		ST DEPARTMENT DIVISION C	OF NA				FOR AMENDED REPOR			
APPLIC	CATION FOR	PERMIT TO DRILI	L			1. WELL NAME and NUMBER BONANZA 1023-2H3CS				
2. TYPE OF WORK  DRILL NEW WELL (	REENTER P&	A WELL DEEPE	EN WELL	L(())		3. FIELD OR WILDO	CAT NATURAL BUTTES			
<b>4. TYPE OF WELL</b> Gas We	II Coalb	ed Methane Well: NO				5. UNIT or COMMU	NITIZATION AGRE	EMENT NAME		
6. NAME OF OPERATOR KERR-	MCGEE OIL & G	SAS ONSHORE, L.P.				7. OPERATOR PHON	<b>NE</b> 720 929-6587			
8. ADDRESS OF OPERATOR P.O.	Box 173779, D	enver, CO, 80217				9. OPERATOR E-MA mary.me	<b>IL</b> ondragon@anadarko	.com		
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)		11. MINERAL OWNE			aa	12. SURFACE OWN		aa		
ML 23608  13. NAME OF SURFACE OWNER (if box 12	= 'fee'\	FEDERAL INC	DIAN (	) STATE (	FEE (	FEDERAL INI	DIAN STATE (			
15. ADDRESS OF SURFACE OWNER (if box	12 = 'fee')					16. SURFACE OWNE	ER E-MAIL (if box 1	12 = 'fee')		
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')		18. INTEND TO COM MULTIPLE FORMAT		LE PRODUCT	ION FROM	19. SLANT				
( 20% <u>22</u>		YES (Submit C	Commin	gling Applicati	ion) NO 📵	VERTICAL DIR	RECTIONAL 📵 H	ORIZONTAL (		
20. LOCATION OF WELL	FO	OTAGES	Q1	TR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN		
LOCATION AT SURFACE	1191 FN	NL 1917 FEL	N	NWNE	2	10.0 S	23.0 E	S		
Top of Uppermost Producing Zone	2445 FI	NL 1175 FEL		SENE	2	10.0 S	23.0 E	S		
At Total Depth	2445 FN	NL 1175 FEL	9	SWNE	2	10.0 S	23.0 E	S		
21. COUNTY  UINTAH		22. DISTANCE TO N		T LEASE LIN 175	E (Feet)	23. NUMBER OF AC	RES IN DRILLING	UNIT		
		25. DISTANCE TO N (Applied For Drilling	g or Co		AME POOL	26. PROPOSED DEPTH MD: 8415 TVD: 8000				
27. ELEVATION - GROUND LEVEL 5443		28. BOND NUMBER	2201	13542		29. SOURCE OF DRI WATER RIGHTS AP		F APPLICABLE		
		A	TTACH	HMENTS						
VERIFY THE FOLLOWING	ARE ATTACH	ED IN ACCORCAN	CE WI	TH THE UT	AH OIL AND G	GAS CONSERVATIO	ON GENERAL RU	ILES		
WELL PLAT OR MAP PREPARED BY	LICENSED SUR	VEYOR OR ENGINEE	R	<b>№</b> сом	PLETE DRILLING	G PLAN				
AFFIDAVIT OF STATUS OF SURFACE	OWNER AGRE	EMENT (IF FEE SURF	ACE)	FORM	15. IF OPERATO	R IS OTHER THAN T	HE LEASE OWNER			
DIRECTIONAL SURVEY PLAN (IF DI		<b>№</b> торо	OGRAPHICAL MA	P						
NAME Kathy Schneebeck-Dulnoan	TITLI	E Staff Regulatory Anal	yst	<b>PHONE</b> 720 929-6007						
SIGNATURE	DATE	04/30/2009			EMAIL Kathy.S	chneebeckDulnoan@ar	nadarko.com			
<b>API NUMBER ASSIGNED</b> 43047503440000	APPR	ROVAL			Permi	it Manager				

API Well No: 43047503440000 Received: 4/13/2009

	Proposed Hole, Casing, and Cement										
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)							
Prod	7.875	4.5	0	8415							
Pipe	Grade	Length	Weight								
	Grade I-80 LT&C	8415	11.6			Г					
						Γ					

API Well No: 43047503440000 Received: 4/13/2009

	Proposed Hole, Casing, and Cement										
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)							
Surf	12.25	9.625	0	2200							
Pipe	Grade	Length	Weight								
	Grade J-55 LT&C	2200	36.0								

#### T10S, R23E, S.L.B.&M. T9SN89°58'14"W - 2635.61' (Meas.) S89°59'59"W - 2634.15' (Meas.) 1977 Brass Cap 1977 Brass Cap 0.3' 1977 Brass Cap Flush 0.5' High, Pile With 0.5' High Pile of High In Center of 0.5' of Stones High Pile of Stones. Stones, Steel Post 2x4 Post Set 2' WLY Lot 4 Lot 3 Lot 2 9 Lot 1 BONANZA #1023-02H3CS Elev. Ungraded Ground = <u>5443</u> 1917' 7,64,70.00N **Bottom** Hole 1175 1995 Alum, Cap 0.8' High, Pile 0.5' High, Set of Stones Stone 54, 2666. 2639. NOO°07'42"E NO0'08'49 1995 Alum. Cap 1995 Alum. Cap 0.5' High, Pile 0.3' High, Pile 1995 Alum. Cap of Stones of Stones S89°59'08"W - 2638.22' (Meas.) S89°58'45"W - 2637.21' (Meas.)

#### Kerr-McGee Oil & Gas Onshore LP

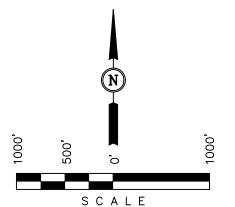
Well location, BONANZA #1023-02H3CS, located as shown in LOT 2 of Section 2, T10S, R23E, S.L.B.&M., Uintah County, Utah.

#### BASIS OF ELEVATION

BENCH MARK 58 EAM (1965) LOCATED IN THE NE 1/4 OF SECTION 30, T9S, R23E, S.L.B.&M. TAKEN FROM THE RED WASH SE, QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5132 FEET.

#### BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



#### CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED PR FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT BEST OF MY KNOWLEDGE AND BELIEF

> REGISTERED LAND SURVEYOR REGISTRATION NO. 161319 STATE OF STAHTE OF U

#### UINTAH ENGINEERING Surveying & LAND 85 SOUTH 200 EAST VERNAL, UTAH 84078

(435) 789-1017

	SCALE	DATE SURVEYED:	DATE DRAWN:			
	1" = 1000'	10-15-08	10-30-08			
_	PARTY	REFERENCES	-			
)	D.K. D.D. C.C.	G.L.O. PLAT				
_	WEATHER	FILE Kerr-McGee	e Oil & Gas			
, >\	COOL	Onshore LP				

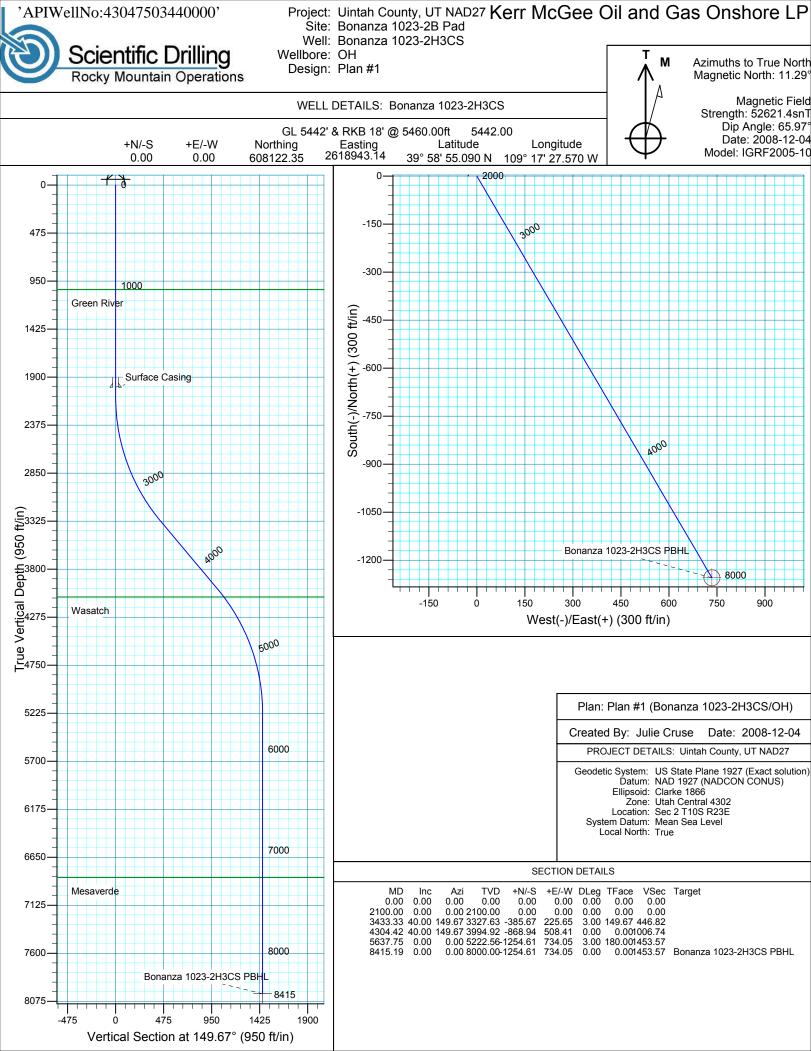
#### LEGEND:

= 90° SYMBOL

PROPOSED WELL HEAD.

= SECTION CORNERS LOCATED.

NAD 83 (TARGET BOTTOM HOLE)	NAD 83 (SURFACE LOCATION)				
NAU 63 (IARGEI BUITOM HULE)	NAU 63 (SURPACE LUCATION)	┰╸			
LATITUDE = 39'58'42.57" (39.978492)	LATITUDE = $39.58.54.97$ " (39.981936)	ľ			
LONGITUDE = $109^{\circ}17^{\circ}20.57^{\circ}$ ( $109.289047$ )	LONGITUDE = 10917'30.00" (109.291667)				
NAD 27 (TARGET BOTTOM HOLE)	NAD 27 (SURFACE LOCATION)	Īw			
LATITUDE = 39'58'42.69" (39.978525)	LATITUDE = $39.58.55.09$ " ( $39.981969$ )	1			
LONGITUDE = $109^{\circ}17'18.14''$ ( $109.288372$ )	LONGITUDE = 10917'27.57" (109.290992)	)			





# **Kerr McGee Oil and Gas Onshore LP**

Uintah County, UT NAD27 Bonanza 1023-2B Pad Bonanza 1023-2H3CS OH

Plan: Plan #1

# **Standard Planning Report**

**04 December, 2008** 



#### **Scientific Drilling**

#### Planning Report

Database: EDM 2003.16 Multi User DB

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT NAD27

Site: Bonanza 1023-2B Pad Well: Bonanza 1023-2H3CS

Wellbore: OH
Design: Plan #1

**Position Uncertainty** 

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well Bonanza 1023-2H3CS

GL 5442' & RKB 18' @ 5460.00ft GL 5442' & RKB 18' @ 5460.00ft

5,442.00 ft

Truo

Minimum Curvature

**Ground Level:** 

Project Uintah County, UT NAD27

Map System: US State Plane 1927 (Exact solution)

Geo Datum: NAD 1927 (NADCON CONUS)

Map Zone: Utah Central 4302

System Datum: Mean Sea Level

ft

Site Bonanza 1023-2B Pad, Sec 2 T10S R23E

0.00 ft

Northing: 608,081.79 ft 39° 58' 54.700 N Site Position: Latitude: 2,618,898.98 ft 109° 17' 28.150 W Lat/Long From: Easting: Longitude: Grid Convergence: 1.41 ° **Position Uncertainty:** 0.00 ft Slot Radius:

 Well Position
 +N/-S +E/-W
 0.00 ft 0.00 ft 2 sting:
 Northing: 608,122.35 ft 2,618,943.14 ft 2 longitude:
 Latitude: 39° 58' 55.090 N 2,618,943.14 ft 2 longitude:
 109° 17' 27.570 W

Wellhead Elevation:

ОН Wellbore Magnetics **Model Name** Sample Date Declination Dip Angle Field Strength (nT) (°) (°) IGRF2005-10 2008-12-04 11.29 65.97 52,621

Design Plan #1 Audit Notes: 0.00 **PLAN** Version: Phase: Tie On Depth: **Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 149.67

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,433.33	40.00	149.67	3,327.63	-385.67	225.65	3.00	3.00	0.00	149.67	
4,304.42	40.00	149.67	3,994.92	-868.94	508.41	0.00	0.00	0.00	0.00	
5,637.75	0.00	0.00	5,222.56	-1,254.61	734.05	3.00	-3.00	0.00	180.00	
8,415.19	0.00	0.00	8,000.00	-1,254.61	734.05	0.00	0.00	0.00	0.00	Bonanza 1023-2H30



#### **Scientific Drilling**

Planning Report

Database: EDM 20

EDM 2003.16 Multi User DB

Company: Kerr McGee Oil and Gas Onshore LP

Project: Uintah County, UT NAD27
Site: Bonanza 1023-2B Pad
Well: Bonanza 1023-2H3CS

Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Bonanza 1023-2H3CS GL 5442' & RKB 18' @ 5460.00ft

