

August 5, 2004

Utah Division of Oil, Gas & Mining 1594 W. N. Temple Suite 1210 Salt Lake City, Utah 84114-5801

RE: Wolverine Gas & Oil Company of Utah, LLC requests permission to drill the Wolverine State #16-1 well as an exception to Rule R649-3-3

Gentlemen:

Pursuant to Rule R649-3-3 of the State's Oil & Gas Conservation regulations, Wolverine Gas & Oil Company of Utah, LLC, hereby makes application for approval to directionally drill an oil & gas well.

Wolverine Gas & Oil Company of Utah, LLC (Wolverine) proposes to drill the Wolverine State #16-1 well to a total depth of 8,075 feet. Wolverine is the only operator within a 460 foot radius.

The mountainous terrain of the area is such that directional drilling is the most effective method to minimize surface disturbance. By locating the well pad on a relatively flat surface and drilling a directional well beneath this challenging topography, Wolverine can most effectively minimize surface disturbance and ensure proper utilization of resources.

Attached hereto is a plat as required by the Commissions rules and regulations.

If no objections are filed, the applicant requests that this application be approved. If objections are filed, applicant requests the matter be set for hearing and that it be advised of the hearing date.

Respectfully submitted,

Wolverine Gas & Oil Company of Utah, LLC

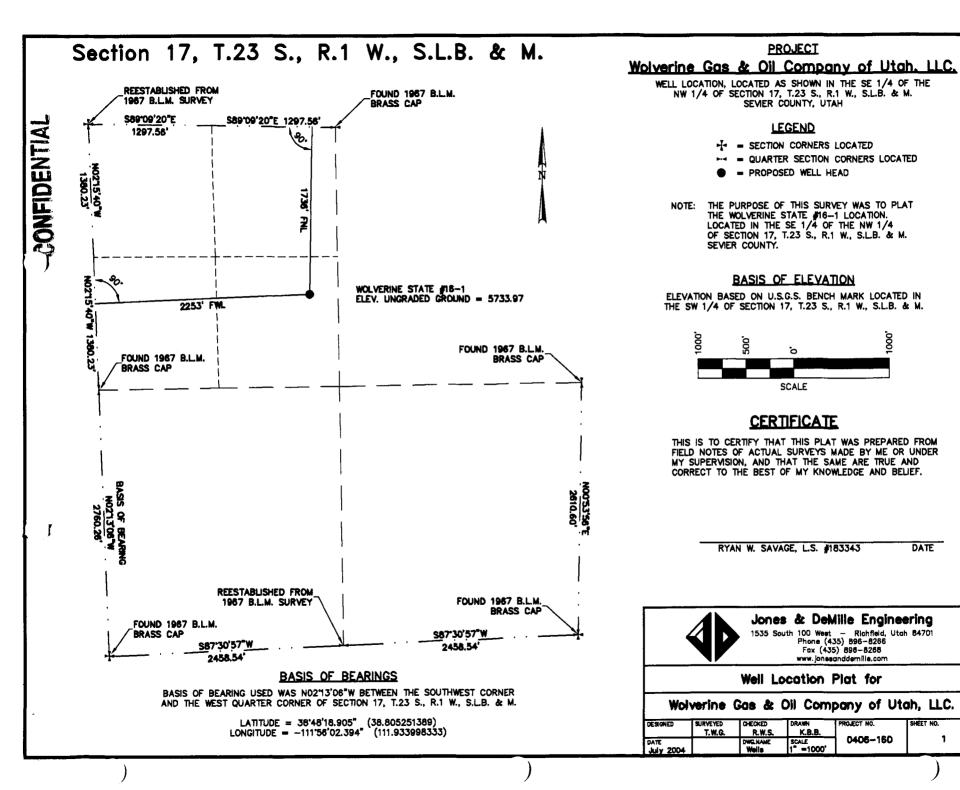
Authorized Agent

CONFIDENTIAL

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES

		FORM	3
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			D	IVISION OF OI	L, GAS AN	ID MINING				D REPORT
	-	APPLICATI	ON FOR	PERMIT TO	DRILL		ML	5. MINERA # 4660	L LEASE NO: 5	6. SURFACE: Fee
1A. TYPE OF WO	ORK: D	RILL Z R	EENTER [DEEPEN				7. IF INDIA	N, ALLOTTEE OR	TRIBE NAME:
B. TYPE OF WE		GAS 🗌 O	THER	SIN	GLE ZONE	MULTIPLE	ZONE 🔲	Wolve		cploration Unit
2. NAME OF OPE		Company of	Utah. LLC	·	-				AME and NUMBER Prine State #	
3. ADDRESS OF	OPERATOR:					PHONE NUMBER:		10. FJECO	AND POOL, OR WI	
One Riverfi	ront Plaza WELL (FOOTAGE	CITY Grand I	Rapids _{st}	ATE MI ZIP 49	503	(616) 458-11	150	Wildo	át TR, SECTION, TOV	AIGUID DANCE
	-	•	T239.	R1W,Sec 17 S	ENILL		/	MERID	AN:	
			,	/L - T23S-R1W		MMMM		NWNV	V 16 238	5 1W
		CTION FROM NEARE	ST TOWN OR F	OST OFFICE:		/		12. COUN	IY:	13. STATE: UTAH
	South of Si				D /			Sevie		
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	R) ON THIS LEASE		I ED, OK		DEPIN.	8,0			well 19-107:	55_6
		R DF, RT, GR, ETC.):	 	22. APPROXIM	ATE DATE WORK	<u> </u>		STIMATED D		
GR-5,740)'		1 2	9/15/200)4		40	days		
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24.			PROPO	SED CASING A	ND CEMEN	TING PROGR	AM			
SIZE OF HOLE	CASING SIZE,	GRADE, AND WEIGH	T PER POOT	SETTING DEPTH		CEMENT TYPE	E, QUANTITY,	YIELD, AND	SLURRY WEIGHT	
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12 1/2	9 5/8	36 ppf	Ú55 ∕ 6TC	1,510	lead:c,360)sx, 1.78,	12.8/	tail:g,	280sx,1.20,	15.6
8 3/4	5 1/2	17 ppf /	Γ80 Γ / C	8,075	lead:Poz,	750sx,1.76,	13.0/	ZOZ/P	350sx.1.49,	13.4
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25.		<u> </u>		ATTA	CHIMENTS			V OF C	IL, GAS &	SHINIM
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NAME (PLEASE I	PRINT) Richar	d Moritz			TITLE	. Vice Presid	dent, Lan	d & Leg	al	
SIGNATURE	77	ul 1	Uis	K/	DATE	7-11	, -04			
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(11110 Opinio 101 Oni					Si	crf 4189:	52 X	MH	420	OLD X
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(11/2001)				(See Instruction	ns on Reverse Si	de)	933			_
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DATE



August 18, 2004

Utah Division of Oil, Gas & Mining 1594 W. N. Temple Suite 1210 Salt Lake City, Utah 84114-5801

RE: Wolverine Gas & Oil Company of Utah, LLC requests permission to drill the Wolverine State #16-1

Gentlemen:

Pursuant to Rule R649-3-3-11 of the State's Oil & Gas Conservation regulations, Wolverine Gas & Oil Company of Utah, LLC, hereby makes application for approval to directionally drill an oil & gas well.

Wolverine Gas & Oil Company of Utah, LLC (Wolverine) proposes to drill the Wolverine State #16-1 well to a total depth of 8,075 feet and is an exception to Rule R649-3-3. Wolverine is the surface owner as well as the only leasehold operator within a 460 foot radius of the bore hole.

The mountainous terrain of the area is such that directional drilling is the most effective method to minimize surface disturbance. By locating the well pad on a relatively flat surface and drilling a directional well beneath this challenging topography, Wolverine can most effectively minimize surface disturbance and ensure proper utilization of resources.

Attached hereto is a plat as required by the Commissions rules and regulations.

If no objections are filed, the applicant requests that this application be approved. If objections are filed, applicant requests the matter be set for hearing and that it be advised of the hearing date.

Respectfully submitted,

Wolverine Gas &/Øit Company of Utah, LLC

Authorized Agent

DIV. OF OIL, GAS & MINING

Web: www.westernls.com



WOLVERINE GAS AND OIL COMPANY

of Utah, LLC

Energy Exploration in Partnership with the Environment

December 29, 2004

Ms. Diana Whitney Utah Division of Oil, Gas & Mining 1594 West North Temple, Suite 1210 Salt Lake City, UT 84114-5801

Re: Revised APD Package – Wolverine State #16-1

Dear Ms. Whitney:

We are submitting the revised information to the permit submitted previously for Wolverine State #16-1. In this package, we are enclosing two sets of the following information:

- Updated Form 3 Application for Permit to Drill
- Project Plan of Development and Master Surface Use Plan
- Well Plat showing the current surface location
- Vicinity Map
- Cut/Fill Diagram
- Drilling Prognosis with directional drilling plan

It is our understanding that these items will be combined with the items submitted previously, so as to complete the package. As you know, these wells are considered "wildcat" wells, so we are requesting this information be held confidential.

If you have any questions, please contact me directly. My contact information is contained within the letter address below (extension 129) and my email address is ehiguera@wolvgas.com.

Sincerely,

Edward A. Higuera, P.E.

RECEIVED

DEC 3 0 2004

THE OF OIL, GAS & MINING

Enclosures

c: Steve Hash and Shawn Burd w/encl.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

001

AMENDED REPORT	
(highlight changes)	

	A	PPLICA	TION FOR	R PE	RMIT TO	DRILL			5. MINERAL LEASE NO: #46605	6. SURFACE: Fee
1A. TYPE OF WO	DRK: DF	RILL 🔽	REENTER [DEEPEN				7. IF INDIAN, ALLOTTEE C	R TRIBE NAME:
B. TYPE OF WE	LL: OIL 🗸	gas 🔲	OTHER		SIN	GLE ZONE 🔽	MULTIPLE ZON	EΠ	8. UNIT of CA AGREEMEN Wolverine Fed E	
2. NAME OF OPE									9. WELL NAME and NUMB	
3. ADDRESS OF		Company	of Utah, LLC	<u> </u>			NIONE WILLIAMS		Wolverine State	
One Riverfo	ront Plaza		d Rapids s			503 (6	PHONE NUMBER: 616) 458-1150		10. FIELD AND POOL, OR Wildcat	
	WELL (FOOTAGES		Surf NL of Sec 17	41	18973¥ 2 954 034	38.809	536 33154		11. QTR/QTR, SECTION, T MERIDIAN: NWNW 16 23	OWNSHIP, RANGE,
			NL & 660' FW			420053X				0144
14. DISTANCE IN	MILES AND DIREC	TION FROM NE	AREST TOWN OR F	OST O	FFICE:	1675687	4 111. 120 15		12. COUNTY:	13. STATE:
			ah on SH 24						Sevier	UTAH
15. DISTANCE TO	O NEAREST PROPE	RTY OR LEASE	LINE (FEET)		16. NUMBER O	ACRES IN LEASE	1880 ac	17. N	UMBER OF ACRES ASSIGN	ED TO THIS WELL:
	O NEAREST WELL	DRILLING, CON	MPLETED, OR	\dashv	19. PROPOSED	DEPTH:	1000 ac	20. B	OND DESCRIPTION:	
APPLIED FOR	r) on this lease rf) & ~ 1867'	(FEET)		İ	10.11101 0022	52.	8,100	1	dividual well 19-10	755-6
21. ELEVATIONS	(SHOW WHETHER	DF, RT, GR, E	rc.):		22. APPROXIMA	ATE DATE WORK W	VILL START:	23. E	STIMATED DURATION:	· · · · · · · · · · · · · · · · · · ·
5736 GL			<u></u>		2/15/200)5 ————		30	days	
24.			PROPO	SED	CASING A	ND CEMENTI	NG PROGRAM			
SIZE OF HOLE	CASING SIZE, G	RADE, AND WE	IGHT PER FOOT	SET	TING DEPTH		CEMENT TYPE, QU	ANTITY,	YIELD, AND SLURRY WEIG	нт
36"	20"				100	Conductor				
17-1/2"	16"	65ppf	H40 BTC		600	Premium G	w/ 2% cc	8	55 sx 1.	17 15.
15" **	13-3/8"	68ppf	J55 BTC		2,700	Premium G		10	00 sx 1.1	17 15.8
12-1/4"	9-5/8"	47ppf	N80 LTC		6,750	50:50 POZ		7	25 sx 1.4	13 13.
8-1/2"	5-1/2"	17ppf	N80 LTC	<u> </u>	8,010	50:50 POZ		3	00 sx 1.2	23 14.3
**	10.0/0#			_					t wo and	
	13-3/8"			<u> </u>		contingency	y string o	only i	f reqd	
25.					ATTA	CHMENTS				
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WELL PL	AT OR MAP PREPA	RED BY LICENS	SED SURVEYOR OF	RENGIN	IEER	✓ comp	PLETE DRILLING PLAN			
✓ EVIDENC	E OF DIVISION OF	WATER RIGHT	S APPROVAL FOR U	JSE OF	WATER	FORM	I 5, IF OPERATOR IS PE	RSON (OR COMPANY OTHER THAN	THE LEASE OWNER
	PRINT) Edward	l A. Higue	ra		•		Manager - De	velon	ment / Wolverine	Gas&Oil
NAME (PLEASE	PRINT)	701	7/1/	1		TITLE		TOIOP	THOMAS TO STATE OF THE STATE OF	<u> </u>
SIGNATURE	EAIL	nuc	/ WA			DATE	12/29/2004			
(This space for Sta	te use only)								REC	
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API NUMBER AS	SIGNED:	13-041	-30037			# APPROBIL	tan Division Gas and Mi	of inim	JUEC 3	EIVED 0 2004
						Date: 1	2-30-0	"	OTV. OF OIL, G	AS & MINIMA
(11/2001)					(See Instruction	ns on Reverse Side		111	/ 	~ ~ IMIMING

Section 17, T.23 S., R.1 W., S.L.B. & M. **PROJECT** Wolverine Gas & Oil Company of Utah, LLC. WELL LOCATION, LOCATED AS SHOWN IN THE SE 1/4 OF THE REESTABLISHED FROM FOUND 1967 B.L.M. NW 1/4 OF SECTION 17, T.23 S., R.1 W., S.L.B. & M. 1967 B.L.M. SURVEY BRASS CAP SEVER COUNTY, UTAH \$89'09'20"E \$89'09'20"E 1297.56" **LEGEND** 1297.56 - ■ SECTION CORNERS LOCATED - QUARTER SECTION CORNERS LOCATED - PROPOSED WELL HEAD NOTE: THE PURPOSE OF THIS SURVEY WAS TO PLAT THE WOLVERINE STATE #16-1 LOCATION. LOCATED IN THE SE 1/4 OF THE NW 1/4 2 OF SECTION 17, T.23 S., R.1 W., S.L.B. & M. SEVIER COUNTY. BASIS OF ELEVATION WOLVERINE STATE #18-1 ELEV. UNGRADED GROUND = 5733.85 ELEVATION BASED ON U.S.G.S. BENCH MARK LOCATED IN 2265' FWL THE SW 1/4 OF SECTION 17, T.23 S., R.1 W., S.L.B. & M. 6. FOUND 1967 B.L.M. ò FOUND 1967 B.L.M. BRASS CAP BRASS CAP SCALE CERTIFICATE THIS IS TO CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION, AND THAT THE SAME ARE TRUE AND CORRECT TO THE SEED OF MENTAL MOWLEDGE AND BELIEF. ED LAND S RYAN REESTABLISHED FROM FOUND 1967 B.L.M. 1967 B.L.M. SURVEY BRASS CAP Scares & Seldie Engineering 14515 South 1000 Feb. - Richfield, Utah 84701 FOUND 1967 B.L.M. BRASS CAP S87'30'57"W S87'30'57"W 2458.54 Fax (435) 896-8268 2458.54 www.ionesanddemilie.com BASIS OF BEARINGS Well Location Plat for BASIS OF BEARING USED WAS NO2"13"06"W BETWEEN THE SOUTHWEST CORNER AND THE WEST QUARTER CORNER OF SECTION 17, T.23 S., R.1 W., S.L.B. & M. Wolverine Gas & Oil Company of Utah, LLC. LATITUDE = 38'48'18.905'' (38.805251389) LONGITUDE = -111'56'02.394'' (111.933998333) DESIGNED ROJECT NO. SURVEYED CHECKED SHEET NO. T.W.G. R.W.S. K.B.B. 0406-160 DWILNAME SCALE 1" =1000'

WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC

DRILLING PROGNOSIS

Wolverine State #16-1 NW NW SEC 16-T23S-R1W SEVIER CO., UTAH

BRIEF DRILLING PLAN

Due to surface topography constraints, directionally drill a 8010' MD (6550'TVD) test of the Navajo 1 formation on a day work contract basis from Wolverine's present work area known as Drill Pad A-2 located in Sec 17 T23S – R01W, Sevier Co, UT. Please refer to the directional drilling plan attached for detailed hole angle, trajectory and target information. Deviation is the primary drilling concern in this area. No abnormal pressure or hydrogen sulfide gas is expected, however, an H2S detector will be utilized. The projected surface and bottomhole locations are to be as follows:

Surface Location:

1680' fnl & 2265' fwl of Sec 17 T23N – R01W

BHL @ top of NVJO1 (5830' TVD) 660' fnl & 660' fwl of Sec 16 T23N – R01W

20" conductor casing will be cemented to surface at approximately 100-120 ft BGL. 16" surface casing will be set & cemented to surface in a 17-1/2" hole deviated to approximately 3 deg at +/-600' (+/-600' TVD). A 12-1/4" hole will then be drilled to +/-6750' (5330' TVD) deviated to approximately 47 deg from vertical by 2750' maintaining tangent to TD of 6750'. 9-5/8" protective casing will be set from surface to TD & cemented across the lowermost 2000'. An 8-1/2" hole will then be drilled to +/- 8010' (6550' TVD). 5-1/2" production casing will then be run from TD back to surface & cemented to approximately 300' into the 9-5/8" intermediate casing. In the event of lost circulation or other problems while drilling the 12-1/4" hole from 600' to 2700', the hole will be enlarged to 15" and a 13-3/8" casing string will be run from surface to TD (no deeper than 2700') and cemented into the surface casing. This is a contingency only.

EMERGENCY NUMBERS

Sevier Valley Medical Center	(435)-896-8271
Medical Helicopter	(800)-453-0120
Sheriff Department	(435)-896-2600
Fire Department-Richfield, UT	(435)-896-5479
Bureau of Land Management (Richfield):	(435)-896-1500
Bureau of Land Management (Salt Lake City)	(801) 539-4045
Utah Division of Oil, Gas and Mining (Salt Lake City):	(801)-538-5340

United States Bureau of Land Management

Contact Al McKee (801) 539-4045 24 hrs prior to spudding

Utah Division of Oil, Gas and Mining

Contact Carol Daniels (801) 538-5284, 24 hrs prior to spudding

GENERAL INFORMATION

OBJECTIVE: Navajo 1 @ 5830' (TVD)

ELEVATION: 5736' GL (actual)

PROJECTED TOTAL DEPTH:

8010' MD; 6550' TVD

SURFACE LOCATION:

1680' FNL & 2265' FWL

Section 17-23S-1W

COUNTY:

Sevier

STATE: Utah

DIRECTIONS TO LOCATION:

From the town of Sigurd, Utah go south

approximately 3.5 miles on Hwy #24 to location on

the left side of the road.

PROPOSED CASING PROGRAM:

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Measured Depth Set
	20"	.25 wall	X42	PE welded	100-120'
<u>1</u> 7-1/2"	16"	65#	H-40	BTC	0'-600'
*** 15"	13-3/8"	68#	J-55	BTC	0'-2700'
12-1/4"	9-5/8"	47#	N-80	LTC	0'-6,750'
8-1/2"	5-1/2"	17#	N-80	LTC	0'- 8,010'

^{***} contingency only - set only if hole conditions dictate

Hole Size	Casing Size	Drift ID, in.	OD of Couplings	Annular Volume in OH, cf/ft	Annular Volume in Csg, cf/ft	Capacity of casing, cf/ft
30"	20"	Conductor	Na			
20"	16"	15.062	17.0	.7854	.7854	1.2476
*** 15"	13-3/8"	12.259	14.375	.2927	.2927	.8406
12¼"	9-5/8"	8.525	10.625	0.3127	0.4659	0.4340
8-1/2"	5-1/2"	4.767	6.050	0.2291	0.2291	0.1305

^{***} contingency only - set only if hole conditions dictate

GEOLOGIC INFORMATION:

Formation	Interval (TVD)	Interval (MD)	Lithology	Prod	Abnormal Psi
Arapien	Surf – 5530'	Surf – 6950'	sh, siltstone,salt,evaporites		
TwinCreek1	5530'- 5830'	6950' –7260'	Carbonates	X	
Navajo 1	5830- 6350'	7260' –7810'	Sandstone w/ minor shale	X	
Total Depth	6550'	8010'	Sandstone w/ minor shale		

CONSTRUCTION OF SURFACE LOCATION

360'x 180' Pad 150'x 100' x 10' Reserve Pit with a 12 mil synthetic liner 96" diameter tin horn cellar, 10' deep. Flare pit a minimum of 100' from wellhead.

SURFACE HOLE: 0' to 600'

Directionally drill a 17-1/2" hole with a TCI rock bit, mud motor & MWD equipment to approximately 600' using fresh water and gel/lime sweeps when necessary (make hole to fit 16" casing). Loss circulation is not expected to be a problem in this interval. If losses do occur, begin pumping LCM sweeps. If loss circulation cannot be healed with ±25 ppb LCM, consider dry drilling (no returns). Maintain hole direction to approximately 230 degr azimuth in keeping with the attached directional plan.

PRESSURE CONTROL & SAFETY EQUIPMENT FOR SURFACE HOLE

Bottom to Top

20" drilling nipple – returns to mud pits – no pressure control

MUD PROGRAM FOR SURFACE HOLE

DEPTH	MUD WEIGHT	TYPE	VISC	PH	FLUID LOSS
0 -600'	8.4 - 8.9	FW/Gel/Lime	26-45	7-9	N/C

Note: Sweep hole every 100 - 200 feet or as needed for hole cleaning. Control the pH with Lime & Caustic to aid in gel flocculation for better carrying capacity.

CASING PROGRAM FOR SURFACE HOLE

DEPTH	SIZE	LENGTH	WT	GRADE	THREAD	REMARKS
0 (00)	1.622	COO 2	CEU		7000	
0 - 600'	16"	600'	65#	H-40	BT&C	

Casing Running Sequence:

guide shoe

1 jt of 16" 65# H-40 BT&C

Float collar

Balance of 16" 65# H-40 BT&C

Centralizers as regd.

RU cement co., hold safety meeting, test lines, cement 16" casing per cement company recommendation. Displace with fresh water or mud if used.

CEMENTING PROGRAM FOR SURFACE HOLE

Lead:

855 sx Premium Class G Mixed at: 15.8 ppg 2% calcium chloride Yield: 1.17 ft³/sx 0.25 lb/sx flocele Water: 5.01 gal/sx

<u>MUST CIRCULATE CEMENT TO SURFACE</u> If the cement does **not** circulate to surface contact the BLM and UDOGM office for further instructions and remedial actions.

WOC A TOTAL OF 24 HOURS:

Wait 4 hours with the hydrostatic pressure of the displacement fluid in place, then cut off conductor and weld on a 16-3/4" 3M x 16" SOW casing head. NU 20" 2M diverter w/ 7-1/16" HCR valve rigged to mud/gas separator, mud tanks and flare pit.

PROTECTIVE CASING HOLE: 600' to 6750'

Directionally drill a 12-1/4" hole with a PDC and/or a TCI rock bit, mud motor & MWD equipment to approximately 6750' MD using a low solids – non dispersed system converting to salt mud in the lower portion. Loss circulation may be a problem in this interval. If losses do occur, begin pumping LCM sweeps. If loss circulation cannot be healed with ±25 ppb LCM, consider dry drilling (no returns). If conditions are severe consider implementing a contingency for casing the problem zone with 13-3/8" csg as outlined above. Build hole angle to approximately 47 degrees by 2750' then maintain hole angle and direction to casing point in keeping with the attached directional plan. Protective casing should be set near the base of the Arapien interval to isolate potential poor hole conditions prior to drilling potential pay zones in the Twin Creek Lime.

PRESSURE CONTROL AND SAFETY EQUIPMENT FOR PROTECTIVE CASING STRING

Bottom to Top (see attached 2M Diverter diagram)

16-3/4" 3M x 16" SOW csg head.
16-3/4" 3M x 20" 2M spacer spool
20" 2M x 20" 2M x (2) 7-1/16" 2m side outlets
one outlet 7-1/16" HCR valve w/ 6" blooie line to mud separator & flare pit
one outlet (blank)
20" 2M Annular Preventer
20" 2M flanged btm drilling nipple w/ fillup line

Upper kelly cock valves with handles available Safety valves and subs to fit all drill string connections in use Inside BOP or float sub available

Testing Procedure:

Annular Preventer & HCR Valve

The annular preventer will be pressure tested to 1000 psi for a period of ten minutes or until provisions of the test are met, whichever is longer. At a minimum, the pressure test will be performed:

- 1) When the annular is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The annular preventer will be functionally operated once per week. All BOP drills will be recorded in the IADC driller's log.

Accumulator:

The accumulator will have sufficient capacity to open the hydraulically controlled gate valve (if so equipped), close the annular preventer, and retain a minimum of 200 psig above pre-charge on the closing manifold without the use of the closing unit pumps. The reservoir capacity will be double the accumulator capacity, and the fluid level will be maintained at the manufacturer's recommendations. The accumulator shall have two (2) independent power sources to close the preventers. Nitrogen bottles may be one of the independent power sources and, if so, shall maintain a charge equal to the manufacturer's specifications.

MUD PROGRAM FOR PROTECTIVE CASING HOLE

DEPTH	MUD WEIGHT	TYPE	VISC	pH	FLUID LOSS
				•	
600' – 6750'	8.7 - 9.6	LSND	34-45	9.0-10.0	12cc or Less

If required, implement a natural breakover to a salt or gypsum system as salt and gypsum sections are drilled. If loss circulation becomes a problem use LCM sweeps to control seepage & clean hole. Implement casing contingency if absolutely necessary.

CASING PROGRAM FOR PROTECTIVE CASING HOLE

<u>DEPTH</u>	SIZE	LENGTH	WT	GRADE	THREAD	REMARKS
0' – TD'	9-5/8"		47#	N-80	LT&C	

Rig up casing tools and run 9-5/8" protective casing as follows:

Float shoe, 2 joint of 9-5/8" 47.0# N-80 LT&C casing, float collar, 6 centralizers, middle shoe joint and one every other joint for 12 jts, run balance of 9-5/8" 47# N-80

CEMENT PROGRAM FOR PROTECTIVE CASING

725 sx (50:50) Poz: Premium

Weight:

13.8 ppg

3 % Bentonite

Yield:

 $1.43 \, \text{ft}^3/\text{sx}$

0.3% Halad R-344 (Low Fluid Loss Control)

Water:

6.45

gal/sx 15 % Salt

0.3% D-AIR 3000 (Defoamer)

0.25 lb/sx Flocele

TOC at ± 4750 ft

Calculate cement volume based on gauge hole plus 30% excess. Displace with mud. Set slips, ND diverter stack, cut off, NU & test wellhead. Clean pits and prepare for next hole section.

PRODUCTION HOLE: 6750' to 8010'

Trip in the hole with an 8-1/2" insert bit, mud motor & MWD. Drill float, shoe and 20'of new hole. Perform an integrity test to 500 psi w/ 9ppg mud (10.5 ppg mud wt equivalent). Drill with a low colloid polymer system.

PRESSURE CONTROL AND SAFETY EQUIPMENT FOR PRODUCTION CASING STRING

Bottom to Top (see attached 5M BOP Stack diagram)

11" 5M x 9-5/8" SOW csg head.

11" 5M x 11" 5M mud cross w/ (2) side outlets

one outlet 2-1/16 5M kill line

one outlet 3-1/16" 5M choke line

11" 5M double ram blowout preventers with 4-1/2" pipe rams top & CSO rams btm

11" 5M annular preventer

11" Rotating head w/ fillup line

Connect BOP to choke manifold with pressure guage Upper kelly cock valves with handles available Safety valves and subs to fit all drill string connections in use Inside BOP or float sub available

Testing Procedure:

Annular Preventer

The annular preventer will be pressure tested to 1500 psi for a period of ten minutes or until provisions of the test are met, whichever is longer. At a minimum, the pressure test will be performed:

- 4) When the annular is initially installed
- 5) Whenever any seal subject to test pressure is broken
- 6) Following related repairs and at 30 day intervals

The annular preventer will be functionally operated once per week.

Blowout Preventer

The BOP, choke manifold and related equipment will be pressure tested to 4500 psi, or 70% of the internal yield of the casing. Pressure will be maintained for a period of at least ten minutes or until the requirements of the test are met, whichever is longer. At a minimum the pressure test will be performed:

- 1) When the BOP is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills will be recorded in the IADC driller's log.

Accumulator:

The accumulator will have sufficient capacity to open the hydraulically controlled gate valve (if so equipped), close all rams plus the annular preventer, and retain a minimum of 200 psig above pre-charge on the closing manifold without the use of the closing unit pumps. The reservoir capacity will be double the accumulator capacity, and the fluid level will be maintained at the manufacturer's recommendations. The accumulator shall have two (2) independent power sources to close the preventers. Nitrogen bottles may be one of the independent power sources and, if so, shall maintain a charge equal to the manufacturer's specifications.

The accumulator pre-charge pressure test will be conducted prior to connecting the closing unit to the BOP stack and at least once every six months thereafter. The accumulator pressure will be corrected if the measured pre-charge pressure is found to be above or below the maximum or minimum limits specified in Onshore Oil & Gas Order Number 2 (only nitrogen gas may be used to pre-charge).

Choke Manifold Equipment, Valves and Remote Controls

All choke lines will be straight lines unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and vibration

A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will be maintained in the open position and will be closed only when the power source for the accumulator is inoperative.

Remote controls shall be readily accessible to the driller. Remote controls will be capable of both opening and closing all preventers. Master controls will be at the accumulator and will be capable of opening and closing all preventers and the choke line valve (if so equipped).

The choke manifold and BOP extension rods with hand wheels will be located outside the rig sub structure. The hydraulic BOP closing unit will be located at least twenty-five feet from the well head but readily accessible to the driller. Exact locations and configurations of the hydraulic BOP closing unit will depend upon the particular rig contracted to drill this well.

A flare line will be installed after the choke manifold, extending 100 feet from the center of the drill hole to a separate flare pit.

MUD PROGRAM FOR PRODUCTION HOLE

DEPTH	MUD WEIGHT	TYPE	VISC	pH F	LUID LOSS
6750' - 8010'	8.7 - 9.9	LC Polymer	34-50	9.0-10.0	10cc or Less

EVALUATION PROGRAM FOR PRODUCTION HOLE

At TD, circulate and condition hole clean for logs. Short trip to the intermediate casing monitoring well closely. TOH for logs.

Mudlogger: From 1500' to total depth.

Electric Logs:

Tool	PCP to TD
Dual Laterolog/GR/Caliper (DLL) (DIL if fresh mud system)	Yes
Micro Spherically Focused Log (MFSL)	Yes
CNL/LithoDensity/GR/Caliper (CNL/LD/GR/CAL)	Yes
Formation Micro Scanner/GR	Yes

DST: To be decided Cores: To be decided

CASING PROGRAM FOR PRODUCTION HOLE

DEPTH	_ SIZE_	LENGTH	WT	GRADE	THREAD	REMARKS	_
			1 7 #				

Rig up casing tools and run 5-1/2" production casing as follows:

Float shoe 2 joints of 5-1/2" 17# N-80 LT&C casing Float collar Centralizers as reqd. Run balance of 5-1/2" 17# N-80.

CEMENT PROGRAM FOR PRODUCTION CASING

245 sx (50:50) Poz: Premium Weight: 14.35 ppg
2 % Bentonite Yield: 1.23 ft³/sx
0.3% Halad R-344 (Low Fluid Loss Control) Water: 4.81 gal/sx
5 % Salt
0.25 lb/sx Flocele

TOC at \pm 6400 ft in 9-5/8" csg Calculate cement volume based on log caliper +/- 25%. Displace cement w/water. Set slips, ND BOP's, cut off, NU & test wellhead. Clean pits and release rig.

SCHEDULE

Location preparation is presently scheduled to begin on or about February 15, 2005 Drilling operations are anticipated to begin on or about February 15, 2005

end

PRESSURE CONTROL SYSTEM SCHEMATIC

Prepared by: EXACT Engineering, Inc Tulsa, OK (918) 599-9400

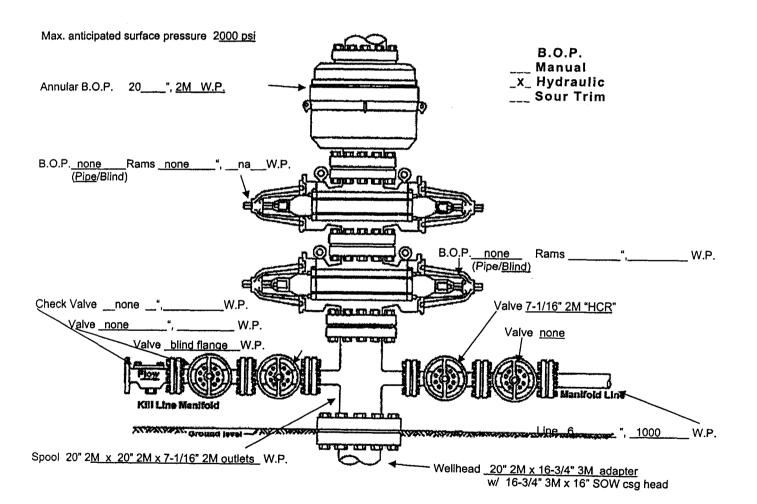
2M Diverter Stack — to be utilized while drilling holes for surface and protective casing thru Arapien formation section

Operator:

Wolverine Gas & Oil Co. of Utah, LLC

Well name and number

Wolverine State #16-1



PRESSURE CONTROL SYSTEM SCHEMATIC

Prepared by: EXACT Engineering, Inc Tulsa, OK (918) 599-9400

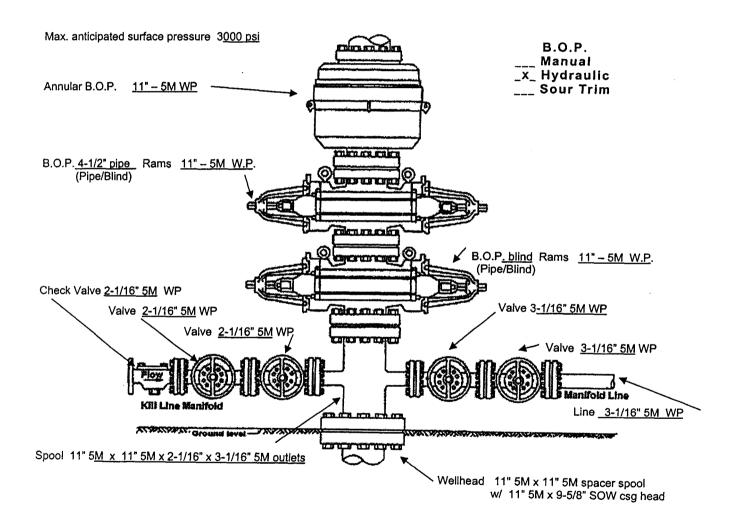
5M BOP Stack --- to be utilized while drilling holes for production casing thru Twin Creek & Navajo intervals

Operator:

Wolverine Gas & Oil Co. of Utah, LLC

Well name and number

Wolverine State #16-1



Worverine Gas & Oil Co of Utah, LC Weatherford Pad A-2 T23S R01W Sevier County, Utah Azimuths to True North Magnetic North: 12.95* NW/4 SE/4 Sec 17 **T**_M Magnetic Field Strength: 52133nT Dip Angle: 64.57° Date: 7/6/2004 Model: igrf2000 16-1 SFC Location 1680' FNL & 2265' FWL Sec 17 SECTION DETAILS TVD +N/-S +E/-W DLeg **TFace** VSec Target MD Inc Azi Sec 0.0 0.00 0.00 0.0 0.0 0.00 0.00 0.0 0.0 300.0 73.33 73.33 73.33 0.00 300.0 0.0 0.0 0.00 0.0 2 3 4 5 6 7 100.6 73.33 105.0 1500.0 30.1 0.83 1506.1 10.00 2738.3 46.97 73.33 2564.4 195.7 653.8 3.00 0.00 682.5 46.97 15.00 73.33 4924.3 920.7 3075.3 0.00 0.00 3210.2 6196.4 3.00 0.00 3751.6 3945.6 1076.0 3594.0 180.00 NVJ01 660' FN & FW 16-1 7262.0 73.33 5826.0 3779.8 0.00 6550.0 15.00 73.33 1131.6 16" South(-)/North(+) [2000ft/in] 1000 -2000 2000-13 3/8" -4000 True Vertical Depth [1000ft/in] -2000 2000 4000 Wcst(-)/East(+) [2000ft/in] TARGET DETAILS **TVD** Name +N/-S +E/-W Shape 4000 [VJ01 660' FN & FW 16-1 1076.0 5826.0 3594.0 Rectangle (330x330) **CASING DETAILS** No. TVD MD Name Size 20.0 20.0 20" 20.000 5000 600.0 600.1 2646.3 16" 16.000 13.375 2500.0 13 3/8" 5534.0 6951.6 8011.5 9 5/8" 9.625 9 5/8" 5 6550.0 7.000 NVJ01 660 FN & FW 16-1 MATION TOP DETAILS NVJ01 6000 No. TVDPath **MDPath Formation**

1000

2000

Vertical Section at 73,33° [1000ft/in]

3000

4000

Plan: 16-1 (16-1/1)

6947.2

7262.0

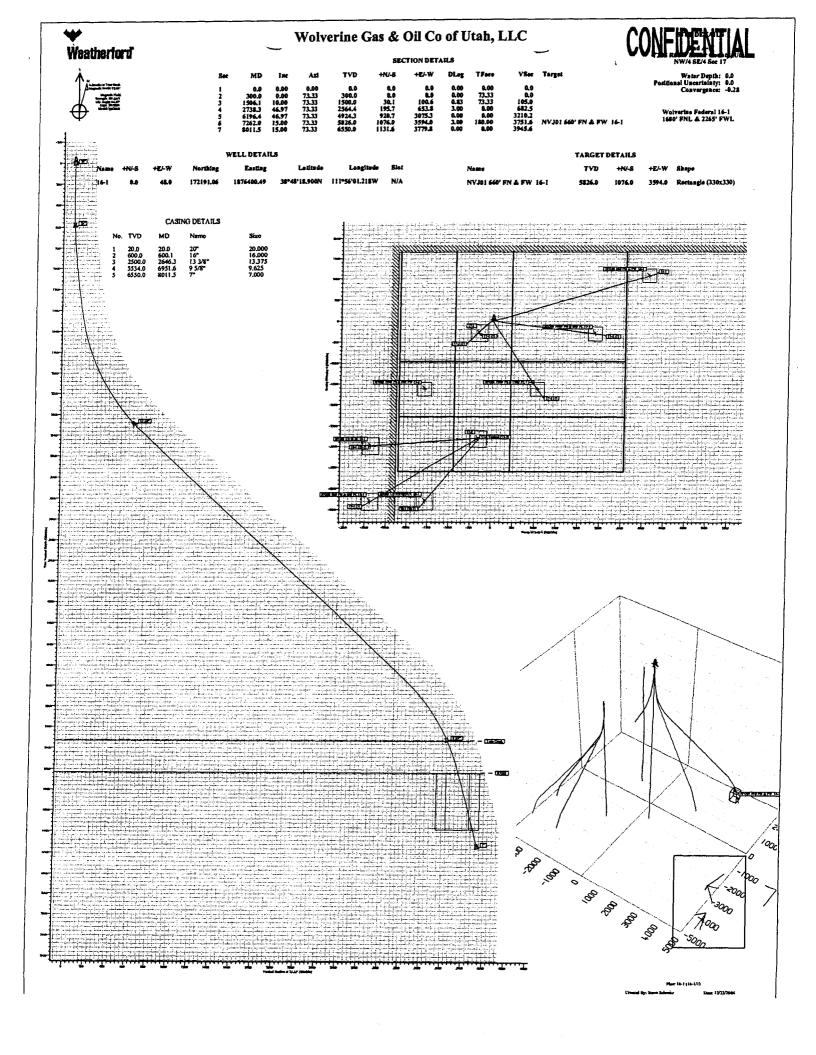
5530.0

5826.0

Created By: Steve Schmitz Date: 12/22/2004
Checked: ______ Date: ____

Twin Creek

NVJ01



Page:

Weatherford **Planning Report**

Company: Wolverine Gas & Oil Co of Utah

Field: Site: Well:

Sevier County, Utah

Pad A-2 16-1

12/22/2004

Time: 10:34:12

Co-ordinate(NE) Reference: Well: 16-1, True North

Vertical (TVD) Reference: Section (VS) Reference:

SITE 0.0

Well (0.00N,0.00E,73.33Azi) 16-1

Plan:

Field:

Wellpath:

Sevier County, Utah

Map System: US State Plane Coordinate System 1927

Geo Datum: NAD27 (Clarke 1866) Sys Datum: Mean Sea Level

Map Zone: Coordinate System: Utah, Central Zone

Well Centre

Geomagnetic Model:

igrf2000

Pad A-2 T23S R01W Sevier County, Utah

NW/4 SE/4 Sec 17

Site Position: From:

Ground Level:

Well Position:

Wellpath: 1

Current Datum:

Magnetic Data: Field Strength:

Lease Line

Position Uncertainty:

0.0 ft

0.0 ft

7/6/2004

0.0

52133 nT

Latitude: Longitude:

North Reference: Grid Convergence:

True -0.28 deg

Well:

16-1

+N/-S +E/-W

SITE

Vertical Section: Depth From (TVD)

0.0 ft Northing: 48.0 ft Easting:

Northing:

Easting:

172191.06 ft 1876400.49 ft

0.0 ft

Height

+N/-S

ft 0.0 Latitude: Longitude:

Slot Name:

18.900 N 38 48 56 1.218 W 111

Position Uncertainty:

0.0 ft

Drilled From: Surface

Tie-on Depth: Above System Datum: Declination:

Mean Sea Level 12.95 deg 64.57 deg Direction

0.0 ft

Mag Dip Angle: +E/-W deg ft 73.33 0.0

Plan:

Principal:

16-1 Yes

Date Composed: Version:

7/6/2004

Tied-to:

From Surface

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100f	Build t deg/100ft	Turn deg/100ft	TFO deg	Target	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00		
300.0	0.00	73,33	300.0	0.0	0.0	0.00	0.00	0.00	73.33		
1506.1	10.00	73.33	1500.0	30.1	100.6	0.83	0.83	0.00	73.33		
2738.3	46.97	73.33	2564.4	195.7	653.8	3.00	3.00	0.00	0.00		
6196.4	46.97	73.33	4924.3	920.7	3075.3	0.00	0.00	0.00	0.00		
7262.0	15.00	73.33	5826.0	1076.0	3594.0	3.00	-3.00	0.00	180.00	NVJ01 660' FN & FW 16-	-1
8011.5	15.00	73.33	6550.0	1131.6	3779.8	0.00	0.00	0.00	0.00		

Section 1: Start Hold

	MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	
Г	0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1	20.0	0.00	0.00	20.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1	100.0	0.00	73.33	100.0	0.0	0.0	0.0	0.00	0.00	0.00	73.33	
	200.0	0.00	73.33	200.0	0.0	0.0	0.0	0.00	0.00	0.00	73.33	
	300.0	0.00	73.33	300.0	0.0	0.0	0.0	0.00	0.00	0.00	73.33	

Section 2: Start Build 0.83

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
400.0	0.83	73.33	400.0	0.2	0.7	0.7	0.83	0.83	0.00	0.00
500.0	1.66	73.33	500.0	0.8	2.8	2.9	0.83	0.83	0.00	0.00
600.0	2.49	73.33	599.9	1.9	6.2	6.5	0.83	0.83	0.00	0.00
600.1	2.49	73.33	600.0	1.9	6.2	6.5	0.00	0.00	0.00	0.00
700.0	3.32	73.33	699.8	3.3	11.1	11.6	0.83	0.83	0.00	0.00
800.0	4.15	73.33	799.6	5.2	17.3	18.1	0.83	0.83	0.00	0.00
900.0	4.97	73.33	899.2	7.5	24.9	26.0	0.83	0.83	0.00	0.00

Weatherford Planning Report

ompany: ield: ite: /ell: /ellpath:	Sevier Co Pad A-2 16-1	Gas & Oil (ounty, Utah				Date: 12/2 Co-ordinate(I Vertical (TVI Section (VS) I Plan:)) Reference:	SITE 0.	6-1, True No	er av er er Storreger og av	Page:
ection	2 : Start B	uild 0.83									
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100f	Build t deg/100	Turn ft deg/100ft	TFO deg	
1000.0	5.80	73.33	998.8	10.2	33.9	35.4	0.83	0.83	0.00	0.00	
1100.0	6.63	73.33	1098.2	13.3	44.3	46.3	0.83	0.83	0.00	0.00	
1200.0	7.46	73.33	1197.5	16.8	56.1	58.5	0.83	0.83	0.00	0.00	
1300.0	8.29	73.33	1296.5	20.7	69.2	72.2	0.83	0.83	0.00	0.00	
1400.0 1506.1	9.12 10.00	73.33 73.33	1395.4 1500.0	25.1 30.1	83.7 100.6	87.4 105.0	0.83 0.83	0.83 0.83	0.00 0.00	0.00 0.00	
	3 : Start Bu									0.00	
MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	TFO	
ft	deg	deg	ft	ft	ft	ft	deg/100fl	deg/100f	deg/100ft	deg	
1600.0	12.82	73.33	1592.0	35.4	118.4	123.6	3.00	3.00	0.00	0.00	
1700.0	15.82	73.33	1688.9	42.5	142.0	148.3	3.00	3.00	0.00	0.00	
1800.0	18.82	73.33	1784.4	51.1	170.6	178.0	3.00	3.00	0.00	0.00	
1900.0 2000.0	21.82 24.82	73.33	1878.1	61.0	203.8	212.8	3.00	3.00	0.00	0.00	
2000.0 2100.0	24.82 27.82	73.33 73.33	1970.0 2059.6	72.4 85.1	241.7 284.2	252.3 296.7	3.00 3.00	3.00 3.00	0.00 0.00	0.00 0.00	
2200.0	30.82	73.33	2146.8	99.1	331.1	345.6	3.00	3.00	0.00	0.00	
2300.0	33.82	73.33	2231.3	114.5	382.3	399.1	3.00	3.00	0.00	0.00	
2400.0	36.82	73.33	2312.8	131.1	437.7	456.9	3.00	3.00	0.00	0.00	
2500.0	39.82	73.33	2391.3	148.8	497.1	518.9	3.00	3.00	0.00	0.00	
2600.0	42.82	73.33	2466.4	167.8	560.3	584.9	3.00	3.00	0.00	0.00	
2646.3	44.21	73.33	2500.0	176.9	590.9	616.8	3.00	3.00	0.00	0.00	
2700.0	45.82 46.97	73.33 73.33	2537.9 2564.4	187.8 195.7	627.2 653.8	654.7 682.5	3.00 3.00	3.00 3.00	0.00 0.01	0.00 0.11	
2738.3					-						
	: Start Hol		TVD	+N/-S	+E/-W	VS	DLS	Build		TFO	
MD ft	: Start Hol Incl deg	d Azim deg	TVD ft	ft	ft	VS ft	deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	
MID ft	: Start Hol Incl deg 48.97	Azim deg 73.33	TVD ft 2606.5	ft 208.7	ft 697.0	ft 727.6	deg/100ft 0.00	deg/100ft 0.00	Turn deg/100ft 0.00	0.00	
MD ft 2800.0	: Start Hol Incl deg 46.97 46.97	Azim deg 73.33 73.33	TVD ft 2606.5 2674.7	208.7 229.6	697.0 767.0	727.6 800.7	0.00 0.00	0.00 0.00	Turn deg/100ft 0.00 0.00	0.00 0.00	
etion 4 MD ft 2800.0 9900.0	: Start Hol Incl deg 46.97 46.97 46.97	Azim deg 73.33 73.33 73.33	TVD ft 2606.5 2674.7 2742.9	208.7 229.6 250.6	697.0 767.0 837.0	727.6 800.7 873.8	0.00 0.00 0.00	0.00 0.00 0.00 0.00	Turn deg/100ft 0.00 0.00 0.00	0.00 0.00 0.00	
MID ft ::800.0 900.0 000.0 100.0	: Start Holdeg 46.97 46.97 46.97 46.97	Azim deg 73.33 73.33 73.33 73.33	TVD ft 2606.5 2674.7 2742.9 2811.2	208.7 229.6 250.6 271.6	697.0 767.0 837.0 907.1	727.6 800.7 873.8 946.9	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	Turn deg/100ft 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	10, 42.5
etion 4 MD ft 2800.0 9900.0 1000.0 100.0 200.0	Incl deg 46.97 46.97 46.97 46.97 46.97	Azim deg 73.33 73.33 73.33 73.33 73.33	TVD ft 2606.5 2674.7 2742.9 2811.2 2879.4	208.7 229.6 250.6 271.6 292.5	697.0 767.0 837.0 907.1 977.1	727.6 800.7 873.8 946.9 1019.9	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	Turn deg/100ft 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	11, 22
etion 4 MD ft 2800.0 9900.0 0000.0 100.0 200.0 300.0	: Start Holdeg 46.97 46.97 46.97 46.97	Azim deg 73.33 73.33 73.33 73.33	TVD ft 2606.5 2674.7 2742.9 2811.2 2879.4 2947.7	208.7 229.6 250.6 271.6 292.5 313.5	697.0 767.0 837.0 907.1 977.1 1047.1	727.6 800.7 873.8 946.9 1019.9 1093.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00	Turn deg/100ft 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00	
etion 4 MID ft 2800.0 9900.0 0000.0 100.0 200.0 300.0 400.0 500.0	: Start Hol Incl deg 46.97 46.97 46.97 46.97 46.97 46.97 46.97	Azim deg 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33	TVD ft 2606.5 2674.7 2742.9 2811.2 2879.4	208.7 229.6 250.6 271.6 292.5	697.0 767.0 837.0 907.1 977.1	727.6 800.7 873.8 946.9 1019.9	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	Turn deg/100ft 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00	
MD R 8800.0 9900.0 000.0 100.0 200.0 300.0 400.0 500.0 600.0	: Start Hol Incl deg 46.97 46.97 46.97 46.97 46.97 46.97 46.97 46.97	Azim deg 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33	TVD ft 2606.5 2674.7 2742.9 2811.2 2879.4 2947.7 3015.9 3084.2 3152.4	ft 208.7 229.6 250.6 271.6 292.5 313.5 334.5 355.4 376.4	697.0 767.0 837.0 907.1 977.1 1047.1 1117.1 1187.2 1257.2	727.6 800.7 873.8 946.9 1019.9 1093.0 1166.1 1239.2 1312.3	deg/100ft 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00	Turn deg/100ft 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00	
etion 4 MD ft 8800.0 9900.0 0000.0 100.0 200.0 300.0 400.0 500.0 600.0 700.0	: Start Hol Incl deg 46.97 46.97 46.97 46.97 46.97 46.97 46.97 46.97	Azim deg 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33	TVD ft 2606.5 2674.7 2742.9 2811.2 2879.4 2947.7 3015.9 3084.2 3152.4 3220.7	208.7 229.6 250.6 271.6 292.5 313.5 334.5 355.4 376.4 397.4	697.0 767.0 837.0 907.1 977.1 1047.1 1117.1 1187.2 1257.2 1327.2	727.6 800.7 873.8 946.9 1019.9 1093.0 1166.1 1239.2 1312.3 1385.4	deg/100ft 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	Turn deg/100ft 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	
MD ft 2800.0 9900.0 9000.0 100.0 200.0 300.0 400.0 500.0 600.0 700.0 800.0	: Start Hol Incl deg 46.97 46.97 46.97 46.97 46.97 46.97 46.97 46.97 46.97	Azim deg 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33	TVD ft 2606.5 2674.7 2742.9 2811.2 2879.4 2947.7 3015.9 3084.2 3152.4 3220.7 3288.9	208.7 229.6 250.8 271.8 292.5 313.5 334.5 355.4 376.4 397.4 418.3	697.0 767.0 837.0 907.1 977.1 1047.1 1117.1 1187.2 1257.2 1327.2 1397.2	727.6 800.7 873.8 946.9 1019.9 1093.0 1166.1 1239.2 1312.3 1385.4 1458.5	deg/100ft 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	Turn deg/100ft 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	16.39
MD ft 2800.0 1900.0 100	: Start Hol Incl deg 46.97 46.97 46.97 46.97 46.97 46.97 46.97 46.97 46.97 46.97	Azim deg 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33 73.33	TVD ft 2606.5 2674.7 2742.9 2811.2 2879.4 2947.7 3015.9 3084.2 3152.4 3220.7 3288.9 3357.1	8 208.7 229.6 250.6 271.6 292.5 313.5 334.5 355.4 376.4 397.4 418.3 439.3	697.0 767.0 837.0 907.1 977.1 1047.1 1117.1 1187.2 1257.2 1327.2 1397.2 1467.3	727.6 800.7 873.8 946.9 1019.9 1093.0 1166.1 1239.2 1312.3 1385.4 1458.5 1531.6	deg/100ft 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	Turn deg/100ft 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	
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MD ft 2800.0 9900.0 1000.0 900	: Start Holdeg 46.97	Azim deg 73.33	TVD ft 2606.5 2674.7 2742.9 2811.2 2879.4 2947.7 3015.9 3084.2 3152.4 3220.7 3288.9 3357.1 3425.4 3493.6 3561.9 3630.1 3698.4 3766.6 3834.8 3903.1 3971.3 4039.6 4107.8 4176.1 4244.3 4312.5 4380.8 4449.0 4517.3 4585.5	8 208.7 229.6 250.8 271.8 292.5 313.5 334.5 355.4 376.4 397.4 418.3 439.3 460.2 481.2 502.2 523.1 544.1 566.1 586.0 607.0 628.0 648.9 669.9 690.9 711.8 732.8 753.7 774.7 795.7 816.6	697.0 767.0 837.0 907.1 1047.1 1117.1 1187.2 1257.2 1327.2 1397.2 1467.3 1607.3 1607.3 1677.3 1747.4 1817.4 1887.4 1957.4 2027.5 2167.5 2237.5 2307.6 2377.6 2517.6 2517.6 2587.6 2687.7 2727.7	727.6 800.7 873.8 946.9 1019.9 1093.0 1166.1 1239.2 1312.3 1385.4 1458.5 1531.6 1604.7 1677.8 1750.9 1824.0 1897.1 1970.2 2043.3 2116.4 2189.5 2262.6 2335.7 2408.8 2481.8 2554.9 2628.0 2701.1 2774.2 2847.3	deg/100ft 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	Turn deg/100ft 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	
MID ft 1800.0 1900.0 10	: Start Holdeg 46.97	Azim deg 73.33	TVD ft 2606.5 2674.7 2742.9 2811.2 2879.4 2947.7 3015.9 3084.2 3152.4 3220.7 3288.9 3357.1 3425.4 349.6 3561.9 3630.1 3698.4 3766.6 3834.8 3903.1 3971.3 4039.6 4107.8 4176.1 4244.3 4312.5 4380.8 4449.0 4517.3 4585.5 4653.8	8 208.7 229.6 250.6 271.6 292.5 313.5 334.5 355.4 376.4 418.3 439.3 460.2 481.2 502.2 502.2 523.1 544.1 565.1 586.0 607.0 628.0 648.9 669.9 711.8 732.8 753.7 774.7 795.7 816.6 837.6	697.0 767.0 837.0 907.1 907.1 1117.1 11187.2 1257.2 1327.2 1327.2 1367.3 1607.3 1677.3 1747.4 1817.4 1887.4 1957.4 2027.5 2037.5 2237.5 2237.5 2237.6 2447.6 2517.6 2587.6 2587.6 2587.7 2727.7	727.6 800.7 873.8 946.9 1019.9 1093.0 1166.1 1239.2 1312.3 1385.4 1458.5 1531.6 1604.7 1677.8 1750.9 1824.0 1897.1 1970.2 2043.3 2116.4 2189.5 2262.6 2335.7 2408.8 2481.8 2554.9 2628.0 2701.1 2774.2 2847.3 2920.4	deg/100ft 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	Turn deg/100ft 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	
### A Property of the Control of the	: Start Holdeg 46.97	Azim deg 73.33	TVD ft 2606.5 2674.7 2742.9 2811.2 2879.4 2947.7 3015.9 3084.2 3152.4 3220.7 3288.9 3357.1 3425.4 3493.6 3561.9 3630.1 3698.4 3766.6 3834.8 3903.1 3971.3 4039.6 4107.8 4176.1 4244.3 4312.5 4380.8 4449.0 4517.3 4585.5	8 208.7 229.6 250.8 271.8 292.5 313.5 334.5 355.4 376.4 397.4 418.3 439.3 460.2 481.2 502.2 523.1 544.1 566.1 586.0 607.0 628.0 648.9 669.9 690.9 711.8 732.8 753.7 774.7 795.7 816.6	697.0 767.0 837.0 907.1 1047.1 1117.1 1187.2 1257.2 1327.2 1397.2 1467.3 1607.3 1607.3 1677.3 1747.4 1817.4 1887.4 1957.4 2027.5 2167.5 2237.5 2307.6 2377.6 2517.6 2517.6 2587.6 2687.7 2727.7	727.6 800.7 873.8 946.9 1019.9 1093.0 1166.1 1239.2 1312.3 1385.4 1458.5 1531.6 1604.7 1677.8 1750.9 1824.0 1897.1 1970.2 2043.3 2116.4 2189.5 2262.6 2335.7 2408.8 2481.8 2554.9 2628.0 2701.1 2774.2 2847.3	deg/100ft 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	Turn deg/100ft 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	

Weatherford **Planning Report**

Company: Wolverine Gas & Oil Co of Utah

Site:

Page:

Sevier County, Utah Pad A-2 Field:

Well: 16-1 Wellpath: 1

Date: 12/22/2004 Time: 10:34:12
Co-ordinate(NE) Reference: Well: 16-1, True North
Vertical (TVD) Reference: SITE 0.0

Section (VS) Reference:

Plan:

Welf (0.00N,0.00E,73.33Azi)

Section	4:	Start	Hold
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	MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100fi	Build deg/100f	Turn t deg/100ft	TFO deg	
$\ \ $	6196.4	46.97	73.33	4924.3	920.7	3075.3	3210.2	0.00	0.00	0.00	0.00	

Section 5: Start Drop -3.00

	MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	
6	200.0	46.86	73.33	4926.7	921.5	3077.8	3212.8	3.00	-3.00	0.00	180.00	
	300.0	43.86	73.33	4997.0	941.9	3146.0	3283.9	3.00	-3.00	0.00	180.00	
6	400.0	40.86	73.33	5070.9	961.2	3210.5	3351.3	3.00	-3.00	0.00	180.00	
6	500.0	37.86	73.33	5148.2	979.4	3271.3	3414.7	3.00	-3.00	0.00	180.00	
6	600.0	34.86	73.33	5228.7	996.4	3328.0	3474.0	3.00	-3.00	0.00	180.00	
_	700.0	31.86	73.33	5312.2	1012.1	3380.7	3529.0	3.00	-3.00	0.00	180.00	
4	0.008	28.86	73.33	5398.5	1026.6	3429.1	3579.5	3.00	-3.00	0.00	180.00	
	900.0	25.86	73.33	5487.3	1039.8	3473.1	3625.5	3.00	-3.00	0.00	180.00	
6	947.2	24.44	73.33	(5530.0)	1045.6	3492.3	3645.5	3.00	-3.00	0.00	-180.00	
	951.6	24.31	73.33	5534.0	1046.1	3494.1	3647.3	3.00	-3.00	0.00	-180.00	
	0.000	22.86	73.33	5578.4	1051.6	3512.7	3666.7	3.00	-3.00	0.00	180.00	}
7	100.0	19.86	73.33	5671.5	1062.1	3547.5	3703.1	3.00	-3.00	0.00	180.00	
22	200.0	16.86	73.33	5766.4	1071.1	3577.7	3734.6	3.00	-3.00	0.00	180.00	
72	262.0	15.00	73.33	(5826.0)	1076.0	3594.0	3751.6	3.00	-3.00	0.00	-180.00	1

Section 6: Start Hold

MID ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100f	Build t deg/100f	Turn t deg/100ft	TFO deg	
7300.0	15.00	73.33	5862.7	1078.8	3603.4	3761.5	0.00	0.00	0.00	0.00	
7400.0	15.00	73.33	5959.3	1086.2	3628.2	3787.3	0.00	0.00	0.00	0.00	
7500.0	15.00	73.33	6055.9	1093.7	3653.0	3813.2	0.00	0.00	0.00	0.00	ľ
7600.0	15.00	73.33	6152.5	1101.1	3677.8	3839.1	0.00	0.00	0.00	0.00	
7700.0	15.00	73.33	6249.1	1108.5	3702.6	3865.0	0.00	0.00	0.00	0.00	
7800.0	15.00	73.33	6345.7	1115.9	3727.4	3890.9	0.00	0.00	0.00	0.00	
7900.0	15.00	73.33	6442.3	1123.4	3752.2	3916.8	0.00	0.00	0.00	0.00	
8000.0	15.00	73.33	6538,9	1130.8	3777.0	3942.6	0.00	0.00	0.00	0.00	1
(8011.5)	15.00	73.33	6550.0	1131.6	3779.8	3945.6	0.00	0.00	0.00	0.00	

Targets

Name	Descriptio Dip.	n Dir.	TVD ft	+N/-S ft	+E/-W	Map Northing ft	Map Easting ft	< Latitude> Deg Min See	< Longitude> Deg Min Sec
NVJ01 660' F -Rectangle -Plan hit ta	(330x330)		5826.0	1076.0	3594.0	173249.621	879999.66	38 48 29.533 N	111 55 15.819 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name	•		
20.0 600.1 2646.3 6951.6 8011.5	20.0 600.0 2500.0 5534.0 6550.0	20.000 16.000 13.375 9.625 7.000	26.000 17.500 17.500 12.250 8.500	20" 16" 13 3/8" 9 5/8" 7"		• • • • • • • • • • • • • • • • • • • •	

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg	
6947.2 7262.0	5530.0 5826.0	Twin Creek NVJ01		0.00 0.00	0.00 0.00	

PROJECT PLAN OF DEVELOPMENT AND MASTER SURFACE USE PLAN

Wolverine State #16-1

NAME OF APPLICANT:

Wolverine Gas and Oil Company of Utah,

LLC

One Riverfront Plaza, 55 Campau NW Grand Rapids, Michigan 49503-2616

PROJECT NAME:

"Wolverine State #16-1"

NW/NW of Section 16

Township 23 South – Range 1 West

ATTACHMENTS:

A.) Project Map/Survey

B.) Well Site Location Layout

C.) Typical Cross Sections (Cut and Fill)D.) Wildlife & Vegetative Species of

Concern Summary

E.) Cultural Resource Survey Report

I. DESCRIPTION OF PROJECT:

Wolverine Gas and Oil Company of Utah, LLC (Wolverine) proposes to drill and explore for hydrocarbons, using a directional drilling program, from the Navajo Formation at depths of approximately $4,810^{\circ} - 7,036^{\circ}$ and approximately $8,062^{\circ} - 9,100^{\circ}$ within the Wolverine Federal Exploration Unit situated in Sevier County, Utah:

TOWNSHIP 23 SOUTH, RANGE 1 WEST

Northwest Quarter of Northwest Quarter (NW/NW) of Section 16

Well Name & No.	Target	Elev.	Location	TD	Footages
LEASE # UTU-73528		1	1	7	
Wolverine State #16-1	Navajo 1 and 2	5,736'	NW NW Sec 16, T23S-R1W	8,100'	1,680' FNL; 2,265' FWL

The attached Project Map (Attachment A) indicates the proposed well site and its intended configuration. Additionally, the existing access route is indicated. This well is being drilled within the "Wolverine Federal Exploration Unit" and upon privately owned surface.

Mineral rights within the Wolverine Federal Exploration Unit are owned by a variety of interests and are state owned at the target bottom-hole location for this proposed well. The proposed surface plan will be reviewed and inspected by the appropriate regulatory agencies, state and federal, to ensure proper utilization of the surface reflecting an effort by Wolverine to minimize surface disturbance and waste. Appropriate Onshore Oil and Gas Orders and those of the Utah Division of Oil, Gas and Mining will be followed in the constructing, drilling, completion, operation, plugging and surface reclamation of this well.

The project is situated within an area that is referred to by the Utah Division of Oil, Gas and Mining (Statement of Basis, Kings Meadow Ranches 17-1, October 21, 2003) as "... placed in the High Plateaus section of the Colorado Plateau physiographic province in western central Utah. Some people have characterized this area as being in the Basin and Range – Colorado Plateau transition zone." The drill site itself is located in a flat area between steep hills and is contiguous to Highway 24 from which access to this site will be established. The flat area is dominated by sagebrush – grass communities and the nearby hillsides are dominated by Pinyon Pine – Juniper communities. The access route consists of an improved driveway off from Highway 24 entering onto the well site. BLM road construction standards will be adhered to as new improvements are constructed.

Wolverine's proposed "Wolverine State #16-1" project is most easily accessible from Sigurd, Utah. From Sigurd, one would drive down Highway 24 heading east/southeasterly. At mile marker 13, drive approximately 0.6 miles and turn easterly onto the existing access road driving approximately 200 yards to the proposed well pad location.

Surface water is located in the area primarily in the form of the Sevier River, in the Peterson Creek drainage, a tributary of Brine Creek. Local springs arising from the volcanic rocks and ephemeral drainages also exist in the area including a drainage way situated along Highway 24. The Sevier River is approximately three (3) miles west of this proposed location.

Geology and Soil Types

Again quoting from the "Division of Oil, Gas and Mining, Statement of Basis, Kings Meadow Ranches 17-1", the well "...will likely spud into a thin alluvium covering the evaporate-rich Jurassic age Arapien shale." "The Arapien Shale may have been somewhat intruded or elevated into the area between the Sevier Fault and the considerable parallel secondary faulting mapped in the Cedar Mountain – Black Mountain area..." It is anticipated that from surface to approximately 400 feet in depth, the lithology of the Quaternary will consist of unconsolidated sediments.

The soil type classified at the Wolverine State #16-1 wellsite is the Billings silty clay loam. This soil type is a fine-silty, mixed calcareous, mesic Typic Torrifluvents and is usually found in areas containing two (2) to five (5) percent slopes. The soil is a deep, drained, silty clay loam. It features a light gray, moderately alkaline, strongly calcareous, silty clay loam surface soil that is approximately ten (10) inches thick. The subsoils consist of a light gray, moderately alkaline, friable, silty clay loam approximately 32 inches thick. The substrate material is a light gray, moderately alkaline, friable, silty clay loam with a small amount of gypsum veining.

Assuming that the drilling and completion of this well results in its ability to commercially produce hydrocarbons, appropriate market connections will be made upon proper permitting of such activities by all agencies having jurisdiction over said activities.

II. SOIL EROSION CONTROL MEASURES:

The well pad will be sloped at about 1%, in the direction of the site's drainage so as to provide for a well-drained work area during drilling operations. Appropriate collection and infiltration basins will be constructed in the sloped area of the drill pad.

In all fill areas, the edges shall be diked to control run off.

Appropriate drill site drainage and sedimentation control measures will be incorporated in the operational plan. These may include utilization of earthen dikes along the fill portion of the drilling pad perimeter, stabilization of slopes as needed, location of the reserve pits in the cut portion of the drilling pad and the pad constructed so as to slope toward a collection and infiltration basin. Construction of the drill site shall be in accordance with the regulations and stipulations as defined by the State of Utah, Department of Natural Resources, Division of Water Rights.

Reclamation of the site will be in accordance with Best Management Practices and requirements of the Bureau of Land Management.

III. EXISTING ACCESS ROADS AND ROAD IMPROVEMENTS

The existing access road is identified and labeled on the project map. Steep, rough topography is not identified as a problem along our access route which was constructed by initially using fill material and covering it with approximately eight (8) inches of shale/gravel. Another layer of road base material, approximately four (4) inches in depth, was placed on top of the shale/gravel.

IV. LOCATION OF EXISTING WELLS

The recently drilled "King Meadow Ranches 17-1" well is situated approximately 200 yards southwesterly of this proposed well site location and is situated in the Southeast Quarter of the Northwest Quarter (SE/NW) of Section 17, Township 23 South, Range 1 West, Sevier County, Utah. "Wolverine Federal 17-2" is located approximately one-half mile southerly of this proposed well site and is situated in the Southeast Quarter of the Southwest Quarter (SE/SW) of Section 17, Township 23 South, Range 1 West, Sevier County, Utah.

V. DRILLING METHOD

Wolverine proposes to use a directional drilling program for the Wolverine State #16-1. The mountainous terrain of the area is such that directional drilling is the most efficient method to minimize surface disturbance. By locating the well pad on a relatively flat surface, and drilling a directional well beneath this challenging topography, Wolverine can most effectively minimize surface disturbance and ensure proper utilization of resources.

VI. LOCATION AND TYPE OF WATER SUPPLY

Water for drilling the Wolverine State #16-1 will be purchased from water wells nearby or drilled on location and pumped into storage tanks at the site. Water for drilling from nearby well(s) will be hauled to location and stored in storage tanks on the drill site. Wastewater will not be discharged on the surface at this site and the drilling of the well will not require a wastewater management plan.

VII. CONSTRUCTION MATERIALS

In most circumstances, natural earth materials were used for the construction of roads and fills. These were taken from locations essentially contiguous to or nearby the locations to be improved. When necessary, road base materials were used and delivered

by the contractor for application on site and specifically as the initial fill material for the access road, which was then covered with approximately eight (8) inches of shale/gravel.

VIII. METHODS FOR HANDLING WASTE

The Reserve Pit will be dug on the well pad per the attached Well Site Location Layout (Attachment B). It will be used for the disposal of waste mud and drill cuttings and will be located on the south portion of the well site plan. The pit will be 100 feet X 240 feet and will be 10 feet deep. The pit will be lined with a synthetic liner having a minimum thickness of 12 mills and if the reserve pit is built in rock, geotextile or some other material approved by the Division of Oil, Gas and Mining shall be utilized. The Division of Oil, Gas and Mining shall be notified prior to lining the reserve pit in order to allow for Division inspection. Rules pursuant to R649-3-16 will be followed regarding the reserve pit as well as those governing Onshore Oil and Gas Operations (43 CFR 3160.)

Upon evaporation of fluids, pit closure occurs with the back fill of soil and its compaction to prevent settling. The usage of the pit is further described in the section VIII under pit closure.

All garbage will be taken off site and disposed of properly. Pursuant to R649-3-14, all rubbish and debris shall be kept in containers on the well site, and will be hauled to an approved disposal site upon completion of drilling and completion operations and as needed during such operations. There will be no chemical disposal of any type. Sewage is handled through the renting of portable toilets. These are serviced by the rental company and removed from site when no longer required.

IX. PLANS FOR RECLAMATION OF THE SURFACE

<u>Pit closure:</u> The pits will be fenced on three sides during all drilling operations and then the fourth side will be immediately fenced when the rig is moved off location. After evaporation of fluids, back-fill of sub-soil and compaction to prevent settling will occur within 90 days of the drilling and completing of the well. If necessary after 90 days, the fluids will be sucked out of the pit and transported off site.

The topsoil will be stripped off and stock piled in an area not to be disturbed. The topsoil will be placed back on the pit after back filling and then prepped for re-seeding.

The approximate Pit size is indicated on the Well Site Location Layout diagram attached hereto (Attachment B).

<u>Revegetation Methods:</u> Disturbed areas will be disked, seeded and "dragged", as needed; seeding with a mixture approved by the local USDA Natural Resource Conservation Service or the Bureau of Land Management.

Wolverine generally requires at least twelve (12) pounds per acre of seed distribution. Wolverine suggests that autumn seeding practices be used due to the terrain in this project area. Spring rain events are common and tend to cause severe run-off. Fall seeding will allow any moisture, whether rain or snow, to assist the seed into the ground.

Other Practices: Other practices that will be utilized to reclaim disturbed areas will include riprap when and if necessary to prevent erosion and the installation of silt fencing in sensitive and/or erosive areas.

<u>Timetable:</u> Reclamation of the surface will commence as soon thereafter construction, drilling and well completion are concluded, as is practicable, depending on weather. In the event of a dry hole, the drill site and roadways will be restored to their original condition as nearly as practicable within 180 days after plugging date of the well.

X. SURFACE OWNERSHIP

The surface of the proposed well site is privately owned.

XI. WELLSITE LAYOUT

Please see the attached "Well Site Location Layout" (Attachment B) for the well configurations.

XII. PIPELINES AND STREAM CROSSINGS

PIPELINES: In the event of hydrocarbon production requiring transmission by pipeline, the proposed pipeline(s) will be designed, constructed, tested, operated and maintained in accordance with standard safety practices and by a combination of construction techniques intended to minimize to the greatest extent practical the impacts upon natural resources.

Pipelines will typically be installed by trenching. In these trenched areas, the contractor shall strip and stockpile topsoil to be replaced over the backfill portion upon completion of construction operations. Silt fencing will be installed at all stream crossings.

The proposed pipelines will be constructed with a combination of methods intended to minimize impacts to private, state and federally owned property, county roads

and natural resources. The pipeline will be constructed by a combination of conventional construction techniques and special measures designed to minimize impacts to natural resources. Pipelines will be adequately compacted before the topsoil is replaced for reseeding.

In general and where required, soil erosion control measures will consist of appropriate BMPs (Best Management Practices) to reduce the potential for erosion. The BMPs that will be utilized in upland areas include use of construction barriers where appropriate, land clearing, spoil piles, staging and scheduling, seeding and mulching. Note that spoil piles will not typically be seeded since exposure of the spoil piles should be minimal in time. All other proper BMP measures will be implemented to reduce the potential for erosion. Seeding of all raw soils after burial of pipe will be performed. However, mulching will be performed only within state or county road right-of-ways.

Generally speaking, in wetlands, appropriate BMPs will be implemented to minimize the potential for soil erosion within wetland construction zones. These measures shall include, but not be limited to, clearing, barriers, staging, filters, silt fencing, spoil piles, dewatering, seeding, and mulching.

XIII. GENERAL

TIMELINE: The following is a general order of construction and sequence of earth change by which our operations will proceed:

- 1.) Access Road and Well Pad Construction
- 2.) Drilling and Well Completion Operations
- 3.) Initial Well Pad Restoration
- 4.) Clearing of Pipeline Rights-of-way (if needed)
- 5.) Delivery and Layout of Pipe
- 6.) Pipe Welding and Inspection
- 7.) Trenching of Pipe
- 8.) Placement and Burying of Pipe
- 9.) Final Restoration of Site/Access/Pipeline Route
- 10.) Re-Seeding

All hillsides, creek banks, and other places where contractor has moved earth to facilitate operations shall be restored to as near original condition as practical. Replaced material and/or backfill will be protected from erosion to the satisfaction of Wolverine, the Bureau of Land Management and the Utah Division of Oil, Gas and Mining without undue delay.

Upon completion of any backfill, contractor shall clear pipeline rights-of-way and access routes of large rocks, stumps and other debris; fill holes, ruts and depressions, and shall keep the access road in a neat and acceptable condition. All cleanup shall be maintained by the contractor until final acceptance by Wolverine and the enforcing agency.

XIV. ENVIRONMENTAL IMPACT ASSESSMENT:

It is anticipated that the drilling and operations planned, provided the success of this well, will not have any adverse affects to any wildlife or aquatic life in the area. There will be only a minor effect on the surface cover. Drilling and production operations should have minimal effect on the population patterns, land use, public utilities or public services in the near future for this rural area.

Noise levels during drilling and completion operations may be continuous but not unusually high. If production is achieved, noise levels should be minimal during the operation and maintenance of the wells.

Necessary soil erosion and sedimentation safeguards will be built into the well pad, access and future proposed pipeline routes to protect any nearby lowlands, where appropriate. Particular care will be exercised in order that all drain ditches be maintained and kept unobstructed to prevent water backup against spoil banks or backfill, causing erosion. The cumulative long-term effect on the immediate environment should be minimal.

If the well is productive, the effect on the air quality in the area is expected to be practically non-existent. Human activity in this area is somewhat limited, due to the nature of the location. Ranching operations and any activities in the area should not be adversely affected.

The site will then be contoured as closely as practical to its natural state, fine graded and stabilized. The well site and access route will be restored as soon as practical. If a well is productive, existing dikes will be maintained and erosion control procedures, as specified and required by the Bureau of Land Management, will be followed to insure protection of the local ecosystem.

Cultural

Please see, "Attachment E", Cultural Resource of A Well Pad (A-2) Near Sigurd, Sevier County, Utah.

Wildlife

Please see "Attachment D", a summary of Wildlife and Vegetative Species of Concern.

XV. SUMMARY:

In conclusion, the environmental impact of this project is considered to be minimal and every effort will be made to ensure the protection and preservation of the environment, as well as the standard of living for those affected by its operation.

This proposed project is aimed at increasing the hydrocarbon reserves within the State of Utah. In addition, in the event that production can be established in this project, it will be of financial benefit to the private holders of oil and gas rights within the "Wolverine Federal Exploration Unit", including the Bureau of Land Management in fulfillment of its stewardship responsibilities over federally owned oil and gas assets. We consider the environmental impact of this project to be slight and we will make every effort to be conscientious operators and to insure protection and preservation of the environment during the course of our drilling and producing operations.

Sincerely,

Wolverine Gas and Dil Company of Utah, LLC

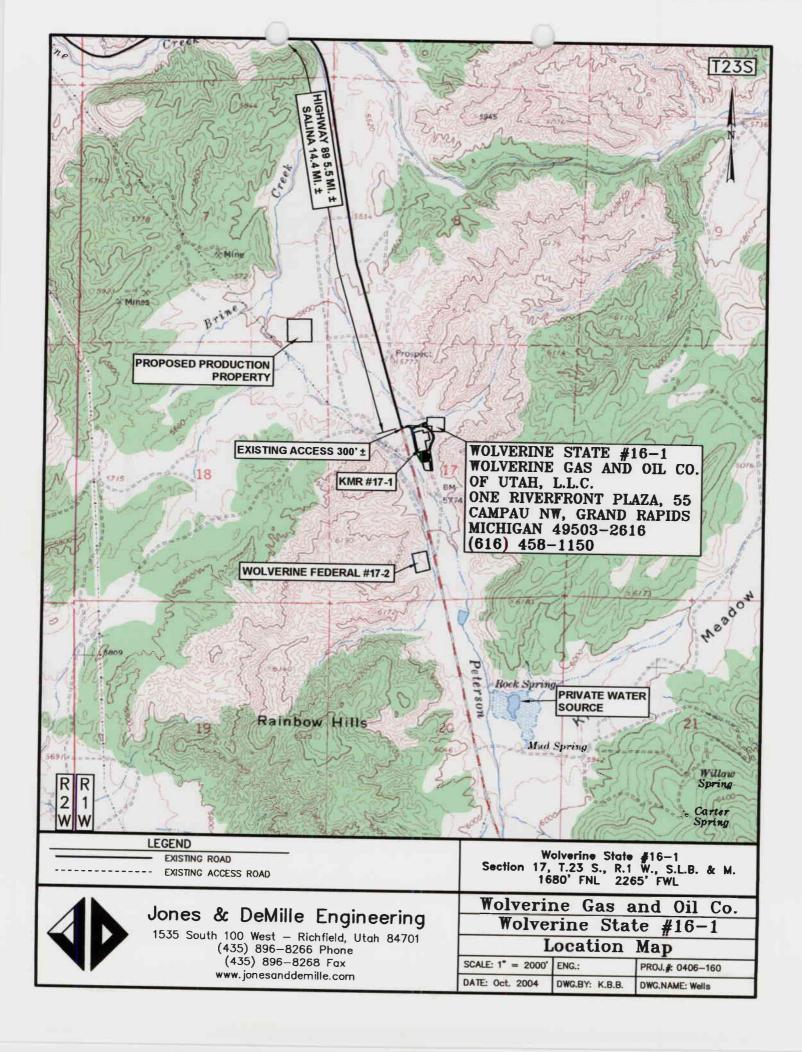
Authorized Permitting Agent: Shawn Burd

Western Land Services – Western Division 54 West Seymour Street Sheridan, WY 82801

Donald L. Anderson, Chief Operating Officer

Phone: 307-673-1817 Local Contact: Shawn Burd

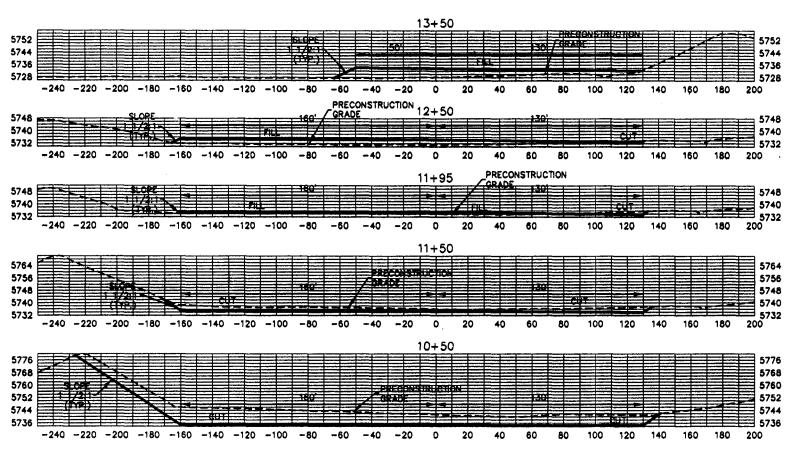
Phone: 435-896-1943



WOLVERINE GAS & OIL COMPANY OF UTAH. LLC.

TYPICAL CROSS SECTIONS FOR

WOLVERINE STATE #16-1 SECTION 17, T23S, R1W, S.L.B.&M.





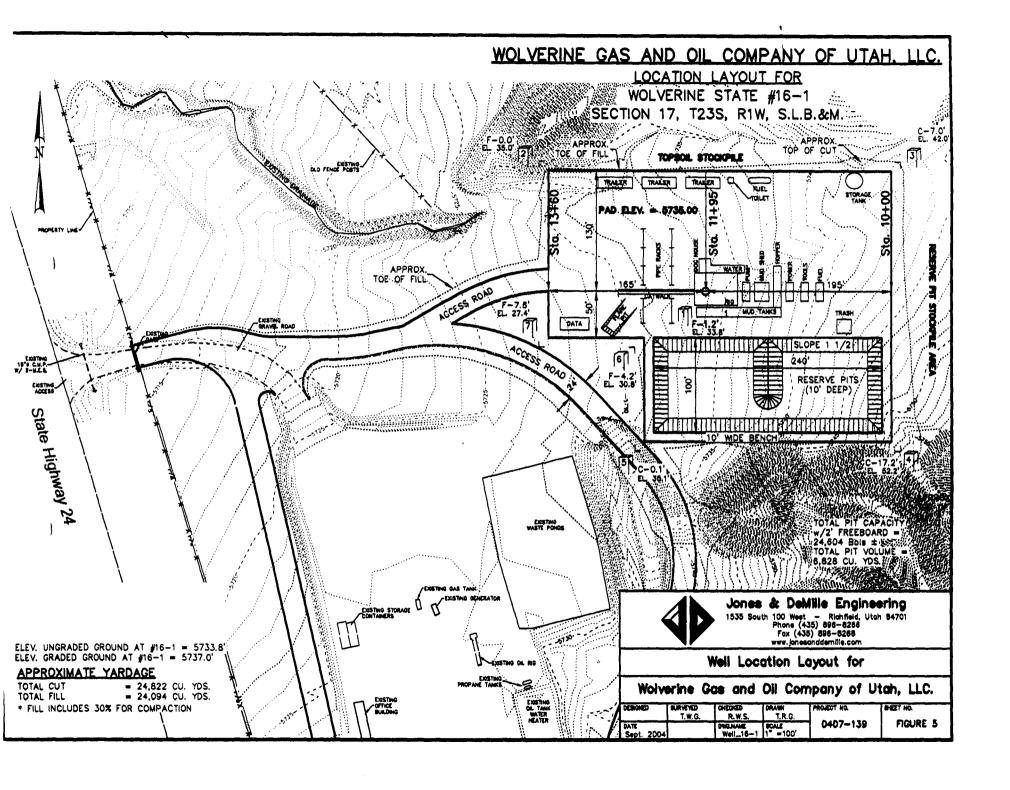
Jones & DeMile Engineering

1535 South 100 West — Richfield, Utah 84701 Phons (435) 898-8286 Fax (435) 898-8285 www.joneconddomills.com

Typical Cross Sections for

Wolverine Gas & Oil Company of Utah, LLC.

DEBIONED	SURVEYED	OHECKED		PROJECT NO.	SHEET NO.
DATE		R.W.S.	T.R.G.	0407139	FIGURE 5A
Sept. 200	<u> </u>	Design	1" =60'		



United States Department of the Interior

BUREAU OF LAND MANAGEMENT Utah State Office P.O. Box 45155 Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

August 16, 2004

Memorandum

To:

Field Office Manger, Richfield Field Office

From:

Michael Coulthard, Petroleum Engineer

Subject:

API#

2004 Plan of Development Wolverine Unit Sevier County,

Utah.

WELL NAME

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2004 within the Wolverine Unit, Sevier County, Utah.

(Proposed PZ Navajo)

LOCATION

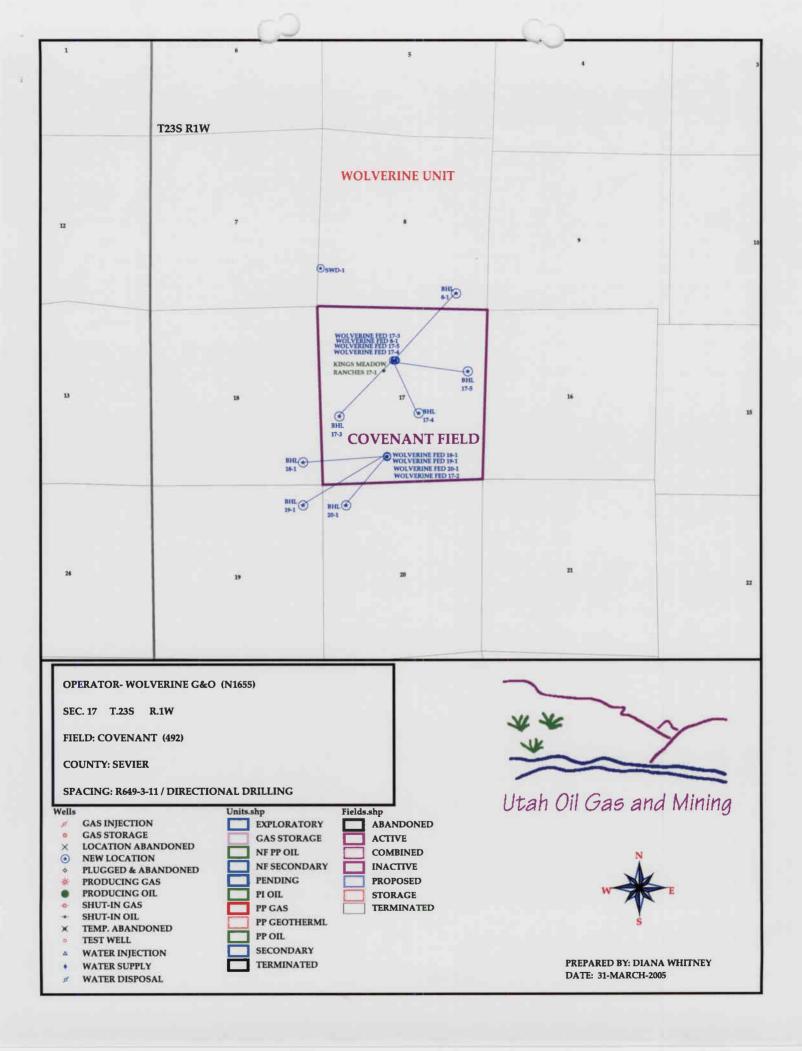
43-041-30032 Wolverine Federal 20-1 Sec 17 T23S R01W 0833 FSL 1925 FWL Sec 20 T23S R01W 0660 FNL 0660 FWL BHT. 43-041-30033 Wolverine Federal 19-1 Sec 17 T23S R01W 0857 FSL 1919 FWL BHL Sec 19 T23S R01W 0660 FNL 0660 FEL 43-041-30034 Wolverine Federal 18-1 Sec 17 T23S R01W 0845 FSL 1922 FWL BHL Sec 18 T23S R01W 0660 FSL 0660 FEL 43-041-30035 Wolverine Federal 17-4 Sec 17 T23S R01W 1736 FNL 2298 FWL Sec 17 T23S R01W 1980 FSL 1980 FEL 43-041-30036 Wolverine Federal 17-3 Sec 17 T23S R01W 1736 FNL 2283 FWL BHL Sec 17 T23S R01W 1980 FSL 0660 FWL 43-041-30037 Wolverine State 16-1 Sec 17 T23S R01W 1736 FNL 2253 FWL Sec 16 T23S R01W 0660 FNL 0660 FWL BHL

43-041-30038 Wolverine Federal 17-5 Sec 17 T23S R01W 1736 FNL 2268 FWL

BHL Sec 17 T23S R01W 1980 FNL 0660 FEL

WORKSHEET APPLICATION FOR PERMIT TO DRILL

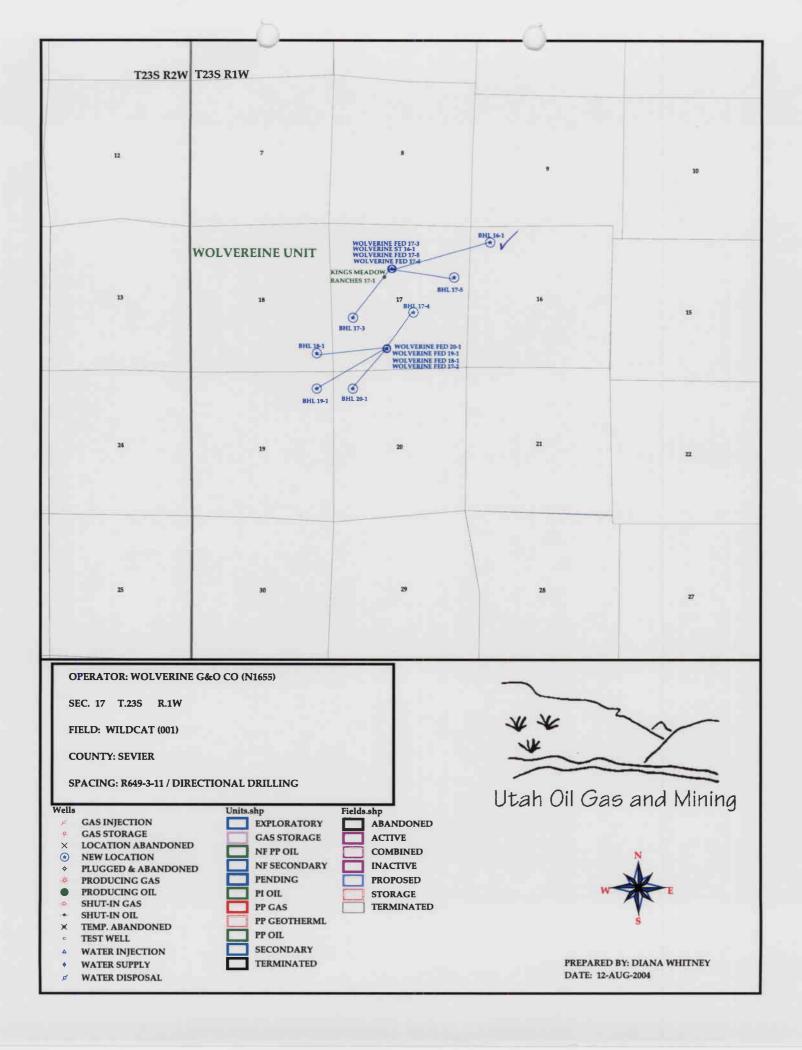
APD RECEIVED: 12/30/2004	API NO. ASSIGNED: 43-041-30037
WELL NAME: WOLVERINE FED 8-1 OPERATOR: WOLVERINE GAS & OIL CO (N1655) CONTACT: RICHARD MORITZ	PHONE NUMBER: 616-458-1150
PROPOSED LOCATION: SENW 17 230S 010W SURFACE: 1680 FNL 2265 FWL SEE BOTTOM: 0450 FSL 1010 FEL Sec & SEVIER COVENANT (492) LEASE TYPE: 1 - Federal LEASE NUMBER: UTU-73528 SURFACE OWNER: 4 - Fee PROPOSED FORMATION: NAVA COALBED METHANE WELL? NO	INSPECT LOCATN BY: / / Tech Review Initials Date Engineering Geology Surface LATITUDE: 38.80554 LONGITUDE: -111.9332
RECEIVED AND/OR REVIEWED: Plat Bond: Fed[1] Ind[] Sta[] Fee[] (No. WY 3329 Potash (Y/N) Oil Shale 190-5 (B) or 190-3 or 190-13 Water Permit (No. 63-2529 NOCC Review (Y/N) (Date: Fee Surf Agreement (Y/N)	LOCATION AND SITING: R649-2-3. Unit WOLVERINE R649-3-2. General Siting: 460 From Qtr/Qtr & 920' Between Wells R649-3-3. Exception Drilling Unit Board Cause No: Eff Date: Siting: R649-3-11. Directional Drill
COMMENTS: STIPULATIONS: - fuding	approx



WORKSHEET

APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 12/30/2004	API NO. ASSIGNE	D: 43-041-3003	37
WELL NAME: WOLVERINE ST 16-1 OPERATOR: WOLVERINE GAS & OIL CO (N1655) CONTACT: RICHARD MORITZ PROPOSED LOCATION:	PHONE NUMBER: 61	.6-458-1150	
SENW 17 230S 010W	INSPECT LOCATN	BY: / /	
SURFACE: 1680 FNL 2265 FWL	Tech Review	Initials	Date
SEVIER	Engineering		
WILDCAT (1)	Geology		
LEASE TYPE: 3 - State LEASE NUMBER: ML-46605	Surface		
SURFACE OWNER: 4 - Fee PROPOSED FORMATION: NAVA COALBED METHANE WELL? NO	LATITUDE: 38.80 LONGITUDE: -111.	.9332	
Plat Bond: Fed[] Ind[] Sta[] Fee[] (No. 19107598) Potash (Y/N) N Oil Shale 190-5 (B) or 190-3 or 190-13 Water Permit (No. 63-2529) N RDCC Review (Y/N) (Date:) Fee Surf Agreement (Y/N) Sur/like Driver is Writering	R649-3-3. E Drilling Uni Board Cause Eff Date: Siting:	eneral com Qtr/Qtr & 920' xception t	
STIPULATIONS:	(R.cd 9-7-04)		
Z- STATE	mout of Basi	<u>S</u>	



ON-SITE PREDRILL EVALUATION Division of Oil, Gas and Mining

OPERATOR: Wolverine Gas and Oil Company

WELL NAME & NUMBER: Wolverine State 16-1

API NUMBER: 43-041-30037

LEASE: State FIELD/UNIT:

LOCATION: 1/4,1/4 SENW Sec: 17 TWP: 23S RNG: 1W 1736 FNL 2253 FWL LEGAL WELL SITING: 460 F SEC. LINE; 460 F 1/4,1/4 LINE; 920 F ANOTHER WELL.

GPS COORD (UTM): X= 428534 E; Y= 4295893 N SURFACE OWNER: Wolverine.

PARTICIPANTS

M. Jones (DOGM), Shaun Burd (Western Land Services), Ed Bonner (SITLA).

REGIONAL/LOCAL SETTING & TOPOGRAPHY

Proposed location is ~3.5 miles south of Sigurd, in Sevier County, Utah. Staked location lies east of Highway 24 on Wolverine Gas and Oil Company owned property. Steep hills surround the sagebrush dominated flat, from where the well is proposed to be drilled. Access to this well will be along existing Wolverine oil field roads from UDOT maintained roads. No new access road will be built for this location, as it will utilize existing access. The direct area drains to the northwest, into Brine Creek then further west eventually into the Sevier River, a year-round live water source ~2.5 miles northwest of the proposed location. Dry washes run throughout the area.

SURFACE USE PLAN

CURRENT SURFACE USE: Grazing and wildlife habitat.

PROPOSED SURFACE DISTURBANCE: $180' \times 360' \text{ w} / 240' \times 100' \times 10'$ (excluded) pit.

LOCATION OF EXISTING WELLS WITHIN A 1 MILE RADIUS: 8 proposed, producing, and/or PA wells are within a 1 mile radius of the above proposed well.

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: On location and along roadway to production facilities south of 17-1 location.

SOURCE OF CONSTRUCTION MATERIAL: Obtained locally and trucked to site.

ANCILLARY FACILITIES: None anticipated.

WILL DRILLING AT THIS LOCATION GENERATE PUBLIC INTEREST OR CONCERNS? (EXPLAIN): This well will be drilled on a pad consisting of 4 wells, all to be drilled directionally. The pad sits next to a recently drilled vertical well, Kings Meadow Ranches 17-1. Highway 24 runs past all of this activity, therefore any and all activity associated with these wells can be seen by the public, which may increase public interest and/or concern.

WASTE MANAGEMENT PLAN:

Portable chemical toilets will be emptied into the municipal waste treatment system; garbage cans on location will be emptied into centralized dumpsters, which will be emptied into an approved landfill. Drilling fluid, and completion/frac fluid will be removed from the pit upon completion of the well. Cuttings will be buried in the pit unless oil based mud is used. If oil based mud is used disposal of the cuttings should be discussed with the Division. Used oil from drilling operations and support will be hauled to a used oil recycling facility. Produced water will be disposed of at an approved facility.

ENVIRONMENTAL PARAMETERS	
AFFECTED FLOODPLAINS AND/OF immediate area of the propos	R WETLANDS: Dry washes run throughout the sed well location.
FLORA/FAUNA: Sagebrush, greated rodents, fowl.	asewood, winterfat, 4-wing salt brush, deer
SOIL TYPE AND CHARACTERISTIC	CS: Rocky clay.
SURFACE FORMATION & CHARACTE	ERISTICS: Arapien Shale
EROSION/SEDIMENTATION/STABII	LITY: Erosive upon disturbance.
PALEONTOLOGICAL POTENTIAL:_	None observed.
RESERVE PIT	
CHARACTERISTICS: Dugout ear	rthen, 240'x100'x10', exterior to location.
LINER REQUIREMENTS (Site Ran	nking Form attached): Liner required.
SURFACE RESTORATION/RECLAMATION I	<u>PLAN</u>
As per Wolverine.	
SURFACE AGREEMENT: Wolverine owns	s the surface.
CULTURAL RESOURCES/ARCHAEOLOGY:	Mountain States Archaeology.
OTHER OBSERVATIONS/COMMENTS	
	ed to a dry wash on the north side of the permits with the Division of Water Rights my construction.
ATTACHMENTS	
Photos of this location were	e taken and placed on file.
Mark L. Jones	September 7, 2004 / 3:00 pm
1 N N - W K P, P K P, N P, N A Y V P.	DATE/ CIME

Evaluation Ranking Criteria and Ranking Sorre For Reserve and Onsite Pit Liner Requirements

		-
Site-Specific Factors	Ranking	Site Ranking
Distance to Groundwater (feet)	0	
>200 100 to 200	0 5	
75 to 100	10	
25 to 75	15	
<25 or recharge area	20	0
Distance to Surf. Water (feet)		
>1000	0	
300 to 1000	2	
200 to 300 100 to 200	10 15	
< 100	20	0
Distance to Nearest Municipal		_ _
Well (feet)		
>5280	0	
1320 to 5280 500 to 1320	5 10	
<500	20	0
Distance to Other Wells (feet)		
>1320 300 to 1320	0 10	
<300	20	0
Native Soil Type	•	
Low permeability Mod. permeability	0 10	
High permeability	20	10
Fluid Type		
Air/mist Fresh Water	0 5	
TDS >5000 and <10000	10	
TDS >10000 or Oil Base Mud Fluid	15	
containing significant levels of		
hazardous constituents	20	10
Drill Cuttings		
Normal Rock	0	
Salt or detrimental	10	0
Annual Precipitation (inches)		
<10	0	
10 to 20	5	
>20	10	5
Affected Populations		
<10	0	
10 to 30	6	
30 to 50	8	
>50	10	0
Presence of Nearby Utility Conduits		
Not Present	0	
Unknown	10	
Present	15	10

Sensitivity Level I = 20 or more; total containment is required, consider criteria for excluding pit use. Sensitivity Level II = 15-19; lining is discretionary.

35___

(Level __I_ Sensitivity)

Sensitivity Level III = below 15; no specific lining is required.

Final Score

DIVISION OF OIL, GAS AND MINING APPLICATION FOR PERMIT TO DRILL STATEMENT OF BASIS

OPERATOR:	Wolverine Gas and Oil Company		
WELL NAME & NUMBER:	Wolverine State 16-1		
API NUMBER:	3-041-30037		
LOCATION: 1/4,1/4 SENW Sec	: <u>17 TWP: 23 S_RNG: 1 W_1736 FNL 2253 FW</u> L		

Geology/Ground Water:

This location is placed in the High Plateaus section of the Colorado Plateau physiographic province in western central Utah. Some people have characterized this area as being in the Basin and Range - Colorado Plateau transition zone. The location is on fee acreage a few miles east of the Sevier River, in the Peterson Creek drainage, a tributary of Brine Creek, which subsequently flows into the Sevier River. The rancher heavily allocates water rights for the local springs, which arise from the volcanic rocks just to the east, for agriculture.

The well will likely spud into a thin alluvium covering the evaporite-rich Jurassic age Arapien Shale. The proposal calls for a saturated salt mud system from below the surface casing into the Navajo Sandstone. The quality of any surface water that manages to escape upstream allocation is diminished as it flows past the location and into Brine Creek, owing to the evaporite minerals in the Arapien Shale. Any water contained in the Arapien Shale is also likely to be of poor quality. A Division of Water Rights publication notes that aquifers in close proximity to the Arapien Shale are also likely to contain ground water with high TDS levels. Inasmuch as there do not appear to be any intervening aquifers documented in this area, which lie between the Arapien Shale and the underlying Navajo Sandstone, it is unlikely that any high quality ground water will be encountered.

At this location it is unlikely that any high quality ground water resource will be encountered in the Navajo, at that depth, in any strata drilled below the Navajo or at all. The proposed casing, cementing and drilling fluid program should be sufficient to control and isolate the poor quality ground waters expected to be encountered in a well at this location. Two surface water rights, a point to point right and an underground water right are found within a mile to the east. The underground water right is for a 156' deep well more than half a mile east.

Reviewer:	Christopher J. Kierst	Date:	October 19, 2004	

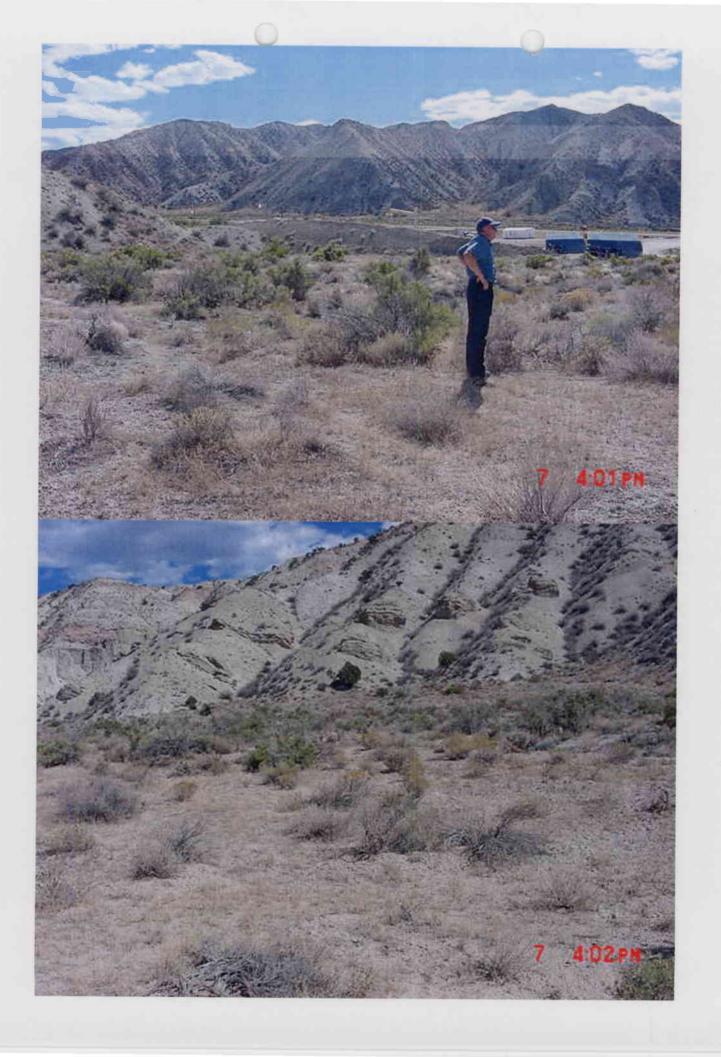
Surface:

Proposed location is ~3.5 miles south of Sigurd, in Sevier County, Utah. Staked location lies east of Highway 24 on Wolverine Gas and Oil Company owned property. Steep hills surround the sagebrush dominated flat from which the well is proposed to be drilled. Access to this well will be along existing Wolverine oil field roads from UDOT maintained roads. No new access road will be built for this location, as it will utilize existing access. The direct area drains to the northwest, into Brine Creek then further west eventually into the Sevier River, a year-round live water source ~2.5 miles northwest of the proposed location. Dry washes run throughout the area. Some alterations are planned to a dry wash on the north side of the location. The appropriate permits with the Division of Water Rights will be obtained prior to any construction. Shaun Burd, Western Land Services, represented Wolverine Gas and Oil, while Ed Bonner was in attendance, representing the SITLA royalty interest. Sevier County was invited but chose not to attend this on-site evaluation.

Reviewer: Mark L. Jones Date: October 14, 2004

Conditions of Approval/Application for Permit to Drill:

- 1. A synthetic liner with a minimum thickness of 12 mills shall be properly installed and maintained in the reserve pit.
- 2. Diversion of drainages around the pad.
- 3. Berm the location.

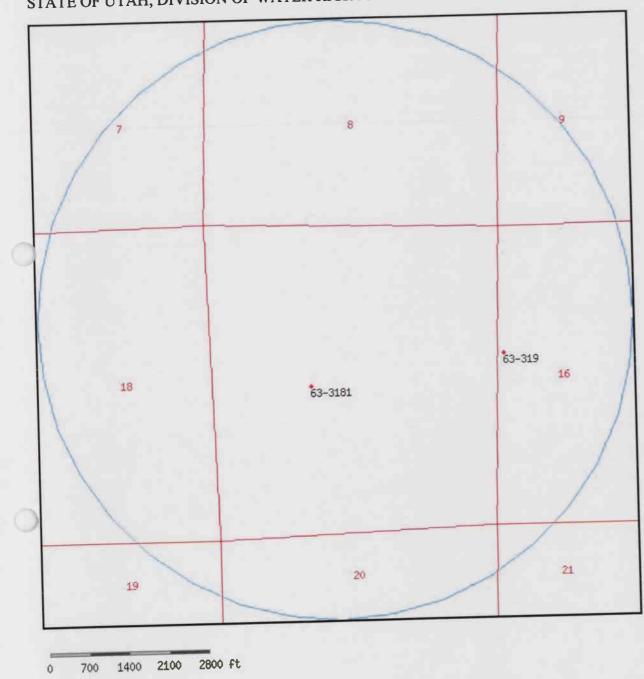




WRPLAT Program Output Listing

Version: 2004.03.26.00 Rundate: 10/19/2004 05:29 PM

Radius search of 5280 feet from a point S1736 E2253 from the NW corner, section 17, Township 23S, Range 1W, SL b&m Criteria:wrtypes=W,C,E podtypes=S,U,D,Sp,P status=U,A,P usetypes=all



Water Rights

WR Number	Diversion Type/Location	Well Log	Status	Priority Use	s CFS ACFT	Owner Name
63-3180	Surface		P	18700000 I	3.160 0.000	G. W. NEBEKER
	S2900 E1800 NW 17 23S 1W SL					SIGURD UT 84657
63-3181	Surface		P	18700000 DS	0.010 0.000	G. W. NEBEKER
	S2900 E1800 NW 17 23S 1W SL					SIGURD UT 84657
63-319	Underground		P	19560121 S	0.015 0.000	A. BRYANT AND J. LLEWELLYN YOUNG
,	N330 E100 W4 16 23S 1W SL					RICHFIELD UT 84701

Natural Resources | Contact | Disclaimer | Privacy Policy | Accessibility Policy



State of Utah

Department of Natural Resources

ROBERT L. MORGAN Executive Director

Division of Oil, Gas & Mining

MARY ANN WRIGHT Acting Division Director OLENE S. WALKER
Governor

GAYLE F. McKEACHNIE Lieutenant Governor

December 30, 2004

Wolverine Gas and Oil Company of Utah, LLC One Riverfront Plaza Grand Rapids, MI 49503

Re:

Wolverine State #16-1 Well, 1680' FNL, 2265' FWL, SE NW, Sec. 17, T. 23 South, R. 1 West, Bottom Location 660' FNL, 660' FWL, NW NW, Sec. 16, T. 23 South, R. 1 West, Sevier County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-041-30037.

Sincerely,

John R. Baza Associate Director

pab Enclosures

cc:

Sevier County Assessor

SITLA

Bureau of Land Management, Moab District Office



Operator:		Wolverine Gas and Oil Company of Utah, LLC				
Well Name & Numl	ber	Wolverine State #16-1				
API Number:		43-041-	30037	211-		
Lease: ML-46605						
Location:	SE NW	Sec. 17	T. 23 South	R. 1 West		
Bottom Location:	NW NW	Sec. 16_	T. <u>23 South</u>	R. <u>1 West</u>		

Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- 24 hours prior to cementing or testing casing
- 24 hours prior to testing blowout prevention equipment
- 24 hours prior to spudding the well
- within 24 hours of any emergency changes made to the approved drilling program
- prior to commencing operations to plug and abandon the well

The following are Division of Oil, Gas and Mining contacts and their work telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at (801) 538-5338
- Carol Daniels at (801) 538-5284 (spud)

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

- 4. In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.
- 5. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.
- 6. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)

Page 2 API #430-041-30037 December 30, 2004

7. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.



WOLVERINE GAS AND OIL COMPANY

of Utah, LLC

Energy Exploration in Partnership with the Environment

March 29, 2005

Ms. Diana Whitney Utah Division of Oil, Gas & Mining 1594 W. N. Temple, suite 1210 Salt Lake City, UT 84114-5801

RE: Sundry Notice

Wolverine Federal 8-1 API No. 43-041-30037

Dear Ms. Whitney:

Please accept the Sundry Notice for the Wolverine Federal 8-1, which will now terminate on BLM property. This well was originally permitted and approved as the Wolverine State 16-1. However, after updating of our interpretation with the wells recently drilled, we have decided that the bottom hole location needed to be changed to the SE/SE of Section 8, T23S-R-1W. This sundry covers: 1) revised bottom hole location, 2) changing the name of the well to reflect the new bottom hole location, and 3) changing the proposed casing program to be consistent with our current procedure. We have enclosed a revised drilling prognosis and directional plan.

If you have any questions, you may reach me at 616.458-1150.

Sincerely,

Edward A. Higuera, P.E.

Manager - Development

RECEIVED

MAR 3 0 2005

DIV. OF OIL, GAS & MINING

Enclosure

c: Steve Hash, Shawn Burd

CONFIDENTIAL

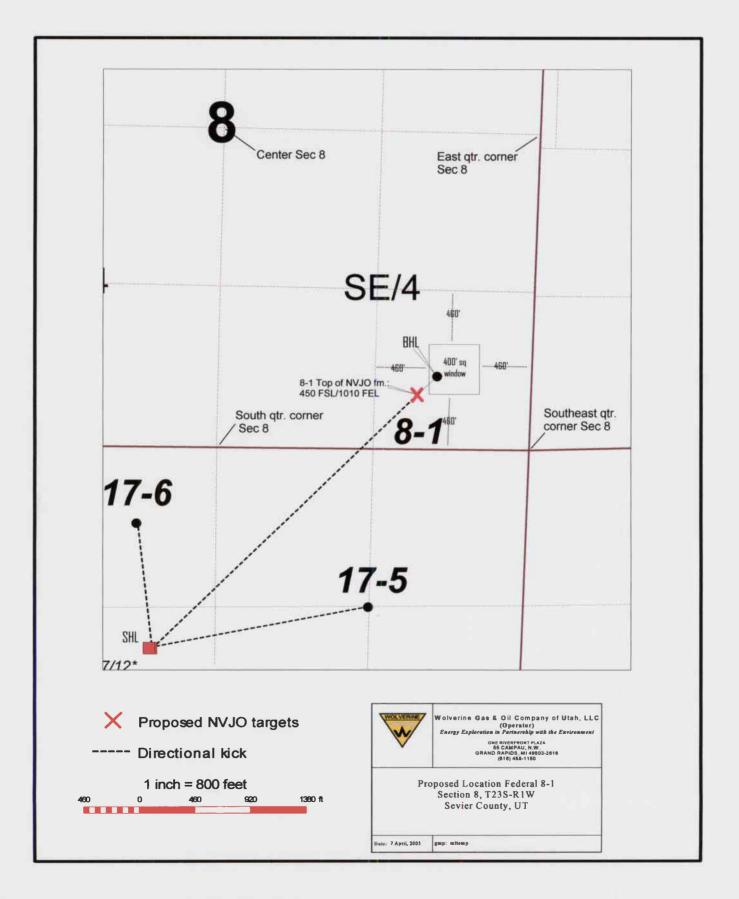
FORM 9

STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

DIVISION OF OIL, GAS AND MINING	UTU-73528		
SUNDRY NOTICES AND REPORTS ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	7. UNIT or CA AGREEMENT NAME: Wolverine Federal Unit		
1. TYPE OF WELL OIL WELL	WELL NAME and NUMBER: Wolverine Federal 8-1		
2. NAME OF OPERATOR:	9. API NUMBER:		
Wolverine Gas & Oil Company of Utah, LLC 3. ADDRESS OF OPERATOR: 1 PHONE NUMBER:	4304130037 10. FIELD AND POOL, OR WILDCAT:		
55 Campau NW CITY Grand Rapids STATE MI ZIP 49505 (616) 458-1150	Covenant		
4. LOCATION OF WELL FOOTAGES AT SURFACE: SHL: 1680 FNL & 2265 FWL Sec 17 T23S-R01W	county: Servier		
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SENW 17 23S 01W	STATE: UTAH		
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPO	RT, OR OTHER DATA		
TYPE OF SUBMISSION TYPE OF ACTION			
ACIDIZE DEEPEN NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: Approximate date work will start: CASING REPAIR NEW CONSTRUCTION CHANGE TO PREVIOUS PLANS OPERATOR CHANGE	REPERFORATE CURRENT FORMATION SIDETRACK TO REPAIR WELL TEMPORARILY ABANDON TUBING REPAIR		
CHANGE TUBING PLUG AND ABANDON SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: CHANGE WELL NAME PLUG BACK CHANGE WELL STATUS PRODUCTION (START/RESUME) COMMINGLE PRODUCING FORMATIONS RECLAMATION OF WELL SITE	VENT OR FLARE WATER DISPOSAL WATER SHUT-OFF OTHER:		
CONVERT WELL TYPE RECOMPLETE - DIFFERENT FORMATION			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volume	ies, etc.		
Permission is requested for the following: 1. Amend bottom hole location: FROM: 660' FNL & 660 FWL Sec 16 T23S-R01W. TO: 45-R01W. BHL 41955 2. Amend Well Name (for new BHL): FROM: Wolverine State 16-1 TO: Wolverine Federal:	51 X 42 41.037 38. 8113		
3. Amend Casing Program: FROM: 16", 65# 0-600', 9-5/8" 47# from 0-6750', 5-1/2" 17# from 0-8010' (est. TD) TO: 13-3/8" 68# from 0-2000', 9-5/8" 47# from 0-6545', 7" 26# 0-7450' (est. TD)	RECEIVED		
Approved by the Utah Division of	APR 0 8 2005		
Oil, Gas and Mining	DIV. OF OIL, GAS & MINING		
SENT TO OPERATOR 3: 4-18-05 CHO By: SENT TO OPERATOR	and a milalide		
NAME (PLEASE PRINT) Edward A. Higuera Manager-Develo	pment		
SIGNATURE Education Clare Date 4-07-6			
(This space for State use only)			

Federal Approval of this Action is Necessary



WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC

DRILLING PROGNOSIS

Wolverine Federal #8-1 SE SE SEC 8-T23S-R1W SEVIER CO., UTAH

BRIEF DRILLING PLAN

Due to surface topography constraints, directionally drill a 7450' MD (6600'TVD) test of the Navajo 1 formation on a day work contract basis from Wolverine's present work area known as Drill Pad A-2 (c) located in SE NW of Sec 17 T23S – R01W, Sevier Co, UT. Please refer to the directional drilling plan attached for detailed hole angle, trajectory and target information. Deviation is the primary drilling concern in this area. No abnormal pressure or hydrogen sulfide gas is expected, however, an H2S detector will be utilized. The projected surface and bottomhole locations are to be as follows:

Surface Location:

1680' fnl & 2265' fwl of Sec 17 T23N – R01W

BHL @ top of NVJO1 (5978' TVD) 450' fsl & 1010' fel of Sec 8 T23N – R01W

20" conductor casing will be cemented to surface at approximately 120 ft BGL. 13-3/8" surface csg will be set & cemented to surface in a 17-1/2" hole deviated to approximately 36 deg at +/- 2000' MD (+/- 1970' TVD). A 12-1/4" hole will then be drilled to +/- 6545' MD (5720' TVD) maintaining approximately a 36 deg tangent section. 9-5/8" protective casing will be set from surface to TD & cemented over the lower 2000'. An 8-1/2" hole will then be drilled to +/- 7450' (6600' TVD). 7" production casing will then be run from TD back to surface & cemented to approximately 500' into the 9-5/8" protective casing.

EMERGENCY NUMBERS

3.6 1° 1.77 1° 1.
Medical Helicopter (800)-453-0120
Sheriff Department (435)-896-2600
Fire Department-Richfield, UT (435)-896-5479
Bureau of Land Management (Richfield): (435)-896-1500
Bureau of Land Management (Salt Lake City) (801) 539-4045
Utah Division of Oil, Gas and Mining (Salt Lake City): (801)-538-5340

United States Bureau of Land Management

Contact Al McKee (801) 539-4045 24 hrs prior to spudding

Utah Division of Oil, Gas and Mining

Contact Carol Daniels (801) 538-5284, 24 hrs prior to spudding

GENERAL INFORMATION

OBJECTIVE: Navajo 1 @ 5978' (TVD)

ELEVATION: 5736' GL (actual) 5753' KB

PROJECTED TOTAL DEPTH:

7450' MD; 6600' TVD

SURFACE LOCATION:

1680' FNL & 2265' FWL

Section 17-23S-1W

COUNTY: Sevier

STATE: Utah

DIRECTIONS TO LOCATION:

From the town of Sigurd, Utah go south

approximately 3.5 miles on Hwy #24 to location on

the left side of the road.

PROPOSED CASING PROGRAM:

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Measured Depth Set
30"	20"	.25 wall	X42	PE welded	120'
17-1/2"	13-3/8"	68#	J-55	BTC	0'-2000'
12-1/4"	9-5/8"	* 47#	N-80	LTC	0'-6545'
8-1/2"	7"	** 26#	N-80	LTC	0' -7450'

^{*} due to availability 47# HCP-110 may be substituted for N80

^{**} due to availability 23# HCP-110 may be substituted for N80

Hole Size	Casing Size	Drift ID, in.	OD of Couplings	Annular Volume in OH, cf/ft	Annular Volume in Csg, cf/ft	Capacity of casing, cf/ft
30"	20"	Conductor	Na			
17-1/2"	13-3/8"	12.259	14.375	.6946	1.0982	.8406
121/4"	9-5/8"	8.525	10.625	0.3127	0.4659	0.4340
8-1/2	7"	6.250	7.656	.1268	.1438	.2148

GEOLOGIC FORMATIONS:

Formation	Interval (TVD)	Interval (MD)	Lithology	Prod	Abnormal Psi
Arapien	Surf – 5680'	Surf – 6505'	sh, siltstone,salt,evaporites		
TwinCreek1	5680'- 5980'	6505'-6810'	Carbonates	X	
Navajo 1	5980'- 6600'	6810'-7450'	Sandstone w/ minor shale	X	
Total Depth	6600'	7450'			

CONSTRUCTION OF SURFACE LOCATION

360'x 180' Pad 150'x 100' x 10' Reserve Pit with a 12 mil synthetic liner 96" diameter tin horn cellar, 10' deep. Flare pit a minimum of 100' from wellhead.

SURFACE HOLE: 120' to 2000'

Directionally drill a 17-1/2" hole with a PDC bit, mud motor & MWD equipment to approximately 2000' using salt mud system from prior well (make hole to fit 13-3/8" casing). Loss circulation could be a problem in this interval and, if such occurs, begin pumping LCM sweeps. If loss circulation cannot be healed with ±25 ppb LCM, consider dry drilling (no returns). Maintain hole angle and direction in keeping with the attached directional plan.

PRESSURE CONTROL & SAFETY EQUIPMENT FOR SURFACE HOLE

Bottom to Top (see attached 2M Diverter diagram)

20" 2M x 20" SOW flange

20" 2M x 20" 2M mud cross w/ (2) 7-1/16" 2M side outlets one outlet 7-1/16" HCR valve w/ 6" blooie line to mud separator & flare pit one outlet (blank)

20" 2M Annular Preventer

20" 2M flanged btm drilling nipple w/ fillup line

Upper kelly cock valves with handles available

Safety valves and subs to fit all drill string connections in use

Inside BOP or float sub available

Testing Procedure:

Annular Preventer & HCR Valve

The annular preventer will be pressure tested to 500 psi for a period of ten minutes or until provisions of the test are met, whichever is longer. At a minimum, the pressure test will be performed:

1) When the annular is initially installed

- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The annular preventer will be functionally operated once per week. All BOP drills will be recorded in the IADC driller's log.

Accumulator:

The accumulator will have sufficient capacity to open the hydraulically controlled gate valve (if so equipped), close the annular preventer, and retain a minimum of 200 psig above pre-charge on the closing manifold without the use of the closing unit pumps. The reservoir capacity will be double the accumulator capacity, and the fluid level will be maintained at the manufacturer's recommendations. The accumulator shall have two (2) independent power sources to close the preventers. Nitrogen bottles may be one of the independent power sources and, if so, shall maintain a charge equal to the manufacturer's specifications.

MUD PROGRAM FOR SURFACE HOLE

DEPTH	MUD WEIGHT	TYPE	VISC	FLUID LOSS
120 -2000'	9.6 - 10.2	Salt mud	40-55	N/C
Note: Sweep	hole every $100-2$	00 feet or as nee	ded for hole clean	ing. Maintain maximum
flowrates for l	hole cleaning. Use	salt gel and Flo	wZan polymer to	maintain properties.
Reduce fluid	loss with Anco-Ph	alt and/or Gilsor	nite for lubricity.	

CASING PROGRAM FOR SURFACE HOLE

DEPTH	SIZE	LENGTH	WT	GRADE	THREAD	REMARKS
120 - 2000)' 13-3/8"	2000'	68#	J-55	BT&C	

Casing Running Sequence:

guide shoe, 1 jt of 13-3/8" 68# J55 BT&C, Float collar, balance of 13-3/8" 68# J55 BT&C, centralizers as reqd. RU cement co., hold safety meeting, test lines, cement 13-3/8" casing per cement company recommendation and the cementing guide below. Displace with fresh water or mud.

CEMENTING PROGRAM FOR SURFACE HOLE

Lead:	1500 sx lite weight	Mixed at: Yield:	12.8 ppg 1.97 ft ³ /sx
Tail:	350 sx Premium G	Mixed at: Yield:	15.8 ppg 1.15 ft ³ /sx

MUST CIRCULATE CEMENT TO SURFACE If the cement does not circulate to surface contact the BLM and UDOGM office for further instructions and remedial actions. Be prepared to top out with premium cement.

WOC A TOTAL OF 24 HOURS:

Wait 4 hours with the hydrostatic pressure of the displacement fluid in place, then cut off conductor and weld on a 13-5/8" 5M x 13-3/8" SOW casing head w/ MBS spool configured to hang both 9-5/8" and 7" csg strings without nippling down BOPE. NU a 13-5/8" 5M double ram BOP w/ 5M annular and 5M choke manifold rigged to mud/gas separator, mud tanks and flare pit.

PROTECTIVE CASING HOLE: 2000' to 6545'

Trip in the hole with a 12-1/4" bit, mud motor & MWD. Drill float, shoe and 20'of new hole. Perform a formation integrity test to 10.5 ppg mud weight equivalent. Directionally drill a 12-1/4" hole with a PDC and/or a TCI rock bit, mud motor & MWD equipment to approximately 6545' MD using same salt mud system as above. Loss circulation, moving salt, gypsum and anhydrite stringers may be a problem in this interval. Maintain hole angle and azimuth in keeping with the attached directional plan. Protective casing should be set into the top of the Twin Creek interval.

PRESSURE CONTROL AND SAFETY EQUIPMENT FOR PROTECTIVE CASING STRING

Bottom to Top (see attached 5M BOP diagram)

13-5/8" 5M x 13-3/8" SOW casing head w/ (2) 2-1/16" SSO's (for 9-5/8")

13-5/8" 5M x 13-5/8" 5M multi-bowl casing spool (for 7")

13-5/8" 5M x 13-5/8" spacer spool

13-5/8" 5M x 13-5/8" 5M mud cross with (2) side outlets:

one outlet 2-1/16" kill line

one outlet 2-1/16" choke line

13-5/8" 5M double ram BOP w/ 5" pipe rams top & CSO rams btm

13-5/8" 5M Annular Preventer

13-5/8" 5M rotating head

Connect BOP to choke manifold with pressure guage Upper kelly cock valves with handles available Safety valves and subs to fit all drill string connections in use Inside BOP or float sub available

Testing Procedure:

Annular Preventer

The annular preventer will be pressure tested to 1500 psi for a period of ten minutes or until provisions of the test are met, whichever is longer. At a minimum, the pressure test will be performed:

- 1) When the annular is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The annular preventer will be functionally operated once per week.

Blowout Preventer

The BOP, choke manifold and related equipment will be pressure tested to 4500 psi, or 70% of the internal yield of the casing. Pressure will be maintained for a period of at least ten minutes or until the requirements of the test are met, whichever is longer. At a minimum the pressure test will be performed:

- 1) When the BOP is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills will be recorded in the IADC driller's log.

Accumulator:

The accumulator will have sufficient capacity to open the hydraulically controlled gate valve (if so equipped), close all rams plus the annular preventer, and retain a minimum of 200 psig above pre-charge on the closing manifold without the use of the closing unit pumps. The reservoir capacity will be double the accumulator capacity, and the fluid level will be maintained at the manufacturer's recommendations. The accumulator shall have two (2) independent power sources to close the preventers. Nitrogen bottles may be one of the independent power sources and, if so, shall maintain a charge equal to the manufacturer's specifications.

The accumulator pre-charge pressure test will be conducted prior to connecting the closing unit to the BOP stack and at least once every six months thereafter. The accumulator pressure will be corrected if the measured pre-charge pressure is found to be above or below the maximum or minimum limits specified in Onshore Oil & Gas Order Number 2 (only nitrogen gas may be used to pre-charge).

Choke Manifold Equipment, Valves and Remote Controls

All choke lines will be straight lines unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and vibration

A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will be maintained in the open position and will be closed only when the power source for the accumulator is inoperative.

Remote controls shall be readily accessible to the driller. Remote controls will be capable of both opening and closing all preventers. Master controls will be at the accumulator and

will be capable of opening and closing all preventers and the choke line valve (if so equipped).

The choke manifold and BOP extension rods with hand wheels will be located outside the rig sub structure. The hydraulic BOP closing unit will be located at least twenty-five feet from the well head but readily accessible to the driller.

A flare line will be installed after the choke manifold, extending 100 feet from the center of the drill hole to a separate flare pit.

MUD PROGRAM FOR PROTECTIVE CASING HOLE

<u>DEPTH</u>	MUD WEIGHT	TYPE	VISC	FLUID LOSS
2000' - 6545'	9.8 - 10.2	Salt Mud	36 - 50	20-30cc or less

Maintain a salt mud system as salt and gypsum sections are drilled. If loss circulation becomes a problem use LCM sweeps to control seepage & clean hole.

CASING PROGRAM FOR PROTECTIVE CASING HOLE

DEPTH	SIZE	LENGTH	V	/T	GRADE	THREAD	REMARKS
0' – TD'	9-5/8"	6545'	* ,	47#	N-80	LT&C	

Rig up casing tools and run 9-5/8" protective casing as follows:

Float shoe, 2 joint of 9-5/8" * 47.0# N-80 LT&C casing, float collar, 6 centralizers, middle shoe joint and one every other joint for 12 jts, run balance of 9-5/8" 47# N-80 * due to availability 47# HCP-110 may be substituted

CEMENT PROGRAM FOR PROTECTIVE CASING

450 sx 50:50 POZ Weight: 13.0 ppg Yield: 1.71 ft³/sx

TOC at \sim 4500'; Calculate cement volume based on gauge hole plus 30% excess. Displace with mud. Land 9-5/8" csg with casing mandrel. Lay down landing joint. Clean pits and prepare for next hole section.

PRODUCTION HOLE: 6,545 to 7450'

Trip in the hole with an 8-1/2" insert bit, mud motor & MWD. Drill float, shoe and 20'of new hole. Perform an integrity test to 10 ppg mud weight equivalent.

PRESSURE CONTROL AND SAFETY EQUIPMENT FOR PRODUCTION CASING STRING

Same as Protective String above due to utilization of Multi-Bowl Casing Head Assembly – Land 9-5/8" through BOPE with casing mandrel, release, test & proceed to drilling production hole section – Nipple down & nipple up NOT required – all BOPE remains intact – normal periodic pressure testing remains on schedule

MUD PROGRAM FOR PRODUCTION HOLE

DEPTH	MUD WEIGHT	TYPE	VISC	pH F	LUID LOSS
6545' - 7450'	8.3 - 9.0	LC Polymer	34-50	9.0-10.0	10cc or Less

EVALUATION PROGRAM FOR PRODUCTION HOLE

At TD, circulate and condition hole clean for logs. Short trip to the intermediate casing monitoring well closely. TOH for logs. Run Induction tool as run #1 to determine hole conditions for logging. Adjust tool configurations depending on hole condition.

Mudlogger: From 2000' to total depth.

Electric Logs:

Tool	PCP to TD
SDL/DSN/GR (DSN PCP to surface casing)	Yes
HRI/GR/SP (DLL/MSFL/SP/GR available if brine system)	Yes
EMI	Yes
NMR	Yes

DST: none planned <u>Cores</u>: none planned

CASING PROGRAM FOR PRODUCTION HOLE

DEPTH	SIZE	LENGTH	 WT	GRADE	THREAD	REMARKS
		7450'			LT&C	

^{*} due to availability 23# HCP-110 may be substituted for N-80

Rig up casing tools and run 7" production casing as follows:

Float shoe, 1 joint of 7" 26# N-80 LT&C casing, Float collar, Run balance of 7" 26# N80.

CEMENT PROGRAM FOR PRODUCTION CASING

400 sx (50:50) POZ Premium Weight: 14.35 ppg 2 % Bentonite Yield: 1.27 ft³/sx Friction reducer, salt & flocele

TOC at ± 5500 ft in 9-5/8" csg

Calculate cement volume based on log caliper +/- 25%. Displace cement w/water. Hang 85-90% casing weight in slips, ND, cut off, install B-section and night cap. Clean pits and release rig.

SCHEDULE

Location preparation is presently scheduled to begin on or about April 15, 2005 Drilling operations are anticipated to begin on or about April 15, 2005

end

PRESSURE CONTROL SYSTEM SCHEMATIC

Prepared by: EXACT Engineering, Inc Tulsa, OK (918) 599-9400

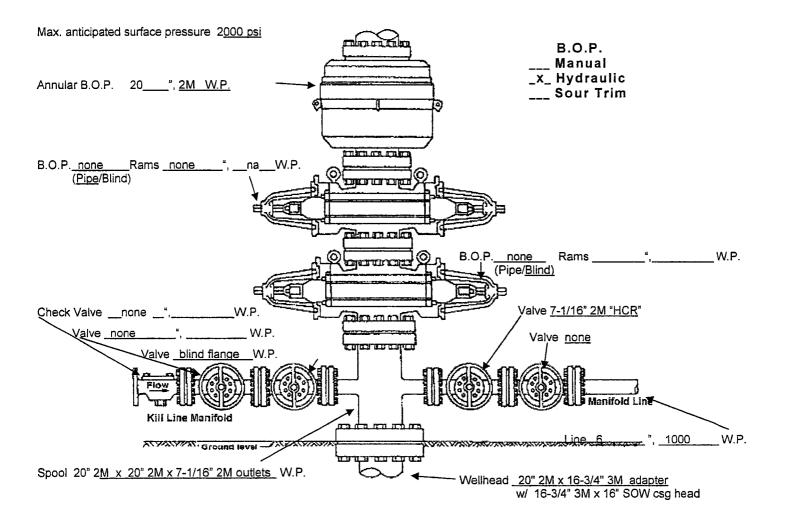
2M Diverter Stack — to be utilized while drilling holes for surface and protective casing thru Arapien formation section

Operator:

Wolverine Gas & Oil Co. of Utah, LLC

Well name and number

Wolverine Federal #8-1



PRESSURE CONTROL SYSTEM SCHEMATIC

Prepared by: EXACT Engineering, Inc Tulsa, OK (918) 599-9400

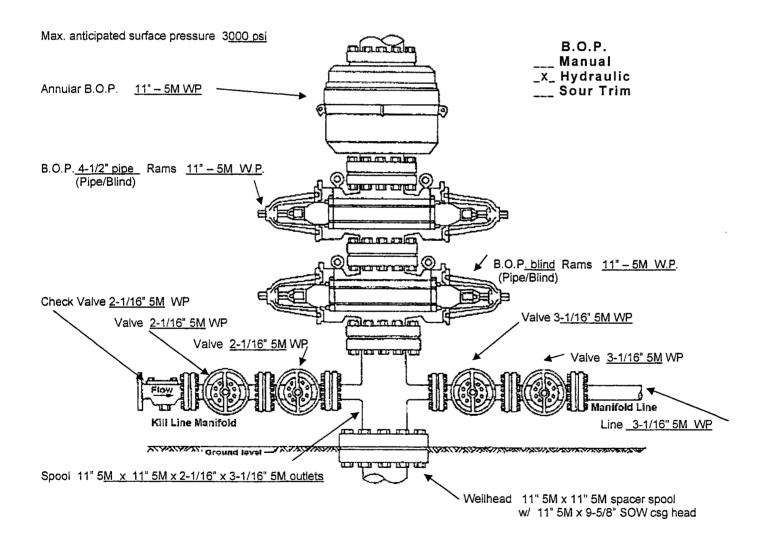
5M BOP Stack — to be utilized while drilling holes for production casing thru Twin Creek & Navajo intervals

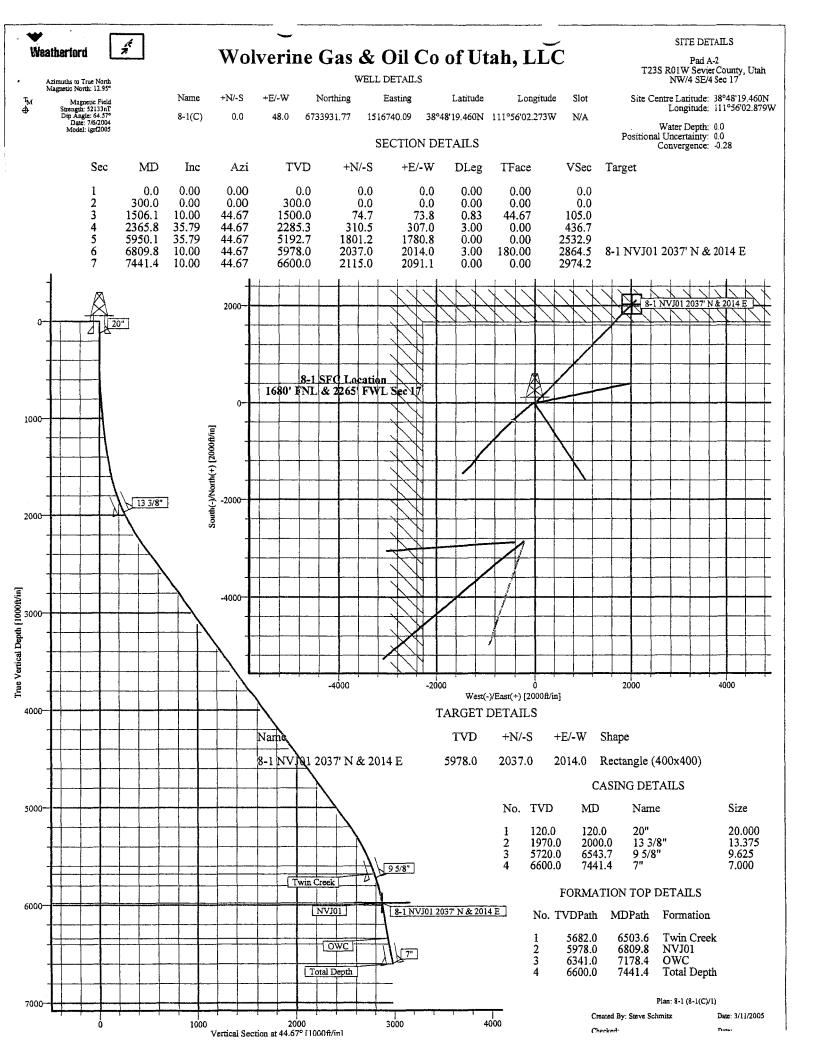
Operator:

Wolverine Gas & Oil Co. of Utah, LLC

Well name and number

Wolverine Federal #8-1





Weatherford **Planning Report**

Plan:

Company:

Wolverine Gas & Oil Co of Utah

Sevier County, Utah

Date: 3/11/2005 Time: 19:08:24
Co-ordinate(NE) Reference: Well: 8-1(C), True North

Page:

1

Field:

Vertical (TVD) Reference:

SITE 0.0

Site: Well: Wellpath: Pad A-2 8-1(C)

Section (VS) Reference:

Well (0.00N,0.00E,44.67Azi)

8-1

Field:

Sevier County, Utah

Map System: US State Plane Coordinate System 1983

Geo Datum: GRS 1980 Sys Datum: Mean Sea Level Map Zone: Coordinate System: Utah, Central Zone

Geomagnetic Model:

Well Centre igrf2005

Site:

Pad A-2

T23S R01W Sevier County, Utah

NW/4 SE/4 Sec 17

Site Position: Geographic From:

Position Uncertainty:

0.0 ft 0.0 ft

Northing: 6733932.00 ft 1516692.09 ft Easting:

Latitude: Longitude:

38 48 19.460 N 2.879 W 111 56

North Reference: Grid Convergence:

True -0.28 deg

Well:

Ground Level:

Well Position:

8-1(C)

+N/-S 0.0 ft 48.0 ft +E/-W

Northing: Easting:

6733931.77 ft Latitude: 1516740.09 ft Longitude: 38 48 19.460 N

Position Uncertainty:

0.0 ft

111 56 2.273 W

Wellpath: 1

Field Strength:

Vertical Section:

Current Datum: SITE Magnetic Data:

7/6/2004

ft

0.0

52133 nT Depth From (TVD)

Height 0.0 ft

+N/-S

ft

0.0

Tie-on Depth: Above System Datum: Declination:

0.0

Drilled From:

Slot Name:

Mag Dip Angle: +E/-W ft

Surface 0.0 ft

Mean Sea Level 12.95 deg 64.57 deg

Direction deg 44.67

Plan:

Principal:

8-1 Yes Date Composed: Version: Tied-to:

3/7/2005

From Surface

Plan Section Information

	MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
	1506.1	10.00	44.67	1500.0	74.7	73.8	0.83	0.83	0.00	44.67	
	2365.8	35.79	44.67	2285.3	310.5	307.0	3.00	3.00	0.00	0.00	
1 :	5950.1	35.79	44.67	5192.7	1801.2	1780.8	0.00	0.00	0.00	0.00	
	6809.8	10.00	44.67	5978.0	2037.0	2014.0	3.00	-3.00	0.00	180.00	8-1 NVJ01 2037' N & 2014
	7441.4	10.00	44.67	6600.0	2115.0	2091.1	0.00	0.00	0.00	0.00	

Section 1: Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100f	Build deg/100ft	Turn deg/100ft	TFO deg
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
200.0	0.00	0.00	200,0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00

Section 2: Start Build 0.83

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ff	Build deg/100ft	Turn deg/100ft	TFO deg	
400.0	0.83	44.67	400.0	0.5	0.5	0.7	0.83	0.83	0.00	0.00	
500.0	1.66	44.67	500.0	2.1	2.0	2.9	0.83	0.83	0.00	0.00	
600.0	2.49	44.67	599.9	4.6	4.6	6.5	0.83	0.83	0.00	0.00	
700.0	3.32	44.67	699.8	8.2	8.1	11.6	0.83	0.83	0.00	0.00	
800.0	4.15	44.67	799.6	12.9	12.7	18.1	0.83	0.83	0.00	0.00	
900.0	4.97	44.67	899.2	18.5	18.3	26.0	0.83	0.83	0.00	0.00	
1000.0	5.80	44.67	998.8	25.2	24.9	35.4	0.83	0.83	0.00	0.00	

Weatherford Planning Report

Field: Site: Well:	Site: Pad A-2				Da Co Ve Sec Pla	SITE 0.0	(C), True N	Page:	2			
Section	2 : Start Bui	ld 0.83										
MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	TFO		
ft	deg	deg	ft	ft	ft	ft			deg/100ft	deg		
1100.0	6.63	44.67	1098.2	32.9	32.5	46.3	0.83	0.83	0.00	0.00		
1200.0	7.46	44.67	1197.5	41.6	41.1	58.5	0.83	0.83	0.00	0.00		
1300.0	8.29	44.67	1296.5	51.4	50.8	72.2	0.83	0.83	0.00	0.00		
1400.0	9.12 10.00	44.67 44.67	1395.4	62.1	61.4	87.4	0.83	0.83	0.00	0.00		
1506.1	10.00	44.07	1500.0	74.7	73.8	105.0	0.83	0.83	0.00	0.00		
Section	3 : Start Bui	ld 3.00										
MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	TFO		
ft	deg	deg	ft	ft	ft	ft	deg/100ft			deg		
1600.0	12.82	44.67	1592.0	87.9	86.9	123.6	3.00	3.00	0.00	0.00		
1700.0	15.82	44.67	1688.9	105.5	104.2	148.3	3.00	3.00	0.00	0.00		
1800.0	18.82	44.67	1784.4	126.6	125.2	178.0	3.00	3.00	0.00	0.00		
1900.0	21.82	44.67	1878.1	151.3	149.6	212.8	3.00	3.00	0.00	0.00		
2000.0	24.82	44.67	1970.0	179.5	177.4	252.3	3.00	3.00	0.00	0.00		
2100.0	27.82	44.67	2059.6 2146.8	211.0	208.6	296.7	3.00	3.00	0.00	0.00		
2200.0 2300.0	30.82 33.82	44.67 44.67	2231.3	245.8 283.8	243.0 280.6	345.6 399.1	3.00 3.00	3.00 3.00	0.00 0.00	0.00 0.00		
2365.8	35.79	44.67	2285.3	310.5	307.0	436.7	3.00	3.00	0.00	0.08		
L												
Section	4 : Start Hol	d										
MD	Incl	Azim	TVD	+N/-S	$+\mathbf{E}/-\mathbf{W}$	VS	DLS	Build	Turn	TFO		
ft	deg	deg	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	deg		
2400.0	35.79	44.67	2313.0	324.7	321.0	456.6	0.00	0.00	0.00	180.00		
2500.0	35.79	44.67	2394.1	366.3	362.2	515.1	0.00	0.00	0.00	180.00		
2600.0	35.79	44.67	2475.3	407.9	403.3	573.6	0.00	0.00	0.00	180.00		
2700.0 2800.0	35.79 35.79	44.67 44.67	2556.4 2637.5	449.5 491.1	444.4 485.5	632.1 690.6	0.00 0.00	0.00 0.00	0.00 0.00	180.00 180.00		
2900.0	35.79	44.67	2718.6	532.7	526.6	749.1	0.00	0.00	0.00	180.00		
3000.0	35.79	44.67	2799.7	574.3	567.8	807.5	0.00	0.00	0.00	180.00		
3100.0	35.79	44.67	2880.8	615.8	608.9	866.0	0.00	0.00	0.00	180.00		
3200.0	35.79	44.67	2961.9	657.4	650.0	924.5	0.00	0.00	0.00	180.00		
3300.0 3400.0	35.79 35.79	44.67 44.67	3043.1 3124.2	699.0 740.6	691.1 732.2	983.0 1041.5	0.00 0.00	0.00 0.00	0.00 0.00	180.00 180.00		
3500.0	35.79	44.67	3205.3	782.2	732.2 773.4	1100.0	0.00	0.00	0.00	180.00		
3600.0	35.79	44.67	3286.4	823.8	814.5	1158.4	0.00	0.00	0.00	180.00		
3700.0	35.79	44.67	3367.5	865.4	855.6	1216.9	0.00	0.00	0.00	180.00		
3800.0	35.79	44.67	3448.6	907.0	896.7	1275.4	0.00	0.00	0.00	180.00		
3900.0	35.79	44.67	3529.8	948.5	937.8	1333.9	0.00	0.00	0.00	180.00		
4000.0 4100.0	35.79 35.79	44.67 44.67	3610.9 3692.0	990.1 1031.7	978.9 1020. 1	1392.4 1450.9	0.00 0.00	0.00 0.00	0.00 0.00	180.00 180.00		
4200.0	35.79	44.67	3773.1	1031.7	1020.1	1509.3	0.00	0.00	0.00	180.00		
4300.0	35.79	44.67	3854.2	1114.9	1102.3	1567.8	0.00	0.00	0.00	180.00		
4400.0	35.79	44.67	3935.3	1156.5	1143.4	1626.3	0.00	0.00	0.00	180.00		
4500.0	35.79	44.67	4016.4	1198.1	1184.5	1684.8	0.00	0.00	0.00	180.00		
4600.0	35.79	44.67	4097.6	1239.7	1225.7	1743.3	0.00	0.00	0.00	180.00		
4700.0	35.79	44.67	4178.7	1281.3	1266.8	1801.8	0.00	0.00	0.00	180.00		
4800.0 4900.0	35.79 35.79	44.67 44.67	4259.8 4340.9	1322.8 1364.4	1307.9 1349.0	1860.2 1918.7	0.00 0.00	0.00 0.00	0.00 0.00	180.00 180.00		
5000.0	35.79	44.67	4422.0	1406.0	1390.1	1977.2	0.00	0.00	0.00	180.00		
5100.0	35.79	44.67	4503.1	1447.6	1431.3	2035.7	0.00	0.00	0.00	180.00		
5200.0	35.79	44.67	4584.2	1489.2	1472.4	2094.2	0.00	0.00	0.00	180.00		
5300.0	35.79	44.67	4665.4	1530.8	1513.5	2152.7	0.00	0.00	0.00	180.00		
5400.0	35.79	44.67	4746.5	1572.4	1554.6	2211.2	0.00	0.00	0.00	180.00		
5500.0 5600.0	35.79 35.79	44.67 44.67	4827.6 4908.7	1614.0 1655.6	1595.7 1636.9	2269.6 2328.1	0.00 0.00	0.00 0.00	0.00 0.00	180.00 180.00		
5700.0	35.79 35.79	44.67 44.67	4906.7	1697.1	1678.0	2326.1	0.00	0.00	0.00	180.00		
5800.0	35.79	44.67	5070.9	1738.7	1719.1	2445.1	0.00	0.00	0.00	180.00		
							0.00	0.00	0.00			
5900.0 5950.1	35.79 35.79	44.67 44.67	5152.0 5192.7	1780.3 1801.2	1760.2 1780.8	2503.6 2532.9	0.00	0.00	0.00	180.00 180.00		

Weatherford Planning Report

Company: Field: Site: Well: Wellpath:	Sevier Cour Pad A-2 8-1(C)	Gas & Oil Co on	î Utah		Verti	rdinate(NE) ical (TVD) F ion (VS) Ref) Reference: Reference:	SITE 0.	-1(C), True N		Page:	3
Section 5	5 : Start Dro	p -3.00										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100f	Turn ft deg/100ft	TFO deg		
												
6000.0	34.29	44.67	5233.5		1801.0	2561.5	3.00	-3.00	0.00	-180.00		
6100.0	31.29	44.67	5317.6		1839.0	2615.7	3.00	-3.00	0.00	180.00		
6200.0	28.29	44.67	5404.4		1874.0	2665.4	3.00	-3.00	0.00	180.00		
6300.0	25.29	44.67	5493.6		1905.7	2710.4	3.00	-3.00	0.00	180.00		
6400.0	22.29	44.67	5585.1		1934.0	2750.8	3.00	-3.00	0.00	-180.00		
6500.0	19.29	44.67	5678.6		1959.0	2786.3	3.00	-3.00	0.00	180.00		
6503.6	19.19	44.67	5682.0		1959.8	2787.5	3.00	-3.00	0.00	-180.00		
6543.7	17.98	44.67	5720.0		1968.8	2800.2	3.00	-3.00	0.00	180.00		
6600.0	16.29	44.67	5773.8		1980.5	2816.8	3.00	-3.00	0.00	-180.00		
6700.0	13.29	44.67	5870.5		1998.4	2842.4	3.00	-3.00	0.00	-180.00		
6809.8	10.00	44.67	5978.0	2037.0	2014.0	2864.5	3.00	-3.00	0.00	-180.00		
Section 6	6 : Start Hole	.d										
MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	TFO		
ft	deg	deg	ft	ft	ft	ft			ft deg/100ft			
6900.0	10.00	44.67	6066.8	2048.1	2025.0	2880.2	0.00	0.00	0.00	0.00		
7000.0	10.00	44.67	6165.3		2037.2	2897.6	0.00	0.00	0.00	0.00		
7100.0	10.00	44.67	6263.8		2049.4	2914.9	0.00	0.00	0.00	0.00		
7178.4	10.00	44.67	6341.0		2059.0	2928.5	0.00	0.00	0.00	0.00		
	10.00	44.67 44.67	6362.3		2059.0	2926.5 2932.3	0.00	0.00	0.00	0.00		
7200.0					2061.6	2932.3 2949.7	0.00			0.00		
7300.0	10.00	44.67 44.67	6460.7					0.00	0.00			
7400.0	10.00	44.67 44.67	6559.2		2086.1	2967.0	0.00	0.00	0.00	0.00 0.00		
7441.4	10.00	44.67	6600.0	2115.0	2091.1	2974.2	0.00	0.00	0.00	0.00		
Targets												
Name		Description Dip. Di	TVD ir. ft	+N/-S ft	+Æ/-W ft	Map Northi ft		ting I	< Latitud Deg Min S		< Longii Deg Min	rude
-Re	VJ01 2037' N ectangle (400 an hit target		5978.0	2037.0	2014.0	6735958	3.98151876	3.95	38 48 39.5	592 N	111 55 36	.831 W
Casing Poi	ints							- _				
MD	TVD	Diameter	Hole Size	Nan	ne			-				
ft	ft	ìn	in									
120.0	120.0	20.000	26.000	20"								
2000.0	1970.0	13.375	17.500	13 3/8"								
6543.7	5720.0	9.625	12.250	9 5/8"								
7441.4	6600.0	7.000	8.500	7"								
Formation	as											
MD TVD) Formations		Lithology					Di	ip Angle deg	Dip Directi deg	on
												
6503.6	5682.0	Twin Cree	.K							0.00	0.00	
										0.00	0.00	
6809.8	5978.0	NVJ01										
	5978.0 6341.0 6600.0	NVJ01 OWC Total Dept								0.00	0.00	



WOLVERINE GAS AND OIL COMPANY

of Utah, LLC

Energy Exploration in Partnership with the Environment

April 11 2005

Via Fax (801) 359-3940 & Mail

Ms. Diana Whitney Utah Division of Oil, Gas & Mining 1594 W. N. Temple, suite 1210 Salt Lake City, UT 84114-5801

RE: Request for Directional Drilling
Wolverine Federal 8-1
Covenant Field, Sevier County, UT
API No. 43-041-30037

APR 1 1 2005 DIV. OF OIL, GAS & MINING

Dear Ms. Whitney:

The purpose of this letter is to provide the information we discussed during our phone conversation on April 8th.

• Request for Exception to Rule 649-3-11: The proposed Wolverine Federal #8-1 will be directionally drilled from the surface location known as the A-2 Pad, which is the same pad used to drill the Wolverine Federal 17-3, 17-4 and 17-5. The well is drilled directionally because of the limited land for drilling wells and because we wanted to minimize the "footprint" of our operations. The proposed bottom hole location of Wolverine Federal 8-1 at the top of the Navajo is 450' F\$L and 1010 FEL of Section 8 T23S-R1W, which is 10' outside the "400' window" allowed under Rule 649-3.2. Although the proposed top of the Navajo will be encountered 10' outside of the "400' window", the end of the well will fall within the "400' window" because the well is directionally drilled.

The proposed location falls within the Wolverine Federal Unit and Wolverine Gas & Oil owns the mineral lease for the proposed bottomhole location and the mineral leases within 460' radius of the proposed drilling location and for directly or diagonally offsetting drilling locations. Woverine Gas & Oil owns all leases within 460 feet of the entire proposed trajectory of the wellbore.

The exception to Rule 649-3-11 is needed because a vertical well is not feasible, given our existing surface land situation.

Ms. Diana Whitney April 11, 2005 Page 2

If you have any questions, please call. Thanks again for your help. It is appreciated.

Sincerely,

Edward A. Higuera Manager - Development

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

April 15, 2005

Memorandum

To: Field Office Manger, Richfield Field Office

From: Michael Coulthard, Petroleum Engineer

Subject: 2005 Plan of Development Wolverine Unit

Sevier County, Utah.

Pursuant to email between Steven R Hash, representing Wolverine Gas and Oil, the following well will have a modified bottom hole location. The new bottom hole location is shown below.

API# WELL NAME LOCATION

(Proposed PZ Navajo)

43-041-30037 Wolverine Federal 8-1 Sec 17 T23S R01W 1680FNL 2265FWL Bottom Hole Location Sec 08 T23S R01W 0125FSL 1352FEL

This office has no objection to approving the change in bottom hole location at this time.

/s/ Michael L. Coulthard

bcc: File - Wolverine Unit

Division of Oil Gas and Mining

Central Files Agr. Sec. Chron Fluid Chron

MCoulthard:mc:4-15-05

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: WO	LVERINE GAS & C	OIL COMPANY O	OF UT LLC
Well Name:	WOLVERINE F	FED 8-1	
Api No: 43-041-3003	Lease Ty	pe:FEDERAL -	- FEE SURF
Section_17_Township_23	3S Range 01W	_CountySE	VIER
Drilling Contractor	UNIT	RIG#	111
SPUDDED:			
Date	04/16/05		
Time	11:30 AM		
How	DRY		
Drilling will Commen	ce:		
Reported by	STEVE HASH		
Telephone #	1-918-599-9400		·
Date 04/18/2005	Signed	СНД	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

FORM 6

K

ENTITY	ACT	ION	FOF	MS

Operator:

Wolverine Gas and Oil Company of Utah, LLC

Operator Account Number: N 1655

Address:

55 Campau NW, One Riverfront Plaza

city Grand Rapids

state MI zip 49503-2616

Phone Number: (616) 458-1150

Well 1

API Number	Well ?	Vame	QQ	Sec	Twp	Rng	County
4304130037	Wolverine Federal 8-1		SESW	8	238	1W	Sevier
Action Code	Current Entity Number	New Entity Number	s	pud Da	te		ty Assignment ffective Date
Α	99999	14667	4	/16/200	5	4	121/05

Comments: MAVA CONCIDENTIAL

Well:

API Number	Well I	Name	QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	S	pud Da	<u>[</u>		ty Assignment fective Date

Well 3

API Number	Well I	Name	QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	s	pud Da	<u> </u>		ly Assignment fective Date
omments:			<u></u>				-

ACTION CODES:

- A Establish new entity for new well (single well only)
- Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity
- E Other (Explain in 'comments' section)

RECEIVED

CONFIDENTIAL

APR 18 2005

Steven R Hash - Consulting Engineer

Stenen !

Signature EXACT (918) 599-9400

4/18/2005

Title

Date

EXACT Engineering, Inc., 415 S. Boston, Suite 734 Tulsa, OK 74103 (918) 599-9801



EXACT Engineering, Inc.

www.exactengineering.com

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E. Registered Professional Engineer stevehash@exactengineering.com

CONFIDENTIAL PLEASE!

May 2, 2005

Mr. Dustin Doucet Utah Division of Oil, Gas & Mining 1594 West North Temple, Suite 1210 Salt Lake City, UT 84114-5801

Re:

Wolverine Federal 8-1 well Sec 17 T23S R01W Sevier Co., UT API# 43-041-30037

Dear Mr. Doucet.

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed daily drilling reports for the subject well from inception on April 15, 2005 through April 30, 2005. The well was spudded at 11:30am on April 16, 2005. 13-3/8" csg was set at 2053' on April 22, 2005. We are presently drilling 12-1/4" hole at 4850' expecting to set 9-5/8" csg at approximately 6400'. We respectfully request that the enclosed information remain confidential

Very Truly Yours,

Consulting Engineer for Wolverine Gas and Oil Company of Utah, LLC

copy without enclosures via email to:

Wolverine Gas & Oil Co of Utah, LLC: Richard Moritz, Sue Benson

EXACT Engineering, Inc.

well file

RECEIVED MAY 0 5 2005

DIV. OF OIL, GAS & MINING

Petroleum Engineering Consulting, Personnel & Jobsite Supervision complete well design, construction & management, drilling, completion, production, pipelines, appraisals, due diligence, acquisitions, procedures, temporary personnel and field supervision

		Eng	ineerin	g & Si	upervis	ion		E	XAC	T	Eng	ine	eriı	ng, Inc	 ; .			(§	918) 5	99-9400)	
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		Eng	ineering	g & S	Supervi	sion		I	EXAC	T	Eng	gine	eeri	ng, Inc	.		_	(9	918) 59	9-9400)	
Operato	or:	Wolveri	ne G&O C	o of L	Jtah, LLC				ILY	DF	RILL	_IN	G I	REPO			_		midnig	ht to mi		
DATE 04/28	3/05	WELL \A/c	olverine I	Feder	ral # 8-1	co	NTRAC		t Rig #1	111		Т		NTY, STATE vier, UT	4/16/05	43-0	ар# 041-3		37	SUPERV		R-R. RE
DAYS F/ SPU			NT OPERAT					TOTAL			PRO	GRESS			ING TIME	ROP	J-7 1-C		MATION		TH. DEP	
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Op	erato	or:	Wolverin	e G&O C	o of Uta	h, LLC	CONT	RACTO		<u> </u>	<u> </u>				NTY, STATE	SPUD DATE		Z4 N		mianig	ht to mi		nt	
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		Eng	ineering	g & S	upervis	ion		E	EXAC	T	Eng	ine	eri	ng, Inc	·.			(918) 5	99-940	0	
Opera	itor:	Wolveri	ne G&O C	o of U	ah, LLC			DA	ILY [DR	ILL	INC	G F	REPO	RT		24 h	rs -	midni	ght to m	idnigh	l
DATE	20/05	WELL	ا معامما	Fodos.	1#04	CON	TRACT		Dia #1	11		T		ITY, STATE	SPUD DATE 4/16/05	43-0	API		27	SUPER		R-R. REB
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		Eng	ineering	g & St	upervi	sion		_ ا _	EXAC	T	Eng	ine	eriı	ng, Inc	,			(9	18) 5	99-9400)	
Opera	itor:	Wolver	ine G&O C	o of Ut	ah, LLC			DA	ILY [DR	ILL	INC	3 F	REPO	RT		24 h	rs - r	nidnig	ht to mi	dnight	
DATE OA!	0E/0E	WELL	ob ovino I	- dora	1#01	CO	NTRAC		t Rig #1	11				ity, STATE ier, UT	SPUD DATE 4/16/05	1	ары 341-3		7	SUPERV		-R. REB
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	- 6 5/8" SWDP 150.00 GAS DATA																OP Test		4/23 5/23			
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T-4-17	NI IA			00		+		- -												perate B		4/23
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MD	INCL.	AZIMUTI	√TVD I	SECTION	N+/S	E+/	w. I	DLS	TOOL	м		INCL.		ZIMUTH	77	/D I	SECT	Тиог	N+/S-	E+/W-	DLS	TOOL
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Operato	or:	Wolverin	ne G&O C	o of Uta	h, LLC				LY	DF	RIL	LIN		REPO	RT				midnig	ht to m		
DATE 04/24	4/05	WELL	lverine F	ederal	# 8-1	CON	TRACT		Rig #1	111				UNTY, STATE Evier, UT	4/16/05	1	ары 041-3		37	SUPERV		-R. REB
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9				RILLII	VG			_	2,487	_	<u></u>	43 ID D	ATA		2.50	34.6			Arapie	ın [69	5U
wt		VIS.	WL			PH		AND	SOLI		- 5	~	ΥP	GELS	DEPTH	DATE/TIME	+	LORIC		CALCIUM		SALT PPM
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DATE 04	/23/05	WELL	olverine F	⊏odera!	# 8-1	CONT	VTRACT		nit Rig #1	11	1	- 1	1	ounty, state levier, UT	\$PUD DATE 4/16/05		ари 041-		137	SUPER D. N.			IR-I	R. REB
	F/ SPUD		NT OPERATI	TIONS @ MI	IIDNIGHT	Т	\neg		DEPTH	<u></u>		ROGRES	ESS	DRIL	LLING TIME	ROP		FOR	RMATION	A		H. DEF	PTH	
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	tional As		+	0.00		 		-	74 Wp	<u></u>	+		+			 		7	Cell No			-		, 45-6671
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1	17.50	00 H	ITC	0-9	RR	602	085	28-	28	28	1	28	1:	35		1266	75.50	16.8		Υ	40-82	35-40	丄		
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닏		<u> </u>			<u> </u>	<u> </u>					<u>_</u>		<u></u>			<u> </u>	<u> </u>	#DIV/	ROP	<u>_</u>	Ш				
PUI	40 1 1	MANUE	ACTURER	LINER	STROKE	GAL / ST	K SF	u I	H)	/DRA	DP.	CS	DC 1	PUN	40 T	MTR DIFF		P/IN ²	1 60					_	100 spn
N	- 1	MANOF	AUTURER	LINER	LENGTH		`\	"	GFM	1 ^*	UF	^*	٦ ا	PRES	- 1	PRESS.	""	P / 3N	=	٦	-	60 Spir	80 :	sprii	TOU Spir
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			D	RILL ST	RING			_	T		_					GEOLOGIC	;					GENER	(AL	NFO	,
ВO	ттомн	OLE AS	SEMBLY	LENGT		O.D.		I.D.		FORM	ATIO	N	=	MD	7	TVD		LITHOU	OGY			RIC	INFO		
17 1	/2" Bi	<u>t </u>		1	.50		_		_ _	SURF	AC	E			4						Rig No	,	Unit	111	
			embly	110			-		-∦-		_				4									8-64	5-6671
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	VG WT.		HA WT.	PU WT		O WT.	ROT.	TORO	JE G	RD. ELE	VATI	ON	GL	TO KB	\pm	KB ELEVA	rion	INTERMEDIA	ATE CS		LAST C	ASING	N	XT C/	ASING
	30		55	115	L	60	<u></u>	175	1	5,73	36			17		5,753	<u> </u>				20" @	121	13-3	/8" @	2700
													_	RVE											
MD 750		NCL. 7.00	43.80	740	SECTION	N+/S- 5.34	E+/		DLS	TOC	`	MD	'	INCL	╁	AZIMUTH	1	/D	SECTI	ION	N+/S-	E+/W-	DL:	<u> </u>	TOOL
730	' ' '	7.00	43.60	740		5.34	1.0	-		╁──	╢		+		+-					\dashv				-+	
=								土		1		- 54		7.6	- NATES					<u> </u>			_		
FROI	4		· · · · · ·	LAST	24 HOURS	:						U	VIL I	AU	TIVITY										
0:00) 13	3:00	13.00	SLII	DE & D	RILL	RO	/ 10	50' T	O 12	73'								-						
13:0	0 13	3:30	0.50	SEF	RVICE	RIG																			
13:3	0 18	3:00	4.50	SLI	DE & D	RILL	RO	<i>l</i> 12	73' T	O 13	36'														
18:0	0 18	3:30	0.50	WO	RK ON	#2P	UMP	-RO	CK L	INDE	RS	SUC	KIO	N V	ALVE										
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	\coprod																				SUPERVISE SUPERVISE SUPERVISE D. NAY FORMATION AUTH Arapien CORIDES CALCIUM IN 3,000 980 MTR RPM WOB RT+MTR WOB RT+MTR WOB RT+MTR WOB GENERA RIG IN Rig No Cell Narren Last BOP Test Last Safety Meet Last Soperate Pip Last Operate Pip Last Operate Pip Last Operate Anr LAST CASING 20* @ 121 13				
Daily	Total		24.00																						

		Engi	neering	g & Si	upervis	ion		_ E	EXAC	CT	En	gin	eer	ing, Inc	:.	_		(9	918) 5	99-940	0	
Opera	ator:		e G&O C											REPO			24 h	rs - i	midni	ht to m	idnigh	t .
DATE O4/	18/05	WELL	lverine l	Enders	1 # R_1	coi	TRAC		t Rig #	111	1			UNTY, STATE Evier, UT	\$PUD DATE 4/16/05	43-0	APII		37	SUPER D N		R-R. REE
DAYS F/	SPUD		NT OPERAT	IONS @ I	MIDNIGHT	—		TOTAL	DEPTH	• • • •		GRES	s	DRILL	ING TIME	ROP	771	FOR	MATION	A	JTH. DEP	ПH
	3	<u> </u>		DRILL	ING			_	1,050		<u> </u>	30	DATA		7.00	17.7	_		Arapi	en	0:	950
WT	r	VIS.	WL		СК	PH	s	AND	SOLI	os %		0	YP	GELS	DEPTH	DATE/TIME	СН	LORIC	ES	CALCIUM	MBT	SALT PPM
9.1	1	31	NC		2/32	7.5	<u></u>	TR	2.	4		2	1	1/2	749	4/17-23:30	6	3,00	<u> </u>	980		103,950
BIT S	SIZE	MFG.	TYPE	IADO	1	L NO.	-		(1/32nd*) r TFA			N	OUT	FOOTAGE	HOURS	ROP		MTR	ŘPM RT+MT	WOB		CONDITION G
	.500	нтс	0-9	RR	602	085	28-2	28	28	28	1	35		915	52.50	17.4		Υ	40-8	2 35-40		
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_				 -	+			+	-		╁	-		 		#DIV/0		Н		†	1-1	1
								HY	DRAUL	.ics	3									SLO	W PUM	P
PUMP NO.	MANU	FACTURER	LINER	STROK	- 1	K SI	>м	GPM	AV DP	1	AV DC	PUA PRES	- 1	MTR DIFF PRESS.	НН	P / IN ²	EC	O.	F	60 spn	n 80 spi	n 100 spn
1	N	ational	6"	8.5	2.93	1:	20	351				105	50	175					1			
2	Na	ational	6"	8.5	2.93	12	-+	351	 	+			+					_	2	<u>.L</u>	1	<u> </u>
Both	<u> </u>		RILL \$1	7007	5.86	24	10	702	<u> </u>	<u>_</u>				GEOLOGIC			_	4		AENE.	RALIN	
воттс	MHOLE A	SSEMBLY	LENGT		O.D.		I.D.		FORMATIO	ON		MD		TVD		LITHOL	ÖĞY				G INFO	
17 1/2"				.50		<u> </u>		_	SURFA	CE	4		\perp					_	Rig N		Unit 1	
	onal As 5/8" SW	sembly	 	0.00		┼-		╬			-		+						Cell N	orren 30P Tes		645-6671
X-OVE		<u>Ur</u>		3.59		\vdash		- - BO	TTOMS UP	TIM	ET B	G GAS		GAS DATA CONN G	AS I	TRIPG	AS .	4		BOP Te		
15-5"S\	WDP		452	2.00									工						Last S	Safety M	eeting	4/17
JARS				.80		_		上	GAS UNIT	S	,	ROM	干	SHOWS TO		ROP (FT	HR)	#		OP Dril		ļ
4-5"HW	VDP.		121	.00		-		╬			╁		+					╢		operate Operate		
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80		55	115		60	<u></u>	1/3	<u></u>	5,736	_	SI	17 IRVE	- <u> </u>	5,753	<u> </u>				20	<u>w</u> (2)	13-3/6	<u>u</u> 2700
MD	INCL.	AZIMUTH	TVD	SECTION	N+/S-	E+/	w-	DLS	TOOL		MD	INCL		AZIMUTH	TV	О	SECT	ION	N+/S-	E+/W-	DLS	TOOL
750	17.00	43.80	740		5.34	1.5	6			╟	_	_	+					\dashv			 	
	<u></u>		l			<u> </u>	<u></u>			<u> </u>	DAILY	/ AC	TIVIT	, 								
FROM			LAST	24 HOUR	is:						DAIL			<u>' </u>								
0:00	3:00	3.00			OUT N	<u>IUD</u>	том	OR -	TEST	M۷	ND - (OK.										
3:00 4:00	4:00 4:30	0.50		PIN SH &	REAM	FRO	M 67	'7' TC	749' -	. 5'	FILL				·-···							
4:30	7:00	2.50			DRILL I					-												
7:00	8:30	1.50	wo	RK O	N#1P	UMF	- CI	IANG	SE VAL	VE	& S	ΕAΤ	OUT									
8:30	13:30		·		DRILL I						AL \ /-	-										
13:30 14:00	14:00 16:00	2.00			N#2P DRILL I					<u> </u>	ALVE	<u> </u>										
16:00	16:30			RVICE														_				
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0:00		\vdash													— <u>.</u> —		۸۸	VIC	ITT.	HH	14	
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		Engi	neering	, & Su	pervisi	on	_		EX/	/C	T	En	gin	eer	ing, In	C.			(918) 5	99-9400)		
Oper	ator:	Wolverin	e G&O C	o of Uta	h, LLC				VILY	<u> </u>)R	ILI	LIN		REPC					midnig	ht to m		ht	
DATE	17/05	WELL	verine f	aderal	# 9.1	CON	TRAC		nit Rig	#1	11				UNTY, STATE Evier, UT	4/16/05	1	АРИ 041-		37	SUPER		Re	bsom
DAYS F			IT OPERATI			ل			DEPTH	# 1	<u>''</u>	PRO	OGRES	s	DRI	LLING TIME	ROP		FOF	RMATION	AU	TH. D	EPTH	
<u> </u>	2	<u></u>		RIP O	UT				749	<u> </u>		<u></u>	45			23.00	19.9)	_	Arapie	n		695	0
		1/15			ск Ј	PH		SAND	1 6	OLIDS	-		UD D	OATA YP	GELS	DEPTH	DATE/TIME	T CL	ILORIO	nee T	CALCIUM	мвт		ALT PPM
9.		71S.	NC NC	2		7.5		TR	 "	2.4	_	+	2	1	1/2	749	4/17-23:30	+	3,00	_	980	1	-	03,950
										=		В	IT D	ATA									<u> </u>	
BIT :	SIZE I	MFG.	TYPE	CODE	SERIAL	NO.			rs (1/32nd or TFA	1")		Ţ	IN	OUT	FOOTAGE	HOURS	ROP		MTR	RPM RT+MTF	WOB	T	JUL C	ONDITION
	.500 H	ITC	0-9	RR	6020	85	28-		28	2	28	1:	35		614	35.50	17.3		Y	0-82	+	+-		
								1									#DIV/0	0!						
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					L					L		L_			1		#DIV/0)!	L_		L	L_		
			,			,			YDRA	_	_										SLOV			200
PUMP NO.	MANUF	ACTURER	LINER	STROKE	GAL / STH	SF	·M	GPM	1 **	DP	AV	DC	PUN PRE:	- 1	MTR DIFF PRESS.	H	HP / IN ²	E	CD	}	60 spm	80	spm	100 spm
1	Na	tional	6"	8.5	2.93	12	20	351			1	\neg	105	-+	175					1				
2	Na	tional	6"	8.5	2.93	12	20	351												2				
Both	<u></u>				5.86	24	10	702	<u>: </u>		<u> </u>		Ĺ					<u> </u>						
			RILLS					I							GEOLOG		·				GENER	AL		5
17 1/2	MHOLE AS	SSEMBLY	LENGT	.50	O.D.	1	I.D.	╢	FORM			<u> </u>	MD		11	/D	LITHOL	.UGY	\dashv	Rig No		Uni		.
	onal Ass	embly	110			 		╢	00.0					_						Cell N				45-6671
	/8" SWI		150																	Last B	OP Tes	t		
X-OVE	R		3	.59					оттомѕ	UP T	TIME	8	G GAS	4	GAS DATA CONN	GAS	TRIP	GAS	\exists	Next E	OP Tes	t		
15-5"S	WDP		452	.00				_#_							SHOWS		<u> </u>				afety Me			4/16
						<u> </u>		-	GAS	NITS	\Box		FROM	7	T	0	ROP (F	/HR)	=		OP Drill			
						├		- -			\dashv										perate f			
Total	BHA:		717	.09		 		╢			\neg			_			 				perate A	Annu	ar	4/16
STRING	WT.	SHA WT.	PUWT		SO WT.	ROT.		UE	GRD. ELE		ON	GL	TO KE	В	KB ELE		INTERMEDI	ATE CS	G.		CASING	 		ASING
65		45	80		55	<u></u>	145		5,7	36	<u> </u>		17	- 120	5,7	53	<u> </u>			20" (D 121	13-3	/8" (@ 2700
MD	INCL.	AZIMUTH	TVD	SECTION	N+/S-	E+/	w- T	DLS	TO	OL II	ME	_	JRVE		AZIMUTH		IVD	SECT	ION	N+/S-	E+/W-	DL	s	TOOL
												\Box												
												\Box				<u> </u>						L		
										_	D/	AJLY	/ AC	TIVIT	Υ								_	
0:00	13:00	7.00		24 HOURS	ILL FR	OM	201	TO	536'		—												-	
13:00	13:30	0.50		RVICE		OIVI .	231		330															
13:30	23:30	10.00			ILL FR	ОМ	536	ТО	749'															
23:30	0:00	0.50	TRI	P OUT	-MWD	FAIL	ED																	
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Daily T	otal	18.00																						

		Engi	neering	g & Su	pervisi	on	_	E	XAC	T	En	gir	ieer	ing, In	C.			(918) 5	99-9400)		
Ope	rator:	Wolverin	e G&O C	o of Uta	h, LLC									REPC			24 h	rs -	midnig	ht to mi	dnig	ht	
DATE	/16/05	WELL	lverine l	Enderal	# 8-1	CON	TRACTO		Rig #	(11				OUNTY, STATE evier, UT	4/16/05	ſ	лрі -041		37	SUPERV		Rel	bsom
	FISPUD		IT OPERAT	IONS @ M	DNIGHT			OTAL D	EPTH			OGRES	SS	DRII	LLING TIME	ROP		FOF	RMATION	AU	TH. DE	PTH	
<u> </u>	1		DR	ILL & S	LIDE				291				56 DATA		2.50	12.5		_	Arapie	n I		695	<u>U</u>
	п	VIS.	WL		CK	PH	SA	ND	SOLIC	os %		₽ .	YP	GELS	DEPTH	DATE/TIME	CH	LORI	DES	CALCIUM	мвт	S.	ALT PPM
8	.3	27	<u>L</u>		!	VC]			<u> </u>				<u> </u>		<u></u>	<u></u>	<u> </u>				<u>L</u>		
BiT	SiZE	MFG.	TYPE	IADC	SERIAL	NO.		JETS	(1/32nd*)			IT D	ATA	FOOTAGE	HOURS	ROP		MTR	RPM	[WOB	T DU	LL C	ONDITION
NO.				CODE	<u> </u>	\dashv		Of	TFA		┿					<u> </u>		↓_	RT+MTR	<u> </u>	口	В	G
1 1	7.500 S	MITH	X-74	RR	6020	85	28	+-	28	28	+1	35	L	156	12.50	12.5 #DIV/		Y	0-82	12-15	1-	_	
\vdash	\dashv					\dashv		+			+				+	#DIV/		-		ļ	\vdash	\dashv	
								\perp							<u> </u>	#DIV/							
								HYC	DRAUL	ıcs			==							SLOV	V PU	MP	
PUMI NO.	MANU	FACTURER	LINER	STROKE	1	SPI	vi	GPM	AV DP	T'	NV DC	PUI	ĺ	MTR DIFF PRESS.	H	IP / IN ²	E	O		60 spm	80 s	pm	100 spm
1	Na	ational	6"	8.5	2.93	120	0 :	 351		T		75		100			T		1		\vdash	7	 -
2	Na	itional	6"	8.5	2.93	120) ;	351		I									2			\Box	
Both	Ш		L	L	5.86	240) .	702	<u> </u>	L,		<u> </u>		<u> </u>	<u> </u>				<u> </u>	<u>-</u>			
POT	OMHOLE A		RILL ST		O.Ď.	1	I.D.		FORMATIO			MD		GEOLOG:		LITHOL	OGV	_		GENER	AL I	NFC	5
17 1/3		SSEMBLI		.50	0.0.	 		╬─	SURFAC	_	+-		_						Rig No		Unit	111	
Direc	ional As	sembly	110	0.00															Cell No	rren	91	8-64	15-6671
5 - 6	5/8" SW	DP	150	0.00		<u> </u>		╂			<u>_</u>			GAS DATA		l		_		OP Test		4	
X-OV	ER		3	3.00				ВОТ	TOMS UP	TIME	8	G GAS	-	CONN	GAS	TRIP	SAS	\exists		OP Tes		4	440
						-		E	GAS UNIT	_		ROM		SHOWS		ROP (F	PAUL N			afety Me OP Drill	eting	╫	4/16
								十	GAS UNIT	-	 	- KUM	_		<u></u>	KOP JE	(/nk)	ᅦ		perate F	ipe f	≀ar	
																			Last O	perate E	Blind	₹a	
Tota	BHA:	BHA WT.	264 PU WT		SO WT.	EOT 1	ORQUE	GR	D. ELEVAT	TION	G	. TO KE	_	KB ELEV	ATION	INTERMEDI	ATE CS			perate A			4/16 ASING
4		25	48	- -	38		0		5,736	10.1	 "	17		5,75				_	20" @				@ 2700
										_	ŞL	JRVE	YS										
MD	INCL.	AZIMUTH	TVD	SECTION	N+/S-	E+/V		L\$	TOOL	(<u> </u>	MD	INCI		AZIMUTH		VD	SECT		N+/S-	E+/W-	DLS	_	TOOL
173 203	3.60	322.50	173 202	0.57	3.23 4.55	-2.4 -3.4		.56	322.5 322.6	╟┈	233	4.5 5.4	-	321.10 345.00		33 66	1.1 2.0		6.22 8.73	-4.77 -5.99	3.0 6.7	-	322.53 325.57
200	0.00	1020.00		0.02	4.00	0.7			022.0				TIVIT						00	0.00			
FROM				24 HOURS														_					
0:00	3:00	3.00														RAT & M		<u>- u</u>	OLE				
3:00 6:00	7:00	1.00			IP 121'					EL	L T -IV	IANE	: UP	SAME-CL	EAN OUT	KAI & IVI	003	<u>e n</u>	OLE				
7:00	11:00	4.00			IEW BI								_									_	
11:00	11:30	0.50	DRI	LL CE	MENT	FROI	vi 120)' TC	135'		SP	UDE	DED 8	3-1 @ 11:	30 HRS 4/	16/2005							
11:30	0:00	12.50	SLII	DE DR	ILL & S	URV	EY F	RON	И 135'	то	291'												
0:00	 	 																	 -				
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Daily '	otal	24.00																					1

		Engi	neering	g & Su	pervis	ion		- E	XAC	TE	ngi	neer	ing, Inc	;.			((918) 5	99-940	0	
Opera	ator:	Wolverin	e G&O C	o of Uta	h, LLC				ILY	DRI	LL		REPO					midnig	ht to m		ht
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EXACT Engineering, Inc.

www.exactengineering.com

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E. Registered Professional Engineer stevehash@exactengineering.com

CONFIDENTIAL PLEASE!

May 10, 2005

Mr. Dustin Doucet Utah Division of Oil, Gas & Mining 1594 West North Temple, Suite 1210 Salt Lake City, UT 84114-5801

Re:

Wolverine Federal 8-1 well Sec 17 T23S R01W Sevier Co., UT API# 43-041-30037

Dear Mr. Doucet.

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed daily drilling reports for the subject well from May 1, 2005 through May 9, 2005. We are presently drilling 12-1/4" hole at 7396', near original projected TD, and have not encountered the Navajo pay interval yet. We respectfully request that the enclosed information remain confidential.

Very Truly Yours,

Steven R. Hash

Consulting Engineer for Wolverine Gas and Oil Company of Utah, LLC

copy without enclosures via email to:

Wolverine Gas & Oil Co of Utah, LLC: Helene Bardolph

well file

EXACT Engineering, Inc.