GL 5442' & RKB 18' @ 5460.00ft

Minimum Curvature

Measured   Depth   Inclination   Azimuth   Critical   Depth   (rt)   Crit   (rt)   Crit   (rt)   Crit   (rt)   Crit   (rt)   Crit   (rt)   Crit   C	sign:	Plan #1								
Depth   Inclination   Azimuth   Popth   NN-S   +E/AV   Section   Rate   Rate   Rate   (*100 to (*100	nned Survey									
100.00	Depth	Inclination		Depth			Section	Rate	Rate	Rate
200.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
390.00 0.00 0.00 300.00 0.00 0.00 0.00 0								0.00		0.00
400.00 0.00 0.00 400.00 0.00 0.00 0.00	200.0	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00 0.00 0.00 400.00 0.00 0.00 0.00	300.0	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
\$00.00										
600.00 0.00 0.00 0.00 0.00 0.00 0.00 0.										
700.00 0.00 0.00 0.00 700.00 0.00 0.00										
800.00 0.00 0.00 0.00 800.00 0.00 0.00										
900.00 0.00 0.00 900.00 0.00 0.00 0.00										
1,000.00	800.0	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
1,033.00   0.00   0.00   1,033.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   1,100.00   1,500.00   0.00	900.0	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,033 00	4 000 (	0.00	0.00	4 000 00	0.00	0.00	0.00	0.00	0.00	0.00
Creen River										
1,100.00	1,033.0	0.00	0.00	1,033.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00										
1,300.00 0.00 0.00 1,300.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	1,100.0	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	1,200.0	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00 0.00 0.00 1,400.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	1,300.0	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00										
1,600,00				,						
1,700.00 0.00 0.00 1,700.00 0.00 0.00 0.00 0.00 0.00 0.00 0.										
1,800.00 0.00 0.00 1,800.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	1,600.0	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00 0.00 0.00 1,900.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	1,700.0	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	1,800.0	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	4.000.0	0.00	0.00	4 000 00	0.00	0.00	0.00	0.00	0.00	0.00
Surface Casing   2,100.00				,						
2,100.00			0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00 3.00 149.67 2,199.95 -2.26 1.32 2.62 3.00 3.00 0.00 2,300.00 6.00 149.67 2,299.63 -9.03 5.28 10.46 3.00 3.00 0.00 0.00 2,400.00 9.00 149.67 2,299.63 -20.30 11.87 23.51 3.00 3.00 0.00 2,500.00 12.00 149.67 2,497.08 -36.03 21.08 41.74 3.00 3.00 0.00 2,500.00 15.00 149.67 2,594.31 -56.17 32.86 65.08 3.00 3.00 0.00 2,700.00 18.00 149.67 2,594.31 -56.17 32.86 65.08 3.00 3.00 0.00 2,800.00 21.00 149.67 2,784.43 -109.49 64.06 126.85 3.00 3.00 0.00 2,800.00 21.00 149.67 2,784.43 -109.49 64.06 126.85 3.00 3.00 0.00 3.00 0.00 3.00 0.00 2,800.00 27.00 149.67 2,967.06 -179.67 105.12 208.16 3.00 3.00 0.00 3,100.00 27.00 149.67 3,054.93 -220.85 129.22 255.87 3.00 3.00 0.00 3,200.00 33.00 149.67 3,140.18 -265.95 155.60 308.12 3.00 3.00 0.00 3,200.00 33.00 149.67 3,3140.18 -265.95 155.60 308.12 3.00 3.00 0.00 3,400.00 39.00 149.67 3,331.91 -367.37 214.94 425.62 3.00 3.00 0.00 3,433.33 40.00 149.67 3,337.63 -385.67 225.65 446.82 3.00 3.00 0.00 3,500.00 40.00 149.67 3,378.70 422.65 247.29 489.67 0.00 0.00 3,500.00 40.00 149.67 3,378.70 422.65 247.29 489.67 0.00 0.00 3,500.00 40.00 149.67 3,351.91 -533.61 312.21 618.23 0.00 0.00 0.00 3,700.00 40.00 149.67 3,685.52 -589.09 344.67 682.51 0.00 0.00 0.00 3,500.00 40.00 149.67 3,685.52 -589.09 344.67 682.51 0.00 0.00 0.00 0.00 4,000 449.67 3,685.52 -589.09 344.67 682.51 0.00 0.00 0.00 0.00 4,000 449.67 3,685.52 -589.09 344.67 682.51 0.00 0.00 0.00 0.00 4,000 449.67 3,685.52 -589.09 344.67 682.51 0.00 0.00 0.00 0.00 4,000 449.67 3,685.52 -589.09 344.67 682.51 0.00 0.00 0.00 0.00 4,000 449.67 3,685.52 -589.09 344.67 682.51 0.00 0.00 0.00 0.00 4,000 449.67 3,685.52 -589.09 344.67 682.51 0.00 0.00 0.00 0.00 4,000 449.67 3,685.52 -589.09 344.67 682.51 0.00 0.00 0.00 0.00 4,000 449.67 3,685.52 -589.09 344.67 682.51 0.00 0.00 0.00 0.00 4,000 449.67 3,944.93 -888.94 508.41 1,006.74 0.00 0.00 0.00 4,000 449.67 3,944.93 -888.94 508.41 1,006.74 0.00 0.00 0.00 4,000 44.66.70 36.93 149.67 3,994.92 -888.94 508.41 1,006.73 0.00 0.00 0.00 4,000 4,000 37.13 149.67 4,069.65 920.37 538.49 1,066	Surface (	Casing								
2,300.00 6.00 149.67 2,299.63 -9.03 5.28 10.46 3.00 3.00 0.00 2,400.00 9.00 149.67 2,398.77 -20.30 11.87 23.51 3.00 3.00 0.00 2,500.00 12.00 149.67 2,497.08 -36.03 21.08 41.74 3.00 3.00 0.00 2,500.00 15.00 149.67 2,594.31 -56.17 32.86 65.08 3.00 3.00 0.00 2,700.00 18.00 149.67 2,594.31 -56.17 32.86 65.08 3.00 3.00 0.00 2,700.00 18.00 149.67 2,690.18 -80.68 47.20 93.48 3.00 3.00 0.00 2,800.00 21.00 149.67 2,784.43 -109.49 64.06 126.85 3.00 3.00 0.00 2,800.00 21.00 149.67 2,768.43 -109.49 64.06 126.85 3.00 3.00 0.00 3,000.00 2,900.00 24.00 149.67 2,767.06 -179.67 105.12 208.16 3.00 3.00 0.00 3,100.00 30.00 149.67 2,967.06 -179.67 105.12 208.16 3.00 3.00 0.00 3,100.00 30.00 149.67 2,967.06 -179.67 105.12 208.16 3.00 3.00 0.00 3,200.00 33.00 149.67 3,054.93 -220.85 129.22 255.87 3.00 3.00 0.00 3,200.00 33.00 149.67 3,222.59 -314.83 184.20 364.75 3.00 3.00 0.00 3,300.00 36.00 149.67 3,322.59 -314.83 184.20 364.75 3.00 3.00 0.00 3,400.00 39.00 149.67 3,327.63 -385.67 225.65 446.82 3.00 3.00 0.00 3,500.00 40.00 149.67 3,327.63 -385.67 225.65 446.82 3.00 3.00 0.00 3,500.00 40.00 149.67 3,378.70 422.65 247.29 489.67 0.00 0.00 0.00 3,500.00 40.00 149.67 3,531.91 -533.61 312.21 618.23 0.00 0.00 0.00 3,500.00 40.00 149.67 3,531.91 -533.61 312.21 618.23 0.00 0.00 0.00 0.00 4.00 149.67 3,531.91 -533.61 312.21 618.23 0.00 0.00 0.00 0.00 4.00 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 0.00 4.00 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 0.00 4.00 0 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 0.00 4.00 0 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 0.00 4.00 0 149.67 3,914.93 -811.01 474.51 939.63 0.00 0.00 0.00 0.00 4.00 0 149.67 3,914.93 -811.01 474.51 939.63 0.00 0.00 0.00 0.00 4.00 0 149.67 3,914.93 -811.01 474.51 939.63 0.00 0.00 0.00 0.00 4.00 0 149.67 3,914.93 -811.01 474.51 939.63 0.00 0.00 0.00 0.00 4.00 0 149.67 3,914.93 -811.01 474.51 939.63 0.00 0.00 0.00 0.00 4.00 0 4.90 0 149.67 3,994.92 -868.94 506.94 10.06.33 3.00 3.00 3.00 0.00 4.00 0 4.00 0 149.67 3,994.92 -868.94 506.94 10	2,100.0	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00 9.00 149.67 2,398.77 -20.30 11.87 23.51 3.00 3.00 0.00 2,500.00 12.00 149.67 2,497.08 -36.03 21.08 41.74 3.00 3.00 0.00 2,600.00 15.00 149.67 2,594.31 -56.17 32.86 65.08 3.00 3.00 0.00 2,700.00 18.00 149.67 2,594.31 -56.17 32.86 65.08 3.00 3.00 0.00 2,800.00 21.00 149.67 2,594.31 -109.49 64.06 126.85 3.00 3.00 0.00 2,800.00 21.00 149.67 2,876.81 -142.52 83.38 165.12 3.00 3.00 0.00 3,000.00 2,700 149.67 2,967.06 -179.67 105.12 208.16 3.00 3.00 0.00 3,000.00 27.00 149.67 2,967.06 -179.67 105.12 208.16 3.00 3.00 0.00 3,100.00 30.00 149.67 3,054.93 -220.85 129.22 255.87 3.00 3.00 0.00 3,200.00 33.00 149.67 3,054.93 -220.85 129.22 255.87 3.00 3.00 0.00 3,200.00 36.00 149.67 3,304.93 -220.85 129.22 255.87 3.00 3.00 0.00 3,300.00 36.00 149.67 3,322.59 -314.83 184.20 364.75 3.00 3.00 0.00 3,433.33 40.00 149.67 3,327.63 -385.67 255.65 446.82 3.00 3.00 0.00 3,433.33 40.00 149.67 3,327.63 -385.67 225.65 446.82 3.00 3.00 0.00 3,500.00 40.00 149.67 3,327.63 -385.67 225.65 446.82 3.00 3.00 0.00 3,500.00 40.00 149.67 3,337.87 422.65 247.29 489.67 0.00 0.00 0.00 3,500.00 40.00 149.67 3,531.91 -533.61 312.21 618.23 0.00 0.00 0.00 3,700.00 40.00 149.67 3,531.91 -533.61 312.21 618.23 0.00 0.00 0.00 0.00 4,000 40.00 149.67 3,608.52 -589.09 344.67 682.51 0.00 0.00 0.00 0.00 4,000 40.00 149.67 3,608.52 -589.09 344.67 682.51 0.00 0.00 0.00 0.00 4,000 40.00 149.67 3,838.33 -755.53 442.05 875.35 0.00 0.00 0.00 0.00 4,000 40.00 149.67 3,838.33 -755.53 442.05 875.35 0.00 0.00 0.00 0.00 4,000 40.00 149.67 3,838.33 -755.53 442.05 875.35 0.00 0.00 0.00 0.00 4,000 40.00 149.67 3,994.92 -868.94 508.41 1,006.74 0.00 0.00 0.00 4,000 40.00 149.67 3,994.92 -868.94 508.41 1,006.74 0.00 0.00 0.00 4,000 40.00 149.67 3,994.92 -868.94 508.41 1,006.74 0.00 0.00 0.00 4,000 40.00 149.67 3,994.92 -868.94 508.41 1,006.74 0.00 0.00 0.00 4,000 4,000 37.13 149.67 4,075.00 -923.85 540.53 1,070.36 3.00 -3.00 0.00 0.00 4,000 0.00 36.93 149.67 4,075.00 -923.85 540.53 1,070.36 3.00 -3.00 0.00 0.00 4,000 0.00 4,000 37.13 149.67 4,075.00 -923.85 540.53 1,07	2,200.0	3.00	149.67	2,199.95	-2.26	1.32	2.62	3.00	3.00	0.00
2,500.00 12.00 149.67 2,497.08 -36.03 21.08 41.74 3.00 3.00 0.00 2,600.00 15.00 149.67 2,594.31 -56.17 32.86 65.08 3.00 3.00 3.00 0.00 2,700.00 18.00 149.67 2,594.31 -56.17 32.86 65.08 3.00 3.00 3.00 0.00 2,800.00 21.00 149.67 2,594.31 -50.00 149.69 64.06 126.85 3.00 3.00 0.00 2,800.00 21.00 149.67 2,784.43 -109.49 64.06 126.85 3.00 3.00 0.00 2,900.00 24.00 149.67 2,876.81 -142.52 83.38 165.12 3.00 3.00 3.00 0.00 3,000.00 27.00 149.67 2,967.06 -179.67 105.12 208.16 3.00 3.00 3.00 0.00 3,000.00 27.00 149.67 3,054.93 -220.85 129.22 255.87 3.00 3.00 0.00 3,200.00 33.00 149.67 3,140.18 -265.95 155.60 308.12 3.00 3.00 0.00 3,200.00 33.00 149.67 3,140.18 -265.95 155.60 308.12 3.00 3.00 0.00 3,300.00 36.00 149.67 3,222.59 -314.83 184.20 364.75 3.00 3.00 0.00 3,433.33 40.00 149.67 3,337.87 422.65 247.29 489.67 0.00 3.00 3.00 0.00 3,433.33 40.00 149.67 3,327.63 -385.67 225.65 446.82 3.00 3.00 3.00 0.00 3,500.00 40.00 149.67 3,327.63 -385.67 225.65 446.82 3.00 3.00 0.00 3,500.00 40.00 149.67 3,378.70 422.65 247.29 489.67 0.00 0.00 0.00 3,600.00 40.00 149.67 3,538.70 422.65 247.29 489.67 0.00 0.00 0.00 3,700.00 40.00 149.67 3,531.91 -533.61 312.21 618.23 0.00 0.00 0.00 3,900.00 40.00 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 3,900.00 40.00 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 40.00 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 40.00 149.67 3,883.33 -755.53 442.05 875.35 0.00 0.00 0.00 0.00 4.000 40.00 149.67 3,838.33 -755.53 420.5 875.35 0.00 0.00 0.00 0.00 4.000 40.00 149.67 3,981.493 -811.01 474.51 939.63 0.00 0.00 0.00 4.000 49.67 3,991.493 -811.01 474.51 939.63 0.00 0.00 0.00 4.304.42 40.00 149.67 3,991.493 -811.01 474.51 939.63 0.00 0.00 0.00 0.00 4.304.42 40.00 149.67 3,991.54 -866.49 506.97 1,003.90 0.00 0.00 0.00 4.304.42 40.00 149.67 3,991.54 -866.49 506.97 1,003.90 0.00 0.00 0.00 4.304.42 40.00 149.67 3,991.54 -866.49 506.97 1,003.90 0.00 0.00 0.00 4.304.42 40.00 149.67 3,991.54 -866.49 506.97 1,003.90 0.00 0.00 0.00 4.400.70 149.67 3,991.54 -866.49 506.97 1,003.90 0.00 0.00 0.0	2,300.0	00 6.00	149.67	2,299.63	-9.03	5.28	10.46	3.00	3.00	0.00
2,500.00 12.00 149.67 2,497.08 -36.03 21.08 41.74 3.00 3.00 0.00 2,600.00 15.00 149.67 2,594.31 -56.17 32.86 65.08 3.00 3.00 3.00 0.00 2,700.00 18.00 149.67 2,594.31 -56.17 32.86 65.08 3.00 3.00 3.00 0.00 2,800.00 21.00 149.67 2,594.33 -109.49 64.06 126.85 3.00 3.00 0.00 2,800.00 21.00 149.67 2,784.43 -109.49 64.06 126.85 3.00 3.00 0.00 2,900.00 24.00 149.67 2,876.81 -142.52 83.38 165.12 3.00 3.00 3.00 0.00 3,000.00 27.00 149.67 2,967.06 -179.67 105.12 208.16 3.00 3.00 3.00 0.00 3,000.00 27.00 149.67 3,054.93 -220.85 129.22 255.87 3.00 3.00 0.00 3,200.00 33.00 149.67 3,140.18 -265.95 155.60 308.12 3.00 3.00 0.00 3,200.00 36.00 149.67 3,222.59 -314.83 184.20 364.75 3.00 3.00 0.00 3,300.00 36.00 149.67 3,222.59 -314.83 184.20 364.75 3.00 3.00 0.00 3,433.33 40.00 149.67 3,327.63 -385.67 225.65 446.82 3.00 3.00 3.00 0.00 3,500.00 40.00 149.67 3,327.63 -385.67 225.65 446.82 3.00 3.00 3.00 0.00 3,500.00 40.00 149.67 3,327.63 -385.67 225.65 446.82 3.00 3.00 0.00 3,600.00 40.00 149.67 3,378.70 422.65 247.29 489.67 0.00 0.00 0.00 3,600.00 40.00 149.67 3,538.70 422.65 247.29 489.67 0.00 0.00 0.00 3,600.00 40.00 149.67 3,538.70 422.65 247.29 489.67 0.00 0.00 0.00 3,700.00 40.00 149.67 3,531.91 -533.61 312.21 618.23 0.00 0.00 0.00 3,900.00 40.00 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 3,900.00 40.00 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 0.00 4,000 40.00 149.67 3,883.33 -755.53 442.05 875.35 0.00 0.00 0.00 0.00 4,000 40.00 149.67 3,883.33 -755.53 42.05 875.35 0.00 0.00 0.00 0.00 4,000 40.00 149.67 3,9814.93 -811.01 474.51 939.63 0.00 0.00 0.00 4,000 40.00 149.67 3,9914.93 -811.01 474.51 939.63 0.00 0.00 0.00 0.00 4,304.42 40.00 149.67 3,991.49 -868.94 508.41 1,006.74 0.00 0.00 0.00 4,000 0.00 4,000 149.67 3,991.49 -868.94 508.41 1,006.74 0.00 0.00 0.00 4,000 0.00 4,000 149.67 3,991.49 -868.94 508.41 1,006.74 0.00 0.00 0.00 4,000 0.00 4,000 149.67 3,994.92 -868.94 508.41 1,006.74 0.00 0.00 0.00 0.00 4,000 0.00 4,000 0.00 4,006.67 4,000 0.00 149.67 3,994.92 -868.94 508.41 1,006.74 0.00 0.00 0.00 0.	0.400.6	0.00	440.07	0.000.77	00.00	44.07	00.54	0.00	0.00	0.00
2,600.00				,						
2,700.00										
2,800.00										
2,900.00	,			,						
3,000.00	2,800.0	00 21.00	149.67	2,784.43	-109.49	64.06	126.85	3.00	3.00	0.00
3,000.00	2 900 (	00 24.00	149.67	2 876 81	-142 52	83 38	165 12	3.00	3.00	0.00
3,100.00 30.00 149.67 3,054.93 -220.85 129.22 255.87 3.00 3.00 0.00 3,200.00 33.00 149.67 3,140.18 -265.95 155.60 308.12 3.00 3.00 0.00 3,300.00 36.00 149.67 3,222.59 -314.83 184.20 364.75 3.00 3.00 0.00 3,400.00 39.00 149.67 3,301.91 -367.37 214.94 425.62 3.00 3.00 3.00 0.00 3,433.33 40.00 149.67 3,327.63 -385.67 225.65 446.82 3.00 3.00 0.00 3,500.00 40.00 149.67 3,327.63 -385.67 225.65 446.82 3.00 3.00 0.00 3,500.00 40.00 149.67 3,378.70 422.65 247.29 489.67 0.00 0.00 0.00 3,600.00 40.00 149.67 3,455.31 -478.13 279.75 553.95 0.00 0.00 0.00 3,700.00 40.00 149.67 3,531.91 -533.61 312.21 618.23 0.00 0.00 0.00 3,700.00 40.00 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 3,900.00 40.00 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 4,000 40.00 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 4,000 40.00 149.67 3,761.73 -700.05 409.59 811.07 0.00 0.00 0.00 4,000 40.00 149.67 3,838.33 -755.53 442.05 875.35 0.00 0.00 0.00 0.00 4,000 40.00 149.67 3,838.33 -755.53 442.05 875.35 0.00 0.00 0.00 0.00 4,200.00 40.00 149.67 3,914.93 -811.01 474.51 939.63 0.00 0.00 0.00 0.00 4,304.42 40.00 149.67 3,994.92 -868.94 508.41 1,006.74 0.00 0.00 0.00 4,400.00 37.13 149.67 4,069.65 -920.37 538.49 1,066.33 3.00 -3.00 0.00 4,406.70 36.93 149.67 4,075.00 -923.85 540.53 1,070.36 3.00 -3.00 0.00				,						
3,200.00 33.00 149.67 3,140.18 -265.95 155.60 308.12 3.00 3.00 0.00 3,300.00 36.00 149.67 3,222.59 -314.83 184.20 364.75 3.00 3.00 0.00 3,400.00 39.00 149.67 3,301.91 -367.37 214.94 425.62 3.00 3.00 0.00 3,433.33 40.00 149.67 3,327.63 -385.67 225.65 446.82 3.00 3.00 0.00 3,500.00 40.00 149.67 3,378.70 -422.65 247.29 489.67 0.00 0.00 0.00 3,600.00 40.00 149.67 3,455.31 -478.13 279.75 553.95 0.00 0.00 0.00 0.00 3,700.00 40.00 149.67 3,531.91 -533.61 312.21 618.23 0.00 0.00 0.00 0.00 3,800.00 40.00 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 0.00 3,900.00 40.00 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 0.00 4,000.00 40.00 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 0.00 4,000 0.00 149.67 3,838.33 -755.53 442.05 875.35 0.00 0.00 0.00 0.00 4,000 40.00 149.67 3,938.33 -755.53 442.05 875.35 0.00 0.00 0.00 0.00 4,200.00 40.00 149.67 3,914.93 -811.01 474.51 939.63 0.00 0.00 0.00 0.00 4,304.42 40.00 149.67 3,994.92 -868.94 506.97 1,003.90 0.00 0.00 0.00 4,400.00 37.13 149.67 4,069.65 -920.37 538.49 1,066.33 3.00 -3.00 0.00 0.00 4,406.70 36.93 149.67 4,075.00 -923.85 540.53 1,070.36 3.00 -3.00 0.00 0.00 4,406.70 36.93 149.67 4,075.00 -923.85 540.53 1,070.36 3.00 -3.00 0.00 0.00 0.00 4,406.70 36.93 149.67 4,075.00 -923.85 540.53 1,070.36 3.00 -3.00 0.00				,						
3,300.00 36.00 149.67 3,222.59 -314.83 184.20 364.75 3.00 3.00 0.00 3,400.00 39.00 149.67 3,301.91 -367.37 214.94 425.62 3.00 3.00 0.00 3,433.33 40.00 149.67 3,327.63 -385.67 225.65 446.82 3.00 3.00 0.00 3,500.00 40.00 149.67 3,378.70 -422.65 247.29 489.67 0.00 0.00 0.00 3,600.00 40.00 149.67 3,455.31 -478.13 279.75 553.95 0.00 0.00 0.00 3,700.00 40.00 149.67 3,531.91 -533.61 312.21 618.23 0.00 0.00 0.00 3,800.00 40.00 149.67 3,608.52 -589.09 344.67 682.51 0.00 0.00 0.00 3,900.00 40.00 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 4,000.00 40.00 149.67 3,761.73 -700.05 409.59 811.07 0.00 0.00 0.00 4,100.00 40.00 149.67 3,838.33 -755.53 442.05 875.35 0.00 0.00 0.00 4,200.00 40.00 149.67 3,914.93 -811.01 474.51 939.63 0.00 0.00 0.00 4,300.00 40.00 149.67 3,994.92 -866.49 506.97 1,003.90 0.00 0.00 0.00 4,304.42 40.00 149.67 3,994.92 -868.94 506.97 1,003.90 0.00 0.00 0.00 4,400.00 37.13 149.67 4,069.65 -920.37 538.49 1,066.33 3.00 -3.00 0.00 4,400.00 37.13 149.67 4,069.65 -920.37 538.49 1,066.33 3.00 -3.00 0.00 4,406.70 36.93 149.67 4,069.65 -920.37 538.49 1,066.33 3.00 -3.00 0.00 Wwesatch										
3,400.00 39.00 149.67 3,301.91 -367.37 214.94 425.62 3.00 3.00 0.00 3,433.33 40.00 149.67 3,327.63 -385.67 225.65 446.82 3.00 3.00 0.00 3,500.00 40.00 149.67 3,378.70 -422.65 247.29 489.67 0.00 0.00 0.00 3,600.00 40.00 149.67 3,455.31 -478.13 279.75 553.95 0.00 0.00 0.00 3,700.00 40.00 149.67 3,531.91 -533.61 312.21 618.23 0.00 0.00 0.00 0.00 3,800.00 40.00 149.67 3,608.52 -589.09 344.67 682.51 0.00 0.00 0.00 0.00 3,900.00 40.00 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 4,000 149.67 3,761.73 -700.05 409.59 811.07 0.00 0.00 0.00 4,000 40.00 149.67 3,838.33 -755.53 442.05 875.35 0.00 0.00 0.00 4,200.00 40.00 149.67 3,914.93 -811.01 474.51 939.63 0.00 0.00 0.00 4,300.00 40.00 149.67 3,994.92 -868.94 508.41 1,006.74 0.00 0.00 0.00 4,400.00 37.13 149.67 4,069.65 -920.37 538.49 1,066.33 3.00 -3.00 0.00 4,406.70 36.93 149.67 4,075.00 -923.85 540.53 1,070.36 3.00 -3.00 0.00	,									
3,433.33	3,300.0	JU 36.00	149.67	3,222.59	-314.83	184.20	364./5	3.00	3.00	0.00
3,433.33	3,400.0	00 39.00	149.67	3,301.91	-367.37	214.94	425.62	3.00	3.00	0.00
3,500.00										
3,600.00 40.00 149.67 3,455.31 -478.13 279.75 553.95 0.00 0.00 0.00 0.00 3,700.00 40.00 149.67 3,531.91 -533.61 312.21 618.23 0.00 0.00 0.00 0.00 3,800.00 40.00 149.67 3,608.52 -589.09 344.67 682.51 0.00 0.00 0.00 0.00 3,900.00 40.00 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 0.00 4,000 0.00 149.67 3,761.73 -700.05 409.59 811.07 0.00 0.00 0.00 0.00 4,100.00 40.00 149.67 3,838.33 -755.53 442.05 875.35 0.00 0.00 0.00 0.00 4,200.00 40.00 149.67 3,914.93 -811.01 474.51 939.63 0.00 0.00 0.00 0.00 4,300.00 40.00 149.67 3,991.54 -866.49 506.97 1,003.90 0.00 0.00 0.00 4,304.42 40.00 149.67 3,994.92 -868.94 508.41 1,006.74 0.00 0.00 0.00 4,400.00 37.13 149.67 4,069.65 -920.37 538.49 1,066.33 3.00 -3.00 0.00 4,406.70 36.93 149.67 4,075.00 -923.85 540.53 1,070.36 3.00 -3.00 0.00 0.00 0.00 0.00 0.00 0.0										
3,700.00 40.00 149.67 3,531.91 -533.61 312.21 618.23 0.00 0.00 0.00 0.00 3,800.00 40.00 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 4,000 40.00 149.67 3,685.12 -644.57 377.13 746.79 0.00 0.00 0.00 4,000.00 40.00 149.67 3,761.73 -700.05 409.59 811.07 0.00 0.00 0.00 0.00 4,100.00 40.00 149.67 3,838.33 -755.53 442.05 875.35 0.00 0.00 0.00 0.00 4,200.00 40.00 149.67 3,914.93 -811.01 474.51 939.63 0.00 0.00 0.00 0.00 4,300.00 40.00 149.67 3,991.54 -866.49 506.97 1,003.90 0.00 0.00 0.00 4,304.42 40.00 149.67 3,994.92 -868.94 508.41 1,006.74 0.00 0.00 0.00 4,400.00 37.13 149.67 4,069.65 -920.37 538.49 1,066.33 3.00 -3.00 0.00 0.00 4,406.70 36.93 149.67 4,075.00 -923.85 540.53 1,070.36 3.00 -3.00 0.00 0.00 0.00 0.00 0.00 0.0										
3,800.00										
3,900.00										
4,000.00       40.00       149.67       3,761.73       -700.05       409.59       811.07       0.00       0.00       0.00         4,100.00       40.00       149.67       3,838.33       -755.53       442.05       875.35       0.00       0.00       0.00         4,200.00       40.00       149.67       3,914.93       -811.01       474.51       939.63       0.00       0.00       0.00         4,300.00       40.00       149.67       3,991.54       -866.49       506.97       1,003.90       0.00       0.00       0.00         4,304.42       40.00       149.67       3,994.92       -868.94       508.41       1,006.74       0.00       0.00       0.00         4,400.00       37.13       149.67       4,069.65       -920.37       538.49       1,066.33       3.00       -3.00       0.00         4,406.70       36.93       149.67       4,075.00       -923.85       540.53       1,070.36       3.00       -3.00       0.00         Wasatch	3,800.0	00 40.00	149.67		-589.09	344.67	682.51	0.00	0.00	0.00
4,100.00       40.00       149.67       3,838.33       -755.53       442.05       875.35       0.00       0.00       0.00         4,200.00       40.00       149.67       3,914.93       -811.01       474.51       939.63       0.00       0.00       0.00         4,300.00       40.00       149.67       3,991.54       -866.49       506.97       1,003.90       0.00       0.00       0.00         4,304.42       40.00       149.67       3,994.92       -868.94       508.41       1,006.74       0.00       0.00       0.00         4,400.00       37.13       149.67       4,069.65       -920.37       538.49       1,066.33       3.00       -3.00       0.00         4,406.70       36.93       149.67       4,075.00       -923.85       540.53       1,070.36       3.00       -3.00       0.00	3,900.0	00 40.00	149.67	3,685.12	-644.57	377.13	746.79	0.00	0.00	0.00
4,100.00       40.00       149.67       3,838.33       -755.53       442.05       875.35       0.00       0.00       0.00         4,200.00       40.00       149.67       3,914.93       -811.01       474.51       939.63       0.00       0.00       0.00         4,300.00       40.00       149.67       3,991.54       -866.49       506.97       1,003.90       0.00       0.00       0.00         4,304.42       40.00       149.67       3,994.92       -868.94       508.41       1,006.74       0.00       0.00       0.00         4,400.00       37.13       149.67       4,069.65       -920.37       538.49       1,066.33       3.00       -3.00       0.00         4,406.70       36.93       149.67       4,075.00       -923.85       540.53       1,070.36       3.00       -3.00       0.00	4,000.0	00 40.00	149.67	3,761.73	-700.05	409.59	811.07	0.00	0.00	0.00
4,200.00       40.00       149.67       3,914.93       -811.01       474.51       939.63       0.00       0.00       0.00         4,300.00       40.00       149.67       3,991.54       -866.49       506.97       1,003.90       0.00       0.00       0.00         4,304.42       40.00       149.67       3,994.92       -868.94       508.41       1,006.74       0.00       0.00       0.00         4,400.00       37.13       149.67       4,069.65       -920.37       538.49       1,066.33       3.00       -3.00       0.00         4,406.70       36.93       149.67       4,075.00       -923.85       540.53       1,070.36       3.00       -3.00       0.00    Wasatch										
4,300.00       40.00       149.67       3,991.54       -866.49       506.97       1,003.90       0.00       0.00       0.00         4,304.42       40.00       149.67       3,994.92       -868.94       508.41       1,006.74       0.00       0.00       0.00         4,400.00       37.13       149.67       4,069.65       -920.37       538.49       1,066.33       3.00       -3.00       0.00         4,406.70       36.93       149.67       4,075.00       -923.85       540.53       1,070.36       3.00       -3.00       0.00    Wasatch										
4,304.42       40.00       149.67       3,994.92       -868.94       508.41       1,006.74       0.00       0.00       0.00         4,400.00       37.13       149.67       4,069.65       -920.37       538.49       1,066.33       3.00       -3.00       0.00         4,406.70       36.93       149.67       4,075.00       -923.85       540.53       1,070.36       3.00       -3.00       0.00         Wasatch				,						
4,400.00 37.13 149.67 4,069.65 -920.37 538.49 1,066.33 3.00 -3.00 0.00 4,406.70 36.93 149.67 4,075.00 -923.85 540.53 1,070.36 3.00 -3.00 0.00 Wasatch	,									
4,406.70 36.93 149.67 4,075.00 -923.85 540.53 1,070.36 3.00 -3.00 0.00 <b>Wasatch</b>	4,304.4	40.00	149.67	-,	-868.94	508.41	1,006.74	0.00	0.00	0.00
Wasatch			149.67	4,069.65	-920.37	538.49	1,066.33	3.00	-3.00	0.00
	4,406.7	70 36.93	149.67	4,075.00	-923.85	540.53	1,070.36	3.00	-3.00	0.00
4 MILLIO 1 34 13 149 67 4 THOUS 470 65 567 UT 1 1976 58 3 OF 3 O	4,500.0		149.67	4,150.92	-970.65	567.91	1,124.58	3.00	-3.00	0.00