RECEIVED

MAY 1 2 2005

DIV. OF OIL, GAS & MINING

Petroleum Engineering Consulting, Personnel & Jobsite Supervision complete well design, construction & management, drilling, completion, production, pipelines, appraisals, due diligence, acquisitions, procedures, temporary personnel and field supervision

· ·		Eng	ineerin	g & Su	pervisi	on	_	EX.	\CT	Er	ngin	eer	ing, Inc	;.			(918) 5	99-940	0	
Oper	ator:		ine G&O (Co of Uta	h, LLC			AILY	D	RIL	.LIN		REPO			24 hrs -	midnig			nt
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	SIZE	MFG.	TYPE	LADC	SERIAL	NO.			(1/32nd*) TFA	Ī	IN		OUT	FOOTAGE	HOURS	ROP		MTR	RPM RT+MTF	WOB	DULL C	ONDITION
NO. 4 12	.250	RTC	HP53A	547	PB47	765	24			24	485	50 6	264	1414	108.50	13.0		Υ	40-82	+	+-+-	1
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91110	L 1444	TACTURE.	Lines	ETROVE	CAL CET	K SPI		HYI	DRAUL AV DP	ICS LAVI	DC (PUMP	7	MTR DIFF	1 44	2 / IN ²	EC	0			V PUMP	100 spm
PUMP NO.	MAN	UFACTURE	LINER	STROKE LENGTH	GAL / STI	32		gr#I	AV 0P			PRESS.	1_	PRESS.	nn!	- ***	ٿا			Se april	Jo Spiri	.ou apir
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Both			5501	(DIELE	5.86	25	Ų	742	65	75	o		<u></u>	EALAN			<u> </u>	ᆜ		WELLE.	EAL INF	
BOTTO	MHÖLE	ASSEMBLY	DRILL S		O.D.		I.D.	╁╴	FORMATIO	ON_		MD	L	EOLOGIC TVD	, 	LITHOL	ŌĠY	_			CAL INF	<u> </u>
12-1/4"	- BIT			1.50					Arapiea	n								\Box	Rig N	,	Unit 11	1
		ssembly	+	1.54		<u> </u>				_			╁_						Celi N			45-6671
5 - 65		VDP		0.00 3.59		-		-					<u></u>	GAS DATA				Ⅎ		OP Tes		4/23
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4-5"HW	/DP.		121	.00															Last C	perate l	Pipe Rar	5/5
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Total I		BHA WT.	999 PUW).46 r. §	OWT.	ROT.	TORQU	E GR	D. ELEVA	TIÓN	GL T	го кв	├	KB ELEVA	TION	INTERMEDIA	TE CS	.		perate /		5/3 CASING
175		55	250		125	2	30		5,736		1	17		5,753		7*			13-3/8"	@ 2053	9-	5/8*
											_	RVEY	_					_				
мо 6,221	20.0	39.60		SECTION 2441	N+/S- 1759	169		DLS 0.55	mwd	6,41	-	INCL. 14.90		41.60	<u></u>	32	SECT 249		N+/S- 1801	1730	2.41	MWD
			5740							₽	+		 	11.00		-			1001	17.00	2.71	MWD
										D/	VILY	ACTI	VITY					_				
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SSP-0505 SSP-	Oper	ator:	Wolve	rine G&	Co of	f Utah, L	.LC		DA	ILY	DR	ILI	LIN	G	REPO	RT		24 h	r s - I	midnig	ht to m	idnigh	t
Trip Decided Section Processes P		/05/0F	1		a Fad	loral # S	- 1	CONTRA		it Ria #	111		T			1	43-0			37	1		D DEI
NOT NOT												PRO	GRESS					/4 					
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Last Operate Blind Ra S/1 Last		VDP.				+	$\neg \uparrow$		-	GAS UNII	•		ROM	\dagger	10		ROP (FI)	нк)	╌╢			Pipe Ra	
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160 55 250 125 240 5.738 17 5.753 7* 13.38*@ 2053 9.58** SURVEYS ND NCL AZMATH TV0 SECTION N+/5* E+/W* DLS TOOL MO NCL AZMATH TV0 SECTION N+/5* E+/W* DLS TOOL MW/D NCL AZMATH TV0 SECTION N+/5* E+/W* DLS TOOL MW/D NCL AZMATH TV0 SECTION N+/5* E+/W* DLS TOOL MW/D NCL AZMATH TV0 SECTION N+/5* E+/W* DLS TOOL MW/D NW/D NCL AZMATH TV0 SECTION N+/5* E+/W* DLS TOOL MW/D NW/D NW/D NCL AZMATH TV0 SECTION N+/5* E+/W* DLS TOOL MW/D NW/D NW/D NW/D NW/D NAME TO			BHA WT.				л I в	OT TOR	OUE G	RO FI FVA	TION	GI	TOKE	┦	KR ELEVA	FION	INTERVENIA	TE PE	_				
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MWD See					\neg						M	<u> </u>	INCL.	\vdash	AZIMUTH	τν	0	SECT	ION	N+/S-	E+/W-	DLS	
		+		+						+	╟─	十		†					7				
10:00 10:00 10:00 10:00 Drill & survey 6051 TO 6149											D	AILY	ACT	IVITY	,			==	==				
10:00 010:30 0.50 Rig service	FROM 0:00	10:0	0 100				6054	TOE	140														
10:30 23:30 13:00 Drill & survey 6149 to 6264' 23:30 0:00 0.50 Pump pill - trip out 0:00 0.00 0.00 0.00 0.00 0.00 0.00 0.0							0031	100	143		 -						 -						
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Opera	tor:	Wolver	ine G&O C	o of Utal	h, LLC			DA	ILY I	DR	ILL	LIN	G F	REPO	RT		24 h	rs - 1	nidnlg	ht to m	idnight	
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05/0 DAYS F/ S	94/05 SPUD		Olverine				7	TOTAL	Rig #1	11	PRO	GRESS	Sev	ier, UT	4/16/05 ING TIME	ROP)41-3		MATION		TH. DEPT	R. REB
1	19			ORILLIN	IG_				6,051		L_	283		23	3.50	12.0			Arapie	n	69	50
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BIT S	ZE	MFG.	TYPE	CODE	SERI	AL NO.			(1/32nd*) r TFA		I IN	<u>'</u>	out	FOOTAGE	HOURS	ROP		MTR	RPM RT+MTF	WOB	T B	G
4 12.	250	RTC	HP53A	547	PB4	765	24	4	24	24	48	50		1201	85.50	14.0		Υ	40-82	40-48		
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PUMP	MAN	JFACTURE	LINER	STROKE	GAL/S	TK SI	M	GPM	AV DP	A۷	DC	PUMP PRESS.		MTR DIFF PRESS.	НН	P / IN ²	EC	0:		60 spm	80 spm	100 spm
NO.	N	ational	6"	8.5	2.93	1:	25	371	145	14	45	2000	1	200	 			\dashv	1	250	 	
2	N	ational	6"	8.5	2.93	12	25	371											2	250		
Both	<u></u>			<u> </u>	5.86	2	50	742	65		5		<u> </u>		<u> </u>							
BOTTO	MHOLE	ASSEMBLY	DRILL S		O.D.	1	I.D.		FORMATIC	ON 1		MD	_ (EOLOGIC	;	LITHOL	OGY	_		GENER	INFO	0
12-1/4"-	ВІТ			1.50					Arapiea	n									Rig No)	Unit 11	1
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5 - 6 5/ X-OVE		/DP	+	0.00 3.59		+			TTOMS UP	THE	B.C	GAS	느	GAS DATA CONN G		TRIP G		╝		OP Tes		4/23 5/23
19-5"SV				7.03		+-		┦•	33	TIME	ВС	GAS	\vdash		AS	IRIP G	AS	┪		afety Me		5/4
JARS			3	1.80		Ţ		E	GAS UNIT	s	F	ROM		SHOWS TO		ROP (FT	/HR)	\exists	Last 8	OP Drill		5/1
4-5"HW	DP.		121	1.00									<u> </u>							perate f		
Total E	BHA:		999	9.46				╬					-			<u></u>				perate f		5/1 5/3
STRING V		BHA WT.	PUW	r. §	OWY.	+	TORO	UE GF	RD. ELEVAT	TON		то кв		KB ELEVA		INTERMEDIA	TE CS	<u> </u>	LAST	CASING	NEXT	CASING
160		<u>55</u>	250		125	<u> </u>	240		5,736			17 RVEY		5,753		7"	=		3-3/8"	@ 2053	9-	5/8"
MD	INCL.	AZIMUT	1 TVD	SECTION	N+ / S-	E+/	w-	DLS	TOOL	М		INCL.		ZIMUTH	T	/D	SECT	ION	N+/S-	E+/W-	DLS	TOOL
5,843 6,032	23.40	-		2307	1658	_	-	2.70	MWD	5,9	37	21.10	<u> </u>	42.80	53	85	234	12	1684	1628	2.50	MWD
0,032	20.80	7 42.00	5474	2376	1709	16	21]	0.30	MWD	L		ACTI	//TV			_===	_					MWD
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Daily To	tal	24.00	<u> </u>																			
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Ope	rator:			e G&O C											EPO			24 hr		<u> </u>	ht to mi		
DATE		ľ	WELL			-	CON	TRACTO		5: "4	44		1		TY, STATE	SPUD DATE	40.0	AP#		-	SUPERV		D DC0
	5/03/0 F/ SPUD			Verine F		·· · · · -	<u> </u>	170	Unit	Rig #1	11	PROG		Sev	ier, UT	4/16/05 NG TIME	43-0 ROP	41-3		MATION		TH. DEPT	R. REB
	18				RILLIN	IG		上		5,768		<u> </u>	331		23	.50	14.1		<u></u>	Arapie	en	69	50
	VŤ		VIS.	WL		ск	РН	SA	ND	SOLID	s% i	MUI	D DAT	A (P	GELS	DEPTH	DATE/TIME	Сні	LORID	ES]	CALCIUM	MBT	SALT PPM
_).4	+	30	NC			0.5	T		4.0		4	_	9	5/7	5541	5/3-09:50	-	2,00		2800		316,800
												BIT	DAT	A UT 1	FOOTAGE	HOURS	I ROP		4000	554	T wos	T. Buni.	CONDITION
BIT NO.	SIZE	MF	G.	TYPE	CODE	SERIAL	NO.			(1/32nd*) TFA		iN	L°	<u>.</u>	POUTAGE	HOURS	ROP		MTR	RPM RT+MT		T 8	G
4 1	2.250	RT	C H	IP53A	547	PB47	65	24	 -	24	24	4850	0	_	918	62.00	14.8		Y	40-82	40-48		
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PUMF NO.	MA	NUFAC	TURER	LINER	STROKE LENGTH	GAL / STR	SP	M_	GPM	AV DP	AV		PUMP PRESS.	l '	NTR DIFF PRESS.	нн	P / IN ²	EC	O.	<u> </u>	60 spm	80 spm	100 spm
1		Natio	nal	6*	8.5	2.93	12	5	371	145	14	5 :	2000		200					1	250		
2		Natio	nal	6"	8.5	2.93	12		371		-	_		<u> </u>				ļ		2	250	<u> </u>	L
Both	<u> </u>		- R	RILL ST	BING	5.86	25	<u>. Т</u>	742	65	75	ı L			EOLOGIC						GENER	AT IN	-
вот	OMHOL	E ASSE		LENGT		O.D.		I.D.		FORMATIC	N	М	D	Ĕ	TVD		LITHOL	OGY				INFO	<u> </u>
	4"- BIT				.50		├		╂	Arapiea	n									Rig No Cell N		Unit 11	1 345-6671
	tional / 5/8" S			114 150			-		╂─		-								┨		OP Test		4/23
x-ov				3	.59				BO	ITOMS UP	TIME	BG (GAS		GAS DATA CONN G	AS	TRIP G	AS		Next I	OP Tes	t	5/23
	SWDP			577			<u> </u>		-	_33	i			_	SHOWS						afety Me	eting	5/3
JARS 4-5"H	WDP.			121	.80		-		F	GAS UNIT	5	FR	OM	_	10		ROP (FT	/HR)			OP Drill Operate F	Pine Ra	5/1 5/3
																			-1		perate E		
Tota	I BHA:		WT.	999 PUWT		owt.	ROT	TORQUE	GB	D. ELEVAT	ION	GL TO	O KB		KB ELEVA	TKÓN	INTERMEDIA	TE CS			perate A		5/3 CASING
16			55	250		125		40		5,736		1	_		5,753		7"				@ 2053		5/8"
													(VEYS						_				
мD 5,465	inc 29.3		21MUTH 41.90	4960	SECTION	N+/S- #####	####		.86	MWD	5,65		6.90		<i>z</i> імитн 37.70		^{/D} 27	SECTI ####	_	N+/S-	E+/W-	1.31	MWD
	+			5044	#####	#####	####	## 2	.04	MWD			5.10		36.60	52	11	####	##	#####	#####		MWD
es au							_				D/	AILY /	ACTIV	ΙΤΥ									
0:00		OPN 1	17.00		LL FR		37'-5	645'															
7:00P	-	_	0.50	SEF	RVICE	RIG-W	ORK	BOF															
17:30	_	00	6.50	DRI	LL FRO	OM 564	15'-5	768'															
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Opera	ator:		ine G&O											REPOI			24 hi	·	<u> </u>	ht to m		
DATE		WELL				CON	TRACT					J		TY, STATE	SPUD DATE	Γ	APW			SUPERV		
05/ DAYS F/	02/05 SPUD		Olverine ENT OPERA				1	Unit	Rig #1	11	PROGR		Sev	ier, UT	4/16/05 NG TIME	43-0 ROP	41-3		ATION		YLOR-	-R. REB
<u> </u>	17			Drlg)		\perp		5,437		<u> </u>	372		23	.50	15.8			Arapie	n	69	50
w	, ,	VIS.	T w		ск	PH	-	AND	SOLID	S 4	MUL	D DA	YP	GELS	DEPTH	DATE/TIME		LORID	FS I	CALCIUM	[MBT]	SALT PPM
10.	$\overline{}$	32	N			10.0		.50	5.0		4	$\overline{}$	9	5/8	5200	5/2-11:00		0,00	_	2680	+	313,500
										Ξ		DAT										
BIT :	SIZE	MFG.	TYPE	CODE		L NO.			(1/32nd*) r TFA		IN	Ţ	TUC	FOOTAGE	HOURS	ROP		MTR	RPM RT+MTR	WOB	T B	CONDITION
4 12	2.250	RTC	HP53A	547	PB4	765	24	\Box	24	24	4850	工		587	38.50	15.2		Υ	40-82	40-48		
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$\vdash \vdash$	 -	-+		┼	 			_	 			╁				#DIV/0 #DIV/0		\vdash		 -	 -	
===				<u> </u>	<u></u>			HY	DRAUL	ics							<u> </u>	닉		SLOV	V PUMP	,
PUMP	MAN	UFACTURE	R LINER	STROK	i i	rk sp	M	GPM	AV DP	AV	1	PUMP		MTR DIFF	нн	2 / IN ²	EC	D.	F	60 spm	80 spm	100 spn
NO. 1	 	lational	6"	LENGTH	2.93	12	25	371	145	14	$\overline{}$	RESS. 2000	\vdash	PRESS.					<u></u>	225		
2	+	lational	6"	8.5	2.93		-	371											2	225		
Both					5.86	25	50	742	65	7:	5											
POTT	NAVOLE	ASSEMBLY	DRILL S		O.D.		T.D.	1	FORMATIO	I	M		G	EOLOGIC		197101	200			GENER		ō
12-1/4		AJJEMBLY		1.50	J.D.	1	1.0.	-1-	Arapiea		M		-	140		LITHOLO	JUT	╢	Rig No		Unit 11	1
Direction	onal A	ssembly	11	4.54		L													Cell N			345-6671
5 - 65		VDP		0.00		-							<u> </u>	GAS DATA				4		OP Tes		4/23
X-OVE 19-5"S				3.59 7.03		+-		80	770MS UP	TIME	BG G	AS		CONN G	AS	TRIPG	AS	7		OP Tes afety Me		5/23 5/2
JARS				1.80	<u> </u>			1=	GAS UNITS	s T	FRC	DM .	L	SHOWS		ROP (FT/	HRI	-		OP Drill	-ouily	5/2
4-5"HV	VDP.		12	1.00						\Box								-		perate F	ipe Rar	
	D111		 			 	38,620.00						_					—ir		perate E		
Total STRING		BHA WT.	99:	9.46 T.	ŝo wt.	ROT.	TOROL	IE GR	D. ĒLEVAT	ION	GL TO	КВ		KB ELEVAT	TION	INTERMEDIA	TE CS		Last O	perate A		4/27 Casing
160		55	250		125		240		5,736	\Box	17]		5,753		7"			3-3/8"	@ 2053	9-	5/8"
MD	INCL	AZIMUT	н тур	SECTION	I N+/S-	E+/	w. T	DLS	TOOL	МС		VEYS	_	ZIMUTH	TV	'O T	CEAT	Ot. I	NA 15	E . 1341	DI C	Too:
5,087	27.4			#####				0.57	MWD	5,27		B.40		14.40	47		SECTI	_	N+/\$- #####	E+/W-	0.64	MWD
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FROM		7	TAST	24 HOUR	s.					DA	AILY A	CTIV	/ITY									
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Operato	or:	Wolverin	ne G&O C	o of Uta	n, LLC		D						REPO			24 h	rs - r	nidnig	ht to m	idnigh	t
DATE OF (04)	/OE	WELL	hanina F		# O 4	CONT	RACTOR		~ #44	14		Ι.	UNTY, STATE	SPUD DATE	42.0	APH		7	SUPER		R-R. REI
05/01/ DAYS F/ SPU			IVERINE F					Jnit Ri	н		PROGRE	SS	orill	4/16/05 ING TIME	43-0 ROP	141-		MATION		JTH. DEP	
16		<u></u>		Drlg			<u></u>	5,0	65			15	15	5.00	14.3		<u>_</u>	Arapie	en	6	950
WT	$\overline{}$	VIS.	WL		ск	PH	SAN	D I	SOLIDS		MUD I	DATA	GELS	DEPTH	DATE/TIME	СН	LORID	ES	CALCIUM	MBT	SALT PPM
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2	Nat	tional	6"	8.5	2.93	125		71			-						_	2	225	<u> </u>	
Both			RILLST	RING	5.86	250	7	42	65	75	<u> </u>		GEOLOGIC					==	GENE	A I	
воттомно	OLE AS		LENGT		O.D.	(.	D.	FOR	MATION		MD	T	TVD	·	LITHOLO	OGY				INFO	ru
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Directiona 5 - 6 5/8"			114					 		+								Cell N	orren OP Tes		-645-6671 4/23
X-OVER				.59				BOTTON	IS UP T	ME	BG GAS		GAS DATA CONN G	AS	TRIP G	AŞ			OP Tes		5/23
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-5 111101	<u>' • </u>		'-	-00			\neg	}		十		+					—		perate l		
Total BH/		HA WT.	999 PUWT		owr.	ROT. TO												Last O	perate /	Annulai	4/27
150	-	55	225		110	26		GRĎ. EL	736	~	GL TO KI	'	KB ELEVA 5,753		INTERMEDIA	TE CS	—		CASING ② 2053		TCASING -5/8"
											SURV	YS					"				
	NCL. 6.90	43.80		SECTION #####	N+/S-	E+/W-	_		WD	MD	INC		AZIMUTH	T	'D	SECTI	ON	N+/S-	E+/W-	DLS	TOOL
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Form 3160-5 (April 2004)

UNITED STATES DEPARTMENT OF THE INTERIOR BURGALLOG LAND MANAGEMENT

BUREAU OF LAND MANAGEMENT

5. Lease Serial No.

FORM APPROVED

OM B No. 1004-0137 Expires: March 31, 2007

Do not use t	/ NOTICES AND RE his form for proposals vell. Use Form 3160-3 (to drill or to re-	enter an	6. If Indian, Allottee or Tribe Name
SUBMIT IN TR	RIPLICATE- Other inst	ructions on reve	rse side.	7. If Unit or CA/Agreement, Name and/or No. Wolverine Fed Exploration Unit
1. Type of Well Oil Well	Gas Well Other			8. Well Name and No.
2. Name of Operator Wolverine C	Gas & Oil Co of Utah, LLC	3b. Phone No. (inchua	le area code)	Wolverine Federal #8-1 9. API Well No. 43-041-30037
One Riverfront Plaza, 55 Cam 4. Location of Well (Footage, Sec.,		616-458-1150		10. Field and Pool, or Exploratory Area Exploratory Area
SHL: 1680' FNL & 2265' FW BHL: 450' FSL & 1010' FEL	L of Sec 17, T23S R01W of Sec 8, T23S R01W (origina	1)	:	11. County or Parish, State Sevier Co, UT
12. CHECK A	PPROPRIATE BOX(ES) TO	INDICATE NATUR	RE OF NOTICE, RI	EPORT, OR OTHER DATA
TYPE OF SUBMISSION		TY	PE OF ACTION	
Notice of Intent ✓ Subsequent Report ☐ Final Abandonment Notice	Acidize Alter Casing Casing Repair Change Plans Convert to Injection	Deepen Fracture Treat New Construction Plug and Abandon Plug Back	Production (Star Reclamation Recomplete Temporarily Aba Water Disposal	Well Integrity Other
13 Describe Proposed or Complete	ed Operation (clearly state all pertin	ent details, including estir	mated starting date of am	reproced work and approximate duration thereof

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Permission was requested and received verbally from Al McKee on May 7, 2005 to amend intermediate casing from 6325 to max 7450'. The Twin Creek Lime projected at 6500' md, which serves as a casing seat, had not yet been encountered.

Permission was requested and received verbally from Al McKee on May 9, 2005 to amend the permitted drill depth from 7450' to 12,000'. Drill data supported that the upper structure had been missed and a geologic marker, possibly as deep as 12000' may be needed for full evaluation. Since then the well was logged at 7557' and determined to have encountered Twin Creek Lime. 9-5/8" intermediate casing will be set at approximately 8500' if either 1) pay is encountered or 2) the well is to be deepened further. At some depth above 12000, logs will be run again and and decision to plugback/sidetrack or run casing for completion will be made. If casing is run it will be either 7" or 5-1/2' and will be cemented back into the 9-5/8" csg shoe. The present hole inclination is 4.2 degr at 133 degr azimuth - on course with the original plan. The original BHL coordinates were projected at 2037' N & 2014' E. The attached well plan now projects BHL of 1894' N and 1892' E of the SHL.

PLEASE MAINTAIN ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL - thank you

_		`
Ac:	UDOGM	J
Ç		•

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed)	· .		==
Steven R Hash - EXACT Engineering Inc	Title Consulting I	Engineer (918) 599-9400	
Signature Sturn R. Harl	Date	05/12/2005	
THIS SPACE FOR FEDERAL	OR STATE O	FFICE USE	
Approved by	Title	Date	
Conditions of approval, if any, are attached. Approval of this notice does not warrant certify that the applicant holds legal or equitable title to those rights in the subject leas which would entitle the applicant to conduct operations thereon.	or Office		

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

C	DIVISION OF OIL, GAS AND MI	NING	5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-73528
SUNDRY	NOTICES AND REPORTS	S ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for proposals to drill ne	ew wells, significantly deepen existing wells below cur terals. Use APPLICATION FOR PERMIT TO DRILL for	rent bottom-hole depth, reenter plugged wells, or to orm for such proposals.	7. UNIT or CA AGREEMENTNAME:
TYPE OF WELL OIL WELL		Orlling well	8. WELL NAME and NUMBER: Wolverine Federal 8-1
2. NAME OF OPERATOR: Wolverine Gas and Oil Col	mnany of Litah LLC		9. API NUMBER: 4304130037
3. ADDRESS OF OPERATOR:		PHONE NUMBER: (616) 458-1150	10. FIELD AND POOL, OR WLDCAT: Exploratory Area
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1680' F			county: Sevier
QTR/QTR, SECTION, TOWNSHIP, RANG		W	STATE: UTAH
11. CHECK APPR	ROPRIATE BOXES TO INDICAT	TE NATURE OF NOTICE, REPO	
TYPE OF SUBMISSION		TYPE OF ACTION	
NOTICE OF INTENT (Submit in Duplicate)	ACIDIZE ALTER CASING	DEEPEN FRACTURE TREAT	REPERFORATE CURRENT FORMATION SIDETRACK TO REPAIR WELL
Approximate date work will start:	CASING REPAIR	NEW CONSTRUCTION	TEMPORARILY ABANDON
5/16/2005	CHANGE TO PREVIOUS PLANS	OPERATOR CHANGE	TUBING REPAIR
	CHANGE TUBING	PLUG AND ABANDON	VENT OR FLARE
SUBSEQUENT REPORT (Submit Original Form Only)	CHANGE WELL NAME	PLUG BACK	WATER DISPOSAL
Date of work completion:	CHANGE WELL STATUS	PRODUCTION (START/RESUME)	WATER SHUT-OFF
Date of work completion.	COMMINGLE PRODUCING FORMATIONS	RECLAMATION OF WELL SITE	✓ OTHER: sidetrack new BHL
	CONVERT WELL TYPE	RECOMPLETE - DIFFERENT FORMATION	
	·	pertinent details including dates, depths, v olum	es, etc.
PLEASE KEEP THE ENC	LOSED INFORMATION CONFIL	DENTIAL - THANK YOU	
UDOGM) permission was which to sidetrack to a new kickoff point is projected at the BHL as presently auth to temporarily "suspend" the well. Depending upon the removed. It is also request	requested and verbally received w BHL, (nat being 1038' N and 4 t approximately 2500' md below orized in an APD for the Wolveri he permitted authority of the King outcome of the sidetrack well, it sted to change the name of the p 7-6 (WF 8-1). Wolverine is the results well with the sted to change the name of the p to the position of	13-3/8" csg. See attached directine Kings Meadow Ranches 17-6 gs Meadow Ranches 17-6 well in it is understood the suspension moresent Wolverine Federal 8-1, for mineral lessee of all minerals with	et depth of 5933' TVD (-180ss). The cional plat. This BHL approximates well. For this reason it is requested favor of the proposed sidetrack ay either be made permanent or purposes of this sizetrack, to the nin 460' of the entire proposed TVFD
	(1022'N and 83' W	HL of 660 FNL and 192 of the SHL) DKG	MAY 2 0 2005
attached: directional plan xc: BLM		, , ,	DIV. OF OIL, GAS & MINING
NAME (PLEASE PRINT) Steven R.	Hash - EXACT Engineering, Inc	: _{TITLE} Consulting Engli	neer for Wolverine Gas & Oil
SIGNATURE Sture	R. Hell	DATE 5/18/2005	

(This space for State use only)

CONFIDENTIAL

WOLVERINE GAS & OIL CO. OF TAH Kings Meadow Ranches 17-0 (198-1) Sevier County, Utah



3.		SECTION DETAILS				E DETAILS	
2 36 3 61	MD Inc Azi TVD 534.00 28.00 41.60 2403.88 535.22 7.71 322.39 3456.00 134.80 7.71 322.39 5933.00 444.21 7.71 322.39 6636.00	+N/-S +E/-W DLeg 511.63 496.92 0.00 768.39 625.97 2.50 1033.97 421.40 0.00 1109.35 363.34 0.00	0.00 97.23 1 -163.44 220.11 0.00 555.35	Target NVJ01	T23S R01W NW/	Pad A-2 Sevier County, Utah 4 SE/4 Sec 17 Satisfy Depth: 0.00 Uncertainty: 0.00 onvergence: -0.28	
7				WELL DETAILS			
	A	Name Kings Meadow Ranches 17-6	+N/-S +E/-W WF8-1)00 48.00	Northing East 6733931.77 1516740	-5//		Slot N/A
0	20"			TAI	RGET DETAILS		
				Name TVI Tie On 2534.0 NVJ01 5933.0	0 511.63 496.9	V Shape 2 Point 0 Point	
000		, T	Target NV	01 is located 642' South of	North Section Line &	43' E of 1/2 Section Li	ine.
2000-	13 3/8"		Azimuths to True No Magnetic North: 12 Magnetic F Strength: 51942 Dip Angle: 64 Date: 5/19/2 Model: igrf2	ield Geodetic Sy 2nT Ellip 52° Ellip 005 Magnetic M	FIELD DETA Sevier County, stem: US State Plane C soid: GRS 1980 Cone: Utab, Central Zo todel: igr2005 atum: Mean Sea Level forth: True North	Utah Coordinate System 198	в
000	Tie On			CA: No. TVD MD 1 119.98 120.00 2 1978.59 2053.3 3 5750.00 5950.1 4 6636.00 6844.3	00 13 3/8" 13 9 5/8"	Size 20 000 13.375 9.625 7.000	
1000					TION TOP DETAILS MDPath Formatio 5800.78 Twin Cre 6134.80 NVI01	TI.	
		2000	MIM		MAN		X
5000		1500 [u ₄ AJ000				[NVJ01]	
5000	9 5/8" NVJ01	South(-)/North(+) [10000P/in]			A	Tie On	
	V PL	-500					
7000		-1000	-2500 -2000 -	-1500 -1000 -	500 0	500 1000	

-Neatherford Internationa-**Planning Report**

Plan:

Company: Wolverine Gas & Oil Co of Utah

Field: Sevier County, Utah

Pad A-2

Site: Well:

Kings Meadow Ranches 17-6 (WK 8-1)

5/19/2005 Date:

Time: 15:12:38

Co-ordinate(NE) Reference: Well: Kings Meadow Ranches 17-6(8-1)

Vertical (TVD) Reference: Section (VS) Reference:

SITE 0.0

Well (0.00N,0.00E,322.00Azi)

KMR 17-6

Wellpath: Field:

Sevier County, Utah

Map System: US State Plane Coordinate System 1983

Geo Datum: GRS 1980 Sys Datum: Mean Sea Level Map Zone:

Coordinate System: Geomagnetic Model: Utah, Central Zone

Well Centre igrf2005

Pad A-2

T23S R01W Sevier County, Utah

NW/4 SE/4 Sec 17

Site Position: Lease Line From:

Northing: Easting:

Latitude:

Longitude:

North Reference: Grid Convergence: True

Position Uncertainty: Ground Level:

0.00 ft 0.00 ft

Slot Name:

-0.28 deg

Kings Meadow Ranches 17-6 (8-1)

Well Position: +N/-S

0.00 ft Northing: +E/-W 48.00 ft Easting:

6733931.77 ft Latitude:

38 48 19.460 N

Position Uncertainty:

1516740.09 ft

Longitude:

111 56 2.273 W

0.00 ft

Drilled From:

Surface

Current Datum: Magnetic Data:

Wellpath:

Plan:

SITE

ft

5/19/2005

0.00 ft Height

Tie-on Depth: **Above System Datum:** Declination:

0.00 ft Mean Sea Level 12.55 deg 64.52 deg

Field Strength: Vertical Section:

51942 nT Depth From (TVD)

+N/-S ft

0.00

Mag Dip Angle: +E/-W

Direction

ft deg 322.00 0.00

0.00 **KMR 17-6**

Date Composed:

5/16/2005

Version: Tied-to:

From: Definitive Path

Principal: Nο

Plan Section	ı Informati	on									
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target	
2534.00	28.00	41.60	2403.88	511.63	496.92	0.00	0.00	0.00	0.00		
3635.22	7.71	322.39	3456.00	768.39	625.97	2.50	-1.84	-7.19	-163.44		
6134.80	7.71	322.39	5933.00	1033.97	421.40	0.00	0.00	0.00	0.00	NVJ01	
6844.21	7.71	322.3 9	6636.00	1109.35	363.34	0.00	0.00	0.00	0.00		

Section 1: Start DLS 2.50 TFO -163.44

MD ft	Incl deg	Azim deg	TVD ft	+N/-S	+E/-W ft	VS ft	DLS deg/100f	Build t deg/1006	Turn ft deg/100ft	TFO deg	
120.00	1.87	322.50	119.98	1.56	-1.19	1.96	0.00	0.00	0.00	0.00	
2053.00	24.72	41.61	1978.59	348.88	342.64	63.97	1,26	1.18	4.09	83.16	
2534.00	28.00	41.60	2403.88	511.63	496.92	97.23	0.68	0.68	0.00	-0.10	
2600.00	26.42	40.54	2462.58	534.37	516.75	102.95	2.50	-2.39	-1.60	-163.44	
2679.12	24.54	39.11	2534.00	560.50	538.56	110.11	2.50	-2.38	-1.81	-162.50	
2700.00	24.05	38.70	2553.03	567.19	543.96	112.05	2.50	-2.36	-1.98	-161.21	
2800.00	21.70	36.48	2645.16	597.96	567.69	121.69	2.50	-2.35	-2.22	-160.83	
2900.00	19.39	33.75	2738.80	626.63	587.91	131.84	2.50	-2.31	-2.72	-158.79	
3000.00	17.13	30.33	2833.76	653.15	604.58	142.48	2.50	-2.26	-3.42	-156.23	
3100.00	14.95	25.93	2929.86	677.47	617.66	153.58	2.50	-2.19	-4.41	-152.98	
3200.00	12.87	20.10	3026.93	699.53	627.12	165.14	2.50	-2.07	-5.83	-148.75	
3300.00	10.98	12.19	3124.77	719.30	632.96	177.13	2.50	-1.90	-7.91	-143.09	
3400.00	9.36	1.33	3223.21	736.74	635.16	189.51	2.50	-1.61	-10.86	-135.35	
3500.00	8.20	346.75	3322.04	751.82	633.71	202.28	2.50	-1.16	-14.57	-124.65	
3600.00	7.70	328.97	3421.10	764.50	628.63	215.41	2.50	-0.50	-17.79	-110.25	
3635.22	7.71	322.39	3456.00	768.39	625.97	220.11	2.50	0.03	-18.66	-92.63	

Weatherford Internationary Planning Report

Time: 15:12:38 Company: Wolverine Gas & Oil Co of Utah Date: 5/19/2005 Page: Co-ordinate(NE) Reference: Well: Kings Meadow Ranches 17-6 (8-1) Field: Sevier County, Utah Pad A-2 Vertical (TVD) Reference: SITE 0.0 Site: Kings Meadow Ranches 17-6 (8-() Well (0.00N,0.00E,322.00Azi) Well: Section (VS) Reference: Wellpath: **KMR 17-6** 2 : Start Hold Section TVD +N/-S +E/-W VS DLS MD Incl Azim Build Turn TFO deg/100ft deg/100ft deg/100ft dea ft ft ft deg ft dea 3700.00 7.71 322.39 3520.20 775.27 620.67 228.80 0.00 0.00 0.00 0.00 3800.00 771 322 39 3619 29 785 90 612 48 242 21 0.000.000.00 0.00322.39 255.63 0.00 0.00 3900.00 7.71 3718.39 796.52 604.30 0.00 0.00 4000.00 7.71 322.39 3817.49 807.15 596.12 269.04 0.00 0.00 0.00 0.00 322.39 3916.58 817.77 587.93 282.45 0.00 0.00 4100.00 7.71 0.00 0.00 4200.00 7.71 322.39 4015.68 828.40 579.75 295.86 0.00 0.00 0.00 0.00 4300.00 7.71 322.39 4114.78 839.02 571.56 309.27 0.00 0.00 0.00 0.00 849 65 322.68 0.00 4400.00 322.39 563 38 0.000.00 0.00 7.71 4213.87 4500.00 7.71 322.39 4312.97 860.27 555.19 336.09 0.00 0.00 0.00 0.00 4600.00 322.39 870.90 547.01 349.51 0.00 0.00 0.00 0.00 7.71 4412.07 4700.00 7.71 322.39 4511.16 881.52 538.82 362.92 0.00 0.00 0.00 0.00 7.71 4610.26 892.15 530.64 376.33 0.00 0.00 0.00 0.00 4800.00 322.39 4900 00 7.71 322.39 902.77 522.46 389.74 0.00 0.00 0.00 0.00 4709.35 5000.00 7.71 322.39 4808.45 913.40 514.27 403.15 0.00 0.00 0.00 0.00 5100.00 7.71 322.39 4907.55 924.02 506.09 416.56 0.00 0.00 0.00 0.00 934.65 497.90 429.97 0.00 0.00 0.00 5200.00 7.71 322.39 5006.64 0.00 5300.00 7.71 322.39 5105.74 945.28 489.72 443.39 0.00 0.00 0.00 0.00 0.00 322.39 955.90 456.80 0.00 0.00 5400.00 7.71 5204 84 481.53 0.00 5500.00 7.71 322.39 5303.93 966.53 473.35 470.21 0.00 0.00 0.00 0.00 5600.00 7.71 322.39 5403.03 977.15 465.17 483.62 0.00 0.00 0.00 0.00 7.71 322.39 5502.13 987.78 456.98 497.03 0.00 0.00 0.00 0.00 5700.00 5800.00 7.71 322.39 5601.22 998.40 448.80 510.44 0.00 0.00 0.00 0.00 998.48 0.00 0.00 0.00 5800.78 7.71 322.39 5602.00 448.73 510.55 0.00 1009.03 440.61 523.85 0.00 0.00 5900.00 7.71 322 39 5700.32 0.00 0.00 5950.13 7.71 322.39 5750.00 1014.35 436.51 530.58 0.00 0.00 0.00 0.00 322.39 6000.00 7.71 5799.42 1019.65 432.43 537.27 0.00 0.00 0.00 0.00 1030.28 424.24 550.68 6100.00 7.71 322.39 5898.51 0.00 0.00 0.00 0.00 6134.80 7.71 322.39 5933.00 1033,97 421.40 555.35 0.00 0.00 0.00 3 : Start Hold Section TVD +N/-S +E/-W VS DLS Build TFO MD Incl Azim Turn deg/100ft deg/100ft deg/100ft ft deg deg ft deg 322.39 0.00 6200 00 7.71 5997 61 1040 90 416 06 564 09 0.00 0.00 0.001051.53 0.00 6300.00 7.71 322.39 6096.71 407.88 577.50 0.00 0.00 0.00 6400.00 7.71 322.39 6195.80 1062.15 399.69 590.91 0.00 0.00 0.00 0.00 0.00 0.00 6500.00 7.71 322.39 6294.90 1072.78 391.51 604.32 0.00 0.00 6541.48 322.39 6336.00 388.11 609.89 0.00 0.00 0.00 0.00 7.71 1077.18 6600.00 7.71 322.39 6394.00 1083 40 383 32 617 74 0.000.000.000.006700.00 7.71 322.39 6493.09 1094.03 375.14 631.15 0.00 0.00 0.00 0.00 6800.00 322.39 6592.19 1104.65 366.95 644.56 0.00 0.00 0.00 0.00 7.71 0.00 1109.35 650.49 0.00 6844.21 7.71 322.39 6636.00 363.34 0.00 Survey MD Inci Azim TVD +N/-S +E/-W VS DLS Build Turn Tool/Comment deg/100ft deg/100ft deg/100ft ft ft deg deg ft ft ft 120.00 1.87 322.50 119.98 1.56 -1.19 1.96 0.00 0.00 0.00 348.88 342.64 63.97 1.26 4.09 13 3/8 41.61 1978.59 1.18 2053.00 24.72 2534.00 0.00 2403.88 511 63 496 92 0.68 0.68 MWD 28.00 41.60 97.23 MWD 2600.00 26.42 40.54 2462.58 534.37 516.75 102.95 2.50 -2.39-1.602679.12 24.54 39.11 2534.00 560.50 538.56 110.11 2.50 -2.38 -1.81 Tie On 2700.00 24.05 38.70 2553.03 567.19 543.96 112.05 2.50 -2.36 -1.98 MWD 2.50 -2.35 -2.22 MWD 36.48 2645.16 597.96 567.69 121.69 2800.00 21.70 2900.00 19.39 33.75 2738.80 626.63 587.91 131.84 2.50 -2.31-2.72 MWD 17.13 30.33 2833.76 653.15 604.58 142.48 2.50 -2.26-3.42MWD 3000.00 617.66 153.58 -4.41 MWD 3100.00 14.95 25.93 2929.86 677.47 2.50 -2.192.50 -5.83 MWD 3200.00 12.87 20 10 3026 93 699 53 627.12 165.14 -2.07 MWD 3300.00 10.98 12.19 3124.77 719.30 632.96 177.13 2.50 -1.90-7.913400.00 9.36 1.33 3223.21 736.74 635.16 189.51 2.50 -1.61 -10.86MWD 3500.00 8.20 346.75 3322.04 751.82 633.71 202.28 2.50 -1.16 -14.57 MWD 2.50 3600.00 328.97 3421.10 764.50 628.63 215.41 -0.50 7.70

-Weatherford Internationa-**Planning Report**

Company: Wolverine Gas & Oil Co of Utah Field:

Sevier County, Utah

Site:

Well: Wellpath:

Pad A-2 Kings Meadow Ranches 17-6 (8-1)

 Date:
 5/19/2005
 Time:
 15:12:38
 Page:
 3

 Co-ordinate(NE) Reference:
 Well:
 Kings Meadow Ranches 17-6 (8-1)

 Vertical (TVD) Reference:
 SITE 0.0

 Section (VS) Reference:
 Well (0.00N,0.00E,322.00Azi)

 Flan:
 KMR 17-6

MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	TooVCommen
ft	deg	deg	n.	ft	ft	ft	deg/100ft	deg/1001	t deg/100ft	
3635.22	7.71	322.39	3456.00	768.39	625.97	220.11	2.50	0.03	-18.66	MWD
3700.00	7.71	322.39	3520.20	775.27	620.67	228.80	0.00	0.00	0.00	MWD
3800.00	7.71	322.39	3619.29	785.90	612.48	242.21	0.00	0.00	0.00	MWD
3900.00	7.71	322.39	3718.39	796.52	604.30	255,63	0.00	0.00	0.00	MWD
4000.00	7.71	322.39	3817.49	807.15	596.12	269.04	0.00	0.00	0.00	MWD
4100.00	7.71	322.39	3916.58	817.77	587.93	282.45	0.00	0.00	0.00	MWD
4200.00	7.71	322.39	4015.68	828.40	579.75	295.86	0.00	0.00	0.00	MWD
4300.00	7.71	322.39	4114.78	839.02	571.56	309,27	0.00	0.00	0.00	MWD
4400.00	7.71	322.39	4213.87	849.65	563.38	322.68	0.00	0.00	0.00	MWD
4500.00	7.71	322.39	4312.97	860.27	555.19	336.09	0.00	0.00	0.00	MWD
4600.00	7.71	322.39	4412.07	870.90	547.01	349.51	0.00	0.00	0.00	MWD
4700.00	7.71	322.39	4511.16	881.52	538.82	362.92	0.00	0.00	0.00	MWD
4800.00	7.71	322.39	4610.26	892.15	530.64	376.33	0.00	0.00	0.00	DWM
4900.00	7.71	322.39	4709.35	902.77	522.46	389.74	0.00	0.00	0.00	MWD
5000.00	7.71	322.39	4808.45	913.40	514.27	403.15	0.00	0.00	0.00	MWD
5100.00	7.71	322.39	4907.55	924.02	506.09	416.56	0.00	0.00	0.00	MWD
5200.00	7.71	322.39	5006.64	934.65	497.90	429.97	0.00	0.00	0.00	MWD
5300.00	7.71	322.39	5105.74	945.28	489.72	443.39	0.00	0.00	0.00	MWD
5400.00	7.71	322.39	5204.84	955.90	481.53	456.80	0.00	0.00	0.00	MWD
5500.00	7.71	322.39	5303.93	966.53	473.35	470.21	0.00	0.00	0.00	MWD
5600.00	7.71	322.39	5403.03	977.15	465.17	483.62	0.00	0.00	0.00	MWD
5700.00	7.71	322.39	5502.13	987.78	456.98	497.03	0.00	0.00	0.00	MWD
5800.00	7.71	322.39	5601.22	998.40	448.80	510.44	0.00	0.00	0.00	MWD
5800.78	7.71	322.39	5602.00	998.48	448.73	510.55	0.00	0.00	0.00	Twin Creek
5900.00	7.71	322.39	5700.32	1009.03	440.61	523.85	0.00	0.00	0.00	MWD
5950.13	7.71	322.39	5750.00	1014.35	436.51	530.58	0.00	0.00	0.00	9 5/8*
6000.00	7.71	322.39	5799.42	1019.65	432.43	537.27	0.00	0.00	0.00	MWD
6100.00	7.71	322.39	5898.51	1030.28	424.24	550.68	0.00	0.00	0.00	MWD
6134.80	7.71	322.39	5933.00	1033.97	421.40	555.35	0.00	0.00	0.00	NVJ01
6200.00	7.71	322.39	5997.61	1040.90	416.06	564.09	0.00	0.00	0.00	MWD
6300.00	7.71	322.39	6096.71	1051.53	407.88	577.50	0.00	0.00	0.00	MWD.
6400.00	7.71	322.39	6195.80	1062.15	399.69	590.91	0.00	0.00	0.00	MWD
6500.00	7.71	322.39	6294.90	1072.78	391.51	604.32	0.00	0.00	0.00	MWD
6541.48	7.71	322.39	6336.00	1077.18	388.11	609.89	0.00	0.00	0.00	OWC
6600.00	7.71	322.39	6394.00	1083.40	383.32	617.74	0.00	0.00	0.00	MWD
6700.00	7.71	322.39	6493.09	1094.03	375.14	631.15	0.00	0.00	0.00	MWD
6800.00	7.71	322.39	6592.19	1104.65	366.95	644.56	0.00	0.00	0.00	MWD
6844.21	7.71	322.39	6636.00	1109.35	363.34	650.49	0.00	0.00	0.00	7 "

1 ML Bers	T	ar	g	eſ	9
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Name	Descript Dip.	ion Dir.	TVD ft	+N/-S ft	+E/-W	Map Northing ft	Map Easting ft	< Latitude> Deg Min Sec	C Longitude> Deg Min Sec
Tie On			2534.00	511.63	496.92	6734440.981	1517239.49	38 48 24.517 N	111 55 55.996 W
-Plan out	by 64.21 at		2534.00	560.50	538.56	6734489.651	517281.37	38 48 25.000 N	111 55 55.470 W
NVJ01	•		5933.00	1038.00	418.00	6734967.731	517163.12	38 48 29.719 N	111 55 56.993 W
-Plan out	by 5.27 at		5933.00	1033.97	421.40	6734963.691	1517166.50	38 48 29.679 N	111 55 56.950 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name		
120.00	119.98	20.000	26.000	20"		
2053.00	1978.59	13.375	17.500	13 3/8"		
5950.13	5750.00	9.625	12.250	9 5/8"		

-Weatherford Internationa-**Planning Report**

Company: Wolverine Gas & Oil Co of Utah Field: Sevier County, Utah

Pad A-2 Site: Well:

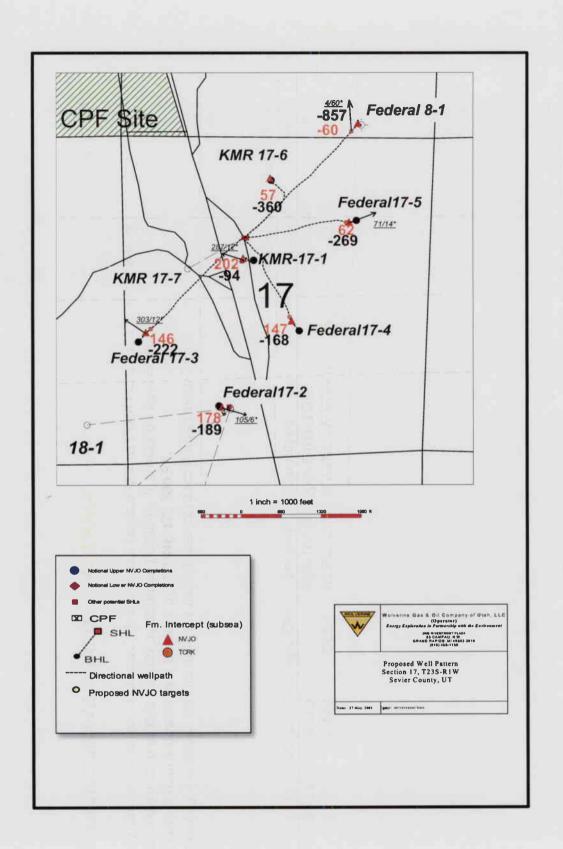
Kings Meadow Ranches 17-6 (8-1) Wellpath: 1

Casing Points

MD	TVD	Diameter	Hole Size	Name
ft	ft	in	in	
6844.21	6636.00	7.000	8.500	7"

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
5800.78	5602.00	Twin Creek		0.00	0.00
6134.80	5933.00	NVJ01		0.00	0.00
6541.48	6336.00	owc		0.00	0.00



From:

"Steven R Hash" <stevehash@exactengineering.com>

To:

"Dustin Doucet" <dustindoucet@utah.gov>, "Al McKee" <al_mckee@blm.gov>

Date:

5/27/2005 2:51:21 PM

Subject:

Kings Meadow Ranches 17-6 (WF 8-1) lease line issue

Gentlemen,

Attached please find our plat detailing the actual coordinates of the top of the Navajo (based on drilling surveys and mudlogger top data) in the subject well. This supports that the producing formation lies entirely within the NW/4 of Sec 17. Tha actual footages are:

NVJO top (drilled top - later refined by logs): 121' FEL (qtr sec line) & 698' FNL

Bottom Hole (TD): 106' FEL (qtr sec line) & 718' FNL

I'll call soon to discuss details. Oh...by the way....Wolverine now wants to drill one more well from A-2 pad and name it "Kinga Meadow Ranches 17-7". Great timing huh?

Steve
Steven R. Hash
EXACT Engineering, Inc.
415 S. Boston, Suite 734
Tulsa, OK 74103
ofc (918) 599-9400 ofc fax (918) 599-9401
direct (918) 599-9801 mobil fax (801) 640-7470
stevehash@exactengineering.com
www.exactengineering.com
Petroleum Engineering Consulting and Field Services

From:

"Steven R Hash" <stevehash@exactengineering.com>

To: .

"Dustin Doucet" <dustindoucet@utah.gov>, "Al McKee" <al mckee@blm.gov>

Date:

5/30/2005 10:12:56 PM

Subject:

Kings Meadow Ranches 17-6 (WF 8-1)

Gentlemen,

FYI, attached is a copy of the cover letter that will accompany (via express mail Tuesday, May 31) those items mentioned in my previous email of Friday, May 27. Please delete the previous amended APD draft sent by email on Friday in favor of the one attached here to show "re-entry" in lieu of "drill". Thank you. Steve

Steven R. Hash

EXACT Engineering, Inc.

415 S. Boston, Suite 734

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Petroleum Engineering Consulting and Field Services

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CC:

"Edward Higuera" <EHiguera@wolvgas.com>

From: To: Earlene Russell

Date:

Dan Triezenberg 5/31/2005 1:04:56 PM

Subject:

Re: Bond information for the 17-6

Dan,

I have attached bond #19-10775-4 to API 43-41-30037 (Kings Meadow Ranches 17-6 (8-1))

Earlene Russell

>>> "Dan Triezenberg" <dtriezenberg@wolvgas.com> 05/31/05 10:26 AM >>> Earlene,

Please change the documentation on the Well Bond for the Wolverine Federal 8-1 (API #43-041-30037) to the Kings Meadow Ranch 17-6 per our conversation from this morning. The reason for the change is due to the original 8-1 was drilled but did not encounter Navajo at TD, so it has been plugged. The top portion of this well bore was used for a new well which will TD in section 17 and therefore the new well bore has been named KMR 17-6.

Thank you for your understanding.

Dan Triezenberg

CC: Dustin Doucet

From: "Steven R Hash" <

"Steven R Hash" <stevehash@exactengineering.com>
"Al McKee@blm.gov" <Al McKee@blm.gov>, "Dustin Doucet"

<dustindoucet@utah.gov>

Date: 6/5/20

6/5/2005 11:58:25 AM

Subject: KMR 17-6 (WF

KMR 17-6 (WF 8-1) lease line issue - PLAT & explanation

Gentlemen.

To:

Please find attached, as previously promised, a plat prepared by Wolverine detailing the 1) original proposed BHL of the Kings Meadow Ranches 17-6 (KMR 17-6) well 2) the proposed BHL, later submitted via sundry notice, for the sidetrack of the Wolverine Federal 8-1 (WF 8-1) which was eventually named KMR 17-6 (WF 8-1) and 3) actual BHL of the Navajo formation top as drilled in the KMR 17-6 (WF 8-1).

A recap of recent developments is as follows: Upon determining that the WF 8-1 was non-productive on May 13, 2005, we subsequently requested, and received, BLM & UDOGM verbal permission to plugback the WF 8-1. A sidetrack, utilizing the upper 2500' of the WF 8-1 wellbore to an approved BHL for the KMR 17-6 well, which had been planned but not yet drilled, was proposed. It was believed during initial sidetrack planning stages, that the sidetrack wellbore would not enter federal mineral space and therefore UDOGM verbal approval was requested and received for a sidetrack well, KMR 17-6 (WF 8-1), to the then intended and previously approved KMR 17-6 BHL, on fee minerals. During the ensuing process of staff evaluation of final open hole logs of the WF 8-1, which included a geologic re-interpretation based on the new data, a somewhat different ideal BHL for the sidetrack well was identified. It was at that time that our oversight occurred. I failed to recognize the difference in the bottomhole locations of this final proposal and that of the KMR 17-6 which I had verbally represented just days earlier. This section, section 17, is an irregular section and the difficulty of readily calculating accurate distances from interior locations to section boundaries exist. I incorrectly assumed that the location provided to me and submitted in our subsequent sundry notice was much closer to the verbally proposed KMR 17-6 than it actually became. These differences are shown on the attached plat. This oversight, and the corresponding difference in approved and actual BHL created an exception to UDOGM rule 649-3-2. We are prepared to submit a written request for this exception but will await your review of this issue for instructions for further handling. I trust this adequately explains the situation surrounding this discrepancy and we will be certain to recognize future potential rule 649-3-2 infringements.

Thank you,

Steve
Steven R. Hash
EXACT Engineering, Inc.
415 S. Boston, Suite 734
Tulsa, OK 74103
ofc (918) 599-9400 ofc fax (918) 599-9401
direct (918) 599-9801 mobil fax (801) 640-7470
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----Original Message-----

From: "Al_McKee@blm.gov" <Al_McKee@blm.gov>

Sent: 5/31/2005 11:58 AM

To: "stevehash@exactengineering.com" <stevehash@exactengineering.com> Cc: "Dustin Doucet" <dustindoucet@utah.gov> Subject: Re: Kings Meadow Ranches 17-6 (WF 8-1) lease line issue

Steve -

I'm obviously confused. The oral to revise the wellpath was based on the approved BHL for the original 17-6 (I never saw that document, but I believe it to be somewhere around the center of the NENW). However the Sundry to revise has a wellpath BHL far to the east of the 17-6 BHL. Regardless, 121' FEL (qtr sec line) would still not meet State location requirements.

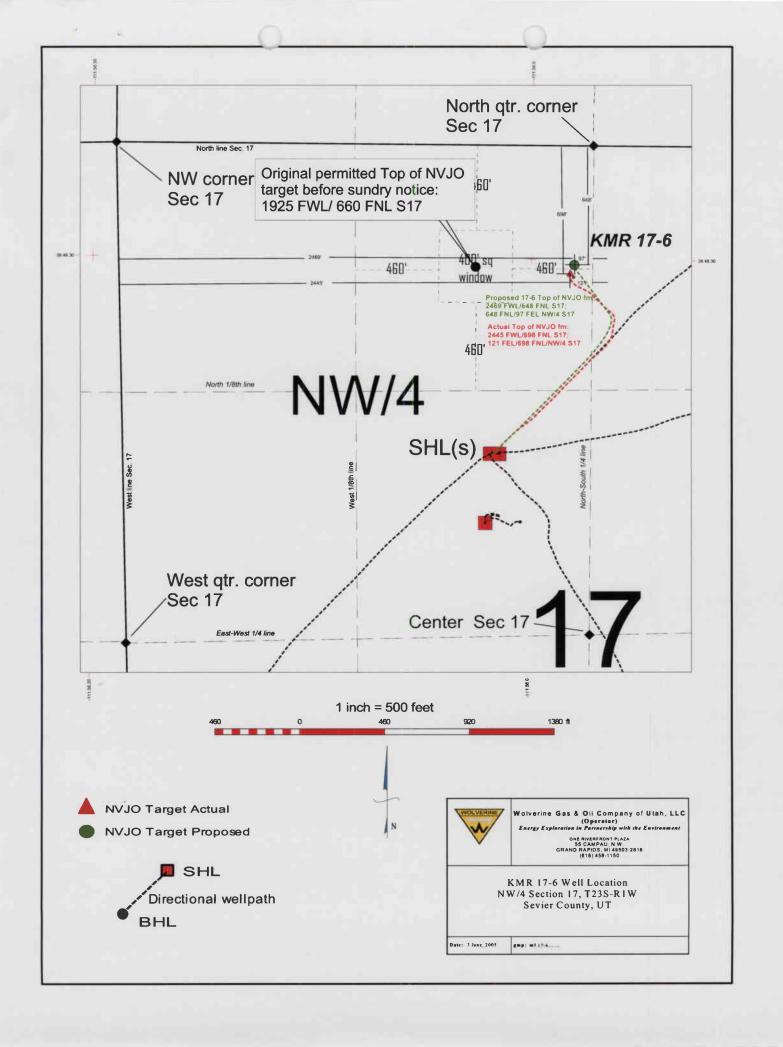
Due to the irregular section, I cannot rectify the differences in BHL. Once SHL lat & long is verified, the actual MWD survey can be tied to it, and then overlaid on the digitized land survey.

As in the past, if a portion of this wellbore entered federal mineral space on its way to the fee minerals, that would require Federal authorization. If a portion of the producing zone is within the SE 1/4 of section 17, then there would remain Federal authority over the wellbore.

I will need daily drilling reports and the actual directional survey for this wellpath to resolve this issue.

-Al McKee 801-539-4045

CC: "John Vrona" <jvrona@wolvgas.com>, "Edward Higuera" <EHiguera@wolvgas.com>, "Sid Jansma" <sjansmajr@wolvgas.com>, "Richard Moritz" <rmoritz@wolvgas.com>



Form 3160-5 (April 2004)

UNITED STATES

Form 3160-5 (April 2004)	UNITED STATE DEPARTMENT OF THE		R			FORM APPROVED OM B No. 1004-0137 Expires: March 31, 2007
	BUREAU OF LAND MA				5. Lease Seria	i No.
Do not use ti	NOTICES AND RE his form for proposals rell. Use Form 3160-3	to drill or	to re-	enter an		, Allottee or Tribe Name
SUBMIT IN TR	IPLICATE- Other ins	tructions o	n reve	rse side.	7. If Unit or	CA/Agreement, Name and/or No.
1. Type of Well Oil Well	Gas Well Other	1.1	MFI	DENTIAL		ine Fed Exploration Unit
				DEMINE	8. Well Nar Wolver	ne and No. ine Federal #8-1
2. Name of Operator Wolverine G	as & Oil Co of Utah, LLC	- -			9. API We	
3a. Address One Riverfront Plaza, 55 Cam	pau NW, Grand Rapids, MI	3b. Phone h 616-458-		e area code)		1 Pool, or Exploratory Area
4. Location of Well (Footage, Sec.,	T., R., M., or Survey Description)				Explora	itory Area
SHL: 1680' FNL & 2265' FW BHL: 450' FSL & 1010' FEL	· · · · · · · · · · · · · · · · · · ·	al)			11. County of Sevier (or Parish, State
12. CHECK A	PPROPRIATE BOX(ES) TO	O INDICATE	NATUR	E OF NOTICE, RE	EPORT, OR	OTHER DATA
TYPE OF SUBMISSION			TYI	PE OF ACTION		
Notice of Intent	Acidize Alter Casing	Deepen Fracture T		Production (Star	,	Water Shut-Off Well Integrity
Subsequent Report	Casing Repair Change Plans	New Con		Recomplete Temporarily Aba	15 5/2/05	Other 0-2500' used for new well - Kings Meadow
Final Abandonment Notice	Convert to Injection	Plug Back		Water Disposal	<i>,</i>	Ranches 17-6 (WF8-1
following completion of the investing has been completed. Fit determined that the site is ready Permission was requested depth of 7824' due to dryh Please refer to the accomp McKee; Plug #1 from 7200 yield; Plug #2 from 5100' to 2500' min as sidetrack p	nal Abandonment Notices shall be for final inspection.) and received verbally from A tole and to use the upper port anying Sundry Notice for the D' to 6900' min across top of T to 4900' min as stabilizer plug	n results in a mule filed only after AI McKee (BLI tion of this wele sidetrack not I'win Creek ling w 150 sx 50:5% CFR3 @ 17	M-SLC) of lbore about the details of POZ w0 ppg, 0.5	letion or recompletion in ments, including reclama on May 13, 2005 to pl ve 2500' for a new we s of this new well. Ce s' w 250 sx 50:50 PO2 / 2% gel & 0.1% HR: 99 yield. 10.6 ppg mu	a new interval, tion, have been ug and aband ell - Kings Me ment plugs w 7. w/ 2% gel & 5. @ 14.2 ppg, ad was placed	a Form 3160-4 shall be filed once completed, and the operator has don the subject well at total eadow Ranches 17-6 (WF 8-1). ere placed as instructed by Mr
						RECEIVED
PLEASE MAINTAIN ALI	L INFORMATION CONTAI	NED HEREIN	1 CONFI	DENTIAL - thank yo	u	MAY 2 0 2005
xc: UDOGM						DIV. OF OIL, GAS & MINING
14. I hereby certify that the foreg	going is true and correct	<u> </u>				
• • • •	EXACT Engineering Inc		Title Co	onsulting Engineer (9)	18) 599-9400	
Signature Steven	R. Harh		Date	05/	16/2005	
	THIS SPACE FOR	FEDERAL	OR ST	TATE OFFICE U	JSE	
Approved by			Tit	tle	Da	te
Conditions of approval, if any, are at certify that the applicant holds legal which would entitle the applicant to	or equitable title to those rights in		t or	fice		
		crime for any	person knc	wingly and willfully to	make to any d	lepartment or agency of the United

States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



		Engi	neering	& Sup	ervisio	on	<u></u>	EXAC	T	Engi	nee	erir	ıg, Inc	•			(9	18) 5	99-940	0	
Opera	ator:	Wolverin	ne G&O C	o of Uta	h, LLC			ILY	DF	RILL			REPO				8 - n	nidnig		idnight	
	14/05		lverine F			CONTR		it Rig #1	111		ļ.;		TY, STATE ier, UT	4/16/05		API# 041-3				L <u>N</u> AY	
DAYS F/	SPUD 29	PRESE	NT OPERATI	_	ONIGHT :-WOC)	TOTA	оертн 2,500		PROGR	ESS		DRILU	NG TIME	#VALU		FORM	MATION	AL	лн. овет 120	н 000
											DAT						-			Jugar	
10.	-	32	N/C			РН 0.0	0.50	\$0U0		5 5		/P 0	GELS 6/9	7817	5/13/8:30	-	0,00	$\overline{}$	2150	+	330,000
віт і	SIZE	MFG.	TYPE	IADC	SERIAL	NO I	is:	S (1/32nd")		BIT	DATA	A UT I	FOOTAGE	I HOURS	ROP		MTR	RPM	WOB	Louis	CONDITION
NO.	34.6	mrs.		CODE	SERIAL	-	-1	or TFA			+-	-		1100110	<u> </u>		\dashv	RT+MTR	<u> </u>	T B	G
\vdash											 				#DIV/0		80	20-40	48	4 4	<u> </u>
															#DIV/0		4				
<u> </u>				<u> </u>	<u> </u>	<u> </u>		YDRAUL	ics	<u> </u>	<u> </u>	_			#DIV/0)!	4		SLOV	V PUMF	<u></u>
PUMP	MANU	FACTURER	UNER	STROKE	GAL / STK	SPM	GPN				UMP	l	ATR DIFF	HH	P/IN²	EC	ō	工			100 spm
NO. 1	Na	ational	6"	ENGTH 8.5	2.93		-	-	+	PF	RESS.		PRESS.				┪	1	250	 	
2	Na	ational	6"	8.5	2.93													2	250		<u>L</u>
Both	<u> </u>				5.86			<u> </u>	<u> </u>							<u> </u>	4		A.P.C.		
вотто	OMHOLE A	SSEMBLY	RILL ST		O.D.	I.C).	FORMATIO	ON	ME		G	EOLOGIC 1√D	; 	ЦТНОЦ	OGY				RAL INF	.0
	Twin Creek 6,986 6,396														—∥	Rig No		Unit 11			
			-							 								Cell N Last B	OP Tes		645-6671 4/23
								OTTOMS UP	TIME	BG G	AS		GAS DATA CONN G	AS	TRIP	AS _			OP Tes		5/23
			 	-				75					SHOWS		ROP (FT	0.75			afety M OP Drill		5/12 5/12
								GASUNIT	5	FRO			fō		ROP (F)	/HR)				Pipe Ra	
																				Blind Ra	
Total STRING		BHA WT.	PUWT	.00	омт.	ROT. TO	RQUE	GRD. ELEVA	TION	GL TO	КВ		KB ELEVA	TION	INTERMEDIA	ATE CSG			perate /	Annular NEXT	5/3 CASING
			<u></u>	Ш.			L_	5,736		SUR	VEVS		5,753					3-3/8"	@ 2053	9-	5/8"
MD	INCL	AZIMUTH	TVD	SECTION	N+/S-	E+/W-	DLS	TOOL	М		ia.		ZIMUTH	Τ\	ло]	SECTIO	NO	N+/S-	E+/W-	OLS	TOOL
	<u> </u>							MWD	-								+				MWD
								TWIVE	<u>I</u> D	AILY A	CTIV	/ITY								ſ	INVO
FROM 0:00	2:00	2.00		24 HOURS		Diug 7	200 to	6000 2	00.6	ke 50/	50 n	07 ′	29/ gel 19	W UD 5 1	14.2 PPG.						
2:00	3:30	1.50						pe, POC			JO pt	02. 2	2 76 yei . I	70 FIIX-5,	14.2 FFG.						
3:30	4:00	0.50				plug 5	100 to	4900, 1	50 s	ks. 50/	/50 p	0Z. i	2% gel .1	% HR-5	14.2 PPG						
4:00 7:30	7:30 8:00	0.50		OH to 3		0 to 25	500 51	5 sks. C	lass	GW.	75%	CFF	R3 17 PF	 G							
8:00	0:00	16.00						well to													
0:00																					
0:00			FIN.	AL RE	PORT	OR V	Volver	ine Fed	eral	8-1 we	ılı; w	/ili s	tart new	well KMF	R 17-6 (WF	8-1)	in t	his w	ellbore	at ~2	500 ft
0:00				VIII	17 0 00	(E 0 4)	Gir f			les.											
0:00 23:00			566	VINIK.	17-0 (W	ir 8-1	THE TO	or contin	ıuat	IOU											
0:00													····								
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0:00																					
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										COST	DATA	4									
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AF	E CW	<u>. \$</u>	2,96	67,353		CL	IM MU	J \$		54,6	95				CUM DI	KILLI	NG (UST	<u> </u>	1,325,	521



HALL	IBUR	TON	J()B S	Ù	MMARY	36922	98		TICKET DATE 14-May-0:		
NORTH AM	FRICA		ROCKY MO	IINTAI	N		BOA / STAT	E		COUNTY SEVIER		
MANU ID / EMPL &	CINON		HES EMPLOYEE MAN	Ř.			PSL DEPAR				· · · · · · · · · · · · · · · · · · ·	
217923 LOCATION			COMPANY:					L ISOLAT		***************************************		
PRICE UT			WOLVERIN WELL TYPE	E OIL 8	L G/	AS CORP.	APIOVA O	ROB KR	UGI	ER	- ,, . , . ,	
WELL LOCATION			OIL.				SAF RENGE					
			ZONAL ISO	LATION	N 10	003	7528	-/	W	OLVERINE	FEDER	AL 8-1
LEASE NAME		Well No.	SEC / TWP / RNG									
H.E.S EMP NAME / EM						MRS			HILL			HE
NATHAN	MILLEN 2179: ODIN 178572	23	Terri Paulk		_				\vdash			
	WDON 1789			,,,,,,,							· · · · · · · · · · · · · · · · · · ·	
<u> </u>		R/T WILES										
HES UNIT #5/(R/T)	57697	R/T INILES	10026553/1002	5038	R/Y	wife2		, , , , , , , , , , , , , , , , , , ,	MKES			R / T WILES
102	37519											
	48051 25072				 —							
Form. Name	20012	Туре										
Form, Thickne	\$\$	From	To	Dat		Called Out 5/13/05		ocation 3/05		Job Started 5/14/05		Completed
Packer Type Bottom Hole T	emp.	Set A Press		Dai		5/ (3/03	39	13/03		3/14/03		5/14/05
Retainer Dept			Depth	Tim	ne	14:00		2:00 Data	<u> </u>	01:00		9:00
Type a	nd Size	Accessorie Qty	Make			Ncw/Use			race	From	To	Max. Allow
Float Collar			HES		sing			13 3/8				
Float Shoe Centralizers	 		HES HES	Line		·						
Top Plug		+ +	HES	Tub					-+			
Limit Clamp			HES	Dui	Pipe			5	4.5			1
BASKET			HES		en H			12 1/	4			Shots/Ft.
Insert Float Guide Shoe		+	HES HES		forat forat			_	-+			
Weld-A		+ +	HES		Tool			 	-+			
	Mate		**************************************			n Location		a Hours		Descript	on of Job	
Mud Type Disp. Fluid	H20	Density Density	[b/Gal 8_33 Ub/Gal		Date 13/0:	Hours 5 2.00	5/13/0	Hour 5 0.50		SEE JOB	LOG	
Prop. Type	Si		Lb		14/0		5/14/0			<u> </u>		-
Prop. Type	Şt		_Lb									
Acid Type Acid Type	G		-% 	·								
Surfactant	Ğ		_lin									
NE Agent	G		_ln						\Box			
Fluid Loss Gelling Agent		al/Lb	_in 	<u> </u>								
Fric. Red.		WLD	In									
Breaker		Gal/Lb	in	Tota	aí	12.00	Total	7.50				
Blocking Agent Perfpac Balls			·				Hydrai	nic Horsep	ower			
Other				Orde	ered		Avail			Used		
Other				Trea	iting		Averag	e Rates in	BPN	t Overall		
Other								nt Left in F				
Other		-		Feet	<u>t</u>		Reaso	<u> </u>	<u> </u>	USTOMER	REQUES	<u>:T</u>
WELLI Sacks	Camana	Bulk/Sks			Сеп	nent Data		· · · · · · · · · · · · · · · · · · ·		1 100-2		
PLUG 1 200	Cement 50/50 POZ	BULK	<u> </u>		2	Additives % GEL .1% HR	-5			W/Rq. 5,44	Yield 1.22	Lbs/Gal 14.2
PLUG 2 150	50/50 POZ	BULK				% GEL .1% HR				5.44	1.22	14.2
PLUG 3 515	"G"	BULK				.75% CFR3				3.80	0.99	17.0
		<u> </u>								<u> </u>	J	
Circulating		Displac	ement		oumi	mary Preflush:	Gal - BBI			Type:		ļ
Breakdown	-2	Maxim	um			Load & Bkdn	: Gal-BB			Pad:Bbl -		
_ost Returns-Yl		Lost R Actual	eturns-NO TOC			Excess /Retu Calc. TOC:	imGal BBI	68	-	Calc.Disp Actual Dis		
Average [Frac. (Gradient			Treatment	Gal - BBI			Disp:BbI-		BBL
Shut In: Instant		5 Min.	15 K	5IC)		Cement Skim Total Volume						
rac Ring #1]FR	ic rang # 2			Frac Rin	g # 3)F	rac Ring #		
	RMATION S		REIN IS COR	RECT							·	
	ER REPRES						SIGNATUR	.				



HAL	LIBU	JRT			JOB LO)G	3692298	14/05/2005
REGION NORTH A	MERICA	LAND	ROC	KY N	OUNTAIN		UTAH	SEVIER
MBU XD / FMPL #			H.E.S EI	WPLOYER	MILLEN		PSL DEPARTMENT ZONAL ISOL	ATION
# OCATION PRICE U	т		COMPAN	14	INE OIL & G	AS CORP	ZONAL ISOL CUSTOMER REP / PHON ROB KRUGE	E P
ICKET AMOUNT	<u></u>	····	02 G	14	inc oil a o	AO OOM .	APIAMI #	-1\
VĚLL LÓCATION			DEPART	MENT			JOB PURPOSC CODE	Description
EASE/WELL #		Weil No	ZON	AL IS	OLATION 1	0003	7528	WOLVERINE FEDERA
			Volume					8-1
Chart No.	Time	Rate (#PM)	(GRENAVE)	T C	Press.(P	31)	Job Desc	cription / Remarks
1174	14:00	(100 100)	(aartiauri	Ϊ́	100	CALLED	OUT	05/13/05
	16:00		†				P SAFETY MEETIN	
	17:00			\sqcap		LEAVE Y		
	22:00		L			ARRIVE	LOCATION	
			ļ					
	22:30		1	- -				& SAFETY MEETING
	22:45		 	- -	 		DUIPMENT AND RE	G UP IRON
	1.00	7.0	50PPI	┟╾┼╾	0000	PLUG #1		
	1:00 1:15	7.0	50BBL	 	800.0 2500.0		REFLUSH DE TEST	
	1:20	7.0	43.5BBL	- -	800.0	PUMP C	RE TEST	
 .	1:30	7.0	7BBL		1000.0	DISPLAC		
···	1:40	7.0	1078BL		500.0	DISPLAC		
	2:00			- -		P.O.O.H.	- nou	
	1			- -				
						PLUG #2		
	3:30	7.0	50BBL		500.0	PUMP PF	REFLUSH	
	3:35	7.0	33BBL		900.0	PUMP CE	~ · · · · · · · · · · · · · · · · · · ·	
	3:46	7.0	7BBL		450.0	DISPLAC		
	3:51	7.0	87BBL		400.0	DISPLAC	E MUD	
	4:00					P.O.O.H.		
	 			-		DI 110 210		
	7:35	7.0	50BBL	++	1000.0	PLUG #3	EEI HEU	
	7:45	7.0	91BBL		1050.0	PUMP CE		
	8:10	7.0	788L	+-	500.0	DISPLACE		
	8:15	7.0	42BBL	- -	400.0	DISPLACE		
	8:21					P.O.O.H.		
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				44				
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EXACT Engineering, Inc.

www.exactengineering.com

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash. P.E. Registered Professional Engineer stevehash@exactengineering.com

CONFIDENTIAL PLEASE!



May 16, 2005

Mr. Dustin Doucet Utah Division of Oil, Gas & Mining 1594 West North Temple, Suite 1210 Salt Lake City, UT 84114-5801

Wolverine Federal 8-1 well Sec 17 T23S R01W Sevier Co., UT

API# 43-041-30037

Dear Mr. Doucet,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed daily drilling reports for the subject well from May 10, 2005 through May 14, 2005. The subject well reached total depth of 7824' on May 13, 2005 and was plugged and abandoned due to dryhole on May 14, 2005 in accordance with regulation. We respectfully request that the enclosed information remain confidential.

Consulting Engineer for Wolverine Gas and Oil Company of Utah, LLC

copy without enclosures via email to:

Wolverine Gas & Oil Co of Utah, LLC: Helene Bardolph

EXACT Engineering, Inc.

well file

RECEIVED MAY 2 0 2005

DIV. OF OIL, GAS & MINING

CONFIDENTIAL

Petroleum Engineering Consulting, Personnel & Jobsite Supervision complete well design, construction & management, drilling, completion, production, pipelines, appraisals, due diligence, acquisitions, procedures, temporary personnel and field supervision

	•	Ei	ngir	neering	g & Su	pervisio	on `	_	E)	XAC	TE	 Enç	gin	eeri	ng, Inc	; .			(<u>;</u>	918) 5	99-9400)		
<u> </u>	rator:	Wolve	erine		o of Utah			D/						IG F	REPOI	RT				midnig	ht to mi		ht	
	5/14/05		Wolv		Federal		CONTRA	Ur	Init R	Rig #1			2066	Sey	vier, UT	SPUD DATE 4/16/05 LING TIME	43-0	APIA 041-3	3003	37		ISOR L NA		OR_
DAYS	F/ SPU0 29	PRE				K - WOC	<u>;</u>	TOTA		,500			GRES		DRILLI	ING TIME	#VALU	JE!	FUR	(MATION	Au		200	00
二	wt	VIS.	_	WL	—	CK P	PH	SAND	, _	SOLIDS	s %]	MU P\	_	ATA YP	GELS	DEPTH	DATE/TIME	Тсн	ILORIE	DES [CALCIUM	мвт	S	ALT PPM
10	0.5	32	=	N/C	; 2	2/32 10	0.0	0.50	\sqsubseteq	4.3		5		10	6/9	7817	5/13/8:30	20	00,00	00	2150		3	30,000
BIT	SIZE	MFG.	_	TYPE	IADC	SERIAL	. NO.	JF	ETS (1/3		$\overline{}$	BI	T DA	OUT	FOOTAGE	HOURS	ROP		MTR		WOB		_	ONDITION
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H	\exists		<u> </u>			<u></u>		_	_	1	\dashv	<u>-</u> -	4		<u> </u>		#DIV/0				Ι	\prod	_	
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$\frac{1}{2}$		National National	-+	6" 6"	8.5 8.5	2.93		+	+		-	+		+		 		┼─	\dashv	1 2	250 250	┼─-	\dashv	
Both		Vanoria.	7		1.5	5.86		<u> </u>	士			寸	`	士					\exists	<u> </u>	1 200	<u></u>		
		<u> </u>	D	RILL ST				三		=	=	=	Ξ	\equiv	GEOLOGIC						GENER		VFC	5
8017	OMHOLE	E ASSEMBL	1.D. FORMATION MD TVD LITHOLOGY Twin Creek 6,986 6,396														\dashv	Rig No		Unit	111			
<u> </u>		TWITTOREK 0,300 0,330													Cell N				45-6671					
	GAS DATA													Last B	OP Tes	t	\sqsupset	4/23						
	BOTTOMS UP TIME BG GAS CORN GAS TRIF GAS												\exists		BOP Tes		\dashv	5/23						
ļ					1		75 xe (18)17e	<u>_</u>		<u></u> -	<u> </u>	SHOWS		205/6		\exists		afety Me		+	5/12 5/12			
			+		+			+	می	AS UNITS	+		ROM	+	10		ROP (FI	MR)			perate F		₹an	5/12
			1					1			1			工							perate E		-	5/10
Tota	BHA:	BHA WT.		O. PUWT.	0.00	so wr.	ROT. TOR	ACITE	GRO	ELEVATI	10N	-GL	то кв]_	KB ELEVA	TIÓN	INTERMEDIA	ATE CS			perate A			5/3 ASING
375	3,44	DITA	1	<u> </u>		-	<u> </u>	1		5,736			17	1	5,753		7*		-		@ 2053	_	9-5	
		<u> </u>	<u> </u>		<u> </u>		<u> </u>	<u> </u>	_	=			RVE						_				_	
MD	INCL	L. AZIML	ЛΗ	TVD	SECTION	N+/S-	E+/W-	DLS	$\overline{}$	TOOL MWD	MD	7	INCL		AZIMUTH	Τ.	νD	SECT	ION	N+ / S-	E+/W-	DLS	7	TOOL MWD
			丁						_	MWD		士	_	1_		ſ <u></u> _			\exists			<u> </u>	\top	MWD
	=	=	=	=	=	=	=	_	=		DA	JLY	AC	TIVITY					_				=	
FROM	+	. 	<u></u>		24 HOURS:		Diva 7	200+	- 60	200 20	20.04		-0/5	2 727	20/ 20/ /	40/ UD 5	14 2 DDC	_						
0:00 2:00						ds. Kell								J μυ <u>z</u> .	2% yei . i	1% HR-5,	14.2 FFG							
3:30												_		0 poz.	. 2% gel .	1% HR-5	14.2 PPG		_				_	
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8:00 0:00	+	0 16.0	4		C, LUL	JP, Pie) 10 SIG	eliac	CK W	eli io	17-0	Bh	<u> </u>						—					
0:00	-	+-	+																		·			
0:00		1	I	FIN	AL RE	PORT F	FOR W	olve	rine	Fede	rai 8	3-1 v	weii	; will	start new	well KM	R 17-6 (W	F 8-1	1) in	this v	vellbor	e at	-25	00 ft
0:00		-	+		'/IAD	17.0.04	·= 0.4)	- CI -		4!	-41													
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	erato	r;		e G&O C	o of Utal	h, LLC			AIL)	Y D	RI	LLI			EPO					midnig	ht to m		ht	
DATE	5/13/	05	WELL	lverine F	ederal	# 8-1	CONTR		Init Rig	ı #11	11				iy, state ier, UT	\$PUD DATE 4/16/05	43-	AP# 041-		 37	SUPER	/ISOR LN	4YL	.OR
DAYS	F/ SPU	D		T OPERATI	•				AL DEPTH	1		PROGRE				ING TIME	ROP		į.	RMATION		TH. D		
\models	28		J RU	Halibu	rton for	P&A o	f 8-1	Ц	7,82	24	i	MUD	81		10	0.00	8.1		'	win Cr	ек		20	JU
	wt	_	VIS.	WL		ск ј	PH	SAND	S	SOLIDS	% [PV	DA I		GELS	DEPTH	DATE/TIME	СН	LORI	DES	CALCIUM	мвт	s	ALT PPM
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7	12.25	0 S	TC	F27	547	RR		24	24	2	4	7557	782	24	267	30.50	8.8		80	20-40	48	4	4	1
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NO					LENGTH							PR	ESS.		PRESS.					Ш				
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2	+	Nat	ional	6"	8.5	2.93	120 240	74	-t $-$) E	75	+					•	\vdash	\dashv	2_	250	<u> </u>		
Bot	<u> </u>			RILL ST	DING	5.86	240	/4	-2 0	35	/0				EOLOGIC			<u> </u>	_	<u>. </u>	GENER	1 4 3	NE7	
BQ1	ТОМНО	LE AS	SEMBLY	LENGT		O.D.	I.D		FORM	ATION		MD			TVD		LITHOL	.OGY				INFO	NF	
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			embly	114							_		_						_	Cell N			8-6	45-6671
_	5/8" /ED	SWL	P	150	-			$-\parallel$							GAS DATA						OP Tes		\dashv	4/23
	-OVER 3.59 9-5"SWDP 577.03								BOTTOM:	<u>S UP TI</u> '5	IME	BG GA	\S		CONN G	AS	TRIP	SAS	-		OP Tes		\vdash	5/23 5/12
JAR										UNITS		FROM	L		SHOWS		RÖP (F1	/HR)	ᅴ		OP Drill		+	5/12
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	10		55	380	$\overline{}$	150	350		5,7		+	17		-	5,753		7*	112 00	┈		@ 2053	.,,	9-5	
-												SURV	EYS	_			•				*			
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Opera	ator:	Wolverin	e G&O C	o of Uta	h, LLC			AILY	/ D	RIL	LIN		REPO					midnig	ht to m		ht	
DATE 05/	12/05	WELL	lverine f	edera	# 8-1	CONTRA		nit Rig	#111	1			UNTY, STATE Evier, UT	SPUD DATE 4/16/05	43-	ары -1-		37		L NA)R
DAYS F	SPUD	PRESEN	IT OPERAT	омs о м Drillin		-	TOTA	NL DEPTH 7,74	.3	PRO	OGRES 18	-	1	ING TIME 0.50	9.1		1	RMATION WIN Cr	1	лн. DE 1	ртн 2000	 າ
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BIT :	SIZE	MFG.	TYPE	IADC	SERIAL	NO.	JE	TS (1/32nd or TFA	J ²)		IN	OUT	FOOTAGE	HOURS	ROP		MTR	RPM RT+MTI	WOB	T I	L CON	IDITION G
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PUMP	MANUF	FACTURER	LINER	I	GAL / ST	SPM	GPI			AV DC	PUN		MTR DIFF	нн	> / IN ²	E	CD		60 spm			00 spn
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12-1/4		JOLINDE 1	 	.50	0.0.			Twin C		. 6	5,986		6,39		Linio	.001		Rig No		Unit	111	
	onal Ass		114	.54														Cell N	arren	918	3-645	-6671
	78" SWI	DP		.00			_			<u> </u>		Щ.	GAS DATA						OP Tes			4/23
X-OVE 19-5"S			577	.59			$\neg \Gamma$	BOTTOMS 75		E B	G GAS	\top	CONN G	AS	TRIP	SAS			OP Tes	-	_	5/23 5/12
JARS				.80				GAS U	-		FROM		SHOWS TO		ROP (F	T/HR)			OP Drill		-	5/12
4-5"HV	VDP.		121	.00			_ -												perate I		_	5/10
Total	RH∆·		999	46				,		+-		-			-				perate i		\rightarrow	5/10 5/3
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210		55	325		150	285		5,73	36	 IS	17 JRVE	VS	5,753	B	7"			13-3/8"	@ 2053	<u> </u>	9-5/8	
MD	INCL.	AZIMUTH	TVD	SECTION	N+/S-	E+/W-	DLS	тоо)L	MD	INCL		AZIMUTH	T	'D	SECT	ION	N+/S-	E+/W-	DLS	—	TOOL
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Ор	erato	r:	Wolverin	e G&O C	o of Uti	sh, LLC				.Y [DR	ILL	IN		REPO					midnigi			nt	
DATE	5/11/	/05	WELL	verine f	edera	I # 8-1	CONT	TRACTOR	ı Jnit R	ia #1	11				ity, state vier, UT	4/16/05	43-0	ари 3-1-1		37	SUPERV	isor L NA	YL	.OR
	F/ SPL		PRESEN	IT OPERAT	IONS @ N				TAL DEP		-	PROG	RESS O		DRILL	ING TIME	#DIV/	<u></u>	1	MATION WIN Cre	- 1	TH. DE	ртн 200	
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BIT	SIZE	, N	IFG.	TYPE	IADC	SERIA	NO.		JETS (1/3			N N		OUT	FOOTAGE	HOURS	ROP	-	MTR	,	WOB			ONDITION
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PUA	P I	ANUF	ACTURER	LINER	STROK	E GAL / ST	d SPA		HYDR PM	AV DP	_	DC I	PUMP		MTR DIFF	1 нн	P / IN²	EC	:0		SLOV 60 spm			100 spm
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_	/4"- B				.50	 	┝		Twi	n Cree	ek	6,9	86	╄-	6,39	6			_	Rig No		Unit		
	tiona 5/8"		embly	114	.54		┼							┼-						Cell No	rren OP Test		3-64	45-6671 4/23
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	SWD	P		577	.03					85											afety Me			5/10
JAR				31	.80				GA	S UNITS		FRO	M		SHOWS TO		ROP (FT	/HR)	\exists	Last Bo	OP Drill			5/10
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Tot	al BH	Δ.		999	46									├╌					╢	Last Or	perate A		-+	5/10 5/3
ŠTRI	IG WT.		HA WT.	PU WT		SO WT.		ORQUE		LEVAT	ION	GL TO			KB ELEVA		INTERMEDIA	TE CS		LAST C	ASING	NE	ктс	ASING
	90	Щ,	55	290		150	2	50		,736		SUR			5,753	<u> </u>	7"			13-3/8"@	2053		9-5	/8"
MD	11:	NCL.	AZIMUTH	TVD	SECTION	N+/S-	E+/W	/- DI	.s i	rool	ME		VET		ZIMUTH	ī	/D	SECT	ION	N+/S-	E+/W-	DLS	1	TOOL
7,38		.40	98.30	6789	2671	1922	185			IWD		_		<u> </u>					_				4	MWD
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Opera	itor:	Wolverin		-									REPOI			24 hr	<u>`</u>	nidnigi			ht
DATE		WELL			., 220	CONTRA							NTY, STATE	SPUD DATE		API#			SUPER		
05/	10/05			ederal				it Rig	#111		ļ	Sev	/ier, UT	4/16/05	43-0	41-3					YLOR
DAYS F/		PRESEN		IONS @ MI			TOTAL	DEPTH	-	PRO	GRESS		1	NG TIME	ROP			MATION	- 1	JTH. DE	
	25			Loggin	g		J	7,55	/	<u> </u>	161		12	2.50	12.9		11	vin Cre	ек		950
wt	<u> </u>	VIS.	WL		ck I i	PH	SAND	1 90	LIDS %	MU	JD DA	TA YP	GELS	DEPTH	DATE/TIME	CHI	ORID	es I o	CALCIUM	МВТ	SALT PPM
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			1								T DA	A									
1 1	IZE	MFG.	TYPE	IADC	SERIAL	NO.		S (1/32nd	}	11		OUT	FOOTAGE	HOURS	ROP		MTR	RPM	WOB		L CONDITIO
NO.	250	SEC	0.700	CODE	10683	245	24	or TFA	24	70		557	507	40.00	12.7	-	80	20-40	48	4	8 G
6 12	.250	SEC	SX20	-	10063	245	24	-24		170	30 /	337	307	40.00	#DIV/0	,	80	20-40	40	+*+	
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							H,	YDRAL	JLICS				·		·		_		SLO	N PUI	/P
PUMP	MANU	FACTURER	LINER	STROKE	GAL / STK	SPM	GPM			V DC	PUMP	T	MTR DIFF	ННЕ	P / IN ²	ECI	D		60 spn		
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Both					5.86	250	742	6)	75											
BOTTO	MHÒLEA	D SSEMBLY	RILL ST		O.D.	i.D.	_	FORMA	TION		MD	T	TVD	: 	LITHOLO	OGY			GENE	RAL II	IFO
12-1/4"		OOL HOL!		.50	0.0.	1		Twin C		† 	.986	T	6.396	5	2,,,,,,,		\dashv	Rig No		Unit	111
Direction		sembly	114										.,					Cell No		918	3-645-667
5 - 65			150	.00									*					Last B	OP Tes	it	4/23
X-OVE	R		3	3.59			В	оттомѕ	UP TIME	ВС	GAS	1	GAS DATA CONN G	AS [TRIP G	AS	\equiv	Next B	OP Tes	st	5/23
19-5"S\	WDP		577	.03				85	5									Last Sa	afety M	eeting	5/10
JARS			31	.80				GAS U	NITS	F	ROM		SHOWS TO		ROP (FT/	HR)	\exists	Last Bo	OP Drill	1	5/10
4-5"HV	/DP.		121	.00			_ _					<u> </u>					_#	Last O	perate	Pipe F	ar 5/10
						Brown Segun						_					-11	Last O			
Total I		BHA WT.	999 PU WT		owt.	ROT. TOP	OUE	GRD. ELE	VATION	GI	то кв	-	KB ELEVA	TION	INTERMEDIA	TE CSG		Last O			r 5/3
190		55	290		150	250	—⊢	5,73			17		5,753		7"		—⊪	13-3/8"(9-5/8"
										SU	RVEY	S									
MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+/W-	DLS	TOO	$\neg \vdash \neg$	4D	INCL.	/	AZIMUTH	ΤV	0	SECTION	ON	N+/S-	E+/W-	DLS	
7,384	6.40	98.30	6789	2671	1922	1855	3.60			\dashv		_					\dashv			├	MWD
7,478	5.50	117.50	6883	2676	1919	1864	2.40	MW				<u> </u>					_L			<u> </u>	MWD
FROM		1	JAST	24 HOURS:				١.	D	AILY	ACTI	VITY									
0:00	1:00	1.00		& surv		6 to 74	08														
1:00	2:00	1.00		rk pipe,				ressur	e										~~~		
2:00	11:00	9.00		& surv																	
11:00	11:30	0.50		service																	
11:30	14:00	2.50		& surv																	
14:00	15:30			. Samp		ndition	for lo	gs													
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22:30	0:00	1.50	Rig	up & st	art logg	ging															
0:00		 														-IT	71	11	-		
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EXACT Engineering, Inc.

www.exactengineering.com

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E. Registered Professional Engineer stevehash@exactengineering.com

Apt 43-041-30037

Diana has APD aneument does and is processing Mine Change, loc. Change etc.

CONFIDENTIAL PLEASE!

May 26, 2005

Mr. Dustin Doucet Utah Division of Oil, Gas & Mining 1594 West North Temple, Suite 1210 Salt Lake City, UT 84114-5801

Re:

Wolverine Kings Meadow Ranches 17-6 (WF 8-1) well

Sec 17 T23S R01W Sevier Co., UT API# 43-041-30037

Dear Mr. Doucet,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed daily drilling reports for the subject well from inception on May 15, 2005 through May 26, 2005. The well was spudded at 8:00am on May 15, 2005. This is a sidetrack of the previous Wolverine Federal 8-1 well which was plugged back on May 13, 2005. 13-3/8" csg was already set at 2053' and the well was sidetracked at 2500'. 9-5/8" casing was set on May 24 @ 6094'. We are presently drilling 8-1/2" hole at 6587' expecting to set 7" production near 6700' TD. We respectfully request that the enclosed information remain confidential.

Very Truly Yours,

Steven R. Hash Consulting Engineer for Wolverine Gas and Oil Company of Utah, LLC

copy without enclosures via email to:

Wolverine Gas & Oil Co of Utah, LLC: Helene Bardolph

EXACT Engineering, Inc.

well file



JUN 0 1 2005

Petroleum Engineering Consulting, Personnel & Jobsite Supervision DIV. OF OIL, GAS & MINING complete well design, construction & management, drilling, completion, production, pipelines, appraisals, due diligence, acquisitions, procedures, temporary personnel and field supervision

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		•	Engin	eering	& Suj	pervisio	n \		EXA	CT	Eng	gine	eeri	ng, Inc.				(91	8) 59	9-9400		
Ор	erato			G&O C	of Uta	h, LLC			ILY	DF	RILI	_IN		REPOF		2		- m	dnigh	nt to mic		
DATI	5/22			MR 17-6			CONTRA		it Rig i	#111				vier, UT	5/15/05	43-041-	API# -3003	 37-00	001		- NAYL	
DAY	F/ SP		PRESENT	OPERATION	Drillin			TOTAL	DEPTH 5,767	7	PRO	GRESS 505		1	NG TIME .50	ROP 21.5		FORM/	ation apiea		н. бертн 6770	
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	WT	+	VIS.	WL			н	SAND		LIDS %		v T	ΥP	GELS 6/9	DEPTH	DATE/TIME 5/22/09:00		ORIDE:	+-	2600		ALT PPM
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BIT NO.	SIZ	E MF	G.	TYPE	IADC	SERIAL	NO.	JET	S (1/32nd	')		N	OUT	FOOTAGE	HOURS	ROP	- 1	MTR	RPM RT+MTR	WOS	DULL C	ONDITION
3	12.2	50 R	тс н	IP53A	537	PB44	36	24	24	24	50	79		688	32.00	21.5		Y 2	0/130	45		
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PU	- 1	MANUFA	CTURER	LINER	STROKE	GAL / STK	SPM	GPN	AV	DP /	AV DÇ	PUM		MTR DIFF PRESS.	нн	P/IN²	ECt	7	F	67 spm	76 spm	100 spm
	\neg	Nati	ional	6"	8.5	2.96	125	37	1				\perp	-					1	260		
7	\rightarrow	Nati	ional	6"	8.5	2.96 5.92	125 250	37 ⁻			474	400	<u>_</u>	200			<u> </u>	_ -	2	<u></u>	300	L
В	th			RILL ST	RING	5.92	250	144	2 14	15	171	160		GEOLOGIC	<u> </u>		<u> </u>	<u> </u>	_	GENER	AL INF	0
_		HOLE AS		LENGT	Н	O.D.	I.D.		FORM		Ţ	МD	7	TVD		LITHOL	OGY	1		RIG	INFO	
_	1/4"-	BIT nal Ass	emhly	 	.50			┈	Arap	iean	+		+			 			Rig No Cell N		Unit 11	1 645-6671
		" SWE			0.00													− ⊩		OP Tes		4/23
_	VER				3.59			_	BOTTOMS	UP TIM	EE	G GAS	1	GAS DATA CONN G	SAS	TRIP	AS_	—⊪		OP Tes		5/23
19-	S"SW	/DP			7.03 1.80					W170	<u> </u>	FROM	ᆜ	SHOWS				—1		afety M		5/20 5/20
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	tal B		HA WT.	999 PUW).46 r.	SO WT.	ROT. TO	RQUE	GRD. ELE	EVATION	V G	L TO KE	3	KB ELEVA	TION	INTERMEDIA	ATE CS		Last C	perate /		5/15 CASING
	165		55	240		125	300		5,7	36		17		5,75	3	<u> </u>			3-3/8	@ 2053	9-	5/8"
	o T	INCL.	AZIMUTH	TVD	SECTIO	N N+/S-	E+/W-	OLS	TO	or II	MD S	INCL		AZIMUTH		TVD	SECT	ION I	N+/S-	E+/W-	DLS	TOOL
	23	7.30	298.60		467	925	426	1.1														MWD
5,7	84	5.20	338.00	5577	535	978	383	0.4	0 MV		.						<u></u>			<u> </u>	<u> </u>	MWD
FR	ОМ			LAS	r 24 HOUF	RS:					DAIL	YAC	TIVIT	<u>Y</u>								
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perator:	: w	olverin	G&O C	of Utah	, LLC		DAI	ILY C	RIL	_LI	NG	REPOF	RT	2	4 hrs	s - mid	nigh	t to mi	dnigl	nt_	
ATE OF (24.0	i	WELL	4D 47.6	NA/E O	4)	CONTRA		Dia #1	14			NTY, STATE Vier, UT	SPUD DATE 5/15/05	43-041-	API#	27.000	11	SUPERV	SOR L NA	VI C	\D
05/21/0 AYS F/ SPUC			MR 17-6			<u> </u>	TOTAL D	Rig #1		ROGRE			NG TIME	#3-041- ROP		FORMAT			TH. DE		<u></u>
7				RIH			<u> </u>	5,262			27	14	.50	15.7		Ara	piea	n	67	70 m	nd
WT	7	VIS.	WL	Τ (X P	Ή (SAND	SOLIDS		MUD PV	DATA	GELS	DEPTH	DATE/TIME	CHL	ORIDES	Тс	ALCIUM	мвт	SAL	T PPM
10.5		32	n/c	-+-		0.0	0.50	4.00		4	11	6/9	5079	5/21/09:00		0,000	+	2600			3,000
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IT SIZE	MF	G.	TYPE	CODE	SERIAL	NO.		(1/32nd*) r TFA		IN	OUT	FOOTAGE	HÖURS	ROP		- 1	RPM +MTR	WOB	T	B B	OTTION G
2 12.250	0 RT	C I	IP51A	517	P706	49 2				4519	+		27.50	20.4		Y 20	/130	45	8	E	
3 12.250	0 RT	C I	IP53A	537	PB44	86 2	24	24 2	24	5079	 	183	8.50	21.5	-				\vdash	\dashv	
	+	+	_ .	<u> </u>	 	+	\dashv		\dashv		├	 		#DIV/0! #DIV/0!		-†-				\dashv	
							HY	DRAULI	CS							\pm		SLOV	V PU	MP	
	MANUFA	CTURER	LINER	1	GAL / STK	SPM	GPM	AV DP	AV D	- 1	UMP	MTR DIFF	нн	P / IN²	EC	D	L	67 spm	_		100 sp
NO. 1	Natio	onal	6"	LENGTH 8.5	2.96	125	371	+	├─-	PF	RESS.	PRESS.					1	260	\vdash	+	<u> </u>
2	Natio		6"	8.5	2.96	125	371	+	 	+-	-+						2	-200	30	10	
Both				L	5.92	250	742	145	171	1	600	200									
			RILL S	TRING								GEOLOGIC				T		GENE		NFO	
BOTTOMHO		SEMBLY	LENG		O.D.	1.0.	$\dashv \vdash$	FORMATIO	_	ME	,	TVD		LITHOLO	OGY		ia Na		INFO	111	
2-1/4"- B Directiona			 	1.50 4.54	 "	 		Arapiea	<u> </u>		-			 		—	ig No ell No	rren			5-667
- 6 5/8"			 	0.00					_†		_			· · · · · · · · · · · · · · · · · · ·				OP Tes			4/23
-OVER				3.59			BC	OTTOMS UP	TIME	BG G	AS	GAS DATA CONN C	AS	TRIP G	AS	N	ext B	OP Te	st		5/23
9-5"SWE	DP		+	7.03		<u> </u>	_}					SHOWS		<u> </u>				afety M		9	5/20
ARS			 	1.80			 F	GAS UNIT	S	FRC	M	TO		ROP (FT	/HR)			OP Dril	-	Bor	5/20
-5"HWDI	Ρ.		12	1.00		 	╢		-+							─		perate perate	<u> </u>		5/20
Total BH	HA:		999	9.46		 			\dashv							L	ast C	perate	Annu	lar	5/15
STRING WT.	В	HA WT.	PU W		so wт. 125	ROT. TO		RD. ELEVA	TION	GL TO		KB ELEVA		INTERMEDIA	ATE CS	—⊪		(2053) (2053)	+	9-5	ASING
165		55	240		123			5,736			VEYS	5,75			_		-3/0	<u>u</u> 2000	<u>—</u>	3-3	
MD I	INCL.	AZIMUTI	TVD	SECTION	N+/S-	E+/W-	DLS	TOOL	MD		NCL.	AZIMUTH		rvD	SECT	TION N	+/S-	E+/W-	DI	.s	TOOL
5,029	7.80	291.00	4826	456	920	437	1.20		₽	\perp	_ _					-		<u> </u>	ـ	-4	MWE
5,312 6	6.70	319.00	5107	490	940	407	1.00	MWD					<u> </u>					<u> </u>	<u> </u>		MWE
FROM			LAS	T 24 HOUR	S:				DA	ILY /	ACTIVI	Y									
0:00	6:00	6.00	Dr	ill & sui	vey 50	35 to 5	079														
	15:30	9.50		p for bi																	
	0:00	8.50	Dr	ill & sui	vey 5	5079 to	5262														
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Daily Tot	tal	24.00												VVIII	H	LIN	1 1/	41.			