# Scientific Drilling Rocky Mountain Operations

#### **Scientific Drilling**

Planning Report

Database: EDM Kerr !

EDM 2003.16 Multi User DB

Kerr McGee Oil and Gas Onshore LP

Project: Uintah County, UT NAD27
Site: Bonanza 1023-2B Pad

Well: Bonanza 1023-2H3CS
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well Bonanza 1023-2H3CS GL 5442' & RKB 18' @ 5460.00ft GL 5442' & RKB 18' @ 5460.00ft

True

Minimum Curvature

ed 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)
4,600.00	31.13	149.67	4,235.12	-1,017.19	595.14	1,178.50	3.00	-3.00	0.00
4,700.00	28.13	149.67	4,322.03	-1,059.86	620.11	1,227.93	3.00	-3.00	0.00
4,800.00	25.13	149.67	4,411.41	-1,098.54	642.74	1,272.76	3.00	-3.00	0.00
4,900.00	22.13	149.67	4,503.02	-1,133.14	662.98	1,312.84	3.00	-3.00	0.00
5,000.00	19.13	149.67	4,596.59	-1,163.55	680.78	1,348.07	3.00	-3.00	0.00
5,100.00	16.13	149.67	4,691.88	-1,189.69	696.07	1,378.36	3.00	-3.00	0.00
5,200.00	13.13	149.67	4,788.63	-1,211.49	708.83	1,403.62	3.00	-3.00	0.00
5,300.00	10.13	149.67	4,886.56	-1,228.90	719.01	1,423.78	3.00	-3.00	0.00
	7.13	149.67			719.01				
5,400.00			4,985.42	-1,241.85		1,438.79	3.00	-3.00	0.00
5,500.00	4.13	149.67	5,084.93	-1,250.32	731.54	1,448.60	3.00	-3.00	0.00
5,600.00	1.13	149.67	5,184.81	-1,254.28	733.86	1,453.19	3.00	-3.00	0.00
5,637.75	0.00	0.00	5,222.56	-1,254.61	734.05	1,453.57	3.00	-3.00	0.00
5,700.00	0.00	0.00	5,284.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
5,800.00	0.00	0.00	5,384.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
5,900.00	0.00	0.00	5,484.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
6,000.00	0.00	0.00	5,584.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
6,100.00	0.00	0.00	5,684.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
6,200.00	0.00	0.00	5,784.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
6,300.00	0.00	0.00	5,884.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
6,400.00	0.00	0.00	5,984.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
6,500.00	0.00	0.00	6,084.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
6,600.00	0.00	0.00	6,184.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
6,700.00	0.00	0.00	6,284.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
6,800.00	0.00	0.00	6,384.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
6,900.00	0.00	0.00	6,484.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
7,000.00	0.00	0.00	6,584.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
7,100.00	0.00	0.00	6,684.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
7,200.00	0.00	0.00	6,784.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
7,265.19	0.00	0.00	6,850.00	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
Mesaverde									
7,300.00	0.00	0.00	6,884.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
7,400.00	0.00	0.00	6,984.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
7,500.00	0.00	0.00	7,084.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
7,600.00	0.00	0.00	7,184.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
7,700.00	0.00	0.00	7,184.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
7,800.00	0.00	0.00	7,384.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
7,900.00	0.00	0.00	7,484.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
8,000.00	0.00	0.00	7,584.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
8,100.00	0.00	0.00	7,684.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
8,200.00	0.00	0.00	7,784.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
8,300.00	0.00	0.00	7,884.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
8,400.00	0.00	0.00	7,984.81	-1,254.61	734.05	1,453.57	0.00	0.00	0.00
8,415.19	0.00	0.00	8,000.00	-1,254.61	734.05	1,453.57	0.00	0.00	0.00



#### **Scientific Drilling**

#### Planning Report

Database: EDM 2003.16 Multi User DB

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT NAD27

Site: Bonanza 1023-2B Pad Well: Bonanza 1023-2H3CS

Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Well Bonanza 1023-2H3CS

GL 5442' & RKB 18' @ 5460.00ft GL 5442' & RKB 18' @ 5460.00ft

True

Minimum Curvature

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Bonanza 1023-2H3CS F - plan hits target cent - Circle (radius 25.00		0.00	8,000.00	-1,254.61	734.05	606,886.26	2,619,707.95	39° 58' 42.690 N	109° 17' 18.140 W

Casing Points							
	Measured	Vertical			Casing	Hole	
	Depth	Depth			Diameter	Diameter	
	(ft)	(ft)		Name	(in)	(in)	
	2,000.00	2,000.00	Surface Casing		9.625	13.500	

Formations						
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	1,033.00	1,033.00	Green River		0.00	
	4,406.70	4,075.00	Wasatch		0.00	
	7,265.19	6,850.00	Mesaverde		0.00	

#### Bonanza 1023-2H3CS

Pad: Bonanza 1023-2B Surface: 1,191' FNL, 1,917' FEL (NW/4NE/4) Lot 2 BHL: 2,445' FNL 1,175' FEL (SE/4NE/4) Sec. 2 T10S R23E

> Uintah, Utah Mineral Lease: ML 47062

#### ONSHORE ORDER NO. 1

#### DRILLING PROGRAM

#### 1. – 2. <u>Estimated Tops of Important Geologic Markers</u>: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	Resource
Uinta Green River	0 – Surface 1,033'	
Birds Nest	1,454'	Water
Mahogany	1,962'	Water
Wasatch	4,075'	Gas
Mesaverde	5,863'	Gas
MVU2	6,850'	Gas
MVL1	7,388'	Gas
TVD	8,000'	
TD	8,415'	

#### 3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program.

#### 4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program.

#### 5. <u>Drilling Fluids Program</u>:

Please refer to the attached Drilling Program.

#### **6.** Evaluation Program:

Please refer to the attached Drilling Program.

#### 7. <u>Abnormal Conditions</u>:

Maximum anticipated bottomhole pressure calculated at 8,415' MD, approximately equals 4,806 psi (calculated at 0.57 psi/foot).

Maximum anticipated surface pressure equals approximately 2,809 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

#### **8.** Anticipated Starting Dates:

*Drilling is planned to commence immediately upon approval of this application.* 

#### 9. Variances:

Please refer to the attached Drilling Program.

*Onshore Order #2 – Air Drilling Variance* 

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

#### **Background**

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

#### Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

#### Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

#### Bonanza 1023-2H3CS

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

#### **Conclusion**

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

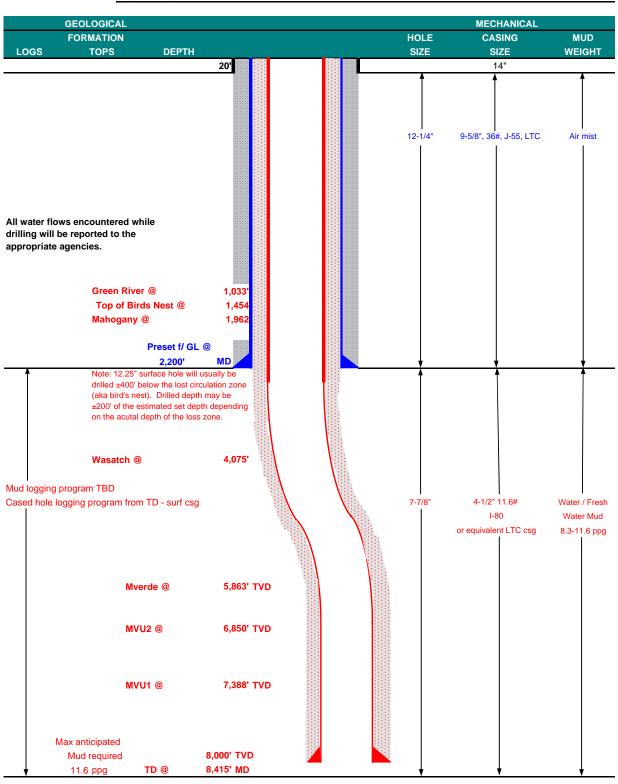
#### 10. Other Information:

Please refer to the attached Drilling Program.



# KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME KERR-McGEE OIL & GAS ONSHORE LP				DATE	April 12, 2009			
WELL NAME Bonanza 1023-2H3CS				TD	8,000'	TVD	8,415' MD	
FIELD Natural Buttes	3	COUNTY	Uintah	STATE U	tah	ELEVATION	5,444' GL	KB 5,459'
SURFACE LOCATION	NW/4 NE/4	1,191' FNL	1,917' FEL	Sec 2	T 10S	R 23E	Lot 2	
	Latitude:	39.981969	Longitud	le: -109.2	90992		NAD 27	
BTM HOLE LOCATION	SW/4 NE/4	2,445' FNL	1,175' FEL	Sec 2	T 10S	R 23E		
	Latitude:	39.978525	Longitud	le: -109.2	88372		NAD 27	
OBJECTIVE ZONE(S)	Wasatch/Me	saverde					_	
ADDITIONAL INFO Regulatory Agencies: SITLA (Minerals), UDOGM (Surface), Tri-County Health Dept.								





#### **KERR-McGEE OIL & GAS ONSHORE LP**

#### **DRILLING PROGRAM**

#### **CASING PROGRAM**

								DESIGN FACTORS			
	SIZE	INTE	RVAL	WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION		
CONDUCTOR	14"	0-4	40'								
							3520	2020	453000		
SURFACE	9-5/8"	0	to 2200	36.00	J-55	LTC	1.09	1.96	7.28		
							7,780	6,350	201,000		
PRODUCTION	4-1/2"	0	to 8415	11.60	I-80	LTC	2.41	1.25	2.36		

- 1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))
- 2) MASP (Prod Casing) = Pore Pressure at TD (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 11.6 ppg) 0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

MASP 2,975 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 11.6 ppg) 0.59 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

MABHP 4,981 psi

#### **CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD			
SURFACE LEAD 500		Premium cmt + 2% CaCl	215	60%	15.60	1.18			
Option 1		+ .25 pps flocele							
TOP OUT CMT (1)	200	20 gals sodium silicate + Premium cmt	50		15.60	1.18			
		+ 2% CaCl + .25 pps flocele							
TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18			
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized							
Option 2 LEAD	1500	65/35 Poz + 6% Gel + 10 pps gilsonite	360	35%	12.60	1.81			
		+.25 pps Flocele + 3% salt BWOW							
TAIL	500	Premium cmt + 2% CaCl	180	35%	15.60	1.18			
		+ .25 pps flocele							
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18			
PRODUCTION LEAD	3,575'	Premium Lite II + 3% KCI + 0.25 pps	340	40%	11.00	3.38			
		celloflake + 5 pps gilsonite + 10% gel							
		+ 0.5% extender							
TAIL	4,840'	50/50 Poz/G + 10% salt + 2% gel	1190	40%	14.30	1.31			
		+.1% R-3							

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

#### FLOAT EQUIPMENT & CENTRALIZERS

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

PRODUCTION

Float shoe, 1 jt, float collar. No centralizers will be used.

#### ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

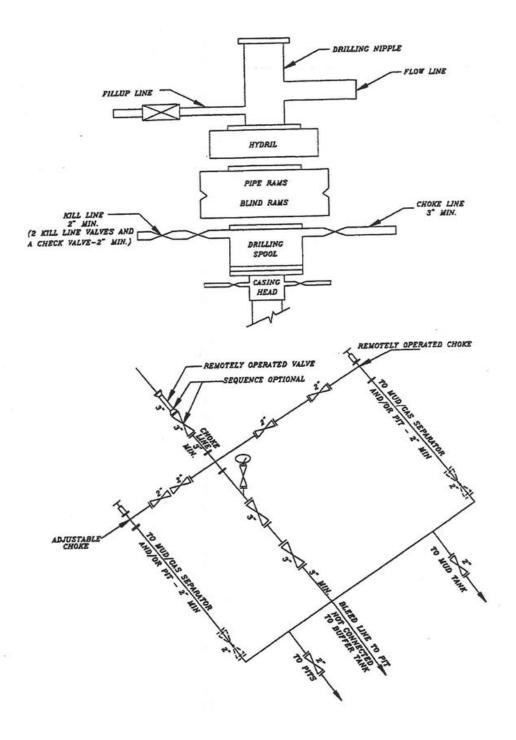
BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be t	taken at	1.000'	minimum	intervals.
Our voyo will bo	tarcii at	1,000		ii itoi vaio.

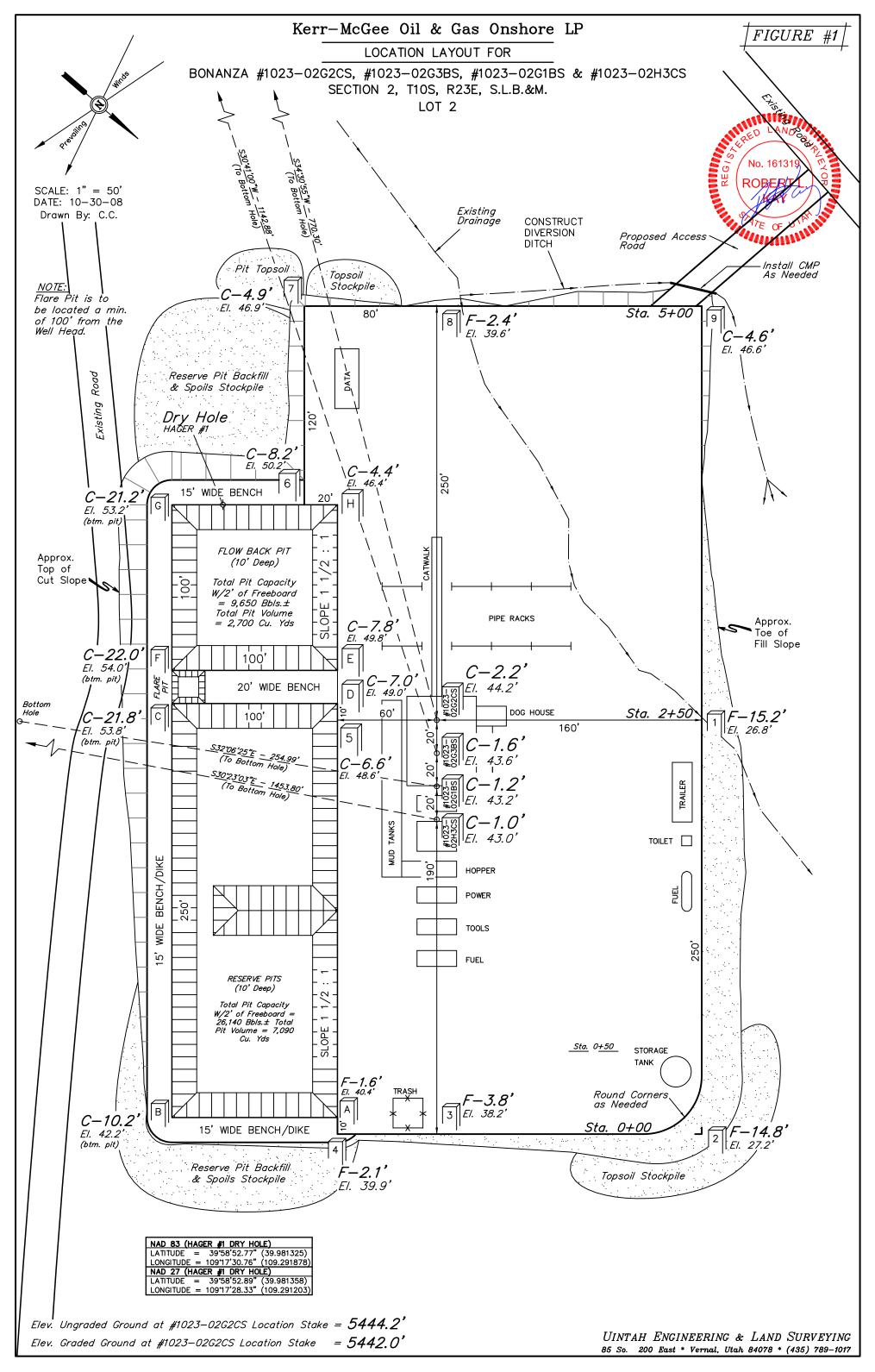
	ourrojo mii bo tanon at 1,000	This is the state of the state	
	Most rigs have PVT System for	mud monitoring. If no PVT is available, visual monitoring will be utilized.	
DRILLING	ENGINEER:		DATE:
		John Huycke / Grant Schluender	•
DRILLING	SUPERINTENDENT:		DATE:
		John Merkel / Lovel Young	

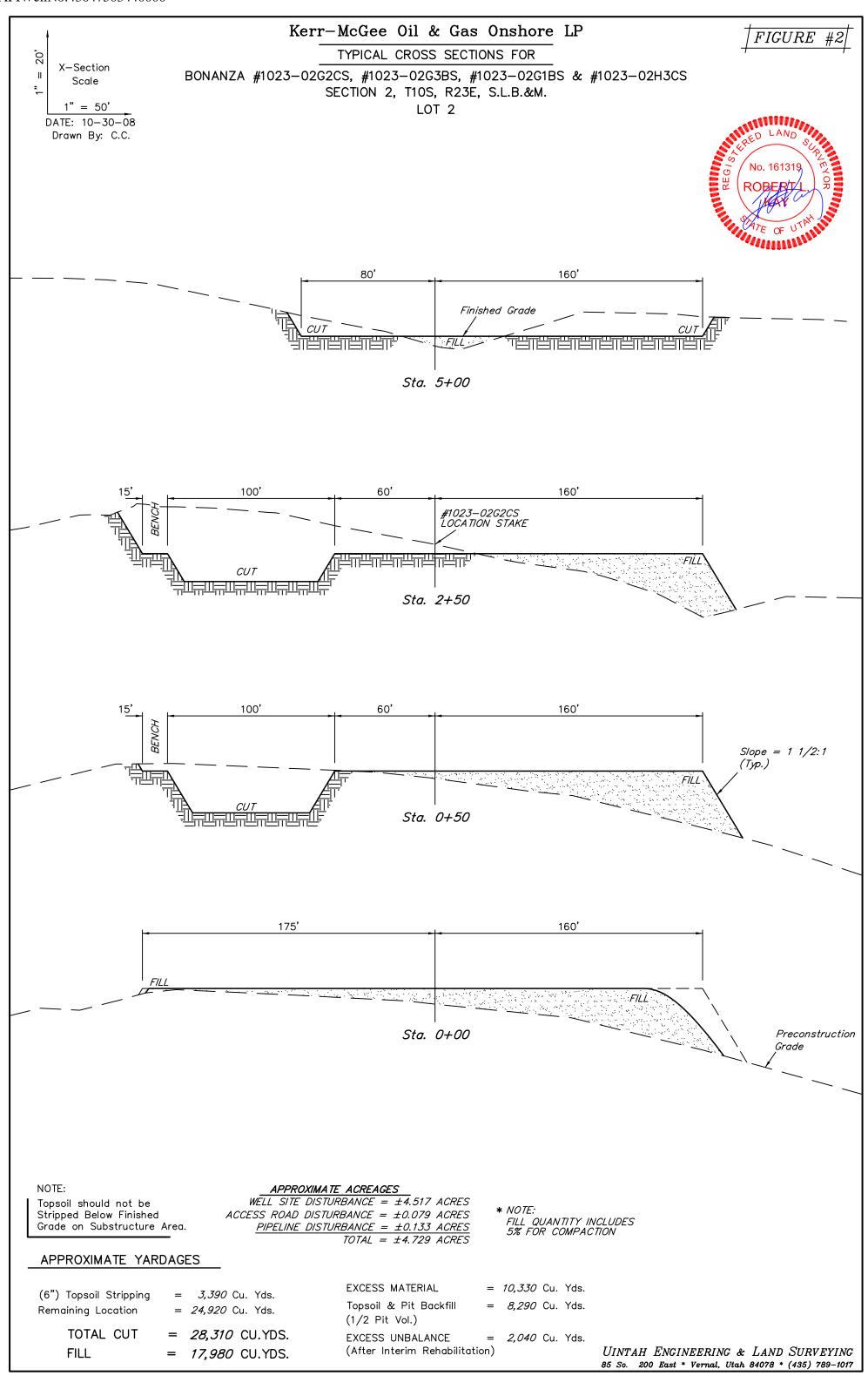
<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