		Engin	eering	& Sup	pervisio	on \	_	E	XAC	ΤE	ng	jine	eri	ng, Inc		_		(9	18) 59	9-9400		
Operat	or: V	Volverine	G&O C	of Utah	ı, LLC			Al	LYC	RI	LL	IN	G F	REPOF	RT		24 hr:	s - n	nidnigh	nt to mi	dnight	
DATE	0/05	WELL	4D 47 6	· /\A/E O	41	CONT	RACTO		Dia #4	14				NTY, STATE	SPUD DATE	42.041	AP#	27.0	0004	SUPERV	SOR L NAYL	OB
05/2 DAYS F/ S			IR 17-6			<u> </u>		OTAL DE	Rig #11		PROG	RESS	Sev	/ier, UT	5/15/05 NG TIME	43-041- ROP			MATION		TH. DEPTH	
	3			RIH					5,035			516		21	.50	24.0		Α	rapiea	n	6770	md
WT		VIS.	WL		ск Т	эн Т	SA	ND	SOLIDS	5% T	MU	D DA	TA YP	GELS	DEPTH	DATE/TIME	CHL	ORID	ES (CALCIUM	IMBTI S	ALT PPM
10.4		32	n/c	2.	/32 1	0.0	0.	50	3.50		3		12	5/8	4650	5/20/09:00	20	0,00	10	2600	3	33,000
	~		~~~					1570				T DA	Γ A Ουτ	L F0074.0F	HOURS					Luca	I nin a	
NO.	ZE MI	FG.	TYPE	CODE	SERIAL	NO.			1/32nd*) TFA		IN	`_		FOOTAGE	ноикъ	ROP		MTR	RPM RT+MTR	WOB	T B	G
2 12.	250 R	TC H	P51A	517	P706	49	24	1-2	24 2	24	451	19		516	21.50	24.0		Y	20/130	45		
	+				 	\dashv		+	-	\dashv		\dashv				#DIV/0 #DIV/0					╂╌╁╌	
																#DIV/0						
			-,					HYI	RAULI	cs										SLOV	V PUMP	
PUMP NO.	MANUF	ACTURER	LINER	STROKE	GAL / STR	SPN	vi	GPM	AV DP	AVI	DC	PUMP		MTR DIFF PRESS.	нн	P / IN ²	EC	D		60 spm	80 spm	100 spr
1	Nat	ional	6"	8.5	2.96	12	5	371			_			, , , , , , , , , , , , , , , , , , , ,					1			
2	Nat	ional	6"	8.5	2.96	12	_	371			\Box							\Box	2			
Both	L			<u> </u>	5.92	250	0	742	145	17	1	1600		200								
вотто	MHOLE AS		RILL ST		O.D.	1	I.D.	+	FORMATIO	N T		MD	7	GEOLOGIC TVD		LITHOL	OGY	_			AL INF	0
12-1/4"				1.50				┪	Arapiea										Rig No)	Unit 11	1
	nal Ass		—	1.54		ļ		╨					4_					_	Cell N			45-6671
	/8" SWE	<u> </u>		3.59		-		╬	_	l			<u> </u>	GAS DATA				_		OP Tes		4/23 5/23
X-OVE 19-5"S\				7.03		\vdash		BO	TTOMS UP	TIME	ВС	G GAS	+	CONN	ias	TRIP	AS	\dashv		afety M		5/20
JARS				1.80				╧	GAS UNIT	s	F	ROM		SHOWS TO		ROP (FI	7HR)	\exists		OP Dril		5/20
4-5"HV	/DP.		12	1.00				- -					_							•	Pipe Ra	
Total	BUA.		000	9.46		├-		╬					-					{		•	Blind Ra Annular	
Total I		SHA WT.	PUW		SO WT.	ROT.	TORQL	JE GF	RD. ELEVAT	ION	GL	то кв	+	KB ELEVA	TION	INTERMEDI	ATE CS		LAST	CASING	NEXT	CASING
165		55	240		125	3	300	<u> </u>	5,736			17		5,75	3				13-3/8'	@ 2053	9-	5/8"
MD	INCL.	AZIMUTH	TVD	SECTION	N+/S-	E+/\	w- I	DLS	TOOL	м		JRVE'	YS	AZIMUTH	<u> </u>	TVD	SECT	TION	N+/S-	E+/W-	DLS	TOOL
4,566	9.60	311.90	1	386	884	50		1.10	MWD													MWD
4,945	8.70	294.00	4743	446	915	44	8	1.20	MWD												<u> </u>	MWD
FROM	1	T	i as	T 24 HOUR	s.					D.	AIL	Y AC	IVIT	Υ								r
0:00	1:00	1.00	RII																			
1:00	1:30	0.50			eam 44																	
1:30	13:30	12.00	-	ill & sur g servic	rvey 4	1519	to 48	344														
13:30 14:00	14:00 17:30				rvey 4	844 t	o 49	44														-
17:30	18:00		_	ork on											***							
18:00	0:00	6.00	Dri	ill & su	rvey 49	44 to	503	5														
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0:00	-	 -	110	is am t	rip to a	ujust	11100	UI				-									•	
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Daily	otal	24.00								_	~~	et n										
	FE DHO	2.6	4	933 685			1411	/ MIII	n ¢		CO	ST D				D 4 11 37	- n-:					

		Engin	eering	& Sup	ervisio		_	EXA	C.	T Eı	ng	ine	eri	ng, Inc	•			(9	18)	599	-9400		
Opera	tor: \	Volverine	G&O Co	of Utah,	LLC		D/	AILY	' D	RII	ŢĹ	.IN	G F	REPOR	₹T		24 hr	s - r	nidr	night	to mid	inight	
DATE	0.05	WELL	45.47.0		4)	CONTRA		- ''- D'-	44.4					NTY, STATE	SPUD DATE	42.044	API#		200		SUPERVI		00
05/1 DAYS F/ S	9/05 SPUD		AR 17-6					L DEPTH	#11		ŔOG	RESS	Sev	/ier, UT	5/15/05 NG TIME	43-041- ROP	-300		MATIC			L NAY	
	5	<u> </u>		RIH				4,51	9			362	2	16	.00	22.6			۱rap	iear	<u>. </u>	6770	md
10.7		140			v r	1	SAND	Lec	DLIDS		MU PV	D D/	_	GELS	DEPTH	DATE/TIME	Cui	LORIE		~	ALCIUM	мвт	SALT PPM
10.4	4	vis. 31	n/c			.5	0.50		3.50	_	3	_	9 9	4/7	4385	5/18/09:00		0,00	$\overline{}$	-	2000		333,000
									_		ВГ	T DA	TA										
BIT S	IZE N	IFG.	TYPE	IADC CODE	SERIAL	NO.	JË	TS (1/32nd or TFA	j*)		IN		OUT	FOOTAGE	HOURS	ROP		MTR		PM MTR	WOB	T B	G
1 12	250 R	тс н	IP43A	417	B734	89	24	24	2	4	267	77	4519	1842	86.50	21.3		Υ	20/	130	45	8 8	
						_			_	_		_		<u> </u>	! 	#DIV/0		_	_	_		-	
						_			 	+				ļ		#DIV/0 #DIV/0		-		\dashv			+
		<u> </u>			<u> </u>		L	IYDRA	ULIC	cs		ᆣ.		<u> </u>		#51470	<u>-</u> -		<u> </u>	1	SLOW	/ PUM	
PUMP	MANUF	ACTURER	LINER		GAL / STK	SPM	GP		OP	AV D	С	PUMI		MTR DIFF	нн	P / IN²	EC	D O					1 100 spn
NO.	Nic	tional	6"	LENGTH	2.06	125	37	,,			+	PRES	S.	PRESS.			 -			닉			+
1 2		tional tional	6"	8.5	2.96 2.96	125	37			\vdash	+		+			***	-		Ь—	<u>'</u>			+
Both					5.92	250	74	2 14	45	171		160	0	200							_		
		D	RILL ST			-								GEOLOGIC					Ĺ		GENER		·0
BOTTO 12-1/4'	MHOLE AS	SEMBLY	LENGT	н .50	O.D.	I.D		FORM				MD	+	TVD		LITHOL	OGY		Bi.	No.		Unit 1	1 1
	onal Ass	sembly	114				_	Alap	Jieai				+			1			11 -	il Na			• • 645-6671
	/8" SWI		150																La	st B0	OP Tes	t	4/23
X-OVE	R		3	.59				воттом	S UP	TIME	ВС	GAS	工	GAS DATA CONN (GAS	TRIP	SAS		╟──		OP Tes		5/23
19-5"S	WDP		577			 							Ш	SHOWS		<u> </u>		_	-		afety Mo DP Drill	eeting	5/17 5/15
JARS 4-5"HV	VDP		121	.80		-		GAS	UNITS	3	F	ROM	+	то		ROP (F	r/HR)		 	_	perate l	Pipe Ra	+
																			⊩	<u> </u>	perate l		
Total		BHA WT.	999 PUWI		SO WT.	ROT. TO	BOTTE	GRD. EL	EVAT	TON	Gi.	то кв		K8 ELEV	LTION	INTERMEDI	ATE C	56			oerate /		5/15
14		55	180		120	22			736	ION		17	<u> </u>	5,75		INTERMED			⊩		2053	_	-5/8"
											SU	IRVE	YS										
MD	INCL.	AZIMUTH	TVD	SECTION	N+/S-	E+/W-)OL	MD	-	INCL		AZIMUTH	1	TVD	SEC	TION	N+	/ S-	E+/W-	DLS	TOOL
4,179		314.20 315.10	t	317	835 873	553 516	0.8	40 MV	VD ΛΩ	<u> </u>	\dashv		┰		 		 					 	MWD
7,712	10.50	10.10.10	72.1.	010	0.0		1 0.	10 111			<u> </u>	/ AC	TIVIT	Υ ===	<u> </u>								
FROM	I			24 HOURS					=														
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14:30 15:00			+	I & sur		504 to	4519	9															
16:30			PO	OH for	bit														,				
19:00				ange b	it moto	& MV	VD, P	U gam	ıma	tools	<u> </u>												
22:00	0:00	2.00	RII	1					_				-										
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Daily	Total	24.00	 														_						
											CO	ST D	ATA				_						
-	AFE DH	C \$	1.9	933.685		DA	ILY N	AUD \$				2.7				DAILY	וופת	LIN	G C	OST.	•	1	A ROO

		Eng	ine	ering	& Sup	ervisio	n .	_	E	XAC	TE	ng	jine	erii	ng, Inc.				(9	18) 5:	99-94	100		_
Operat	tor:		_		of Utah										REPOF		2	4 hr	s - r	nidnig	ht to	mid	night	
ATE OF/1	8/05	WELL	V A A	D 17 6	(WF 8	1)	CONTR			Rig #1	11				ier, UT	SPUD DATE 5/15/05	43-041-	AP#		0001	SUP	ERVIS	OR NAYL	OP.
AYS F/ S	PUD			PERATIC	NS @ MID	NIGHT			TAL DE	PTH		PROC	GRESS	Jev	DRILLI	NG TIME	ROP	300	FOR	MATION			. DEPTH	
	4		_		Drilling				4	,157		T.	667 ID DA	_	23	.50	28.4			Arapie	an	<u> </u>	6770	md
WT		VIS.	I	WL] (K P	н	SAN	D	SOLIDS		MU P\		YP	GELS	DEPTH	DATE/TIME	СНІ	ORID	ES	CALCI	UM I	MBT S	ALT PPM
10.5	<u>. </u>	32		n/c	2/	32 10).5	0.5	0	3.75	5	4		10	6/9	3180	5/17/09:00	20	0,00	00	2000	0	3	33,000
BIT SI	ZE	MFG.	Ť	YPE	IADC	SERIAL	NO.		JETS (1/32nd*)	Т	BI	T DAT	A DUT	FOOTAGE	HOURS	ROP		MTR	RPM	w	ОВ	DULL C	ONDITION
1 12.	250 I	RTC	не	243A	CODE 417	B7348	RO I	24	$\overline{}$	TFA	24	267	77		813	47.50	17.1		Y	20/13	+-	15	T B	G
- !2.	230 1	10	110	40/	417	0734	59		+-	7+-	-	20	-		013	47.50	#DIV/0	!	<u> </u>	20/13	\	7	<u> </u>	
																	#DIV/0				\perp			
<u> </u>						<u></u>									·		#DIV/0	<u>!</u>	L_			- N. F.	<u> </u>	<u> </u>
PUMP	MANU	FACTURE	R	LINER	STROKE	GAL / STK	SPM		HYL PM	AV DP	CS AV D	С	PUMP	Τ	MTR DIFF	нн	P / IN ²	80	0		_	_	PUMP 80 spm	100 spr
NO.	<u> </u>	diam'	+	6"	LENGTH	2.00	405	+,	74	<u> </u>	<u> </u>	\dashv	PRESS.	-	PRESS.					F	+			
2		tional tional	+	6"	8.5 8.5	2.96 2.96	125		371 371			\dashv		+						2	+	1		
Both				-		5.92	250	7	742	145	17	1	1600		200									
BOTTO	MHOLE 4	SSEMBL		ILL ST		O.D.	,	.D.		FORMATIO	n I		MD		GEOLOGIC TVD		LITHOL	OGY			GE	NER/	AL INF	0
2-1/4"					.50		<u> </u>		╢┈	Arapiea							202			Rig N	lo	-	Unit 11	1
		sembly	4	114			_		lacksquare		_			-						Cell I			918-6	45-667
6 - 6 5 - OVE	/8" SW R	DP	╅		0.00 0.59				80	TOMS UP	TIME	B	G GAS	<u> </u>	GAS DATA	SAS .	TRIP G	AS		Last Next				4/23 5/23
9-5"S			\perp	577																Last	Safet	y Me	eting	5/17
IARS			_		.80		<u> </u>		₽	GAS UNIT	s	F	ROM	F	SHOWS		ROP (FT	/HR)		Last			D-	5/15
I-5"HV	VDP.		\dashv	121	.00		\vdash		╫		\dashv			╁┈				_			<u> </u>		ipe Rai lind Ra	t
Total					.46				L											Last	Opera	ate A	nnular	5/15
STRING 145		BHA WT	+	PU W1	_	so wт. 120		ORQUI	GR	5,736	TION	GL	17 KB	t	KB ELEVA 5,75		INTERMEDIA	ATE C		13-3/8	CASIN 3"@ 2	_		CASING 5/8"
												કા	JRVEY	S										
м¤ 3,707	9.20	307.	_	7V0 3523	SECTION 241	N+/S- 784	E+/V		.00	MWD	MD	7	INCL.	$\overline{\Gamma}$	AZIMUTH		VD	SEC	TION	N+/S	E+	/W-	DLS	MWD
	-		-	3896		812	565	~+		MWD	 	\exists												MWD
											D/	AIL'	Y ACT	ΙVΙΤ	Υ									
FROM 0:00	13:30	13.5	50		1 & sur		490 to	378	30	_														
13:30	14:0	0.5	0	Rig	servic	e		-																
14:00 0:00	0:00		00	Dri	ll & sur	vey 3	780	TO 4	157	<u> </u>														
0:00	0:00	+	\dashv					_				_												
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			1																					
Daily [*]	Total	24.	00									_												
	FE DI	10 f			933,685			AILY	MII	n e		CO	1.690	_			DAILY	וואמ	LIM	ദ ന	er e		77	401

		Eng	inee	ring	& Sup	ervisio		_	EX	AC	TEr	ngir	iee	rin	ıg, Inc				 (9	18) 59	9-9400)	
Oper	ator:				of Utah					Y D	RIL	.LII	NG	R	EPOF	₹T		24 hr	s - r	nidnigi	nt to m	dnight	
	17/05				(WF 8-		CONTRA	U	nit Ri				_ 5		er, UT	SPUD DATE 5/15/05	43-041	AP# -300				L NAY	
DAYS F	SPUD 3	PRES			ns@MID on #2			TOTA	L DEPTI		P	ROGRES	ss 62			NG TIME .00	ROP 20.1			MATION Arapiea	i	TH. DEPT	н D md
												NUD I	DAT/	A									
10	-+	vis. 32	+	wL n/c	 -	32 10		0.50		SOLIDS 3.75		PV 4	1(-+	GELS 6/9	3180	DATE/TIME 5/17/09:00	_	O.00		2000	MBT	333,000
						- 1		-				BIT C							-				
BIT NO.	SIZE	MFG.	TYP	E	IADC CODE	SERIAL I	10.	JE	TS (1/32 or TFA			(N	ΟU	ĴΤ.	FOOTAGE	HOURS	ROP		MTR	RPM RT+MTR	WOB		CONDITION
1 1	2.250 F	RTC	HP4	3A	417	B7348	39 2	24	24	2	4 :	2677			813	47.50	17.1		Υ	20/130	45		
\dashv	-+			\dashv				_		+-	-			-			#DIV/0	-	_		 		
+				\dashv				\dashv		+-	+		├	\dashv		ļ	#DIV/0 #DIV/0		-		 	++	
				=		<u></u>			HYDR	AULIC	cs					<u> </u>					SLO	N PUM	P
PUMP	MANU	FACTURE	R LI	- 1	STROKE	GAL / STK	SPM	GF	M /	V DP	AV DO	- 1	JMP	1	MTR DIFF	нн	P / IN²	EC	D		60 spn	1 80 sp	n 100 spn
NO. 1	Na	ational	+	6"	LENGTH	2.96	125	37	71			PR	ESS.		PRESS.		· · · · · · · · · · · · · · · · · · ·	┢		1	\vdash	+-	╁
2	+	ational		6"	8.5	2.96	125	37												2			
Both	1					5.92	250	74	12	145	171	16	500	_	200	L		<u></u>		<u></u>			
BOT	OMHOLE A	SSEMBLY		L ST		Ö.D.	I.D.		FOR	RMATIO	N I	MD		G	EOLOGIC TVD		LITHOL	OGY				RAL IN	-0
	"- BIT		工		50					apiear	_									Rig N		Unit 1	11
	ional As			114.				_			_									Cell N			-645-667
5 - 6 X-OV	5/8" SW	DP	+	150.	.00 .59										GAS DATA						OP Te		5/23
	SWDP		十	577.				_	вотто	MS UP	IME	BG G/	ıs		CONN	SAS	TRIP	AS	_		Safety M		5/17
JARS				31.	.80				GA	S UNITS		FRO	и <u> </u>		SHOWS TO		ROP (F	/HR)		Last E	OP Dri		5/15
4-5"H	WDP.			121.	.00																perate		
Tota	BHA:		+	999.	46			-			-		\dashv								operate Operate		
STRIN	GWT.	BHA WT.	上	PU WT.		SO WT.	ROT. TO			ELEVAT	ION	GL TO	кв	_	KB ELEV		INTERMEDI	ATE CS	G	LAST	CASING	NEX	T CASING
10	5	55		125		95	220			5,736		17		_	5,75	3				13-3/8	'@ 205	3	9-5/8"
MĐ	INCL.	AZIMU	тн	TVD_	SECTION	N+/S-	E+/W-	DI	s	TOOL	MD	SUR	CL.	_	AZIMUTH	1 1	VD	SEC	TION	N+/S-	E+/W	DLS	TOOL
3,04				876	135	656	620	5.0		MMD								<u> </u>		ļ	<u> </u>	—	MWD
3,42	3 11.30	1.3	0 3	243	196	743	633	3.	30 N	MMD				0.5		<u> </u>		<u> </u>	_		<u> </u>	<u> </u>	MWD
FROM	T	<u> </u>	Т.	LAST	24 HOURS	3:					DA	ILY A	CTIV	// Y									
0:00	+	_	_			vey 30	28 to	3244															
11:0		+	_		servic & sur		244 to	340															
23:3	 -	+				t2 pump		5-5	<u> </u>														
0:00	+					<u>'</u>													_				
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0:00		+	+														~ ~ 111	ועו	<u> </u>	11/	\ 		
0.00	+	+	+																				
Daily	Total	24.0	00											_									
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	VEE DE	1C 6		4.0	22 685		DA	II V Î	עווווי	•		4	RON				V IIAU	וואַת	LIM	G COS	т \$	•	2 522

		Eng	neering	& Suj	oervisi	on >		E	XAC	T En	ıgiı	nee	ring, Inc). 			(9	18) 59	9-9400		
Operato	or:	Wolveri	ne G&O C	o of Utal	ı, LLC		C	ΙΑC	LYC	RIL	.LI	NG	REPO		2	24 hr	s - n	nidnigh	t to mi	dnight	
ATE OF 14.0		WELL		0 0		CONT	RACTO		Die Jee	4.4		1	DUNTY, STATE	SPUD DATE	40.044	API#		004	SUPERVI		00
05/16 AYS F/ SP			MR 17- NT OPERAT			<u> </u>		Unit	Rig #11		ROGRE		evier, UT	5/15/05 LING TIME	43-041- ROP	·300		MATION		L NAYL	
2		<u> </u>		Drilling]		_Ĺ	3	3,028		3	35	2	0.00	16.8		Α	rapiea	n	6770	md
											ΙUD	DATA									
WT	\neg	VIS.	WL			PH	SA		SOLIDS		PV	YP		DEPTH	DATE/TIME		LORIDI		ALCIUM		ALT PPM
10.4		31	n/c	3 2	/32 1	1.0	0.	50	3.25		5 5	8 DATA		2753	5/16/09:00	18	8,00	<u> </u>	2000	1 1 3	26,700
IIT SIZ	E	MFG.	TYPE	IADC	SERIA	L NO.		JETS (1/32nd")	- 	iN	OU		HOURS	ROP		MTR	RPM	WOB		ONDITIO
1 12.2	250	RTC	HP43A	417	B734	490	24		TFA 24 2	24 2	2677	+	16	4.50	3.6		Y	20/130	2	ТВ	G
1 12.2	250	KIC	пгчэн	417	B/3	+09		- -	+-	-+	2011	+	10-	4.50	#DIV/0	l		20/130	-		+-
+-				†	† —				<u> </u>					1	#DIV/0		П		· · · · ·		
1															#DIV/0	!					
								HYC	RAULI	cs									SLOV	V PUMP	
PUMP	MANU	FACTURE	LINER	STROKE	1	K SPI	м	GPM	AV DP	AV DC		UMP	MTR DIFF	HF	P / IN ²	EC	D		60 spm	80 spm	100 sp
NO.	- NI	ational	6"	LENGTH	2.96	12	_	371	-		PF	RESS.	PRESS.	 		-		<u> </u>	 		
2		ational	6"	8.5	2.96	12	_+	371	 	 	+			+					-		+
Both		2001101	+	1 0.0	5.92		-+	742	145	171	1	600	200	 		_			L	ــــــــــــــــــــــــــــــــــــــ	
			DRILL S	TRING				T					GEOLOG	ic					GENER	AL INF	0
BOTTOM	HOLE A	ASSEMBLY	LENG		O.D.	1	I.D.		FORMATIO	N	MC	2	TN		LITHOL	OGY	二			INFO	
2-1/4"-				1.50		-		_	Arapiea	n								Rig No		Unit 11	
		sembly		4.54		+		- -							1			Cell No			45-66
6 5/8		/DP	+-	0.00		+		1					GAS DATA						OP Tes		5/23
9-5"SV			+	7.03		+-		- =0	TOMS UP	TIME	BG G	AS	CONN	GAS	TRIPG	AS	\dashv		afety M		5/23
ARS	VDI		+	1.80		+-		#=	GAS UNIT		FRO	M 1	SHOWS	0	ROP (FT	7HR1	\dashv		OP Drill		5/15
-5"HW	DP.		+	1.00		1		┪	GAG GIVIT	_	1110			<u> </u>	1	71.11.7				Pipe Ra	+
																			<u> </u>	Blind Ra	1-
Total B		DU - 17-		9.46	60.42		7000		0.5:5		<u> </u>				Authoriza	. 			perate /	Annular	5/15 CASING
STRING V	***	BHA WT.	12		95	_	TORQU 220	JE GF	5,736	ION	GL TO	-	KB ELE 5,7		INTERMEDIA	ATE C			@ 2053	-	5/8"
								ш	-,. 55			VEYS								<u> </u>	
MD	INCL.	AZIMU	H TVD	SECTION	N+/S-	E+/	W-	DLS	TOOL	MD		NCL.	AZIMUTH	 _	TVD	SEC	TION	N+ / S-	E+ / W-	DLS	TOOL
2,685	25.0			781	558	54		4.70	MWD	(-	2.20	45.40	2	610		12	579	569	4.30	MW
2,857	20.4	0 38.6	2697	846	604	59	2	2.50	MWD				29.80	2	786	87	77	630	610	5.20	MWI
FROM			1 141	T 24 HOUF	ıs.					DAI	LY	ACTIV	ΊΤΥ								
0:00	1:00	1.00		H to 26					*												
1:00	1:30			rientate		& wa	sh to	btm.													
1:30	6:00	4.50		me drill																	
6:00	13:0			rill & su		713 to	286	7													
13:00	13:3			g servi								,									
13:30	0:00	10.5) D	rill & su	rvey 2	867 to	0 302	28													
0:00		+	+-																		
0:00	-/	+	+																_ 		
0:00		 	1											· <u>·</u>							
0:00																					
23:00																					
0:00																					
0:00		+											**								
0:00			+												PANE	1	EN	HTIA	+-		
0:00		+	+											-	VVIII	W	<u> </u>	1114	L		
0.00		+	+							_						_					
Daily T	otal	24.0	0													-					
											:OS1	DAT	A		·····						
										•			- ·								

			Engir	neering	& Sup	ervisio	n -	_	EXA	CT	Eng	gine	erir	ng, Inc	•			(9	18) 5	99-9400)	
Ope	rator	r: W	olverin	G&O Co	of Utah	, LLC			AILY	DF	RILI	LINC	F	REPOF	२ Т	2	24 hr	s - r	nidnig	ht to mi		
DATE OS DAYS	5/15/ F/ SPU	05		MR 17-6			CONTRA	Ur	nit Rig	#111		ı ı		TY, STATE ier, UT DRILLII	SPUD DATE 5/15/05 NG TIME	43-041- ROP	AP# -300		0001		ISOR L NAY TH. DEPT	
	1			Trip	for M	WD		<u> </u>	2,69	3		16		4.	50	3.6			Arapie	an	6770) md
												UD DAT	_									
	vт 0.5		vis. 35	n/c		-+-	H).5	0.50		0LIDS % 4.25			YP 18	GELS 9/14	2551	DATE/TIME		,000		2000	MBT	330,000
	0.5		33	11/0		32 10		0.50		4.20		/i IT DAT		9/14	2551	5/15/10:00		,000		2000	<u> </u>	330,000
BiT	SIZE	MF	G.	TYPE	IADC	SERIAL	NO.	JΕ	TS (1/32nd	i*)			DUT	FOOTAGE	HOURS	ROP	_	MTR	RPM	WOB	DULL	CONDITION
NO.	12.25	60 R1	rc 1	IP43A	417	B734	-	24	or TFA	24	+-	77		16	4.50	3.6		Y	20/13		+ + + + +	G
-11	2.25	or K		1P43A	417	B7346	9 (4		_24	120	"		- 10	4.50	#DIV/0	-		20/13	-	++	-
7		+						7			\top				·	#DIV/0				<u> </u>	$\dagger \dagger$	
																#DIV/0	!					
									YDRA	ULICS	\$									SLO	N PUM	P
PUM		MANUFA	CTURER	LINER	STROKE	GAL / STK	SPM	GP	M AV	DP	AV DC	PUMP		MTR DIFF	. нн	P / IN ²	EC	D	F	60 spn	80 sp	n 100 spm
NO 1	+	Nati	onal	6"	LENGTH 8.5	2.96	125	37	1	-		PRESS.	+-	PRESS.	<u> </u>		 		1	+-	\dagger	+
<u>_</u>	+	Nati		6"	8.5	2.96	125	37		$\neg +$		 	╁╴		 			_	2	 	1	+
Bot	h			<u> </u>		5.92	250	74	_+	45	171	1600	1	200	·							
				RILL S1	RING									SEOLOGIC	;			=		GENE	RAL IN	FO
		IOLE ASS	SEMBLY	LENGT		O.D.	I.D.			ATION	7.	MD	F	TVÖ		LITHOL	OGY				G INFO	
	/4"- E				.50				Arap	oiean	+-		┼─			 			Rig N		Unit 1	
		al Asse		114			}				+-		╁			<u> </u>		_	⊪	Norren BOP Te:		4/23
X-0'		SVVD			3.59				воттом	STID TIK	<u> </u>	BG GAS	<u> </u>	GÁS DATA CONN G	242	I TRIP G				BOP Te		5/23
	"SWI	DP			7.03				BOTTOM	3 OF 1 IN	<u>"</u>	00 0A3	 	CONTR		TRIFE		_	<u> </u>	Safety M		5/15
JAR				+	1.80				GAS	ÚNITS		FROM	-	SHOWS		ROP (F1	MR)	_	!	BOP Dri		5/15
4-5"1	HWD	P.		121	.00														Last	Operate	Pipe R	ar 5/15
													_						Last	Operate	Blind R	a 5/15
	al Bh		HA WT.	999 PUW	9.46	SO WT.	ROT. TO	OUE	GRD. EL	EVATIO	N	L TÓ KB	ļ_	KB ELEVA	TION	INTERMÉDI	ATE CS	SG		Operate		r 5/15
	00	+	55	120		95	200			736	- - 	17	t-	5,75						"@ 205	+	9-5/8"
					==						S	URVEY	\$				==					
ME		INCL.	AZIMUTH	TVD	SECTION	N+/S-	E+/W-	DL	s to	OOL	MD	INCL.		AZIMUTH		VD	SEC	TION	N+/S	E+/W	DLS	TOOL
L	_			<u> </u>	<u> </u>			ļ	-+-	ND			 	~ -					<u> </u>	 	┼	MWD
	!			<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u></u>	M\	ND ∥		<u></u>	<u> </u>		<u></u>		<u> </u>			<u> </u>	<u> </u>	MWD
FRO	ú I			LAS	24 HOUR	S:					DAIL	Y ACT	VIT	Υ								
0:0	-	8:00	8.00				s. Rea	dy to	dress	plug	@ 08	3:00 - S	pud	@ 8am 5	5/15/05		_			.		
8:0	0	9:00	1.00	Wa	sh to 2	2552' ce	ement r	ot fi	rm.													
9:0	0	15:30	6.50	Wa	sh to 2	2677 W	ith 180	TF,	found 1	firm c	emer	nt, Tota	l se	t time on j	plug 30 hr	s.						
15:	-	20:00	4.50			2677 to			<u>:</u>													
20:0		0:00	4.00	PC	OH to	change	MWD						,									
0:0	_		 																			
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		Engin	eering	& Sup	ervisi	on 👡	_	EXA	CT	「En	gine	erir	ng, Inc		<u> </u>		(9	18) 59	9-9400)	
Operator:			G&O Co										REPOR		2	24 hr	s - n	nidnig	ht to m	idnight	
05/15/0	05		/IR 17-6			CONTRA	Ur	nit Rig					ity, STATE rier, UT	SPUD DATE 5/15/05	43-041-	AP# -300	37-0			L NAY	
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- 6 5/8" \$	SWD	Р	150	0.00									GAS DATA					Last E	OP Te	st	4/23
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						-	_	_	MD DW		1	-					\dashv			<u> </u>	MWD
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FROM				24 HOUR										-14-10-							
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Operat	tor: V	Volverin	e G&O C	of Utah	, LLC		D	All	LYC	RII	LL	ING	F	REPOF	RT	2	4 hr	s - r	nidnig	nt to m	idnigh	t
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U5/1 DAYS F/ S	5/05 PUD		MR 17-6			<u> </u>		JAIT I	Rig #11 РТН		ROGE		Sev	ier, UT	5/15/05 NG TIME	43-041- ROP	300		MATION		TH. DEP	
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- 6 5	/8" SW[)P	+	0.00 3.59				L	TAUK US		- BA		<u>L</u> .	GAS DATA		TRIP G			— —	OP Te		4/2 5/2
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ARS			+	1.80					GAS UNIT		FF	ROM		SHOWS TO		ROP (FT	/HR)		Last E	OP Dr	ill	5/1
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100)	55	120)	95	2	00		5,736			17		5,75	3				13-3/8	@ 205	3	9-5/8"
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Jany	, otal	1.24.00									സ	T DA	TΔ				_	_				
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STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT 🔽 (highlight changes)

		APPLICA	TION FOR F	PERMIT T	O DRILL		5. MII Priv	NERAL LEASE NO:	6. SURFACE: Fee
1A. TYPE OF W	ORK:	DRILL 🗌	REENTER W	DEEPEN	\(\overline{\ov		7. IF I	NDIAN, ALLOTTEE OF	R TRIBE NAME:
B. TYPE OF W	ELL: OIL	GAS 🗌	OTHER	SIN	NGLE ZONE MUL	TIPLE ZON	1E 🔲 8. UN	T or CA AGREEMENT	NAME:
2. NAME OF OF	PERATOR:						9. WE	LL NAME and NUMBE	R:
Wolverine	Gas & Oil	Company of	Utah, LLC				Kir	gsMeadowRa	nches17-6(WF8-1
3. ADDRESS O					PHONE N		I I	ELD AND POOL, OR V	WLDCAT:
55 Campa			d Rapids STATE	MI 21P 49	9503-2616 (616) 4	158-1150		venant	
	F WELL (FOOTAC	•			_		11. Q1	R/QTR, SECTION, TO RIDIAN:	WNSHIP, RANGE,
AT SURFACE	: 1680' FN	L & 2265' FV	VL, Sec 17 T23	S - R01W ((amended) 🕺		NEI	NW 17 23	S 01W
AT PROPOSE	D PRODUCING Z	ONE: 4038' A	I & 418' E of SI ·	北 (irregular	section)				
14. DISTANCE	N MILES AND DIR	ECTION FROM NE	AREST TOWN OR POS	OFFICE:			12. CC	OUNTY:	13. STATE:
3.5 miles	S of Sigur	d, UT		•			Se	/ier	UTAH
15. DISTANCE 1	O NEAREST PRO	PERTY OR LEASE	LINE (FEET)	16. NUMBER (OFACRES IN LEASE:		17. NUMBER	OF ACRES ASSIGNED	TO THIS WELL:
500' west						160	1		40
18. DISTANCE T	O NEAREST WEL	L (DRILLING, COM	PLETED, OR	19. PROPOSEI	D DEPTH:		20. BOND DE	SCRIPTION:	
	R) ON THIS LEAS					6,840	Pendin		
	approx 500	ER DF, RT, GR, ET	C):	22 APPROXIM	ATE DATE WORK WILL STAF		1 Chairi		100
5753' KB	•	En Dr , 111 , Ci 1, Ci	G.J.	5/15/200			(A	A10	
				0/10/20		_ the	ended A		
24.			PROPOSE	D CASING A	ND CEMENTING PR	ed for	WF 8-	(
	1 010110 5175	00.05 445.45			CEME	- • 479	nechange	e km217-4([8-1]
SIZE OF HOLE		, GRADE, AND WEI		ETTING DEPTH		" • BH	L Chang	~	
30"	20	X42	.25 wall	123	conductor cmtd (e		chang		
17-1/2"	13-3/8"	J55	61 ppf	2,053	HiFill (exist)		eady d.		11 ppg
					Prem G (exist)	* w	ise Cha	180.	15.6 ppg
12-1/4"	9-5/8"	N80	47 ppf	5,950	50:50 POZ		450sx	1.71 cfps	13 ppg
8-1/2"	7"	N80	26 ppf	6,840	50:50 POZ		400sx	1.27 cfps	14.35 ppg
			0.41						
		trop	RHC		note: revised APD	<u>t</u>	o re-enter	WF 8-1	
25.		Prop 418850	1X	ATTA	CHMENTS				
VERIFY THE FOL	LOWING AR	42957	15Y	AND GAS C	ONSERVATION GENERAL RU	JLES:			
WELL PL	AT OR MAP	38.808	15Y 340 34 <i>50</i> 6		COMPLETE DRII	LLING PLAN			
_	E OF DIVISI	-111.9	34506	ER	FORM 5 IE ODE	RATOR IS DED	SON OB COM	ANY OTHER THAN TH	ELEASE OWNED
EAIDEING	COF DIVIGI			Ľľ		NATON 13 FEN	SON ON COMP	ANTOTHER HANTIN	IL LEAGE OVVIVER
NAME (PLEASE)	Stever	n R. Hash - (Consulting Eng	ineer	TITLE EXAC	T Engine	ering Inc (918) 599-9400)
SIGNATURE	Dev	m / 2.	Hash		DATE 5/25/2	005			
This space for Stat	e use only)								
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							AANE	INTAITIAI	

CONFIDENTIAL CEIVED

JUN 0 1 2005

DIV OF OIL, GAS & MINING

API NUMBER ASSIGNED:

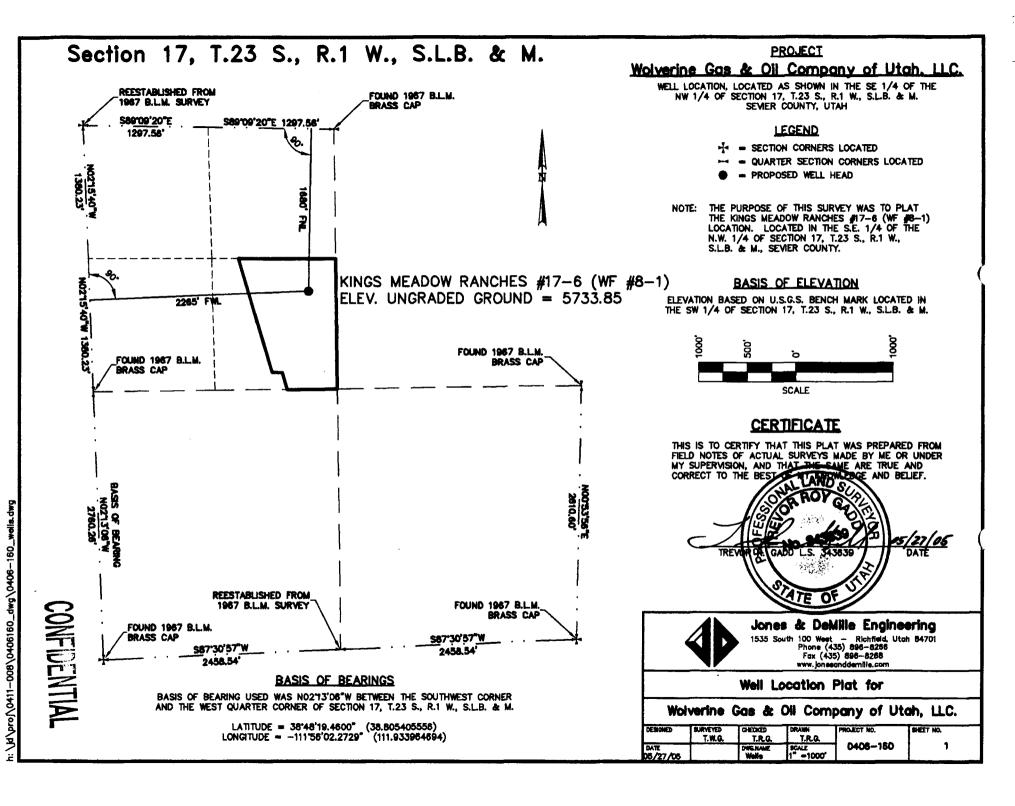
APPROVAL:

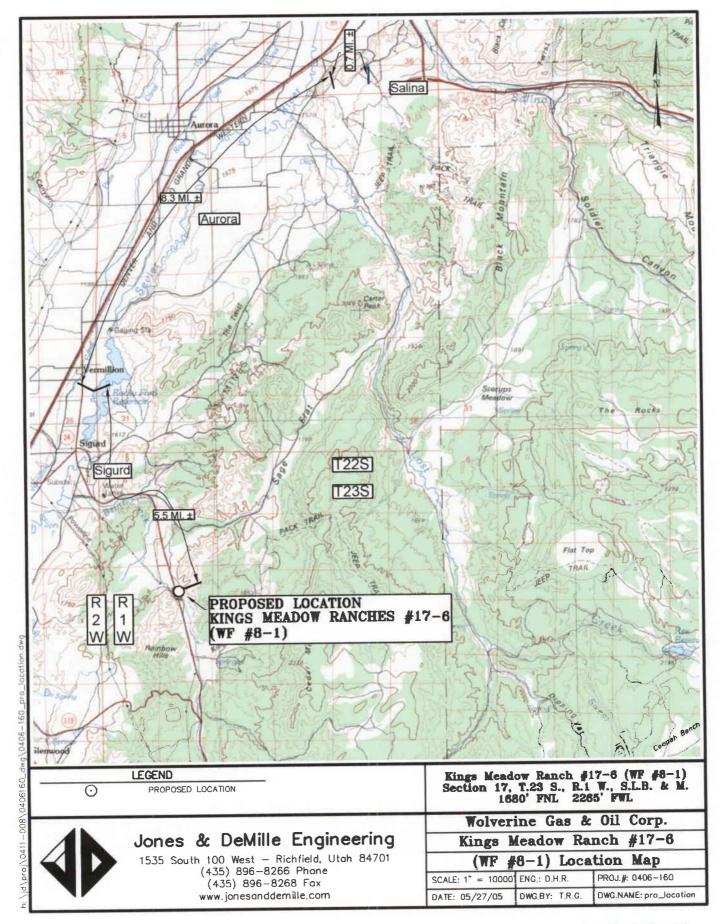
STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT
(highlight changes)

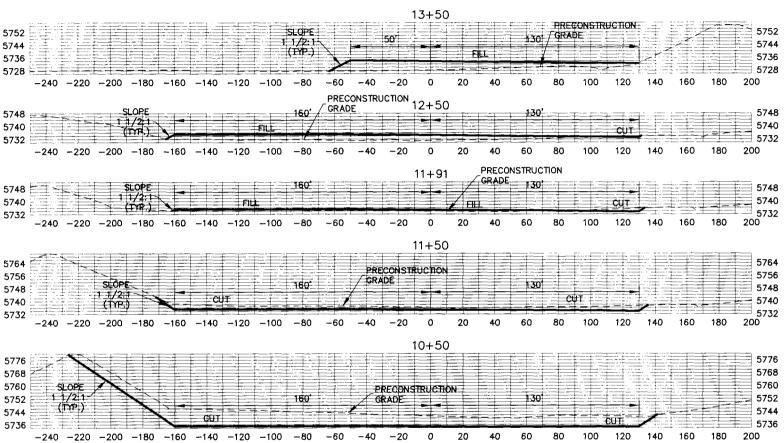
	А	PPLICA	TION FOR F	PERMIT T	O DRILL	1	5. MINERAL LEASE NO: Private	6. SURFACE: Fee
1A. TYPE OF W	ork: DR	RILL 🗌	REENTER W	DEEPEN			7. IF INDIAN, ALLOTTEE OR	TRIBE NAME:
B. TYPE OF W	ELL: OIL .	gas 🗌	OTHER	SII	NGLE ZONE MULTIPLE ZOI	NE 🔲 📙	8. UNIT or CA AGREEMENT	NAME:
2. NAME OF OP	DEBATOR:						9. WELL NAME and NUMBE	D.
	Gas & Oil Co	mpany of	Utah, LLC				KingsMeadowRa	
3. ADDRESS OF		mpany or	01011, 220	-	PHONE NUMBER:		10. FIELD AND POOL, OR W	
55 Campa	u	CITY Gran	d Rapids STATE	MI _{ZIP} 49	9503-2616 (616) 458-1150		Covenant	
4. LOCATION O	F WELL (FOOTAGES)					11. QTR/QTR, SECTION, TO MERIDIAN:	WNSHIP, RANGE,
AT SURFACE:	1680' FNL 8	3 2265' FV	VL, Sec 17 T23	S - R01W ((amended) ?	1		S 01W
			I & 418' E of SI		•		1421444 17 200	5 0144
14. DISTANCE II	N MILES AND DIRECT	TION FROM NE	AREST TOWN OR POS	OFFICE:			12. COUNTY:	13. STATE:
3.5 miles	S of Sigurd,	UT					Sevier	UTAH
15. DISTANCE T	O NEAREST PROPE	RTY OR LEASE	LINE (FEET)	16. NUMBER (DFACRES IN LEASE:	17. NUN	MBER OF ACRES ASSIGNED	TO THIS WELL:
500' west				1	160			40
	O NEAREST WELL (DIE) ON THIS LEASE (F	ORILLING, COM	PLETED, OR	19. PROPOSEI	D DEPTH:	20. BON	ID DESCRIPTION:	
					6,840	İ	ding	
	approx 500' w		C):	22 ADDROVIM	ATE DATE WORK WILL START:		MATED DURATION:	
	·	DF, KT, GK, EK	G.).	5/15/200		20 d		
5753' KB		 		5/15/200		20 0		
24.			PROPOSE	D CASING A	ND CEMENTING PROGRAM			
SIZE OF HOLE	CASING SIZE, GR	RADE, AND WEI	GHT PER FOOT S	ETTING DEPTH	CEMENT TYPE, QU	ANTITY, YI	ELD, AND SLURRY WEIGHT	
30"	20	X42	.25 wall	123	conductor cmtd (exist)			
17-1/2"	13-3/8"	J55	61 ppf	2,053	HiFill (exist)	595sx I	ead 3.96 cfps	11 ppg
					Prem G (exist)	475sx	tail 1.18 cfps	15.6 ppg
12-1/4"	9-5/8"	N80	47 ppf	5,950	50:50 POZ	45	0sx 1.71 cfps	13 ppg
8-1/2"	7"	N80	26 ppf	6,840	50:50 POZ	40	0sx 1.27 cfps	14.35 ppg
					note: revised APD	to re-er	nter WF 8-1	
25.				ATTA	CHMENTS			
· · · · · · · · · · · · · · · · · · ·	LOWING ARE ATTAC	CHED IN ACCOR	RDANCEWITH THE UTA		ONSERVATION GENERAL RULES:			
✓ WELL PL	4T 00 440 DD5040	ED DV LIGENOE	D SURVEYOR OR ENG	NEED	COMPLETE DRILLING PLAN			
W WELL PE	AT OR MAPPREPAR	ED BY LICENSE	D SURVETUR OR ENG	INCER	COMPLETE DRILLING PLAN			
EVIDENC	E OF DIVISION OF W	ATER RIGHTS /	APPROVAL FOR USE O	F WATER	FORM 5, IF OPERATOR IS PER	RSON OR C	COMPANY OTHER THAN TH	E LEASE OWNER
								
NAME (PLEASE P	Steven F	R. Hash - (Consulting Eng	ineer	TITLE EXACT Engine	ering I	nc (918) 599-9400)
SIGNATURE	Steve	.12.	Hash		DATE 5/25/2005			
This space for Stat	e use only)							
API NUMBER ASS	IGNED:				APPROVAL:	CO	NFIDENTIAL	CENT-
	•				-		" " fair	MINED





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Jones & DeMille Engineering

1535 South 100 West ~ Richfield, Utah 84701 Phone (435) 896-8266 Fax (435) 896-8268 www.jonesonddemille.com

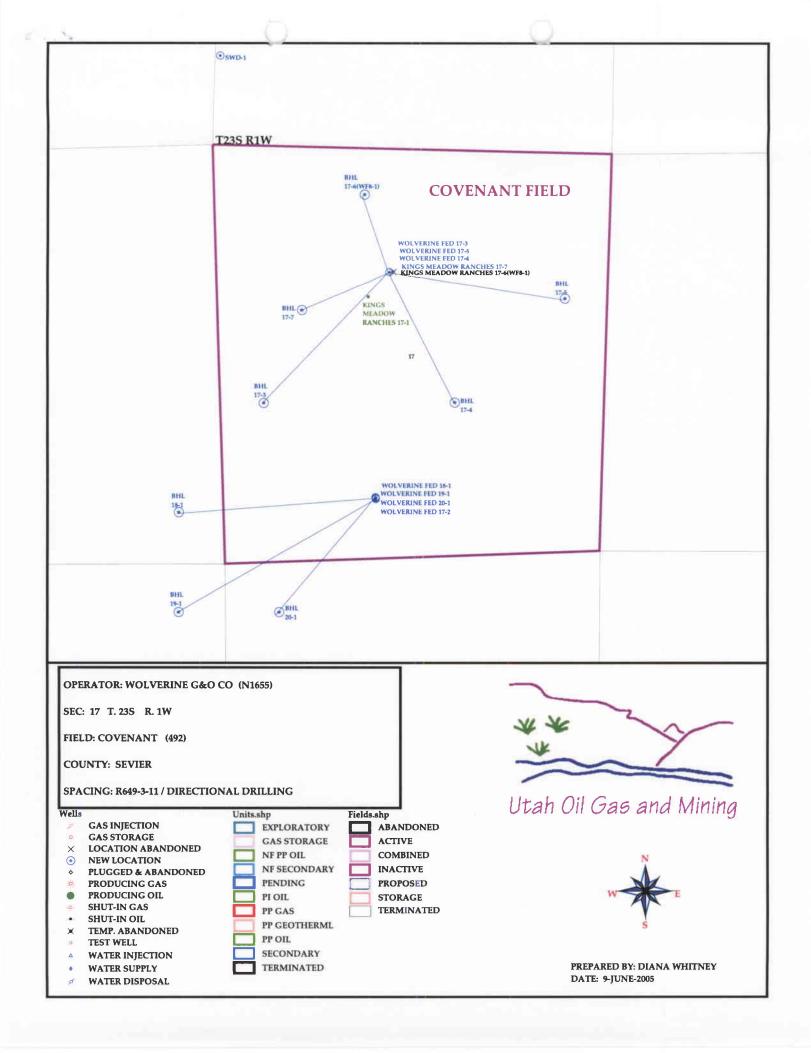
Typical Cross Sections for

Wolverine Gas & Oil Company of Utah, LLC.

DESIGNED	SURVEYED	CHECKED	DRAWN	PROJECT NO.	SHEET NO.
	T.W.G.	T.R.G.	T.R.G.	ـــ ــــ	1 .
DATE	-	DWG NAME	SCALE	0407-139	1
05/27/05	J	Design	1"=60"	t	1

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 06/01/2005	
1110 1110111110. 00/01/11000	API NO. ASSIGNED: 43-041-30037
WELL NAME: KINGS MEADOW RANCHES 17-1 (WG S-1) OPERATOR: WOLVERINE GAS & OIL CO (N1655) RICHARD MORITZ	PHONE NUMBER: 616-458-1150
PROPOSED LOCATION: SENW 17 230S 010W SURFACE: 1680 FNL 2265 FWL BOTTOM: 0660 FNL 1925 FWL SEVIER COVENANT (492) LEASE TYPE: 4 - Fee LEASE NUMBER: FEE	INSPECT LOCATN BY: / / Tech Review Initials Date Engineering Geology Surface
SURFACE OWNER: 4 - Fee PROPOSED FORMATION: NAVA COALBED METHANE WELL? NO	LATITUDE: 38.80554 LONGITUDE: -111.9332
RECEIVED AND/OR REVIEWED: ✓ Plat ✓ Bond: Fed[] Ind[] Sta[] Fee[] (No. 19107754) ✓ Potash (Y/N) N Oil Shale 190-5 (B) or 190-3 or 190-13 ✓ Water Permit (No. 63-2529) N RDCC Review (Y/N) (Date:) ✓ Fee Surf Agreement (Y/N) X MINTING IS THE SURFICE OWNER.	LOCATION AND SITING: R649-2-3. Unit WOLVERINE R649-3-2. General Siting: 460 From Qtr/Qtr & 920' Between Wells R649-3-3. Exception Drilling Unit Board Cause No: Eff Date: Siting: R649-3-11. Directional Drill
COMMENTS:	



UTAH DEPARTMENT OF NA_KAL RESOURCES

Division of Oil, Gas & Mining
Oil and Gas Program

1594 West North Temple, Suite 1210, Box 145801

Salt Lake City, Utah 84114-5801

(801) 538-5340 Phone

(801) 359-3940 Fax

NOTICE OF VIOLATION STATE OF UTAH OIL AND GAS CONSERVATION ACT

To the following operator:
Name: Wolverine Gas & Oil Company of Utah, LLC
Well or Site: Kings Meadow Ranches 17-6(WF 8-1) API #: 43-041-30037
Location: Township <u>23S</u> , Range <u>01W Section 17</u> , County <u>Sevier</u>
Date and Time of Inspection/Violation: May 27, 2005 @ 3:02 p.m. (phone confirmation of BHL)
Mailing Address: _55 Campau
Grand Rapids, MI 49503-2616
Under the authority of the Utah Oil and Gas Conservation Act, Section 40-6 et. Seq., Utah Code Annotated, 1953, as amended, the undersigned authorized representative of the Division of Oil, Gas and Mining has conducted an inspection of the above described site and/or records on the above date and has found alleged violation(s) of the act, rules or permit conditions as described below.
Description of Violation(s):
Rule R649-3-6-1, <i>Drilling operations shall be conducted according to the drilling program submitted on the original APD and as approved by the division</i> Verbal approval was given May 13, 2005 by Dustin Doucet of the Division to sidetrack this well to a BHL of 660' FNL and 1925' FWL (1022' N and 83' W of the SHL). Wolverine subsequently drilled the well to an approximate BHL 1038' N and 418' E of the SHL.
Action: Wolverine shall meet with the division to discuss drainage and spacing issues associated with this well and the other Wolverine wells in this section. A Board spacing hearing may ultimately be needed to resolve these issues and to protect correlative rights. Additional permits overlaying this pool may not be approved until this NOV is resolved.
Rule R649-3-3, Exception to Location and Siting of Wells – <u>The permitted BHL was a legal location</u> . <u>The BHL that Wolverine drilled to was an exception location</u> . An application for the exception well location was never submitted by Wolverine and never approved by the <u>Division</u> .
Action: Wolverine shall submit a complete exception location request in accordance with R649-3-3 and R649-3-11. Because of the close proximity to the Federal lease line (~106'), this well may not be allowed to produce until proof of correlative rights protection is received. This may entail a Board spacing and pooling order.
This notice shall remain in effect until it is modified, terminated, or vacated by a written notice of an authorized representative of the director of the Division of Oil, Gas and Mining.
Compliance Deadline: July 15, 2005
Date of Service Mailing: Tune 3, 2005 Time of Service Mailing: 3:00 p.m.
1 A W Lut 6/3/05
Division's Representative Operator or Representative

(If presented in person)

EXACT Engineering, Inc.

www.exactengineering.com

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E. Registered Professional Engineer stevehash@exactengineering.com

CONFIDENTIAL PLEASE!

May 26, 2005

Mr. Dustin Doucet
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84114-5801

Re:

Wolverine's - Kings Meadow Ranches 17-6 (WF 8-1) well Sec 17 T23S R01W Sevier Co., UT API# 43-041-30037

Dear Mr. Doucet,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed the following per your request:

- 1) Amended form 3, <u>Application For Permit To Drill</u> (cover page), to change well name from <u>Wolverine</u> Federal 8-1 to <u>Kings Meadow Ranches 17-6 (WF 8-1)</u>.
- 2) Surveyor's plat changing SHL <u>from</u> 1680' FNL & 2217' FWL <u>to</u> 1680' FNL & 2265' FWL (ie FROM our slot F on drill pad A-2 as originally intended TO our slot C) plus accompanying amended topographic, location layout and cross-section plats.
- 3) Revised drilling prognosis and directional plan changing bottom-hole location, formation tops and casing setting points for the sidetrack operation.

Please recall that the original wellbore was for the Wolverine Federal 8-1 well which was plugged and abandoned. The wellbore was immediately re-named and then re-entered.

We respectfully request that the enclosed information remain confidential.

Very Truly Yours,

Steven R. Hash

Consulting Engineer for Wolverine Gas and Oil Company of Utah, LLC

RECFIVED

JUN 3 1 2005

copy with enclosures to:

U.S. Bureau of Land Management; Salt Lake City, UT office; Wolverine Gas & Oil Co of Utah, LLC; Grand Rapids, MI office EXACT Engineering, Inc.

Mr.Al McKee Mr. Ed Higuera well file DOWN OF LAW, GAS & MINING

Petroleum Engineering Consulting, Personnel & Jobsite Supervision complete well design, construction & management, drilling, completion, production, pipelines, appraisals, due diligence, acquisitions, procedures, temporary personnel and field supervision

STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES



	DIVISION OF OIL, GAS AND IVI	IIIIIIII	UTU-73528
SUNDRY	Y NOTICES AND REPORT	S ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for proposals to drill drill horizontal	new wells, significantly deepen existing wells below a laterals. Use APPLICATION FOR PERMIT TO DRILL	urrent bottom-hole depth, reenter plugged wells, or to form for such proposals.	7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL OIL WELL	GAS WELL OTHER	Drilling well	8. WELL NAME and NUMBER: KingsMeadowRanches 17-6(8-1)
2. NAME OF OPERATOR:			9. API NUMBER:
Wolverine Gas and Oil Co	ompany of Utan, LLC	PHONE NUMBER:	4304130037 10. FIELD AND POOL, OR WILDCAT:
	. _y Grand Rapids _{STATE} MI _{ZII}	, 49203 (616) 458-1150	Exploratory Area
4. LOCATION OF WELL			
FOOTAGES AT SURFACE: 1680'	FNL & 2265' FWL		county: Sevier
QTR/QTR, SECTION, TOWNSHIP, RAN	NGE, MERIDIAN: SENW 17 23S	1W	STATE: UTAH
11. CHECK APPI	ROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPO	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
NOTICE OF INTENT	ACIDIZE	DEEPEN	REPERFORATE CURRENT FORMATION
(Submit in Duplicate)	ALTER CASING	FRACTURE TREAT	SIDETRACK TO REPAIR WELL
Approximate date work will start:	CASING REPAIR	NEW CONSTRUCTION	TEMPORARILY ABANDON
6/6/2005	CHANGE TO PREVIOUS PLANS	OPERATOR CHANGE	TUBING REPAIR
	CHANGE TUBING	PLUG AND ABANDON	VENT OR FLARE
SUBSEQUENT REPORT (Submit Original Form Only)	CHANGE WELL NAME	PLUG BACK	WATER DISPOSAL
Date of work completion:	CHANGE WELL STATUS	PRODUCTION (START/RESUME)	WATER SHUT-OFF
Date of Work completion.	COMMINGLE PRODUCING FORMATIONS	RECLAMATION OF WELL SITE	отнея: suspend operations
	CONVERT WELL TYPE	RECOMPLETE - DIFFERENT FORMATION	
12. DESCRIBE PROPOSED OR CO	MPLETED OPERATIONS. Clearly show all p	pertinent details including dates, depths, v olume	s, etc.
PLEASE KEEP THE ENC	LOSED INFORMATION CONFIL	DENTIAL - THANK YOU	
Production casing was set	t May 29 and drilling operations v	vere completed May 30, 2005	
A2. This well is secured w	vith a drilling cap flange. It is esti	ily suspended until additional well imated that drilling operations from begin on or about July 15, or as so	n this location will be completed by
xc: BLM		c 22PV 58 4 Scrie: 1 amidis: "	NT TO OPERATOR 6-20-05- CHO
Stoven B	Hash - EXACT Engineering, Inc	Conquiting Engine	or for Woharing Cos & Oil
NAME (PLEASE PRINT) SIEVET R.	riasii - EAACT Engineening, Inc	TITLE Consulting Engine	er for Wolverine Gas & Oil
SIGNATURE SULL	a 16. Heal	DATE 6/6/2005	
This space for State use only)	APPROVED BY THE	STATE	COMPOENTIAL

OF UTAH
OIL, GAS,
DATE: 620/05
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Action is Necessan



EXACT Engineering, Inc.

www.exactengineering.com

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E. Registered Professional Engineer stevehash@exactengineering.com

CONFIDENTIAL PLEASE!

June 8, 2005

Mr. Dustin Doucet Utah Division of Oil, Gas & Mining 1594 West North Temple, Suite 1210 Salt Lake City, UT 84114-5801

Re:

Wolverine Kings Meadow Ranches 17-6 (WF 8-1) well

Sec 17 T23S R01W Sevier Co., UT

API# 43-041-30037-0001

Dear Mr. Doucet,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed daily drilling reports for the subject well from May 27, 2005 through May 30, 2005. TD of 6765' was reached on May 27, the well logged and 7" production casing set & cemented on May 29. Operations have been suspended until about July 15, 2005. A sundry notice of these suspended operations is enclosed. We respectfully request that the enclosed information remain confidential.

Very Truly Yours,

Steven R. Hash

Consulting Engineer for Wolverine Gas and Oil Company of Utah, LLC

copy without enclosures via email to:

Wolverine Gas & Oil Co of Utah, LLC: Helene Bardolph

EXACT Engineering, Inc.

well file

RECEIVED

JUN 1 0 2005

DIV. OF CALL TO MING

Petroleum Engineering Consulting, Personnel & Jobsite Supervision complete well design, construction & management, drilling, completion, production, pipelines, appraisals, due diligence, acquisitions, procedures, temporary personnel and field supervision

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13:00 14:00 1.00 Kelly up, fill pipe, wash 6667 to 6765, no fill					
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WOLVERINE GAS AND OIL COMPANY

of Utah, LLC

Energy Exploration in Partnership with the Environment

June 29, 2005

Ms. Diana Whitney Utah Division of Oil, Gas & Mining 1594 W. N. Temple, Suite 1210 Salt Lake City, UT 84114-5801 Drill in 18 por por to 19 man

RE:

Request for Directional Drilling/Exception to Rule R649-3-2

Wolverine Federal 17-6 (Wolverine Federal 8-1)

Covenant Field, Sevier County, Utah

API No 43-041-300370001

Dear Ms. Whitney:

The purpose of this letter is to provide information pertaining to the captioned well pursuant to a request for an exception location Rule R649-3-2. The proposed bottom hole location for the Wolverine Federal 17-6 (WF 8-1) at the top of the Navajo is 704' FNL and 115' FWL of the NW/4 NE/4, Section 17, T23S, R01W. The Navajo target location is 345' feet west of the 400' "window" allowed under Rule R649-3-2 (see attached diagram). The proposed location falls within the Wolverine Federal Unit and Wolverine Gas and Oil owns all mineral leases for the proposed BHL as well as mineral leases within a 460' radius of the proposed Navajo target and for all directly or diagonally offsetting drilling locations. The exception to Rule R649-3-2 is needed because Wolverine is in the process of defining the limits of the Covenant Field structure and our current geologic interpretation suggests the proposed bottom hole location would be more favorable than a Navajo target located further east within the 400' "window" provided for in Rule R649-3-2. The closest well to the planned BHL of the WF 17-6 (WF 8-1) is the KMR 17-1, which intersected the top of the Navajo 1436' south southwest of the proposed WF 17-6 (WF 8-1) BHL location.

If you have any questions, please call me at 616-458-1150. Thank you for your attention to this matter.

Sincerely

John P. Vrona Manager of Geology

cc:

Edward A. Higuera

WF 17-6 (WF 8-1) Well Log File

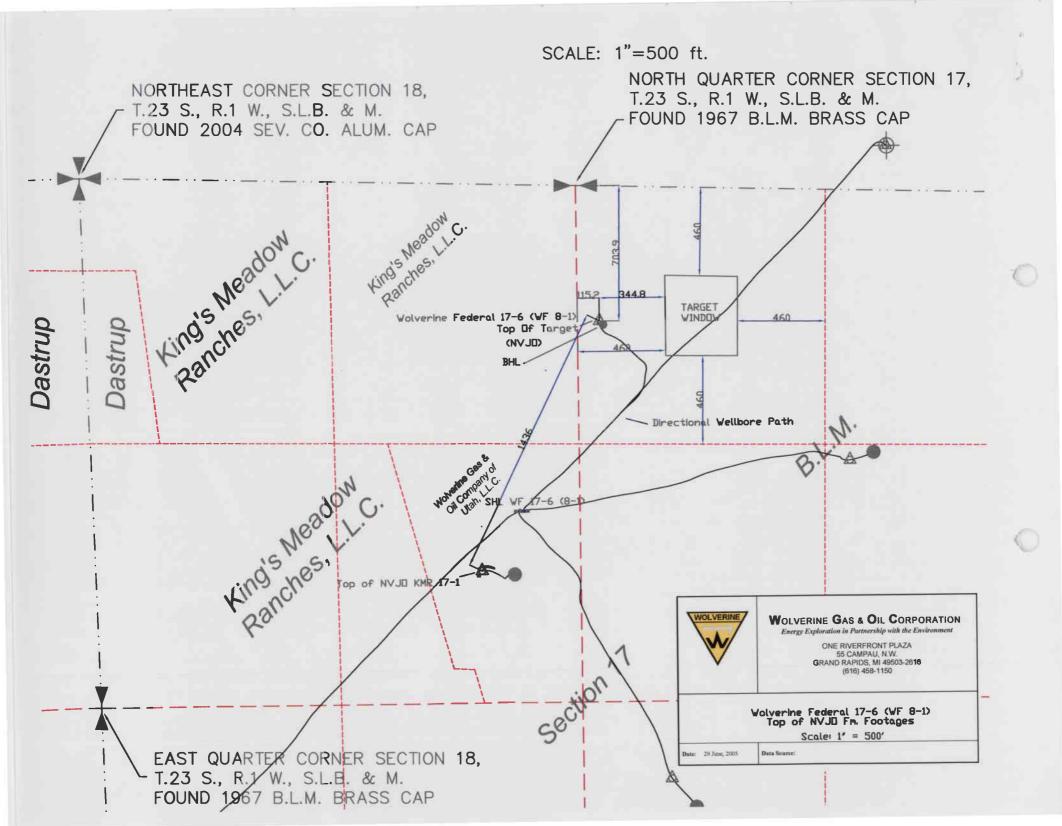
My Coordinates

2751 FWL 685 FNL

Their Coordinates ±2710 FWL 704 FNL

RECEIVED

JUL 0 1 2005





WOLVERINE GAS AND OIL COMPANY

of Utah, LLC

Energy Exploration in Partnership with the Environment

June 29, 2005

Ms. Diana Whitney Utah Division of Oil, Gas & Mining 1594 W. N. Temple, Suite 1210 Salt Lake City, UT 84114-5801

Request for Directional Drilling/Exception to Rule R649-3-10 Pursuant to Rule RE:

R649-3-11

Wolverine Federal 17-6 (Wolverine Federal 8-1)

Covenant Field, Sevier County, Utah

API No 43-041-300370001

Dear Ms. Whitney:

The purpose of this letter is to provide you with information pertaining to the directional drilling of the Wolverine Federal 17-6 (Wolverine Federal 8-1) in accordance with Rule R649-3-10 pursuant to Rule R649-3-11. The WF 17-6 (WF 8-1) will be directionally drilled from a surface location known as the A-2 Pad, which is the same pad used to drill the Wolverine Federal 17-3, 17-4 and 17-5 wells. The well is to be directionally drilled due to the limited availability of suitable surface hole locations as well as Wolverine's commitment to minimizing the "footprint" of our operations. The proposed bottom hole location of the WF 17-6 (WF 8-1) at the top of the Navajo is 704' FNL & 345' FWL of the NW/4 NE/4, Section 17, T23S, R01W. The indicated Navajo target is 345' west of the 400' "window" allowed under rule R649-3-2 (see attached diagram).

The proposed location falls within the Wolverine Federal Unit and Wolverine Gas and Oil owns the mineral lease for the proposed bottom hole location and the mineral leases within a 460' radius of the proposed Navajo BHL and for all directly or diagonally offsetting drilling locations. Wolverine Gas and Oil also owns all leases with a 460' radius offsetting the entire proposed trajectory of the wellbore. An exception to Rule R649-3-10 pursuant to Rule R649-3-11 is needed because a vertical well is not feasible given our existing surface and land situation.

If you have any questions, please call me at 616-458-1150. Thank you for your attention to this matter.

Sincerely,

Jøhn P. Vrona

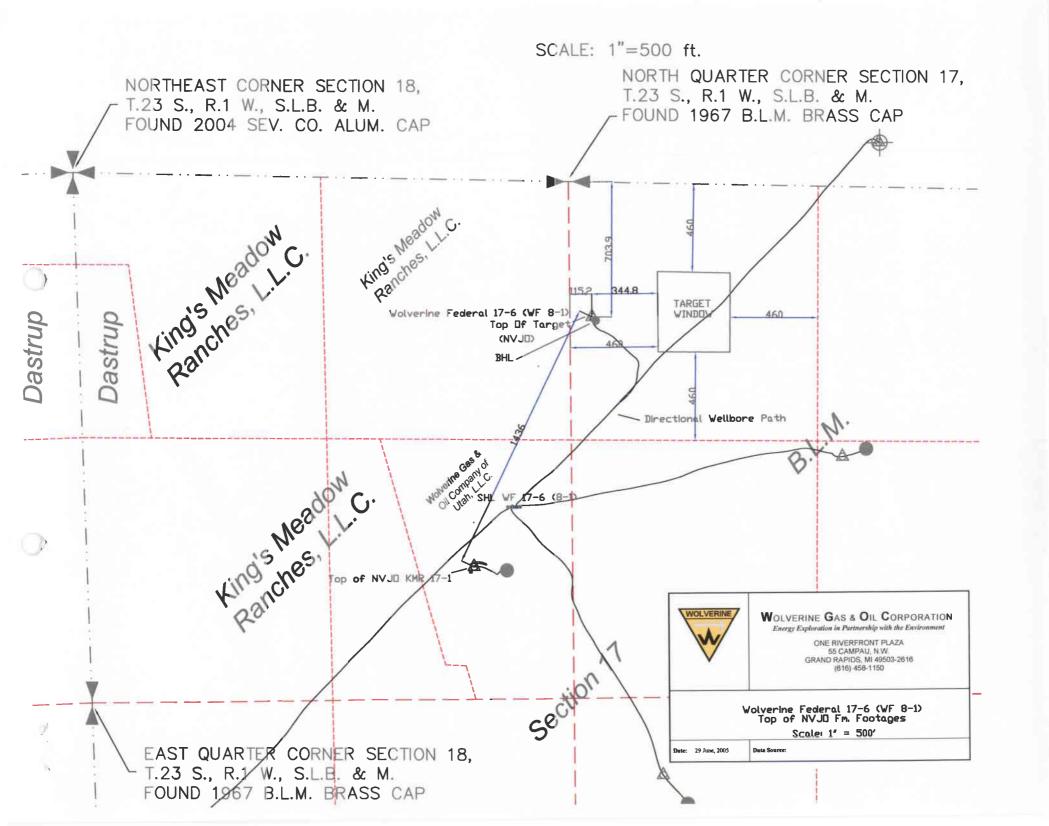
Manager of Geology

Edward A. Higuera cc:

WF 17-6 (WF 8-1) Well Log File

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RECEIVED



WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC

DRILLING PROGNOSIS

Kings Meadow Ranches # 17-6 (WF 8-1)

NE NW SEC 17-T23S-R1W

SEVIER CO., UTAH

REVISED - BRIEF DRILLING PLAN FOR SIDETRACK

Due to surface topography constraints, directionally drill a 6850' MD (6640'TVD) test of the Navajo 1 formation on a day work contract basis from Wolverine's present work area known as Drill Pad A-2 (slot C) located in SE NW of Sec 17 T23S – R01W, Sevier Co, UT. This well will utilize the previously abandoned Wolverine Federal 8-1 (API# 43-041-30037). Please refer to the directional drilling plan attached for detailed hole angle, trajectory and target information. Deviation is the primary drilling concern in this area. No abnormal pressure or hydrogen sulfide gas is expected, however, an H2S detector will be utilized. The projected surface and bottomhole locations are to be as follows:

Surface Location:

1680' fnl & 2265' fwl of Sec 17 T23S – R01W

BHL @ top of NVJO1 (5933' TVD) 1038' N & 418' E of SHL – Sec 17 T23S - R01W

20" conductor casing has been set and cemented to surface at 123 ft BGL. 13-3/8" surface csg has been set at 2053' MD (1977' TVD) and cemented to surface in a 17-1/2" hole deviated to 25 deg at 2053' MD (1977' TVD). A 12-1/4" hole, originally drilled to 7824' MD has been successfully plugged back to 2500' in accordance with regulations. The 12-1/4" hole will be sidetracked with downhole motor and bent housing as outlined in the attached directional plan at approximately 2500' (28 deg inclination & 42 degr azimuth – BHL coordinates 511' N & 497' E of SHL). It will then be directionally drilled to +/- 5950' MD (5750' TVD) dropping angle to an approximate 7 deg from vertical. 9-5/8" protective casing will be set from surface to TD & cemented over the lower 1000'. An 8-1/2" hole will then be drilled to +/- 6850' (6640' TVD). 7" production casing will then be run from TD back to surface & cemented to approximately 800' into the 9-5/8" protective casing.



EMERGENCY NUMBERS

Sevier Valley Medical Center	(435)-896-8271
Medical Helicopter	(800)-453-0120
Sheriff Department	(435)-896-2600
Fire Department-Richfield, UT	(435)-896-5479
Bureau of Land Management (Richfield):	(435)-896-1500
Bureau of Land Management (Salt Lake City)	(801) 539-4045
Utah Division of Oil, Gas and Mining (Salt Lake City):	(801)-538-5340

United States Bureau of Land Management

Contact Al McKee (801) 539-4045 24 hrs prior to spudding

Utah Division of Oil, Gas and Mining

Contact Carol Daniels (801) 538-5284, 24 hrs prior to spudding

GENERAL INFORMATION

OBJECTIVE: Navajo 1 @ 5933' (TVD) ELEVATION: 5736' GL (actual) 5753' KB

PROJECTED TOTAL DEPTH: 6850' MD; 6640' TVD

SURFACE LOCATION: 1680' FNL & 2265' FWL

Section 17-23S-1W

COUNTY: Sevier STATE: Utah

DIRECTIONS TO LOCATION: From the town of Sigurd, Utah go south

approximately 3.5 miles on Hwy #24 to location on

the left side of the road.

PROPOSED CASING PROGRAM:

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Measured Depth Set
30"	20"	.25 wall	X42	PE welded	123' (set)
17-1/2"	13-3/8"	61#	J-55	LTC	0'-2053' (set)
12-1/4"	9-5/8"	* 47#	N-80	LTC	0'-59500'
8-1/2"	7"	** 26#	N-80	LTC	0' -6850'

^{*} due to availability 47# HCP-110 may be substituted for N80

^{**} due to availability 23# HCP-110 may be substituted for 26# N80

Hole Size	Casing Size	Drift ID, in.	OD of Couplings	Annular Volume in OH, cf/ft	Annular Volume in Csg, cf/ft	Capacity of casing, cf/ft
30"	20"	Conductor	Na			
17-1/2"	13-3/8"	12.259	14.375	.6946	1.0982	.8406
121/4"	9-5/8"	8.525	10.625	0.3127	0.4659	0.4340
8-1/2	7"	6.250	7.656	.1268	.1438	.2148

GEOLOGIC FORMATIONS:

Formation	Interval (TVD)	Interval (MD)	Lithology	Prod	Abnormal Psi
Arapien	Surf – 5602'	Surf – 5800'	sh, siltstone,salt,evaporites		
TwinCreek1	5602'- 5933'	5800'-6135'	Carbonates	X	
Navajo 1	5933'- 6640'	6135'-6850'	Sandstone w/ minor shale	X	
Total Depth	6640'	6850'			

CONSTRUCTION OF SURFACE LOCATION (EXISTING)

360'x 180' Pad 150'x 100' x 10' Reserve Pit with a 12 mil synthetic liner 96" diameter tin horn cellar, 10' deep. Flare pit a minimum of 100' from wellhead.

SURFACE HOLE: 120' to 2053' (EXISTING)

Directionally drill a 17-1/2" hole with a PDC bit, mud motor & MWD equipment to approximately 2000' using salt mud system from prior well (make hole to fit 13-3/8" casing). Loss circulation could be a problem in this interval and, if such occurs, begin pumping LCM sweeps. If loss circulation cannot be healed with ±25 ppb LCM, consider dry drilling (no returns). Maintain hole angle and direction in keeping with the attached directional plan.

PRESSURE CONTROL & SAFETY EQUIPMENT FOR SURFACE HOLE (EXISTING)

Bottom to Top (see attached 2M Diverter diagram)

20" 2M x 20" SOW flange
20" 2M x 20" 2M mud cross w/ (2) 7-1/16" 2M side outlets
one outlet 7-1/16" HCR valve w/ 6" blooie line to mud separator & flare pit
one outlet (blank)
20" 2M Annular Preventer

20" 2M flanged btm drilling nipple w/ fillup line
Upper kelly cock valves with handles available
Safety valves and subs to fit all drill string connections in use
Inside BOP or float sub available

Testing Procedure:

Annular Preventer & HCR Valve

The annular preventer will be pressure tested to 500 psi for a period of ten minutes or until provisions of the test are met, whichever is longer. At a minimum, the pressure test will be performed:

- 1) When the annular is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The annular preventer will be functionally operated once per week. All BOP drills will be recorded in the IADC driller's log.

Accumulator:

The accumulator will have sufficient capacity to open the hydraulically controlled gate valve (if so equipped), close the annular preventer, and retain a minimum of 200 psig above pre-charge on the closing manifold without the use of the closing unit pumps. The reservoir capacity will be double the accumulator capacity, and the fluid level will be maintained at the manufacturer's recommendations. The accumulator shall have two (2) independent power sources to close the preventers. Nitrogen bottles may be one of the independent power sources and, if so, shall maintain a charge equal to the manufacturer's specifications.

MUD PROGRAM FOR SURFACE HOLE (EXISTING)

DEPTH	MUD WEIGHT	TYPE	VISC	FLUID LOSS	
120 -2053'	9.6 - 10.2	Salt mud	40-55	N/C	
Note: Sweep	hole every 100 - 20	00 feet or as nee	eded for hole clear	ing. Maintain maximu	m
flowrates for	hole cleaning. Use	salt gel and Flo	owZan polymer to	maintain properties.	
	loss with Anco-Pha			• •	

CASING PROGRAM FOR SURFACE HOLE (EXISTING)

DEPTH SIZE	LENGTH	_WT	GRADE	THREAD	REMARKS
120 - 2053' 13-3/8"		68#	J-55	BT&C	

Casing Running Sequence:

guide shoe, 1 jt of 13-3/8" 61# J55 LT&C, Float collar, balance of 13-3/8" 61# J55 LT&C, centralizers as reqd. RU cement co., hold safety meeting, test lines, cement 13-3/8" casing per cement company recommendation and the cementing guide below. Displace with fresh water or mud.

CEMENTING PROGRAM FOR SURFACE HOLE (EXISTING)

Lead:

500 sx hi-fill

Mixed at:

11.0 ppg

Yield:

3.86 ft³/sx

Tail: 450 sx Premium G

Mixed at:

15.8 ppg

Yield:

 $1.18 \, \text{ft}^3/\text{sx}$

MUST CIRCULATE CEMENT TO SURFACE If the cement does not circulate to surface contact the BLM and UDOGM office for further instructions and remedial actions. Top out with premium cement regardless of circulation.

WOC A TOTAL OF 24 HOURS:

Wait 4 hours with the hydrostatic pressure of the displacement fluid in place, then cut off conductor and weld on a 13-5/8" 5M x 13-3/8" SOW casing head w/ MBS spool configured to hang both 9-5/8" and 7" csg strings without nippling down BOPE. NU a 13-5/8" 5M double ram BOP w/ 5M annular and 5M choke manifold rigged to mud/gas separator, mud tanks and flare pit.

PROTECTIVE CASING HOLE: 2053' to 5950'

Trip in the hole with a 12-1/4" bit, mud motor & MWD. Drill float, shoe and 20'of new hole. Perform a formation integrity test to 10.5 ppg mud weight equivalent. Directionally drill a 12-1/4" hole with a PDC and/or a TCI rock bit, mud motor & MWD equipment to approximately 5950' MD using same salt mud system as above. Loss circulation, moving salt, gypsum and anhydrite stringers may be a problem in this interval. Maintain hole angle and azimuth in keeping with the attached directional plan. Protective casing should be set into the top of the Twin Creek formation approximately 100-150'.

PRESSURE CONTROL AND SAFETY EQUIPMENT FOR PROTECTIVE CASING STRING

Bottom to Top (see attached 5M BOP diagram)

13-5/8" 5M x 13-3/8" SOW casing head w/(2) 2-1/16" SSO's (for 9-5/8")

13-5/8" 5M x 13-5/8" 5M multi-bowl casing spool (for 7")

13-5/8" 5M x 13-5/8" spacer spool

13-5/8" 5M x 13-5/8" 5M mud cross with (2) side outlets:

Kings Meadow Ranches 17-6 (WF 8-1) (A2c) (ver2 2005.05.25) Section 17 T23S-R1W Sevier Co.,UT one outlet 2-1/16" 5M kill line one outlet 3-1/16" 5M choke line

13-5/8" 5M double ram BOP w/ 5" pipe rams top & CSO rams btm

13-5/8" 5M Annular Preventer

13-5/8" 5M rotating head

Connect BOP to choke manifold with pressure guage Upper kelly cock valves with handles available Safety valves and subs to fit all drill string connections in use Inside BOP or float sub available

Testing Procedure:

Annular Preventer

The annular preventer will be pressure tested to 1500 psi for a period of ten minutes or until provisions of the test are met, whichever is longer. At a minimum, the pressure test will be performed:

- 1) When the annular is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The annular preventer will be functionally operated once per week.

Blowout Preventer

The BOP, choke manifold and related equipment will be pressure tested to 4500 psi, or 70% of the internal yield of the casing. Pressure will be maintained for a period of at least ten minutes or until the requirements of the test are met, whichever is longer. At a minimum the pressure test will be performed:

- 1) When the BOP is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills will be recorded in the IADC driller's log.

Accumulator:

The accumulator will have sufficient capacity to open the hydraulically controlled gate valve (if so equipped), close all rams plus the annular preventer, and retain a minimum of 200 psig above pre-charge on the closing manifold without the use of the closing unit pumps. The reservoir capacity will be double the accumulator capacity, and the fluid level will be maintained at the manufacturer's recommendations. The accumulator shall have two (2) independent power sources to close the preventers. Nitrogen bottles may be one of the independent power sources and, if so, shall maintain a charge equal to the manufacturer's specifications.

The accumulator pre-charge pressure test will be conducted prior to connecting the closing unit to the BOP stack and at least once every six months thereafter. The accumulator pressure will be corrected if the measured pre-charge pressure is found to be above or below the maximum or minimum limits specified in Onshore Oil & Gas Order Number 2 (only nitrogen gas may be used to pre-charge).

Choke Manifold Equipment, Valves and Remote Controls

All choke lines will be straight lines unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and vibration

A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will be maintained in the open position and will be closed only when the power source for the accumulator is inoperative.

Remote controls shall be readily accessible to the driller. Remote controls will be capable of both opening and closing all preventers. Master controls will be at the accumulator and will be capable of opening and closing all preventers and the choke line valve (if so equipped).

The choke manifold and BOP extension rods with hand wheels will be located outside the rig sub structure. The hydraulic BOP closing unit will be located at least twenty-five feet from the well head but readily accessible to the driller.

A flare line will be installed after the choke manifold, extending 100 feet from the center of the drill hole to a separate flare pit.

MUD PROGRAM FOR PROTECTIVE CASING HOLE

DEPTH	MUD WEIGHT	TYPE	VISC	FLUID LOSS
2053' - 5950'	9.8 - 10.2	Salt Mud	36 - 50	20-30cc or less

Maintain a salt mud system as salt and gypsum sections are drilled. If loss circulation becomes a problem use LCM sweeps to control seepage & clean hole.

CASING PROGRAM FOR PROTECTIVE CASING HOLE

DEPTH	SIZE	LENGTH	WT	GRADE	THREAD	REMARKS
		-				
0' - TD'	9-5/8"	5950'	* 47#	N-80	LT&C	

Rig up casing tools and run 9-5/8" protective casing as follows:

Float shoe, 2 joint of 9-5/8" * 47.0# N-80 LT&C casing, float collar, 6 centralizers, middle shoe joint and one every other joint for 12 jts, run balance of 9-5/8" 47# N-80 * due to availability 47# HCP-110 may be substituted

CEMENT PROGRAM FOR PROTECTIVE CASING

350 sx 50:50 POZ Weight: 13.0 ppg Yield: 1.71 ft³/sx

TOC at ~ 5000 '; Calculate cement volume based on gauge hole plus 30% excess. Displace with mud. Land 9-5/8" csg with casing mandrel. Lay down landing joint. Clean pits and prepare for next hole section.

PRODUCTION HOLE: 5,950 to 6840'

Trip in the hole with an 8-1/2" insert bit, mud motor & MWD. Drill float, shoe and 20'of new hole.

PRESSURE CONTROL AND SAFETY EQUIPMENT FOR PRODUCTION CASING STRING

Same as Protective String above due to utilization of Multi-Bowl Casing Head Assembly – Land 9-5/8" through BOPE with casing mandrel, release, test & proceed to drilling production hole section – Nipple down & nipple up NOT required – all BOPE remains intact – normal periodic pressure testing remains on schedule

MUD PROGRAM FOR PRODUCTION HOLE

DEPTH	MUD WEIGHT	TYPE	VISC	pH F	<u>LUID LOSS</u>
				-	
5950' - 6840'	8.3 - 9.0	LC Polymer	34-50	9.0-10.0	10cc or Less

EVALUATION PROGRAM FOR PRODUCTION HOLE

At TD, circulate and condition hole clean for logs. Short trip to the intermediate casing monitoring well closely. TOH for logs. Run Induction tool as run #1 to determine hole conditions for logging. Adjust tool configurations depending on hole condition.

Mudlogger: From 2000' to total depth.

Electric Logs:

Tool	PCP to TD
SDL/DSN/GR (DSN PCP to surface casing)	Yes
HRI/GR/SP (DLL/MSFL/SP/GR available if brine system)	Yes
EMI	Yes

DST: none planned Cores: none planned

NMR

Yes

CASING PROGRAM FOR PRODUCTION HOLE

DEPTH	SIZE	LENGTH	WT_	GRADE	THREAD	<u>REMARKS</u>
A1 (TY)	<i></i>	60403	* 0611	NI 00	T.T.O.C	
0' – TD'	7"	6840'	* 26#	N-80	LT&C	

^{*} due to availability 23# HCP-110 may be substituted for 26# N-80

Rig up casing tools and run 7" production casing as follows:

Float shoe, 1 joint of 7" 26# N-80 LT&C casing, Float collar, Run balance of 7" 26# N80.

CEMENT PROGRAM FOR PRODUCTION CASING

400 sx (50:50) POZ Premium 2 % Bentonite

Weight: Yield:

14.35 ppg 1.27 ft³/sx

Friction reducer, salt & flocele

TOC at +4200 ft in 9-5/8" csg

Calculate cement volume based on log caliper +/- 25%. Displace cement w/water. Hang 85-90% casing weight in slips, ND, cut off, install B-section and night cap. Clean pits and release rig.

SCHEDULE

Location preparation is presently scheduled to begin on or about EXISTING Drilling operations are anticipated to begin on or about May 15, 2005

end

WOLVERINE GAS & OIL CO. OF UTAH Kings Meadow Ranches 17-6 (WF 8-1) Sevier County, Utah



										• ,						DIRECTIONAL	, sentices
							SECTION DE	TAILS							SITI	EDETAILS	
		Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target		т	23S R01W	Pad A-2 Sevier County, U SE/4 Sec 17	Jtah
		1 2 3 4	2534.00 3635.22 6134.80 6844.21	28.00 7.71 7.71 7.71	41.60 322.39 322.39 322.39	2403.88 3456.00 5933.00 6636.00	511.63 768.39 1033.97 1109.35	496.92 625.97 421.40 363.34	0.00 2.50 0.00 0.00	0.00 -163.44 0.00 0.00	97.23 220.11 555.35 650.49	NVJ01]	Wa Positional U	ater Depth: 0.00 incertainty: 0.00 nvergence: -0.28	
						Name	-			+N/-S		L DETAILS		sting	Latitude	Longitude	e Slot
	-			8		Kings	Meadow Ranche	es 17-6 (WF 8-	1)	0.00	48.00	6733931.	77 151674	0.09 38°4	8'19.460N	111°56'02.273W	V N/A
	0			- 4	20"								TA	RGET DETA	ILS		
	1000—							Ť				Name Tie On NVJ01	2534.0 5933.0	0 51163	+E/-W 418.00		
 	-								1	Azimu Magne	ths to True No tic North: 12.5	55°			D DETAIL		
	2000				13 3/8"			\bigoplus	Total	D	Magnetic Figrength: 51942 ip Angle: 64.5 Date: 5/19/20 Model: igrf20	nT 52° 05	Magnetic M	stem: US Sta ssoid: GRS 19 Zone: Utah, C lodel: igrf200 atum: Mean S lorth: True N	Central Zone 5 Sea Level	ordinate System	1983
	-					. :		•					CA	SING DETAI	LS		
True Vertical Depth [1000ft/in]	3000											No. TVI 1 119. 2 1978 3 5750 4 6636	98 120.00 3.59 2053.0 3.00 5950.1	00 13 3/8" 13 9 5/8"		Size 20.000 13.375 9.625 7.000	
True Vertical D	4000											N 1 2 3	FORMA' 5602.00 5933.00 6336.00	6134.80			
	5000								2000								
						9 5/8"		+) [1000fvin] 	1000							NVJ01	
•	6000					NVJ01		South(-)/North(+) [1000fv/in]	500					\03	7	<u>K</u>	
;	7000-				2				-500								
	-ار 10-	000	++++	0	++++	1000	 	-1	-25	00 -2	000 -15	500 -1	000 -50	00 0	50	00 1000	1500

Created By: Scott Wallace 05/20/05

West(-)/East(+) [1000ft/in]

Vertical Section at 322.00° [1000ft/in]

Weatherford International

Planning Report

Wolverine Gas & Oil Co of Utah Company:

Field: Sevier County, Utah

Site: Pad A-2

Kings Meadow Ranches 17-6 (WF Well:

Wellpath:

Date: 5/20/2005 Time: 15:28:32 Page: 1 Co-ordinate(NE) Reference: Well: Kings Meadow Ranches 17-6 (WF 8-1)

Vertical (TVD) Reference: SITE 0.0

Section (VS) Reference:

Well (0.00N,0.00E,322.00Azi)

KMR 17-6

Field: Sevier County, Utah

Map System: US State Plane Coordinate System 1983

Geo Datum: GRS 1980 Sys Datum: Mean Sea Level Map Zone: Coordinate System: Geomagnetic Model:

Utah, Central Zone Well Centre

igrf2005

Site: Pad A-2

T23S R01W Sevier County, Utah

NW/4 SE/4 Sec 17

Site Position: From: Lease Line Position Uncertainty:

Northing: Easting: 0.00 ft

Latitude: Longitude: North Reference:

Slot Name:

Grid Convergence:

True -0.28 deg

Well: Kings Meadow Ranches 17-6 (WF

Well Position: +N/-S

+E/-W

0.00 ft Northing: 48.00 ft Easting:

0.00 ft

6733931.77 ft 1516740.09 ft Longitude: 38 48 19.460 N

Position Uncertainty:

0.00 ft

111 56 2.273 W

Surface

Wellpath: 1 **Current Datum:**

Magnetic Data:

Field Strength:

Vertical Section:

Ground Level:

51942 nT

Depth From (TVD)

ft

0.00

Height 5/19/2005

+N/-S

ft

0.00

0.00 ft

Drilled From: Tie-on Depth: Above System Datum: Declination: Mag Dip Angle:

0.00 ft Mean Sea Level 12.55 deg 64.52 deg Direction

+E/-W ft deg 0.00 322.00

Plan:

KMR 17-6

Date Composed: Version:

5/16/2005

Tied-to:

From: Definitive Path

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
2534.00 3635.22	28.00 7.71	41.60 322.39	2403.88 3456.00	511.63 768.39	496.92 625.97	0.00 2.50	0.00 -1.84	0.00 -7.19	0.00	
6134.80	7.71	322.39	5933.00	1033.97	421.40	0.00	0.00	0.00	-163.44 0.00	NVJ01
6844.21	7.71	322.39	6636.00	1109.35	363.34	0.00	0.00	0.00	0.00	

Section	1	:	Start	DLS	2.50	TFO	-163.44
---------	---	---	-------	-----	------	------------	---------

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	
120.00	1.87	322.50	119.98	1.56	-1.19	1.96	0.00	0.00	0.00	0.00	
2053.00	24.72	41.61	1978.59	348.88	342.64	63.97	1.26	1.18	4.09	83.16	
2534.00	28.00	41.60	2403.88	511.63	496.92	97.23	0.68	0.68	0.00	-0.10	
2600.00	26.42	40.54	2462.58	534.37	516.75	102.95	2.50	-2.39	-1.60	-163.44	
2679.12	24.54	39.11	2534.00	560.50	538.56	110.11	2.50	-2.38	-1.81	-162.50	
2700.00	24.05	38.70	2553.03	567.19	543.96	112.05	2.50	-2.36	-1.98	-161.21	
2800.00	21.70	36.48	2645.16	597.96	567.69	121.69	2.50	-2.35	-2.22	-160.83	
2900.00	19.39	33.75	2738.80	626.63	587.91	131.84	2.50	-2.31	-2.72	-158.79	
3000.00	17.13	30.33	2833.76	653.15	604.58	142.48	2.50	-2.26	-3.42	-156.23	
3100.00	14.95	25.93	2929.86	677.47	617.66	153.58	2.50	-2.19	-4.41	-152.98	
3200.00	12.87	20.10	3026.93	699.53	627.12	165.14	2.50	-2.07		-148.75	
3300.00	10.98	12.19	3124.77	719.30	632.96	177.13	2.50	-1.90	-7.91	-143.09	
3400.00	9.36	1.33	3223.21	736.74	635,16	189.51	2.50			-135.35	
3500.00	8.20	346.75	3322.04	751.82	633.71	202.28	2.50		-14.57	-124.65	
3600.00	7.70	328.97	3 4 21.10	764.50	628.63	215.41	2.50		-17.79	-110.25	
3635.22	7.71	322.39	3456.00	768.39	625.97	220.11	2.50		-18.66	-92.63	

Weatherford International

Planning Report

Company: Wolverine Gas & Oil Co of Utah

Sevier County, Utah Pad A-2 Field: Site:

Well: Kings Meadow Ranches 17-6 (WF

Wellpath: 1

Date: 5/20/2005 Time: 15:28:32 Page: 2
Co-ordinate(NE) Reference: Well: Kings Meadow Ranches 17-6 (WF 8-1)
Vertical (TVD) Reference: SITE 0.0
Well (0.00N,0.00E,322.00Azi)
KMR 17-6

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W	VS ft	DLS deg/100f	Build ft deg/100ft	Turn t deg/100ft	TFO deg	
3700.00	7.71	322.39	3520.20	775.27	620.67	228.800.	00	0.00	0.00	0.00	
3800.00	7.71	322.39	3619.29	785.90	612.48	242.21	0.00	0.00	0.00	0.00	
3900.00	7.71	322.39	3718.39	796.52	604.30	255.63	0.00	0.00	0.00	0.00	
4000.00	7.71	322.39	3817.49	807.15	596.12	269.04	0.00	0.00	0.00	0.00	
4100.00	7.71	322.39	3916.58	817.77	587.93	282.45	0.00	0.00	0.00	0.00	
4200.00	7.71	322.39	4015.68	828.40	579.75	295.86	0.00	0.00	0.00	0.00	
4300.00	7.71	322.39	4114.78	839.02	571.56	309.27	0.00	0.00	0.00	0.00	
4400.00	7.71	322.39	4213.87	849.65	563.38	322.68	0.00	0.00	0.00	0.00	
4500.00	7.71	322.39	4312.97	860.27	555.19	336.09	0.00	0.00	0.00	0.00	
4600.00	7.71	322.39	4412.07	870.90	547.01	349.51	0.00	0.00	0.00	0.00	
4700.00	7.71	322.39	4511.16	881.52	538.82	362.92	0.00	0.00	0.00	0.00	
4800.00	7.71	322.39	4610.26	892.15	530.64	376.33	0.00	0.00	0.00	0.00	
4900.00	7.71	322.39	4709.35	902.77	522.46	389.74	0.00	0.00	0.00	0.00	
5000.00	7.71	322.39	4808.45	913.40	514.27	403.15	0.00	0.00	0.00	0.00	
5100.00	7.71	322.39	4907.55	924.02	506.09	416.56	0.00	0.00	0.00	0.00	
5200.00	7.71	322.39	5006.64	934.65	497.90	429.97	0.00	0.00	0.00	0.00	
5300.00	7.71	322.39	5105.74	945.28	489.72	443.39	0.00	0.00	0.00	0.00	
5400.00	7.71	322.39	5204.84	955.90	481.53	456.80	0.00	0.00	0.00	0.00	
5500.00	7.71	322.39	5303.93	966.53	473.35	470.21	0.00	0.00	0.00	0.00	
5600.00	7.71	322.39	5403.03	977.15	465.17	483.62	0.00	0.00	0.00	0.00	
5700.00	7.71	322.39	5502.13	987.78	456.98	497.03	0.00	0.00	0.00	0.00	
5800.00	7.71	322.39	5601.22	998.40	448.80	510.44	0.00	0.00	0.00	0.00	
5800.78	7.71	322.39	5602.00	998.48	448.73	510.55	0.00	0.00	0.00	0.00	
5900.00	7.71	322.39	5700.32	1009.03	440.61	523.85	0.00	0.00	0.00	0.00	
5950.13	7.71	322.39	5750.00	1014.35	436.51	530.58	0.00	0.00	0.00	0.00	
6000.00	7.71	322.39	5799.42	1019.65	432.43	537.27	0.00	0.00	0.00	0.00	
6100.00	7.71	322.39	5898.51	1030.28	424.24	550.68	0.00	0.00	0.00	0.00	
6134.80	7.71	322.39	5933.00	1033.97	421.40	555.35	0.00	0.00	0.00	0.00	

Section	3:	Start	Hold
---------	----	-------	------

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
6200.00	7.71	322.39	5997.61	1040.90	416.06	564.090.	00	0.00	0.00	0.00
6300.00	7.71	322.39	6096.71	1051.53	407.88	577.50	0.00	0.00	0.00	0.00
6400.00	7.71	322.39	6195.80	1062.15	399.69	590.91	0.00	0.00	0.00	0.00
6500.00	7.71	322.39	6294.90	1072.78	391.51	604.32	0.00	0.00	0.00	0.00
6541.48	7.71	322.39	6336.00	1077.18	388.11	609.89	0.00	0.00	0.00	0.00
6600.00	7.71	322.39	6394.00	1083.40	383.32	617.74	0.00	0.00	0.00	0.00
6700.00	7.71	322.39	6493.09	1094.03	375.14	631.15	0.00	0.00	0.00	0.00
6800.00	7.71	322.39	6592.19	1104.65	366.95	644.56	0.00	0.00	0.00	0.00
6844.21	7.71	322.39	6636.00	1109.35	363.34	650.49	0.00	0.00	0.00	0.00

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100f	Build ft deg/100f	Turn ft deg/100ft	Tool/Comment	
120.00	1.87	322.50	119.98	1.56	-1.19	1.96	0.00	0.00	0.00	20"	
2053.00	24.72	41.61	1978.59	348.88	342.64	63.97	1.26	1.18	4.09	13 3/8"	
2534.00	28.00	41.60	2403.88	511.63	496.92	97.23	0.68	0.68	0.00	MWD	
2600.00	26.42	40.54	2462.58	534.37	516.75	102.95	2.50	-2.39	-1.60	MWD	
2679.12	24.54	39.11	2534.00	560.50	538.56	110.11	2.50	-2.38	-1.81	Tie On	
2700.00	24.05	38.70	2553.03	567.19	543.96	112.05	2.50	-2.36	-1.98	MWD	
2800.00	21.70	36.48	2645.16	597.96	567.69	121.69	2.50	-2.35	-2.22	MWD	
2900.00	19.39	33.75	2738.80	626.63	587.91	131.84	2.50	-2.31	-2.72	MWD	
3000.00	17.13	30.33	2833.76	653.15	604.58	142.48	2.50	-2.26	-3.42	MWD	
3100.00	14.95	25.93	2929.86	677.47	617.66	153.58	2.50	-2.19	-4.41	MWD	ı
3200.00	12.87	20.10	3026.93	699.53	627.12	165.14	2.50	-2.07	-5.83	MWD	!
3300.00	10.98	12.19	3124.77	719.30	632.96	177.13	2.50	-1.90	-7.91	MWD	
3400.00	9.36	1.33	3223.21	736.74	635.16	189.51	2.50	-1.61	-10.86	MWD	
3500.00	8.20	346.75	3322.04	751.82	633.71	202.28	2.50	-1.16	-14.57	MWD	,
3600.00	7.70	328.97	3421.10	764.50	628.63	215.41	2.50	-0.50	-17.79	MWD	1

Weatherford International

Planning Report

Company: Wolverine Gas & Oil Co of Utah Field:

Sevier County, Utah Pad A-2

Kings Meadow Ranches 17-6 (WF

Site: Well: Wellpath: 1

Date: 5/2U/2005 Time: 15:28:32 Page: 3
Co-ordinate(NE) Reference: Well: Kings Meadow Ranches 17-6 (WF 8-1)
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,322.00Azi)
Plan: KMR 17-6

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100	Build it deg/100	Turn ft deg/100ft	Tool/Comment
3635.22	7.71	322.39	3456.00	768.39	625.97	220.11	2.50	0.03	-18.66	MWD
3700.00	7.71	322.39	3520.20	775.27	620.67	228.80	0.00	0.00	0.00	MWD
3800.00	7.71	322.39	3619.29	785.90	612.48	242.21	0.00	0.00	0.00	MWD
3900.00	7.71	322.39	3718.39	796.52	604.30	255.63	0.00	0.00	0.00	MWD
4000.00	7.71	322.39	3817.49	807.15	596.12	269.04	0.00	0.00	0.00	MWD
4000.00	7.71	322.39	3017.49	607.15	390.12	209.04	0.00	0.00	0.00	MIVVD
4100.00	7.71	322.39	3916.58	817.77	587.93	282.45	0.00	0.00	0.00	MWD
4200.00	7.71	322.39	4015.68	828.40	579.75	295.86	0.00	0.00	0.00	MWD
4300.00	7.71	322.39	4114.78	839.02	571.56	309.27	0.00	0.00	0.00	MWD
4400.00	7.71	322.39	4213.87	849.65	563.38	322.68	0.00	0.00	0.00	MWD
4500.00	7.71	322.39	4312.97	860.27	555.19	336.09	0.00	0.00	0.00	MWD
4600.00	7.71	322.39	4412.07	870.90	547.01	349.51	0.00	0.00	0.00	MWD
1700.00	7.71	322.39	4511.16	881.52	538.82	362.92	0.00	0.00	0.00	MWD
1800.00	7.71	322.39	4610.26	892.15	530.64	376.33	0.00	0.00	0.00	MWD
1900.00	7.71	322.39	4709.35	902.77	522.46	389.74	0.00	0.00	0.00	MWD
5000.00	7.71	322.39	4808.45	913.40	514.27	403.15	0.00	0.00	0.00	MWD
5100.00	7.71	322.39	4907.55	924.02	506.09	416.56	0.00	0.00	0.00	MWD
5200.00	7.71	322.39	5006.64	934.65	497.90	429.97	0.00		0.00	
300.00	7.71	322.39	5105.74	945.28	489.72	429.97 443.39	0.00	0.00		MWD
300.00 3400.00								0.00	0.00	MWD
	7.71	322.39	5204.84	955.90	481.53	456.80	0.00	0.00	0.00	MWD
500.00	7.71	322.39	5303.93	966.53	473.35	470.21	0.00	0.00	0.00	MWD
600.00	7.71	322.39	5403.03	977.15	465.17	483.62	0.00	0.00	0.00	MWD
700.00	7.71	322.39	5502.13	987.78	456.98	497.03	0.00	0.00	0.00	MWD
800.00	7.71	322.39	5601.22	998.40	448.80	510.44	0.00	0.00	0.00	MWD
800.78	7.71	322.39	5602.00	998.48	448.73	510.55	0.00	0.00	0.00	Twin Creek
900.00	7.71	322.39	5700.32	1009.03	440.61	523.85	0.00	0.00	0.00	MWD
950.13	7.71	322.39	5750.00	1014.35	436.51	530.58	0.00	0.00	0.00	9 5/8"
00.00	7.71	322.39	5799.42	1019.65	432.43	537.27	0.00	0.00	0.00	MWD
100.00	7.71	322.39	5898.51	1030.28	424.24	550.68	0.00	0.00	0.00	MWD
134.80	7.71	322.39	5933.00	1033.97	421.40	555.35	0.00	0.00	0.00	NVJ01
200.00	7.71	322.39	5997.61	1040.90	416.06	564.09	0.00	0.00	0.00	MWD
300.00	7.71	322.39	6096.71	1051.53	407.88	E77 E0	0.00	0.00	0.00	A 41 A 470
400.00	7.71 7.71	322.39				577.50	0.00	0.00	0.00	MWD
			6195.80	1062.15	399.69	590.91	0.00	0.00	0.00	MWD
500.00	7.71	322.39	6294.90	1072.78	391.51	604.32	0.00	0.00	0.00	MWD
541.48	7.71	322.39	6336.00	1077.18	388.11	609.89	0.00	0.00	0.00	OWC
600.00	7.71	322.39	6394.00	1083.40	383.32	617.74	0.00	0.00	0.00	MWD
700.00	7.71	322.39	6493.09	1094.03	375.14	631.15	0.00	0.00	0.00	MWD
800.00	7.71	322.39	6592.19	1104.65	366.95	644.56	0.00	0.00	0.00	MWD
844.21	7.71	322.39	6636.00	1109.35	363.34	650.49	0.00	0.00	0.00	7"

Targets

Name	Description Dip.	ı Dir.	TVD ft	+N/-S ft	+E/-W	Map Northing ft	Map Easting ft	< Latitude> Deg Min Sec	< Longitude> Deg Min Sec
Tie On			2534.00	511.63	496.92	6734440.981	517239.49	38 48 24.517 N	111 55 55.996 W
-Plan out b	y 64.21 at		2534.00	560.50	538.56	6734489.651		38 48 25.000 N	111 55 55.470 W
NVJ01			5933.00	1038.00	418.00	6734967.731		38 48 29.719 N	111 55 56.993 W
-Plan out b	y 5.27 at		5933.00	1033.97	421.40	6734963.691		38 48 29.679 N	111 55 56.950 W

Casing Points

MD	TVD	Diameter	Hole Size	Name
ft	ft	in	in	
120.00	119.98	20.000	26.000	20"
2053.00	1978.59	13.375	17.500	13 3/8"
5950.13	5750.00	9.625	12.250	9 5/8"

Weatherford International **Planning Report**

Company: Wolverine Gas & Oil Co of Utah

Sevier County, Utah

Site: Pad A-2

Well: Kings Meadow Ranches 17-6 (WF

Wellpath:

Field:

Date: 5/20/2005 Time: 15:28:32 Page: 4
Co-ordinate(NE) Reference: Well: Kings Meadow Ranches 17-6 (WF 8-1) SITE 0.0 Well (0.00N,0.00E,322.00Azi) KMR 17-6

Vertical (TVD) Reference:

Section (VS) Reference:

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in		Name			
6844.21	6636.00	7.000	8.500	7"				

Plan:

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
5800.78	5602.00	Twin Creek		0.00	0.00
6134.80	5933.00	NVJ01		0.00	0.00
6541.48	6336.00	owc		0.00	0.00

PRESSURE CONTROL SYSTEM SCHEMATIC

Prepared by: EXACT Engineering, Inc Tulsa, OK (918) 599-9400

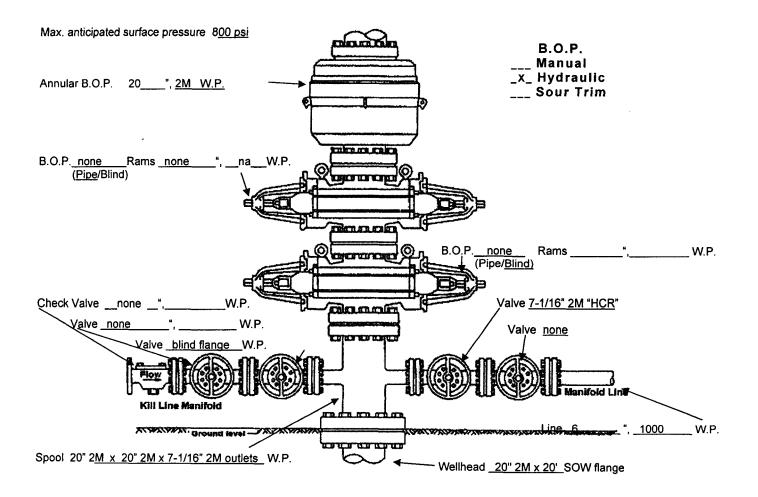
2M Diverter Stack --- to be utilized while drilling holes for surface casing thru upper Arapien formation section

Operator:

Wolverine Gas & Oil Co. of Utah, LLC

Well name and number

Kings Meadow Ranches # 17-6 (WF 8-1)



PRESSURE CONTROL SYSTEM SCHEMATIC

Prepared by: EXACT Engineering, Inc Tulsa, OK (918) 599-9400

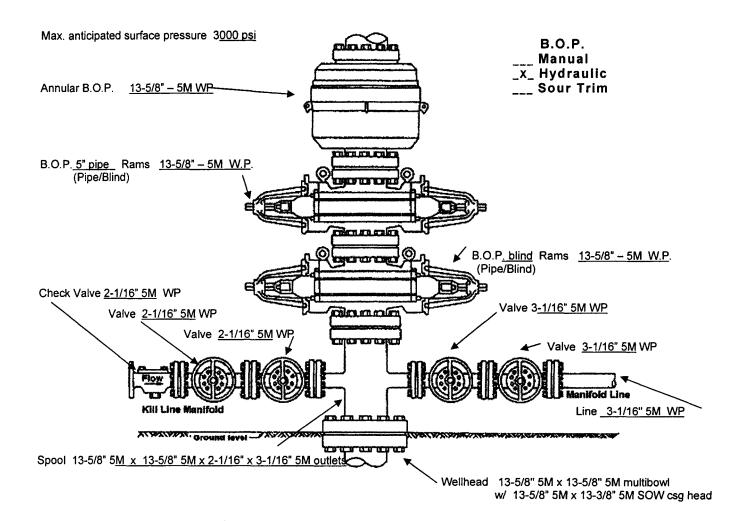
5M BOP Stack --- to be utilized while drilling holes for protective and production casings thru lower Arapien, Twin Creek & Navajo intervals

Operator:

Wolverine Gas & Oil Co. of Utah, LLC

Well name and number

Kings Meadow Ranches # 17-6 (WF 8-1)



From:

"Helene Bardolph" <HBardolph@wolvgas.com>
"Diana Whitney" <dianawhitney@utah.gov>

To: Date:

7/8/2005 6:13:48 AM

Subject:

Missing attachment form previous communication (6-29-05)

Diane:

RE: Wolverine Federal 17-6 (Wolverine Federal 8-1, Section 17, R23S, R01W

I am sorry that I neglected to attach the necessary document to the letters John Vrona sent to you last week. I have now attached a copy of that document to this e mail (it is the same document for both letters). I will also send you two copies of this document by mail.

I'm sorry for any confusion ordelay this may have caused.

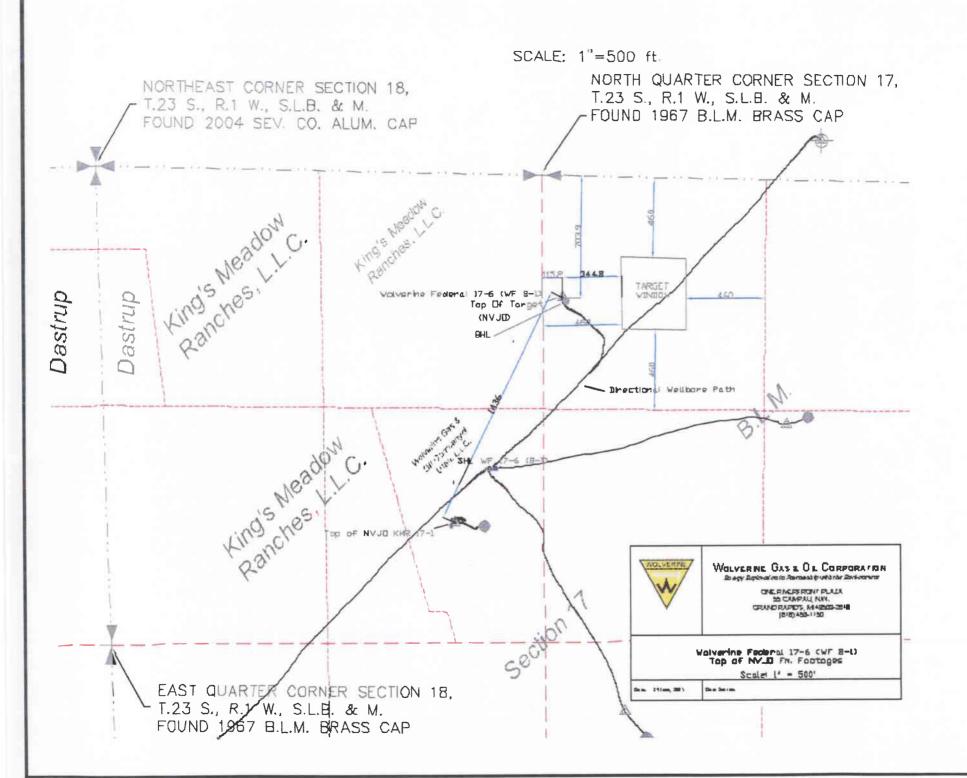
Helene Bardolph

Wolverine Gas and Oil Corp.

616-458-1150

CC:

"John Vrona" <jvrona@wolvgas.com>





WOLVERINE GAS AND OIL COMPANY

of Utah, LLC

Energy Exploration in Partnership with the Environment

July 13, 2005

Ms. Diana Whitney Utah Division of Oil, Gas & Mining 1594 W. N. Temple, Suite 1210 Salt Lake City, UT 84114-5801

Re:

Wolverine Federal 8-1 Well

Completion Report

Dear Diana:

Enclosed please find the Completion Report (form #8 – abandoned well) for the captioned well. Attached to the report are the following documents:

- Electric & Mechanical Log List
- Geologic Report
- Directional Survey
- Logs

Please keep this report and all attachments confidential. If you have any questions or concerns, please feel free to contact me.

Sincerely,

Helene Bardolph for John Vrona

RECEIVED

JUL 1 9 2005

JV/hb

DIV. OF OIL, GAS & MINING

enclosures

				RTMEN.	TOF NA	TURA	L RESC					_	(highligl	nt char		FORM 8
			DIVISI	ON O	FOIL,	GAS	AND I	MININ	G			5		-7352		ERIAL NUMBER:
WELL	CON	API E	TION	OR F	RECO	MPI	FTIC	N RI		ΓΔΝΙ	D LOG	6	. IF INDIA	N, ALLO	OTTEE OR TR	IBE NAME
1a. TYPE OF WELL:			OIL C		GAS C	7		\overline{Z}	OTHER			7	. UNIT or	CA AGF	REEMENT NA	 ME
- TV05 05 W00			WELL L	۱ ل	WELL 1	_	5 (()	V			- 14 F 1 # 1					ploration Unit
b. TYPE OF WORK NEW WELL 2. NAME OF OPERA	HORIZ. [DEEP-]	RE- ENTRY		DIFF. RESVR.		OTHER		LIN CHIL		Wol	verine	d NUMBER: e Federa	l #8-1
Wolverine		nd Oil (Compa	ny of l	Jtah, L	LC						8	9. API NUMBER: 4304130037			
3. ADDRESS OF OP 55 Campau			CITY Gr	and Ra	apids	STATE	MI	ZIP 498	503		NUMBER: 6) 458-115		10 FIELD AND POOL, OR WILDCAT Exploratory Area			
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 1680' FNL & 2265' FWL, Sec 17,T23S,R01W										CTION, TOWN	SHIP, RANGE,					
AT TOP PRODUC	CING INTER	RVAL REP	ORTED BE	LOW: N	lone								INVVIAV	W 10	233	100
AT TOTAL DEPT	H: 232'	FSL 8	991' F	FEL, S	ec 8, T	238,	R01W	1				1	2. COUN			13. STATE UTAH
14. DATE SPUDDED 4/16/2005):		T.D. REAC 2005	HED:	16. DATE 5/13	3/2005		A	BANDONE	· 🗸	READY TO PROD	DUCE _			ONS (DF, RKE /5753/57	3, RT, GL): '53/5736
18. TOTAL DEPTH:	MD 7,	,824 ,227		19. PLUG	BACK T.D		2,500 2,374		20. IF ML	ILTIPLE CO	OMPLETIONS, HO	W MANY	21. 🛭	EPTH B PLUG S		
22. TYPE ELECTRIC	AND OTH	ER MECH	NICAL LO	GS RUN (Submit cop				1	23.						
See attache	d list									WAS DST	L CORED? RUN? NAL SURVEY?	1	0 € 	YES YES	(Sub	mit analysis) mit report) mit copy)
24. CASING AND LI	NER RECO	RD (Repo	t all string	s set in w	ell)											
HOLE SIZE	SIZE/GI	RADE	WEIGHT	(#/ft.)	TOP (MD)	вотто	M (MD)	STAGE CE DEP		CEMENT TYPE NO. OF SACKS		LURRY UME (BBL	.) CE	MENT TOP *	AMOUNT PULLED
20"	condi				0		12	21								
17.5	13 3#	J55	61	#	0		2,0	057	2,0	80	Prem 🚡 1,05	50	518	+	surface	_
												+		+		
												-				
25. TUBING RECOR	D										<u> </u>	<u> </u>		L		
SIZE	DEPTH	SET (MD	PACK	ER SET (I	MD)	SIZE		DEPTH	SET (MD)	PACKE	R SET (MD)	SIZE		DEPT	H SET (MD)	PACKER SET (MD)
26. PRODUCING IN	TERVALS		<u> </u>						2	, PEREO	RATION RECORD					
FORMATION		то	P (MD)	Твотто	OM (MD)	TOP	(TVD)	вотто			L (Top/Bot - MD)	SIZE	NO. H	OLES	PERFO	RATION STATUS
(A) None															Open	Squeezed
(B)							DE		1 /2						Open	Squeezed
(C)							1 1 1	₩	VED						Open	Squeezed
(D)							JUI	19	2005						Open	Squeezed
28. ACID, FRACTUR	RE, TREATI	MENT, CE	MENT SQU	EEZE, ET	С.				-2000							
DEPTH I	NTERVAL					DIV	. OF 0	IL, GAS	RPMM & S	NEAND T	YPE OF MATERIA	L				
None																
···																
29. ENCLOSED ATT	ACHMENT	'S:				····-									30. WE	LL STATUS:
=	RICAL/MEC			CEMENT	VERIFICA	ATION	=	GEOLOGI CORE AN	C REPORT	=	DST REPORT	✓ DIF	RECTIONA	L SURV	EY	P & A

DATE FIRST PR				INI	EKANT V (V2 2110	wn in item #26)				e dia 9 -
	ODUCED:	TEST DATE:		HOURS TESTER	D:	TEST PRODUCTION RATES: →	OIL ~ BBL:	GAS - MCF:	WATER -	BBL: PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS	. API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL ~ BBL:	GAS - MCF:	WATER -	BBL: INTERVAL STATU
······································	·	<u> </u>	-	INT	ERVAL B (As sho	wn in item #26)				
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTED	HOURS TESTED:		OIL ~ BBL:	GAS - MCF:	WATER -	BBL: PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS	. API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL ~ BBL:	GAS MCF:	WATER -	BBL: INTERVAL STATU
				INT	ERVAL C (As sho	wn in item #26)				
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTED):	TEST PRODUCTION RATES: →	OIL ~ BBL:	GAS - MCF:	WATER -	BBL: PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL ~ BBL:	GAS - MCF:	WATER -	BBL: INTERVAL STATU
	<u> </u>			INT	ERVAL D (As sho	wn in item #26)				
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTED):	TEST PRODUCTION RATES: →	OIL ~ BBL:	GAS MCF:	WATER -	BBL: PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL ~ BBL:	GAS - MCF:	WATER -	BBL: INTERVAL STATU
Show all importar		y and contents	ulfers): thereof: Cored interv nut-in pressures and		ı tests, including de		4. FORMATION	(Log) MARKERS:		
	_ [Тор	Bottom	D				N	··-	Тар
Tomato	n	Top (MD)	Bottom (MD)	Descrip	tions, Contents, etc	:.		Name		Top (Measured Depth)
None	n			Descrip	tions, Contents, etc		Arapien Twin Creek			Top (Measured Depth) 0 6.984

NAME (PLEASE PRINT) P. Vrona

This report must be submitted within 30 days of

- completing or plugging a new well
 drilling horizontal laterals from an existing well bore
- · recompleting to a different producing formation

DATE

reentering a previously plugged and abandoned well
 significantly deepening an existing well bore below the previous bottom-hole depth

Manager of Geology

7/8/2005

- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests
- * ITEM 20: Show the number of completions if production is measured separately from two or more formations.
- ** ITEM 24: Cement Top Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Utah Division of Oil, Gas and Mining Send to:

1594 West North Temple, Suite 1210

Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

SIGNATURE

Electric & Mechanical Log List

Wolverine Federal 8-1 1680' FNL & 2265' FWL, Sec 17, T23S, R1W Sevier County, Utah API# 43-041-30037

- Mudlog
 Directional Plot
- Dual Spaced Neutron Spectral Density
- Dual Spaced Neutron Spectral Density TVD

 Dual Laterolog MSFL

 Dual Laterolog TVD

Wolverine Federal 8-1 Sevier County, Utah Sec 16 T23S R01W



MD	INCL	AZM	N-S	E-W	TVD	vs	DLS
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
173.00	2.70	322.50	3.23	-2.48	172.94	0.57	1.56
203.00	3.60	323.50	4.55	-3.47	202.89	0.82	3.01
233.00	4.50	321.10	6.22	-4.77	232.82	1.10	3.05
266.00	5.40	345.00	8.73	-5.99	265.70	2.05	6.75
296.00	5.40	355.50	11.50	-6.46	295.56	3.69	3.29
326.00	5.00	4.10	14.21	-6.48	325.44	5.61	2.92
357.00	4.70	29.30	16.67	-5.76	356.33	7.87	6.88
388.00	5.50	38.20	18.94	-4.22	387.21	10.57	3.62
419.00	6.80	39.30	21.53	-2.14	418.03	13.88	4.21
448.00	8.30	43.80	24.37	0.40	446.78	17.68	5.56
478.00	9.80	49.30	27.60	3.83	476.40	22.39	5.77
509.00	11.10	48.80	31.29	8.08	506.89	28.00	4.20
539.00	12.30	47.90	35.33	12.62	536.27	34.07	4.05
569.00	13.10	47.40	39.77	17.49	565.53	40.65	2.69
600.00	13.80	45.80	44.73	22.73	595.68	47.85	2.56
630.00	14.70	42.60	50.03	27.87	624.76	55.24	3.99
689.00	16.00	41.20	61.66	38.30	681.65	70.84	2.29
750.00	17.00	43.80	74.42	50.01	740.14	88.15	2.04
811.00	16.70	46.30	86.91	62.52	798.52	105.83	1.29
874.00	16.70	46.10	99.44	75.58	858.87	123.92	0.09
964.00	16.70	47.00	117.22	94.36	945.07	149.76	0.29
1056.00	16.90	51.10	134.64	114.43	1033.15	176.25	1.31
1150.00	16.80	51.20	151.73	135.65	1123.11	203.31	0.11
1245.00	17.10	53.50	168.64	157.58	1213.98	230.74	0.77
1339.00	16.80	50.00	185.59	179.10	1303.90	257.91	1.13
1434.00	16.10	46.30	203.52	199.14	1395.02	284.74	1.33
1528.00	16.70	43.50	222.32	217.86	1485.19	311.27	1.06
1622.00	17.30	43.70	242.22	236.81	1575.09	338.75	0.64
1717.00	17.50	46.30	262.30	256.90	1665.74	367.15	0.85
1812.00	19.50	46.50	283.09	278.73	1755.83	397.27	2.11
1906.00	22.10	45.10	306.37	302.64	1843.69	430.64	2.82
2063.00	24.90	41.40	352.02	345.42	1987.66	493.19	2.02
2125.00	25.90	43.30	371.67	363.34	2043.67	519.77	2.08
2189.00	26.30	43.70	392.09	382.72	2101.15	547.92	0.68
2252.00	27.80	45.10	412.56	402.77	2157.25	576.57	2.59
2346.00	29.10	44.90	444.22	434.44	2239.90	621.34	1.39
2440.00	30.00	42.40	477.77	466.42	2321.67	667.69	1.62
2534.00	28.00	41.60	511.63	496.92	2403.88	713.22	2.17
2629.00	27.50	43.50	544.21	526.82	2487.96	757.42	1.07
2724.00	27.80	42.80	576.38	556.97	2572.11	801.50	0.47
2818.00	28.30	43.80	608.54	587.29	2655.07	845.69	0.73
2913.00	29.60	41.70	642.32	618.49	2738.20	891.64	1.74



MD	INCL	AZM	N-S	E-W	TVD	vs	DLS
3007.00	31.50	40.90	678.21	650.01	2819.15	939.35	2.07
3102.00	32.10	38.90	716.62	682.11	2899.89	989.25	1.28
3196.00	32.40	40.90	755.09	714.29	2979.39	1039.24	1.18
3291.00	33.00	47.50	791.82	750.04	3059.36	1090.50	3.80
3385.00	33.30	48.20	826.31	788.15	3138.06	1141.81	0.52
3480.00	32.80	48.40	860.78	826.83	3217.69	1193.50	0.54
3574.00	32.50	49.50	894.08	865.07	3296.83	1244.05	0.71
3669.00	31.70	50.00	926.70	903.60	3377.31	1294.32	0.89
3764.00	31.20	50.20	958.50	941.62	3458.35	1343.64	0.54
3858.00	30.50	51.90	988.80	979.10	3539.06	1391.52	1.19
3952.00	29.70	50.70	1018.27	1015.90	3620.38	1438.32	1.06
4046.00	28.00	46.80	1048.13	1050.01	3702.72	1483.52	2.70
4141.00	28.00	41.60	1080.08	1081.07	3786.61	1528.08	2.57
4235.00	28.00	38.00	1113.97	1109.31	3869.61	1572.05	1.80
4330.00	28.10	39.10	1148.90	1137.15	3953.46	1616.48	0.55
4424.00	28.80	41.90	1182.94	1166.23	4036.11	1661.15	1.60
4520.00	28.50	40.90	1217.46	1196.67	4120.35	1707.11	0.59
4614.00	26.90	43.80	1249.76	1226.08	4203.58	1750.76	2.23
4708.00	26.00	45.10	1279.66	1255.39	4287.74	1792.63	1.14
4802.00	25.10	46.00	1308.05	1284.33	4372.55	1833.16	1.04
4899.00	25.70	44.70	1337.29	1313.92	4460.17	1874.76	0.84
4993.00	26.90	44.90	1366.84	1343.27	4544.44	1916.41	1.28
5087.00	27.40	45.30	1397.12	1373.65	4628.08	1959.30	0.57
5182.00	27.90	45.10	1428.19	1404.93	4712.23	2003.38	0.54
5276.00	28.40	44.40	1459.68	1436.15	4795.11	2047.73	0.64
5371.00	28.80	43.20	1492.50	1467.63	4878.52	2093.20	0.74
5465.00	29.30	41.90	1526.13	1498.49	4960.70	2138.82	0.86
5560.00	28.00	38.90	1560.79	1528.02	5044.07	2184.24	2.04
5654.00	26.90	37.70	1594.79	1554.88	5127.49	2227.32	1.31
5748.00	25.10	36.60	1627.62	1579.77	5211.97	2268.19	1.98
5843.00	23.40	41.40	1657.95	1604.26	5298.59	2307.00	2.74
5937.00	21.10	42.80	1684.37	1628.11	5385.59	2342.56	2.51
6032.00	20.80	42.60	1709.34	1651.14	5474.31	2376.51	0.32
6127.00	20.20	41.00	1734.13	1673.32	5563.29	2409.74	0.86
6221.00	20.00	39.60	1758.77	1694.22	5651.57	2441.96	0.55
6315.00	17.10	39.30	1781.85	1713.22	5740.67	2471.75	3.09
6410.00	14.90	41.60	1801.80	1730.18	5831.99	2497.86	2.41
6504.00	12.60	44.20	1818.19	1745.35	5923.29	2520.19	2.53
6599.00	12.00	40.50	1833.12	1758.99	6016.11	2540.40	1.04
6693.00	11.90	39.60	1848.02	1771.51	6108.07	2559.81	0.22
6807.00	11.30	38.80	1865.78	1786.00	6219.75	2582.64	0.54
6901.00	11.00	39.30	1879.90	1797.45	6311.97	2600.73	0.34
7006.00	10.30	41.70	1894.66	1810.04	6415.16	2620.09	0.79
7100.00	9.20	47.00	1906.06	1821.13	6507.80	2635.99	1.51
7195.00	8.60	57.40	1915.07	1832.67	6601.67	2650.50	1.80
7290.00	7.40	70.90	1920.90	1844.44	6695.75	2662.90	2.34



MD	INCL	AZM	N-S	E-W	TVD	VS	DLS		
7384.00	6.40	98.30	1922.12	1855.34	6789.09	2671.41	3.62		
7478.00	5.20	117.50	1919.40	1864.31	6882.62	2675.74	2.41		
7574.00	5.10	116.30	1915.50	1871.99	6978.23	2678.33	0.15		
7669.00	4.80	121.20	1911.57	1879.18	7072.88	2680.56	0.55		
7764.00	4.90	127.00	1907.07	1885.82	7167.54	2681.99	0.53		
PROJECTIO	PROJECTION TO BIT AT TD-TOH TO SIDETRACK								
7824.00	4.96	130.66	1903.84	1889.83	7227.31	2682.49	0.53		

WOLVERINE GAS & OIL COPORATION

WOLVERINE FEDERAL #8-1 SE/SE SEC.8.T235, R1W SEVIER CO., UT

GEOLOGIC REPORT

ON

WOLVERINE FEDERAL #8-1 SE/SE SEC.8.T235, R1W SEVIER CO., UT

FOR

WOLVERINE GAS & OIL CORPORATION ONE RIVER FRONT PLAZA 55 CAMPAU NW GRAND RAPIDS, MI 49503-2616

TABLE OF CONTENTS

Well Data Summary	1
Formation Tops	2
Formation Evaluation	3
Bit Record	4
Daily Drilling Summary	6
Deviation Surveys	7
Sample Descriptions	10

WELL DATA SUMMARY

WELL NAME WOLVERINE FEDERAL #8-1

OPERATOR WOLVERINE GAS & OIL CORP

SURFACE LOCATION SE/SE SEC.8.T23S,R1W

SEVIER COUNTY, UT

API # 043 - 041 - 30037

WELL CLASSIFICATION DEVELOPMENT COVENANT

FIELD

DRILLING CONTRACTOR UNIT #111

WELL LICENSE # 043 - 041 - 30037

ELEVATION - GROUND LEVEL 5736'

KELLY BUSHING 5753'

SPUD DATE 4-16-05

SURFACE CASING 2053' OF 13 3/8

INTERMEDIATE CASING NIL

PRODUCTION CASING NIL

HOLE SIZE 17 ½ ", 12 ¼"

SAMPLE INTERVAL 2054 - 7820

GAS DETECTION 2054 - 7820

OPEN HOLE LOGS GR, CAL, SP, DLL, CNL-FDC, DIP METER

MUD TYPE SATURATED SALT MUD, FLOZAN

WELL STATUS DRY HOLE - PLUGGED AND ABANDONED

FORMATION TOPS

Kelly Bushing

5753'

Formation Prog.(tvd) Spl. Top (md) Spl. Top(tvd) Log Top(md) Log Top(tvd) Sub Sea

Arapien

Surface

Twin Creek

5872

6986

5477

6986

6477 -624

WOLVERINE GAS & OIL CORPORATION WOLVERINE FEDERAL #8-1 SE/SE SEC.8,T235, R1W SEVIER COUNTY, UT

The Wolverine Federal #8-1 was the sixth well drilled in the Covenant Field. Decollement Consulting began sample coverage at 2054' under 2053' of 13 3/8" surface casing. Gas detection was rigged up on Unit Rig #111 on 4-23-05. Crews caught 30' lagged samples to total depth(7820'). Intermediate hole was drilled to 7820 and casing not set. E-logs were run at 7557' to determine that the pay zone would come in below the oil/water contact. After logging the well was drilled deeper until the rig reached it's over pull coming off bottom to make connections.

CONCLUSION: Dry Hole-Plugged and abandon.

4

BIT RECORD

KINGS MEADOW RANCHES #8-1

LOCATION

SE/SE SEC. 8, T235, R1W

SURFACE CASING

20531' OF 13 3/8

SPUD DATE

4-16-05

TD DATE

3-16-05

BIT	1	2	3	4	5	6
SIZE	17 1/2	12 1/4	12 1/4	12 1/4	12 1/4	12 1/4
MAKE	STC	RTC	SEC	REED	REED	SEC
TYPE	X74	HP34AKPR	EBXS165	HP53AIKPR	HP53A	EB55X205
SERIAL#	G02085	B73515	10627405	PB4765	8876L	10683245
JETS	3X28	3X22	3X24	3X24	3X24	3X24
OUT @	2054	3911	4850	6264	7050	7557
FOOTAGE	1934	1857	939	1414	706	507
HOURS	112	75 ½	56 ½	108 1/2	34 1/2	43
ACC HRS	112	187 1/2	244	352 1/2	387	430 1/2
WT	40	35	25	48	30	50
RPM	30	30	0/30	0/30	0/50	0/30
PP	1100	1870	1950	2010	2000	1910
MUD WT	10.0	12.0	10.4	10.4	10.4	10.2
VIS	36	32	33	32	31	31

5

BIT 7
SIZE 12 ¼
MAKE STC
TYPE CK15BUCP

MR4626 SERIAL# **JETS** 3X24 OUT @ 7824 **FOOTAGE** 267 **HOURS** 31 1/2 ACC. HRS 31 1/2 WT **50 RPM** 0/30 PP 2020 **MUD WT** 12.4 **VIS** 33

6

DAILY DRILLING SUMMARY

DATE	DEPTH	PROG.	HRS	MUD	VIS	\mathbf{WL}	PH	ACTIVITY
4-16-05	210	190	$6\frac{1}{2}$	WATE	CR			SPUD, DRILL
4-17-05	626	416	23 ½	9.1	31			DRILL
4-18-05	934	308	$16\frac{1}{2}$	9.2	31			DRILL, TRIP MWD

4-19-05	1346	412	23 1/2	9.2	31	DRILL
4-20-05	1675	329	23	9.5	30	DRILL
4-21-05	1960	285	21	9.7	32	DRILL, Pump repair
4-22-05	2054	94	9 1/2	10.0	36	Wiper trip, Drill, POOH
4-23-05	2054	NIL	NIL	10.0	36	Run & cement 13 3/8 "
4-24-05	2280	226	$6\frac{1}{2}$	9.5	32	Press,test,pickup tools,Drill
4-25-05	3020	740	23 1/2	9.7	32	DRILL
4-26-05	3338	3/8	$15\frac{1}{2}$	9.8	32	DRILL, TRIP MWD
4-27-05	3835	497	23 1/2	10.0	32	DRILL
4-28-05	4031	196	15	10.1	32	TRIP MWD, DRILL
4-29-05	4465	343	23 ½	10.1	32	DRILL
4-30-05	4839	374	23	10.3	32	DRILL
5-01-05	4965	126	10 1/2	10.4	33	DRILL, TRIP BIT
5-02-05	5345	380	23 ½	10.6	32	DRILL
5-03-05	5665	320	23 1/2	10.5	32	DRILL
5-04-05	5991	326	23 1/2	10.6	33	DRILL
5-05-05	6220	229	23 1/2	10.4	30	DRILL
5-06-05	6310	90	8 1/2	10.7	33	DRILL, TRIP BIT
5-07-05	6892	852	20 ½	10.6	32	DRILL, WIPER TRIP
5-08-05	7050	158	11	10.4	31	DRILL, TRIP MWD
5-09-05	7336	826	21 1/2	10.4	32	DRILL
5-10-05	7557	221	17 1/2	10.4	35	DRILL, CIRR FOR LOGS
5-11-05	7557	NIL	NIL	10.6	31	LOGGING
5-12-05	7705	148	16	10.2	31	RIH, DRILL
5-13-05	7824	119	$15\frac{1}{2}$	10.2	32	DRILL, POOH
5-14-05	7824	NIL	NIL	10.6	33	PLUGGING BACK

7 DEVIATION SURVEYS

DEPTH	INCLINATION	DIRECTION
1906.00	22.10	45.10

2063.00	24.90	41.40	
2125.00	25.90	43.30	
2189.00	26.30	4370	
2252.00	27.80	45.10	
2346.00	29.10	44.90	
2440.00	30.00	42.40	
2534.00	28.00	41.60	
2534.00	28.00	41.60	
2629.00	27.50	43.50	
2724.00	27.80	42.80	
2818.00	28.30	43.80	
2913.00	29.60	41.70	
2913.00	29.60	41.70	
3007.00	31.50	40.90	
3291.00	33.00	47.50	
3385.00	33.30	48.20	
3480.00	32.80	48.40	
3574.00	32.50	49.50	
3574.00	32.50	49.50	
3669.00	31.70	50.00	
3764.00	31.20	50.20	
3858.00	30.50	51.90	
3858.00	30.50	51.90	
3952.00	29.70	50.70	
4046.00	28.00	46.80	
DEPTH	INCLINATION	DIRECTION	
4141.00	28.00	41.60	
4141.00	28.00	41.60	
4235.00	28.00	38.00	
4330.00	28.10	39.10	
4424.00	28.80	41.90	
4520.00	28.50	40.90	

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4520.00	28.50	40.90
4614.00	26.90	43.80
4708.00	26.00	45.10
4802.00	25.10	46.00
4899.00	25.70	44.70
4993.00	36.90	44.90
5087.00	27.40	45.30
5087.00	27.40	45.30
5182.00	27.90	45.10
5276.00	28.40	44.40
5371.00	28.80	43.20
5465.00	29.30	41.90
5560.00	28.00	38.90
5654.00	26.90	37.70
5748.00	25.10	36.60
5748.00	25.10	36.60
5843.00	53.40	41.40
5937.00	21.10	42.80
6032.00	20.80	42.60
6032.00	20.80	42.60
6127.00	20.20	41.00
6127.00	20.20	41.00
6221.00	20.00	39.60
6410.00	14.90	41.60
6504.00	12.60	44.20
DEPTH	INCLINATION	DIRECTION
6599.00	12.00	40.50
6693.00	11.90	39.60
6807.00	11.30	38.80
6901.00	11.00	39.30
7009.00	10.30	41.70
7100.00	9.20	47.00

7195.00	8.60	57.40	
7290.00	7.40	70.90	
7384.00	6.40	98.30	
7384.00	6.40	86.30	· · · · · · · · · · · · · · · · · · ·
7478.00	5.20	117.50	
7574.00	5.10	116.30	
7669.00	4.80	121.20	·
7764.00	4.90	127.00	

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LITHOLOGIC DESCRIPIONS

Wolverine Gas & Oil Corporation Wolverine Federal #8-1 SE/SE Sec.8,T23S,R1W Sevier County, Utah

2030-60	CEMENT-70% LIMESTONE-70% Light to medium gray, argillaceous, lithographic, mudstone. SHALE-10% Red brown, blocky, silty, firm, slightly calcareous.
2060-90	SHALE-40% Light gray, limy, argillaceous, earthy, red brown, blocky, silty, firm, slightly calcareous.
	LIMESTONE-60% Light to medium gray, argillaceous, earthy, lithographic, mudstone.
2090-2120	SHALE-40% Light gray, limy, argillaceous, earthy, red brown, blocky, silty, firm, slightly calcareous.
	ANHYDRITE20% White, light gray, chalky, crystalline, greasy texture in part, chalky in part.
	LIMESTONE-40% Light medium gray, mottled, silty, very fine to microcrystalline, argillaceous, lithographic, mudstone.
2120-50	SHALE-80% Red brown, tan, gray green, earthy, slightly calcareous, soft to firm blocky.
	SILTSTONE20% Light gray, White, aren, limy, blocky, argillaceous.
2150-80	SHALE-10% Red brown, tan, grayish green, earthy, slightly calcareous, soft to firm blocky.
	LIMESTONE-50% Light to medium gray, mottled, very fine to microcrystalline, dense in part, earthy in part, mudstone. ANHYDRITE40% White, salt cast textured, fracture in fill.
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2180-2210	LIMESTONE-90% Light to medium gray, mottled, very fine to micro crystalline, dense in parts, earthy in parts, mudstone, earthy, lithographic, mudstone. ANHYDRITE10% White, salt cast textured, fracture in fill.
2210-40	LIMESTONE-100% 90% lithographic, 10% soft chalky.
2210-70	LIMESTONE-100% 90% lithographic, 10% soft chalky.
2270-2300	LIMESTONE-100% 90% lithographic, 10% soft chalky, mudstone.
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2300-30	LIMESTONE-100% 90% lithographic, 10% soft chalky.
2330-60	LIMESTONE-100% Light to medium gray, earthy, lithographic, argillaceous, mudstone (90%) 10% white to light gray, soft chalky, trace anhydrite fracture in fill.
2360-90	LIMESTONE-100% Light to medium gray, earthy, lithographic, argillaceous, mudstone (90%) 10% white to light gray, soft chalky, trace anhydrite fracture in fill.
2390-2420`	LIMESTONE-100% Light to medium gray, earthy, lithographic, argillaceous, mudstone

(95%) 5% white to light gray, soft chalky, abundant anhydrite fracture in fill. 2420-50 LIMESTONE-100% Light to medium gray, earthy, lithographic, argillaceous, mudstone (80%) 20% white to light gray, soft chalky, trace anhydrite fracture in fill. 2450-80 LIMESTONE-100% Light to medium gray, earthy, lithographic, argillaceous, mudstone (90%) 10% White to Light gray, soft chalky, trace anhydrite fracture in fill. 2480-2510 LIMESTONE-100% Light to medium gray, earthy, lithographic, argillaceous, mudstone (70%) 30% white to light gray, soft chalky, trace anhydrite fracture in fill. 2510-40 LIMESTONE-80% Light to medium gray, earthy, lithographic, argillaceous, mudstone (70%) 30% white to light gray, soft chalky, trace anhydrite fracture in fill. SILTSTONE-20% White, arenaceous, soft to firm, slightly calcareous, anhydrite 2540-70 LIMESTONE-80% Light to medium gray, earthy, lithographic, argillaceous, mudstone (70%) 30% white to light gray, soft chalky, trace anhydrite fracture in fill. SILTSTONE-10% White, arenaceous, soft to firm, slightly calcareous, anhydrite. ANHYDRITE-10% White, light gray, crystalline, salt cast, chalky. 2570-2600 LIMESTONE-90% Light to medium gray, argillaceous, earthy, light, mudstone, white, soft in part. ANHYDRITE-10% White, light gray, crystalline, salt cast, chalky. 2600-30 LIMESTONE-60% 90% Light to medium gray, argillaceous, earthy, light, mudstone, white, soft in part. SILTSTONE-30% White, Light gray, arenaceous, limy, anhydritic. ANHYDRITE-10% White, soft, chalky, abundant red orange potash. 2630-60 SHALE- 10% Red brown, abundant salt casts, red to orange potash, blocky, firm. LIMESTONE-90% Light to medium gray, light gray brown, very fine to microcrystalline, dense, lithographic, mudstone.

- 2660-90 SHALE-30% Gray green, waxy, soft to firm, smooth texture, red brown, abundant salt casts, red to orange potash, blocky, firm.

 LIMESTONE-70% Light to medium gray, light gray brown, very fine to microcrystalline, dense, lithographic, mudstone.
- 2690-2720 SHALE- 30% Red brown, grayish green, waxy, soft to firm, smooth texture, red brown, abundant salt casts, red to orange potash, blocky, firm.

 SILTSTONE-10% White, light gray, arenaceous, slightly calcareous, anhydrite.

 LIMESTONE- 70% waxy, soft to firm, smooth texture, red brown, abundant salt casts,

red to orange potash, blocky, firm.

- 2720-50 SHALE-40% Red brown, grayish green, waxy, soft to firm, smooth texture, red brown, abundant salt casts, red to orange potash, blocky, firm, abundant red orange potash, salt dis solution casts. SILTSTONE-20% White, light gray, arenaceous, slightly calcareous, anhydrite. LIMESTONE-40% Light to medium gray, light gray brown, very fine to microcrystalline, dense, lithographic, mudstone. 2750-80 SHALE-40% Gray green, red brown, tan, smooth, fine, blocky, slightly calcareous. SILTSTONE-30% White, light gray, arenaceous, firm, limy, anhydrite. LIMESTONE- 0% Light to medium gray, lithographic, mudstone. 2780-2810 SHALE-30% Red brown, Light gray, limy, blocky, silty. SILTSTONE-40% Light grayish brown, arenaceous, argillaceous, calcareous. LIMESTONE-30% Light to medium gray, blocky, lithographic, mudstone. 2810-40 SHALE-20% Red brown, Light gray, limy, blocky, silty. SILTSTONE-40% Light grayish brown, arenaceous, argillaceous, calcareous. LIMESTONE-40% Light to medium gray, blocky, lithographic, mudstone. 2840-70 LIMESTONE-80% Light to medium gray, blocky, lithographic, mudstone. SILTSTONE-20% Light grayish brown, arenaceous argillaceous, calcareous. 2870-2900 LIMESTONE-100% Light to medium gray, argillaceous, earthy, lithographic, crystalline, dense, silty in parts, soft chalky in part, trace anhydrite fracture fill. 2900-30 LIMESTONE-100% Light to medium gray, argillaceous, earthy, lithographic, crystalline, dense, silty in part, soft chalky in part, trace anhydrite fracture fill. 2930-60 LIMESTONE-100% Light to medium gray, argillaceous, earthy, lithographic, crystalline, dense, silty in parts, soft chalky in part, trace anhydrite fracture fill. 13 LIMESTONE-100% Light to medium gray, argillaceous, earthy, lithographic, crystalline, 2960-90 dense, silty in part, soft chalky in part, trace anhydrite fracture fill.
- LIMESTONE-100% Light to medium gray, argillaceous, earthy, lithographic, crystalline, 2990-3020 dense, silty in part, soft chalky in part, trace anhydrite fracture fill.
- 3020-50 LIMESTONE-100% Light to medium gray, argillaceous, earthy, lithographic, crystalline, dense, silty in part, soft chalky in part, trace anhydrite fracture fill, 5% white anhydrite and calcite fracture in fill.
- 3050-80 SHALE-10% Red brown, gray to green, blocky, silty.

SILTSTONE-30% White, light gray, arenaceous, limy, anhydritic. LIMESTONE-60% Light to medium gray, argillaceous, earthy, lithographic, crystalline, dense, silty in part, soft chalky in part, trace anhydrite fracture fill, 5% white anhydrite and calcite fracture in fill.

- 3080-3110 SHALE-10% Red brown, gray to green, blocky, silty.
 SILTSTONE-20% White, light gray, arenaceous, limy, anhydritic.
 LIMESTONE-70% Light to medium gray, argillaceous, earthy, lithographic, crystalline, dense, silty in part, soft chalky in part, trace anhydrite fracture fill, 5% white anhydrite and calcite fracture in fill.
- SHALE-10% Red brown, gray to green, blocky, silty.

 SILTSTONE-60% White, light gray, arenaceous, limy, anhydritic.

 LIMESTONE-30% Light to medium gray, argillaceous, earthy, lithographic, crystalline, dense, silty in parts, soft chalky in parts, trace anhydrite fracture fill, 5% white anhydrite and calcite fracture in fill.
- 3140-70 SILTSTONE-50% White, light gray, arenaceous, limy, anhydritic.
 LIMESTONE-50% Light to medium gray, argillaceous, earthy, lithographic, crystalline, dense, silty in part, soft chalky in part, trace anhydrite fracture fill, 5% white anhydrite and calcite fracture in fill.
- 3170-3200 LIMESTONE-100% Light to medium gray brown, very fine to microcrystalline, dense, argillaceous, earthy, lithographic, mudstone, 10% soft, chalky, trace gray green shale.
- 3200-30 LIMESTONE-100% Light to medium gray brown, very fine to micro crystalline, dense, argillaceous, earthy, lithographic, mudstone, 10% soft, chalky, trace grayish green shale.
- 3230-60 LIMESTONE-100% Light to medium gray brown, very fine to micro crystalline, dense, argillaceous, earthy, lithographic, mudstone, 10% soft, chalky, trace grayish green shale.

- 3260-90 LIMESTONE-100% Light to medium gray brown, very fine to micro crystalline, dense, argillaceous, earthy, lithographic, mudstone, 10% soft, chalky, trace gray green shale, abundant white, sucrose, crystalline, anhydrite and calcite
- 3290-3320 LIMESTONE-100% Light to medium gray brown, very fine to micro crystalline, dense, argillaceous, earthy, lithographic, mudstone, 10% soft, chalky, trace grayish green shale, abundant White, sucrose, crystalline, anhydrite and calcite
- 3320-50 LIMESTONE-100% Light to medium gray brown, very fine to micro crystalline, dense, argillaceous, earthy, lithographic, mudstone, 10% soft, chalky, trace grayish green shale, abundant white, sucrose, crystalline, anhydrite and calcite.

3350-80 LIMESTONE-100% Light to medium gray brown, very fine to microcrystalline, dense, argillaceous, earthy, lithographic, mudstone, 10% soft, chalky, trace grayish green shale, abundant white, sucrose, crystalline, anhydrite and calcite. 3380-3410 LIMESTONE-70% Light to medium gray, very fine to microcrystalline, lithographic, mudstone. SILTSTONE-30% Light gray, light gray brown, arenaceous, limy, firm. 3410-40 LIMESTONE-70% Light to medium gray, very fine to microcrystalline, lithographic, mudstone. SILTSTONE-30% Light gray, light grayish brown, arenaceous, limy, firm. 3440-70 LIMESTONE-100% Light to medium gray brown, microcrystalline, dense, lithographic, mudstone abundant white chalky, crystalline, anhydritic. 3470-3500 LIMESTONE- 100% Light to medium gray brown, microcrystalline, dense, lithographic, mudstone, abundant white chalky, crystalline, anhydrite, mottled, abundant anhydrite fracture in fill. 3500-30 SHALE-10% Red brown, blocky, firm, slightly calcareous, gray green, blocky, smooth. LIMESTONE-90% Light to medium gray brown, microcrystalline, dense, lithographic, mudstone abundant white chalky, crystalline, anhydrite. SHALE- 30% Red brown, blocky, firm, silty, gray green, blocky, smooth, abundant salt 3530-60 LIMESTONE- 30% Light to medium gray brown, crystalline, dense, lithographic, mudstone. SANDSTONE 40% White, clear, quartzose, firm to medium grained, sub angular to rounded, fair to poorly sorted. 15 SHALE-10% Red brown, blocky, firm, silty, gray green, blocky, smooth, abundant salt 3560-90 LIMESTONE-80% Light to medium gray, mottled, sandy in parts, crystalline, dense, lithographic, mudstone. ANHYDRITE-10% White, sucrosic, crystalline, soft to firm. 3590-3620 SHALE-10% Red brown, blocky, firm, silty, gray green, blocky, smooth, abundant salt LIMESTONE-70% Light to medium gray, mottled, sandy in parts, crystalline, dense, lithographic, mudstone.

ANHYDRITE-20% White, sucrosic, crystalline, soft to firm.

3620-50

SILTSTONE-10% White, arenaceous, argillaceous, limy, anhydritic.

LIMESTONE-90% Light to medium gray, medium to dark gray, gray brown, argillaceous, earthy, lithographic, mudstone, crystalline in part, chalky in part, abundant calcite fracture in fill.

- 3650-80 SHALE-20% Red brown, silty, blocky, slightly calcareous, grayish green. SANDSTONE- 80% White, clear, quartzose, fine to medium grained, sub angular to rounded, fair to poorly sorted, unconsolidated.
- 3680-3710 SHALE-30% Red brown, silty, blocky, slightly calcareous, grayish green. SANDSTONE -70% White, clear, quartzose, firm to medium grained, sub angular to rounded, fair to poorly sorted, unconsolidated.
- 3710-40 SHALE-30% Red brown, silty, blocky, slightly calcareous, grayish green.
 SANDSTONE -50% White, clear, quartzose, fine to medium grained, sub angular to rounded, fair to poorly sorted, unconsolidated.
 LIMESTONE-20% Light to medium gray, very fine to microcrystalline, dense, earthy, lithographic, mudstone.
- 3740-70 LIMESTONE-100% Light to medium gray, very fine to microcrystalline, dense, earthy, lithographic, mudstone.
- 3770-3800 LIMESTONE-100% Light to medium gray, very fine to microcrystalline, mottled, lithographic, mudstone.
- 3800-30 SHALE-10% Red brown, blocky, silty
 LIMESTONE-80% Light to medium gray, grayish brown, argillaceous, earthy, lithographic, mudstone, 10% soft, chalky.
 ANHYDRITE-10% White, soft, chalky.

- 3830-60 LIMESTONE-90% Light to medium gray, grayish brown, argillaceous, earthy, lithographic, mudstone, 10% soft, chalky.

 ANHYDRITE-10% White, soft, chalky.
- 3860-90 LIMESTONE-90% Light to medium gray, grayish brown, argillaceous, earthy, lithographic, mudstone, 10% soft, chalky.
 ANHYDRITE-10% White, soft, chalky.
- 3890-3920 SHALE-10% Red brown, light gray, slightly calcareous, silty, firm.
 SILTSTONE-20% Light gray, soft to firm, slightly calcareous, anhydritic, arenaceous, blocky.
 LIMESTONE-70% Light to medium gray, very fine to micro crystalline, dense, mottled, argillaceous, earthy, lithographic, mudstone.

3920-50	SHALE-10% Red brown, light gray, slightly calcareous, silty, firm. SILTSTONE-10% White, arenaceous, anhydritic. LIMESTONE-70% Light to medium gray, crystalline, argillaceous, dense, lithographic, mudstone. ANHYDRITE-10% White, sucrosic, chalky.
3950-80	LIMESTONE-90% Light to medium gray, crystalline, argillaceous, dense, lithographic, mudstone. ANHYDRITE-10% White, sucrosic, chalky.
3980-4010	SHALE-30% Red brown, silty, firm, slightly calcareous, light gray, soft, chalky, limy. LIMESTONE-30% Light to medium gray, crystalline, argillaceous, dense, lithographic, mudstone. SANDSTONE-40% Light red, red orange, white, clear, quartzose, fine to medium grained, fair to poorly sorted, sub angular to rounded, unconsolidated.
4010-40	SHALE-30% Varied in color, red brown, light gray, white, silty, blocky, firm, calcareous. SANDSTONE-70% Light red, Red orange, White, clear, quartzose, fine to medium gray, fine to poorly sorted, sub angular to rounded, unconsolidated.
4040-70	SHALE-10% Red brown, Light gray, White, silty, blocky, firm, calcareous. LIMESTONE- 90% Light to medium gray, argillaceous, lithographic, mudstone.
4070-4100	LIMESTONE-100% 70% Light to medium gray, lithographic, mudstone. 30% white, light gray soft, chalky mudstone.
4100-30	LIMESTONE-100% 70% Light to medium gray, lithographic, mudstone, 30% white, light gray soft, chalky mudstone, abundant, white, calcite and anhydrite. 17
4130-60	LIMESTONE-90% 70% Light to medium gray, lithographic, mudstone, 30% white, light gray soft, chalky mudstone, abundant, white, calcaite and anhydrite. ANHYDRITE-10% White, soft, chalky.
4160-90	LIMESTONE-90% 80% Light gray, lithographic, mudstone, 20% soft, chalky, ANHYDRITE-10% White, soft, chalky.
4190-4220	LIMESTONE-100% Light gray, lithographic, mudstone, 20% soft, chalky.
4220-50	LIMESTONE-100% Light gray, lithographic, mudstone, 20% soft, chalky,
4250-80	LIMESTONE-100% Light gray, lithographic, mudstone, 20% soft, chalky,
4280-4310	LIMESTONE-100% Light gray, lithographic, mudstone, 20% soft, chalky, abundant anhydrite fracture fill.

4310-40	LIMESTONE-100% Light gray, lithographic, mudstone, 20% soft, chalky, abundant anhydrite fracture fill.
4340-70	LIMESTONE-100% Light gray, lithographic, mudstone, 20% soft, chalky, abundant anhydrite fracture fill.
4370-4400	LIMESTONE-90% Light to medium gray, very fine to microcrystalline, lithographic, mudstone. ANHYDRITE-10% White, sucrosic texture, chalky, soft to firm.
4400-30	LIMESTONE-80% Crystalline, 50% soft, chalky. SILTSTONE-20% Light gray to white, arenaceous, argillaceous, soft to firm, limy.
4430-60	LIMESTONE-70% Crystalline, 50% soft, chalky. SILTSTONE-20% Light gray to white, arenaceous, argillaceous, soft to firm, limy. ANHYDRITE-10% White, sucrosic texture, chalky, soft to firm.
4460-90	LIMESTONE-100% Light to medium gray, microcrystalline, dense, lithographic, mudstone.
4490-4520	LIMESTONE-90% Light to medium gray, microcrystalline, dense, lithographic, mudstone. ANHYDRITE-10% White, sucrosic texture, chalky, soft to firm.
4520-50	LIMESTONE-100% Light to medium gray, microcrystalline, dense, lithographic, mudstone.
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4580-4610	LIMESTONE-70% Light to medium gray brown, crystalline, dense, lithographic, mudstone. ANHYDRITE-20% White, soft, chalky. SILTSTONE-10% White, chalky, anhydritic.
4610-40	LIMESTONE-70% Light to medium gray, crystalline, lithographic, mudstone. ANHYDRITE-10% White, soft, chalky. SILTSTONE-20% White, arenaceous, anhydritic.
4640-70	SHALE-10% Red brown, silty, firm. LIMESTONE-70% Light to medium gray, very fine to microcrystalline, lithographic, mudstone. ANHYDRITE-20% White, soft, chalky, silty.

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4670-4700 SHALE-10% Red brown, silty, blocky, firm, light gray green, soft, smooth, waxy. LIMESTONE-80% Light to medium gray, very fine to microcrystalline, lithographic,

mudstone.

ANHYDRITE-10% White, soft, chalky, silty.

- 5HALE-40% Red brown, silty, firm, slightly calcareous, light gray green, red brown, silty, blocky, firm, light gray green, soft, smooth, waxy.

 LIMESTONE-50% Light to medium gray, very fine to microcrystalline, lithographic, mudstone.

 ANHYDRITE-10% White, soft, chalky, silty.
- 4730-60 SHALE-10% Red brown, silty, firm, slightly calcareous, light gray green, red brown, silty, blocky, firm, light gray green, soft, smooth, waxy.

 LIMESTONE-80% Light gray brown, tan, microcrystalline, dense, firm to hard, mudstone.

 ANHYDRITE-10% White, soft, chalky, silty.
- 4760-90 SHALE-10% Red brown, silty, firm, slightly calcareous, light gray green, red brown, silty, blocky, firm, light gray green, soft, smooth, waxy.

 LIMESTONE-80% Light gray brown, tan, microcrystalline, dense, firm to hard, mudstone.

 ANHYDRITE-10% White, soft, chalky, silty.
- 4790-4820 SHALE-10% Red brown, silty, firm, slightly calcareous, light gray green, red brown, silty, blocky, firm, light gray green, soft, smooth, waxy.

 LIMESTONE-80% Light gray brown, tan, microcrystalline, dense, firm to hard, mudstone. ANHYDRITE-10% White, soft, chalky, silty.

- 4820-50 LIMESTONE-90% Light gray brown, tan, microcrystalline, dense, firm to hard, mudstone.

 ANHYDRITE-10% White, soft, chalky, silty.
- 4850-80 LIMESTONE-90% Light to medium gray brown, crystalline, dense, lithographic, mudstone.

 ANHYDRITE-10% White, chalky, crystalline, sucrosic.
- 4880-4910 LIMESTONE-100% Light to medium gray brown, crystalline, dense, lithographic, mudstone, abundant calcite and anhydrite fracture fill.
- 4910-40 LIMESTONE-100% Light to medium gray brown, crystalline, dense, lithographic, mudstone, abundant calcite and anhydrite fracture fill.
- 4940-70 LIMESTONE-100% Light to medium gray brown, crystalline, dense, lithographic, mudstone, abundant calcaite and anhydrite fracture fill, 10% soft, chalky.

LIMESTONE-100% Light to medium gray brown, crystalline, dense, lithographic, 4970-5000 mudstone, abundant calcite and anhydrite fracture fill, 30% soft chalky abundant fracture fill. 5000-30 LIMESTONE-100% Light to medium gray brown, crystalline, dense, lithographic, mudstone, abundant calcite and anhydrite fracture fill, 10% soft chalky, abundant fracture fill. 4030-60 LIMESTONE-100% Light to medium gray brown, crystalline, dense, lithographic, mudstone, abundant calcite and anhydrite fracture fill, 10% soft chalky, abundant fracture fill. LIMESTONE-100% Light to medium gray, medium to dark gray, argillaceous, 5060-90 lithographic, mudstone, 10% soft, chalky, abundant calcite and anhydrite fracture in fill. LIMESTONE-100% Medium to dark gray, crystalline, dense, lithographic, mudstone. 5090-5120 LIMESTONE-100% Medium to dark gray, crystalline, dense, lithographic, mudstone, 5120-50 20% light gray to white, soft, chalky. LIMESTONE-80% Medium to dark gray, crystalline, dense, lithographic, mudstone, 5150-80 20% light gray to white, soft, chalky. SILTSTONE- 20% White, light gray, arenaceous, limy, anhydrite, firm. 20

.

- 5180-5210 LIMESTONE-90% Medium to dark gray, crystalline, dense, lithographic, mudstone, 20% light gray to white, soft, chalky.

 SILTSTONE- 10% White, light gray, arenaceous, limy, anhydritic, firm.
- 5210-40 LIMESTONE-100% Light to medium gray brown, very fine to micro crystalline, silty, lithographic, mudstone.
- 5240-70 LIMESTONE-100% Light to medium gray brown, very fine to microcrystalline, silty, lithographic, mudstone.
- 5270-5300 SHALE-20% White, chalky, limy, silty.
 SILTSTONE-10% White, Llght gray, arenaceous, limy, soft to firm.
 LIMESTONE-70% Light to medium gray brown, very fine to microcrystalline, silty, lithographic, mudstone.
- 5300-30 SILTSTONE-10% White, light gray, arenaceous, limy, soft to firm.

 LIMESTONE-90% Light to medium gray brown, very fine to microcrystalline, silty, lithographic, mudstone

5330-60 SHALE-10% White, chalky, soft, limy.
LIMESTONE- 90% Light to medium gray brown, very fine to micro crystalline, dense, lithographic, mudstone

. . . .

- 5360-90 SHALE-30% White, chalky, soft, limy LIMESTONE- 70% Light to medium gray brown, very fine to microcrystalline, dense, lithographic, mudstone.
- 5390-5420 SHALE-20% White, chalky, soft, limy.
 LIMESTONE-80% Light to medium gray brown, very fine to microcrystalline, dense, lithographic, mudstone.
- 5420-50 SHALE- 30% White, chalky, soft, limy.
 LIMESTONE- 70% Light to medium gray brown, very fine to microcrystalline, dense, lithographic, mudstone.
- 5450-80 SHALE- 10% White, light gray, earthy, chalky, limy, soft to firm.

 LIMESTONE- 90% Light to medium gray brown, medium to dark gray brown, microcrystalline, dense, firm to hard, lithographic, mudstone.
- 5480-5510 SHALE- 30% White, Light gray, earthy, chalky, limy, soft to firm.

 LIMESTONE- 70% Light to medium gray brown, medium to dark gray brown, microcrystalline, dense, firm to hard, lithographic, mudstone.

- 5510-40 LIMESTONE-100% Light to medium gray brown, microcrystalline, dense, firm to hard, lithographic, mudstone, 10% white, light gray, soft to firm, argillaceous, earthy, grades to limy shale.
- 5540-70 LIMESTONE-100% Light to medium gray brown, microcrystalline, dense, firm to hard, lithographic, mudstone, 10% white, light gray, soft to firm, argillaceous, earthy, grades to limy shale, abundant white, calcite and anhydrite fracture in fill.
- 5570-5600 LIMESTONE100% Light to medium gray brown, microcrystalline, dense, firm to hard, lithographic, mudstone, 10% white, light gray, soft to firm, argillaceous, earthy, grades to limy shale, abundant white, calcite and anhydrite fracture infill.
- 5600-30 LIMESTONE- 100% Light gray, white, very fine to fine crystalline, sucrosic texture, light to medium gray brown, microcrystalline, dense, hard, 10% white, light gray, soft, chalky, abundant white calcite.
- 5630-60 LIMESTONE-100% Light gray, white, very fine to fine crystalline, sucrosic texture, light to medium gray brown, microcrystalline, dense, hard, 10% white, loight gray, soft, chalky,

abundant white calcite.

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SILTSTONE-30% White, arenaceous, argillaceous, firm, limy, anhydritic.

5660-90 LIMESTONE-70% Light to medium gray, mottled, white, argillaceous, lithographic, mudstone.

SILTSTONE-20% White, light gray, white, arenaceous, argillaceous, firm, limy, anhydritic. ANHYDRITE-10% White, soft, chalky.

5690-5720 LIMESTONE-80% Light to medium gray, mottled, white, argillaceous, lithographic, mudstone.

ANHYDRITE-20% White, soft, chalky.

- 5720-50 LIMESTONE-90% Light to medium gray, mottled, White, argillaceous, lithographic, mudstone.

 SILTSTONE-10% White, light gray, white, arenaceous, argillaceous, firm, limy, anhydritic.
- 5750-80 LIMESTONE-70% Light to medium gray, mottled, white, argillaceous, lithographic, mudstone.

 SILTSTONE- 20% White, arenaceous, anhydritic, firm, chalky.

 ANHYDRITE- 10% White, soft, chalky.
- 5780-5810 LIMESTONE- 100% Light to medium gray, gray brown, crystalline, lithographic, mudstone.

- 5810-40 LIMESTONE-100% Light to medium gray, gray brown, crystalline, lithographic, mudstone.
- 5840-70 LIMESTONE-80% Light to medium gray, gray brown, crystalline, lithographic, mudstone.

 SILTSTONE-20% White, arenaceous, firm, anhydritic.
- 5870-5900 LIMESTONE-90% Light to medium gray, very fine to microcrystalline, soft, chalky in part, lithographic, mudstone.

 ANHYDRITE-10% White, soft, chalky.
- 5900-30 SHALE-20% White, light gray, chalky, limy, argillaceous, soft.

 LIMESTONE-70% Light to medium gray, very fine to microcrystalline, lithographic, mudstone.

 ANHYDRITE-10% White, chalky, soft.
- 5930-60 LIMESTONE-100% Light to medium gray, argillaceous, lithographic, mudstone, white, chalky, soft, silty, abundant White, chalky anhydrite.

5960-90 LIMESTONE-70% Light to medium gray, argillaceous, lithographic, mudstone, white, chalky, soft, silty, abundant white, chalky anhydrite, very fine to fine crystalline in part. ANHYDRITE-10% White, soft, chalky. SILTSTONE- 20% Light gray, arenaceous, limy, firm, anhydritic. 5990-6020 LIMESTONE-70% Light to medium gray, argillaceous, lithographic, mudstone, white, chalky, soft, silty, abundant white, chalky anhydrite, very fine to fine crystalline in part. ANHYDRITE-10% White, soft, chalky. SILTSTONE-20% Light gray, arenaceous, limy, firm, anhydritic. 6020-50 LIMESTONE-90% Light to medium gray, lithographic, mudstone, white, soft, chalky. SILTSTONE-10% Light gray, arenaceous, limy, firm, anhydritic. 6050-80 LIMESTONE-100% Light to medium gray, medium to hard, gray, gray brown, crystalline, lithographic, mudstone, white, soft, chalky, silty. LIMESTONE-100% Light to medium gray, lithographic, mudstone, medium to dark 6080-6110 gray brown, microcrystalline, dense, mudstone, white, chalky, soft. 6110-40 LIMESTONE-100% Light to medium gray, lithographic, mudstone, abundant soft white chalky 23 LIMESTONE-100% Light to medium gray, lithographic, mudstone, minor clear to white 6140-70 anhydrite fracture fill. 6170-6200 LIMESTONE-80% Light to medium gray, lithographic, mudstone. SILTSTONE-20% White to light gray, arenaceous, very soft, very calcareous. 6200-30 LIMESTONE-80% Light to medium gray, lithographic, mudstone. SILTSTONE-20% White to light gray, arenaceous, very soft, very calcareous. LIMESTONE-90% Light to medium gray, lithographic, mudstone, light gray, soft. 6230-60 SILTSTONE-10% Red orange, arenaceous, argillaceous, firm. LIMESTONE-80% Light to medium gray, lithographic, mudstone. 6260-90 SILTSTONE-10% Red orange, arenaceous, argillaceous, firm. LIMESTONE-80% Light to medium gray, lithographic, mudstone, soft. 6290-6320 SILTSTONE-20% Red orange, arenaceous, argillaceous, firm. LIMESTONE-80% Light to medium gray, lithographic, mudstone, soft. 6320-6350 SILTSTONE-20% Red orange, arenaceous, argillaceous, firm.

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6350-6380	LIMESTONE-80% Light to medium gray, lithographic, mudstone, soft. SILTSTONE-20% Red orange, arenaceous, argillaceous, firm.
6380-6410	LIMESTONE -80% Light to medium gray, lithographic, mudstone, soft. SILTSTONE-20% Red orange, arenaceous, argillaceous, firm.
6410-6440	SALT-100% White, crystalline, translucent.
6440-6470	SALT-100% White, crystalline, translucent.
6470-6500	SALT-100% White, crystalline, translucent.
6500-6530	SALT-100% White, crystalline, translucent.
6530-6560	SALT-100% White, crystalline, translucent.
6560-6590	SALT00% White, crystalline, translucent.
6590-6950	SALT 100% White, crystalline, translucent.
6950-6980	LIMESTONE-20% Light to medium gray, argillaceous, mudstone. SALT 80% White, crystalline, translucent. 24
6980-7010	LIMESTONE-100% Light gray to white to brownish gray, dense, lithographic.
7010-7040	LIMESTONE-100% Light gray to brownish gray, lithographic, mudstone.
7040-70	${\bf LIMESTONE-100\%\ Light\ to\ medium\ gray,\ tan,\ microcrystalline,\ dense,\ lithographic,\ mudstone.}$
7070-7100	$LIMESTONE-100\%\ Light\ to\ medium\ gray,\ lithographic,\ crystalline,\ mudstone,\ abundant\ white\ anhydrite\ fracture\ fill,\ white,\ silty\ in\ part.$
7100-30	
	LIMESTONE-100% Light to medium gray, crystalline, dense, lithographic, mudstone, tan, microcrystalline, dense, mudstone, abundant white, chalky anhydrite fracture in fill.
7130-60	

7190-7220 LIMESTONE-100% Light to medium gray brown, tan, mottled, oolitic, packstone to grainstone, microcrystalline, hard, dense, tight matrix, no show, abundant white, sandy, chalky, fracture fill. 7220-50 LIMESTONE-100% Light to medium gray, grayish brown, tan, light gray to white, very fine to fine crystalline, sucrosic texture in part, microcrystalline, dense, hard, tight in part, trace packstone to grainstone in part, oolitic. 7250-80 LIMESTONE-100% Light to medium gray, very fine to microcrystalline, mudstone, abundant tan, microcrystalline, dense, hard, tight. 7280-7310 LIMESTONE-100% Medium to dark gray, dense, microcrystalline, hard, mudstone, white, light gray, silty, chalky, soft to firm, mudstone (30%). 7310-40 LIMESTONE-100% Medium to dark gray, dense, crystalline, mudstone, Light gray to white, silty, chalky, soft to firm, silty, mudstone, (40%) abundant white calcareous fracture in fill. 7340-70 LIMESTONE-100% medium to dark gray, dense, crystalline, mudstone, Light gray to white, silty, chalky, soft to firm, silty, mudstone, (40%) abundant white calcite fracture in fill, 30% light gray, silty, 70% medium to dark gray, abundant fracture fill. 7370-7400 LIMESTONE-100% Medium to dark gray, crystalline, 90% light gray, soft, 10% abundant calcite. 7400-30 LIMESTONE-100% Medium to dark gray, 70% light gray, soft,30% abundant calcite fracture fill. LIMESTONE-100% Medium to dark gray, 80% light gray, 20% calcareous fracture fill. 7430-60 7460-90 LIMESTONE-100% Light to medium gray brown, medium to dark gray, mottled, oolitic, packstone to grainstone, microcrystalline, dense, in part, mudstone, abundant white calcite fracture fill. 7490-7520 LIMESTONE-100% Light to medium gray brown, tan, light brown, sandy, trace oolitic, abundant white, calcareous, mudstone to wackestone. LIMESTONE-100% Light brown, tan, very fine to microcrystalline, sandy, mudstone to 7520-50 wackestone, abundant white, calcite fracture fill.

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- 7550-80 LIMESTONE-100% Light brown, tan, white, very fine to micro crystalline, mottled, oolitic, light gray to white, chalky, silty, crystalline, calcite fracture fill.
- 7580-7610 LIMESTONE-100% Light brown, tan, mottled, oolitic, grainstone in part, mudstone, matrix, abundant white, calcareous fracture fill.

7610-40 LIMESTONE-100% Light brown, tan, white, mottled, mudstone to wackestone, oolitic, mudston matrix, abundant, calcite fracture fill.
 7640-70 LIMESTONE- 100% Light brown, tan, white, packstone to grainstone, mottled,

mudstone matrix, oolitic, tight, abundant white, calcite fracture fill.

. . .

- 7670-7700 LIMESTONE- 100% Light brown, tan, brown, white, mottled, packstone to grainstone, oolitic, mudstone matrix, abundant white, silty, chalky, calcite.
- 7700-30 LIMESTONE- 100% Light gray brown, light brown, mottled, packstone to grainstone, oolitic, mudstone matrix, abundant white silty, chalky, calcite.
- 7730-60 LIMESTONE- 100% Light grayish brown, light brown, mottled, packstone to grainstone, oolitic, mudstone matrix, abundant white silty, chalky, calcite.
- 7760-90 LIMESTONE- 100% White, tan, microcrystalline, tightly, dense, sandy, yellow to gold fluorescence, no cut

26

7790-7820 LIMESTONE- 100% White, tan, microcrystalline, tight, dense, sandy, yellow to gold fluorescence, no cut, very fine to microcrystalline, tight, dense.



WOLVERINE GAS AND OIL COMPANY

of Utah, LLC

Energy Exploration in Partnership with the Environment

August 29, 2005

CONFL

Ms. Diana Whitney Utah Division of Oil, Gas & Mining 1594 W. N. Temple, Suite 1210 Salt Lake City, UT 84114-5801

Re:

Wolverine Federal 17-6 (8-1) Well

Completion Report

Dear Al:

Enclosed please find the Completion Report (form #8) for the captioned well. Attached to the report are the following documents:

- Directional Survey
- Geologic Report
- Logs
- -Mudlog
- -Electric Micro Imager Monitor Log
- -HRI MD
- -HRI TVD
- -Spectral Density/DSN/GR MD
- -Spectral Density/DSN/GR TVD

Please keep this report and all attachments confidential. If you have any questions or concerns, please feel free to contact me.

Sincerely,

Helene Bardolph

enclosures

RECEIVED

AUG 3 1 2005

DIV. OF OIL, GAS & MINING

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING									(hi	AMENDED REPORT FORM 8 (highlight changes) 5. LEASE DESIGNATION AND SERIAL NUMBER:											
DIVISION OF OIL, GAS AND MINNING											1	UTU-73528									
WELI	L CO	MPLE	TION	OR F	RECO	MPL	ETIC	N RE	EPOF	RT AI	ND L	OG		6. 11	INDIAN	, allo	TTEE (OR TRI	BE NAME	·	
1a. TYPE OF WELL:	:	-	OIL Z] {	SAS C]	DRY		ОТІ	IER		· · · · ·)	# 1		NIT or C		_				
b. TYPE OF WORK	(:								UU		سأل		H		Wolverine Federal Unit 8. WELL NAME and NUMBER:						
b. TYPE OF WORK: NEW WELL ATS. DEEP- RESVR. OTHER												Wolverine Federal 17-6 (8-1)									
2. NAME OF OPERATOR: Wolverine Gas and Oil of Utah, LLC											9. API NUMBER: 4304130037										
3. ADDRESS OF OF 55 Campau			CITY Gr	and Ra	apids	STATE	МІ	zıp 49 5	503		ONE NUM		150	10 FIELD AND POOL, OR WILDCAT Covenant Field							
4. LOCATION OF W	•													11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:							
AT SURFACE: 1680' FNL & 2265' FWL Sec 17 T23S R1W AT TOP PRODUCING INTERVAL REPORTED BELOW: 764' FNL & 2477' FEL											I .	ENW	17				26	•			
AT TOTAL DEPT	H: 721	'FNL 8	k 2458'	FEL											12. COUNTY 13. STATE UTAH						
14. DATE SPUDDED	D:		T.D. REAC	HED:	16. DATE	COMPL 2/2005		A	BANDON	ED	REA	DY TO	PRODUC	17. FLEVATIONS (DE RKB RT. GL.):							
18. TOTAL DEPTH:	-	,765		19. PLUG		.: MD	6,713		20. IF	MULTIPLE	E COMPL	ETION:	s, HOW I	MANY? * 21. DEPTH BRIDGE MD PLUG SET:							
22 TVDE ELECTRIC	TVD 6		ANIICAL I O	CC BUILT	Pulposit con		6,504		į	laa								TVE) 		
22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) High Res. Induction MD & TVD, Spectral Density Dual Spaced Neutron MD & TVD, Dipmeter Monitor Log MUD LOC DIRECTIONAL SURVEY? NO YES DIRECTIONAL SURVEY?]] 7	(Subr	nit analysis nit report) nit copy)	s)									
24. CASING AND LI	NER RECC	RD (Repo	rt all string:	s set in w	elt)																
HOLE SIZE	SIZE/G	RADE	WEIGHT	(#/ft.)	TOP (MD)		BOTTOM (MD)			BE CEMENTER DEPTH		CEMENT TYPE & NO. OF SACKS		SLURRY VOLUME (BBL)		CEMENT TOP **		AMOUN	NT PUI	LED.	
30	20	H40	65	5	0		12	21			Cla	Class G 620		126		Surface Cir		r			
17.5	133/8	J55	61	1	0		2,0	53			Hì	HiFill V 1,050		518		Su	Surface Cir		·		
12.25	9 5/8	٦	47	7	0		6,0	94			50	50/50 p 230		58		5100 CAL		CAL			
8.5	7		23	3 0		6,7		'58			50/50 p		255	56		4700 CAL					
		140	PIID	LTC																	
	\	'HC	PIIO	LTC																	
25. TUBING RECOR	ED .																				
SIZE		SET (MD) PACK	ER SET (N	AD)	SIZE		DEPTH	SET (MD) PAC	KER SE	r (MD)		SIZE	-	DEPTH	SET (N	MD)	PACKER	SET (MD)
2 7/8 6.364													L_								
26. PRODUCING INTERVALS FORMATION NAME TOP (MD) BOTT			BOTTO	27 						27. PERFORATION RECORD INTERVAL (Top/Bot - MD) S				SIZE NO. HOLES PERFORATION STATUS							
(A) Navajo			,303		765 6.0				56	· ·		6,415		.43 80		-+		Open Squeezed		_	
(B)		+	,000	J	-	5,15		0,0		6,430			433	.43	52	-			Squeezed	+	
(C)		<u> </u>								6,472			484	.43	48	-			Squeezed	一	
(D)										6,512			518	.43	24		Open		Squeezed	౼	
28. ACID, FRACTUR	RE, TREATI	MENT, CEI	MENT SQUI	EEZE, ETC	 >.					0,0,1							<u> </u>		•		
DEPTHI	NTERVAL								AM	OUNT AN	ID TYPE	OF MA1	ERIAL						· · · · · · · · · · · · · · · · · · ·		
			2% aci	cid mix @1.15 sg and 4% KCl @1.04 sg, 6300 gal to									al								
29. ENCLOSED ATTACHMENTS:													30	. WEL	L STATUS	:	_				
Z ELECT	RICAL/MEC	HANICAL	LOGS				Z	GEOLOGI	C REPOF	ıτ [DST	REPOR	т 🔽	DIREC	TIONAL	Producing					
I SHINDR	Y NOTICE	FOR PLUG	CING AND	CEMENT	VEDIEICA	TION	- 1 1 4	ORE AN	AL VSIS	1	NAME OF TAXABLE PARTY.	~ -					- 1	-		•	•

(CONTINUED ON BACK) AUG 3 1 2005

DIV. OF OIL, GAS & MINING CONFIDENTIAL

SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION

CALL

					~پ					T	Mh	•		•
31. INITIAL PR	ODUCTION					INT	ERVAL A (As sho	wn in item #26)						
DATE FIRST PE	RODUCED:		DATE:			HOURS TESTED	D:	TEST PRODU	CTION		GAS MCF:	WATER -	- BBL:	PROD. METHOD:
8/12/200	5	8/1	2/2005	5		2	40	RATES: →		492	0) 0)	Flowing
CHOKE SIZE:	TBG. PRES	s. csg.	PRESS.	API GR		BTU - GAS	GAS/OIL RATIO		CTION		GAS - MCF:	WATER -		INTERVAL STATUS:
16/64	170		0	40	.00	0	0	RATES: →		492	0	C	<u> </u>	Producing
						INT	ERVAL B (As sho	wn in item #26)						
DATE FIRST PF	RODUCED:	TEST	DATE:			HOURS TESTED	D:	TEST PRODUC RATES: →	CTION	OIL - BBL:	GAS MCF:	WATER -	- BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRES	s. csg.	PRESS.	API GR	AVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODU RATES: →	CTION	OIL - BBL:	GAS - MCF:	WATER -	- BBL:	INTERVAL STATUS:
						INTI	ERVAL C (As sho	wn in item #26)						· L .
DATE FIRST PE	RODUCED:	TEST	DATE:			HOURS TESTED);	TEST PRODUC RATES: →	CTION	OIL – BBL:	GAS - MCF:	WATER -	- 88L:	PROD. METHOD:
CHOKE SIZE:	TBG. PRES	s. Csg.	PRESS.	API GR	AVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODU RATES: →	CTION	OIL - BBL:	GAS - MCF:	WATER -	- BBL:	INTERVAL STATUS:
	-,*			-	-	INTI	ERVAL D (As shor	wn in item #26)				<u> </u>		
DATE FIRST PE	RODUCED:	TEST	DATE:	-		HOURS TESTED	D:	TEST PRODUC	CTION	OIL - BBL:	GAS - MCF:	WATER -	- BBL:	PROD. METHOD:
								RATES: →						
CHOKE SIZE:	TBG. PRES	s. csg.	PRESS.	API GRA	AVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODU RATES: →	CTION	OIL - BBL:	GAS - MCF:	WATER -	- BBL:	INTERVAL STATUS:
32. DISPOSITIO	on of gas (s (gas too			-	.)	<u> </u>	•			<u>.</u>		<u> </u>		· · · · · · · · · · · · · · · · · · ·
33. SUMMARY									34	4. FORMATION (Log) MARKERS:			
Show all imports tested, cushion of							ı tests, including de	pth interval						
Formati	on	Top (MD)		ottom VID)		Descript	tions, Contents, etc			 	Name		(Top Measured Depth)
Navajo		6,303	6,	767	Oil &	water			1	Arapien Twin Creek Navaio				0 5,895 6,303
											*			

35. ADDITIONAL REMARKS (include plugging procedure)

36.	I nereby certify tha	it the foregoing and	attached information i	s complete and correct as	s determined from al	l available records.