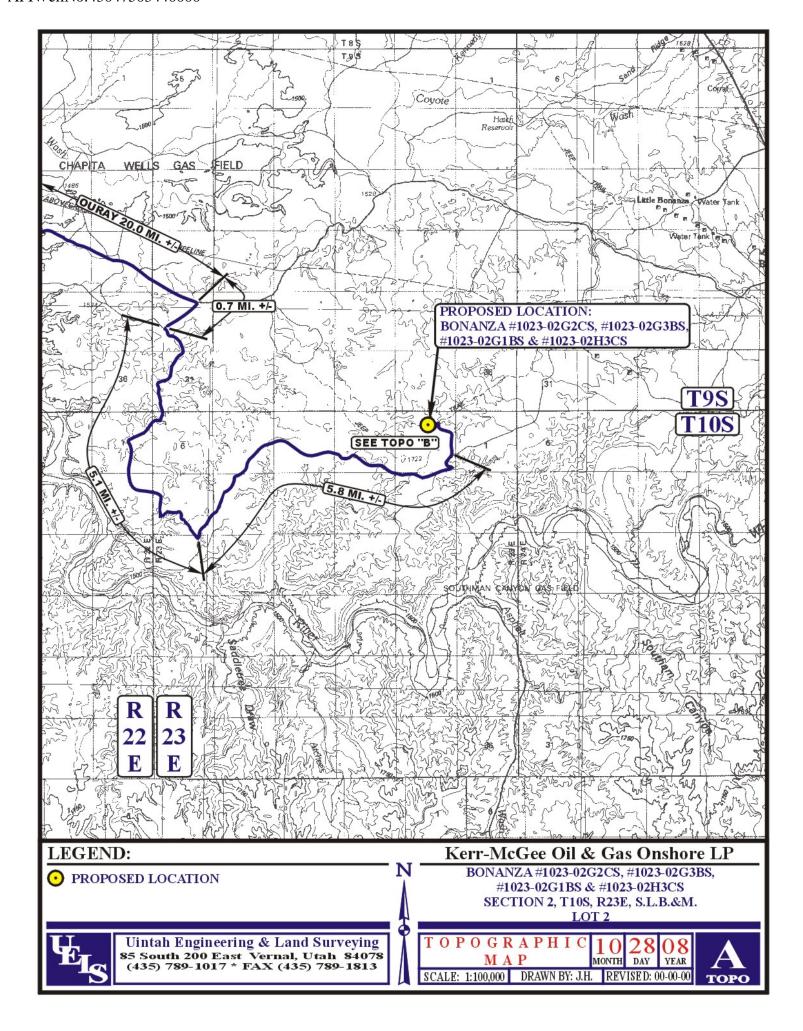
EXHIBIT A Bonanza 1023-2H3CS

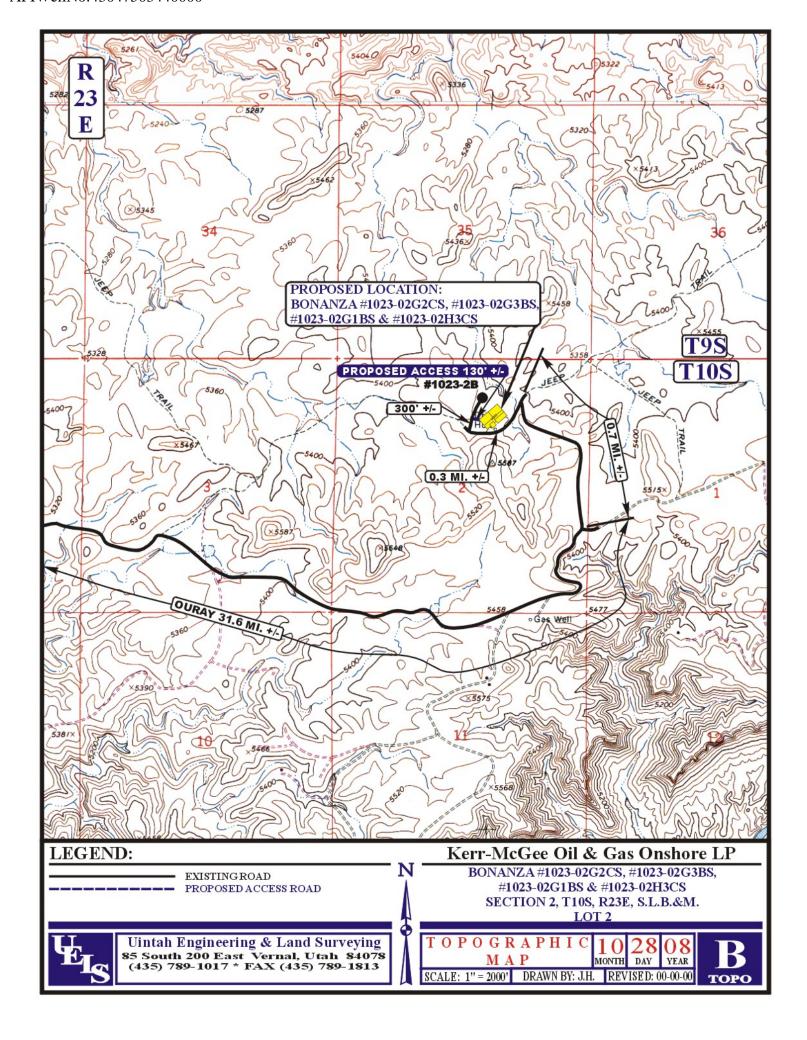


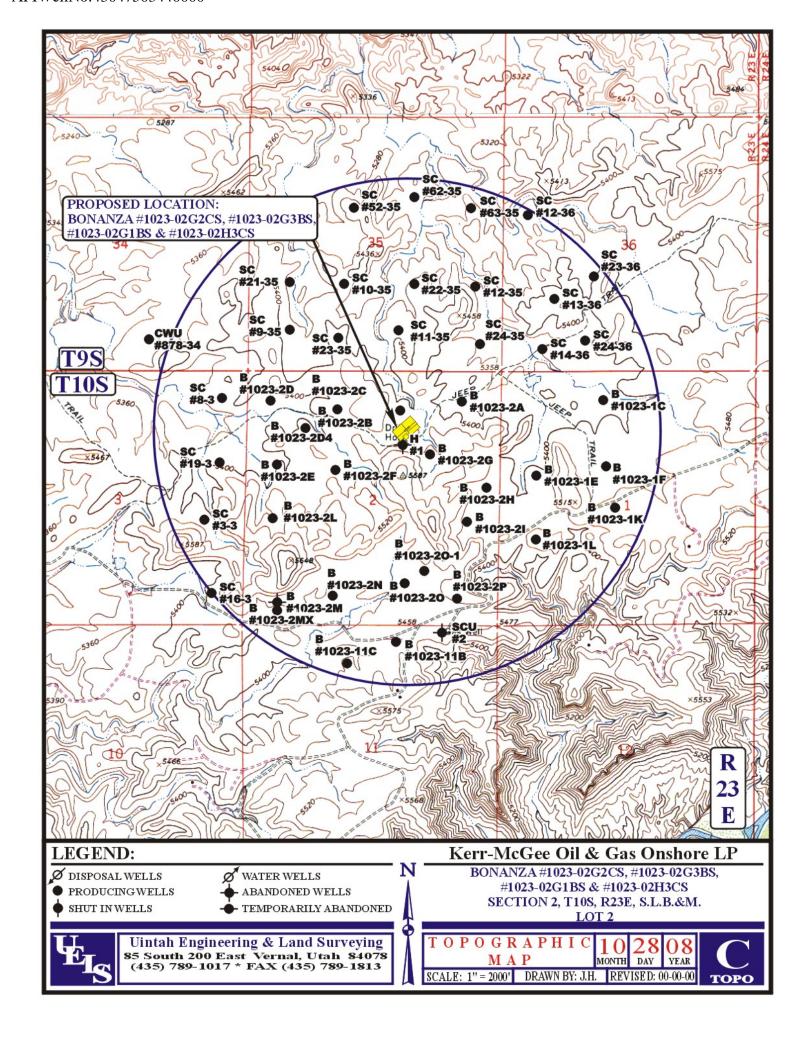
SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

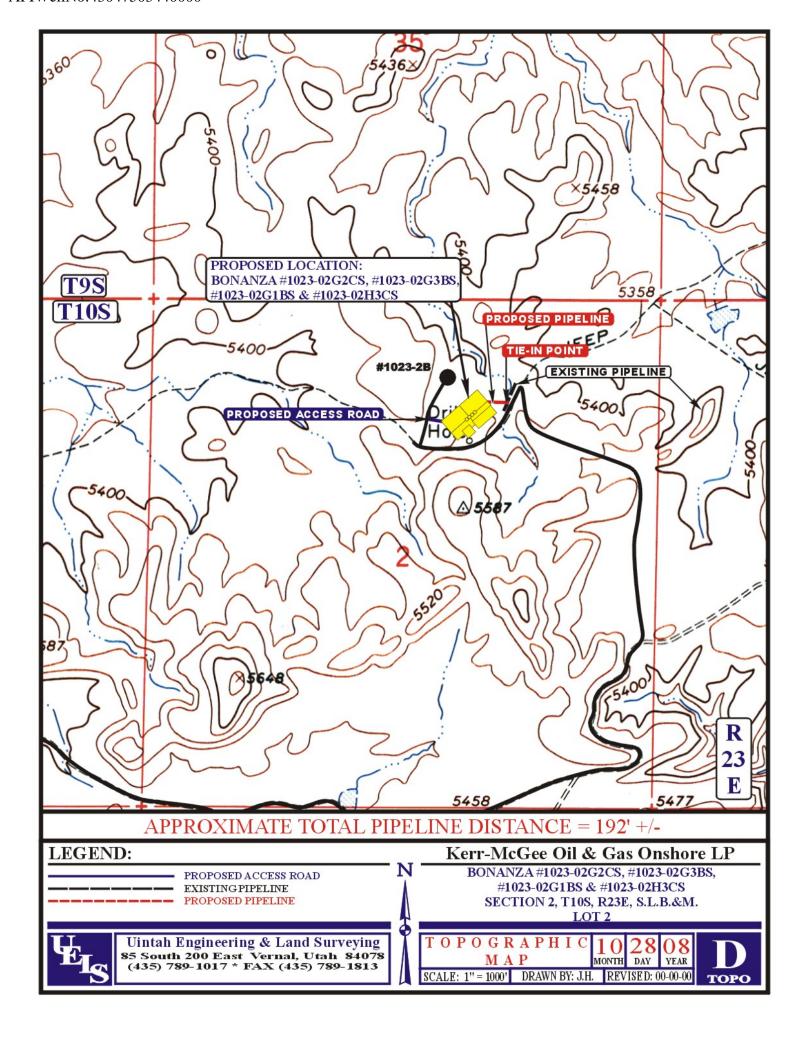












## Kerr-McGee Oil & Gas Onshore LP BONANZA #1023-02G2CS, #1023-02G3BS, #1023-02G1BS & #1023-02H3CS SECTION 2, T10S, R23E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 14.0 MILES TO THE JUNCTION OF STATE HIGHWAY 88; EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.0 MILES TO OURAY, UTAH; PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 0.3 MILES ON THE SEEP RIDGE ROAD TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 12.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH: TURN RIGHT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 1.7 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 1.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN RIGHT AND PROCEED IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 0.5 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 3.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHWEST; TURN RIGHT AND PROCEED IN A SOUTHWESTERLY DIRECTION APPROXIMATELY 0.7 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN LEFT AND PROCEED IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 5.1 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN LEFT AND PROCEED IN A NORTHEASTERLY, THEN EASTERLY DIRECTION APPROXIMATELY 5.8 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTH: TURN LEFT AND PROCEED IN A NORTHERLY. THEN NORTHWESTERLY DIRECTION APPROXIMATELY 0.7 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHWEST; TURN LEFT AND PROCEED IN A SOUTHWESTERLY, THEN WESTERLY DIRECTION APPROXIMATELY 0.3 MILES TO THE JUNCTION OF AN EXISTING ROAD TO THE NORTH; TURN RIGHT AND PROCEED IN A NORTHERLY DIRECTION APPROXIMATELY 300' TO THE BEGINNING OF THE PROPOSED ACCESS TO THE EAST; FOLLOW ROAD FLAGS IN AN EASTERLY DIRECTION APPROXIMATELY 130' MILES TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 63.7 MILES.

Kerr-McGee Oil & Gas Onshore LP BONANZA #1023-02G2CS, #1023-02G3BS, #1023-02G1BS & #1023-02H3CS LOCATED IN UINTAH COUNTY, UTAH

SECTION 2, T10S, R23E, S.L.B.&M.



PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERAANGLE: EASTERLY





Kerr-McGee Oil & Gas Onshore LP BONANZA #1023-02G2CS, #1023-02G3BS, #1023-02G1BS & #1023-02H3CS LOCATED IN UINTAH COUNTY, UTAH SECTION 5, T10S, R23E, S.L.B.&M.

### PIPELINE ALIGNMENT



PHOTO: VIEW FROM TIE-IN POINT

CAMERA ANGLE: WESTERLY





#### Bonanza 1023-2H3CS

Pad: Bonanza 1023-2B Surface: 1,191' FNL, 1,917' FEL (NW/4NE/4) Lot 2 BHL: 2,445' FNL 1,175' FEL (SE/4NE/4) Sec. 2 T10S R23E

> Uintah, Utah Mineral Lease: ML 47062

#### ONSHORE ORDER NO. 1

#### **MULTI-POINT SURFACE USE & OPERATIONS PLAN**

#### **Directional Drilling:**

In accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, this well will be directionally drilled in order to access portions of our lease which are otherwise inaccessible due to topography.

#### 1. Existing Roads:

Refer to Topo Map A for directions to the location.

Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

Refer to Topo Maps A and B for location of access roads within a 2 mile radius.

All existing roads will be maintained and kept in good repair during all drilling and completion operations associated with this well.

#### 2. Planned Access Roads:

Approximately  $\pm 0.02$  mi. ( $\pm 130$ ') of new access road is proposed. Please refer to the attached Topo Map B.

The upgraded and new portions of the access road will be crowned and ditched with a running surface of 18 feet and a maximum disturbed width of 30 feet. Appropriate water control will be installed to control erosion.

Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site.

The access road was centerline flagged during time of staking.

Surfacing material may be necessary, depending upon weather conditions.

Surface disturbance and vehicular traffic will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.

#### 3. Location of Existing Wells Within a 1-Mile Radius:

Please refer to Topo Map C.

#### 4. Location of Existing & Proposed Facilities:

The following guidelines will apply if the well is productive.

All production facilities will be located on the disturbed portion of the well pad and at a minimum of 25 feet from the toe of the back slope or the top of the fill slope.

A dike will be constructed completely around those production facilities which contain fluids (i.e., production tanks, produced water tanks, and/or heater/treater). These dikes will be constructed of compacted subsoil, be impervious, hold 100% of the capacity of the largest tank, and be independent of the back cut.

All permanent (on-site six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earthtone color to match one of the standard environmental colors, as determined by the five state Rocky Mountain Inter-Agency Committee.

All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The required color is Shadow Gray, a non-reflective earthtone.

Any necessary pits will be properly fenced to protect livestock and prevent wildlife entry.

Approximately ±192' of 4" pipeline is proposed. Refer to Topo D for the proposed pipeline.

#### 5. <u>Location and Type of Water Supply:</u>

Water for drilling purposes will be obtained from Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim #43-8496, Application #53617.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

#### **6.** Source of Construction Materials:

Surface and subsoil materials in the immediate area will be utilized.

Any gravel will be obtained from a commercial source.

#### 7. <u>Methods of Handling Waste Materials</u>:

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids, including salts and chemicals, will be contained in the reserve pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be removed and disposed of at an approved waste disposal facility within 120 days after drilling is terminated.

The reserve pit will be constructed on the location and will not be located within natural drainage, where a flood hazard exists or surface runoff will destroy or damage the pit walls. The reserve pit will be constructed so that it will not leak, break, or allow discharge of liquids.

A plastic reinforced liner and felt will be used; it will be a minimum of 20 mil thick, with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the liner will be disposed of in the pit. Any spills of oil, gas, salt water, or other noxious fluids will be immediately cleaned up and removed to an approved disposal site.

A chemical porta-toilet will be furnished with the drilling rig.

Garbage, trash, and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. No trash will be burned on location.

All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig.

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling of this well.

Any produced water from the proposed well will be contained in a water tank and will then be hauled By truck to one of the pre-approved disposal sites: RNI in Sec. 5 T9S R22E, NBU #159 in Sec. 35 T9S R21E, Ace Oilfield in Sec. 2 T6S R20E, MC&MC in Sec. 12 T6S R19E, Pipeline Facility in Sec. 36 T9S R20E, Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E, Bonanza Evaporation Pond in Sec. 2 T10S R23E.

#### 8. <u>Ancillary</u> Facilities:

None are anticipated.

#### **9.** Well Site Layout: (See Location Layout Diagram)

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills, and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

The reserve pit will be lined, and when the reserve pit is closed, the pit liner will be buried below plow depth.

All pits will be fenced according to the following minimum standards:

39 inch net wire will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.

The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.

Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

The reserve pit fencing will be on three sides during drilling operations, and on the fourth side when the rig moves off location. Pits will be fenced and maintained until cleanup.

Location size may change prior to the drilling of the well due to current rig availability. If the proposed location is not large enough to accommodate the drilling rig the location will be resurveyed and a Form 9 shall be submitted.

#### 10. Plans for Reclamation of the Surface:

Producing Location:

Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, materials, trash, and debris not required for production.

Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1.

A plastic, nylon reinforced liner will be used, it shall be torn and perforated before backfilling of the reserve pit.

Before any dirt work associated with location restoration takes place, the reserve pit shall be as dry as possible. All debris in it will be removed. Other waste and spoil materials will be disposed of immediately upon completion of operations.

The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours. The reserve pit will be reclaimed within 90 days from the date of well completion, weather permitting.

To prevent surface water(s) from standing (ponding) on the reclaimed reserve pit area, final reclamation of the reserve pit will consist of "mounding" the surface three feet above surrounding ground surface to allow the reclaimed pit area to drain effectively.

Upon completion of backfilling, leveling, and recontouring, the stockpiled topsoil will be spread evenly over the reclaimed area(s).

#### Dry Hole/Abandoned Location:

Abandoned well sites, roads, and other disturbed areas will be restored as near as practical to their original condition. Where applicable, these conditions include the re-establishment of irrigation systems, the re-establishment of appropriate soil conditions, and re-establishment of vegetation as specified.

All disturbed surfaces will be recontoured to the approximate natural contours, with reclamation of the well pad and access road to be performed as soon as practical after final abandonment. Reseeding operations will be performed after completion of other reclamation operations.