NAME (PLEASE PRINT) JOHN VIONA SIGNATURE

Manager of Geology

8/29/2005 DATE

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

** ITEM 24: Cement Top - Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to:

Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210 Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940 RECEIVED

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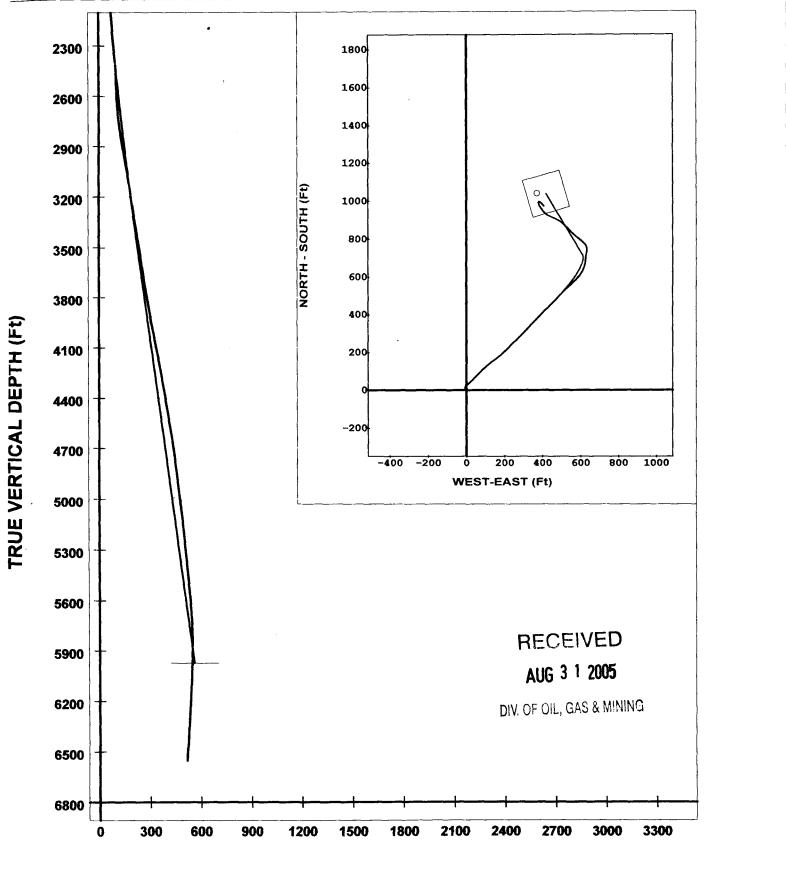
DIV. OF OIL, GAS & MINING

CONFIDENTIAL

^{*} ITEM 20: Show the number of completions if production is measured separately from two or more formations.

Company: Wolverine Oil & Gas Co or Utah, LLC Lease/Well: KMR 17-6
Location: Covenant Field
State/Country: Sevier Co. Ut.





-- 17-6 Plan 3 Deg. VERTICAL SECTION (Ft) @ 322.00° "-- 17-6 ST WORK

Job Number: WYL0505D058

State/Country: Sevier Co. Ut.

Company: Wolverine Oil & Gas Co of Utah, LL:Declination: 12.56

Lease/Well: KMR 17-6

Grid: **Location: Covenant Field** File name: C:\MARSHA~1\ENDOFW~1\WOLVER~1\KMR#17~1\17

Rig Name: Unit 111

Date/Time: 12-Jul-05 / 14:07

RKB:

Curve Name: 17-6 ST WORK

G.L. or M.S.L.:

WINSERVE SURVEY CALCULATIONS

Minimum Curvature Method Vertical Section Plane 322.00 Vertical Section Referenced to Wellhead Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	inci Angle Deg	Drift Direction Deg	True Vertical Depth	Course Length FT	Vertical Section FT	N-S FT	E-W FT	Dogleg Severity Deg/100	BUILD RATE Deg/100	WALK RATE Deg/100	TFO Deg	
.00	.00	.00	.00		.00	.00	.00	.00	.00	.00	-90.00	
.00 173.00	2.70	322.50	172.94	173.00	4.08	3.23	-2.48	1.56	1.56	-21.68	3.99	
203.00	3.60	323.50	202.89	30.00	5.72	4.55	-2. 4 6 -3.47	3.01	3.00	3.33	-11.86	
233.00	4.50	323.30	232.82	30.00	7.84	6.22	-3.47 -4.77	3.05	3.00	-8.00	78.64	
255.00 266.00	5.40	345.00	265.70	33.00	10.57	8:73	-5.99	6.75	2.73	-6.00 72.42	95.23	
200.00	3.40	345.00	205.70	33.00	10.57	6.73	-0.99	0.75	2.13	12.42	90.23	
296.00	5.40	355.50	295.56	30.00	13.04	11.50	-6.46	3.29	.00	35.00	121.41	
326.00	5.00	4.10	325.44	30.00	15.19	14.21	-6.48	2.92	-1.33	28.67	110.44	
357.00	4.70	29.30	356.33	31.00	16.68	16.67	<i>-</i> 5.76	6.88	97	81.29	49.17	
388.00	5.50	38.20	387.21	31.00	17.53	18.94	-4.22	3.62	2.58	28.71	5.73	
419.00	6.80	39.30	418.03	31.00	18.28	21.53	-2.14	4.21	4.19	3.55	23.75	
448.00	8.30	43.80	446.78	29.00	18.96	24.37	.40	5.56	5.17	15.52	32.71	
478.00	9.80	49.30	476.40	30.00	19.39	27.60	3.83	5.77	5.00	18.33	-4.24	
509.00	11.10	48.80	506.89	31.00	19.68	31.29	8.08	4.20	4.19	-1.61	-9.09	
539.00	12.30	47.90	536.27	30.00	20.07	35.33	12.62	4.05	4.00	-3.00	-8 .07	
569.00	13.10	47.40	565.53	30.00	20.57	39.77	17.49	2.69	2.67	-1.67	-28.78	
000 00	40.00	4E 00	595.68	31.00	21.25	44.73	22.73	2.56	2.26	-5.16	-42 .75	
600.00	13.80	45.80	624.76	30.00	21.25	50.03	27.87	3.99	3.00	-3.16 -10.67	-16.59	
630.00	14.70	42.60 41.20	681.65	59.00	25.26 25.01	61.66	38.30	2.29	2.20	-10.07	37.70	
689.00	16.00		740.14	61.00	25.01 27.85	74.42	50.01	2.29	1.64	-2.37 4.26	113.68	
750.00	17.00	43.80			30.00	86.91	62.52	1.29	49	4.20 4.10	-90.10	
811.00	16.70	46.30	798.52	61.00	30.00	00.91	02.52	1.29	49	4.10	-90.10	
874.00	16.70	46.10	858.87	63.00	31.83	99.44	75.58	.09	.00	32	90.43	
964.00	16.70	47.00	945.07	90.00	34.28	117.22	94.36	.29	.00	1.00	82.39	
1056.00	16.90		1033.15	92.00	35.64	134.64	114.43	1.31	.22	4.46	163.88	
1150.00	16.80		1123.11	94.00	36.05	151.73	135.65	.11	11	.11	67.00	
1245.00	17.10		1213.98	95.00	35.88	168.64	157.58	.77	.32		-108.05	

Measured Depth	Incl Angle	Drift Direction		Course Length	Vertical Section	N-S	E-W	Dogleg Severity	BUILD RATE	WALK RATE	TFO	
FT	Deg	Deg	Depth	FT	FT	FT	FT	Deg/100	Deg/100	Deg/100	Deg	
1339.00	16.80	50.00	1303.90	94.00	35.99	185.59	179.10	1.13	32	-3.72	-125.51	
1434.00	16.10	46.30	1395.02	95.00	37.77	203.52	199.14	1.33	74	-3.89	-54.15	
1528.00	16.70	43.50	1485.19	94.00	41.07	222.32	217.86	1.06	.64	-2.98	5.66	
1622.00	17.30		1575.09	94.00	45.08	242.22	236.81	.64	.64	.21	76.82	
1717.00	17.50		1665.74	95.00	48.54	262.30	256.90	.84	.21	2.74	1.91	
***************************************	77.00	40.00	1000.14	00.00	-10.0-1	202.00	200.00	,	/	,	7.01	
1812.00	19.50	46.50	1755.83	95.00	51.48	283.09	278.73	2.11	2.11	.21	-11.48	
1906.00	22.10	45.10	1843.69	94.00	55.10	306.37	302.64	2.82	2.77	-1.49	-29.49	
2063.00	24.90	41.40	1987.66	157.00	64.74	352.02	345.42	2.02	1.78	-2.36	40.04	
2125.00	25.90	43.30	2043.67	62.00	69.18	371.67	363.34	2.08	1.61	3.06	23.93	
2189.00	26.30	43.70	2101.15	64.00	73.35	392.09	382.72	.68	.63	.62	23.62	
0050 00	07.00	4E 40	2457.25	62.00	77.42	440 EG	402.77	2.50	2.38	2.22	-4.28	
2252.00	27.80		2157.25	63.00	77.13	412.56		2.59				
2346.00	29.10	44.90	2239.90	94.00	82.58	444.22	434.44	1.39	1.38	21	-54.96	
2440.00	30.00	42.40	2321.67	94.00	89.33	477.77	466.42	1.62	.96	-2.66	-169.37	 1
TIE-IN												
2534.00	28.00	41.60	2403.88	94.00	97.23	511.63	496.92	2.17	-2.13	85	110.95	
L												
2629.00	26.90		2488.21	95.00	102.35	542.38	527.98	3.82	-1.16	7.89	166.66	
2668.00	25.80		2523.16	39.00	103.13	553.65	541.12	2.90	-2.82		-173.97	
2685.00	25.00	49.50	2538.52	17.00	103.44	558.37	546.67	4.73	-4.71		-151.49	
2763.00	22.20	45.40	2609.99	78.00	105.85	579.43	569.71	4.16	-3.59	-5.26	-129.22	
2857.00	20.40	38.60	2697.58	94.00	111.69	604.71	592.58	3.25	-1.91	-7.23	-129.86	
			2786.28	94.00	121.03	630.33	610.14	3.82	-2.23		-125.35	
2951.00	18.30								-2.23 -2.66		-120.64	
3045.00	15.80		2876.20	94.00	134.60	655.59	620.49	5.69				
3140.00	14.60		2967.89	95.00	151.49	680.11	624.43	2.86	-1.26	-9.79	157.44	
3235.00	13.80	5.70	3059.98	95.00	168.54	703.32	626.45	.92	84	1.47	123.11	
						•						
3329.00	12.60	15.40	3151.51	94.00	182.76	724.36	630.29	2.68	-1.28	10.32	-120.79	
3423.00	11.30	1.30	3243.49	94.00	196.01	743.46	633.22	3.39	-1.38		-116.26	
3518.00	10.20	341.80	3336.85	95.00	211.13	760.76	630.80	3.98	-1.16		-113.21	
3613.00	9.40	313.40	3430.52	95.00	226.72	774.09	622.53	5.10	84		-105.05	
3707.00	9.20		3523.29	94.00	241.59	783.96	611.01	1.00	21	-6.06	161.89	
3707.00	3.20	307.70	3323.23	J-7.00	241.00	, 00.00	011.01	7.00	,	0.00		
											40.05	
3801.00	8.40		3616.18	94.00	255.58	792.92	599.77	.90	85	1.91	18.85	
3896.00	9.20		3710.06	95.00	269.81	802.34	588 .70	.89	.84	1.79	30.45	
3990.00	9.60	312.60	3802.80	94.00	284.93	812.59	577.27	.49	.43	1.49	16.01	
4085.00	9.90	313.10	3896.42	95.00	300.81	823.54	565.48	.33	.32	.53	14.35	
4179.00	10.70	314.20	3988.91	94.00	317.44	835.14	553.32	.88	.85	1.17	128.05	
4274 00	10.60	214 00	4082.27	95.00	334.85	847.46	540.81	.17	11	.74	180.00	
4274.00	10.60		4082.27		351.79	859.51	528.72	.53	53	.00	5.21	
4369.00	10.10			95.00			526.72 515.70	.39	33 .39	.19	-149.75	
4472.00	10.50		4277.07	103.00	370.07	872.53	503.82	.39 1.13		-3.40	-90.19	
4566.00	9.60		4369.62	94.00	386.29	883.83			96 21		1.72	
4661.00	9.80	300.00	4463.28	95.00	401.58	893.16	490.92	2.12	.21	-12.53	1.12	
4755.00	10.40	300.10	4555.82	94.00	416.87	901.42	476.65	.64	.64		-120.36	
4850.00	9.90		4649.33	95.00	432.08	909.13	461.81	1.13	53	-5.68	-174.96	
4945.00	8.70		4743.08	95.00	445.69	915.47	447.83	1.27	-1.26		-155.92	
5029.00	7.80		4826.21	84.00	456.18	920.09	436.71	1.19	-1.07	-3.57	120.33	
5123.00	7.30		4919.40	94.00	467.13	925.24	425.51	1.19	53	8.09	103.42	
J125.00	7.50	230.00	10.10.10	2 1.50		·	- -					

											•		
	Measured Depth	Incl Angle	Drift Direction	True n Vertical	Course Length	Vertical Section	N-S	E-W	Dogleg Severity	BUILD RATE	WALK RATE	TFO	
	FT	Deg	Deg	Depth	FŤ	FT	FT	FT	Deg/100	Deg/100	Deg/100	Deg	
	5218.00	7.10	311.60	5013.66	95.00	478.44	932.03	415.82	1.72	21	13.68	116.74	
	5312.00	6.70	319.50	5106.98	94.00	489.64	940.05	407.91	1.09	43	8.40	153.90	
	5406.00	6.10	322.30	5200.39	94.00	500.11	948.18	401.30	.72	64	2.98	144.05	
	5500.00	5.40	327.90	5293.92	94.00	509.50	955.87	395.89	. 9 5	74	5.96	160.49	
	5595.00	5.10	329.10	5388.52	95.00	518.14	963.28	391.35	.34	32	1.26	-22.36	
	5690.00	6.00	325.60	5483.08	95.00	527.29	971.00	386.37	1.01	.95	-3.68	129.70	
	5784.00	5.20	337.90	5576.63	94.00	536.29	979.00	381.99	1.53	85	13.09	144.01	
	5879.00	4.10	350.10	5671.32	95.00	543.42	986.34	379.79	1.55	-1.16	12.84	152.91	
	5973.00	3.00	1.50	5765.14	94.00	548.29	992.11	379.28	1.38	-1.17	12.13	145.50	
	6060.00	1.70	54.80	5852.07	87.00	549.98	995.13	380.39	2.77	-1.49	61.26	92.86	
	6162.00	2.30	100.10	5954.01	102.00	548.38	995.64	383.64	1.60	.59	44.41	97.56	
	6256.00	2.50	131.90	6047.94	94.00	544.96	993.94	387.03	1.41	.21	33.83	-4.64	
	6351.00	3.10	131.00	6142.82	95.00	540.40	990.87	390.51	.63	.63	95	24.86	
	6445.00	3.30	132.60	6236.68	94.00	535.23	987.37	394.42	.23	.21	1.70	119.11	
	6539.00	3.20	136.00	6330.52	94.00	529.96	983.66	398.23	.23	11	3.62	-2.23	
	6634.00	3.90	135.60	6425.34	95.00	524.11	979.44	402.33	.74	.74	42	126.31	
	6728.00	3.50	145.80	6519.15	94.00	518.07	974.78	406.18	.82	43	10.85	115.02	
T	PROJEC												7
1	6764.00	3.40	149.70	6555.08	36.00	515.91	972.95	407.34	.71	28	10.83	115.63	}
ĮĻ	0104.00	J.40	173.70	0000.00	30.00	J 1J.51	312.30	407.34	/ \	20	10.03	110.00	

WOLVERINE GAS & OIL COPORATION

KING MEADOW RANCH #17-6 NE/NW SEC.17.T23S,R1W SEVIER CO., UT

> RECEIVED AUG 3 1 2005

GEOLOGIC REPORT

ON

KING MEADOW RANCH #17-6 NW/SW SEC.,T23S,R1S SEVIER CO., UT

FOR

WOLVERINE GAS & OIL CORPORATION ONE RIVER FRONT PLAZA 55 CAMPAU NW GRAND RAPIDS, MI 49503-2616

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WELL DATA SUMMARY

WELL NAME KING MEADOW RANCH #17-6

OPERATOR WOLVERINE GAS & OIL CORP

SURFACE LOCATION NF/NW SEC.17, T23S, R1W

SEVIER COUNTY, UT

API# 043-041-30037

WELL CLASSIFICATION DEVELOPMENT COVENANT

FIELD

DRILLING CONTRACTOR UNIT #111

WELL LICENSE # 043-041-30037

ELEVATION - GROUND LEVEL 5736'

KELLY BUSHING 5753'

SPUD DATE 5-15-05

SURFACE CASING 2053' OF 13 3/8

INTERMEDIATE CASING 6078' OF 9 5/8

PRODUCTION CASING 6764' OF 7"

HOLE SIZE 17 ½ ", 12 ¼", 8 ½"

SAMPLE INTERVAL 2720' - 6764'

GAS DETECTION 2718' - 6764

OPEN HOLE LOGS GR,SP,CAL.,HRI,SDL/DSN,EMI,MRIL

MUD TYPE SATURATED SALT MUD, FLOZAN

WELL STATUS AWAITING COMPLETION

FORMATION TOPS

Kelly Bushing 5753'

Formation Prog.(tvd) Spl. (md) Spl. Top(tvd) Log Top(md) Log Top(tvd) Sub Sea

Arapien Surface

Twin Creek 5912 5704

Navajo 5933 6321 6112 6303 6094 -341

FORMATION EVALUATION

WOLVERINE GAS & OIL CORPORATION KINGS MEADOW RANCHES #17-6 NE/NW SEC. 17,T235, R1W SEVIER COUNTY, UT

The King Meadow Ranch #17-6 was side tracked from under the surface casing set for the Wolverine Federal #8-1. The Wolverine Federal #8-1 was plugged because the Navajo pay zone would have come in below the oil/water contact. Side track off the cement plug started at 2718' on May 18, 2005. Crews caught 30' lagged samples from 2720' to 6764'. Mud Gas was run over the same interval. A full suite of E-Logs was run including Dip Meter and MRIL.

NAVAJO 6303' MD 6094 TVD -341 SS

The Navajo was white, light red orange, clear, quartzose, fine to medium grained, sub angular, fair to poor sorted, clay matrix, silica cement, friable, 70-98% unconsolidated, brown oil stain, rainbows on the wash water, strong hydrocarbon odor, yellow to white oil fluorescence, yellow to white milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity.

CONCLUSION: Oil saturated oil reservoir-Awaiting Completion

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BIT RECORD

KINGS MEADOW RANCHES #17-6

LOCATION					
	T	ΔC	· 🛦	TI	

NE/NW SEC. 17, T235, R1W

SURFACE CASING

2053' OF 13 3/8"

SPUD DATE

5-15-05

TD DATE

5-27-05

BIT	1	2	3	4
SIZE	12 1/4	12 1/4	12 1/4	8 1/2
MAKE	RTC	RTC	RTC	SEC
TYPE	HP43AKPR	EM551H	HP53A	EBX5305
SERIAL#	B73489	P70649	PB4486	10686493
JETS	3X24	3X24	3X24	3X12
OUT @	4519	5079	6110	6765
FOOTAGE	2415	560	1031	655
HOURS	95	27 1/2	51 1/2	28 1/2
ACC HRS	95	122 1/2	174	202 1/2
WT	40	40	50	30
RPM	0/30	0/30	0/30	0/30
PP	1900	1900	2000	900
MUD WT	10.4	10.4	10.7	8.4
VIS	31	31	31	33

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DAILY DRILLING SUMMARY

DATE	DEPTH	PROG.	HRS	MUD	VIS	WL	PH	ACTIVITY
5-15-05	2686	NIL	NIL	10.5	37	NC	11.0	PLUGGING BACK
5-16-05	2940	254	11 1/2	10.3	33	NC	10.5	TIME DRILL, DRILL

5-17-05	3380	450	23 1/2	10.1	32	NC	11.0	DRILL
5-18-05	3917	537	23	10.2	30	NC	10.5	DRILL
5-19-05	4519	602	23 1/2	10.4	31	NC	10.0	DRILL
5-20-05	4944	425	15 1/2	10.4	31	NC	9.5	DRILL, TRIP BIT
5-21-05	5107	163	14 1/2	10.4	31	NC	10.0	RIH, DRILL
5-22-05	5684	577	23 1/2	10.4	32	NC	10.0	DRILL
5-23-05	6075	391	23 1/2	10.4	32	NC	10.0	DRILL
5-24-05	6110	35	2	10.7	31	NC	10.5	DRILL, RUN 9 5/8"
5-25-05	6110	NIL	NIL	8.7	29	11	9.0	CEMENT, PRES, TEST
5-26-05	6418	308	13 1/2	8.4	33	10.5	9.5	DRILL,COND. MUD,Drill
5-27-05	6765	347	13	8.4	32	7.0	9.5	DRILL
5-28-05	6765	NIL	NIL	8.4	33	7.5	9.0	Logging w/ Hallibiulon

DEPTH	INCLINATION	DIRECTION
173.00	2.70	322.50
203.00	3.60	323.50
233.00	4.50	321.10
266.00	5.40	345.00
296.00	5.40	355.50
326.00	5.00	4.10
357.00	4.70	29.30
388.00	5.50	38.20
419.00	6.80	39.30
448.00	8.30	43.80
478.00	9.80	49.30
509.00	11.10	48.80
539.00	12.30	47.90
569.00	13.10	47.40
600.00	13.80	45.80
630.00	14.70	42.60
689.00	16.00	41.20
750.00	17.00	43.80
811.00	16.70	46.30
874.00	16.70	46.10
964.00	16.70	47.00
1056.00	16.90	51.10
1150.00	16.80	51.20
12.45.00	17.10	53.50
DEPTH	INCLINATION	DIRECTION
1339.00	16.80	50.00
1434.00	16.10	46.30
1528.00	16.70	43.50
1622.00	17.30	43.70
1717.00	17.50	43.60

1812.00	19.50	46.50
1906.00	22.10	45.10
2063.00	24.90	41.40
2125.00	25.90	43.30
2189.00	26.30	43.70
2252.00	27.80	45.10
2346.00	29.10	44.90
2440.00	30.00	42.40
2534.00	28.00	41.60
2629.00	26.90	49.10
2668.00	25.80	49.70
2685.00	25.00	49.50
2700.00	24.30	49.50
2731.00	23.10	48.10
2763.00	22.20	45.40
2857.00	20.40	38.60
2951.00	18.30	29.80
3045.00	15.80	13.60
3045.00	15.80	13.60
3140.00	14.60	4.30
3235.00	13.80	5.70
3329.00	12.60	15.40
3423.00	11.30	1.30
3518.00	10.20	341.80
3518.00	10.20	341.80
3613.00	9.40	313.40
DEPTH	INCLINATION	DIRECTION
3707.00	9.20	307.70
3801.00	8.40	309.50
3869.00	9.20	311.20
3990.00	9.60	312.60
4085.00	9.90	313.10

4085.00	9.90	313.10
4179.00	10.70	314.20
4179.00	10.70	341.20
4274.00	10.60	314.90
4369.00	10.10	314.90
4472.00	10.50	315.10
4566.00	9.60	311.60
4661.00	9.80	300.00
4755.00	10.40	300.10
4850.00	9.90	294.70
4945.00	8.70	294.00
4945.00	8.70	294.00
5029.00	7.80	291.00
5123.00	7.30	298.60
5218.00	7.10	311.60
5312.00	6.70	319.50
5406.00	6.10	322.30
5500.00	5.40	327.90
5595.00	5.10	329.10
5690.00	6.00	325.60
5784.00	5.20	337.90
5879.00	4.10	350.10
5973.00	3.00	1.50
6060.00	1.70	54.80
6110.00	1.70	54.80
6162.00	2.30	100.10
DEPTH	INCLINATION	DIRECTION
6256.00	2.50	131.90
6351.00	3.10	131.00
6445.00	3.30	132.60
6539.00	3.20	136.00
6634.00	3.90	135.60

6728.00	3.50	145.80
6764.00	3.40	149.70

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SAMPLE DESCRIPTIONS

Wolverine Gas & Oil Corporation Kings Meadow Ranch #17-6

2720-50 SHALE- 10% Red brown, silty, blocky, firm, calcareous.

LIMESTONE- 80% Light to medium gray, lithographic, argillaceous, mudstone. 2750-80 SHALE- 20% Red brown, arenaceous, silty, soft to firm, calcareous, abundant potash, salt casts. SILTSTONE- 10% White, light gray, arenaceous, argillaceous, slightly calcareous. LIMESTONE-80% Light to medium gray, lithographic, argillaceous, mudstone. 2780-2810 SHALE- 30% White, light gray, soft, limy, grades to argillaceous limestone. SILTSTONE- 20% White, light gray, arenaceous, limy, anhydritic. LIMESTONE- 50% Light to medium gray, argillaceous, lithographic, mudstone. 2810-40 SHALE- 20% White, light gray, soft, limy, grades to argillaceous limestone. SILTSTONE- 10% White, light gray, arenaceous, limy, anhydritic. LIMESTONE-70% Light to medium gray, argillaceous, lithographic, mudstone. 2840-70 SILTSTONE- 10% White, light gray, arenaceous, limy, anhydritic. LIMESTONE-70% Light to medium gray, argillaceous, lithographic, mudstone. LIMESTONE- 90% Light to medium gray, argillaceous, lithographic, mudstone. 2870-2900 ANHYDRITIC- 10% White, soft, chalky, sucrosic texture. 2900-30 LIMESTONE- 40% Light to medium gray, argillaceous, lithographic, mudstone, crystalline in part. SILTSTONE- 30% White, light gray, arenaceous, limy, anhydritic. ANHYDRITIC-30% White, chalky, sucrosic texture. 2930-60 LIMESTONE- 40% Light to medium gray, argillaceous, lithographic, mudstone, crystalline ANHYDRITIC-30% White, chalky, sucrosic texture. 11 SHALE- 30% Light gray, limy, soft to firm, chalky. 2960-90

LIMESTONE- 70% Light to medium gray, argillaceous, lithographic, mudstone.

LIMESTONE- 90% Light to medium gray, argillaceous, lithographic, mudstone.

LIMESTONE- 40% Light to medium gray, argillaceous, lithographic, mudstone.

ANHYDRITIC- 10% White, soft, chalky.

2990-3020

3020-50

SILTSTONE- 10% White, chalky, anhydritic, firm, arenaceous.

	SILTSTONE- 60% White, arenaceous, argillaceous, anhydritic.
3050-80	LIMESTONE- 10% Light to medium gray, argillaceous, lithographic, mudstone. SILTSTONE- 90% White, arenaceous, argillaceous, anhydritic.
3080-3110	LIMESTONE- 80% Light to medium gray, crystalline, argillaceous, anhydritic. SILTSTONE- 10% White, arenaceous, argillaceous, anhydritic. ANHYDRITIC- 10% White, soft, chalky
3110-40	LIMESTONE- 20% Light to medium gray, crystalline, argillaceous, anhydritic. SILTSTONE- 20% White, arenaceous, argillaceous, anhydritic. SANDSTONE- 60% White, clear, quartzose, fine to medium grained, sub angular to rounded, fair to poorly sorted, unconsolidated.
3140-70	SHALE- 10% Red brown, silty, blocky, slightly calcareous. LIMESTONE- 10% Light to medium gray, crystalline, argillaceous, anhydritic. SILTSTONE- 10% White, arenaceous, argillaceous, anhydritic. SANDSTONE- 70% White, clear, quartzose, fine to medium grained, sub angular to rounded, fair to poorly sorted, unconsolidated.
3170-3200	LIMESTONE- 70% Light to medium gray, crystalline, lithographic, mudstone. SILTSTONE- 30% White, Light gray, arenaceous, argillaceous, anhydritic.
3200-30	SHALE- 10% Red brown, soft to firm, silty, calcareous. SILTSTONE- 70% White, Light gray, arenaceous, argillaceous, anhydritic. LIMESTONE- 20% Light to medium gray, crystalline, lithographic, mudstone.
3230-60	LIMESTONE-80% Light to medium gray, crystalline, lithographic, mudstone. ANHYDRITIC-10% White, soft, chalky. SILTSTONE-10% White, light gray, arenaceous, argillaceous.
3260-90	LIMESTONE-100% Light to medium gray, argillaceous, lithographic, mudstone, 10% soft, chalky.
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3290-3320	LIMESTONE-100% Light to medium gray, argillaceous, lithographic, mudstone, 10% soft, chalky, silty in part.
3320-50	LIMESTONE-100% Light to medium gray, medium to dark gray, argillaceous, lithographic, mudstone, 10%, soft, chalky, silty in parts.
3350-80	LIMESTONE-100% Medium to dark gray, crystalline, lithographic, argillaceous, mudstone, abundant anhydrite fracture fill.

3380-3410	LIMESTONE-100% Light to medium gray brown, crystalline, lithographic, mudstone.
3410-40	LIMESTONE-100% Light to medium gray brown, crystalline, lithographic, mudstone.
3440-70	LIMESTONE-100% Light to medium gray brown, crystalline, lithographic, mudstone, abundant white, calcite and anhydrite fracture fill.
3470-3500	LIMESTONE-100% Light to medium gray brown, crystalline, lithographic, mudstone, abundant white, calcite and anhydrite fracture fill.
3500-30	LIMESTONE-100% Light to medium gray brown, crystalline, lithographic, mudstone.
3530-60	LIMESTONE-100% Light to medium gray brown, crystalline, lithographic, mudstone.
3560-90	LIMESTONE-100% Light to medium gray brown, crystalline, lithographic, mudstone, 10% soft, chalky, abundant calcite fracture fill.
3590-3620	LIMESTONE-100% Light to medium gray brown, crystalline, lithographic, mudstone.
3620-50	LIMESTONE-100% Light to medium gray brown, crystalline, lithographic, mudstone, abundant calcite fracture fill, soft chalky in part.
3650-80	LIMESTONE-100% Light to medium gray brown, crystalline, lithographic, mudstone abundant, calcite fracture fill, soft chalky in part.
3680-3710	LIMESTONE-100% Light to medium gray brown, crystalline, lithographic, mudstone abundant, calcite fracture fill.
3710-40	LIMESTONE-70% Light to medium gray brown, crystalline, lithographic, mudstone, abundant calcite fracture fill. SILTSTONE-30% White, light gray, clay filled, limy, firm.
3740-70	LIMESTONE-100% Light to medium gray brown, crystalline, lithographic, mudstone, abundant calcite fracture fill, light gray, soft, chalky 30%.
3770-3800	LIMESTONE-70% Light to medium gray brown, crystalline, lithographic, mudstone abundant, calcareous fracture fill, Light gray, soft, chalky 30% SILTSTONE-30% White, Light gray, clay filled, limy, firm
3800-30	LIMESTONE-80% Light to medium gray brown, crystalline, lithographic, mudstone, abundant calcite fracture fill, light gray, soft, chalky 30%. SILTSTONE-20% White, light gray, clay filled, limy, firm.
3830-60	LIMESTONE-100% Light to medium gray, silty, earthy, lithographic, mudstone.

3860-90	LIMESTONE-100% Light to medium gray, silty, earthy, lithographic, mudstone.
3890-3920	LIMESTONE-20% Light to medium gray, silty, earthy, lithographic, mudstone. SALT-80% White, pink, clear, crystalline, translucent.
3920-50	SALT-100% White, clear, pink, crystalline, translucent.
3950-80	SALT-100% White, clear, pink, crystalline, translucent.
3980-4010	SALT-100% White, clear, pink, crystalline, translucent.
4010-40	SALT-100% White, clear, pink, crystalline, translucent.
4040-70	SALT-100% White, clear, pink, crystalline, translucent.
4070-4100	SALT-100% White, clear, pink, crystalline, translucent.
4100-30	SHALE-20% Red orange, gray green, blocky, waxy, smooth, firm. SALT-80% White, clear, pink, crystalline, translucent.
4130-60	SHALE-10% Red orange, gray green, blocky, waxy, smooth, firm, silty. SALT-90% White, clear, pink, crystalline, translucent.
4160-90	SALT-100% Light red orange, pink, white, clear, translucent, crystalline.
4190-4220	SHALE-10% Red brown, red orange, soft, chalky, firm. SALT-90% Light red orange, pink, white, clear, translucent, crystalline.
4220-50	SALT-100% Light red orange, pink, white, clear, translucent, crystalline.
4250-80	SALT-100% Light Red orange, pink, White, clear, translucent, crystalline.
4280-4310	SALT-100% Light Red orange, pink, White, clear, translucent, crystalline. 14
4310-40	SALT-100% Light red orange, pink, white, clear, translucent, crystalline.
4340-70	SALT-100% Light red orange, pink, clear, translucent, crystalline.
4370-4400	SALT-90% Light red orange, pink, clear, translucent, crystalline. LIMESTONE-10% Light to medium gray, lithographic, mudstone.
4400-30	LIMESTONE-100% Light to medium gray brown, gray brown, light brown, mottled, crystalline, lithographic, mudstone.

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4430-60	LIMESTONE-100% Light to medium gray, silty in part, chalky in part, crystalline, lithographic, mudstone.
4460-90	LIMESTONE-90% White, light gray, silty, light to medium gray, lithographic, mudstone, crystalline in part. SILTSTONE-10% White, light gray, arenaceous, limy, clay filled.
4490-4520	LIMESTONE-80% White, light gray, silty, light to medium gray, lithographic, mudstone, crystalline in part. SILTSTONE-20% White, light gray, arenaceous, limy, clay filled.
4520-50	SHALE-20% Light gray, gray green, soft to firm, calcareous, blocky, smooth. SILTSTONE-10% White, light gray, arenaceous, limy, argillaceous. LIMESTONE-70% Light to medium gray, silty, crystalline, lithographic, mudstone.
4550-80	SALT-70% White, clear, crystalline. LIMESTONE-30% Light to medium gray, argillaceous, lithographic, mudstone.
4580-4610	SALT-90% White, clear, crystalline. LIMESTONE-10% Light to medium gray, argillaceous, lithographic, mudstone.
4610-40	SH-10% Red brown, blocky, firm, calcareous. SILTSTONE-20% White, light gray, soft to firm, arenaceous, calcareous. LIMESTONE-70% Light to medium gray, soft to firm, crystalline in part, chalky in part, lithographic, mudstone.
4640-70	SH-70% Red brown, blocky, firm, calcareous. LIMESTONE-30% Light to medium gray, soft to firm, crystalline in part, chalky in part, lithographic, mudstone.
4670-4700	SH-90% Red brown, blocky, firm, calcareous. LIMESTONE-10% Light to medium gray, soft to firm, crystalline in part, chalky in part, lithographic, mudstone.
4700-30	SH-70% Red brown, blocky, firm, calcareous LIMESTONE-30% Light to medium gray, soft to firm, crystalline in parts, chalky in parts lithographic, mudstone
4730-60	SALT-100% Red orange, clear, crystalline, translucent.
4760-90	SALT-100% Red orange, pink, crystalline, translucent.
4790-4820	SALT-100% Red orange, pink, crystalline, translucent.
4820-50	SALT-100% Red orange, pink, crystalline, translucent.

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4850-80	SALT-100% Red orange, pink, crystalline, translucent.
4880-4910	SALT-100% Red orange, pink, crystalline, translucent.
4910-40	SALT-100% Red orange, pink, crystalline, translucent.
4940-70	SHALE-50% Red orange, gray, gray green, silty, blocky, smooth, calcareous. SILTSTONE-30% White, Light gray, arenaceous, argillaceous, limy, firm. LIMESTONE-20% Light to medium gray, argillaceous, earthy, lithographic, mudstone.
4970-5000	SHALE-50% Red brown, silty, slightly calcareous, firm, white, gray, limy, soft. SILTSTONE-10% Light gray, white, arenaceous, argillaceous, firm. SANDSTONE-40% Light gray, fine grained, sub angular, fair to poorly sorted, clay filled.
5000-30	LIMESTONE-60% Light to medium gray, lithographic, mudstone. SILTSTONE-40% Light gray, arenaceous, limy, firm.
5030-60	LIMESTONE-30% Light to medium gray, lithographic, mudstone. SILTSTONE-70% Light gray, arenaceous, limy, firm.
5060-90	LIMESTONE-100% Light to medium gray brown, crystalline, dense, lithographic, mudstone.
5090-5120	LIMESTONE-80% Light to medium gray, crystalline, argillaceous, lithographic, silty, mudstone. SILTSTONE-20% Light gray, white, argillaceous, limy, blocky, firm.
5120-50	LIMESTONE-70% Light to medium gray, crystalline, argillaceous, lithographic, silty, mudstone. SILTSTONE-30% Light gray, white, argillaceous, limy, blocky, firm.
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5150-80	SALT-70% White, pink, crystalline, translucent. LIMESTONE-30% Light to medium gray, crystalline, argillaceous, lithographic, silty, mudstone.
5180-5210	SALT-80% White, pink, crystalline, translucent. LIMESTONE-20% Light to medium gray, crystalline, argillaceous, lithographic, silty, mudstone.
5210-40	SALT-100% White, pink, crystalline, translucent.

SALT-100% White, pink, crystalline, translucent.

5240-70

5270-5300	SALT-100% White, pink, crystalline, translucent.
5300-30	SALT-100% White, pink, crystalline, translucent.
5330-30	SALT-100% White, pink, crystalline, translucent, muddy, potash.
5360-90	SALT-100% White, pink, crystalline, translucent, muddy, potash.
5390-5420	SALT-100% White, pink, crystalline, translucent, muddy, potash.
5420-50	SALT-100% White, pink, crystalline, translucent, muddy, potash
5450-80	SALT-100% White, pink, crystalline, translucent, muddy, potash.
5480-5510	${\bf LIMESTONE-100\%\ Light\ to\ medium\ gray\ brown,\ crystalline,\ chalky,\ soft\ to\ hard,}\\ lithographic,\ mudstone.$
5510-40	SHALE-20% Light gray, soft, chalky, limy. LIMESTONE-80% Light to medium gray brown, crystalline, lithographic, mudstone.
5540-70	SHALE-40% Light gray, white, soft, chalky, earthy, limy. LIMESTONE-60% Light to medium gray brown, crystalline, dense, lithographic, mudstone, abundant anhydrite fracture fill.
5570-5600	SHALE-60% Light gray, white, soft, chalky, earthy, limy. LIMESTONE-40% Light to medium gray brown, crystalline, dense, lithographic, mudstone, abundant anhydrite fracture fill.
	17
	17
5600-30	SHALE-40% Light gray, soft, earthy, limy. LIMESTONE-60% Light to medium gray brown, crystalline, dense, lithographic, mudstone.
5630-60	SHALE-30% Light gray, soft, earthy, limy, light gray, silty, soft, chalky. LIMESTONE-70% Light to medium gray brown, crystalline, dense, lithographic, mudstone.
5660-90	SHALE-30% Light gray, soft, earthy, limy, light gray, silty, soft, chalky. LIMESTONE-70% Light to medium gray brown, crystalline, dense, lithographic,

5690-5720 SHALE-30% Light to medium gray, earthy, limy.

mudstone.

5720-50	SHALE-20% Light to medium gray, earthy, limy. LIMESTONE-10% Light to medium gray, argillaceous, earthy, lithographic, mudstone. ANHYDRITE-70% White, salt casts, chalky, crystalline.
5750-80	LIMESTONE-30% Light to medium gray, argillaceous, earthy, lithographic, mudstone. ANHYDRITE-70% White, salt casts, chalky, crystalline.
5780-5810	ANHYDRITE-80% White to chalky, crystalline, sandy, silty. LIMESTONE-20% Light to medium gray, argillaceous, earthy, lithographic, mudstone.
5810-40	SALT-100% White, pink, crystalline, translucent, muddy potash.
5840-70	SALT-60% White, pink, crystalline, translucent, muddy potash. SHALE-10% Light to medium gray, dolomitic, firm to hard, blocky. LIMESTONE-10% medium to dark gray, dolomitic, lithographic, mudstone. ANHYDRITE-10% White, chalky, crystalline, sandy, silty.
5870-5900	LIMESTONE-80% Light to medium gray, argillaceous, lithographic, mudstone. ANHYDRITIC-20% White, sucrosic, crystalline, chalky.
5900-30	LIMESTONE-90% Light to medium gray, argillaceous, lithographic, mudstone. ANHYDRITIC-10% White, sucrosic, crystalline, chalky.
5930-60	$LIMESTONE-100\%\ Light\ to\ medium\ gray\ brown,\ crystalline,\ dense,\ oolitic,\ packstone\ to\ grainstone,\ mudstone\ matrix.$
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5960-90	LIMESTONE-100% White, light brown, mottled, gray brown, fossil fragments, oolitic in parts, packstone to grainstone, mudstone matrix, chalky in part.
5990-6020	LIMESTONE-100% Light gray brown, white, chalky in part, mottled, fossil fragments, pellets, packstone to grainstone in part, mudstone matrix.
6020-50	LIMESTONE-100% Light gray brown, white, chalky in part, mottled, fossil fragments, pellets, packstone to grainstone in part, mudstone matrix.
6050-80	LIMESTONE-100% Light to medium gray, argillaceous, lithographic, mudstone, white, chalky in part.
6080-6110	LIMESTONE-100% Light to medium gray, medium to dark gray, lithographic, mudstone.

 $LIMESTONE-30\%\ Light\ to\ medium\ gray,\ argillaceous,\ earthy,\ lithographic,\ mudstone.$ ANHYDRITE-40% White, salt casts, chalky, crystalline.

- 6110-40 LIMESTONE-100% \Medium to dark gray, argillaceous, lithographic, mudstone. 6140-70 LIMESTONE-100% White, light brown, mottled, very fine to micro crystalline, oolitic, dense, chalky, packstone to grainstone, mudstone matrix, tight, no show. 6170-6200 LIMESTONE-100% White, light brown, mottled, very fine to microcrystalline, oolitic, dense, chalky, packstone to grainstone, mudstone matrix, tight, no show. 6200-30 LIMESTONE-100% Light grayish brown, oolitic, very fine to microcrystalline, mudstone matrix, tight, no show. 6230-60 LIMESTONE-100% Light grayish brown, oolitic, very fine to microcrystalline, mudstone matrix, tight, no show, abundant white calcite fracture in fill. 6260-90 LIMESTONE-100% Tan, light brown, microcrystalline, sandy, salt casts, sucrosic texture, hard, tight. 6290-6320 SHALE-30% Red orange, red brown, silty, sandy. SILTSTONE-20% Red brown, pink, arenaceous, calcareous, blocky, firm. SANDSTONE-30% White, light red, pink, very fine to fine grained sub angular, fair to well sorted, clay matrix, calcareous cement, tight, no show. LIMESTONE-20% Tan, light brown, microcrystalline, sandy, salt casts sucrosic texture, hard, tight.
- 6320-50 SANDSTONE-100% White, light red orange, fine to medium grained, sub angular to rounded, fair to poorly sorted, clay matrix, silicaeous cement, 70% unconsolidated, brown oil stained, rainbows on wash water, strong hydrocarbon odor, yellow to white oil fluorescence, yellow to white milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity.

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- SANDSTONE-100% White, light red orange, fine to medium grained, sub angular to rounded, fair to poorly sorted, clay matrix, siliceous cement, 70% unconsolidated, brown oil stained, rainbows on wash water, strong hydrocarbon odor, yellow to white oil fluorescence, yellow to white milky cut fluorescence, yellow gold residue ring 10-14% intergranular porosity, fine to medium grained, 60% unconsolidated, show as above.
- 6380-6410 SANDSTONE-100% White, light red orange, fine to medium grained, sub angular to rounded, fine to poorly sorted, clay matrix, siliceous cement, 70% unconsolidated, brown oil stain, rainbows on wash water, strong hydrocarbon odor, yellow to white oil fluorescence, yellow to white milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, fine to medium grained, 70% unconsolidated, show as above.
- 6410-40 SANDSTONE-100% White, clear, quartzose, fine to medium grained, 98% unconsolidated, show as above.

6440-70 SANDSTONE-100% White, clear, quartzose, fine to medium grained, 90% unconsolidated, show as above. 6470-6500 SANDSTONE-100% White, clear, quartzose, fine to medium grained, 95% unconsolidated, show as above. 6500-30 SANDSTONE 100% White, clear, quartzose, fine to medium grained, 98% unconsolidated, no to weak show. 6530-60 SANDSTONE-100% Light red, pink, very fine to medium grained, sub angular to rounded, fair to poor sorted, clay matrix, silicaeous cement, friable, 85% unconsolidated, no to weak show. SHALE-30% Red brown, brick red, silty, blocky, firm. 6560-90 SILTSTONE-30% Brick red, arenaceous, argillaceous, firm to hard, calcareous. SANDSTONE-40% White, clear, quartzose, very fine to medium grained, unconsolidated, no show. 6590-6620 SHALE-20% Red brown, brick red, silty, blocky, firm. SILTSTONE-50% Brick red, arenaceous, argillaceous, firm to hard, calcareous. SANDSTONE-30% White, clear, quartzose, very fine to medium grained, unconsolidated, no show. 6620-50 SANDSTONE-100% White, clear, quartzose, fine to medium grained, sub angular to rounded, fine to poorly sorted, 98 % unconsolidated, no show 20 6650-80 SANDSTONE-100% White, clear, quartzose, fine to medium grained, sub angular to rounded, fair to poorly sorted, 98 % unconsolidated, no show. 6680-6710 SANDSTONE-100% White, clear, quartzose, fine to medium grained, sub angular to rounded, fair to poorly sorted, 98 % uncommon, no show. SANDSTONE-100% White, clear, quartzose, fine to medium grained, sub angular to 6710-40 rounded, fair to poorly sorted, 98 % unconsolidated, no show. 6740-64 SANDSTONE-100% White, clear, quartzose, fine to medium grained, sub angular to rounded, fair to poorly sorted, 98 % unconsolidated, no show.

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Steven R. Hash, P.E. Registered Professional Engineer stevehash@exactengineering.com

CONFIDENTIAL PLEASE!

September 6, 2005

Mr. Dustin Doucet Utah Division of Oil, Gas & Mining 1594 West North Temple, Suite 1210 Salt Lake City, UT 84114-5801

Re:

Wolverine Federal 17-6 (WF 8-1) well

Sec 17 T23S R01W Sevier Co, UT API# 43-041-30037

BLM Lease No. UTU-73528

Dear Mr. Doucet,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed our daily completion activity reports for the subject well. Wolverine's Grand Rapids, Michigan office will send final completion form(s). We respectfully request that the enclosed information remain confidential.

Very Truly Yours,

Chris Nicely

Engineering Technician

copy without enclosures via email to:

Wolverine Gas & Oil Co of Utah, LLC:

Helene Bardolph

EXACT Engineering, Inc.

well file

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DIV. OF OIL, GAS & MINING

Petroleum Engineering Consulting, Personnel & Jobsite Supervision complete well design, construction & management, drilling, completion, production, pipelines, appraisals, due diligence, acquisitions, procedures, temporary personnel and field supervision

Daily Completion Report Wolverine Gas & Oil Company of Utah, LLC Wolverine Federal #17-6 (8-1) well SE NW Sec 17 T23S - R01W Sevier Co., Utah page 1 of 4

New Completion
7" 23# HCP110 @ 6758' TD
PBTD 6713' on 5/28/05; CBL TD 6644'
Perfs – 6395-6415, 6430-6443, 6472-6484
Perfs – 6512-6518
ESP set @ na
GL to RKB: 17'

"TIGHT HOLE"

08/06/05

FIRST COMPLETION REPORT – during July cleaned location, installed 11" 5m x 7-1/16" 5m tbg head with (2) 2-1/16" 5m gate valves w/ single valve tree, move in 4% KCL treating fluid and flowback tanks. Offload 2-7/8" 6.5ppf N80 EUE 8rd new tbg. MIRU Pool Well Service Unit @ 3pm from WF 17-5. ND wellhead & flowline, NU 7-1/16" 5m BOP, set up pipe racks & load with tbg & strap. Note: CBL log run on 7/21/05 found good cement w/ TOC @ 4700'. Tomorrow's plan: TIH & circ with clean 4% KCL, Halco not available for acid pickle job CMOL: DL Naylor

Est Daily Completion Cost Est Cumulative Comp Cost Est Dryhole Cost

Est Total Well Cost to date

(incl csg,FL,WH,tbg)

Completion AFE Dryhole AFE Total Well Cost AFE



08/07/05

RU lines, PT BOPE & csg to 4000 psi, OK. Make up 6-1/4" bit, 7" csg scraper, xo & pick up 218 jts tbg, tag btm @ 6713' kb. Pull up to 6710', close rams & PT to 2500 psi, OK. RU rig pump to frac tank, reverse circulate well with 265 bbls of 4% KCL w/ bactericide @ 5 bpm sending dirty water to pit. Hole clean after 250 bbls, RD. RU swab, swab fluid level down to 2600' fs, POOH w/ tbg, SDFN. Plan: perf & swab test natural. CMOL: DL Naylor

Est Daily Completion Cost

Est Cumulative Comp Cost

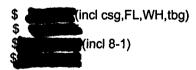


08/08/05

RU WellServ WLU. Perforated in four gun runs the (4) Upper Navajo 1 intervals listed below with 4 jpf (204 holes total) per Spectral Density – Dual Spaced Neutron log dated 27-May-2005. Used 4" slick gun, Titan 39 gm charges for .43" hole diam and 59" penetration. Third run10' of shots did not fire, wait on new gun. 4th run perforated 6405 to 6415. RD WLU. Make up 7" TS RBP,RT, SS, 7" HD packer & TIH to 6194', leave pkrs swinging and SWI & SDFN. Tomorrow's plan: Swab each zone separately. CMOL: DL Naylor This am SITP 10 psig.

Set	Zone	Interval	Ft	Density	# holes	Charge	Diam	Pene
(1)	Upr Navajo 1	6395-6415	20	4 jpf	80	39gm	.43	59"
(2)	Upr Navajo 1	6430-6443	13	4 jpf	52	39gm	.43	59"
(3)	Upr Navajo 1	6472-6484	12	4 jpf	48	39gm	.43	59"
(4)	Upr Navajo 1	6512-6518	6	4 jpf	24	39gm	.43	59"
	total	123 gross	51		204			

Est Daily Completion Cost Est Cumulative Comp Cost Est Dryhole Cost Est Total Well Cost to date



Completion AFE Dryhole AFE Total Well Cost AFE



Daily Completion Report
Wolverine Gas & Oil Company of Utah, LLC
Wolverine Federal #17-6 (8-1) well
SE NW Sec 17 T23S - R01W
Sevier Co., Utah

"TIGHT HOLE"

page 2 of 4

New Completion
7" 23# HCP110 @ 6758' TD
PBTD 6713' on 5/28/05; CBL TD 6644'
Perfs = 6395-6415, 6430-6443, 6472-6484
Perfs = 6512-6518
ESP set @ na
GL to RKB: 17'

08/09/05

Zero SICP, TIH & set packer @ 6498, RU swab,fuid @ surface, made 7 swab runs and recovered 60 BLW, last 3 runs show oil, EFL 4400', made 8 more runs and recovered 14 BLF last sample 95% oil. EFL 5100'. Fill tubing w/30 bbl. 4% KCL water. Release packer, pull up & set plug @ 6498 & packer @ 6423. RU swab, made 14 swab runs and recovered 90 BLF, last 8 runs show oil,last two 100% oil. EFL 2900', pulling from 4000'. Left open to tank overnight, Started to flow @ 8pm. made 60 BO in 9 hrs. 6.6BPH. Plan: pull up & swab top zone. CMOL: DL Naylor

Est Daily Completion Cost Est Cumulative Comp Cost \$

08/10/05

Zero FTP, Reverse tubing volume, release tools, pull up set plug @ 6422, set packer @ 6367 RU swab,fuid @ surface, made 7 swab runs and recovered 44 BLF, last 3 runs 60% oil, well started to flow 14 bbl. in 3 ½ hrs. Release pkr. reverse tubing volume, retrieve RBP, pooh, ld tools. PU RBP w/ballcatcher & pkr. TIH set plug @ 6561, pull above perfs @ 6367. Leave well open to tank. Plan: Acidize. CMOL: DL Naylor

Est Daily Completion Cost
Est Cumulative Comp Cost



8/11/05 Zero TP, well did not flow. RU Halco, QC 7-1/2% acid mix @ 1.15 sg and 4% KCl @ 1.04 sg, OK. Hold safety mtg & test P&L to 6000 psi. Individually acidize each interval as follows:

#	Ft	Plan	Pmpd	Break	BD	ATR	ATP	ISDP	5m	10m	15m	Comments
	•	gals	Gals	psi	bpm	bpm	psi	psi	psi	psi	psi	
4	6	600	900	2830	.3	4	2450	1		I	1	Communicated
3	12	1200	1400	1850	.5	4	1900	1200	-	1	1	Communicated
2	13	1300	1500	2120	.6	4	1900	1200	450	225	125	Good ball action
1	20	2000	2500	1850	.8	4	1850	1200	400	190	100	Some ball action
				<u> </u>			L					
				<u> </u>		<u> </u>	<u> </u>	į				
			1	1		i i			•			

Release tools & set packer @ 6367, reverse out w/ 60bbl. 4% kcl water, RU to swab, made 14 swab runs in 3 hrs, 1st oil cut on 1st run, 25%. Recovered 230 bbls fluid to tank. well started to flow.Last sample 95% oil. Made 210 BOF in 9 hrs. 23.3 BPH CMOL: DL Naylor

Est Daily Completion Cost
Est Cumulative Comp Cost

This am. Flow test.



8/12/05

Flow well on open chk w FTP 0 psi. Total daily recovery 575 BO 23.9 BPH FIRST OIL SALES FROM WF17-6 TO HOLLY REFINERY ON 08/12/05 Total production to date 825 BO. Total sales 190 bbl

8/13/05 Flow well on open chk w FTP 0 psi. Total daily recovery 615 BO 25.6 BPH. Put on 10 chk, @ 1pm.

8/14/05

Flow well 23 hrs. FTP 180 on 10/64 chk. Total daily recovery 437 BO 19 BPH Total production to date 1927 BO. Total sales 810 bbl

EXACT Engineering, Inc. 415 S. Boston, Suite 734, Tulsa, OK 74103 (918) 599-9400

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Daily Completion Report

Wolverine Gas & Oil Company of Utah, LLC Wolverine Federal #17-6 (8-1) well SE NW Sec 17 T23S - R01W

Sevier Co., Utah

"TIGHT HOLE"

page 3 of 4

New Completion

7" 23# HCP110 @ 6758' TD

PBTD 6713' on 5/28/05: CBL TD 6644'

Perfs - 6395-6415, 6430-6443, 6472-6484

Perfs - 6512-6518

ESP set @ na

GL to RKB: 17'

8/15/05

Flow well 24 hrs. FTP 280 on 8/64 chk. Total daily recovery 373 BO 15.5 BPH

Total production to date 2300 BO. Total sales 941 bbl

CMOL: DL Navlor

This am. Pull pkr & plug, Run Arrow set pkr. & press gauges.

Est Daily Completion Cost

Est Cumulative Comp Cost

8/16/05

FTP 280 psi, reversed tubing volume. Released pkr POOH w/ tbg. LD tools, PU 7" Arrow set pkr, run perf tailpipe with digital BHP instruments in place, 2.25" SN min id,1 jt. 2 7/8 tubing TIH w/205 jts. set pkr with EOT & gauges @ 6365' kb w 15k down. ND BOP, NU 3m adapter & tree, hook up flowlines and rig up swab. Swabbed 49 bbls fluid in 5 runs, last sample 100% oil, well flowing, RD swab, RD rig while flowing to tank #7. Move rig to WF 17-7 well. Well flowed 204 BO,On 10/64th choke and monitored hourly overnight as follows:

Time	chk	ftp	Bbl per hr	Sample description & comments
4:p	Open	120	22	100% oil; slight show gas
5:p	12	215	12	ditto
6:p	12	285	12	ditto
7:p	11	290	12	ditto
8:p	11	300	12	ditto
9:p	11	310	11	ditto
10:p	11	320	11	ditto
11:p	11	330	11	ditto
12:p	11	330	11	ditto
1:a	11	330	9	ditto
2:a	11	330	9	ditto
3:a	11	330	9	ditto

Total daily recovery 204 BO. Plan: Continue to flow well CMOL: DL Naylor

Total production to date 2504 BO. Total sales 1573.5 bbl

Est Daily Completion Cost \$

Est Cumulative Comp Cost

NOTE: FIRST OIL SALES FROM WF17-6 TO HOLLY REFINERY ON 08/12/05

8/17/05

Flow well on 14/64th chk. FTP 250 psi. Total daily recovery 416 BO 17.3 BPH Total production to date 2920 BO. Total sales 2006 bbl

8/18/05 No report

8/19/05 Flow well on 16/64th chk. FTP 160 psi. Total daily recovery 452 BO 18.8 BPH

Total production to date 3372 BO. Total sales 2642 bbl

Flow well on 16/64th chk. FTP 160 psi. Total daily recovery 523 BO 21.8 BPH 8/20/05

Total production to date 3895 BO. Total sales 3235 bbl

8/21/05

Flow well on 16/64th chk. FTP 170 psi. Total daily recovery 548 BO 22.8 BPH Total production to date 4443 BO. Total sales 3436 bbl

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Daily Completion Report Wolverine Gas & Oil Company of Utah, LLC Wolverine Federal #17-6 (8-1) well SE NW Sec 17 T23S - R01W Sevier Co., Utah

page 4 of 4

New Completion 7" 23# HCP110 @ 6758' TD PBTD 6713' on 5/28/05; CBL TD 6644' Perfs – 6395-6415, 6430-6443, 6472-6484 Perfs – 6512-6518 ESP set @ na GL to RKB: 17'

"TIGHT HOLE"

8/22/05	Flow well on 14/64 th chk. FTP 190 psi. Total daily recovery 480 BO 20 BPH Total production to date 4923 BO. Total sales 3891 bbl
8/23/05	Flowed 478 BO and no water in 24 hrs on a 14/64" chk, FTP 180 psi Total production to date 5401 BO. Total sales 5275 CMOL: SRHash
8/24/05	Flowed 483 BO and no water in 24 hrs on a 14/64" chk, FTP 185 psi Total production to date 5884 BO. Total sales 5586 CMOL: SRHash
8/25/05	Flowed 220 BO and no water in 11 hrs on a 15/64" chk from 6am to 5pm, FTP 180 psi Shut well in for pressure buildup @ 5pm 8/23/05 until 8/27am 13 hr SITP 410 psi
	Total production to date 6104 BO. Total sales 5708 CMOL: SRHash
8/26/05	SIFPBU – SITP 420 psi in 37 total hrs Well shut in 24 hrs from 6am 8/24 to 6am 8/25 Total production to date 6104 BO. Total sales 5708 CMOL: SRHash
8/27/05	SIFPBU – SITP 420 psi in 61 total hrs Well shut in 24 hrs from 6am 8/25 to 6am 8/26
8/28/05	SIFPBU - SITP 420 psi in 85 total hrs Well shut in 24 hrs from 6am 8/26 to 6am 8/27
8/29/05	SIFPBU – SITP 420 psi in 93 total hrs; Well shut in 8 hrs from 6am 8/27 to 2pm 8/27; opened well on 18/64" chk @ 2pm on 8/27; Flowed 359 BO in 16 hrs on 18/64" chk, FTP 130 psi
8/30/05	Flowed 540 BO & tr wtr in 24 hrs on 18/64" chk, FTP 130 psi, drawing off approx 2% water before each frac tank sale
8/31/05	Flowed 518 BO & tr wtr in 23 hrs on 18/64" chk, FTP 130 psi, shut-in 1 hr to RU PLS & retrieve BHP gauges
09/01/05	Flowed 718 BO & tr wtr in 32 hrs on 18/64" chk chk from 6am 8/30 to 2pm 8/31, FTP 130 psi, continue drawing off 2% water from 480 bbl frac tank before each sale
09/02/05	Flowed 542 BO & trace water in 24 hrs on 18/64" chk from 2pm 8/31 to 2pm 9/01, FTP 130 psi Total production to date 8781 BO (less 1-2% water drawoff); Total frac tank sales from inception on 8/12/05 thru 2pm 9/1/05 is 7823 BO. Sales report turned over to production staff.
09/03/05	Flowed 574 BO & trace water in 26 hrs on 18/64" chk from 2pm 9/01 to 4pm 9/02, FTP 130 psi Total production to date 9355. Switched flow from frac tanks thru flowline to main battery at 4pm. Production now allocated daily based on well test. TURNED WELL OVER TO PRODUCTION – FINAL COMPLETION REPORT

EXACT Engineering, Inc. 415 S. Boston, Suite 734, Tulsa, OK 74103 (918) 599-9400

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Complete well design, construction & management, drilling, completion, production, pipelines, evaluations, due diligence, acquisitions, procedures, temporary personnel and field supervision

CGPY

Form 31	60-4			•										
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	e of Well of Coppl			Gas Well		Other	. F7N					G. If las	dien, Alluta	o or Tribe Name
D. 17P	or Compr	onon:	()thei	-	Work Over	Deeb	enr	AIS Buck	tyin	. Kent		7 Unit	or CA Agie	curent Name and No.
2. Non	e of Opera	lor va			f Utah, LLC	* *					_			derat Unit
		***	Of ACLITIC (PR BUCH ON C	r Claii, LLC						l		c Name and lverine Fe	Well No. deral 17-6 (8-1)
3. Add	CAR S5 C	rmpai	ı NW, Gra	nd Rapids,	M1 49503			one No. 16-458-	(inchule ar 1150	eo code	,	O. AFI		
4. Loca	ition of We	ll (Rep	ori location	clearly and in	occordance with	Federal	requiremen	urc)*			1		•	T Exploratory
At st	rface	1680'	FNL & 22	65, kMT' 86	e 17 T238 R01	w							enent Fic	
A: to	p prod. int	erval re	ported below	" 764' FNI	. & 2477' FEI.									on Block and 17 T23S R01W SKNW 24
Åt tu	tal depth	7217	NL & 245	8, krp							1	2 Coor Scyle	ity or Parish	13. State UT
14. Trate	•		15.	Date T.D. Re			16. Date C							RKB, RT, GL)*
	6/2005	٠		05/27/200			D A	Ł A	Ready		*** ***		<i>5</i> 753,5753	5736
IR. Total	•	MD 6		119	Plug Back T.D.:	, מעד			20. Dep	ih Birdi	go Plug Se	t: Mi TV	-	
21. Type	Electric d	k Othe	T Mechanic	al Logs Run (Submit copy of e	ach)		···		well a		-	Yes (Sul	mit analysis)
Hi. 1	les. Indo	t. MD/	TVD, Spe	Den Dual S	p Neu MD/TV	D, Dipn	n Monitor			DST n cional	in? <u>[√</u> Survey?	No [·	mit report) Submit copy)
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	cing Interv	als			<u>. </u>	26.	Per foration	Kecord		<u> </u>				
	Formatio	m		Top	Bottom		Perforated	nterval		Size	No. 1	Toles		Perf. Statux
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D)					. 14. 44.	+	-6518		.43		24		open	
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28 Produ	ction - Inte	A lave												
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*(See Instructions and spaces for additional data on page 2)

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DIV. OF OIL, GAS & MINING Duplicate of report rec'd 8/31/05 TO

2005,10-31 03:44PM #195 P.08/11

	uction - Inte	-					·	,		
Date First Produced	Test Date	llours Testod	Production	KKL	G25 MCF	Water	Oil Gravity Opti. AM	Gas Onvity	Production Method	
Choke Size	Thg. Press. Plwg. 31	Csg. Press.	24 Hr. Raiv	Oil	Gas MCF	Welc; BBL	Cies/Oil Ratio	Well Status		
28c. Prod	luction - Int	crval D			 			-i	-,	
Date First Produced		Hours Tasted	Production	DBL	MCIF	Water	Oil Oravity Out. API	Gas Oravity	Production Mediod	
Choke Size	The Press. Flwg. SI	Cag. Press.	24 Mr. Rate	Oil BBL	Gac MCF	Water BBL	Gas/Oll Ruid	Well Status		
		-	used for fuel.		:.)					
Ver	iling (gas	gente no	to moasure							
30. Sum	mary of Po	rous Zones	(Include Aq	ji(ers):				31. Format	ion (ne) Markers	
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34. I here	by certify th	ud the fore	going and at	actical info	roeissoitean	unplete and c	correct as determined	Irom all evails	ble records (see anached ins	ractions)+
Name ((please pri	John	V ro nn	· 		1	Title Manag	er of Geolog	<u>y</u>	
Signal	tore C		L_	P	Un	m	Date 08/29/2	2005		
Tine 18 U	I.S.Q Section	on 1001 an	d Title 43 U	S.C Socii	on 1212, nu	ıkc ir a crime	for any puryon know	vingly and will	fully to make to any depart	ment or agency of the United

(Form 3160 4, page 2)

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SIATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES TO DIVISION OF OIL, GAS AND MINING

03:40PM #195 P.02/11

ENTITY ACTION FORM

Operator:

Wolverino Gas and Oil Company of Utah, LLC

Operator Account Number: N 1655

Address:

55 Campau NW, One Riverfront Plaza

City Grand Rapids

state MI zip 49503

Phone Number: (616) 458-1150

Well 1

API Number	Well	QQ	Sec	Twp	Rng County			
4304130035	Wolverine Federal 17-	NWSE	17	238	1W	Sevier		
Action Code	Current Entity Number	New Entity Number	8	Spud Date		Entity Assignment Effective Date		
С	14559	13995		1/31/2005		1/31/2005 /0/31/		10/31/05

Comments: Existing Participating Area expanded to include lands effective as of 9/1/2005 production.

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Well 2

API Number	Well	Name	QQ	Sec	TWp	Rng	County	
4304130038	Wolverine Federal 17	-5	SENE	17	238	1W	Sevier	
Action Code	Current Entity Number	New Entity Number	S	Spud Date		Entity Assignment Effective Date		
С	14626	13995		3/14/2005		10/31/05		

Comments: Existing Participating Area expanded to Include lands offective as of 8/1/2005 production.

NAV A

J

Well 3

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API Number	Well N	Vame	QQ	Sec	Twp	Rng	County		
4304130037	Wolverine Fedoral 17-	8 (WF 8-1)	NWNE	17 238		1W	Sevier		
Action Code	Current Entity Number	New Entity Number	S	Spud Date			Entity Assignment Effective Date		
С	14667	13995	4/16/2005			10/31/05			

Comments: Existing Participating Area expanded to include lands effective as of 8/1/2005 production.

J

ACTION CODES:

- A Establish now entity for new woll (single well only)
- B Add new well to existing entity (group or unit well)
- Re-assign well from one existing entity to another existing entity
- Ro-assign well from one existing entity to a new entity
- E Other (Explain in 'comments' section)

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Edward A. Higuera

Name (Please Print)

Manager Development

10/31/2005

Title

Dato

(6/2000)

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WOLVERINE OPERATING COMPANY

of Utah, LLC

Energy Exploration in Partnership with the Environment

December 28, 2005

Ms. Diana Whitney Utah Division of Oil, Gas & Mining 1594 W. N. Temple, Suite 1210 Salt Lake City, UT 84114-5801

RE:

Wolverine Federal #17-2

Wolverine Federal #17-3
Wolverine Federal #8-1

Dear Ms. Whitney:

Enclosed please find completion forms with minor corrections made for each of the above referenced wells.

If you have any questions or concerns, please don't hesitate to contact me.

Sincerely,

Helene Bardolph

cc:

WF #17-2 (Well Log File)

WF #17-3 (Well Log File) WF #8-1 (Well Log File)

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DIV. OF OIL, GAS & MINING

STATE OF UTAH AMENDED REPORT V FORM 8 **DEPARTMENT OF NATURAL RESOURCES** (highlight changes) DIVISION OF OIL, GAS AND MINING 5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-73528 6. IF INDIAN, ALLOTTEE OR TRIBE NAME WELL COMPLETION OR RECOMPLETION REPORT AND LOG 1a. TYPE OF WELL: 7. UNIT or CA AGREEMENT NAME OTHER Wolverine Fed Exploration Unit 8. WELL NAME and NUMBER: b. TYPE OF WORK: DEEP-RE-DIFF. RESVR. WEYL 🗹 Wolverine Federal #8-1 OTHER 2. NAME OF OPERATOR: 9. API NUMBER: Wolverine Gas and Oil Company of Utah, LLC 4304130037 3. ADDRESS OF OPERATOR: PHONE NUMBER: 10 FIELD AND POOL, OR WILDCAT ZIP 49503 (616) 458-1150 55 Campau NW **CITY Grand Rapids** STATE MI **Exploratory Area** QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: 4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 1680' FNL & 2265' FWL, Sec 17,T23S,R01W SENW 17 23S 1W AT TOP PRODUCING INTERVAL REPORTED BELOW: None 12. COUNTY 13. STATE AT TOTAL DEPTH: 232' FSL & 991' FEL, Sec 8, T23S, R01W **UTAH** Sevier 16. DATE COMPLETED: 14. DATE SPUDDED: 15. DATE T.D. REACHED: 17. ELEVATIONS (DF, RKB, RT, GL): ABANDONED 🗸 READY TO PRODUCE 4/16/2005 5/13/2005 5/13/2005 5752/5753/5753/5736 19. PLUG BACK T.D.: MD 2,500 18. TOTAL DEPTH: 21. DEPTH BRIDGE 7,824 20. IF MULTIPLE COMPLETIONS, HOW MANY? PLUG SET: TVD 7,227 TVD 2.374 TVD 22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) WAS WELL CORED? NO 🔽 YES (Submit analysis) See attached list WAS DST RUN? ио 🔽 YES (Submit report) DIRECTIONAL SURVEY? NO YES 🗸 (Submit copy) 24. CASING AND LINER RECORD (Report all strings set in well) STAGE CEMENTER CEMENT TYPE & SLURRY BOTTOM (MD) HOLE SIZE SIZE/GRADE WEIGHT (#/ft.) TOP (MD) AMOUNT PULLED CEMENT TOP ** DEPTH NO. OF SACKS VOLUME (BBL) 0 121 cond 13 3# J55 61# 2,057 2,008 Prem 🚡 1,050 518 surface

25. TUBING RECORD

20"

17.5

SIZE	DEPTH S	SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD) PACKER SET (MD)	SIZE	DEPT	TH SET (MD)	PACKER SET (MD)
	<u> </u>				<u> </u>					<u>L</u>
26. PRODUCING INT	ERVALS					27. PERFORATION RECO	ORD			
FORMATION N	NAME	TOP (MD) BOTTOM (N	(D) TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - M	D) SIZE	NO. HOLES	PERFO	RATION STATUS
(A) None									Open	Squeezed
(B)									Open	Squeezed
(C)									Open	Squeezed
(D)									Open	Squeezed
28 ACID FRACTUR	E TREATME	NT CEME	NT SOLIFEZE ETC							

DEPTH INTERVAL	Al	MOUNT AND TYPE OF MATERIA		<u> </u>
None			TILOLIVE	
			JAN 0 3 2006	r]
29. ENCLOSED ATTACHMENTS:			DIV. OF OIL, GAS & MI	NO NOELL STATUS:
ELECTRICAL/MECHANICAL LOGS SUNDRY NOTICE FOR PLUGGING AND CEMEN	GEOLOGIC REPO	RT DST REPORT	DIRECTIONAL SURVEY	P&A

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31. INITIAL PRO	DUCTION					-	INTE	ERVAL A (As show	wn in item #26))				
DATE FIRST PR	ODUCED:		TEST DA	TE:			HOURS TESTED):	TEST PRODUCTION RATES: →	OIL - BBL:	GAS – MCF:	WATER -	- BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRES	is	CSG. PRI	ESS.	API GRA	VITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTIO RATES: →	N OIL - BBL:	GAS - MCF:	WATER -	- BBL:	INTERVAL STATUS:
							INTE	ERVAL B (As shor	wn in item #26)	2				
DATE FIRST PR	ODUCED:		TEST DA	TE:			HOURS TESTED):	TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER -	- BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRES	S.	CSG. PRI	ESS.	API GRA	VITY	BTU – GAS	J – GAS GAS/OIL RATIO 24 HR PRODUCTION OIL – BBL: GAS – MCF: WATER – RATES: →			- BBL:	INTERVAL STATUS:		
							INTE	ERVAL C (As show	wn in item #26)					•
DATE FIRST PR	ODUCED:		TEST DA	TE:			HOURS TESTED		TEST PRODUCTION RATES: →	N OIL - BBL:	GAS - MCF:	WATER -	- BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRES	S.	CSG. PRI	ESS.	API GRA	VITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTIO RATES: →	N OIL - BBL:	GAS MCF:	WATER -	- BBL:	INTERVAL STATUS:
							INTE	ERVAL D (As sho	wn in item #26)					<u> </u>
DATE FIRST PR	ODUCED:		TEST DA	TE:			HOURS TESTED		TEST PRODUCTION RATES: →	N OIL - BBL:	GAS - MCF:	WATER -	- BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRES	S.	CSG. PRI	ESS.	API GRA	VITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	ION OIL - BBL: GAS - MCF: WATER -			- BBL:	INTERVAL STATUS:
32. DISPOSITIO	ON OF GAS (S	Sold, l	Jsed for F	uel, Vei	nted, Etc.)								
33. SUMMARY	OF POROUS	ZONE	S (Include	e Aquife	ers):				J	34. FORMATION	(Log) MARKERS:			
Show all importa tested, cushion u							is and all drill-stem ecoveries.	tests, including de	epth interval					
Formatio	on		Top MD)		tom ID)		Descript	ions, Contents, etc	:.	Name Top (Measured Depth)				
None										Arapien Twin Creel	<			0 6.984
35. ADDITIONA	35. ADDITIONAL REMARKS (Include plugging procedure)													
36. I hereby cer	tify that the	forego	oing and a	ttached	informa	tion is co	omplete and corre	ct as determined	from all available red	cords.	<u></u>			<u>-</u>
NAME (PLEAS		ohn	P Vr	na-			,		TT - Mar	nager of Ge	ology			
NAME (PLEAS	EPRINT)_0	2111					/		IIILE INICII	lager or de	U.Ugy			

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- · reentering a previously plugged and abandoned well

DATE

7/8/2005

- significantly deepening an existing well bore below the previous bottom-hole depth
- · drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests
- * ITEM 20: Show the number of completions if production is measured separately from two or more formations.
- ** ITEM 24: Cement Top Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah D

SIGNATURE

Utah Division of Oil, Gas and Mining

1594 West North Temple, Suite 1210

Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

CONFIDENTIAL

Form 3160-5

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	UNITED STATES EPARTMENT OF THE	INTERIOR		FORM APPROVED OMB No. 1004-0137 Expires: March 31, 2007			
	BUREAU OF LAND MANA			5. Lease Serial UTU-735			
SUNDRY Do not use th			Allottee or Tribe Name				
abandoned we	ell. Use Form 3160 - 3 (A	APD) for such p	oroposals.				
SUBMIT IN TRI	PLICATE- Other instr	uctions on rev	erse side.	1	CA/Agreement, Name and/or No.		
1. Type of Well Oil Well	Gas Well Other			8 Well Nam	ine Federal Exploration Unit		
				Wolveri	ne Federal 17-6 (WF 8-1)		
Name of Operator Wolverine Ga Address	as and Oil Company of Utah, I	3b. Phone No. (inc.	ude area code)	9. API Wel			
55 Campau NW, Grand Rapid		616-458-1150		10. Field and	Pool, or Exploratory Area		
4. Location of Well (Footage, Sec.,		ar n a 1 f			or Parish, State		
Surface: 1680' FNL & 22 Bottom-Hole: 721' FNL & 24	265' FWL, Sec. 17, T23S, R01' 58' FEL, Sec. 17, T23S, R01W	w, SLB&M , SLB&M		Sevier C	County, Utah		
12. CHECK AI	PPROPRIATE BOX(ES) TO	INDICATE NAT	URE OF NOTICE, R	EPORT, OR	OTHER DATA		
TYPE OF SUBMISSION			TYPE OF ACTION				
Notice of Intent	Acidize	Deepen	Production (St	art/Resume)	Water Shut-Off Weil Integrity		
Subsequent Report	Alter Casing Casing Repair	Fracture Treat New Construction			Other		
Final Abandonment Notice	Change Plans	Plug and Abando					
	Convert to Injection	Plug Back	Water Disposal		rk and approximate duration thereof.		
following completion of the intesting has been completed. Findetermined that the site is ready A workover was perform. Formation perforated at a control of the well was circulated tripped to PBTD and well completed. The perforation intervating fluid, and retest a communication from 641: All perforations (6395) The perforation intervation displace acid into performations (6395) (pumped total of 2000 gal 7. Spent acid was recover 8. New ESP equipment and	nal Abandonment Notices shall be y for final inspection.) ed on the Wolverine Federal 1' 6395' - 6518'. The work detailed with workover fluid, wellhead was circulated clean. al of 6395' - 6415' was isolated the isolated interval. rvals at 6430' - 6518' were isol 5' to 6430'. - 6518') were jetted using coil al of 6512' - 6518' was pulse was prations, so 3 Bbls acid remain - 6518') were pulse washed willons 15% HCl acid). ed using coiled tubing and jetted using coiled tubing and jetted using coiled tubing and jetted using coiled (to allow product)	results in a multiple of filed only after all req 7-6 (WF 8-1) to inced on the attached pd removed, BOPE then coiled tubing ated and pulse was ed tubing and nitro ashed using 3 Bbls ing in tubing was of the remaining 44 Bbling nitrogen.	perior pe	in a new intervanation, have been aning out the value of follows: ipment pulled. Dulse wash with using coiled to ment fluid and ditives. An attern, and the acid	I, a Form 3160-4 shall be filed once in completed, and the operator has well and acidizing the Navajo A bit and casing scraper were in treated water, recover the libing after finding if flow test. Empt was made with little success was displaced into formation		
14. I hereby certify that the for Name (Printed/Typed) Ellis M. Peterso		Titl	e Sr. Production Engi	neer			
Signature FUME	Flan	Dat	Δ	11/20/2006			
Signature Grand	THIS SPACE FOR						
	I THIS SPACE I OR						
Approved by Conditions of approval, if any, are certify that the applicant holds leg	attached. Approval of this notice	does not warrant or	Office	[]	Date		
which would entitle the applicant	to conduct operations thereon.			u to males to	y department or agency of the United		
Title 18 U.S.C. Section 1001 and Ti States any false, fictitious or fraud	tle 43 U.S.C. Section 1212, make it ulent statements or representations	a crime for any persons as to any matter with	on knowingly and willfull	y to make to an	y department or agency of the United		

(Instructions on page 2)



page 1 of 4

Daily Workover Report Wolverine Gas & Oil Company of Utah, LLC Wolverine Federal #17-6 (8-1) well SE NW Sec 17 T23S - R01W Sevier Co., Utah

"TIGHT HOLE"

10/11/06

<u>FIRST REPORT</u> – RU horizontal treater & test tank system to production test select perf intervals in subject well. Prepare 500 bbl 4% KCl filtered to 10 microns. MIRU Key Energy WSU #059, DD series 300, set one rig anchor, SDFN.

CMOL: Steve Hash

10/12/06

7am, wait on Key pump & tank until 1pm, off load & hookup, attempt to test pump & lines, pump plungers washed out, needs repair, released crew at 5pm; no rig charges for today. Prep to reverse hole with 4% KCL in am, NU BOPE then POOH with tbg & ESP.

CMOL: Steve Hash

10/13/06

5am, SITP 40 psi, SICP 300 psi. Hook up Action Hot Oil pump truck to csg, pump 212 bbls filtered 4% KCl down csg annulus @ 1.2bpm @ 750-1000psi (capacity 196 bbl to pump intake) displacing tbg down flowline to main treater, unknown volume returned to production. Switch to tbg, pump tbg capacity of 36 bbls down tbg with csg annulus returns down flowline @ 1 bpm @ 1400 psi. SD @ 9am, well static. ND wellhead, pick up tbg, NU 5m double hydraulic BOP w/ annular. RU Baker Centrilift cable spooler, POOH w/ 203 jts of 2-7/8" tbg spooling cable on reel. Cable damaged slightly in 2-3 spots, lower pigtail (under wellhead) contacts burned and needs replaced. LD pump, seal, motor & sensor assy. All downhole equipment visually inspected in excellent condition. No visible scale, corrosion, etc. Baker Petrolite on location and took oil sample from pump; oil sample from pump delivered to PSI next afternoon, all Baker ESP equipment delivered to Baker Centrilift Casper location next am for exam. Petrolite to obtain samples from pump shop. 246 BLWTR

CMOL: Steve Hash

10/14/06

SDFWE

10/15/06

10/16/06

7am, SICP zero, change out fluid pump, hook up & test pump, lines and flowback hookup to 1500 psi. OK Pick up csg scraper for 7" 23ppf csg & strap in hole with 202 jts tbg (6194.93). Pick up 15 jts and tag btm @ 6675' kb. Pick up to 6672' & reverse circ hole with 70 bbls of 4% KCl, recovered approx one quart of fine debris and scale substance from lower rathole. Spot 15 bbls of pickle fluid down tbg into rathole mixed with 1 gal Cortron RN-234 Biocide & 1 gal Bactron Biocide. Displace with 37 bbls 4% KCL. Laid down 12 jts tbg above perfs & SDFN @ 6pm.

CMOL: Steve Hash

10/17/06

7am, POOH w/ tbg & scraper, wait 4 hrs on packer change out. Hold tailgate safety mtg. Make up 7" TS retrievable bridge plug, HD packer, mechanical collar locator and SN w/ marker sub one jt above pkr. TIH with 2-7/8" tbg to 6350. RU Excell Wireline, RIH with GR-CCL, ran correlation strip, tbg tally 22 ft deep to log, made -22 ft correction in tally and placed tbg on depth with open hole log dated 5/27/2005. Set RBP @ 6422' below Upr Navajo zone #1, no room to test RBP. Set pkr @ 6343' above zone #1, ran GR-CCL check strip, OK. Landed tbg in BOP, csg full, closed pipe rams, pressured annulus & pkr to 750 psi, shut in, SWI.. Hold tailgate safety mtg, move in and spot Halco coiled tbg unit, crane, pump truck, nitrogen pump & nitrogen transport. SDFN @ 9pm.

CMOL: Steve Hash

10/18/06

6am, Rig up coiled tbg unit, install injector head to tbg, cool N2, hold tailgate safety mtg. Pressure test coil reel & flowback lines to 1800 psi, OK. 1pm, trip in hole w/ 1-1/2" coiled tbg to 6300' (pkr @ 6343') pumping 300 scfm N2, unload 13 bbls water from tbg, load up, pull out of hole to 5200' and begin unloading, trip



Daily Workover Report
Wolverine Gas & Oil Company of Utah, LLC
Wolverine Federal #17-6 (8-1) well
SE NW Sec 17 T23S - R01W
Sevier Co., Utah

"TIGHT HOLE"

back in to 6300', jetting approx 10 bbls per hr, flowline 24/64" chk @ 220 psi, CT 1500 psi. Switch well thru test separator @ 4:30pm, jet zone #1 with 300 scfm N2 from 6300' and recover 31 BO & 34 BW in 4 hrs, 390 BPD total rate, CT 1300 psi, flowline 48/64" chk @ 100 psi, SD @ 8:30pm, POOH with CT, CT friction pressure 500 psi @ 300 scfm. Used 190,000 scf N2, SWI & remove injector from wellhead, SD @ 10pm CMOL: Steve Hash

6am, install pulse tool to CT, NU injector to wellhead, pressure test reel to 2000 psi with 4%, TIH to 6300' in tbg, start pmpg at ½ bpm rate, incr to 1 bpm, TIH & tag RBP @ 6422', pressure washed zone #1 6395'-6415' with pulse tool @ 1bpm @ 4099 psi CT pressure for 4 passes in 12 min. Shut down @ 12 noon & POOH w/ CT. Remove injector, remove pulse tool, install jet nozzle, PT reel to 2000 psi, purge reel w/ N2, TIH pumping 300 scfm N2 unloading well. Stop at 6300' and jet well for 1 hr until stabilized, start test at 4pm. Recovered 7.5 BO & 12 BW in 1-1/2 hrs, 468 BPD total rate. Shut down, POOH w/ CT, blow reel down, remove injector from wellhead. Rig up tongs, release pkr, latch RBP, move RBP down to 6544 below all zones, set pkr @ 6520, zones 2,3 & 4 isolated. Pump down tbg @ 2 bpm, total 8 bbls, immediately communicated to zone #1 in annulus, shut down, SWIFN 7pm.

CMOL: Steve Hash

6am, Hold tailgate safety mtg, install jet nozzle to CT, install injector head to tbg. Pressure test coil reel & flow lines to 2000 psi, OK. 9am, trip in hole w/ 1-1/2" coiled tbg to 6400', unload water from tubing, jet zones #2,3,4 from 6430-6518', (pkr @ 6420') pumping 300 scf/m N2 w/ 1600 psi CT psi, and 87 wellhead psi. 12:30pm switch to test on ¾" choke, recovered 3.75 bbl/oil and 41.75 bbl wtr in 1-1/2 hrs. 7" annulus on vacuum & communicated. 2:15pm POOH with coil tbg. 3:30pm Install pulse tool on CT and TIH. 4:55pm pressure washed zones with pulse tool @ 1bpm @ 3600 psi, wellhead 5psi and 7" annulus 200psi, made 4 passes in 1 hr, total water pumped 62 bbl. Shut down pump, 7" annulus pressure dropped to 150 psi, zero in 5 min. 6:00 pm POOH with CT and pulse tool, rig down injector head, secure wellhead, SDFN @ 7:30pm

CMOL: Jay Rasmussen

7am, release pkr and reset above all perfs at 6343, close rams & PT 7" csg & pkr to 500 psi, OK. Install jet nozzle to CT & install injector to well. Hold tailgate safety meeting, 09:15amTlH with CT to 6300' @ 300 SCFM N/2, stabilized rate at 1350 psi CT, 35 wellhead psi, 12:00 pm switch well to test on 50/64 choke, recovered 20.6 bbl oil & 36 bbl wtr. in 3hrs. 454 BPD total rate. 3pm POOH with CT & remove injector from wellhead. 4pm release pkr, move to 6496' attempt to pump in zone #4 @ 1200 & 1500 psi, no leakoff, move pkr above zone #3, pump into zone at 300 psi and communicated to annulus, released pkr and reset on zone #4. Secure wellhead SDFN @ 6pm. CMOL: Jay Rasmussen

7am RU CT & injector on wellhead. Hold safety meeting. Pressure test flowlines to 1765 psi. 8:10 am TIH with CT & 1 bpm pulse tool to 6520'. Spot 3 bbl 15% HCL w/ additives, 3 bbl water & 3 bbls acid to btm of CT. Make two pulse tool passes thru zone #4 perfs 6512 – 6518 @ 1 bpm using 3 bbls acid. PU CT to 5300' in 2-7/8" tbg, let acid soak for 45 minutes. 10:50am attempt to breakdown zone #4 beginning at 1400 psi injection pressure, could not pump in, leak off to 1120 psi in 5 min. Stage each 5 min for 6 hrs raising maximum injection pressure 150-200 psi each hr up to 3700 psi after 6 hrs. Zone will leak off 200-500 psi in 5 min each attempt but could not establish rate. At 5pm communicate to annulus at 3700 psi injection pressure. Attempt to pump down 7" annulus with rig pump while displacing 2 bbl acid into zone. Could not establish rate at less than 4000 psi. Circulate 2nd stage of 3 bbl acid out to rig tank, add neutralizer. POOH w/ CT & pulse tool. Reset pkr @ 6343' above all perfs, PT to 600 psi, OK. SWI & SDFN @ 8pm. Note: Acid mix is 15% HCl with 30gpt Morflo, 1gpt lowsurf-300M, 1gpt AS-9 anti-sludge, 6gpt HAI-404

Daily Workover Report
Wolverine Gas & Oil Company of Utah, LLC
Wolverine Federal #17-6 (8-1) well
SE NW Sec 17 T23S - R01W
Sevier Co.. Utah

"TIGHT HOLE"

inhibitor, 10gpt Fe-7A & 50gpt Fe-2 iron sequestering agents. CMOL: Jay Rasmussen

7am RU CT & injector on wellhead, Hold safety meeting & pressure test flowlines to 2000 psi, 10:00 TIH with CT & pulsing jet, pressure wash @ 1 bpm with 11 bbls 15% HCl acid on zones #3 & #4 (6518-6472'), let acid soak for 30 minutes, 11:50 displace acid in perfs @ 992 psi @ 1 bpm ISIP 684 psi, 12:15 pressure wash @ 1 bpm with 11 bbls 15% HCl acid on zones #1 & #2 (6472-6395'), let acid soak, 12:45 displace acid in perfs @ 915 psi @ 1 bpm , 13:10 pressure wash with 11 bbls 15% HCl acid on zones #3 & #4 (6518-6472'), let acid soak, 13:40 displace acid in perfs @ 835 psi @ 1 bpm, 13:55 pressure wash @ 1 bpm with 11 bbls 15% HCl acid on zones #1 & #2 (6472-6395'), 14:30 displace acid in perfs @ 885 psi @ 1 bpm, 14:40 POOH with CT & pulsing jet, 16:00 TIH with CT & washing nozzle tag RBP @ 6544' pumping 300 scfm N/2 circulating fluids back to rig tank, total returns 142 bbl, 20:45 switch well to test on 50/64 choke, recovered 19 bbl oil & 48 bbl water in 3 hr test, 534 BPD total rate, 23:50 POOH with CT & wash nozzle, rig down CT unit and all equipment, secure wellhead & SDFN @ 01:30 CMOL: Jay Rasmussen

10/24/06 7am Released Halco, RU to pull tbg, hold safety meeting, hookup rig pump, fill 7" annulus, released pkr & rbp, POOH with tbg, pkr, & rbp, SWI, police location, ready to run ESP.

CMOL: Jay Rasmussen

10/25/06 7:30am Hold safety meeting, unhook flowlines and test manifolds, start hauling equipment to B pad. CMOL: Jay Rasmussen

10/26/06 7am Hold safety meeting, Baker Centrilift on location splicing cable, pump won't be in till morning, move equipment to pad B.

CMOL: Jay Rasmussen

7am Rig up to run ESP & tubing; Baker Centrilift personnel on location, make up sensor, motor, seal, pump, Trico Y-tool w/ 1.5" blanking plug in place tested to 2000 psi (1.31" od instrument tube with 1.147" tube id for maximum 1" od instrument pass thru). Btm of instrument tube mule shoe btm and approx 6-8" above btm of sensor. 10am - RIH with ESP & 202 jts tbg strapping with 3 SS bands per jt, ND BOP, repair three cable spots and splice on new Taurus Engrg surface pigtail, NU wellhead, hookup flowlines and instrumentation, start well, well not pumping, downhole electric check out OK. SDFN @ 7pm CMOL: Jay Rasmussen

10/28/06 7am RDMOSU, TURN WELL OVER TO PRODUCTION @ 7am 10/28/06, FINAL WORKOVER REPORT,
Thank You!
CMOL: Jay Rasmussen

CONCIDENTIAL

Daily Workover Report Wolverine Gas & Oil Company of Utah, LLC Wolverine Federal #17-6 (8-1) well SE NW Sec 17 T23S - R01W Sevier Co., Utah

"TIGHT HOLE"

Production Tubing Setting - ran in hole on 10/27/2006

***************************************	Description	SN	Length	Top @ kb
1	3.75" od, Centinel 2250 BHP sensor	55C0001082	4.10	
1	3.75"od, 65hp, 940v,52a,DMFI motor	21D0049271	20.76	6234 md
1	4.0"od, FSB3 DMPFS seal	31F0072478	5.60	6228 md
1	4.0"od, type P6, model 400PSHD, 163 stg pump w intake	102414921	16.60	6211 md
1	2-3/8" 4.7# N80 EUE 8rd tbg sub		10.17	
1	TRICO Y-tool, 2-3/8" EUE w/ blanking plug in place;		4.04	
	1.31" od instrument tube (drift 1.053") btm @ 6258'		ļ	
1	2-3/8" x 2-7/8" EUE 8rd xover	**************************************	.77	
1	2-7/8" EUE 8rd SN (2.25" min id)		1.08	6195 md
1	2-7/8" 6.5# N80 EUE 8rd handling sub		6.22	
202	2-7/8" 6.5# N-80 EUE 8rd tbg joints		6196.19	***************************************
	Overall		6265.53	***************************************
	Set below KB 15' (GL to KB = 17') less 22' WL correct		-7.00	
	EOT set @ KB		6258.53	
	EOT 6259'kb md; intake @ 6195'kb md (6000' tvd)			
	Note: there is NO check or drain valve in this well			·
	Fishing neck for plug is 5/8" rod catch-1" max tool o.d.			***************************************



Form 3160-5

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DIV. OF OIL, GAS & MINING

Form 3160-5 (April 2004)	UNITED STA' DEPARTMENT OF T BUREAU OF LAND M	HE INTERIOR	5.	FORM APPROVED OMB No. 1004-0137 Expires: March 31, 2007 5. Lease Serial No.			
Do not	NDRY NOTICES AND F use this form for proposal ned well. Use Form 3160 -	REPORTS ON WE	LLS 6.	UTU-73528 If Indian, Allottee or Tribe Name			
SUBMIT	IN TRIPLICATE- Other in	nstructions on rever	rse side.	. If Unit or CA/Agreement, Name and/or No. Wolverine Federal Exploration Unit			
1. Type of Well Oil Well	Gas Well Oth	er	8	. Well Name and No.			
2. Name of Operator Wolv	verine Gas and Oil Company of Ut	ah, LLC	9.	Wolverine Federal 17-6 (WF 8-1) API Well No.			
3a Address 55 Campau NW, Gran	d Rapids, MI 49503	3b. Phone No. (include 616-458-1150	·	43-041-30037 0. Field and Pool, or Exploratory Area			
	age, Sec., T., R., M., or Survey Descripti	ion)		Covenant Field			
Surface: 1680' I	FNL & 2265' FWL, Sec. 17, T23S, NL & 2458' FEL, Sec. 17, T23S, R	R01W, SLB&M	1	11. County or Parish, State Sevier County, Utah			
12. CHI	ECK APPROPRIATE BOX(ES)	TO INDICATE NATUR	RE OF NOTICE, REPO	ORT, OR OTHER DATA			
TYPE OF SUBMISS	ION	TY	PE OF ACTION				
Notice of Intent Subsequent Report	Acidize Alter Casing Casing Repair	Deepen Fracture Treat New Construction	Production (Start/R) Reclamation Recomplete	Resume) Water Shut-Off Well Integrity Other			
Final Abandonment	Notice Change Plans Convert to Injection	Plug and Abandon Plug Back	Temporarily Aband Water Disposal	lon			
testing has been com determined that the s A recompletion w perforation inter and 6352' - 6363' following the reco	pleted. Final Abandonment Notices shat ite is ready for final inspection.)	all be filed only after all requir- rine Federal 17-6 (WF 8-1) e currently producing, and te each perforated interva etion activities are expected	ements, including reclamation. It is planned to squeezed perforate two additions. This well will continue	new interval, a Form 3160-4 shall be filed once on, have been completed, and the operator has be cement to isolate between existing all Upper Navajo intervals at 6326' - 6340' to produce only from the Upper Navajo as October 1, 2007.			
Attachment: Wo	lverine Federal 17-6 Recompletion	1 Procedure		6W			
14. I hereby certify the Name (Printed/I	at the foregoing is true and correct (yped)						
Ellis M	. Peterson	Title	Sr. Production Engineer				
Signature ##	Mo there	Date	·	05/2007			
		OR FEDERAL OR		ISE			
Approved by Conditions of approval, certify that the applicant which would entitle the	if any, are attached. Approval of this holds legal or equitable title to those rapplicant to conduct operations thereo	notice does not warrant or a rights in the subject leads and	Hited by the Division of Mining	PECEIVED			
Title 18 U.S.C. Section 10 States any false, fictitiou	001 and Title 43 U.S.C. Section 1212, ma s or fraudulent statements or represent	ake it a crime for any person tations as to any matter within		take to any department or agency of the United			
(Instructions on pag	re 2)		SULVY	SEL 0 0 5001			

Wolverine Gas & Oil Company of Utah, LLC Recompletion Procedure

Wolverine Federal 17-6 Covenant Field

Purpose:

Cement exiting perforations and recomplete Upper Navajo

Note: This procedure is based on conditions existing prior to and situations and results anticipated during the well work activities. Actions and methods will deviate from this procedure as warranted by actual circumstances.