#### 11. <u>Surface/Mineral Ownership:</u>

SITLA 675 East 500 South, Suite 500 Salt Lake City, UT 84102

#### 12. <u>Other Information</u>:

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, the approved Plan of Operations, and any applicable Notice of Lessees. The Operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

The Operator will control noxious weeds along Rights-Of-Way for roads, pipelines, well sites, or other applicable facilities.

A Class III archaeological survey report and paleontological survey report is attached.

#### 13. Lessee's or Operators' Representative & Certification:

Kathy Schneebeck Dulnoan Regulatory Analyst Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6007 Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720-929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by State Surety Bond 22013542.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Kathy Schneebeck Dulnoan April 2, 2009

Date





Keri-McGee Oil & Ges Onshore LP P.O. Box 173778 Denver CO 80217-3779

March 25, 2009

Ms. Diana Mason Division of Oil, Gas and Mining P.O. Box 145801 Salt Lake City, UT 84114-6100

Re: Exception Location R649-3-3 and Directional Drilling R649-3-11
Bonanza 1023-02H3CS
T10S- R23E
Section 2: NWNE/SENE
1191' FNL, 1917' FEL (surface)
2445' FNL, 1175' FEL (bottom hole)
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-3 and Rule R649-3-11 pertaining to the Exception to Location and Sitting of Wells.

- Kerr-McGee's Bonanza 1023-02H3CS is located within the area covered by Docket No. 2008-011
  authorizing the equivalent of an approximate 10-acre well density pattern, and requiring approval for wells
  drilled at an exception location and wells drilled directionally in accordance with the referenced rules.
- Kerr-McGee is permitting this well at this location and as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing roads and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire
  directional well bore.

Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to Rule R6493-3 and Rule R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Jessy Pink Landman

## Paleontological Reconnaissance Survey Report

Survey of Kerr McGee's Proposed Multi-Well Pads, Access Roads, Pipelines, and Pipeline Upgrades for "Bonanza #1023-02G2CS, 02G3BS, 02G1BS, & 02H3CS & #1023-6M1B, 6N1AS, 6N1CS, & 6N4BS" (Sec. 2 & 6, T 10 S, R 23 E)

Asphalt Wash Topographic Quadrangles Uintah County, Utah

February 20, 2009

Prepared by Stephen D. Sandau Paleontologist for Intermountain Paleo-Consulting P. O. Box 1125 Vernal, Utah 84078

#### **INTRODUCTION**

At the request of Raleen White of Kerr McGee Onshore LP and authorized by the BLM Vernal Field Office and James Kirkland of the Office of the State Paleontologist, a paleontological reconnaissance survey of Kerr McGee's proposed multi-well pads, access roads, pipelines, and pipeline upgrades for "Bonanza #1023-02G2CS, 02G3BS, 02G1BS, & 02H3CS & #1023-6M1B, 6N1AS, 6N1CS, & 6N4BS" (Sec. 2 & 6, T 10 S, R 23 E) was conducted by Stephen Sandau and Thomas Temme on November 5, 2008. The reconnaissance survey was conducted under the Utah BLM Paleontological Resources Use Permit #UT08-006C and Utah Paleontological Investigations Permit #07-356. This survey to locate, identify and evaluate paleontological resources was done to meet requirements of the National Environmental Policy Act of 1969 and other State and Federal laws and regulations that protect paleontological resources.

#### FEDERAL AND STATE REQUIREMENTS

As mandated by the Federal and State government, paleontologically sensitive geologic formations on State lands that are considered for exchange or may be impacted due to ground disturbance require paleontological evaluation. This requirement complies with:

- 1) The National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321.et. Seq., P.L. 91-190);
- 2) The Federal Land Policy and Management Act (FLPMA) of 1976 (90 Stat. 2743, 43 U.S.C. § 1701-1785, et. Seq., P.L. 94-579);
- 3) The National Historic Preservation Act.16 U.S.C. § 470-1, P.L. 102-575 in conjunction with 42 U.S.C. § 5320; and
- 4) The Utah Geological Survey. S. C. A.: 63-73-1. (1-21) and U.C.A.: 53B-17-603

The new Potential Fossil Yield Classification (PFYC) System (October, 2007) replaces the Condition Classification System from Handbook H-8270-1. Geologic units are classified based on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts, with a higher class number indicating a higher potential.

- *Class 1* **Very Low**. Geologic units (igneous, metamorphic, or Precambrian) not likely to contain recognizable fossil remains.
- Class 2 Low. Sedimentary geologic units not likely to contain vertebrate fossils or scientifically significant non-vertebrate fossils. (Including modern eolian, fluvial, and colluvial deposits etc...)
- Class 3 Moderate or Unknown. Fossiliferous sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence; or sedimentary units of unknown fossil potential.
  - Class 3a Moderate Potential. The potential for a project to be sited on or impact a significant fossil locality is low, but is somewhat higher for common fossils.

- Class 3b Unknown Potential. Units exhibit geologic features and
  preservational conditions that suggest significant fossils could be present, but
  little information about the paleontological resources of the unit or the area is
  known.
- Class 4 High. Geologic units containing a high occurrence of vertebrate fossils or scientifically significant invertebrate or plant fossils, but may vary in abundance and predictability.
  - o *Class 4a* Outcrop areas with high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
  - Class 4b Areas underlain by geologic units with high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.
- Class 5 Very High. Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils.
  - Class 5a Outcrop areas with very high potential are extensive (greater than two
    acres) and paleontological resources may be susceptible to adverse impacts from
    surface disturbing actions.
  - o *Class 5b* Areas underlain by geologic units with very high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.

It should be noted that many fossils, though common and unimpressive in and of themselves, can be important paleo-environmental, depositional, and chronostratigraphic indicators.

#### **LOCATION**

Kerr McGee's proposed multi-well pads, access roads, pipelines, and pipeline upgrades for "Bonanza #1023-02G2CS, 02G3BS, 02G1BS, & 02H3CS; #1023-6M1B, 6N1AS, 6N1CS, & 6N4BS" (Sec. 2, & 6, T 10 S, R 23 E) are on lands managed by the BLM and the State of Utah Trust Lands Administration (SITLA), 2 to 6 miles east of the White River, a few miles north of the Saddletree Draw and Asphalt Wash, and about 14-18 miles southwest of Bonanza, UT. The project area can be found on the Asphalt Wash 7.5 minute U. S. Geological Survey Quadrangle Maps, Uintah County, Utah.

#### PREVIOUS WORK

The basins of western North America have long produced some of the richest fossil collections in the world. Early Cenozoic sediments are especially well represented throughout the western interior. Paleontologists started field work in Utah's Uinta Basin as early as 1870 (Betts, 1871; Marsh, 1871, 1875a, 1875b). The Uinta Basin is located in the northeastern corner of Utah and covers approximately 31,000 sq. km (12,000 sq. miles) ranging in elevation from 1,465 to 2,130 m (4,800 to 7,000 ft) (Marsell, 1964; Hamblin et al., 1987). Middle to late Eocene time marked a period of dramatic change in the climate, flora, (Stucky, 1992) and fauna (Black and Dawson, 1966) of North America.

#### GEOLOGICAL AND PALEONTOLOGICAL OVERVIEW

Early in the geologic history of Utah, some 1,000 to 600 Ma, an east-west trending basin developed creating accommodation for 25,000 feet of siliclastics. Uplift of that filled-basin during the early Cenozoic formed the Uinta Mountains (Rasmussen et al., 1999). With the rise of the Uinta Mountains the asymmetrical synclinal Uinta Basin is thought to have formed through the effects of down warping in connection with the uplift. Throughout the Paleozoic and Mesozoic deposition fluctuated between marine and non-marine environments laying down a thick succession of sediments in the area now occupied by the Uinta Basin. Portions of these beds crop out on the margins of the basin due to tectonic events during the late Mesozoic.

Early Tertiary Uinta Basin sediments were deposited in alternating lacustrine and fluvial environments. Large shallow lakes periodically covered most of the basin and surrounding areas during early to mid Eocene time (Abbott, 1957). These lacustrine sediments show up in the western part of the basin, dipping 2-3 degrees to the northeast and are lost in the subsurface on the east side. The increase of cross-bedded, coarse-grained sandstone and conglomerates preserved in paleo-channels indicates a transition to a fluvial environment toward the end of the epoch.

Four Eocene formations are recognized in the Uinta Basin: the Wasatch, Green River, Uinta and Duchesne River, respectively (Wood, 1941). The Uinta Formation is subdivided into two lithostratigraphic units namely: the Wagonhound Member (Wood, 1934), formerly known as Uinta A and B (Osborn, 1895, 1929) and the Myton Member previously regarded as the Uinta C.

Within the Uinta Basin in northeast Utah, the Uinta Formation in the western part of the basin is composed primarily of lacustrine sediments inter-fingering with over-bank deposits of silt and mudstone and westward flowing channel sands and fluvial clays, muds, and sands in the east (Bryant et al, 1990; Ryder et al, 1976). Stratigraphic work done by early geologists and paleontologists within the Uinta Formation focused on the definition of rock units and attempted to define a distinction between early and late Uintan faunas (Riggs, 1912; Peterson and Kay, 1931; Kay 1934). More recent work focused on magnetostratigraphy, radioscopic chronology and continental biostratigraphy (Flynn, 1986; Prothero, 1996). Well-known for its fossiliferous nature and distinctive mammalian fauna of mid-Eocene Age, the Uinta Formation is the type formation for the Uintan Land Mammal Age (Wood et al, 1941).

The Duchesne River Formation of the Uinta Basin in northeastern Utah is composed of a succession of fluvial and flood plain deposits composed of mud, silt and sandstone. The source area for these late Eocene deposits is from the Uinta Mountains indicated by paleocurrent data (Anderson and Picard, 1972). In Peterson's (1931c) paper, the name "Duchesne Formation" was applied to the formation and it was later changed to the "Duchesne River Formation" by Kay (1934). The formation is divided up into four members: the Brennan Basin, Dry Gulch Creek, LaPoint and Starr Flat (Anderson and Picard, 1972). Debates concerning the Duchesne River Formation, as to whether its age was late Eocene or early Oligocene, have surfaced throughout the literature of the last century (Wood et al., 1941; Scott 1945). Recent paleomagnetostratigraphic work (Prothero, 1996) shows that the Duchesne River Formation is late Eocene in time.

#### FIELD METHODS

In order to determine if the proposed project area contained any paleontological resources, a reconnaissance survey was performed. An on-site observation of the proposed areas undergoing surficial disturbance is necessary because judgments made from topographic maps alone are often unreliable. Areas of low relief have potential to be erosional surfaces with the possibility of bearing fossil materials rather than surfaces covered by unconsolidated sediment or soils.

When found within the proposed construction areas, outcrops and erosional surfaces were checked to determine if fossils were present and to assess needs. Careful effort is made during surveys to identify and evaluate significant fossil materials or fossil horizons when they are found. Microvertebrates, although rare, are occasionally found in anthills or upon erosional surfaces and are of particular importance.

#### PROJECT AREA

The project area is situated in the Wagonhound Member (Uinta B) of the Uinta Formation. The following list provides a description of the individual multi-well pads and their associated pipelines, pipeline upgrades, and access roads.

# Bonanza #1023-02G2CS, 02G3BS, 02G1BS, & 02H3CS

The proposed access road, pipeline, and well pad are located in the SW/NW quarter-quarter section of Sec. 2, T 10 S, R 23 E (Figure 1). The project area is situated in low, rolling drainage-cut hills of an arid scrubland. Ground cover consists of silty soil and colluvium derived from clasts of green, purple, and tan siltstones and disaggregated mudstones. Alternating beds of semi-fissile green and tan siltstones and friable green and tan mudstones outcrop in small hills and stream banks throughout the project area. Several isolated fossil fragments and turtle scatters were observed in colluvium within the well pad boundary. Most fragments were moderately to well preserved and highly weathered.

# Bonanza #1023-6M1B, 6N1AS, 6N1CS, & 6N4BS

The proposed access road, pipeline, and well pad are located in the SW/NW quarter-quarter section of Sec. 6, T 10 S, R 23 E (Figure 2). The project area is situated in large rolling hills, ridges, and buttes as well as drainage-cut valleys and canyons of an arid scrubland. Ground cover consists of silty soil and colluvium/alluvium derived from clasts of green, purple, and tan siltstones; tan, medium to coarse-grained, sub-arkosic sandstone; and disaggregated mudstones and sandstones. Lithologies exposed in the project area are consistent with that of the lower Wagonhound Member and include green, gray, purple, and tan siltstones and mudstones; green and orange-tan, medium to coarse-grained, sub-arkosic sandstones; and purple, fine-grained, parallel-bedded lithic sandstone. Cross-bedded, channel-fill sandstones and conglomeratic sandstone lenses appear in the thickly bedded, tan sandstone layers. Outcrops in the project area occur as resistant beds in hillsides or as exposures in drainage-cut banks or bottoms.

Infrequent to abundant isolated fossil fragments and turtle scatters were observed in colluvium throughout the project area, with higher concentrations observed around the access road to well pad tie-in area and along the eastern edge of the well pad. Most fragments were poorly to well preserved and highly weathered. Seven individual turtles (?*Echmatemys* sp.), were observed in the project area, as fragmentary concentrations sourcing from green and tan siltstones or concentrated in colluvium. A small concentration of unidentifiable mammal limb bone fragments was observed near the pit of the proposed well pad sourcing from green siltstone. A small fragment of petrified wood was also observed in the colluvium of the pit area. Ichnofossil burrows, presumably *Planolites*, were observed in the green, medium-grained sandstones.