PERTINENT INFORMATION

Location:

1680' FSL, 2265' FWL (SENW)

Section 17, Township 23 South, Range 1 West

Sevier County, Utah

Elevation:

5736' GL, 5753' KB

TD:

6765°

PBTD:

6713' (cement top)

API No.:

43-041-30037

Casing:

13-3/8", 61.0# @ 2000', cemented to surface

9-5/8", 47.0#, HCP-110, LT&C @ 6094', cemented with 230 sks 50:50 Poz 7", 23.0#, HCP-110, LT&C @ 6758', cemented with 480 sks 50:50 Poz

Wellhead:

Tubing Head Flange - 7-1/16" 5k w/ 2-7/8" EUE top connection

Tubing:

6246' of 2-7/8", 6.5#, N-80, EUE, 8rd w/ SN, x-over, and ESP equipment

Production Casing Specs:

7", 23.0#, HCP-110, LT&C, 8rd, ID: 6.366" Drift: 6.241"

Collapse: 5650 psi

Burst: 8720 psi (80% 6976 psi)

Tubing Specs:

2-7/8", 6.5#, N-80, EUE, 8rd, ID: 2.441" Drift: 2.347"

Collapse: 11,170 psi Burst: 10,570 psi (80% 8456 psi)

Joint: 145,000 lbs (80% 116,000 lbs)

Capacities:

7", 23.0#:

0.03936 Bbls/ft 0.2210 ft³/ft

2-7/8", 6.5#

0.00579 Bbls/ft 0.0325 ft³/ft

7" x 2-7/8" Annulus

0.0313 Bbls/ft

 $0.1759 \text{ ft}^3/\text{ft}$

BH Temperature: 183 °F @ 6508' MD (6300' TVD)

Current Upper Navajo Formation Completion Interval: 6395' - 6518' (8/8/05)

Current Perforations:

6395' - 6415' MD (6187' - 6207' TVD), 20', 80 holes 6430' - 6443' MD (6222' - 6235' TVD), 13', 52 holes 6472' - 6484' MD (6264' - 6276' TVD), 12', 48 holes 6512' - 6518' MD (6304' - 6310' TVD), 6', 24 holes

Perforation Depths are referenced to Halliburton SDL-DSN-GR dated 05/27/05. CBL-GR-CCL dated 07/21/05 is 2' shallow to open-hole logs at perforation depth.

Proposed Upper Navajo Formation Completion Interval: 6326' - 6518'

Proposed Perforations:

6326' - 6340' MD (6118' - 6132' TVD), 14', 84 holes 6352' - 6363' MD (6144' - 6155' TVD), 11', 66 holes 6395' - 6415' MD (6187' - 6207' TVD), 20', 120 holes 6430' - 6444' MD (6222' - 6236' TVD), 14', 84 holes 6462' - 6484' MD (6254' - 6276' TVD), 22', 132 holes 6507' - 6518' MD (6299' - 6310' TVD), 11', 66 holes

PROCEDURE

- 1. Prepare location for workover.
- 2. Obtain a production log through the Y-Tool while producing the well.
- 3. Shut in well and disconnect power.
- 4. MIRUSU. Reverse circulate completion fluid to recover oil and kill well. Disconnect flow lines, ND wellhead, and NU BOP.
- 5. RU cable spoolers. POOH and lay down ESP equipment. RD cable spoolers.
- 6. Round trip a 6-1/8" bit and casing scraper to PBTD.
- 7. RIH with a packer and set it at 6500' (CBL depth). Using rig pump, attempt to establish a rate down tubing and circulate out casing (circulation not expected). Reset packer at 6450' and repeat (circulation expected). Reset packer at 6418' and repeat (circulation expected). Release packer, reverse circulate clean, and POOH with tubing and packer.
- 8. RU wireline service. Run a third party Gyro/CCL survey (directional survey) from PBTD to surface. Run and wireline set a 7" (23#) CICR at 6460' (CBL depth).
- 9. RIH with CICR stinger on 2-7/8" tubing and sting into CICR. RU cementing company and squeeze isolated perforations and behind casing with 25 sks of low fluid loss, premium cement.
- 10. POOH with tubing and stinger.
- 11. RU wireline unit. Run a 6-1/8" gauge ring to ~6430' and then run and set a 7" (23#) CICR at 6418' (CBL depth).
- 12. RIH with CICR stinger on 2-7/8" tubing and sting into CICR. RU cementing company and squeeze perforations and behind casing with 25 sks of low fluid loss, premium cement.
- 13. POOH with tubing and stinger.
- 14. RIH with a 6-1/8" and ten 4-3/4" drill collars on 2-7/8" tubing. RU power swivel and drill out with reverse circulation. Drill out cement and both CICR, circulate clean, and POOH laying down the drill collars.
- 15. RIH with a 6-1/8" bit and casing scraper. Tag PBTD and spot 10 Bbls of 10 ppg salt brine containing recommended biocide and corrosion inhibitor to fill casing below perforations. POOH with bit and casing scraper.

- 16. RU Halliburton wireline unit to run segmented radial cement bond log (SRCBL) under pressure. Run SRCBL/CCL/GR from 6600' to 6000' (on depth to OH logs) with 0, 1000, and 2000 psi casing pressure.
- 17. Perforate the bottom completion interval of Upper Navajo at 6507' 6518' WLM with 6 SPF and 6' of Stimgun sleeve. RD and release wireline unit.
- 18. RIH with a RBP, retrieving head, packer, and seating nipple on 2-7/8" tubing. Set RBP below 6530' and packer at 6495'. RU and swab for rate and clean-up.
- 19. RU Halliburton and acid stimulate the isolated zone using 500 gallons of 15% FE acid for tube clean, 732 gallons of Clay-Safe H (5% HCl acid), 1100 gallons of Sandstone Completion Acid (13.5/1.5% HCl/HF), and 630 gallons of Clayfix 5 (5% Ammonium Chloride).
- 20. Open well and flow/swab back for cleanup.
- 21. Release packer and reset RBP at 6500' WLM. POOH with packer and tubing.
- 22. RU Halliburton wireline unit and perforate 6462' 6484' WLM with 6 SPF and 10' of Stimgun sleeve.
- 23. RIH with a RBP retrieving head and packer. Set packer at 6450'. RU and swab the isolated zone for rate and clean-up.
- 24. RU Halliburton and acid stimulate the isolated zone using 1460 gallons of Clay-Safe H (5% HCl acid), 2200 gallons of Sandstone Completion Acid (13.5/1.5% HCl/HF), and 630 gallons of Clayfix 5 (5% Ammonium Chloride).
- 25. Open well and flow/swab back for cleanup.
- 26. Reset tools and check for behind-pipe communication between current top two zones, then reset RBP at 6450' WLM. POOH with packer and tubing.
- 27. RU Halliburton wireline unit and perforate 6430' 6444' WLM with 6 SPF and 9' of Stimgun sleeve. RD and release wireline unit.
- 28. RIH with a RBP retrieving head, packer, and seating nipple on 2-7/8" tubing. Set packer at 6416'. RU and swab the isolated zone for rate and clean-up.
- 29. RU Halliburton and acid stimulate the isolated zone using 928 gallons of Clay-Safe H (5% HCl acid), 1400 gallons of Sandstone Completion Acid (13.5/1.5% HCl/HF), and 630 gallons of Clayfix 5 (5% Ammonium Chloride).
- 30. Open well and flow/swab back for cleanup.
- 31. Reset tools and check for behind-pipe communication between current top two zones, then reset RBP at 6423' WLM. POOH with packer and tubing.
- 32. RU Halliburton wireline unit and perforate 6395' 6415' WLM with 6 SPF and 9' of Stimgun sleeve. RD and release wireline unit.
- 33. RIH with a RBP retrieving head, 2 joints of tubing, packer, and seating nipple on 2-7/8" tubing. Set packer above 6320'. RU and swab the isolated zone for rate and clean-up.
- 34. RU Halliburton and acid stimulate the isolated zone using 1328 gallons of Clay-Safe H (5% HCl acid), 2000 gallons of Sandstone Completion Acid (13.5/1.5% HCl/HF), and 630 gallons of Clayfix 5 (5% Ammonium Chloride).
- 35. Open well and flow/swab back for cleanup.

- 36. Reset tools and check for behind-pipe communication between current top two zones, then reset RBP at 6370' WLM. POOH with packer and tubing.
- 37. RU Halliburton wireline unit and perforate 6352' 6363' WLM with 6 SPF and 6' of Stimgun sleeve. RD and release wireline unit.
- 38. RIH with a RBP retrieving head, 2 joints of tubing, packer, and seating nipple on 2-7/8" tubing. Set packer above 6290'. RU and swab the isolated zone for rate and clean-up.
- 39. RU Halliburton and acid stimulate the isolated zone using 1328 gallons of Clay-Safe H (5% HCl acid), 2000 gallons of Sandstone Completion Acid (13.5/1.5% HCl/HF), and 630 gallons of Clayfix 5 (5% Ammonium Chloride).
- 40. Open well and flow/swab back for cleanup.
- 41. Reset tools and check for behind-pipe communication between current top two zones, then reset RBP at 6345' WLM. POOH with packer and tubing.
- 42. RU Halliburton wireline unit and perforate 6326' 6340' WLM with 6 SPF and 9' of Stimgun sleeve. RD and release wireline unit.
- 43. RIH with a RBP retrieving head, 2 joints of tubing, packer, and seating nipple on 2-7/8" tubing. Set packer above 6260'. RU and swab the isolated zone for rate and clean-up.
- 44. RU Halliburton and acid stimulate the isolated zone using 928 gallons of Clay-Safe H (5% HCl acid), 1400 gallons of Sandstone Completion Acid (13.5/1.5% HCl/HF), and 630 gallons of Clayfix 5 (5% Ammonium Chloride).
- 45. Open well and flow/swab back for cleanup.
- 46. Reset tools and check for behind-pipe communication between top two zones, then release packer and RBP and POOH with tubing and tools.
- 47. If well is capable of flowing, RIH with a tubing collar (or wireline re-entry guide), 7" (23#) packer, and SN on 2-7/8" tubing, and set packer at ~6260' WLM. Land tubing, ND BOP and NU wellhead. RU, swab well in, and turn to production.
 - If well is to be pumped, details for installing a Y-tool and pumping equipment will be provided.
- 48. RDMOSU.



WOLVERINE GAS AND OIL COMPANY

OF UTAH, LLC

Energy Exploration in Partnership with the Environment

February 15, 2008

Al McKee BLM Utah State Office PO Box 45155 Salt Lake City, Utah 84145-0155 United States of America

235 IW 17

RE: Sundry Notices - Wolverine Gas and Oil Company of Utah, LLC

Wolverine Federal 17-6, API 43-041-30037

Covenant Field, Sevier County, Utah

Dear Mr. McKee:

Wolverine Gas and Oil Company of Utah, LLC (Wolverine) respectfully submits the enclosed Sundry Notice and attachments in triplicate for the referenced well.

Please advise if you have any questions or need additional information.

Sincerely,

Ellis M. Peterson

Senior Production Engineer

Wolverine Gas and Oil

cc: UDOGM w/ attachments in duplicate

FEB 1 9 2008

DIV. OF OIL, GAS & MINING

Form 3160-5 (April 2004)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

).	Lease Senai No.	
	UTU-73528	
5,	If Indian, Allottee or Tribe Name	

abandoned we	ell. Use Form 3160 - 3	(APD) for such pro	posals.					
SUBMIT IN TR	IPLICATE- Other inst	tructions on rever	se side.	7. If Unit or C	CA/Agreement, Name and/or No.			
1. Type of Well Oil Well □ □	8. Well Name and No. Wolverine Federal 17-6 (WF 8-1) 9. API Well No.							
2. Name of Operator Wolverine G								
3a. Address 3b. Phone No. (include area code) 55 Campau NW, Grand Rapids, MI 49503 616-458-1150					9037 Pool, or Exploratory Area			
 Location of Well (Footage, Sec., T., R., M., or Survey Description) Surface: 1680' FNL & 2265' FWL, Sec. 17, T23S, R01W, SLB&M Bottom-Hole: 721' FNL & 2458' FEL, Sec. 17, T23S, R01W, SLB&M 					Covenant Field 11. County or Parish, State Sevier County, Utah			
12. CHECK AF	PPROPRIATE BOX(ES) TO	INDICATE NATUR	E OF NOTICE, RI	EPORT, OR	OTHER DATA			
TYPE OF SUBMISSION		TYP	E OF ACTION					
Notice of Intent ✓ Subsequent Report Final Abandonment Notice	Acidize Alter Casing Casing Repair Change Plans Convert to Injection	Deepen Fracture Treat New Construction Plug and Abandon Plug Back	Production (Star Reclamation Recomplete Temporarily Aba Water Disposal		Water Shut-Off Well Integrity Other			
13. Describe Proposed or Complete	d Operation (clearly state all pert	inent details, including estir	nated starting date of an	y proposed work	and approximate duration thereof.			

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

A recompletion workover was completed on the Wolverine Federal 17-6 (8-1) well. The existing perforations were cemented using 25 sacks of Class "G" cement to eliminate a channel behind casing. Productive intervals at 6507' - 6518', 6462' - 6484', 6430' - 6444', and 6395' - 6415' were reperforated with 6 SPF and acid stimulated. Additional Upper Navajo perforations were added at 6326' - 6334' at 6 SPF and a diagnostic fracture injection test was pumped into the 6326' - 6334' interval using 46 BW. The well was then returned to production with ESP artificial lift.

See the attached summary for details of the completed work.

Attachment: Workover Summary and Results

RECEIVED
FEB 1 9 2008

			DIV OF OIL	<u>GAS & MIN</u> ING
14. I hereby certify that the foregoing is true and correct Name (Printed/Typed)			<u> </u>	
Ellis M. Peterson	Title	Sr. Production Engineer		
Signature Alis Marin	Date	02/15/2008		
THIS SPACE FOR FEDERAL (OR	STATE OFFICE USE		
Approved by		Title	Date	
Conditions of approval, if any, are attached. Approval of this notice does not warrant certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	. !	Office		

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to anymatter within its jurisdiction.



Workover Summary and Results

Wolverine Federal 17-6 Covenant Field November 1, 2007 to January 24, 2008

Purpose of Workover: Recomplete Upper Navajo

Work Summary:

- 1. Ran a fluid entry survey via the y-tool while producing the Upper Navajo.
- 2. Tagged new PBTD at 6666' KB.
- 3. Checked for communication behind casing by setting a packer, pumping down tubing, and observing casing for circulation. No communication with packer settings of 6498' and 6300', but there was communication at 6450' and 6421' (circulated 2.5 BPM at 1000-1100 psi).
- 4. Ran a Gyro directional survey from 6655'.
- 5. Set CICR at 6460'. Spotted 25 sacks of premium cement (15.8 ppg. 1.15 yield) and squeezed cement in channel behind casing to 2000 psi and circulated clean with end of tubing at 6445'.
- 6. Set CICR at 6418'. Could not establish circulation through CICR, indicating that cement from the first squeeze plugged perforations or channel.
- 7. Attempted to drill out cement and CICR using a power swivel, but deviated well caused excessive torque. Picked up a mud motor and drilled out cement and retainers.
- 8. Ran a Schlumberger ICB (CBL) from 6600' to 6000'.
- 9. Wireline perforated 6507'- 6518' and 6462' 6484' with 6 SPF.
- 10. Halliburton acidized 6462' 6518' with 1021 gallons 7.5% FE acid (7-1/2% HCl), 2311 gallons Clay Safe H (5% HCl) and 2467 gallons Sandstone Completion Acid (13.5% HCl/1.5% HF) split into three stages using 1.5 lb/perf of Benzoic Acid to divert. Treated at 2.1 BPM and 1919 psi.
- 11. Wireline perforated 6430'- 6444' with 6 SPF.
- 12. Checked for and found communication behind casing with packer settings of 6456' and 6422'.
- 13. Wireline perforated 6395'- 6415' with 6 SPF.
- 14. Halliburton acidized 6395'- 6518' with 1587 gallons FE (7-1/2% HCl), 2564 gallons Clay Safe H (5% HCl), and 3489 gallons Sandstone Completion Acid (13.5% HCl/1.5% HF) split into three stages using 2 lb/perf of Benzoic Acid to divert. Final treating rate was 2.1 BPM at 1356 psi.
- 15. Wireline perforated 6326'- 6334' with 6 SPF.
- 16. Halliburton pumped 46 BW for Diagnostic Fracture Injection Test at 4.6 BPM with initial pressure of 3042 psi and average pump pressure of 1768 psi. ISIP was 1275 psi. Well went on vacuum within two hours after injection.
- 17. Ran Weatherford Y-Tool and ESP. Placed well on production.
- 18. Plan to pump well while finalizing plans and evaluating a possible sand fracture stimulation through perforations at 6326'- 6334'.





Active Perforations: (Upper Navajo)

6326' - 6334' MD (6118' - 6126' TVD), 8', 48 holes

6395' - 6415' MD (6187' - 6207' TVD), 20', 200 holes

6430' - 6444' MD (6222' - 6236' TVD), 14', 136 holes

6462' - 6484' MD (6254' - 6276' TVD), 22', 180 holes

6507' - 6518' MD (6299' - 6310' TVD), 110', 44 holes

Production before Workover: 102 BOPD and 293 BWPD with 1018 psi BFHP

Production after Workover: 217 BOPD and 396 BWPD with 1736 psi BFHP

Pre-WO Fluid Entry Survey results:

6395'- 6415': 91% of oil, 85% of water (260 BWPD)

6430'- 6444': 0% of oil, 0% of water

6462'- 6484': 0% of oil, 15% of water (46 BWPD)

6507'- 6518': 9% of oil, 0 % of water

Gyro Results: MD to TVD correction is -206' at perforation depths (compared to -208' with drilling directional surveys)



RECEIVED
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DIV. OF OIL, GAS & MINING

KEEPER GYRO SURVEY REPORT

Prepared For:

Wolverine Gas & Oil Co. of Utah LLC Wolverine Fed 17-6 Servier County, UT

Prepared By:

Julie Cruse, Rockies Region Engineer Scientific Drilling Rocky Mountain Region

> Scientific Drilling International 7237 W. Barton Rd., Casper, WY 82604 P.O. Box 1600, Mills, WY 82644 (307) 472-6621 julie.cruse@scientificdrilling.com



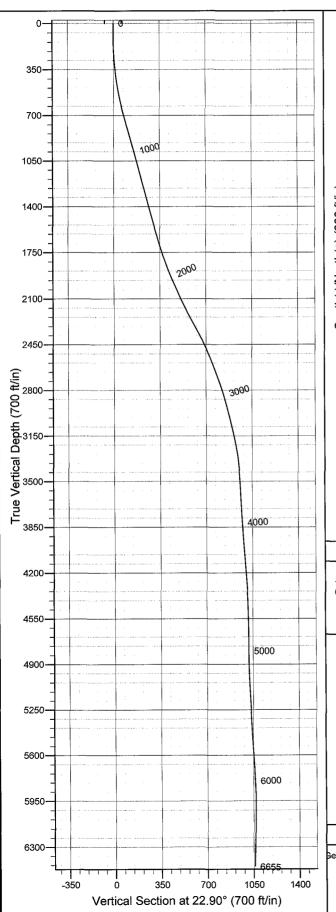
Project: Servier County, UT

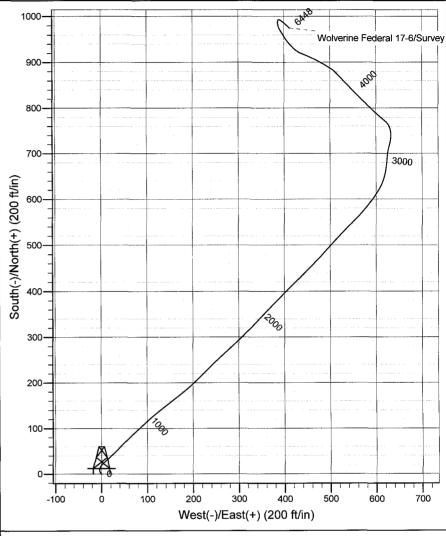
Site: Wolverine Federal

Well: Wolverine Federal 17-6

Wellbore: OH Design: OH

Wolverine Gas & Oil Co. of Utah LLC





WELL DETAILS: Wolverine Federal 17-6

Ground Level: GL 5753' & RKB 17' @ 5770.00ft (Lead 720) +N/-S +F/-W Northing Easting Latitude 38° 48' 19.460 N Longitude 110° 56' 2.273 W 2161327.64 0.00 0.00 172458.88

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Wolverine Federal 17-6, True North Vertical (TVD) Reference: GL 5753' & RKB 17' @ 5770.00ft (Lead 720) Section (VS) Reference: Slot - (0.00N, 0.00E) Measured Depth Reference: GL 5753' & RKB 17' @ 5770.00ft (Lead 720)

Calculation Method: Minimum Curvature

Local North: True

Location: Sec 17 T23S R1W

PROJECT DETAILS: Servier County, UT

Survey: Survey #1 (Wolverine Federal 17-6/OH)

eodetic System: US State Plane 1927 (Exact solution) Created By: Julie Cruse Datum: NAD 1927 (NADCON CONUS) Ellipsoid: Clarke 1866 Zone: Utah Central 4302

Date: 2007-12-10

Wolverine Gas & Oil Co. of Utah LLC

Servier County, UT Wolverine Federal Wolverine Federal 17-6 OH

Survey: Survey #1

Standard Survey Report

10 December, 2007

Scientific Drilling

Survey Report

Company:

Wolverine Gas & Oil Co. of Utah LLC

Project:

Servier County, UT Wolverine Federal

Site: Well:

Wolverine Federal 17-6

Wellbore: Design:

OH

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

Well Wolverine Federal 17-6

GL 5753' & RKB 17' @ 5770.00ft (Lead 720) GL 5753' & RKB 17' @ 5770.00ft (Lead 720)

North Reference:

Survey Calculation Method:

Database:

EDM 2003.16 Multi-User Db

Minimum Curvature

Project

Servier County, UT

Map System: Geo Datum:

US State Plane 1927 (Exact solution) NAD 1927 (NADCON CONUS)

Map Zone:

Utah Central 4302

System Datum:

Mean Sea Level

Site

Wolverine Federal, Sec 17 T23S R1W

Site Position: From:

Lat/Long

Northing: Easting:

172,458.88 ft

Latitude:

Longitude:

True

38° 48' 19.460 N 110° 56' 2.273 W

Position Uncertainty:

0.00 ft

Slot Radius:

2,161,327.64ft

Grid Convergence:

0.36°

Well

Wolverine Federal 17-6

Well Position

+N/-S +E/-W

0.00 ft 0.00 ft Northing: Easting:

172,458.88 ft 2,161,327.64 ft Latitude: Longitude: 38° 48' 19,460 N

Position Uncertainty

0.00 ft

Wellhead Elevation:

ft

Ground Level:

110° 56' 2.273 W 5,753.00 ft

Wellbore

ОН

Magnetics

Model Name

Sample Date

Declination (°)

Dip Angle (°)

Field Strength

(nT)

IGRF2005-10

2007-11-15

11.89

64.68

51,826

Design

Version:

ОН

Audit Notes:

1.0

Phase:

0,00

ACTUAL

Tie On Depth:

0.00

Vertical Section:

Depth From (TVD) (ft)

+N/-S

(ft)

0.00

+E/-W (ft) 0.00

Direction (°)

22.90

Survey Program

2007-12-10

From (ft)

То (ft)

Survey (Wellbore)

Tool Name

Description

100.00

6,655.00 Survey #1 (OH)

NS-GYRO-MS

North sensing gyrocompassing m/s

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100,00	0.13	285.65	100.00	0.03	-0.11	-0.01	0.13	0.13	0.00	
200.00	3.81	326.79	199.92	2.84	-2.04	1.82	3.71	3.68	41.14	
300,00	5.14	3.71	299.64	10.09	-3.57	7.91	3.10	1.33	36.92	
400.00	6.77	38.99	399.13	19.15	0.43	17.81	3.92	1.63	35.28	
500.00	11.23	49.39	497.88	30.07	11.54	32.19	4.73	4.46	10.40	
600.00	14.06	45.16	595.44	44.98	27.55	52.15	2.98	2.83	-4.23	
700.00	16.27	43.39	691.96	63.73	45.79	76.52	2.26	2.21	-1.77	
800.00	16.64	46.80	787.86	83.71	65.85	102.73	1.03	0.37	3.41	
900.00	16.58	46.33	883.69	103.36	86.60	128.92	0.15	-0.06	-0.47	
1,000.00	16.72	49.10	979.50	122.63	107.80	154.91	0.81	0.14	2.77	
1,100.00	16.57	51.87	1,075.31	140.86	129.89	180.30	0.81	-0.15	2.77	
1,200.00	16.76	52.59	1,171.11	158.42	152.56	205.30	0.28	0.19	0.72	

Scientific Drilling

Survey Report

Company:

Wolverine Gas & Oil Co. of Utah LLC

Project:

Servier County, UT Wolverine Federal

Site: Well:

Wolverine Federal 17-6

Wellbore: Design: OH

ОН

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method: Database:

Well Wolverine Federal 17-6

GL 5753' & RKB 17' @ 5770.00ft (Lead 720) GL 5753' & RKB 17' @ 5770.00ft (Lead 720)

True

Minimum Curvature

EDM 2003.16 Multi-User Db

Survey

Depth Inclination Column Colu	Measured			Vertical			Vertical	Dogleg	Build	Turn
1,300.00 16.75	Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
1,400.00	(ft)			(ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)
1,400.00	1 300 00	16.75	51 75	1 266 86	176 10	175 32	230 44	0.24	-0.01	0.84
1,500.00	•									
1,000.00	1,400.00	10.11	47.20	1,002.70	134.43	100.04	233.70	1.72	-0.04	-4.41
1700.00 1778 4/28 1649.89 255.19 259.04 335.67 1.01 0.71 2.38 1800.00 19.25 47.78 1.744.71 27.62 282.47 364.73 1.48 1.47 0.50 1800.00 219.4 45.41 1.838.32 30.0.82 307.98 366.95 2.82 2.99 2.237 2.000.00 24.53 43.16 1.930.20 359.73 364.69 473.29 1.10 1.00 2.5 2.25 2.90 2.237 2.000.00 24.53 44.05 2.000.00 35.67 3 1.01 1.00 1.00 1.00 1.00 1.00 1.00 1.	1,500.00	16.54	44.84	1,458.75	213.94		281.54	0.81	0.43	-2.44
1800.00 19.25 4778 1744.71 276.92 282.47 364.73 1.48 1.47 0.50 1.900.00 21.94 45.41 1.88.83.23 30.02 307.98 36.95 2.82 2.269 2.237 2.000.00 24.83 43.16 1.890.20 329.08 335.49 433.69 2.74 2.59 2.245 2.000.00 25.86 44.05 2.200.80 39.07 34.69 473.29 1.10 1.03 0.89 2.200.00 26.85 44.72 2.110.60 39.11.6 395.46 514.22 1.11 1.07 0.87 2.200.00 28.85 44.22 2.110.80 39.11.6 395.46 514.22 1.11 1.07 0.87 2.200.00 28.85 44.22 2.19.19 19 4.23.05 4.26.57 557.02 2.15 2.02 1.80 2.200.00 28.85 44.22 2.19.19 19 4.23.05 4.26.57 557.02 2.15 2.02 1.80 2.200.00 28.85 44.22 2.19.19 19 4.23.05 4.26.57 557.02 2.15 2.02 1.80 2.200.00 28.85 44.22 2.10.80 4.28.85 4.96.97 648.31 1.91 -1.46 -2.52 2.200.00 28.85 4.37.80 2.46.19 2.200.00 28.85 4.44.40 2.258.24 4.88.11 483.45 602.34 1.91 -1.46 -2.52 2.200.00 28.84 44.44 2.552.29 538.08 528.04 582.14 1.88 -1.66 1.88 2.200.00 28.84 44.44 2.552.29 538.08 528.04 582.14 1.88 -1.66 1.88 2.200.00 28.84 44.44 2.552.29 538.08 528.04 582.14 1.88 -1.66 1.88 2.200.00 1.00 1.00 1.00 1.00 1.00 1.00	1,600.00	17.07	44.90	1,554.48	234.43	237.46	308.36	0.53	0.53	0.06
1,900.00	1,700.00	17.78	47.28	1,649.89	255.19	259.04	335.87	1.01	0.71	2.38
2,000.00	1,800.00	19.25	47.78	1,744.71	276.62	282.47	364.73	1.48	1.47	0.50
2 100.00	1,900.00	21.94	45.41	1,838.32	300.82	307.98	396.95	2.82	2.69	-2.37
2,200.00	2,000.00	24.53	43.16	1,930.20	329.08	335.49	433.69	2.74	2.59	-2.25
2,200.00	2,100.00	25.56	44.05	2,020.80	359.73	364.69	473.29	1.10	1.03	0.89
2,400.00 30.08 44.40 2,286.84 458.11 463.45 602.34 1.71 1.43 1.192 2,500.00 28.62 41.88 2,373.50 493.85 496.97 648.31 1.91 1.146 -2.52 2,600.00 28.96 43.76 2,461.97 528.06 528.64 692.14 1.88 1.66 1.88 2,700.00 22.96 43.76 2,461.97 528.06 528.64 692.14 1.88 1.66 1.88 2,600.00 29.96 37.89 2,644.75 587.41 583.63 768.22 3.81 2.88 6.56 62.24 1.80 2,600.00 19.40 32.66 2,738.62 615.52 603.58 801.87 2.38 1.56 5.23 31.00 61 19.40 32.66 2,738.62 615.52 603.58 801.87 2.38 1.56 5.23 31.00 0.15 2.5 18.08 2,233.85 642.82 615.52 603.58 801.87 2.38 1.56 5.23 31.00 0.15 2.5 18.08 5.23 31.00 0.1 15.14 7.11 2.330.14 669.09 622.85 858.72 3.16 1.11 1.01.97 3.20 0.00 13.86 5.27 3.028.96 693.97 625.57 882.70 3.16 1.13 1.12 3.30 1.42 83 3.00 0.00 12.88 15.85 3.124.26 716.82 629.71 905.18 2.83 0.09 11.45 2.97 3,222.03 737.26 633.27 925.58 3.06 1.13 6.14 7.12 3.30 1.42 83 3.00 0.00 11.45 2.97 3,222.03 737.26 633.27 925.58 3.06 1.13 6.14 7.12 8.33 3.00 0.00 9.42 312.94 3.148.82 770.11 622.71 951.73 5.32 0.09 30.75 3.00 9.42 312.94 3.148.82 770.11 622.71 951.73 5.32 0.09 30.75 3.300 0.0 9.09 313.15 3.315.2 780.78 780.78 610.65 68.87 7.0 56.6 0.30 2.291 3.300 0.0 9.09 313.15 3.315.15 780.78 610.65 575.93 972.63 0.62 0.61 0.57 4.00 0.00 9.70 313.72 3.813.79 812.56 575.93 972.63 0.62 0.61 0.57 4.00 0.00 9.85 312.33 3.616.32 790.91 590.07 961.68 0.64 0.53 2.30 3.300.00 9.87 313.54 3.312.27 824.76 563.56 973.05 0.68 0.61 0.57 4.00 0.00 9.85 316.87 4.00 0.98 3.00 0.98 3.00 0.98 30.00 4.50 3.35 4.00 3.312.27 824.76 563.56 973.05 0.68 0.61 0.57 4.00 0.00 9.85 316.12 4.00 0.98 3.00 0.98 30.00 4.50 3.35 4.0	2,200.00	26.63	44.72	2,110.60	391.16	395.46	514.22	1.11	1.07	0.67
2,400.00 30.08 44.40 2,286.34 458.11 463.45 602.34 1.71 1.43 1.192 2,500.00 28.62 41.88 2,373.50 493.85 496.97 648.31 1.91 1.146 -2.52 2,500.00 26.96 43.76 2,461.97 528.06 528.64 692.14 1.88 1.66 1.88 1.66 1.88 2,700.00 22.96 43.76 2,461.97 528.06 528.64 692.13 3.13 3.13 3.12 2.88 6.56 692.90 198.40 32.86 2,738.62 615.52 603.58 801.87 2.38 11.28 6.56 6.56 2,900.00 198.40 32.86 2,738.62 615.52 603.58 801.87 2.38 11.56 5.23 310.00 152.5 18.08 2,233.65 842.82 615.52 603.58 801.87 2.38 1.56 5.23 310.00 152.4 31.5 1.45.8 842.82 615.52 603.58 801.87 2.38 1.56 5.23 310.00 152.4 31.5 1.45.8 842.82 615.52 603.58 801.87 2.38 1.156 5.23 310.00 152.4 31.5 1.45.8 842.82 699.9 622.85 858.72 3.16 1.11 1.01.97 3.200.00 158.4 5.27 3.069.96 803.97 803.20 1.88 6.527 3.069.96 803.97 803.20 1.88 6.527 3.069.96 803.97 803.20 1.28 15.85 3.102.00 11.85 2.97 3.222.03 737.26 633.27 925.58 30.08 1.43 1.28 1.84 3.300.00 11.45 2.97 3.222.03 737.26 633.27 925.58 30.08 1.43 1.28 3.500.00 9.42 312.94 3.148.82 770.11 622.71 951.73 5.32 0.99 9.07.5 3.700.00 9.12 310.03 3.517.52 780.78 610.65 69.87 0.56 0.30 0.2.91 3.800.00 9.90 313.15 3.315.2 780.78 80.90 9.90 313.15 3.715.14 801.34 801.34 809.00 9.90 313.15 3.715.14 801.34 801.34 809.00 9.90 313.15 3.715.14 801.34 801.34 809.00 9.90 313.15 3.715.14 801.34 801.34 809.00 9.90 313.15 3.715.14 801.34 801.34 809.00 9.90 313.15 3.715.14 801.34 801.34 809.00 9.90 313.15 3.715.14 801.34 801.34 809.00 9.90 313.15 3.715.14 801.34 801.34 809.00 9.90 313.15 40 3.912.27 824.76 563.56 978.05 0.68 0.61 1.66 4.000.00 9.85 316.12 4.207.36 863.74 501.34 90.35 0.62 0.61 0.57 0.50 0.82 4.000.00 9.87 316.87 4.100.98 803.75 563.86 978.05 0.68 0.61 1.68 4.000.00 9.85 316.12 4.207.36 863.74 501.34 4.100.40 9.95 0.58 0.61 1.68 4.000.00 9.89 300.10 4.500.07 885.49 4.472.00 1.014.90 0.50 0.20 0.20 0.40 0.40 0.90 0.50 0.50 0.82 4.700.00 9.89 300.10 4.500.07 885.49 4.700.26 911.00 4.700.00 9.90 0.55 0.88 30.10 4.200.00 9.90 3.75 5.22 2.476 5.563.69 93.35 0.26 0.19 0.09 0.55 6.88 5.400.00 9.84 30.18 80.00 9.84 30.18 80.00	2,300.00	28.65	46.32	2,199.19	423.65	428.57	557.02	2.15	2.02	1.60
2 600 0	2,400.00	30.08	44.40	2,286.34	458.11	463,45	602.34	1.71	1.43	-1.92
2 600 0	2,500.00	28.62	41.88	2,373.50	493.85	496.97	648.31	1.91	-1.46	-2.52
2,700.00 23,84 44,45 2,555,29 558,86 558,48 732,13 3,13 3,12 0,69 2,800.00 20,56 37,89 2,644,75 687,41 583,63 768,22 3,81 -2,88 -6,56 2,900.00 19,40 32,66 2,738,62 615,52 603,58 801,87 2,38 -1,56 -5,23 3,000.00 15,14 7,11 2,930,14 669,09 622,85 683,72 3,16 -1,11 -10,97 3,200.00 15,14 7,11 2,930,14 669,09 622,85 683,72 -1,36 -1,28 -1,84 3,300.00 12,88 15,85 3,124,26 716,62 629,71 905,18 2,63 -0,98 10,58 3,400.00 11,45 2,97 3,222,03 73,26 632,27 925,58 3,06 -1,43 -1,28 -1,84 3,000.00 11,45 2,97 3,222,03 73,26 632,27 925,58 3,06 -1,43 -1,28 3,500.00 9,42 312,94 3,418,82 770,11 622,71 951,73 5,32 -0,99 -30,75 3,700.00 8,59 312,33 3,616,32 770,11 622,71 951,73 5,32 -0,99 -30,75 3,700.00 8,59 312,33 3,616,32 790,91 599,07 961,88 604 -0,53 2,30 3,900.00 9,09 313,15 3,715,14 801,34 587,78 966,80 0,52 0,50 0,82 4,000.00 9,70 313,72 315,88 4,010.61 837,75 550,86 998,07 0,32 0,31 1,68 4,000.00 10,62 315,88 4,010.61 837,75 550,86 998,07 0,32 0,31 0,48 4,000.00 9,85 316,33 16,37 84,006,89 360,74 520,80 9,99 315,88 4,010.61 837,75 550,86 998,07 0,32 0,31 0,48 4,000.00 9,86 316,33 316,32 4,006,89 360,30 3,98 360,30 3,98 360,30 3,98 360,30 3,98 360,30 3,98 360,30 3,98 360,30 3,98 360,30 3,98 360,30 3,98 360,30 3,98 360,30 3,98 360,30 3,98 360,30 3,98 360,30 3,98 360,30 360,30 3,99 313,15 3,715,14 801,34 587,78 966,80 0,52 0,50 0,82 4,000.00 9,70 313,72 3,813,79 812,56 575,93 972,63 0,62 0,61 0,57 4,100.00 10,31 315,88 4,010.61 837,75 550,86 996,07 0,32 0,31 0,48 4,200.00 10,62 315,88 4,010.61 837,75 550,86 996,07 0,32 0,31 0,48 4,200.00 10,62 315,88 4,010.61 837,75 550,86 996,07 0,32 0,31 0,48 4,200.00 9,86 3 302,83 4,404,52 886,67 501,88 1,017,20 2,38 -0,04 4,14,23 4,800.00 9,86 3 302,83 4,404,52 886,67 501,88 1,017,20 2,38 -0,04 4,000.00 9,87 316,88 4,010.61 837,75 550,86 996,07 0,32 0,31 0,44 4,600.00 9,86 3 302,83 4,404,52 886,67 501,88 1,017,40 0,59 -0,58 -0,75 4,500.00 9,87 318,88 4,010.61 8,000.00 9,87 318,88 4,010.61 8,000.00 9,88 300,10 4,503,07 8,84 9,84 9,84 9,84 9,84 9,84 9,84 9,84	2,600.00		43.76	2,461.97	528.06	528.64	692.14	1.88	-1.66	1.88
2,800.00			44.45	2,552.29	558.86	558.48	732.13	3.13	-3.12	0.69
2,900.00										-6.56
3,100.00						603.58			-1.56	-5.23
3,100.00	3.000.00	16.25	18.08	2.833.85	642.82	616.89	832.20	5.44	-3.15	-14.58
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4,600.00 9,63 302.63 4,404.52 886.67 501.68 1,012.00 2.38 -0.04 -14.23 4,700.00 9,89 300.10 4,503.07 895.49 487.20 1,014.49 0.50 0.26 -2.53 4,800.00 9,84 297.56 4,601.59 903.75 472.20 1,016.26 0.44 -0.05 -2.54 4,900.00 8.87 295.28 4,700.26 911.00 457.65 1,017.28 1.04 -0.07 -2.28 5,000.00 7.82 291.22 4,799.20 916.75 444.34 1,017.40 1.20 -1.05 -4.06 5,100.00 7.14 298.97 4,998.35 922.22 432.56 1,017.86 1.22 -0.68 7.75 5,200.00 7.12 312.59 4,997.59 929.43 422.56 1,020.60 1.69 -0.02 13.62 5,300.00 6.57 319.47 5,096.87 937.97 414.28 1,025.25 0.99 -0.55 6.88 5,500.00 5.11 328.69 5,295.84 954.19										
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4,900.00 8.87 295.28 4,700.26 911.00 457.65 1,017.28 1.04 -0.97 -2.28 5,000.00 7.82 291.22 4,799.20 916.75 444.34 1,017.40 1.20 -1.05 -4.06 5,100.00 7.14 298.97 4,898.35 922.22 432.56 1,017.86 1.22 -0.68 7.75 5,200.00 7.12 312.59 4,997.59 929.43 422.56 1,020.60 1.69 -0.02 13.62 5,300.00 6.57 319.47 5,096.87 937.97 414.28 1,025.25 0.99 -0.55 6.88 5,400.00 5.82 322.73 5,196.29 946.35 407.49 1,030.33 0.83 -0.75 3.26 5,500.00 5.11 328.69 5,295.84 954.19 402.10 1,035.46 0.91 -0.71 5.96 5,600.00 5.30 328.60 5,395.42 961.94 397.38 1,040.76 0.19 0.19 -0.09 5,700.00 5.72 326.70 5,494.96 970.05	4,700.00	9.89	300.10	4,503.07	895.49		1,014.49			
5,000.00 7.82 291.22 4,799.20 916.75 444.34 1,017.40 1.20 -1.05 -4.06 5,100.00 7.14 298.97 4,898.35 922.22 432.56 1,017.86 1.22 -0.68 7.75 5,200.00 7.12 312.59 4,997.59 929.43 422.56 1,020.60 1.69 -0.02 13.62 5,300.00 6.57 319.47 5,096.87 937.97 414.28 1,025.25 0.99 -0.55 6.88 5,400.00 5.82 322.73 5,196.29 946.35 407.49 1,030.33 0.83 -0.75 3.26 5,500.00 5.11 328.69 5,295.84 954.19 402.10 1,035.46 0.91 -0.71 5.96 5,600.00 5.30 328.60 5,395.42 961.94 397.38 1,040.76 0.19 0.19 -0.09 5,700.00 5.72 326.70 5,494.96 970.05 392.24 1,046.22 0.46 0.42 <td< td=""><td>4,800.00</td><td>9.84</td><td>297.56</td><td>4,601.59</td><td>903.75</td><td>472.20</td><td>1,016.26</td><td></td><td></td><td></td></td<>	4,800.00	9.84	297.56	4,601.59	903.75	472.20	1,016.26			
5,100.00 7,14 298.97 4,898.35 922.22 432.56 1,017.86 1.22 -0.68 7.75 5,200.00 7,12 312.59 4,997.59 929.43 422.56 1,020.60 1.69 -0.02 13.62 5,300.00 6,57 319.47 5,096.87 937.97 414.28 1,025.25 0.99 -0.55 6.88 5,400.00 5.82 322.73 5,196.29 946.35 407.49 1,030.33 0.83 -0.75 3.26 5,500.00 5.11 328.69 5,295.84 954.19 402.10 1,035.46 0.91 -0.71 5.96 5,600.00 5.30 328.60 5,395.42 961.94 397.38 1,040.76 0.19 0.19 -0.09 5,700.00 5.72 326.70 5,494.96 970.05 392.24 1,046.22 0.46 0.42 -1.90 5,800.00 4.78 343.71 5,594.55 978.21 388.34 1,052.23 1.81 -0.94 17.01 5,900.00 3.75 355.83 5,694.27 985.47 <	4,900.00	8.87	295.28	4,700.26	911.00	457.65	1,017.28	1.04	-0.97	-2.28
5,200.00 7.12 312.59 4,997.59 929.43 422.56 1,020.60 1.69 -0.02 13.62 5,300.00 6.57 319.47 5,096.87 937.97 414.28 1,025.25 0.99 -0.55 6.88 5,400.00 5.82 322.73 5,196.29 946.35 407.49 1,030.33 0.83 -0.75 3.26 5,500.00 5.11 328.69 5,295.84 954.19 402.10 1,035.46 0.91 -0.71 5.96 5,600.00 5.30 328.60 5,395.42 961.94 397.38 1,040.76 0.19 0.19 -0.09 5,700.00 5.72 326.70 5,494.96 970.05 392.24 1,046.22 0.46 0.42 -1.90 5,800.00 4.78 343.71 5,594.55 978.21 388.34 1,052.23 1.81 -0.94 17.01 5,900.00 3.75 355.83 5,694.27 985.47 386.93 1,058.37 1.36 -1.03 <t< td=""><td>5,000.00</td><td>7.82</td><td>291.22</td><td>4,799.20</td><td>916.75</td><td>444.34</td><td>1,017.40</td><td>1.20</td><td>-1.05</td><td>-4.06</td></t<>	5,000.00	7.82	291.22	4,799.20	916.75	444.34	1,017.40	1.20	-1.05	-4.06
5,300.00 6.57 319.47 5,096.87 937.97 414.28 1,025.25 0.99 -0.55 6.88 5,400.00 5.82 322.73 5,196.29 946.35 407.49 1,030.33 0.83 -0.75 3.26 5,500.00 5.11 328.69 5,295.84 954.19 402.10 1,035.46 0.91 -0.71 5.96 5,600.00 5.30 328.60 5,395.42 961.94 397.38 1,040.76 0.19 0.19 -0.09 5,700.00 5.72 326.70 5,494.96 970.05 392.24 1,046.22 0.46 0.42 -1.90 5,800.00 4.78 343.71 5,594.55 978.21 388.34 1,052.23 1.81 -0.94 17.01 5,900.00 3.75 355.83 5,694.27 985.47 386.93 1,058.37 1.36 -1.03 12.12 6,000.00 2.32 14.20 5,794.13 990.70 387.19 1,063.28 1.71 -1.43 18.37 6,100.00 2.00 87.20 5,894.08 992.75 <t< td=""><td>5,100.00</td><td>7.14</td><td>298.97</td><td>4,898.35</td><td>922.22</td><td>432.56</td><td>1,017.86</td><td>1.22</td><td>-0.68</td><td>7.75</td></t<>	5,100.00	7.14	298.97	4,898.35	922.22	432.56	1,017.86	1.22	-0.68	7.75
5,400.00 5,82 322.73 5,196.29 946.35 407.49 1,030.33 0.83 -0.75 3.26 5,500.00 5,11 328.69 5,295.84 954.19 402.10 1,035.46 0.91 -0.71 5.96 5,600.00 5,30 328.60 5,395.42 961.94 397.38 1,040.76 0.19 0.19 -0.09 5,700.00 5,72 326.70 5,494.96 970.05 392.24 1,046.22 0.46 0.42 -1.90 5,800.00 4.78 343.71 5,594.55 978.21 388.34 1,052.23 1.81 -0.94 17.01 5,900.00 3.75 355.83 5,694.27 985.47 386.93 1,058.37 1.36 -1.03 12.12 6,000.00 2.32 14.20 5,794.13 990.70 387.19 1,063.28 1.71 -1.43 18.37 6,100.00 2.00 87.20 5,894.08 992.75 389.43 1,066.04 2.58 -0.32 <td< td=""><td>5,200.00</td><td></td><td>312.59</td><td>4,997.59</td><td>929.43</td><td>422.56</td><td>1,020.60</td><td>1.69</td><td>-0.02</td><td>13.62</td></td<>	5,200.00		312.59	4,997.59	929.43	422.56	1,020.60	1.69	-0.02	13.62
5,500.00 5.11 328.69 5,295.84 954.19 402.10 1,035.46 0.91 -0.71 5.96 5,600.00 5.30 328.60 5,395.42 961.94 397.38 1,040.76 0.19 0.19 -0.09 5,700.00 5.72 326.70 5,494.96 970.05 392.24 1,046.22 0.46 0.42 -1.90 5,800.00 4.78 343.71 5,594.55 978.21 388.34 1,052.23 1.81 -0.94 17.01 5,900.00 3.75 355.83 5,694.27 985.47 386.93 1,058.37 1.36 -1.03 12.12 6,000.00 2.32 14.20 5,794.13 990.70 387.19 1,063.28 1.71 -1.43 18.37 6,100.00 2.00 87.20 5,894.08 992.75 389.43 1,066.04 2.58 -0.32 73.00 6,200.00 2.34 120.28 5,994.01 991.80 392.93 1,066.53 1.28 0.34 <td< td=""><td>5,300.00</td><td>6.57</td><td>319.47</td><td>5,096.87</td><td>937.97</td><td>414.28</td><td>1,025.25</td><td>0.99</td><td>-0.55</td><td>6.88</td></td<>	5,300.00	6.57	319.47	5,096.87	937.97	414.28	1,025.25	0.99	-0.55	6.88
5,600.00 5,30 328.60 5,395.42 961.94 397.38 1,040.76 0.19 0.19 -0.09 5,700.00 5.72 326.70 5,494.96 970.05 392.24 1,046.22 0.46 0.42 -1.90 5,800.00 4.78 343.71 5,594.55 978.21 388.34 1,052.23 1.81 -0.94 17.01 5,900.00 3.75 355.83 5,694.27 985.47 386.93 1,058.37 1.36 -1.03 12.12 6,000.00 2.32 14.20 5,794.13 990.70 387.19 1,063.28 1.71 -1.43 18.37 6,100.00 2.00 87.20 5,894.08 992.75 389.43 1,066.04 2.58 -0.32 73.00 6,200.00 2.34 120.28 5,994.01 991.80 392.93 1,066.53 1.28 0.34 33.08 6,300.00 2.92 127.69 6,093.90 989.22 396.71 1,065.62 0.67 0.58 7.41 6,400.00 3.23 130.19 6,193.76 985.84 <t< td=""><td>5,400.00</td><td></td><td>322.73</td><td>5,196.29</td><td>946.35</td><td>407.49</td><td>1,030.33</td><td>0.83</td><td>-0.75</td><td>3.26</td></t<>	5,400.00		322.73	5,196.29	946.35	407.49	1,030.33	0.83	-0.75	3.26
5,600.00 5.30 328.60 5,395.42 961.94 397.38 1,040.76 0.19 0.19 -0.09 5,700.00 5.72 326.70 5,494.96 970.05 392.24 1,046.22 0.46 0.42 -1.90 5,800.00 4.78 343.71 5,594.55 978.21 388.34 1,052.23 1.81 -0.94 17.01 5,900.00 3.75 355.83 5,694.27 985.47 386.93 1,058.37 1.36 -1.03 12.12 6,000.00 2.32 14.20 5,794.13 990.70 387.19 1,063.28 1.71 -1.43 18.37 6,100.00 2.00 87.20 5,894.08 992.75 389.43 1,066.04 2.58 -0.32 73.00 6,200.00 2.34 120.28 5,994.01 991.80 392.93 1,066.53 1.28 0.34 33.08 6,300.00 2.92 127.69 6,093.90 989.22 396.71 1,065.62 0.67 0.58 <td< td=""><td>5,500.00</td><td>5.11</td><td>328.69</td><td>5,295.84</td><td>954.19</td><td>402.10</td><td>1,035.46</td><td>0.91</td><td>-0.71</td><td>5.96</td></td<>	5,500.00	5.11	328.69	5,295.84	954.19	402.10	1,035.46	0.91	-0.71	5.96
5,700.00 5.72 326.70 5,494.96 970.05 392.24 1,046.22 0.46 0.42 -1.90 5,800.00 4.78 343.71 5,594.55 978.21 388.34 1,052.23 1.81 -0.94 17.01 5,900.00 3.75 355.83 5,694.27 985.47 386.93 1,058.37 1.36 -1.03 12.12 6,000.00 2.32 14.20 5,794.13 990.70 387.19 1,063.28 1.71 -1.43 18.37 6,100.00 2.00 87.20 5,894.08 992.75 389.43 1,066.04 2.58 -0.32 73.00 6,200.00 2.34 120.28 5,994.01 991.80 392.93 1,066.53 1.28 0.34 33.08 6,300.00 2.92 127.69 6,093.90 989.22 396.71 1,065.62 0.67 0.58 7.41 6,400.00 3.23 130.19 6,193.76 985.84 400.88 1,064.13 0.34 0.31 2.50 6,500.00 3.22 133.10 6,293.60 982.10 <td< td=""><td>'</td><td></td><td></td><td>5,395.42</td><td>961.94</td><td>397.38</td><td>1,040.76</td><td>0.19</td><td>0.19</td><td>-0.09</td></td<>	'			5,395.42	961.94	397.38	1,040.76	0.19	0.19	-0.09
5,800.00 4,78 343,71 5,594,55 978,21 388,34 1,052,23 1,81 -0.94 17.01 5,900.00 3,75 355,83 5,694,27 985,47 386,93 1,058,37 1,36 -1.03 12.12 6,000.00 2,32 14,20 5,794,13 990,70 387,19 1,063,28 1,71 -1.43 18.37 6,100.00 2,00 87,20 5,894,08 992,75 389,43 1,066,04 2,58 -0.32 73.00 6,200.00 2,34 120,28 5,994.01 991.80 392.93 1,066,53 1,28 0.34 33.08 6,300.00 2,92 127,69 6,093.90 989,22 396,71 1,065,62 0,67 0,58 7,41 6,400.00 3,23 130.19 6,193.76 985,84 400.88 1,064,13 0,34 0,31 2,50 6,500.00 3,22 133.10 6,293.60 982,10 405.08 1,062,33 0,16 -0.01 2,91								0.46	0.42	-1.90
5,900.00 3.75 355.83 5,694.27 985.47 386.93 1,058.37 1.36 -1.03 12.12 6,000.00 2.32 14.20 5,794.13 990.70 387.19 1,063.28 1.71 -1.43 18.37 6,100.00 2.00 87.20 5,894.08 992.75 389.43 1,066.04 2.58 -0.32 73.00 6,200.00 2.34 120.28 5,994.01 991.80 392.93 1,066.53 1.28 0.34 33.08 6,300.00 2.92 127.69 6,093.90 989.22 396.71 1,065.62 0.67 0.58 7.41 6,400.00 3.23 130.19 6,193.76 985.84 400.88 1,064.13 0.34 0.31 2.50 6,500.00 3.22 133.10 6,293.60 982.10 405.08 1,062.33 0.16 -0.01 2.91	,								-0.94	17.01
6,000.00 2.32 14.20 5,794.13 990.70 387.19 1,063.28 1.71 -1.43 18.37 6,100.00 2.00 87.20 5,894.08 992.75 389.43 1,066.04 2.58 -0.32 73.00 6,200.00 2.34 120.28 5,994.01 991.80 392.93 1,066.53 1.28 0.34 33.08 6,300.00 2.92 127.69 6,093.90 989.22 396.71 1,065.62 0.67 0.58 7.41 6,400.00 3.23 130.19 6,193.76 985.84 400.88 1,064.13 0.34 0.31 2.50 6,500.00 3.22 133.10 6,293.60 982.10 405.08 1,062.33 0.16 -0.01 2.91	•									
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6,200.00 2,34 120.28 5,994.01 991.80 392.93 1,066.53 1.28 0.34 33.08 6,300.00 2.92 127.69 6,093.90 989.22 396.71 1,065.62 0.67 0.58 7.41 6,400.00 3.23 130.19 6,193.76 985.84 400.88 1,064.13 0.34 0.31 2.50 6,500.00 3.22 133.10 6,293.60 982.10 405.08 1,062.33 0.16 -0.01 2.91				•						
6,300.00 2.92 127.69 6,093.90 989.22 396.71 1,065.62 0.67 0.58 7.41 6,400.00 3.23 130.19 6,193.76 985.84 400.88 1,064.13 0.34 0.31 2.50 6,500.00 3.22 133.10 6,293.60 982.10 405.08 1,062.33 0.16 -0.01 2.91				•						
6,400.00 3.23 130.19 6,193.76 985.84 400.88 1,064.13 0.34 0.31 2.50 6,500.00 3.22 133.10 6,293.60 982.10 405.08 1,062.33 0.16 -0.01 2.91										
6,500.00 3.22 133.10 6,293.60 982.10 405.08 1,062.33 0.16 -0.01 2.91				•			. ,			
0,000,000 3.73 134.51 0,595.42 877.91 409.40 1,000.17 0.52 0.51 1.21										
	0,000.00	3.13	134.31	0,393.42	16.118	409,40	1,000.17	0.52	0.51	1,41

Scientific Drilling

Survey Report

Company:

Wolverine Gas & Oil Co. of Utah LLC

Project: Site:

Servier County, UT Wolverine Federal

Well:

Wolverine Federal 17-6

Wellbore: Design:

ОН

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference: **Survey Calculation Method:**

Database:

Well Wolverine Federal 17-6

GL 5753' & RKB 17' @ 5770.00ft (Lead 720) GL 5753' & RKB 17' @ 5770.00ft (Lead 720)

True

Minimum Curvature

EDM 2003.16 Multi-User Db

Survey

Measured			Vertical			Vertical	Dogleg	Build	Turn	
Depth (ft)	Inclination	Azimuth (°)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Section (ft)	Rate (°/100ft)	Rate (°/100ft)	Rate (°/100ft)	
6,655.00	4.03	138.84	6,448.29	975.21	412.01	1,058.67	0.78	0.55	8.24	

Survey Annotations

Measured Vertical Depth Depth (ft) (ft)

Local Coordinates

+N/-S (ft)

+E/-W (ft)

Comment

6,655.00 6,448.29 975.21 412.01 Last Gyro Survey

Checked By: Approved By: Date:



SUPPORT STAFF

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Dee Bailey - Casper Base Manager (307) 472-6621 dee.bailey@scientificdrilling.com

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Charles Paladino - Directional Drilling Coordinator (970) 625-8651 charles.paladino@scientificdrilling.com

Fred Wrobleske – Directional Drilling Coordinator (970) 625-8651 fred.wrobleske@scientificdrilling.com

> Justin Stetz - MWD Coordinator (307) 472-6621 Justin.stetz@scientificdrilling.com

Johnny Aguilar - MWD Coordinator (970) 625-8651 johnny.aguilar@scientificdrilling.com

Operator: D. Doney

7237 W. Barton Rd., Casper, WY 82604 P.O. Box 1600, Mills, WY 82644 (307) 472-6621 Form 3160-5 (April 2004)

UNITED STATES DEPARTMENT OF THE INTERIOR

FORM APPROVED
OM B No. 1004-0137
Exnires: March 31, 2007

	5. Lease Serial No.						
SUNDRY	UTU-73528						
Do not use the abandoned w	6. If Indian, Allottee or Tribe Name						
	IPLICATE- Other instr	ructions on rev	rerse side.	7. If Unit or CA/Agreement, Name at Wolverine Federal Exploration			
1. Type of Well ☐ ☐ ☐ ☐	Gas Well□□ Other			8. Well Name and No.	······································		
2. Name of Operator Wolverine G	as and Oil Company of Utah, l	LLC		Wolverine Federal 17-6 (WF 9. API Well No.	8-1)		
3a Address 55 Campau NW, Grand Rapid	ls, MI 49503	3b. Phone No. (inc 616-458-1150	lude area code)	43-041-30037 10. Field and Pool, or Exploratory An	ea		
4. Location of Well (Footage, Sec.,	T., R., M., or Survey Description)			Covenant Field			
	265' FWL, Sec. 17, T23S, R01V 58' FEL, Sec. 17, T23S, R01W,			11. County or Parish, State Sevier County, Utah			
12. CHECK A	PPROPRIATE BOX(ES) TO	INDICATE NAT	URE OF NOTICE,	REPORT, OR OTHER DATA			
TYPE OF SUBMISSION		7	TYPE OF ACTION				
Notice of Intent Subsequent Report	Acidize Alter Casing Casing Repair Change Plans	Deepen Fracture Treat New Construction Plug and Abando	· ·	Well Integrity Other			
Final Abandonment Notice	Convert to Injection	Plug Back	Water Disposa	<u> </u>			
following completion of the investing has been completed. Fit determined that the site is ready A temporary plug and abacirculated clean with comp	Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.) A temporary plug and abandonment is planned for the Wolverine Federal 17-6 (WF 8-1) well. The ESP equipment will be pulled and willbore circulated clean with completion fluid and corrosion inhibitor. A retrievable bridge plug will be set above the perforations, and the well will be shut-in. The proposed abandonment activity is expected to commence as early as October 14, 2010.						
See the attached documen	t for details of this planned pro	ocedure.	COPY SENT TO O	PERATOR			
			Date: 10.11. Initials: K	2010 S	- Comment		
14. I hereby certify that the fore Name (Printed/Typed)	going is true and correct	1	ika ani katalanda di somenik kasadan ani ani kanalan i				
Matthew Rivers	/	Title	Production Engineer				
Signature May 5		Date		09/28/2010			
	THIS SPACE FOR F	EDERAL OR	STATE OFFICE	EUSE			
Approved by	J) L(I		Title Pet, E-	ng. Date 10/5/	10		
Conditions of approval, if any, are a certify that the applicant holds legal which would entitle the applicant to	or equitable title to those rights ir		Office DOG	Federal Approval C Action Is Necess			
		crime for any person	knowingly and willfull	y to make to any department or agency of	f the United		

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowings. States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

Wolverine Gas & Oil Company of Utah, LLC Temporary Abandonment Procedure

Wolverine Federal 17-6 Covenant Field

Purpose:

Temporarily plug back and abandon well to remove ESP equipment and preserve

casing.

PERTINENT INFORMATION

Location:

1680' FSL, 2265' FWL (SENW)

Section 17, Township 23 South, Range 1 West

Sevier County, Utah

Elevation:

5736' GL, 5753' KB

TD:

6765'

PBTD:

6666' (cement top)

API No.:

43-041-30037

Casing:

13-3/8", 61.0# @ 2000', cemented to surface

9-5/8", 47.0#, HCP-110, LT&C @ 6094', cemented with 230 sks 50:50 Poz 7", 23.0#, HCP-110, LT&C @ 6758', cemented with 480 sks 50:50 Poz

Wellhead:

Tubing Head Flange – 7-1/16" 5k w/ 2-7/8" EUE top connection

Tubing:

6246' of 2-7/8", 6.5#, N-80, EUE, 8rd w/SN, x-over, and ESP equipment.

Production Casing Specs:

7", 23.0#, HCP-110, LT&C, 8rd, ID: 6.366" Drift: 6.241"

Collapse: 5650 psi

Burst: 8720 psi (80% 6976 psi)

Tubing Specs:

2-7/8", 6.5#, N-80, EUE, 8rd, ID: 2.441" Drift: 2.347"

Collapse: 11,170 psi Burst: 10,570 psi (80% 8456 psi)

Joint: 145,000 lbs (80% 116,000 lbs)

Capacities:

7", 23.0#:

0.03936 Bbls/ft

 $0.2210 \text{ ft}^3/\text{ft}$

2-7/8", 6.5#

0.00579 Bbls/ft

 $0.0325 \text{ ft}^3/\text{ft}$

7" x 2-7/8" Annulus

0.0313 Bbls/ft

 $0.1759 \text{ ft}^3/\text{ft}$

BH Temperature: 183 °F @ 6508' MD (6300' TVD)

Current Upper Navajo Formation Completion Interval: 6395' – 6518' (as of 1/10/08)

Current Upper Navajo Perforations:

6326' - 6334' MD (6118' - 6126' TVD), 8', 48 holes

6395' - 6415' MD (6187' - 6207' TVD), 20', 200 holes

6430' - 6444' MD (6222' - 6236' TVD), 14', 136 holes

6462' - 6484' MD (6254' - 6276' TVD), 22', 180 holes

6507' - 6518' MD (6299' - 6310' TVD), 11' 90 holes

Perforation Depths are referenced to Halliburton SDL-DSN-GR dated 05/27/05. PROCEDURE

- 1. Remove fence, cover ground, and prepare location for workover. Spot one 500 Bbl tank and fill with completion fluid (CF) consisting of filtered produced water containing 21 gallons (1000 ppm) Baker Petrolite WAW 3003 non-ionic surfactant, 5.25 gallons (250 ppm) XC102W biocide, and 1.25 gallons (60 ppm) OSW5200 Oxygen Scavenger.
- 2. Shut in well and disconnect power.
- 3. MIRUSU. Reverse circulate completion fluid to recover oil and kill well. Circulate until wellbore contains only completion fluid. Disconnect flow lines, ND wellhead, and NU BOP.
- 4. RU cable spoolers. POOH and lay down ESP equipment. RD cable spoolers.
- 5. PU tubing as needed to round trip a 6-1/8" bit and casing scraper to PBTD. Tag PBTD and spot 20 Bbls of 9+ ppg salt brine containing recommended biocide and corrosion inhibitor to fill casing above perforations. POOH with bit and casing scraper.
- 6. RIH with a 7" (23#) RBP and retrieving head on 2-7/8" tubing. RU wireline and run a CCL/GR log through tubing to determine WLM to SLM depth correction. RD wireline and set RBP at 6300' WLM.
- 7. POOH and lay down retrieving head and 2-7/8" tubing. Completely fill wellbore with additional completion fluid as necessary.
- 8. ND BOP, and NU wellhead. Shut in well.
- 9. RDMOSU

Sundry Number: 18933 Approval of this: 43041300370000

Action is Necessary

			FORM 9				
	STATE OF UTAH		l lows				
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ	IG	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-73528				
SUNDF	RY NOTICES AND REPORTS O	N WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
Do not use this form for proposition-hole depth, reenter plu DRILL form for such proposals.	sals to drill new wells, significantly deepen exi ugged wells, or to drill horizontal laterals. Use	sting wells below current APPLICATION FOR PERMIT TO	7.UNIT or CA AGREEMENT NAME: WOLVERINE				
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: WOLVERINE FED 17-6 (WF 8-1)				
2. NAME OF OPERATOR: WOLVERINE GAS & OIL COMP	ANY OF UTAH, LLC		9. API NUMBER: 43041300370000				
3. ADDRESS OF OPERATOR: One Riverfront Plaza 55 Camp	PHONE I Dau NW, Grand Rapids, MI, 49503	NUMBER: 616 458-1150 Ext	9. FIELD and POOL or WILDCAT: COVENANT				
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1680 FNL 2265 FWL			COUNTY: SEVIER				
QTR/QTR, SECTION, TOWNSHI	IP, RANGE, MERIDIAN: Township: 23.0S Range: 01.0W Meridian: S		STATE: UTAH				
11. CHE	CK APPROPRIATE BOXES TO INDICATE I	NATURE OF NOTICE, REPORT,	OR OTHER DATA				
TYPE OF SUBMISSION		TYPE OF ACTION					
	✓ ACIDIZE	ALTER CASING	☐ CASING REPAIR				
NOTICE OF INTENT Approximate date work will start:	☐ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME				
11/30/2011	☐ CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE				
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION				
Date of Work Completion:	☐ OPERATOR CHANGE ☐	PLUG AND ABANDON	☐ PLUG BACK				
	✓ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION				
SPUD REPORT Date of Spud:	✓ REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON				
Bute or spau.	TUBING REPAIR	VENT OR FLARE	☐ WATER DISPOSAL				
	□ WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION				
DRILLING REPORT Report Date:							
	☐ WILDCAT WELL DETERMINATION ☐	OTHER	OTHER:				
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Wolverine Gas and Oil Co. of Utah, LLC plans to undertake a workover on the Wolverine Federal 17-6 in late November or December upon completing workovers on the Wolverine State 20-3 and Wolverine Federal 20-2. Evaluation of the Wolverine State 20-5 will also be concluded once TD is reached and the well will be completed accordingly before a workover begins on the WF 17-6. The Kings Meadow Ranches 17-14, which was drilled as a replacement well to the WF 17-6, was successfully worked over in August 2011. The lessons Date: learned from the KMR 17-14 will be applied to the WF 17-6 well. The log charactor and position of the WF 17-6 is comparable to the KMR 17-14. They procedure for the WF 17-6 will entail drilling the CIBP out, set above the existing interval, while reverse circulating the cuttings, completion fluid and corrosion inhibitor out of the well bore. Swabbing data of selected perforation intervals will determine remaining potential of existing perforations and intervals deemed watered-out will be squeezed and abandoned. Behind pipe pay uphole in the Navajo interval will be perforated and stimulated with 7-1/2% HCL acid if necessary. Once the workover is completed the well will be put on pump with an ESP to resume production. A Y-tool will also be run with the pump for future production logging analysis.							
Helene Bardolph	616 458-1150	Engineering Administrative Ass	istant				
SIGNATURE N/A		DATE 9/28/2011					

Form 3160-5 (April 2004)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

FORM APPROVED
OM B No. 1004-0137
Expires: March 31, 2007

5.	Lease Serial No.
	LITTI TOPOO

6.	If Indian	, Allottee o	r Tribe Name

abandoned well. Use Form 3160 - 3 (APD) for such proposals.					N/A		
SUBMIT IN TRIPLICATE- Other instructions on reverse side.					7. If Unit or CA/Agreement, Name and/or No. Wolverine Federal Unit		
l. Type of Well ☐ ☐ ☐ Gas Well ☐ ☐ Other					8. Well Name and No.		
Name of Operator Wolverine G Address	as and Oil Company of Utah,	LLC 3b. Phone No. (include	area code)	Wolverine Federal 17-6 (WF 8-1) 9. API Well No. 43-041-30037			
55 Campau NW, Grand Rapid		616-458-1150		10. Field and Pool, or Exploratory Area Covenant Field			
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Surface: 1680' FNL & 2265' FWL, Sec. 17, T23S, R01W, SLB&M Bottom-Hole: 721' FNL & 2458' FEL, Sec. 17, T23S, R01W, SLB&M				11. County or Parish, State Sevier County, Utah			
12. CHECK AI	PROPRIATE BOX(ES) TO	INDICATE NATUR	E OF NOTICE, R	EPORT, OR	OTHER DATA	OCT	1 1 2011
TYPE OF SUBMISSION		TYF	PE OF ACTION			DIV. OF OIL	, GAS & MIN
✓ Notice of Intent Subsequent Report Final Abandonment Notice	Acidize Alter Casing Casing Repair Change Plans Convert to Injection	Deepen Fracture Treat New Construction Plug and Abandon Plug Back	Production (Statement of the Production (Stat	oandon	Water Shut-Off Well Integrity Other	3.44	-
13 Describe Proposed or Complete	ed Operation (clearly state all pertin	nent details, including estin	mated starting date of a	ny proposed wo	ork and approximate du	ration thereof	

If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Wolverine Gas and Oil Co. of Utah, LLC plans to undertake a workover on the Wolverine Federal 17-6 in late November or December upon completing workovers on the Wolverine State 20-3 and Wolverine Federal 20-2. Evalualion of the Wolverine State 20-5 will also be concluded once TD is reached and the well will be completed accordingly before a workover begins on the WF 17-6. The Kings Meadow Ranches 17-14, which was drilled as a replacement well to the WF 17-6, was successfully worked over in August 2011. The lessons learned from the KMR 17-14 will be applied to the WF 17-6 well. The log charactor and position of the WF 17-6 is comparable to the KMR 17-14.

The procedure for the WF 17-6 will entail drilling the CIBP out, set above the existing interval, while reverse circulating the cuttings, completion fluid and corrosion inhibitor out of the well bore. Swabbing data of selected perforation intervals will be emaining potential of existing perforations and intervals deemed watered-out will be squeezed and abandoned. Behind pipe pay uphale in the Navaio interval will be perforated and stimulated with 7-1/2% HCL acid if necessary. Once the workover is completed the well will be put on pump with an ESP to resume production. A Y-tool will also be run with the pump for future production logging analysis.

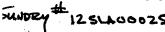
OCT 0 4 2011

Richfield BLM Field Office

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed)						
Matthew Rivers	Title Production Engineer					
Signature MHE L.	Date 09/28/2011					
THIS SPACE FOR FEDERAL OR STATE OFFICE USE						
Approved by Ja L. Amt	Title SNRS Date 10/6/2011					
Conditions of approval, if any, are attached. Approval of this notice does not warracertify that the applicant holds legal or equitable title to those rights in the subject lewhich would entitle the applicant to conduct operations thereon.						
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any	person knowingly and willfully to make to any department or agency of the United					

States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)





CONDITIONS OF APPROVAL

Company:

Wolverine Gas and Oil Company of Utah, LLC.

Well No:

Wolverine Federal 17-6 (WF 8-1)

Location:

1680' FNL & 2265' FWL, Section 17, T23S, R1W SLB&M

Sevier County, Utah

Lease No:

UTU-73528

Agreement No: UTU-80800A

Conditions of Approval for the Sundry Notice submitted dated September 28, 2011.

- 1. Please submit a revised completion report for this well if the existing wellbore configuration changes as a result of the workover work undertaken.
- 2. Per 43 CFR 3162.4-1c Records & Reports: Not later than the 5th business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site, or resumes production in the case of a well which has been off production for more than 90 days, the operator shall notify the authorized officer by letter or sundry notice, Form 3160 5, or orally to be followed by a letter or sundry notice, of the date on which such production has begun or resumed.



Form 3160-5 (April 2004)

1. Type of We

3a. Address

Surface:

55 Campau NW, Grand Rapids, MI 49503

DEPARTMENT OF THE INTERIOR 2 0 2012 BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

2. Name of Operator Wolverine Gas and Oil Company of Utah, LLC

Bottom-Hole: 721' FNL & 2458' FEL, Sec. 17, T23S, R01W, SLB&M

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

UNITED STATES DEPARTMENT OF THE BUREAU OF LAND MAN	FORM APPROVED OM B No. 1004-0137 Expires: March 31, 2007 5. Lease Serial No.	
SUNDRY NOTICES AND REP Do not use this form for proposals to abandoned well. Use Form 3160 - 3 (A	6. If Indian, Allottee or Tribe Name N/A	
IBMIT IN TRIPLICATE- Other instr	7. If Unit or CA/Agreement, Name and/or No. Wolverine Federal Unit	
Öil Well□ □ □ Gas Well□□ □ Other	8. Well Name and No. Wolverine Federal 17-6 (WF 8-1)	
Wolverine Gas and Oil Company of Utah,	9. API Well No. 43-041-30037	
IW, Grand Rapids, MI 49503 Iell (Footage, Sec., T., R., M., or Survey Description)	10. Field and Pool, or Exploratory Area Covenant Field	
1680' FNL & 2265' FWL, Sec. 17, T23S, R01' :: 721' FNL & 2458' FEL, Sec. 17, T23S, R01W	11. County or Parish, State Sevier County, Utah	
12. CHECK APPROPRIATE BOX(ES) TO	INDICATE NATURE OF NOTICE,	REPORT, OR OTHER DATA

TYPE OF SUBMISSION TYPE OF ACTION Acidize Water Shut-Off Production (Start/Resume) Deepen Notice of Intent Well Integrity Alter Casing Fracture Treat Reclamation **✓** Other Workover Casing Repair New Construction Recomplete Subsequent Report Change Plans Plug and Abandon Temporarily Abandon Final Abandonment Notice Plug Back Water Disposal Convert to Injection 13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof.

If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

A workover was performed on the Wolverine Federal 17-6 and concluded on April 22, 2012 with unsuccessful results. Existing perforations from 6326' - 6518' were swabbed and subsequently squeezed with 75 bbls of polymer followed by a 75 sack balanced cement plug. Perforations were added at 6353' - 6363' and acidized with 500 gallons of 7-1/2% FE HCL and 50 ball sealers. An additional zone was perforated at 6306' -6310'. Both zones swabbed with very little to no oil cut. See attached WBD and Daily Reports for additional details.

RECEIVED

JUN 28 2012

Richfield BLM Field Office

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed)						
Matthew Rivers	Title	Production Engineer				
Signature	Date	06/27/2012				
THIS SPACE FOR FEDERAL OR STATE OFFICE USE						
Approved by		Title	Date			
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.						
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.						



Wolverine Federal 17-6 (WF 8-1) API # 43-041-30037 **Covenant Field** Section 17, T23S, R1W Sevier County, Utah

(Not to Scale)

Ground Elevation: 5.736' KB Elevation: 5.753' 121'

Deviated Well

Surface: 1680' FNL 2265' FWL, SE NW, 17-23S-1W Top of Pay (6303' MD): 704' FNL, 2477' FEL, NW NE, 17-23S-1W Total Depth (6765' MD): 721' FNL, 2458' FEL, NW NE, 17-23S-1W

Conductor Casing (06/05)

Size: 20". 0.25" wall Depth Landed: 121'

Cement Data: Cemented to surface with 640 sks Class "G"

Surface Casing (4/22/05)

Size/Wt/Grade: 13 3/8", 61#, J-55, STC, 8rd

Depth Landed: 2054' MD

Cement Data: 595 sks Hifill (11.0 ppg, 3.96 cf/sk), 475 sks Prem. Plus

(15.6 ppg, 1.18 cf/sk), Top job w/ 30 bbls Class "G"

Intermediate Casing (5/24/05)

Size/Wt/Grade: 9-5/8", 47#, HC-P110, LTC, 8rd

Depth Landed: 6094' MD

Cement Data: 230 sks 50:50 Poz (13.0? ppg, 1.71? cf/sk)

Production Casing (5/29/05)

Size/Wt/Grade: 7", 23#, HC-P110, LTC, 8rd

Properties: 8720 psi burst, 6.241" drift, 6.366" ID, 0.0393 Bbl/ft Capacity

Depth Landed: 6758' MD

Cement Data: 255 sks 50:50 Poz (14.35? ppg, 1,27? cf/sk)

Navaio Perforations

6306' - 6310' MD (6100' - 6104' TVD), 4', 24 holes (4/20/12)

6326' - 6334' MD (6120' - 6128' TVD), 8', 48 holes (squeezed)

6353' - 6363' MD (6147' - 6157' TVD), 10', 60 holes (4/13/12)

6395' - 6415' MD (6189' - 6209' TVD), 20', 200 holes (squeezed)

6430' - 6444' MD (6224' - 6238' TVD), 14', 136 holes (squeezed)

6462' - 6484' MD (6256' - 6278' TVD), 22', 180 holes (squeezed)

6507' - 6518' MD (6301' - 6312' TVD), 11', 90 holes (squeezed)

Mid-Perf = 6335' MD (6129' TVD), 14' M (14' TV), 84 holes

Tubing (10/15/2010)

None

PBTD

6765

(8/7/05)Tubing tagged cement top @ 6713' MD

(10/16/06) Tagged fill @ 6675' MD

(11/14/07) Tagged fill @ 6666' MD

(10/11/10) Tagged fill @ 6597' WLM

(4/5/12)Tagged fill @ 6597' WLM



TD = 6765' MD (6557' TVD)



Wolverine Federal 17-6 (WF 8-1)

API # 43-041-30037

Covenant Field

Section 17, T23S, R1W

Sevier County, Utah

Tubing Detail (10/14/2010)	 	

Directional Data:

<u>MD</u>	<u>TVD</u>	<u>Incl.</u>	<u>MD</u>	<u>TVD</u>	<u>Incl.</u>
500	498	11.2	3000	2834	16.3
1000	980	16.7	3500	3320	10.4
1500	1459	16.5	4000	3814	9.7
1750	1697	18.5	4500	4305	9.7
2000	1930	24.5	5000	4799	7.8
2250	2155	27.6	5500	5296	5.1
2500	2374	28.6	6000	5794	2.3
2750	2599	22.4	6500	6294	3.2

Wellhead Information

- Tubing head flange is 7-1/16", 5M with a 2-7/8" EUE 8rd top connection.
- North valve in cellar is to the 13-3/8" x 9-5/8" annulus
- South valve in cellar is to the 9-5/8" x 7" annulus

Stimulation/Treatments

8/11/05:

6395' - 6518' w/ 6300 gal 7.5% HCI. Attempted to isolate and treat individual zones. Communicated between 6512' - 6518' MD, 6472' - 6484' MD, and 6430' - 6443' MD. BDP = 1850 – 2830 psi, ISDP = 1200 psi

10/23/06:

6395' - 6518' w/ 2100 gal 15% HCl with 30 gpt Morflo, 1 gpt lowsurf-300M, 1 gpt AS-9 anti-sludge, 6 gpt HAI-404 inhibitor, 10gpt Fe-7A & 50gpt Fe-2 iron sequestering agents. Communicated between all zones. Pulse washed all perforations using coiled tubing. FTP = 885 psi @ 1 BPM.

11/19/07

Circulation cement squeeze with 25 sks of Class "G" cement and CICR at 6460'.

1/9/08:

6395' - 6518' w/ 1587 gal 7.5% FE, 2564 gal 5% Clay-Safe H, and 3489 gal 11.5%-1.5% Sandstone Completion Acid with diverter and three stages. FTP = 1356 psi @ 2.1 BPM.

4/18/12:

6353' - 6363' w/ 500 gal 7.5% FE HCL and 50 buoyant ball sealers, MTR = 0.6 BPM MTP = 1000 psi ISIP = 984 psi

<u>Notes</u>

Surface Location: Latitude = 38° 48' 19.4600", Longitude = -111° 56' 02.2729"

(7/21/05): Cement top at 4702' on CBL-CCL-GR

(9/5/06): Available Logs: DLL/MSFL, SDL/DSN, EMI, CBL, Halliburton Directional Log

Form 3160-5 (April 2004)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OM B No. 1004-0137 Expires: March 31, 2007 5. Lease Serial No.

SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.				6. If Indian, Allottee or Tribe Name N/A	
SUBMIT IN TRIPLICATE- Other instructions on reverse side.			7. If Unit or CA/Agreement, Name and/or No. Wolverine Federal Unit 8. Well Name and No.		
1. Type of Well ☐ ☐ Gas Well ☐ ☐ Other					
2. Name of Operator Wolverine Gas and Oil Company of Utah, LLC				Wolverine Federal 17-6 (WF 8-1) 9. API Well No.	
3a Address 55 Campau NW, Grand Rapid	3b. Phone No. (include 616-458-1150	e area code)	43-041-30037 10. Field and Pool, or Exploratory Area		
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)			Covenant Field		
Surface: 1680' FNL & 2265' FWL, Sec. 17, T23S, R01W, SLB&M Bottom-Hole: 721' FNL & 2458' FEL, Sec. 17, T23S, R01W, SLB&M			11. County or Parish, State Sevier County, Utah		
12. CHECK A	PPROPRIATE BOX(ES) TO	INDICATE NATUR	E OF NOTICE, R	EPORT, OR OTHER DATA	
TYPE OF SUBMISSION		TYI	PE OF ACTION		
Notice of Intent Subsequent Report Final Abandonment Notice	Acidize Alter Casing Casing Repair Change Plans Convert to Injection	Deepen Fracture Treat New Construction Plug and Abandon Plug Back	Production (State Reclamation Recomplete Temporarily Ab	Well Integrity Other	
Describe Proposed or Complet	ed Operation (clearly state all pertir	nent details, including esti	mated starting date of ar	ny proposed work and approximate duration thereof.	

If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Wolverine Gas & OII Company of Utah, LLC completed a temporary abandonment on the Wolverine Federal 17-6 well July 10, 2012. 10 bbls of 9.2# salt brine with CRW-132 corrosion inhibitor were spotted at PBTD of 6400'. A CIBP was set at 6280' and 2 sacks of cement were dump bailed on top of the plug. The well was then circulated with 250 bbls of fresh water with CRW-132 corrosion inhibitor. The wellhead was nippled up and shut-in.

See activity report and WBD for additional details.

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14. I hereby certify that the foregoing is true and correct Name (Printed/Typed)					
Matthey Rivers	Title	Title Production Engineer			
Signature Waff—U.	Date	Date 07/17/2012			
THIS SPACE FOR FEDERAL OR STATE OFFICE USE					
Approved by		Title	Date		
Conditions of approval, if any, are attached. Approval of this notice does not warrar certify that the applicant holds legal or equitable title to those rights in the subject lea which would entitle the applicant to conduct operations thereon.		Office			
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any States any false, fictitious or fraudulent statements or representations as to any matter	person within	knowingly and willfully to make to a its jurisdiction.	any department or agency of the United		



Covenant Field Federal 17-6 API# 43-041-30037

SE/NW Sec 17 T23S R1W Sevier County, Utah

7/9/2012

MIRUSU, ND wellhead, NU BOP. Pulled out of hole with tubing, PU and tripped in hole with casing scraper to PBTD at 6400'. RU pump lines and spotted 10 bbls of 9.2# salt brine containing Baker Petrolite CRW -132 corrosion inhibitor, RD pump lines and pulled out of hole with tubing. RU wireline unit, set CIBP at 6280' then dumped two sacks of cement on top. SWIFN

Plan to tag cement top / circulate corrosion inhibitor / lay down tubing.

7/10/2012

Opened well, 0 psi. Tripped in hole with tubing to cement top at 6270', picked up 4' and circulated well with 250 bbls of fresh water containing Baker Petrolite CRW-132 corrosion inhibitor. Pulled out of hole laying down tubing. ND BOP, NU wellhead. RDMOSU

Final Report

Supervisor:

Tony E. Cook

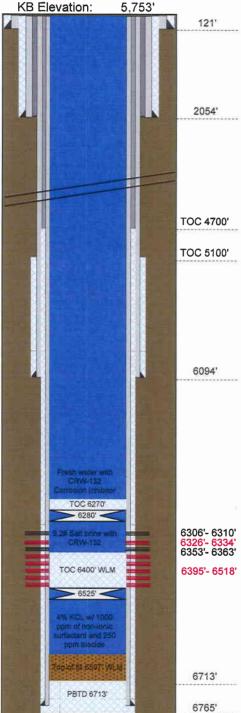
Rig Operator:

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Ground Elevation: 5,736'



TD = 6765' MD (6557' TVD)

Wolverine Federal 17-6 (WF 8-1)

API # 43-041-30037

Covenant Field

Section 17, T23S, R1W

Sevier County, Utah

(Not to Scale)

Deviated Well

Surface: 1680' FNL 2265' FWL, SE NW, 17-23S-1W Top of Pay (6303' MD): 704' FNL, 2477' FEL, NW NE, 17-23S-1W Total Depth (6765' MD): 721' FNL, 2458' FEL, NW NE, 17-23S-1W

Conductor Casing (06/05)

Size: 20", 0.25" wall Depth Landed: 121'

Cement Data: Cemented to surface with 640 sks Class "G"

Surface Casing (4/22/05)

Size/Wt/Grade: 13 3/8", 61#, J-55, STC, 8rd

Depth Landed: 2054' MD

Cement Data: 595 sks Hifill (11.0 ppg, 3.96 cf/sk), 475 sks Prem. Plus

(15.6 ppg, 1.18 cf/sk), Top job w/ 30 bbls Class "G"

Intermediate Casing (5/24/05)

Size/Wt/Grade: 9-5/8", 47#, HC-P110, LTC, 8rd

Depth Landed: 6094' MD

Cement Data: 230 sks 50:50 Poz (13.0? ppg, 1.71? cf/sk)

Production Casing (5/29/05)

Size/Wt/Grade: 7", 23#, HC-P110, LTC, 8rd

Properties: 8720 psi burst, 6.241" drift, 6.366" ID, 0.0393 Bbl/ft Capacity

Depth Landed: 6758' MD

Cement Data: 255 sks 50:50 Poz (14.35? ppg, 1.27? cf/sk)

Navajo Perforations

6306' - 6310' MD (6100' - 6104' TVD), 4', 24 holes (4/20/12)

6326' - 6334' MD (6120' - 6128' TVD), 8', 48 holes (squeezed)

6353' - 6363' MD (6147' - 6157' TVD), 10', 60 holes (4/13/12)

6395' - 6415' MD (6189' - 6209' TVD), 20', 200 holes (squeezed)

6430' - 6444' MD (6224' - 6238' TVD), 14', 136 holes (squeezed)

6462' - 6484' MD (6256' - 6278' TVD), 22', 180 holes (squeezed)

6507' - 6518' MD (6301' - 6312' TVD), 11', 90 holes (squeezed)

Mid-Perf = 6335' MD (6129' TVD), 14' M (14' TV), 84 holes

Tubing (7/10/12)

None

PBTD

(8/7/05) Tubing tagged cement top @ 6713' MD

(10/16/06) Tagged fill @ 6675' MD

(11/14/07) Tagged fill @ 6666' MD

(10/11/10) Tagged fill @ 6597' WLM

(4/5/12) Tagged fill @ 6597' WLM

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Wolverine Federal 17-6 (WF 8-1) API # 43-041-30037 Covenant Field Section 17, T23S, R1W Sevier County, Utah

Tubing Detail (7/10/12)

No tubing in well

Directional Data:

<u>MD</u>	<u>TVD</u>	<u>lncl.</u>	<u>MD</u>	<u>TVD</u>	Incl.
500	498	11.2	3000	2834	16.3
1000	980	16.7	3500	3320	10.4
1500	1459	16.5	4000	3814	9.7
1750	1697	18.5	4500	4305	9.7
2000	1930	24.5	5000	4799	7.8
2250	2155	27.6	5500	5296	5.1
2500	2374	28.6	6000	5794	2.3
2750	2599	22.4	6500	6294	3.2

Wellhead Information

- Tubing head flange is 7-1/16", 5M with a 2-7/8" EUE 8rd top connection.

Stimulation/Treatments

8/11/05:

6395' - 6518' w/ 6300 gal 7.5% HCl. Attempted to isolate and treat individual zones. Communicated between 6512' - 6518' MD, 6472' - 6484' MD, and 6430' - 6443' MD. BDP = 1850 - 2830 psi, ISDP = 1200 psi

10/23/06:

6395' - 6518' w/ 2100 gal 15% HCl with 30 gpt Morflo, 1 gpt lowsurf-300M, 1 gpt AS-9 anti-sludge, 6 gpt HAI-404 inhibitor, 10gpt Fe-7A & 50gpt Fe-2 iron sequestering agents. Communicated between all zones. Pulse washed all perforations using coiled tubing. FTP = 885 psi @ 1 BPM.

11/19/07:

Circulation cement squeeze with 25 sks of Class "G" cement and CICR at 6460'. 1/9/08.

6395' - 6518' w/ 1587 gal 7.5% FE, 2564 gal 5% Clay-Safe H, and 3489 gal 11.5%-1.5% Sandstone Completion Acid with diverter and three stages. FTP = 1356 psi @ 2.1 BPM.

4/10/12:

6326'-6518' w 75 bbls of Halliburton H2Zero polymer at 1 BPM and 1000 psi. Over displaced w/ 25 bbls of 4% KCL.

4/18/12:

6353' - 6363' w/ 500 gal 7.5% FE HCL and 50 buoyant ball sealers, MTR = 0.6 BPM MTP = 1000 psi ISIP = 984 psi

Notes

Surface Location: Latitude = 38° 48' 19.4600", Longitude = -111° 56' 02.2729"

(7/21/05): Cement top at 4702' on CBL-CCL-GR

(9/5/06): Available Logs: DLL/MSFL, SDL/DSN, EMI, CBL, Halliburton Directional Log

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Form 3160-5 (April 2004)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

JUL 2 0 2012

FORM APPROVED OM B No. 1004-0137 Expires: March 31, 2007

BUREAU OF LAND MANAGE	MENT
	TS ON WELLSFOIL, CAS & NININGTU-73528
Do not use this form for proposals to dri	ill or to re-enter an 6. If Indian, Allottee or Tribe Name
abandoned well. Use Form 3160-3 (APD)	for such proposals.
SUBMIT IN TRIPLICATE- Other instruction	7. If Unit or CA/Agreement, Name and/or No. Wolverine Federal Unit
1. Type of Well ☐ ☐ Gas Well ☐ ☐ Other	8. Well Name and No.
2. Name of Operator Wolverine Gas and Oil Company of Utah, LLC	Wolverine Federal 17-6 (WF 8-1) 9 API Well No.
3a. Address 3b. 1	Phone No. (include area code) 43-041-30037
55 Campau NW, Grand Rapids, MI 49503 61 4. Location of Well (Footage, Sec., T., R., M., or Survey Description)	16-458-1150 10. Field and Pool, or Exploratory Area Covenant Field
Surface: 1680' FNL & 2265' FWL, Sec. 17, T23S, R01W, SL Bottom-Hole: 721' FNL & 2458' FEL, Sec. 17, T23S, R01W, SLB	&M Sevier County, Utah
12. CHECK APPROPRIATE BOX(ES) TO INDI-	ICATE NATURE OF NOTICE, REPORT, OR OTHER DATA
TYPE OF SUBMISSION	TYPE OF ACTION
✓ Notice of Intent ☐ Alter Casing ☐ Fr	Production (Start/Resume) Water Shut-Off racture Treat Reclamation Well Integrity [we Construction Recomplete Other
Subsequent Report Change Plans Pl	lug and Abandon Temporarily Abandon
Convert to Injection	lug Back
determined that the site is ready for final inspection.)	ral 17-6 well by August, 2012 for the maximum allowable 3 year time period with a erine's proposed plan.
4 11 1	RECEIVED
Accepted by the	
Utah Division of	JUN 2 8 23:2
Oil, Gas and Mining	
For Record Only	Richfield BLM Field Office
14. I hereby certify that the foregoing is true and correct Name (Printed/Typed)	1
Matthew Rivers	Title Production Engineer
Signature # #	Date 06/27/2012
THIS SPACE FOR FEDI	ERAL OR STATE OFFICE USE
	Title SNRS Date 7/17/2012
Approved by Conditions of approval, if any, are attached. Approval of this notice does not certify that the applicant holds legal or equitable title to those rights in the su	ot warrant or
which would entitle the applicant to conduct operations thereon. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime	for any person knowingly and willfully to make to any department or agency of the United
States any false, fictitious or fraudulent statements or representations as to ar	nymatter within its juristiction.

CONDITIONS OF APPROVAL

Company:

Wolverine Gas and Oil Company of Utah, LLC.

Well No:

Wolverine Federal 17-6 (WF 8-1)

Location:

1680' FNL & 2265' FWL, Section 17, T23S, R1W SLB&M

Sevier County, Utah

Lease No:

UTU-73528

Agreement No: UTU-80800A

Conditions of Approval for the Sundry Notice submitted dated June 27, 2012.

"Wolverine's request to temporarily abandon the Wolverine Federal 17-6 (WF 8-1) well is approved for a one-time, one-year period until 7/17/13. On (or before) 7/17/13 the operator shall take action to either 1) resume operations on the well, 2) submit a justification for an additional one-year extension, or 3) submit plans to permanently plug and abandon the wellbore per BLM regulations."

Wolverine Gas & Oil Company of Utah, LLC Temporary Abandonment Procedure

Wolverine Federal 17-6 Covenant Field

Purpose:

Temporarily plug back and abandon well to preserve casing.

PERTINENT INFORMATION

Location:

1680' FSL, 2265' FWL (SENW)

Section 17, Township 23 South, Range 1 West

Sevier County, Utah

Elevation:

5736' GL, 5753' KB

TD:

6765

PBTD:

6400' (cement top)

API No.:

43-041-30037

Casing:

13-3/8", 61.0# @ 2000', cemented to surface

9-5/8", 47.0#, HCP-110, LT&C @ 6094', cemented with 230 sks 50:50 Poz 7", 23.0#, HCP-110, LT&C @ 6758', cemented with 480 sks 50:50 Poz

Wellhead:

Tubing Head Flange – 7-1/16" 5k w/ 2-7/8" EUE top connection

Tubing:

6246' of 2-7/8", 6.5#, N-80, EUE, 8rd w/SN, x-over, and ESP equipment

Production Casing Specs:

7", 23.0#, HCP-110, LT&C, 8rd, ID: 6.366" Drift: 6.241"

Collapse: 5650 psi

Burst: 8720 psi (80% 6976 psi)

Tubing Specs:

2-7/8", 6.5#, N-80, EUE, 8rd, ID: 2.441" Drift: 2.347"

Collapse: 11,170 psi Burst: 10,570 psi (80% 8456 psi)

Joint: 145,000 lbs (80% 116,000 lbs)

Capacities:

7", 23.0#:

0.03936 Bbls/ft

 $0.2210 \text{ ft}^3/\text{ft}$

2-7/8", 6.5#

0.00579 Bbls/ft

 $0.0325 \text{ ft}^3/\text{ft}$

7" x 2-7/8" Annulus

0.0313 Bbls/ft

 $0.1759 \text{ ft}^3/\text{ft}$

BH Temperature: 183 °F @ 6508' MD (6300' TVD)

Current Upper Navajo Formation Completion Interval: 6395' – 6518' (as of 1/10/08)

Current Upper Navajo Perforations:

6306'- 6310' MD (6100'- 6104' TVD), 4' 24 holes (4/20/12)

6326' - 6334' MD (6118' - 6126' TVD), 8', 48 holes (squeezed)

6353'- 6363' MD (6147' - 6157' TVD), 10', 60 holes (4/13/12)

6395' - 6415' MD (6187' – 6207' TVD), 20', 200 holes (squeezed)

6430' - 6444' MD (6222' - 6236' TVD), 14', 136 holes (squeezed)

6462' - 6484' MD (6254' - 6276' TVD), 22', 180 holes (squeezed)

6507' - 6518' MD (6299' - 6310' TVD), 11' 90 holes (squeezed)

Page 2 Wolverine Federal 17-6 June 27, 2012

Perforation Depths are referenced to Halliburton SDL-DSN-GR dated 05/27/05.

PROCEDURE

- 1. Remove fence, cover ground, and prepare location for workover. Spot two 500 Bbl tanks and fill with completion fluid (CF) consisting of filtered produced water containing, 5.25 gallons (250 ppm) XC102W biocide, and 1.25 gallons (60 ppm) OSW5200 Oxygen Scavenger.
- 2. MIRUSU, NU BOP and ND wellhead.
- 3. PU 2-7/8" tubing as needed to round trip a 6-1/8" bit and casing scraper to PBTD. Tag PBTD and spot 5 Bbls of 9+ ppg salt brine containing recommended biocide and corrosion inhibitor to fill casing above perforations. POOH with bit and casing scraper.
- 4. RU wireline unit with lubricator. Set a 7" (23#) CIBP at 6280' and dump bail 2 sacks of cement on top of the CIBP. RD wireline.
- 5. RIH with 2-7/8" tubing and tag CIBP and cement at ~6270'. Pull up one joint of tubing and circulate well with 250 bbls of completion fluid. POOH and lay down tubing.
- 6. ND BOP, and NU wellhead. Shut in well.
- 7. RDMOSU



Covenant Field

Federal 17-6

SE/NW Sec 17 T23S R1W

API# 43-041-30037

Sevier County, Utah

3/28/2012 Roustabouts removed well fencing and prepped area for workover rig. Hauled in frac tanks and started

plumbing in flow back and pump lines.

3/29/2012 Hauled in rig pump, cat walk and base beam. Started filling frac tanks with water and KCL, finished plumbing

in flow back and pump lines.

Plan to MIRUSU on Monday.

3/30/2012

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No activity

3/31/2012

No activity

<u>4/1/2012</u>

No activity

4/2/2012

MIRUSU, ND wellhead, NU BOP's

4/3/2012

Finished rigging up service unit, opened well, picked up and run in hole with bit, ten 4 3/4" drill collars and

160 Joints of 2 7/8" N-80 tubing. SWIFN

Note: Partial downtime due rig repairs

Plan to finish tripping in hole with tubing, drill out CICR, POOH.

4/4/2012

Opened well, finished picking up tubing off racks, tagged cement top at 6294'. RU power swivel and drilled out cement and CICR, circulated well clean with 50 bbls then RIH with bit to 6541'. RD power swivel and pulled out of hole with tubing. SWIFN

Plan to stand back drill collars, run in hole with bit and scraper, RU wireline to correlate tubing then RIH with packer and plug.

4/5/2012

Opened well. O psi. Pulled out of hole with drill collars, PU and tripped in hole with bit and casing scraper to fill at 6597', RU wireline unit and established a depth correlation for the tubing, RD and released wireline unit. Pulled out of hole with casing scraper, picked up retrievable bridge plug, RH, 4' sub, HD packer, 1 joint and a cup type SN, then tripped in hole and set the retrievable plug at 6530' then set the packer at 6452'. RU swab equipment and swabbed well as follows:

Swab runs - 7

Water cut - 100%

Average rate -1168 bfpd

Average fluid level - 3250'

Total fluid recovered - 82 bbls

Perf intervals open -6507'-6518' & 6462'-6484'

See 4-5 Swab report for details.

Note: The swab data is not accurate due to the annular fluid dropping while swabbing.

Plan to continue swabbing perforation intervals for rate and cut prior to cementing.

4/6/2012

Opened well, 0 psi tubing, 0 psi casing. RU swab equipment and made 4 runs to confirm communication from the perforations above the packer. Released the packer and reset at 6380', RU swab equipment and swabbed well as follows:

Swab runs - 28

Water cut - 99/100%

Average rate -1032 bfpd

Average fluid level - 3536'

Total fluid recovered - 284 bbls

Perf intervals open -6395' - 6518'

See 4-6 Swab report 2 for details.

Note: Perf intervals 1-4 all had communication, there was not any signs of communication between perf intervals 4 & 5.

RD swab equipment, released packer and plug then reset plug at 6380' and the packer at 6311'. RU pump lines, pressure tested packer to 2000 psi for 15 minutes. RD pump lines and SWIFN.

Plan to swab perf interval 6326'-6334' for rate / set CBP / TIH with tubing.

4/7/2012

Opened well, 0 psi tubing, 0 psi casing. RU swab equipment and swabbed well as follows:

Swab runs - 27

Water cut - 100%

Average rate -922 bfpd

Average fluid level - 2870'

Total fluid recovered - 213 bbls

Perf intervals open - 6326'-6334'

See 4-7 Swab report for details.

Plan to resume operations on Tuesday.

4/8/2012

No activity, waiting on cementing equipment.

4/9/2012

Opened well, 0 psi tubing, 0 psi casing. Released packer and plug, reset plug at 6572', set packer at 6186'.

Run R/A tracer and temperature surveys as follows:

- 1. Run static temperature survey
- 2. Pumped R/A tracer surveys with the following entry rates.

Perfs	1 bpm	1.5 bpm
6326'-6334'	7%	32%
6395'-6414'	70%	50%
6430'-6440'	15%	14%
6462'-6484'	8%	4%
6507'-6518'	0%	0%

- 3. Shut well in and run post shut in temperature survey
- 4. Run 15 minute post shut in temperature survey
- 5. Run 30 minute post shut in temperature survey

RD and released wireline unit.

4/10/2012

Opened well, 0 psi tubing, 0 psi casing. RU Halliburton pump equipment and bullheaded 75 bbls of H2zero polymer then displaced with 70 bbls of water (displacement volume was calculated with 25 bbls over displacement to the mid perf depth)

Note: See 4-10 Polymer Squeeze tab for pressure graph

Released packer and plug then pulled out of hole with tubing. RU wireline unit and set composite plug at 6525' RD and released wireline unit. TIH with open-ended tubing and tagged plug at 6525' then set tubing at 6524', RU Halliburton cementing equipment, and pumped cement squeeze as follows:

- 1. Pumped 5 bbls of fresh water
- 2. Pumped 75 sks 15.8 ppg 1.15 yield squeezechem cement (15.36 bbls)
- 3. Pumped 5 bbls fresh water
- 4. Displaced with 30.4 bbls of 4% KCL water

.

- 5. RD pump equipment and pulled out of hole with 16 joints (EOT @ 6027')
- 6. RU pump equipment
- 7. Squeezed 2.5 bbls at 1 bpm with a max pressure of 254 psi
- 8. SD for 5 minutes, pressure fell to 102 psi
- 9. Squeezed 1 bbl at 1/4 bpm with a max pressure of 705 psi
- 10. SD for 10 minutes, pressure fell off to 247 psi
- 11. Squeezed 0.5 bbl at 1/4 bpm with a max pressure of 800 psi.
- 12. SD for 4 minutes, pressure bled off to 754 psi
- 13. Squeezed 0.1 bbl at 1/4 bpm with a max pressure of 850 psi.
- 14. SD for 5 minutes, pressure held at 850 psi without fall off.
- 15. Bled pressure off with 1 bbl back, RD pump equipment
- 16. TIH with 8 joints (EOT @ 6278')
- 17. RU pump lines and reverse circulated cement out at 3.1 bpm with 600 psi.
- 18. RD pump lines
- 19. Pulled out of hole with 16 joints
- 20. RU pump lines and pressured tubing up to 500 psi. SWIFN
- 21. RD and released cementing equipment

Plan to pull out of hole with tubing / TIH with bit, drill collars and tubing to cement top.

Note: See 4-10 Cement Squeeze tab for pressure graph

4/11/2012

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Opened well, 590 psi tubing, 590 psi casing. Bled down pressure and pulled out of hole with tubing. Picked up bit, bit sub, 10 drill 4 3/4" spiral drill collars and crossover to tubing, then tripped in hole with 180 joints of tubing. SWIFN

Plan to drill out cement / round trip bit and scraper.

4/12/2012

Opened well, 0 psi. RU power swivel, tagged cement top at 6294'. Drilled out cement to 6400' WLM, RD power swivel and pulled out of hole laying down drill collars. Picked up and tripped in hole with bit and casing scraper to PBTD @ 6400', RU pump lines and reverse circulated with 54 bbls of completion fluid. Pressure tested casing to 1000 psi for 15 minutes, RD pump lines. RU swab equipment and swabbed well down to 2130', RD swab equipment, pulled out of hole with tubing to 3000'. SWIFN

Plan to finish pulling out of hole with tubing / Perforate / 6353'-6363' / Swab for rate and clean up.

4/13/2012

Opened well, 0 psi tubing, 0 psi casing. Finished pulling out of hole with tbg, RU wireline unit and perforated 6353'-6363' as follows:

Titan Part # EXP 3325-321T

25 gram charges

.41 entry hole

45.16" penetration

4" EXP gun loaded 6 spf on 60° phasing.

RD and released wireline unit. Picked up retrievable bridge plug, RH, 4' sub, HD packer, 1 joint and a cup type SN. Tripped in hole, set plug at 6581' then set the packer at 6310'. RU pump lines and pressure tested packer to 1000 psi, RD pump lines, RU swab equipment and swabbed well as follows:

Swab runs - 4

Water cut - 100%

Average rate -0 bfpd

Average fluid level - SN

Total fluid recovered - 15 bbls

Perf intervals open - 6353'-6363'

RD swab equipment, RU pump lines, filled tubing then injected into perf set 6353'-6363' at 1/4 bpm with 960 psi. Pumped a total of 5 bbls of CF into the formation reaching a max pressure of 1020 psi. RD pump lines RU swab equipment and swabbed well as follows:

Swab runs - 5

Water cut - 100%

Average rate -0 bfpd

Average fluid level - SN

Total fluid recovered - 41 bbls

Perf intervals open - 6353'-6363'

See 4-13 Swab report for details.

SWIFN

 4/14/2012
 Rig crew on days off

 4/15/2012
 Rig crew on days off

 4/16/2012
 Rig crew travel to location

4/17/2012 Opened well, 0 psi tubing, 0 psi casing. RU swab equipment and swabbed well as follows:

Swab runs - 3

Water cut - 98%

Average rate -0 bfpd

Average fluid level - SN

Total fluid recovered - 27 bbls

Perf intervals open - 6353'-6363'

See 4-17 Swab report for details.

Note: On the third swab run the rig operator stuck the swab mandrel in the seating nipple and was unable to pull out of the rope socket until late afternoon. The failure was due to a worn swab mandrel.

Released packer, pulled out of hole with tubing, removed the swab mandrel and weight bars from seating nipple. Tripped in hole with tubing and reset the packer at 6310' (EOT 6320'). SWIFN

Plan to pump acid on perf interval 6353'-6363' / Swab for rate and clean up.

<u>4/18/2012</u> Opened well, 0 psi tubing, 0 psi casing. RU Halliburton acid equipment and pumped acid on perf interval 6353' - 6363' as follows:

Opened bypass on packer

Pumped 34.7 bbls CF to establish circulation	<u>Rate</u>	Max pressure
Spotted 11.9 bbls 7 1/2% FE- Acid containing 50 buoyant balls	2 bpm	
Closed bypass on packer		
Pressured casing to 500 psi		
Pumped 2.27 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		·
Pumped 1.47 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		
Pumped 1.2 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		
Pumped 1.14 bbls CF	0.6 bpm	1000 psi

Shut down and waited for pressure to bleed off to 450 psi		
Pumped 1.03 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		
Pumped .97 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		
Pumped 2.44 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		
Pumped 5.67 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		
Pumped 7.63 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		
Pumped 3.45 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		
Pumped 5.14 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		
Pumped 3.58 bbls CF	0.6 bpm	1000 psi
Shut down and recorded ISIP, 5, 10, 15		

General details	<u>Pressure</u>
ISIP	984 psi
5 Min	446 psi
10 Min	243 psi
15 Min	129 psi
Max Treating Pressure	1000 psi
Max Acid Rate	0.6 bpm
Avg Treating Pressure	725 psi
Load to Recover	69 bbls

Note: See (4-18 One sec data, Acid stim) tab for details

Plan to swab perf intervals 6353' - 6363' for rate and clean up.

RD and released acid equipment, RU swab equipment and swabbed well as follows:

Swab runs - 10

Water cut - 98%

Average rate -236 bfpd

Average fluid level - 5560

Total fluid recovered - 87 bbls

Perf intervals open - 6353'-6363'

See 4-18 Swab report for details.

SWIFN

4/19/2012

Plan to swab perf intervals 6353' - 6363' for rate and clean up. / Move plug and packer

Opened well, 0 psi tubing, 0 psi casing. RU swab equipment and swabbed well as follows:

Swab runs - 8

Water cut - 98%

Average rate -172 bfpd

Average fluid level - 5660

Total fluid recovered - 51 bbls

Perf intervals open - 6353'-6363'

See 4-19 Swab report for details.

RD swab equipment, released packer and plug. Reset plug at 6320', RU pump lines and pressure tested plug to 1000 psi, RD pump lines, RU swab equipment and swabbed fluid level down to 2500', pulled out of hole with tubing and packer, RIH with one stand. SWIFN

Plan to perforate 6306'-6310' / swab for rate and clean up.

4/20/2012

Opened well, 0 psi tubing, 0 psi casing. POOH with stand, RU wireline unit and perforated as follows:

Perf interval - 6306'-6310'

Titan Part # EXP 3325-321T

.41 entry hole

25 gram charges

45.16" penetration

4" EXP gun loaded 6 spf on 60° phasing.

RD and released wireline unit. Picked up RH, 4' sub, HD packer, 1 joint and a cup type SN. Tripped in hole, set packer at 6247'. RU pump lines and pressure tested packer to 1000 psi, RD pump lines, RU swab equipment and swabbed well as follows:

Swab runs - 18

Water cut - 100%

Average rate -444 bfpd

Average fluid level - 5150

Total fluid recovered - 138 bbls

Perf intervals open - 6306'-6310'

See 4-20 Swab report for details.

SWIFN

Plan to move plug and packer / Swab 6306'-6363'

4/21/2012

Opened well, 0 psi tubing, 0 psi casing. Released packer and plug, reset plug at 6375' and packer at 6200'. Pressure tested packer, RU swab equipment and swabbed well as follows.

Swab runs - 12

Water cut - 100%

Average rate -383 bfpd

Average fluid level - 5650

Total fluid recovered - 105 bbls

Perf intervals open - 6306'-6363'

See 4-21 Swab report for details.

RD swab equipment released plug and packer and pulled out of hole. Laid down plug and packer, run in hole with tubing only to ~6500'.

Plan to RDMOSU until further notice.

4/22/2011

ND BOP's, NU wellhead. RDMOSU

Supervisor:

7ong E. Cook

Rig Operator:

RECEIVED

IIIN 2 8 2012

Form 3160-5 (April 2004)	UNITED STATES DEPARTMENT OF THE BUREAU OF LAND MAN).	FOIL, GAS & MINING	FORM APPROVED OMB No. 1004-0137 Expires: March 31, 2007 5. Lease Serial No.
	NOTICES AND REP			UTU-73528
Do not use th	nis form for proposals to ell. Use Form 3160-3 (A	odrill or to re-	-enter an	If Indian, Allottee or Tribe Name N/A
	IPLICATE- Other instr	uctions on reve	erse side.	7. If Unit or CA/Agreement, Name and/or No. Wolverine Federal Unit
1. Type of Well ☐ ☐ ☐ ☐	Gas Well□□ Other			8. Well Name and No.
2. Name of Operator Wolverine G	as and Oil Company of Utah, I	LLC		Wolverine Federal 17-6 (WF 8-1) 9. API Well No.
3a. Address 55 Campau NW, Grand Rapid	ls, MI 49503	3b. Phone No. (inclu 616-458-1150	de area code)	43-041-30037 10. Field and Pool, or Exploratory Area
4. Location of Well (Footage, Sec.,	T., R., M., or Survey Description)			Covenant Field
	265' FWL, Sec. 17, T23S, R01\ 58' FEL, Sec. 17, T23S, R01W,			11. County or Parish, State Sevier County, Utah
10 OUTCUL AT	DDD ODDIATE DOVOES TO	INDICATE NATE	THE OF NOTICE DI	
	PPROPRIATE BOX(ES) TO			EPORT, OR OTHER DATA
TYPE OF SUBMISSION		T	YPE OF ACTION	
Notice of Intent	Acidize Alter Casing	Deepen Fracture Treat	Production (Star	t/Resume) Water Shut-Off Well Integrity
Subsequent Report	Casing Repair	New Construction	L	Other
Final Abandonment Notice	Change Plans Convert to Injection	Plug and Abandon Plug Back	✓ Temporarily Aba Water Disposal	indon
Attach the Bond under which the following completion of the inv	he work will be performed or provided operations. If the operations and Abandonment Notices shall be to	le the Bond No. on file results in a multiple con	with BLM/BIA. Required in the second with BLM/BIA. Required in the second entire in the secon	e vertical depths of all pertinent markers and zones. d subsequent reports shall be filed within 30 days a new interval, a Form 3160-4 shall be filed once tion, have been completed, and the operator has
	rarily abandon the Wolverine 2. See attached procedure for			naximum allowable 3 year time period with a
COPY SENT TO OPERATO Date: 8-9-201 Initials: KS	2 (1901) Oil, Ci Doto 8/	epted by the Division of End Mini	ng	Federal Approval Of This Action Is Necessary
	By: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	m Condition ralid th	ons of Appro rough 7/17/2	and Dated 7/17/2012 2013)
14. I hereby certify that the fore Name (Printed/Typed) Matthew Rivers	going is true and correct		Production Engineer	
Signature ###		Date		6/27/2012
	THIS SPACE FOR F	EDERAL OR	STATE OFFICE	USE
Approved by			Title	Date

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Office

Wolverine Gas & Oil Company of Utah, LLC Temporary Abandonment Procedure

Wolverine Federal 17-6 Covenant Field

Purpose:

Temporarily plug back and abandon well to preserve casing.

PERTINENT INFORMATION

Location:

1680' FSL, 2265' FWL (SENW)

Section 17, Township 23 South, Range 1 West

Sevier County, Utah

Elevation:

5736' GL, 5753' KB

TD:

6765

PBTD:

6400' (cement top)

API No.:

43-041-30037

Casing:

13-3/8", 61.0# @ 2000', cemented to surface

9-5/8", 47.0#, HCP-110, LT&C @ 6094', cemented with 230 sks 50:50 Poz 7", 23.0#, HCP-110, LT&C @ 6758', cemented with 480 sks 50:50 Poz

Wellhead:

Tubing Head Flange – 7-1/16" 5k w/ 2-7/8" EUE top connection

Tubing:

6246' of 2-7/8", 6.5#, N-80, EUE, 8rd w/SN, x-over, and ESP equipment

Production Casing Specs:

7", 23.0#, HCP-110, LT&C, 8rd, ID: 6.366" Drift: 6.241"

Collapse: 5650 psi

Burst: 8720 psi (80% 6976 psi)

Tubing Specs:

2-7/8", 6.5#, N-80, EUE, 8rd, ID: 2.441" Drift: 2.347"

Collapse: 11,170 psi Burst: 10,570 psi (80% 8456 psi)

Joint: 145,000 lbs (80% 116,000 lbs)

Capacities:

7", 23.0#:

0.03936 Bbls/ft

 $0.2210 \text{ ft}^3/\text{ft}$

2-7/8", 6.5#

0.00579 Bbls/ft

 $0.0325 \text{ ft}^3/\text{ft}$

7" x 2-7/8" Annulus

0.0313 Bbls/ft

 $0.1759 \text{ ft}^3/\text{ft}$

BH Temperature: 183 °F @ 6508' MD (6300' TVD)

Current Upper Navajo Formation Completion Interval: 6395' - 6518' (as of 1/10/08)

Current Upper Navajo Perforations:

6306'- 6310' MD (6100'- 6104' TVD), 4' 24 holes (4/20/12)

6326' - 6334' MD (6118' - 6126' TVD), 8', 48 holes (squeezed)

6353'- 6363' MD (6147' - 6157' TVD), 10', 60 holes (4/13/12)

6395' - 6415' MD (6187' - 6207' TVD), 20', 200 holes (squeezed)

6430' - 6444' MD (6222' - 6236' TVD), 14', 136 holes (squeezed)

6462' - 6484' MD (6254' - 6276' TVD), 22', 180 holes (squeezed)

6507' - 6518' MD (6299' - 6310' TVD), 11' 90 holes (squeezed)

Perforation Depths are referenced to Halliburton SDL-DSN-GR dated 05/27/05.

PROCEDURE

- 1. Remove fence, cover ground, and prepare location for workover. Spot two 500 Bbl tanks and fill with completion fluid (CF) consisting of filtered produced water containing, 5.25 gallons (250 ppm) XC102W biocide, and 1.25 gallons (60 ppm) OSW5200 Oxygen Scavenger.
- 2. MIRUSU, NU BOP and ND wellhead.
- 3. PU 2-7/8" tubing as needed to round trip a 6-1/8" bit and casing scraper to PBTD. Tag PBTD and spot 10 Bbls of 9+ ppg salt brine containing recommended biocide and corrosion inhibitor to fill casing above perforations. POOH with bit and casing scraper.
- 4. RU wireline unit with lubricator. Set a 7" (23#) CIBP at 6280' and dump bail 2 sacks of cement on top of the CIBP. RD wireline.
- 5. RIH with 2-7/8" tubing and tag CIBP and cement at ~6270'. Pull up one joint of tubing and circulate well with 250 bbls of completion fluid. POOH and lay down tubing.
- 6. ND BOP, and NU wellhead. Shut in well.
- 7. RDMOSU



Covenant Field

Federal 17-6

API# 43-041-30037

SE/NW Sec 17 T23S R1W

Sevier County, Utah

3/28/2012 Roustabouts removed well fencing and prepped area for workover rig. Hauled in frac tanks and started

plumbing in flow back and pump lines.

3/29/2012 Hauled in rig pump, cat walk and base beam. Started filling frac tanks with water and KCL, finished plumbing

in flow back and pump lines.

Plan to MIRUSU on Monday.

3/30/2012 No activity

3/31/2012 No activity

4/1/2012 No activity

4/2/2012 MIRUSU, ND wellhead, NU BOP's

4/3/2012 Finished rigging up service unit, opened well, picked up and run in hole with bit, ten 4 3/4" drill collars and

160 Joints of 2 7/8" N-80 tubing. SWIFN

Note: Partial downtime due rig repairs

Plan to finish tripping in hole with tubing, drill out CICR, POOH.

4/4/2012 Opened well, finished picking up tubing off racks, tagged cement top at 6294'. RU power swivel and drilled

out cement and CICR, circulated well clean with 50 bbls then RIH with bit to 6541'. RD power swivel and

pulled out of hole with tubing. SWIFN

Plan to stand back drill collars, run in hole with bit and scraper, RU wireline to correlate tubing then RIH with

packer and plug.

4/5/2012 Opened well. O psi. Pulled out of hole with drill collars, PU and tripped in hole with bit and casing scraper to

fill at 6597', RU wireline unit and established a depth correlation for the tubing, RD and released wireline unit.

Pulled out of hole with casing scraper, picked up retrievable bridge plug, RH, 4' sub, HD packer, 1 joint and

a cup type SN, then tripped in hole and set the retrievable plug at 6530' then set the packer at 6452'. RU

swab equipment and swabbed well as follows:

Swab runs - 7

Water cut - 100%

Average rate -1168 bfpd

Average fluid level - 3250'

Total fluid recovered - 82 bbls

Perf intervals open -6507'-6518' & 6462'-6484'

See 4-5 Swab report for details.

Note: The swab data is not accurate due to the annular fluid dropping while swabbing.

Plan to continue swabbing perforation intervals for rate and cut prior to cementing.

4/6/2012 Opened well, 0 psi tubing, 0 psi casing. RU swab equipment and made 4 runs to confirm communication

from the perforations above the packer. Released the packer and reset at 6380, RU swab equipment and

swabbed well as follows:

Swab runs - 28

Water cut - 99/100%

Average rate -1032 bfpd

Average fluid level - 3536'

Page 1 of 7

Daily Activity

Total fluid recovered - 284 bbls

Perf intervals open -6395' - 6518'

See 4-6 Swab report 2 for details.

Note: Perf intervals 1-4 all had communication, there was not any signs of communication between perf intervals 4 & 5.

RD swab equipment, released packer and plug then reset plug at 6380' and the packer at 6311'. RU pump lines, pressure tested packer to 2000 psi for 15 minutes. RD pump lines and SWIFN.

Plan to swab perf interval 6326'-6334' for rate / set CBP / TIH with tubing.

4/7/2012

Opened well, 0 psi tubing, 0 psi casing. RU swab equipment and swabbed well as follows:

Swab runs - 27

Water cut - 100%

Average rate -922 bfpd

Average fluid level - 2870'

Total fluid recovered - 213 bbls

Perf intervals open - 6326'-6334'

See 4-7 Swab report for details.

Plan to resume operations on Tuesday.

4/8/2012

No activity, waiting on cementing equipment.

4/9/2012

Opened well, 0 psi tubing, 0 psi casing. Released packer and plug, reset plug at 6572', set packer at 6186'. Run R/A tracer and temperature surveys as follows:

- 1. Run static temperature survey
- 2. Pumped R/A tracer surveys with the following entry rates.

Perfs	1 bpm	1.5 bpm
6326'-6334'	7%	32%
6395'-6414'	70%	50%
6430'-6440'	15%	14%
6462'-6484'	8%	4%
6507'-6518'	0%	0%

- 3. Shut well in and run post shut in temperature survey
- 4. Run 15 minute post shut in temperature survey
- 5. Run 30 minute post shut in temperature survey

RD and released wireline unit.

4/10/2012

Opened well, 0 psi tubing, 0 psi casing. RU Halliburton pump equipment and bullheaded 75 bbls of H2zero polymer then displaced with 70 bbls of water (displacement volume was calculated with 25 bbls over displacement to the mid perf depth)

Note: See 4-10 Polymer Squeeze tab for pressure graph

Released packer and plug then pulled out of hole with tubing. RU wireline unit and set composite plug at 6525' RD and released wireline unit. TIH with open-ended tubing and tagged plug at 6525' then set tubing at 6524', RU Halliburton cementing equipment, and pumped cement squeeze as follows:

- 1. Pumped 5 bbls of fresh water
- 2. Pumped 75 sks 15.8 ppg 1.15 yield squeezechem cement (15.36 bbls)
- 3. Pumped 5 bbls fresh water
- 4. Displaced with 30.4 bbls of 4% KCL water

Daily Activity

- 5. RD pump equipment and pulled out of hole with 16 joints (EOT @ 6027')
- 6. RU pump equipment
- 7. Squeezed 2.5 bbls at 1 bpm with a max pressure of 254 psi
- 8. SD for 5 minutes, pressure fell to 102 psi
- 9. Squeezed 1 bbl at 1/4 bpm with a max pressure of 705 psi
- 10. SD for 10 minutes, pressure fell off to 247 psi
- 11. Squeezed 0.5 bbl at 1/4 bpm with a max pressure of 800 psi.
- 12. SD for 4 minutes, pressure bled off to 754 psi
- 13. Squeezed 0.1 bbl at 1/4 bpm with a max pressure of 850 psi.
- 14. SD for 5 minutes, pressure held at 850 psi without fall off.
- 15. Bled pressure off with 1 bbl back, RD pump equipment
- 16. TIH with 8 joints (EOT @ 6278')
- 17. RU pump lines and reverse circulated cement out at 3.1 bpm with 600 psi.
- 18. RD pump lines
- 19. Pulled out of hole with 16 joints
- 20. RU pump lines and pressured tubing up to 500 psi. SWIFN
- 21. RD and released cementing equipment

Plan to pull out of hole with tubing / TIH with bit, drill collars and tubing to cement top.

Note: See 4-10 Cement Squeeze tab for pressure graph

4/11/2012

Opened well, 590 psi tubing, 590 psi casing. Bled down pressure and pulled out of hole with tubing. Picked up bit, bit sub, 10 drill 4 3/4" spiral drill collars and crossover to tubing, then tripped in hole with 180 joints of tubing. SWIFN

Plan to drill out cement / round trip bit and scraper.

4/12/2012

Opened well, 0 psi, RU power swivel, tagged cement top at 6294', Drilled out cement to 6400' WLM, RD power swivel and pulled out of hole laying down drill collars. Picked up and tripped in hole with bit and casing scraper to PBTD @ 6400', RU pump lines and reverse circulated with 54 bbls of completion fluid. Pressure tested casing to 1000 psi for 15 minutes, RD pump lines. RU swab equipment and swabbed well down to 2130', RD swab equipment, pulled out of hole with tubing to 3000'. SWIFN

Plan to finish pulling out of hole with tubing / Perforate / 6353'-6363' / Swab for rate and clean up.

4/13/2012

Opened well, 0 psi tubing, 0 psi casing. Finished pulling out of hole with tbg, RU wireline unit and perforated 6353'-6363' as follows:

Titan Part # EXP 3325-321T

25 gram charges

.41 entry hole

45.16" penetration

4" EXP gun loaded 6 spf on 60° phasing.

RD and released wireline unit. Picked up retrievable bridge plug, RH, 4' sub, HD packer, 1 joint and a cup type SN. Tripped in hole, set plug at 6581' then set the packer at 6310'. RU pump lines and pressure tested packer to 1000 psi, RD pump lines, RU swab equipment and swabbed well as follows:

Swab runs - 4

Water cut - 100%

Average rate -0 bfpd

Average fluid level - SN

Total fluid recovered - 15 bbls

Perf intervals open - 6353'-6363'

RD swab equipment, RU pump lines, filled tubing then injected into perf set 6353'-6363' at 1/4 bpm with 960 psi. Pumped a total of 5 bbls of CF into the formation reaching a max pressure of 1020 psi. RD pump lines RU swab equipment and swabbed well as follows:

Swab runs - 5

Water cut - 100%

Average rate -0 bfpd

Average fluid level - SN

Total fluid recovered - 41 bbls

Perf intervals open - 6353'-6363'

See 4-13 Swab report for details.

SWIFN

4/14/2012Rig crew on days off4/15/2012Rig crew on days off4/16/2012Rig crew travel to location

4/17/2012 Opened well, 0 psi tubing, 0 psi casing. RU swab equipment and swabbed well as follows:

Swab runs - 3

Water cut - 98%

Average rate -0 bfpd

Average fluid level - SN

Total fluid recovered - 27 bbls

Perf intervals open - 6353'-6363'

See 4-17 Swab report for details.

Note: On the third swab run the rig operator stuck the swab mandrel in the seating nipple and was unable to pull out of the rope socket until late afternoon. The failure was due to a worn swab mandrel.

Released packer, pulled out of hole with tubing, removed the swab mandrel and weight bars from seating nipple. Tripped in hole with tubing and reset the packer at 6310' (EOT 6320'). SWIFN

Plan to pump acid on perf interval 6353'-6363' / Swab for rate and clean up.

4/18/2012 Opened well, 0 psi tubing, 0 psi casing. RU Halliburton acid equipment and pumped acid on perf interval 6353' - 6363' as follows:

Opened bypass on packer

Pumped 34.7 bbls CF to establish circulation	<u>Rate</u>	Max pressure
Spotted 11.9 bbls 7 1/2% FE- Acid containing 50 buoyant balls	2 bpm	
Closed bypass on packer		
Pressured casing to 500 psi		
Pumped 2.27 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		•
Pumped 1.47 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		
Pumped 1.2 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		
Pumped 1.14 bbls CF	0.6 bpm	1000 psi

Page 4 of 7

Daily Activity

Shut down and waited for pressure to bleed off to 450 psi		
Pumped 1.03 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		
Pumped .97 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		
Pumped 2.44 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		
Pumped 5.67 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		
Pumped 7.63 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		
Pumped 3.45 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		
Pumped 5.14 bbls CF	0.6 bpm	1000 psi
Shut down and waited for pressure to bleed off to 450 psi		
Pumped 3.58 bbls CF	0.6 bpm	1000 psi
Shut down and recorded ISIP, 5, 10, 15		

General details	<u>Pressure</u>
ISIP	984 psi
5 Min	446 psi
10 Min	243 psi
15 Min	129 psi
Max Treating Pressure	1000 psi
Max Acid Rate	0.6 bpm
Avg Treating Pressure	725 psi
Load to Recover	69 bbls

Note: See (4-18 One sec data, Acid stim) tab for details

Plan to swab perf intervals 6353' - 6363' for rate and clean up.

RD and released acid equipment, RU swab equipment and swabbed well as follows:

Swab runs - 10

Water cut - 98%

Average rate -236 bfpd

Average fluid level - 5560

Total fluid recovered - 87 bbls

Perf intervals open - 6353'-6363'

See 4-18 Swab report for details.

SWIFN

Plan to swab perf intervals 6353' - 6363' for rate and clean up. / Move plug and packer

Opened well, 0 psi tubing, 0 psi casing. RU swab equipment and swabbed well as follows:

Swab runs - 8

Water cut - 98%

Average rate -172 bfpd

Avei

4/19/2012

Average fluid level - 5660

Total fluid recovered - 51 bbls

Perf intervals open - 6353'-6363'

See 4-19 Swab report for details.

RD swab equipment, released packer and plug. Reset plug at 6320', RU pump lines and pressure tested plug to 1000 psi, RD pump lines, RU swab equipment and swabbed fluid level down to 2500', pulled out of hole with tubing and packer, RIH with one stand. SWIFN

Plan to perforate 6306'-6310' / swab for rate and clean up.

4/20/2012

Opened well, 0 psi tubing, 0 psi casing. POOH with stand, RU wireline unit and perforated as follows:

Perf interval - 6306'-6310'

Titan Part # EXP 3325-321T

.41 entry hole

25 gram charges

45.16" penetration

4" EXP gun loaded 6 spf on 60° phasing.

RD and released wireline unit. Picked up RH, 4' sub, HD packer, 1 joint and a cup type SN. Tripped in hole, set packer at 6247'. RU pump lines and pressure tested packer to 1000 psi, RD pump lines, RU swab equipment and swabbed well as follows:

Swab runs - 18

Water cut - 100%

Average rate -444 bfpd

Average fluid level - 5150

Total fluid recovered - 138 bbls

Perf intervals open - 6306'-6310'

See 4-20 Swab report for details.

SWIFN

Plan to move plug and packer / Swab 6306'-6363'

4/21/2012

Opened well, 0 psi tubing, 0 psi casing. Released packer and plug, reset plug at 6375' and packer at 6200'.

Pressure tested packer, RU swab equipment and swabbed well as follows.

Swab runs - 12

Water cut - 100%

Average rate -383 bfpd

Average fluid level - 5650

Total fluid recovered - 105 bbls

Perf intervals open - 6306'-6363'

See 4-21 Swab report for details.

RD swab equipment released plug and packer and pulled out of hole. Laid down plug and packer, run in hole with tubing only to ~6500'.

Plan to RDMOSU until further notice.

4/22/2011

ND BOP's, NU wellhead. RDMOSU

Supervisor:

7ony E. Cook

Rig Operator:

Form 3160-5 (April 2004)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

	AU OF LAND MAN				Lease Serial I UTU-735;		
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.				-		Allottee or Tribe Na	me
					N/A		
SUBMIT IN TRIPLICATE- Other instructions on reverse side.				7. If Unit or CA/Agreement, Name and/or No. Wolverine Federal Unit		ne and/or No.	
1. Type of Well Oil Well Gas	Well□□ Other				8. Well Name	and No. e Federal 17-6 (WF 8-1)
2. Name of Operator Wolverine Gas and	Oil Company of Utah,	LLC			9. API Well	No.	
3a. Address 55 Campau NW, Grand Rapids, MI 4	19503	3b. Phone No. (include area code) 616-458-1150			43-041-30037 10. Field and Pool, or Exploratory Area		y Area
4. Location of Well (Footage, Sec., T., R., M.	1., or Survey Description)				Covenan		
Surface: 1680' FNL & 2265' FV Bottom-Hole: 721' FNL & 2458' FE	WL, Sec. 17, T23S, R01 L, Sec. 17, T23S, R01W				11. County or Sevier Co	Parish, State	
12. CHECK APPROP	RIATE BOX(ES) TO	INDICATE N	ATURE OF NO	TTCE, REI	PORT, OR	OTHER DATA	
TYPE OF SUBMISSION			TYPE OF AC	TION			
Notice of Intent ☐ Subsequent Report ☐	Acidize Alter Casing Casing Repair	Deepen Fracture Treat New Constru	t Recla	uction (Start/ amation mplete	Resume)	Water Shut-Off Well Integrity Other	
	Change Plans	Plug and Aba	ndon 🔽 Temp	porarily Aban	don		
Final Abandonment Notice	Convert to Injection	Plug Back	Wate	r Disposal			
following completion of the involved of testing has been completed. Final Abadetermined that the site is ready for final Wolverine Gas & OII Company of 9.2# salt brine with CRW-132 bailed on top of the plug. The wonippled up and shut-in.	ndonment Notices shall be al inspection.) of Utah, LLC complete corrosion inhibitor we	filed only after all a d a temporary al	requirements, include bandonment on the CD of 6400'. A C	ding reclamati he Wolverin IBP was set CRW-132 c	on, have been one Federal 17 at 6280' and orrosion inhi	completed, and the -6 well July 10, 2 2 sacks of cemer bitor. The wellh	operator has 012. 10 bbls at were dump ead was
See activity report and WBD for	additional details.			R	ECE	EIVE	D
		RECE	IVED		JUL :	2 3 2012	
			0040				
		AUG 2 2 DIV. OF OIL, GA		Rich	field BL	M Field ()ffice
14. I hereby certify that the foregoing i Name (Printed/Typed)	s true and correct	<u> </u> _		. .			
Matthew Rivers		T	itle Production I	Engineer			
Signature Matter .		E	Date	07/	17/2012		
TH	IS SPACE FOR	FEDERAL C	OR STATE O	FFICE L	ISE		
Approved by			Title		Da	te	
Conditions of approval, if any, are attached certify that the applicant holds legal or equ which would entitle the applicant to condu	itable title to those rights		or				
Title 18 U.S.C. Section 1001 and Title 43 U.S. States any false, fictitious or fraudulent sta	S.C. Section 1212, make it a	a crime for any pe as to any matter w	rson knowingly and ithin its jurisdiction	d willfully to n.	make to any o	lepartment or agen	y of the United

(Instructions on page 2)



Covenant Field Federal 17-6 API# 43-041-30037

SE/NW Sec 17 T23S R1W Sevier County, Utah

7/9/2012

MIRUSU, ND wellhead, NU BOP. Pulled out of hole with tubing, PU and tripped in hole with casing scraper to PBTD at 6400'. RU pump lines and spotted 10 bbls of 9.2# salt brine containing Baker Petrolite CRW -132 corrosion inhibitor, RD pump lines and pulled out of hole with tubing. RU wireline unit, set CIBP at 6280' then dumped two sacks of cement on top. SWIFN

Plan to tag cement top / circulate corrosion inhibitor / lay down tubing.

7/10/2012

Opened well, 0 psi. Tripped in hole with tubing to cement top at 6270', picked up 4' and circulated well with 250 bbls of fresh water containing Baker Petrolite CRW-132 corrosion inhibitor. Pulled out of hole laying down tubing. ND BOP, NU wellhead. RDMOSU

Final Report

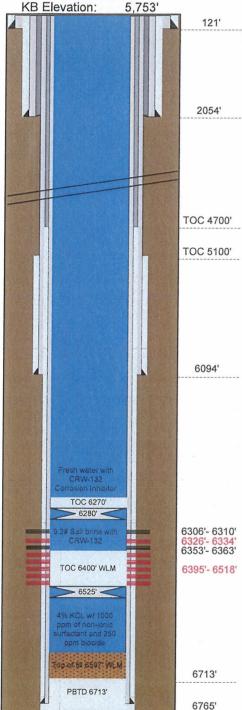
Supervisor:

Tony E. Cook

Rig Operator:



Ground Elevation: 5,736'



TD = 6765' MD (6557' TVD)

Wolverine Federal 17-6 (WF 8-1) API # 43-041-30037 Covenant Field Section 17, T23S, R1W Sevier County, Utah

(Not to Scale)

Deviated Well

Surface: 1680' FNL 2265' FWL, SE NW, 17-23S-1W Top of Pay (6303' MD): 704' FNL, 2477' FEL, NW NE, 17-23S-1W Total Depth (6765' MD): 721' FNL, 2458' FEL, NW NE, 17-23S-1W

Conductor Casing (06/05)

Size: 20", 0.25" wall Depth Landed: 121'

Cement Data: Cemented to surface with 640 sks Class "G"

Surface Casing (4/22/05)

Size/Wt/Grade: 13 3/8", 61#, J-55, STC, 8rd

Depth Landed: 2054' MD

Cement Data: 595 sks Hifill (11.0 ppg, 3.96 cf/sk), 475 sks Prem. Plus

(15.6 ppg, 1.18 cf/sk), Top job w/ 30 bbls Class "G"

Intermediate Casing (5/24/05)

Size/Wt/Grade: 9-5/8", 47#, HC-P110, LTC, 8rd

Depth Landed: 6094' MD

Cement Data: 230 sks 50:50 Poz (13.0? ppg, 1.71? cf/sk)

Production Casing (5/29/05)

Size/Wt/Grade: 7", 23#, HC-P110, LTC, 8rd

Properties: 8720 psi burst, 6.241" drift, 6.366" ID, 0.0393 Bbl/ft Capacity

Depth Landed: 6758' MD

Cement Data: 255 sks 50:50 Poz (14.35? ppg, 1.27? cf/sk)

Navajo Perforations

6306' - 6310' MD (6100' - 6104' TVD), 4', 24 holes (4/20/12)

6326' - 6334' MD (6120' - 6128' TVD), 8', 48 holes (squeezed)

6353' - 6363' MD (6147' - 6157' TVD), 10', 60 holes (4/13/12)

6395' - 6415' MD (6189' - 6209' TVD), 20', 200 holes (squeezed)

6430' - 6444' MD (6224' - 6238' TVD), 14', 136 holes (squeezed)

6462' - 6484' MD (6256' - 6278' TVD), 22', 180 holes (squeezed)

6507' - 6518' MD (6301' - 6312' TVD), 11', 90 holes (squeezed)

Mid-Perf = 6335' MD (6129' TVD), 14' M (14' TV), 84 holes

Tubing (7/10/12)

None

PBTD

(8/7/05)Tubing tagged cement top @ 6713' MD

(10/16/06) Tagged fill @ 6675' MD

(11/14/07) Tagged fill @ 6666' MD

(10/11/10) Tagged fill @ 6597' WLM

(4/5/12) Tagged fill @ 6597' WLM



Wolverine Federal 17-6 (WF 8-1) API # 43-041-30037 Covenant Field Section 17, T23S, R1W Sevier County, Utah

Tubing Detail (7/10/12)

No tubing in well

Directional Data:

<u>MD</u>	TVD	<u>Incl.</u>	<u>MD</u>	TVD	<u>Incl.</u>
500	498	11.2	3000	2834	16.3
1000	980	16.7	3500	3320	10.4
1500	1459	16.5	4000	3814	9.7
1750	1697	18.5	4500	4305	9.7
2000	1930	24.5	5000	4799	7.8
2250	2155	27.6	5500	5296	5.1
2500	2374	28.6	6000	5794	2.3
2750	2599	22.4	6500	6294	3.2

Wellhead Information

- Tubing head flange is 7-1/16", 5M with a 2-7/8" EUE 8rd top connection.

Stimulation/Treatments

8/11/05:

6395' - 6518' w/ 6300 gal 7.5% HCl. Attempted to isolate and treat individual zones. Communicated between 6512' - 6518' MD, 6472' - 6484' MD, and 6430' - 6443' MD. BDP = 1850 -- 2830 psi, ISDP = 1200 psi

10/23/06:

6395' - 6518' w/ 2100 gal 15% HCl with 30 gpt Morflo, 1 gpt lowsurf-300M, 1 gpt AS-9 anti-sludge, 6 gpt HAI-404 inhibitor, 10gpt Fe-7A & 50gpt Fe-2 iron sequestering agents. Communicated between all zones. Pulse washed all perforations using coiled tubing. FTP = 885 psi @ 1 BPM.

11/19/07:

Circulation cement squeeze with 25 sks of Class "G" cement and CICR at 6460'.

<u> 1/9/08:</u>

6395' - 6518' w/ 1587 gal 7.5% FE, 2564 gal 5% Clay-Safe H, and 3489 gal 11.5%-1.5% Sandstone Completion Acid with diverter and three stages. FTP = 1356 psi @ 2.1 BPM.

4/10/12:

6326'-6518' w 75 bbls of Halliburton H2Zero polymer at 1 BPM and 1000 psi. Over displaced w/ 25 bbls of 4% KCL.

<u>4/18/12:</u>

6353' - 6363' w/ 500 gal 7.5% FE HCL and 50 buoyant ball sealers, MTR = 0.6 BPM MTP = 1000 psi ISIP = 984 psi

Notes

Surface Location: Latítude = 38° 48' 19.4600", Longitude = -111° 56' 02.2729"

(7/21/05): Cement top at 4702' on CBL-CCL-GR

(9/5/06): Available Logs: DLL/MSFL, SDL/DSN, EMI, CBL, Halliburton Directional Log

Sundry Number: 66929 API Well Number: 43041300370000 FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

	STATE OF UTAH		FORM 9
DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING			5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-73528
SUNDR	RY NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for procurrent bottom-hole depth, FOR PERMIT TO DRILL form	oposals to drill new wells, significantly deep reenter plugged wells, or to drill horizontal l n for such proposals.	en existing wells below aterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME: WOLVERINE
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: WOLVERINE FED 17-6 (WF 8-1)
2. NAME OF OPERATOR: WOLVERINE GAS & OIL COM	MPANY OF UTAH, LLC		9. API NUMBER: 43041300370000
3. ADDRESS OF OPERATOR: One Riverfront Plaza 55 Ca	РНО mpau NW, Grand Rapids, MI, 49503	NE NUMBER: 616 458-1150 Ext	9. FIELD and POOL or WILDCAT: COVENANT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1680 FNL 2265 FWL			COUNTY: SEVIER
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 17 Township: 23.0S Range: 01.0W Meridian:	S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICATE NA	ATURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	CHANGE TO PREVIOUS PLANS CHANGE WELL STATUS DEEPEN OPERATOR CHANGE PRODUCTION START OR RESUME REPERFORATE CURRENT FORMATION TUBING REPAIR WATER SHUTOFF	1.41	CASING REPAIR CHANGE WELL NAME CONVERT WELL TYPE NEW CONSTRUCTION PLUG BACK RECOMPLETE DIFFERENT FORMATION TEMPORARY ABANDON WATER DISPOSAL APD EXTENSION OTHER: EPTHS, VOLUMES, etc.
Temporary Abando Although the well (CIBP and cement p is actively investigat Results of that	nment status of Wolverine Federis not capable of production at blug top is at 6270'), Wolverine Guing E.O.R. options for the Coverstudy may find that W.F.17-6 capantly to the field's ultimate oil reference.	present oil, on still ecovery.	ew Attached Conditions of Approval
NAME (PLEASE PRINT) Ron Meredith	PHONE NUMBER 616 929-1932	TITLE Sr. Production Engineer	
SIGNATURE N/A		DATE 10/14/2015	

Sundry Number: 66929 API Well Number: 43041300370000



The Utah Division of Oil, Gas, and Mining

- State of UtahDepartment of Natural Resources

Electronic Permitting System - Sundry Notices

Sundry Conditions of Approval Well Number 43041300370000 Did not meet the requirements of R649-3-36 for extension.

RECEIVED: Oct. 19, 2015

UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

FORM APPROVED
OM B No. 1004-0137
Expires: March 31, 2007

5.	Lease Serial No.	
	TITTI 72530	

6	. If Indian,	Allottee o	r Tribe Name

	1474		
SUBMIT IN TRIPLICATE- Other instructions on reverse side.			7. If Unit or CA/Agreement, Name and/or No.
1. Type of Well ☐ ☐ Gas Well ☐ ☐ Other			Wolverine Federal Unit 8. Well Name and No.
2. Name of Operator Wolverine G	Wolverine Federal 17-6 (WF 8-1) 9. API Well No.		
3a. Address 55 Campau NW, Grand Rapids, Michigan 49503-2616 3b. Phone No. (include area code) 616-458-1150			43-041-30037 10. Field and Pool, or Exploratory Area
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SHL - 1680' FNL, 2265' FWL, Section 17, T23S, R1W, SLB&M BHL - 7217' FNL, 22458' FEL, Section 17, T23S, R1W, SLB&M			Covenant Field Navajo 11. County or Parish, State Sevier County, Utah
12. CHECK AI	PPROPRIATE BOX(ES) T	O INDICATE NATURE OF NOT	CE, REPORT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTI	ON
Acidize Deepen Production (St. Reclamation Subsequent Report Casing Repair New Construction Final Abandonment Notice Convert to Injection Plug Back Water Disposal			plete Other

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Wolverine Gas and Oil Company seeks to extend the Temporary Abandonment status of Wolverine Federal #17-6. Although this well is not capable of production at present (see the attached current WBD for additional details), Wolverine Gas and Oil is actively investigating EOR options at the Covenant Field. Results of that study may find that WF 17-6 is still capable of significant contribution to the field's ultimate oil

RECEIVED

RECEIVED OCT 1 3 2015

OCT 0 1 2015

DIV. OF O	L, GAS& MINING	Richfield	BFW Lieid Ource
 I hereby certify that the foregoing is true and correct Name (Printed/Typed) 	 		
Ron Meredith	Title Sr. Productio	n Engineer	
Signature Am Muredite	Date	09/25/2015	
THIS SPACE FOR FEDERAL OR STATE OFFICE USE			
Approved App	Title SN	ZS Date	10/6/2015
Conditions of approval, if any, are attached. Approval of this notice does not warn certify that the applicant holds legal or equitable title to those rights in the subject which would entitle the applicant to conduct operations thereon.		RICHARLO	F.O.
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for ar States any false, fictitious or fraudulent statements or representations as to any mat	y person knowingly and er within its jurisdiction	willfully to make to any do	epartment or agency of the United

Instructions on page 2)

Conditions of Approval Attached

SUNDRY # 1651400049

Conditions of Approval

Wolverine Gas and Oil Company of Utah, LLC Sundry Dated 9/25/2015

Well:

Wolverine Federal 17-6 (WF 8-1)

Location:

Section 17, T23S, R1W

Lease:

UTU-73528

County:

Sevier

The following conditions of approval shall apply to this sundry:

Wolverine Federal #17-6 (WF 8-1) TA approval:

- 1. The temporarily abandoned status is granted for a one time, one-year period until October 6, 2016.
- 2. On or before October 6, 2016, operator shall take action to either resume operations, submit justification for an additional one-year extension, or submit a sundry notice to plug and abandon the well.

If you have any questions regarding the conditions supporting this approval, please call Stan Andersen in the Richfield Field Office at 435-896-1532 or Leslie Peterson in the Price Field Office at 435-636-3661.

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	2	FORM 9 5.LEASE DESIGNATION AND SERIAL NUMBER:
	UTU-73528		
SUNDR	RY NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for procurrent bottom-hole depth, FOR PERMIT TO DRILL form	oposals to drill new wells, significantly dee reenter plugged wells, or to drill horizontal n for such proposals.	pen existing wells below laterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME: WOLVERINE
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: WOLVERINE FED 17-6 (WF 8-1)
2. NAME OF OPERATOR: WOLVERINE GAS & OIL COM	ИРАNY OF UTAH, LLC		9. API NUMBER: 43041300370000
3. ADDRESS OF OPERATOR: One Riverfront Plaza 55 Ca	PHO nmpau NW, Grand Rapids, MI, 49503	ONE NUMBER: 616 458-1150 Ext	9. FIELD and POOL or WILDCAT: COVENANT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1680 FNL 2265 FWL			COUNTY: SEVIER
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SENW Section:	HIP, RANGE, MERIDIAN: 17 Township: 23.0S Range: 01.0W Meridian	: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICATE N	IATURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
Wolverine Gas ar Wolverine Federal	COMPLETED OPERATIONS. Clearly show all point of the company seeks to extend 17-6. The well is currently not details.	d the T.A. status of capable of producing,	CASING REPAIR CHANGE WELL NAME CONVERT WELL TYPE NEW CONSTRUCTION PLUG BACK RECOMPLETE DIFFERENT FORMATION TEMPORARY ABANDON WATER DISPOSAL APD EXTENSION OTHER: EPths, volumes, etc. Accepted by the Utah Division of Oil, Gas and Mining
was set above perfinvestigating EOR of CO2-flooding option still add significations. WF 1 current state. The was verified with a Finally, it is lo	o equipment were removed and forations (July, 2012 at 6270'). Supportunities at Covenant, includings. Study results may concludicant value to the field, thru add 7-6 poses minimal safety/enviruell was drilled just 11 years agd 1000 psi MIT, witnessed by Utocated on a pad with 4 other actorsequently checked, at least data.	Wolverine is actively iding infill drilling and le that WF 17-6 can ded oil recovery. Conmental risks in its o and casing integrity DGOM, on 10/28/15.	Date: November 19, 2015 By: Day County
NAME (PLEASE PRINT) Ron Meredith	PHONE NUMBER 616 929-1932	TITLE Sr. Production Engineer	
SIGNATURE N/A		DATE 10/29/2015	

Form 3160-5 (June 2015)

UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

FORM APPROVED OMB NO. 1004-0137 Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS				UTU73528	
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.				If Indian, Allottee or	r Tribe Name
SUBMIT IN TRIPLICATE - Other instructions on page 2				If Unit or CA/Agree UTU80800A	ement, Name and/or No.
Type of Well	ner		8.	Well Name and No. WOLVERINE FED	DERAL 17-6 (WF 8-1)
Name of Operator WOLVERINE GAS & OIL COI		N W MEREDITH vgas.com	9.	API Well No. 43-041-30037	
3a. Address ONE RIVERFRONT PLAZA 5 GRAND RAPIDS, MI 49503	5 CAMPAU NW Ph	Phone No. (include area code) : 616-929-1932 : 616-458-0869	10). Field and Pool or E COVENANT FIE	
4. Location of Well (Footage, Sec., T	., R., M., or Survey Description)		11	. County or Parish, S	State
Sec 17 T23S R1W Mer SLB S	ENW 1680FNL 2265FWL			SEVIER COUNT	TY COUNTY, UT
12. CHECK THE AF	PPROPRIATE BOX(ES) TO	INDICATE NATURE OI	FNOTICE, RE	PORT, OR OTH	ER DATA
TYPE OF SUBMISSION		TYPE OF	ACTION		
Notice of Intent	☐ Acidize	□ Deepen	□ Production	(Start/Resume)	■ Water Shut-Off
	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	n	■ Well Integrity
☐ Subsequent Report	□ Casing Repair	■ New Construction	☐ Recomplete	;	☐ Other
☐ Final Abandonment Notice	☐ Change Plans	□ Plug and Abandon	▼ Temporarily	y Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disp	osal	
If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection. Wolverine Gas and Oil Co. of Utah, LLC (a subsidiary of Wolverine Gas and Oil Corp.) seeks to renew the Temporarily Abandoned status of Wolverine Federal 17-6. The subject well is presently not capable of production as pump equipment was removed from the well and a CIBP/cement plug was set above all perforations (at 6270')in July of 2012. Wolverine continues to monitor production and bottom-hole pressure across the field while considering both infill drilling and CO2-flooding options at Covenant. If an economically viable CO2 source can be identified, 17-6 could contribute significantly towards enhancing the field's ultimate oil recovery. WF 17-6 poses minimal safety/environmental risks in its current state. The well was drilled just 12 years ago and had its most recent (UDOGM-witnessed, 1000 psi) MIT on 10/28/15. Furthermore, the well is located on a well pad with 4 other, active Covenant Field wells and is monitored continuously by Wolverine field personnel.					CEIVED 2.1.6 2016
14. I hereby certify that the foregoing is true and correct. Electronic Submission #352526 verified by the BLM Well Information System For WOLVERINE GAS & OIL CORP., sent to the Salt Lake Name (Printed/Typed) RON W MEREDITH Title SR. PRODUCTION ENGINEER					
The National Association of the					
Signature (Electronic Submission) Date 09/26/2016					
	THIS SPACE FOR F	EDERAL OR STATE (FFICE USE		
Approved By Approved By		Title Fild	Manago	r	DaP12/16
onditions of approval, if any, are attached. Approval of this notice does not warrant or ertify that the applicant holds legal or equitable title to those rights in the subject lease thich would entitle the applicant to conduct operations thereon. Office Richard Fold Office it a Conduct operation of the United Subject lease of the Unit					
States any false, fictitious or fraudulent s	U.S.C. Section 1212, make it a crime statements or representations as to an	or any person knowingly and wanter within its jurisdiction.	wintuny to make to	any department or a	igency of the United

Well and Notice Remarks

TA

Doc. Number 17RH0002SE API 430413003701S1

Doc. Type

Case IID UTU80800A

Type 318230

Name WOLVERINE NVJO A

Well Name WOLVERINE FEDERAL

Number 17-6(8-1) Operator
WOLVERINE GAS & OIL CO OF UT

Doc. Number 17RH0002SE 12 17RH0002SE 12

Date 12/06/2016 12/05/2016

ROBIN HANSEN ROBIN HANSEN Author

Subject

Category APPROVAL

TA TA

APPROVAL

Category

GENERAL

Date 12/06/2016

The TA request is granted as proposed with the following conditions:

1. The TA status shall expire on December 6, 2017.

2.Prior to drilling out the CIPB (placing the well back to production or conversion to injection), an MIT test will be performed on the production casing.

If you have any other questions concerning this matter, please contact Robin L Hansen of this office at (801)-539-4072.

Sundry Number: 74656 API Well Number: 43041300370000 FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

			FORM 9
	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCE		
DIVISION OF OIL, GAS, AND MINING			5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-73528
SUNDR	RY NOTICES AND REPORTS (ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significantly or reenter plugged wells, or to drill horizor n for such proposals.		7.UNIT or CA AGREEMENT NAME: WOLVERINE
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: WOLVERINE FED 17-6 (WF 8-1)
2. NAME OF OPERATOR: WOLVERINE GAS & OIL COM	MPANY OF UTAH, LLC		9. API NUMBER: 43041300370000
3. ADDRESS OF OPERATOR: One Riverfront Plaza 55 Ca	mpau NW, Grand Rapids, MI, 49503	PHONE NUMBER: 616 458-1150 Ex	9. FIELD and POOL or WILDCAT: COVENANT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1680 FNL 2265 FWL			COUNTY: SEVIER
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SENW Section:	HIP, RANGE, MERIDIAN: 17 Township: 23.0S Range: 01.0W Meric	lian: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
10/1/2016	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:		_	
Date of Spau.	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	L TUBING REPAIR	VENT OR FLARE	☐ WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
Wolverine Gas and Wolverine Gas and Abandoned status of Field. The well has was removed and a (@ 6270') in July, 2 production and Bhdrilling and CO2-flowis identified, 17-6 enhancing the field poses minimal enviperfs are isolated a its mechanical inte	COMPLETED OPERATIONS. Clearly show a nd Oil Co. of Utah, LLC (a sul Oil Corp.) seeks to renew the f Wolverine Federal 17-6, in been inactive since production CIBP/cement plug was set all 2012. Wolverine is actively mostly at Covenant in considerated oding options. If a suitable so could contribute significant d's oil recovery. In its present ironmental/safety concerns. and the well only drilled/case grity should be sound. And, of	the Covenant on equipment ove all perfs onitoring well ation of infill ource of CO2 ly towards t state, 17-6 Again, all its d in 2005 so even though ong with 4 other, active	DUEST DENIED The Division of Gas and Mining The Division of Gas and Mining The Division of Approval The Attached Conditions of Approval The Wells on the same well pad.
Ron Meredith	616 929-1932	Sr. Production Engineer	
SIGNATURE N/A		DATE 9/27/2016	

Sundry Number: 74656 API Well Number: 43041300370000



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Sundry Conditions of Approval Well Number 43041300370000

Did not meet the requirements of R649-3-36. No showing of integrity or that the well did not pose a risk to health, safety or environment.

RECEIVED: Jan. 09, 2017

Sundry Number: 78490 API Well Number: 43041300370000 FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES		FORM 9
ι	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-73528		
SUNDRY NOTICES AND REPORTS ON WELLS			6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
I CULTENT NOTIOM-NOTE GENTA TEENTEL NITIONED WEILS OF TO OFFIL NOTIZONTAL LATERALS TISE APPLICATION I			7.UNIT or CA AGREEMENT NAME: WOLVERINE
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: WOLVERINE FED 17-6 (WF 8-1)
2. NAME OF OPERATOR: WOLVERINE GAS & OIL COM	IPANY OF UTAH, LLC		9. API NUMBER: 43041300370000
3. ADDRESS OF OPERATOR: One Riverfront Plaza 55 Ca	PHO mpau NW, Grand Rapids, MI, 49503	NE NUMBER: 616 458-1150 Ext	9. FIELD and POOL or WILDCAT: COVENANT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1680 FNL 2265 FWL			COUNTY: SEVIER
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SENW Section: 1	IIP, RANGE, MERIDIAN: 17 Township: 23.0S Range: 01.0W Meridian:	S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICATE NA	ATURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
NOTICE OF INTENT Approximate date work will start: 3/1/2017		LITER CASING CHANGE TUBING	CASING REPAIR CHANGE WELL NAME
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN F	COMMINGLE PRODUCING FORMATIONS RACTURE TREAT FLUG AND ABANDON	CONVERT WELL TYPE NEW CONSTRUCTION PLUG BACK
SPUD REPORT Date of Spud:	PRODUCTION START OR RESUME	ECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION TEMPORARY ABANDON
DRILLING REPORT Report Date:	☐ WATER SHUTOFF ✓ S	VENT OR FLARE	WATER DISPOSAL APD EXTENSION OTHER
	WILDCAT WELL DETERMINATION	THER	OTHER:
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Wolverine Gas and Oil Co. of Utah, LLC seeks to renew the T.A. status of Wolverine Federal 17-6, in the Covenant Field. Wolverine is monitoring BHP's and oil production at Covenant and considering both infill drilling and CO2-flooding options. If a suitable CO2 source is found, 17-6 could contribute to enhanced oil recovery efforts. In its present state, 17-6 poses minimal environmental/safety concerns. The Arapien Formation outcrops at Covenant, so groundwater contamination risks are minimal. 17-6's production equipment was removed and a CIBP/cement plug was set above all perfs (@ 6270') in July, 2012. The well was drilled/cased in just 2005, and mechanical integrity was verified on 2/21/17 by a successful MIT (30 Mins, 1020 psi, witnessed by UDOGM's Mark Jones). There are 4 other active wells on 17-6's well pad so the site is visited dail and is remotely monitored continuously.			
NAME (PLEASE PRINT) Ron Meredith	PHONE NUMBER 616 929-1932	TITLE Sr. Production Engineer	
SIGNATURE N/A		DATE 3/1/2017	

Sundry Number: 78490 API Well Number: 43041300370000

INSPECTION FORM 6

STATE OF UTAH

hut-in TA

-INJECTION WELL - PRESSURE TEST

Well Name: Wolverine Fe Qtr/Qtr: Section Company Name: Fease: State Finspector: Mark Fease	•	23 5. Range: / W.
Initial Conditions:		
Tubing - Rate: + No :	tubing in hole Pressure	e:psi
Casing/Tubing Annulus - Pres	sure:psi	
Conditions During Test:		
Time (Minutes) 0 5 10 15 20 25 30 Results: Pass/Fail	Annulus Pressure 1020 # 1020 # 1020 # 1020 #	Tubing Pressure
Conditions After Test:		
Tubing Pressure:/_Casing/Tubing Annulus P		
COMMENTS:		
Operator Representative		

Sundry Number: 95899 API Well Number: 43041300370100 FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

			FORM 9
Dì	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES IVISION OF OIL, GAS, AND MINING		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-73528
SUNDRY	NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
below current bottom-h	proposals to drill new wells, significantly de ole depth, reenter plugged wells, or to drill h PERMIT TO DRILL form for such proposals.		7.UNIT or CA AGREEMENT NAME: WOLVERINE
1. TYPE OF WELL			8. WELL NAME and NUMBER: Wolverine Fed 17-6 (WF 8-1)
2. NAME OF OPERATOR: Wolverine Gas & Oil Compa	ny of Utah, LLC		9. API NUMBER: 43041300370100
3. ADDRESS OF OPERATO 55 Campau Avenue NW #1,		PHONE NUMBER: 6-458-1150	9. FIELD and POOL or WILDCAT: COVENANT
4. LOCATION OF WELL FOOTAGES AT SURFACE 1680 FNL 2265 FWL	::		COUNTY: SEVIER
QTR/QTR, SECTION, TO	WNSHIP, RANGE, MERIDIAN: 7 Township: 23S Range: 1W Meridian: S		STATE: UTAH
11. CHECK	(APPROPRIATE BOXES TO INDICATE N	ATURE OF NOTICE, F	REPORT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
NOTICE OF INTENT Approximate date work will start: 5/16/2019 SUBSEQUENT REPORT Date of Work Completion: SPUD REPORT Date of Spud: DRILLING REPORT Report Date:	□ CHANGE TO PREVIOUS PLANS □ CHANGE WELL STATUS □ CO □ DEEPEN □ FRA □ OPERATOR CHANGE □ PLI □ PRODUCTION START OR RESUME □ REPERFORATE CURRENT FORMATION □ SID □ TUBING REPAIR □ VEL	TER CASING ANGE TUBING MMINGLE PRODUCING FORMA ACTURE TREAT UG AND ABANDON CLAMATION OF WELL SITE ETRACK TO REPAIR WELL NT OR FLARE EA STATUS EXTENSION HER	CASING REPAIR CHANGE WELL NAME TIONS CONVERT WELL TYPE NEW CONSTRUCTION PLUG BACK RECOMPLETE DIFFERENT FORMATION TEMPORARY ABANDON WATER DISPOSAL APD EXTENSION OTHER:
Wolverine Gas and Corp.) seeks to rene (8-1) in the Covena 2012, but may yet of operations are improvement cover. Well (witnessed by UDO since. Daily monitoring is located on an activitield personnel. Furth a continuous basis,	OR COMPLETED OPERATIONS. Clearly show Oil Co. of Utah, LLC (a subsidiary of Wown Temporary Abandonment status at Wont Field. The well has been non-product contribute to Covenant Field production plemented. A CIBP sets above all perfs libore integrity was most recently verified OGM) and daily checks of WHP have reng of 17-6's WHP is a part of routine field we well pad and is typically visited multipermore, the wellsite is remotely monitor, so the well poses minimal environments state.	olverine Gas and Oil folverine Federal 17-cive and shut-in since if enhanced recover at 6280' with 10' of ed in a 2/21/17 MIT nained at Zero ever doperations. The world operations are from the plant of tal risk in its present	Approved by the Utah Division of Oil, Gas and Mining Date: July 25, 2019 By:
NAME (PLEASE PRINT) Ron Meredith	PHONE NUMBER 616 929-1932	TITLE Sr. Production Engineer	
SIGNATURE N/A		DATE 5/6/2019	

Sundry Number: 95899 API Well Number: 43041300370100



KB Elevation:

Wolverine Federal 17-6 (WF 8-1) API # 43-041-30037 Covenant Field **Section 17, T23S, R1W** Sevier County, Utah

Ground Elevation: 5,736' (Not to Scale) 5,753'

121'

2054'

TOC 4700'

TOC 5100'

6094'

6306'- 6310'

6353'- 6363'

6395'- 6518'

6713'

6765'

Deviated Well

Surface: 1680' FNL 2265' FWL, SE NW, 17-23S-1W Top of Pay (6303' MD): 704' FNL, 2477' FEL, NW NE, 17-23S-1W Total Depth (6765' MD): 721' FNL, 2458' FEL, NW NE, 17-23S-1W

Conductor Casing (06/05)

Size: 20", 0.25" wall Depth Landed: 121'

Cement Data: Cemented to surface with 640 sks Class "G"

Surface Casing (4/22/05)

Size/Wt/Grade: 13 3/8", 61#, J-55, STC, 8rd

Depth Landed: 2054' MD

Cement Data: 595 sks Hifill (11.0 ppg, 3.96 cf/sk), 475 sks Prem. Plus

(15.6 ppg, 1.18 cf/sk), Top job w/ 30 bbls Class "G"

Intermediate Casing (5/24/05)

Size/Wt/Grade: 9-5/8", 47#, HC-P110, LTC, 8rd

Depth Landed: 6094' MD

Cement Data: 230 sks 50:50 Poz (13.0? ppg, 1.71? cf/sk)

Production Casing (5/29/05)

Size/Wt/Grade: 7", 23#, HC-P110, LTC, 8rd

Properties: 8720 psi burst, 6.241" drift, 6.366" ID, 0.0393 Bbl/ft Capacity

Depth Landed: 6758' MD

Cement Data: 255 sks 50:50 Poz (14.35? ppg, 1.27? cf/sk)

Navajo Perforations

6306' - 6310' MD (6100' - 6104' TVD), 4', 24 holes (4/20/12)

6326' - 6334' MD (6120' - 6128' TVD), 8', 48 holes (squeezed)

6353' - 6363' MD (6147' - 6157' TVD), 10', 60 holes (4/13/12)

6395' - 6415' MD (6189' - 6209' TVD), 20', 200 holes (squeezed)

6430' - 6444' MD (6224' - 6238' TVD), 14', 136 holes (squeezed)

6462' - 6484' MD (6256' - 6278' TVD), 22', 180 holes (squeezed)

6507' - 6518' MD (6301' - 6312' TVD), 11', 90 holes (squeezed)

Mid-Perf = 6335' MD (6129' TVD), 14' M (14' TV), 84 holes

Tubing (7/10/12)

None

PBTD

(8/7/05)Tubing tagged cement top @ 6713' MD

(10/16/06) Tagged fill @ 6675' MD

(11/14/07) Tagged fill @ 6666' MD

(10/11/10) Tagged fill @ 6597' WLM

Tagged fill @ 6597' WLM (4/5/12)

TD = 6765' MD (6557' TVD)

Fresh water with CRW-132

Corrosion Inhibitor

TOC 6270' > 6280' <

9.2# Salt brine with CRW-132

TOC 6400' WLM

> 6525' **<**

4% KCL w/ 1000

ppm of non-ionic rfactant and 250 ppm biocide

op of fill 6597" WLN

PBTD 6713'

RECEIVED: Jul. 17, 2019

Sundry Number: 95899 API Well Number: 43041300370100



Wolverine Federal 17-6 (WF 8-1)

API # 43-041-30037

Covenant Field

Section 17, T23S, R1W

Sevier County, Utah

Tubing Detail (7/10/12)

No tubing in well

Directional Data:

<u>MD</u>	<u>TVD</u>	<u>Incl.</u>	<u>MD</u>	<u>TVD</u>	<u>Incl.</u>
500	498	11.2	3000	2834	16.3
1000	980	16.7	3500	3320	10.4
1500	1459	16.5	4000	3814	9.7
1750	1697	18.5	4500	4305	9.7
2000	1930	24.5	5000	4799	7.8
2250	2155	27.6	5500	5296	5.1
2500	2374	28.6	6000	5794	2.3
2750	2599	22.4	6500	6294	3.2

Wellhead Information

- Tubing head flange is 7-1/16", 5M with a 2-7/8" EUE 8rd top connection.

Stimulation/Treatments

8/11/05:

6395' - 6518' w/ 6300 gal 7.5% HCl. Attempted to isolate and treat individual zones. Communicated between 6512' - 6518' MD, 6472' - 6484' MD, and 6430' - 6443' MD. BDP = 1850 – 2830 psi, ISDP = 1200 psi

10/23/06:

6395' - 6518' w/ 2100 gal 15% HCl with 30 gpt Morflo, 1 gpt lowsurf-300M, 1 gpt AS-9 anti-sludge, 6 gpt HAI-404 inhibitor, 10gpt Fe-7A & 50gpt Fe-2 iron sequestering agents. Communicated between all zones. Pulse washed all perforations using coiled tubing. FTP = 885 psi @ 1 BPM.

11/19/07:

Circulation cement squeeze with 25 sks of Class "G" cement and CICR at 6460'. 1/9/08:

6395' - 6518' w/ 1587 gal 7.5% FE, 2564 gal 5% Clay-Safe H, and 3489 gal 11.5%-1.5% Sandstone Completion Acid with diverter and three stages. FTP = 1356 psi @ 2.1 BPM.

<u>4/10/12:</u>

6326'-6518' w 75 bbls of Halliburton H2Zero polymer at 1 BPM and 1000 psi. Over displaced w/ 25 bbls of 4% KCL.

4/18/12:

6353' - 6363' w/ 500 gal 7.5% FE HCL and 50 buoyant ball sealers, MTR = 0.6 BPM MTP = 1000 psi ISIP = 984 psi

<u>Notes</u>

Surface Location: Latitude = 38° 48' 19.4600", Longitude = -111° 56' 02.2729"

(7/21/05): Cement top at 4702' on CBL-CCL-GR

(9/5/06): Available Logs: DLL/MSFL, SDL/DSN, EMI, CBL, Halliburton Directional Log

RECEIVED: Jul. 17, 2019

Sundry Number: 102985 API Well Number: 43041300370100
FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

D:	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES IVISION OF OIL, GAS, AND MINING		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-73528
SUNDRY	NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
below current bottom-h	r proposals to drill new wells, significantly de ole depth, reenter plugged wells, or to drill h PERMIT TO DRILL form for such proposals.		7.UNIT or CA AGREEMENT NAME: WOLVERINE
1. TYPE OF WELL			8. WELL NAME and NUMBER: Wolverine Fed 17-6 (WF 8-1)
2. NAME OF OPERATOR: Wolverine Gas & Oil Compa	ny of Utah, LLC		9. API NUMBER: 43041300370100
3. ADDRESS OF OPERATO One Riverfront Plaza 55 Carr	OR: npau, NW, Grand Rapids, MI, 49503-2616	PHONE NUMBER: 616-458-1150	9. FIELD and POOL or WILDCAT: COVENANT
4. LOCATION OF WELL FOOTAGES AT SURFACE 1680 FNL 2265 FWL	:		COUNTY: SEVIER
QTR/QTR, SECTION, TO	WNSHIP, RANGE, MERIDIAN: 7 Township: 23S Range: 1W Meridian: S		STATE: UTAH
11. CHECK	APPROPRIATE BOXES TO INDICATE NA	ATURE OF NOTICE,	REPORT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	•
	CHANGE TO PREVIOUS PLANS CHANGE WELL STATUS CODE DEEPEN OPERATOR CHANGE PRODUCTION START OR RESUME REPERFORATE CURRENT FORMATION SID TUBING REPAIR WATER SHUTOFF WILDCAT WELL DETERMINATION DOR COMPLETED OPERATIONS. Clearly show	all pertinent details in	NEW CONSTRUCTION PLUG BACK RECOMPLETE DIFFERENT FORMATION TEMPORARY ABANDON WATER DISPOSAL APD EXTENSION OTHER: Cluding dates, depths, volumes, etc.
status for Wolverine in this well and a CIB (at 6280'). The hole is the production the cast located on an active personnel and the sit been inactive since 2 with multiple/indeper	il Co. of Utah, LLC seeks to renew Temp Federal 17-6 (8-1) in the Covenant Field P, with 10' of overlying cement cover, so is loaded with inhibited fluid and roughly esing so that wellbore integrity can be vere well pad which is visited at least daily be is remotely monitored continuously. A 012, Wolverine is currently investigating andent consultants. If results of that stud e to the field through enhanced recover	d. There is no tubing tets above all perfs (10 psi was left on erified daily. The we by field operations although the well had CO2-flood feasibility are favorable,	Utah Division of Oil, Gas and Mining Date: July 21, 2020
NAME (PLEASE PRINT) Ron Meredith	PHONE NUMBER 616 490-8616	TITLE Consulting Engineer for W	/olv. Gas & Oil
SIGNATURE N/A		DATE 3/17/2020	

Sundry Number: 102985 API Well Number: 43041300370100



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Sundry Conditions For Well Number 43041300370100

The requirements of R649-3-36 for extended SI/TA haven't been met.

R649-3-36. Shut-in and Temporarily Abandoned Wells. 1. Wells may be initially shut-in or temporarily abandoned for a period of twelve (12) consecutive months. If a well is to be shut-in or temporarily abandoned for a period exceeding twelve (12) consecutive months, the operator shall file a Sundry Notice providing the following information:

- 1.1. Reasons for shut-in or temporarily abandonment of the well,
- 1.2. The length of time the well is expected to be shut-in or temporarily abandoned, and
- 1.3. An explanation and supporting data, for showing the well has integrity, meaning that the casing, cement, equipment condition, static fluid level, pressure, existence or absence of Underground Sources of Drinking Water and other factors do not make the well a risk to public health and safety or the environment.
 - 2. After review the Division will either approve the continued shut-in or temporarily abandoned status or require remedial action to be taken to establish and maintain the well's integrity.
 - 3. After five (5) years of nonactivity or nonproductivity, the well shall be plugged in accordance with R649-3-24, unless approval for extended shut-in time is given by the Division upon a showing of good cause by the operator.
- 4. If after a five (5) year period the well is ordered plugged by the Division, and the operator does not comply, the operator shall forfeit the drilling and reclamation bond and the well shall be properly plugged and abandoned under the direction of the Division.

RECEIVED: Jul. 21, 2020

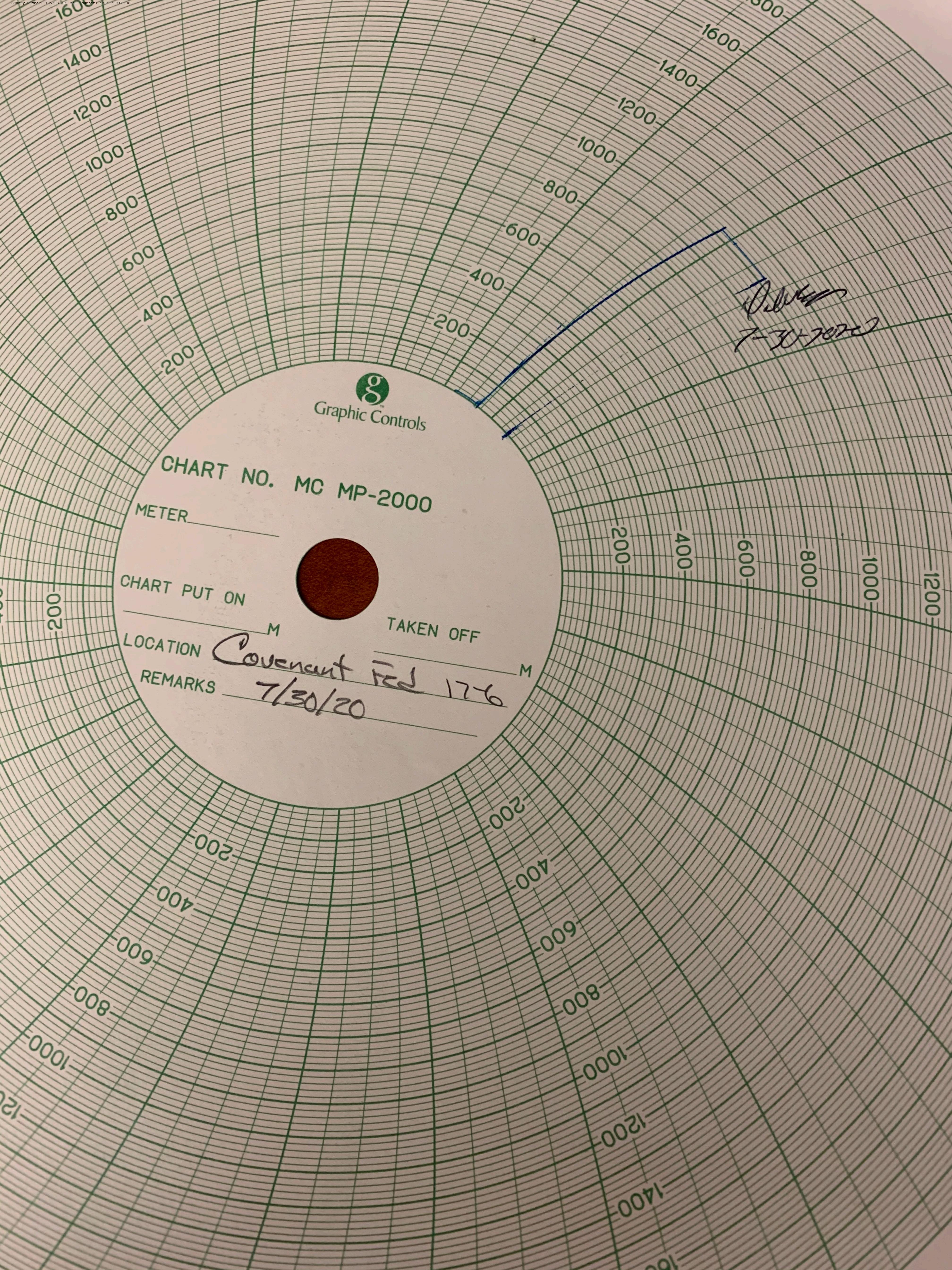
Sundry Number: 105333 API Well Number: 43041300370100
FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

	STATE OF UTAH		FORM 9
D:	DEPARTMENT OF NATURAL RESOURCES IVISION OF OIL, GAS, AND MINING	-	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-73528
SUNDRY	NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
below current bottom-h	r proposals to drill new wells, significantly decole depth, reenter plugged wells, or to drill h PERMIT TO DRILL form for such proposals.		7.UNIT or CA AGREEMENT NAME: WOLVERINE
1. TYPE OF WELL			8. WELL NAME and NUMBER: Wolverine Fed 17-6 (WF 8-1)
2. NAME OF OPERATOR: Wolverine Gas & Oil Compa	ny of Utah, LLC		9. API NUMBER: 43041300370100
3. ADDRESS OF OPERATO One Riverfront Plaza 55 Carr	OR: npau, NW, Grand Rapids, MI, 49503-2616	PHONE NUMBER: 616-458-1150	9. FIELD and POOL or WILDCAT: COVENANT
4. LOCATION OF WELL FOOTAGES AT SURFACE 1680 FNL 2265 FWL	::		COUNTY: SEVIER
QTR/QTR, SECTION, TO	WNSHIP, RANGE, MERIDIAN: 7 Township: 23S Range: 1W Meridian: S		STATE: UTAH
11. CHECK	APPROPRIATE BOXES TO INDICATE NA	ATURE OF NOTICE, R	REPORT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
NOTICE OF INTENT Approximate date work will start: 8/5/2020 SUBSEQUENT REPORT Date of Work Completion: SPUD REPORT Date of Spud: DRILLING REPORT Report Date:	□ CHANGE TO PREVIOUS PLANS □ CHANGE WELL STATUS □ CON □ DEEPEN □ FRA □ OPERATOR CHANGE □ PLU □ PRODUCTION START OR RESUME □ REPERFORATE CURRENT FORMATION □ SID □ TUBING REPAIR □ VEN	TER CASING ANGE TUBING MMINGLE PRODUCING FORMA ACTURE TREAT IG AND ABANDON CLAMATION OF WELL SITE ETRACK TO REPAIR WELL AT OR FLARE A STATUS EXTENSION HER	CASING REPAIR CHANGE WELL NAME CONVERT WELL TYPE NEW CONSTRUCTION PLUG BACK RECOMPLETE DIFFERENT FORMATION TEMPORARY ABANDON WATER DISPOSAL APD EXTENSION OTHER:
Wolverine Gas and O status for Wolverine in this well and a CIB 6280'). The hole is lo 7/30/20 (UDOGM-wit active well pad that is site is remotely moni 2012, Wolverine is cumultiple/independent	D OR COMPLETED OPERATIONS. Clearly show il Co. of Utah, LLC seeks to renew Temp Federal 17-6 (8-1) in the Covenant Field P, with 10' of overlying cement cover, staded with inhibited fluid and was successnessed paperwork is attached). The west visited at least daily by field operation tored continuously. Although the well have rently investigating CO2-flood feasibility consultants. If results of that study are a field through enhanced recovery operations.	orary Abandonment I. There is no tubing tets above all perfs (ssfully MIT'd on II is located on an s personnel and the as been inactive sinc ty with teta favorable, #17-6	Approved by the Utah Division of Oil, Gas and Mining Date: August 12, 2020
NAME (PLEASE PRINT) Ron Meredith	PHONE NUMBER 616 490-8616	TITLE Consulting Engineer for We	olv. Gas & Oil
SIGNATURE N/A		DATE 8/4/2020	

STATE OF UTAH DIVISION OF OIL GAS AND MINING

INJECTION WELL - PRESSURE TEST

Well Name: 4/01 veri ne Federal		13-041-30037
Qtr/Qtr: Section: Company Name: Walverine (-	Township:	Range:
Lease: State Fee Inspector: Dal Gray		Indian
Initial Conditions:		
Tubing - Rate: NA	Pressure:_	NA psi
Casing/Tubing Annulus - Pressu	re: psi	
Conditions During Test:		
Time (Minutes)	Annulus Pressure	Tubing Pressure
0	1000	nA
5	1020	/
10	1020	
15	1000	
20	1020	
25	1020	
30		
Results: Pass/Fail		
Conditions After Test:		
Tubing Pressure: 104	_psi	
Casing/ Fubing Annulus Pres	ssure: 230 psi	
COMMENTS:		
perator Representative		



Sundry Number: 111816 API Well Number: 43041300370100

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES VISION OF OIL, GAS, AND MINING	·	FORM 9 LEASE DESIGNATION AND SERIAL NUMBER: TU-73528
Do not use this form for below current bottom-ho	Proposals to drill new wells, significantly depth, reenter plugged wells, or to drill hermit TO DRILL form for such proposals.	epen existing wells orizontal laterals	IF INDIAN, ALLOTTEE OR TRIBE NAME: UNIT or CA AGREEMENT NAME: /OLVERINE
1. TYPE OF WELL		·	WELL NAME and NUMBER: /olverine Fed 17-6 (WF 8-1)
2. NAME OF OPERATOR: Wolverine Gas & Oil Compar	ny of Utah, LLC	·	API NUMBER: 3041300370100
3. ADDRESS OF OPERATO One Riverfront Plaza 55 Camp	DR: pau, NW, Grand Rapids, MI, 49503-2616		FIELD and POOL or WILDCAT: OVENANT
	WNSHIP, RANGE, MERIDIAN: Township: 23S Range: 1W Meridian: S	SI	DUNTY: EVIER FATE: TAH
11. CHECK	APPROPRIATE BOXES TO INDICATE NA	ATURE OF NOTICE, RE	PORT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
Wolverine Gas and Oi status for Covenant F below a CIBP (at 6280	□ CHANGE TO PREVIOUS PLANS □ CHANGE WELL STATUS □ CO □ DEEPEN □ FR □ OPERATOR CHANGE □ PL □ PRODUCTION START OR RESUME □ REPERFORATE CURRENT FORMATION □ SID □ TUBING REPAIR □ VE	all pertinent details includerary Abandonment perfs in this well are s no tubing in the	NEW CONSTRUCTION PLUG BACK RECOMPLETE DIFFERENT FORMATION TEMPORARY ABANDON WATER DISPOSAL APD EXTENSION OTHER:
by UDOGM on 8/3/21 an active well pad that is remotely monitored evaluate Covenant Fie modeling effort and the	and a copy of MIT paperwork is attach it is visited at least daily by Wolverine p I, 24/7. Wolverine has consultants unde eld CO2-flood feasibility through an extension neir recommendation is expected in the #17-6 may yet contribute to Covenant	ed. 17-6 is located on personnel and the site or contract to ensive reservoir coming months. If oil recovery through	_
NAME (PLEASE PRINT) Ron Meredith	PHONE NUMBER 616 490-8616	TITLE Consulting Engineer for Wolv	v. Gas & Oil
SIGNATURE N/A		DATE 8/12/2021	

Sundry Number: 111816 API Well Number: 43041300370100



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

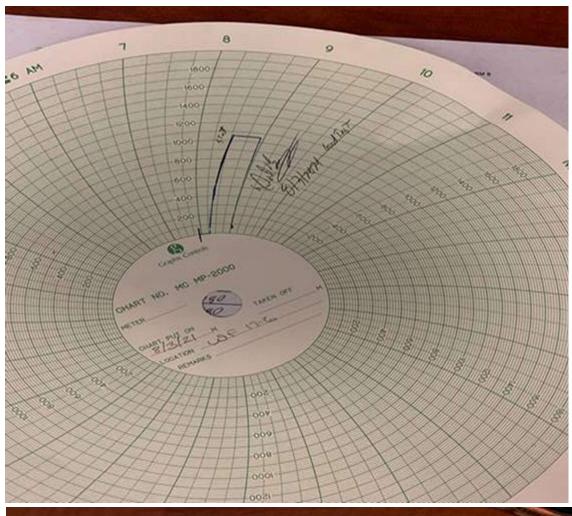
Electronic Permitting System - Sundry Notices

Sundry Conditions For Well Number 43041300370100

This is a federal well that has been shut in over 11 years. Well is approved for a 1 year extension until 8/20/22 contingent upon approval from the BLM. Operator commits to monitoring this well and if anything changes that indicates a lack of integrity, will be addressed immediately.

RECEIVED: Aug. 20, 2021

Sundry Number: 111816 API Well Number: 43041300370100



A 100 A 100	ON OF OIL GAS AND A			
Well Name: Livel-mind Fed 17:	e API Numb	ser _ 43-04%-	30037	
Qtr/Qtr: Section	Township	Rang		
Company Name: Up! UFRILLI Lease State Fee_	Vectoral	l feet	and the same of th	1
Inspector Dal Grey	Control	15-3-2021		
nitial Conditions:	Loans	0 1 000	1000	
Tubing - Rate AP	200	ure	1200	
Csg/Tbg Annulus - Pressure		Perf		
Inditions During Test				
	nnulus Pressure	Tubing Pres		
0	1090	- NA		
	1080	NA		
	1090	- ALPS		
20	1050	00		
25		-		
30	-			
Results: Pass/Fail				
tions After Test				
Tubing Pressure: AP p	-1			
Casing/Tubing Annulus Pressur	0:t) ai		
ENTS:				