## **SURVEY RESULTS**

PROJECT	GEOLOGY	PALEONTOLOGY
"Bonanza #1023-	The project area is situated in low,	Several isolated fossil fragments and
02G2CS,	rolling drainage-cut hills of an arid	turtle scatters were observed in colluvium
02G3BS,	scrubland. Ground cover consists of	within the well pad boundary. Most
02G1BS, &	silty soil and colluvium derived from	fragments were moderately to well
<b>02H3CS"</b> (Sec. 2,	clasts of green, purple, and tan	preserved and highly weathered.
T 10 S, R 23 E)	siltstones and disaggregated mudstones. Alternating beds of semi-fissile green and tan siltstones and friable green and tan mudstones outcrop in small hills and stream banks throughout the project area.	Class 4a

"Bonanza #1023-6M1B, 6N1AS, 6N1CS, & 6N4BS" (Sec. 6, T 10 S, R 23 E)

The project area is situated in large rolling hills, ridges, and buttes as well as drainage-cut valleys and canyons of an arid scrubland. Ground cover consists of silty soil and colluvium/alluvium derived from clasts of green, purple, and tan siltstones; tan, medium to coarse-grained, sub-arkosic sandstone; and disaggregated mudstones and sandstones. Lithologies exposed in the project area are consistent with that of the lower Wagonhound Member and include green, gray, purple, and tan siltstones and mudstones; green and orange-tan, medium to coarse-grained, sub-arkosic sandstones; and purple, fine-grained, parallel-bedded lithic sandstone. Cross-bedded, channel-fill sandstones and conglomeratic sandstone lenses appear in the thickly bedded, tan sandstone layers. Outcrops in the project area occur as resistant beds in hillsides or as exposures in drainagecut banks or bottoms.

Infrequent to abundant isolated fossil fragments and turtle scatters were observed in colluvium throughout the project area, with higher concentrations observed around the access road to well pad tie-in area and along the eastern edge of the well pad. Most fragments were poorly to well preserved and highly weathered. Seven individual turtles (?Echmatemys sp.), were observed in the project area, as fragmentary concentrations sourcing from green and tan siltstones or concentrated in colluvium. A small concentration of unidentifiable mammal limb bone fragments was observed near the pit of the proposed well pad sourcing from green siltstone. A small fragment of petrified wood was also observed in the colluvium of the pit area. Ichnofossil burrows, presumably Planolites, were observed in the green, medium-grained sandstones.

Class 4a

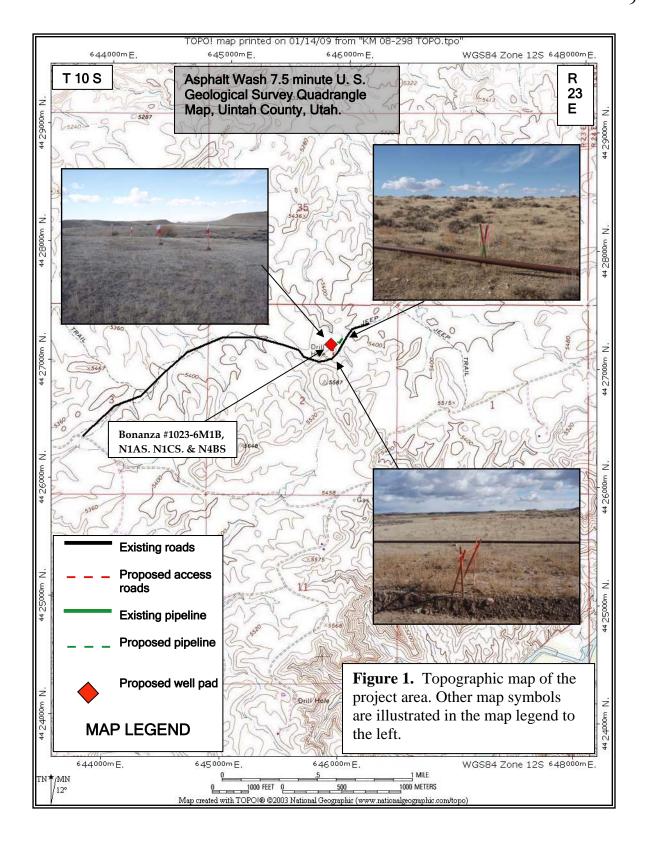
#### RECOMMENDATIONS

A reconnaissance survey was conducted for Kerr McGee's proposed multi-well pads, access roads, pipelines, and pipeline upgrades for "Bonanza #1023-02G2CS, 02G3BS, 02G1BS, & 02H3CS; #1023-6M1B, 6N1AS, 6N1CS, & 6N4BS" (Sec. 2 & 6, T 10 S, R 23 E). The well pads and the associated access roads, pipeline upgrades, and pipelines covered in this report showed some signs of vertebrate fossils, therefore, we advice the following recommendations.

Due to the abundance of vertebrate fossil material found within the project area for "Bonanza #1023-6M1B, 6N1AS, 6N1CS, & 6N4BS", we recommend that a permitted paleontologist be present to monitor the construction of the proposed access road, pipeline and well pad.

Furthermore, we recommend that no paleontological restrictions should be placed on the development of the proposed project area for "Bonanza #1023-02G2CS, 02G3BS, 02G1BS, & 02H3CS."

Nevertheless, if any vertebrate fossil(s) are found during construction within the project area, Operator (Lease Holder) will report all occurrences of paleontological resources discovered to a geologist with the Vernal Field Office of the BLM and the Office of the State Paleontologist. The operator is responsible for informing all persons in the areas who are associated with this project of the requirements for protecting paleontological resources. Paleontological resources found on the public lands are recognized by the BLM and State as constituting a fragile and nonrenewable scientific record of the history of life on earth, and so represent an important and critical component of America's natural heritage. These resources are afforded protection under 43 CFR 3802 and 3809, and penalties possible for the collection of vertebrate fossils are under 43 CFR 8365.1-5.



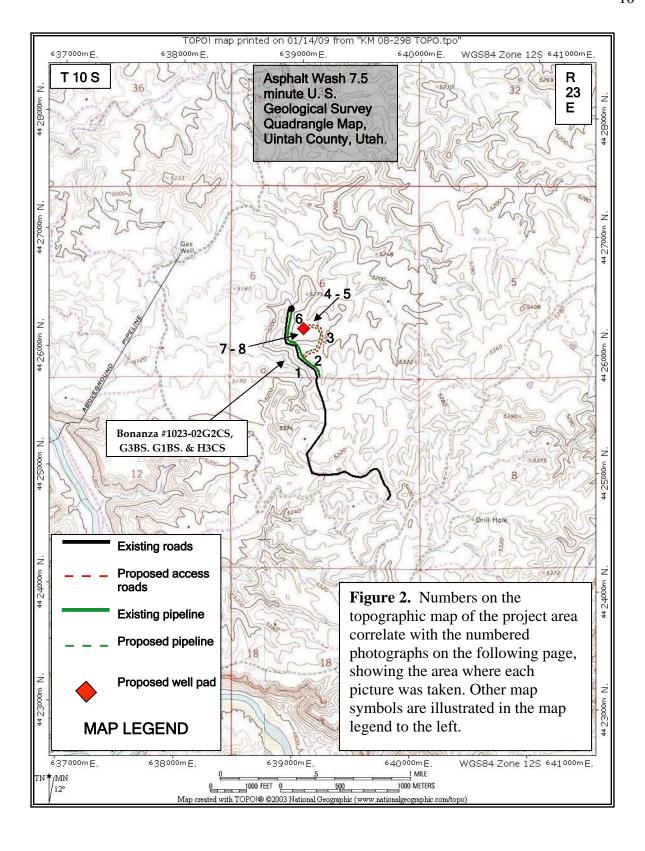
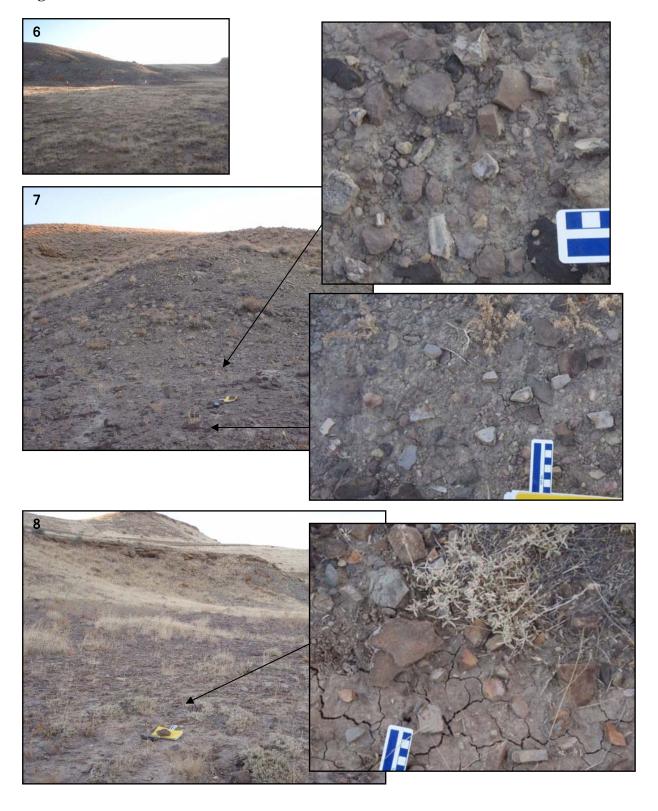


Figure 2. continued...



Figure 2. continued...



#### **REFERENCES CITED**

- Abbott, W., 1957, Tertiary of the Uinta Basin: Intermountain Assoc. Petroleum Geologists Guidebook, Eighth Ann. Field Conf., p. 102-109.
- Anderson, D. W., and Picard, M. D., 1972, Stratigraphy of the Duchesne River Formation (Eocene-Oligocene?), northern Uinta Basin, northeastern Utah: Utah Geological and Mineralogical Survey Bulletin 97, p. 1-28.
- Betts, C. W., 1871, The Yale College expedition of 1870: Harper's New Monthly Magazine, v. 43, p. 663-671.
- Black, C. C. and Dawson, M. R., 1966, A Review of Late Eocene Mammalian Faunas from North America: American Journal of Science, v. 264, p. 321-349.
- Bryant, B., Naeser C. W., Marvin R. F., Mahnert H. H., 1989, Cretaceous and Paleogene Sedimentary Rocks and Isotopic Ages of Paleogene Tuffs, Uinta basin, Utah. And Ages of Late Paleogene and Neogene Tuffs and the Beginning of Rapid Regional Extension, Eastern Boundary of the Basin and Range Province near Salt lake City, Utah: In: Evolution of Sedimentary basins-Uinta and Piceance Basins. U. S. Geological Survey Bulletin 1787-J, K.
- Flynn, J. J., 1986, Correlation and geochronology of middle Eocene strata from the western United States: Palaeogeographic, Palaeoclimatology, Palaeoecology, v. 55, p. 335-406.
- Hamblin, A. H. and Miller, W. E., 1987, Paleogeography and Paleoecology of the Myton Pocket, Uinta Basin, Utah (Uinta Formation-Upper Eocene): Brigham Young University Geology Studies, v. 34, p 33-60.
- Kay, J. L., 1934, Tertiary formations of the Uinta Basin, Utah: Annals of Carnegie Museum, v. 23, p. 357-371.
- Marsell, R. E., 1964, Geomorphology of the Uinta Basin-A Brief Sketch: Thirteenth annual Field Conference. Association of Petroleum Geologists, p. 34-46.
- Marsh, O. C., 1871, on the geology of the Eastern Uintah Mountains: American Journal of Science and Arts, v. 1, p. 1-8.
  \_\_\_\_\_\_1875a, Ancient lake basins of the Rocky Mountain region: American Journal of Science and Arts, v. 9, p. 49-52.
- \_\_\_\_\_ 1875b, Notice of new Tertiary mammals, IV: American Journal of Science and Arts, Third Series, v. 9, p. 239-250.

- Osborn, H. F., 1895, Fossil mammals of the Uinta beds, expedition of 1894: American Museum of Natural History Bulletin, v. 7, p. 71-106.
- \_\_\_\_\_ 1929, The Titanotheres of Ancient Wyoming, Dakota and Nebraska: Monograph of the U. S. Geological Survey, v. 55, p. 1-953.
- Peterson, O. A., 1931c, new species from the Oligocene of the Uinta: Annals of Carnegie Museum, v. 21, p. 61-78.
- Peterson, O. A. and Kay, J. L., 1931, The Upper Uinta Formation of Northeastern Utah: Annals of the Carnegie Museum, v. 20, p. 293-306.
- Prothero, D. R., 1996, Magnetic Stratigraphy and biostratigraphy of the middle Eocene Uinta Formation, Uinta Basin, Utah, *in* Prothero, D. R., and Emry, R. J. editors, The Terrestrial Eocene-Oligocene Transition in North America, p. 3-24.
- Rasmussen, D. T., Conroy, G. C., Friscia, A. R., Townsend, K. E. and Kinkel, M. D., 1999, Mammals of the middle Eocene Uinta Formation: Vertebrate Paleontology of Utah, p. 401-420.
- Riggs, E. S., 1912. New or Little Known Titanotheres from the Lower Uintah Formations: Field Museum of Natural History Geological Series, v. 159, p. 17-41.
- Ryder, R. T., Fouch, T. D., Elison, J. H., 1976, Early Tertiary sedimentation in the western Uinta Basin, Utah: Geological Society of America Bulletin v. 87, p. 496-512.
- Scott, W. B., 1945, The Mammalia of the Duchesne River Oligocene: Transactions of the American Philosophical Society, v. 34, p. 209-253.
- Stucky, R. K., 1992, Mammalian faunas in North America of Bridgerian to early Arikareean "age" (Eocene and Oligocene), in Prothero, D. R., and Berggren, W. A., eds., Eocene-Oligocene climatic and biotic evolution: Princeton University Press, p. 464-493.
- Wood, H. E., 1934, Revision of the Hyrachyidaes: American Museum of Natural History Bulletin, v. 67, p. 181-295.
- and others, 1941, Nomenclature and Correlation of the North America Continental Tertiary: Geol. Soc. Amer. Bull., v. 52, no. 1, Jan. 1, p. 1-48. 52, no. 1, Jan. 1, p. 1-48.

'APIWellNo:43047503440000'

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS ONSHORE LP'S ELEVEN PROPOSED WELL LOCATIONS IN TOWNSHIP 10S, RANGE 23E, SECTIONS 2 AND 7, UINTAH COUNTY, UTAH

# CLASS I REVIEW OF KERR-MCGEE OIL AND GAS ONSHORE LP'S ELEVEN PROPOSED WELL LOCATIONS IN TOWNSHIP 10S, RANGE 23E, SECTIONS 2 AND 7, UINTAH COUNTY, UTAH

By:

Patricia Stavish

Prepared For:

State of Utah
School & Institutional Trust Lands Administration
and
Bureau of Land Management
Vernal Field Office

Prepared Under Contract With:

Kerr-McGee Oil and Gas Onshore LP 1368 South 1200 East Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc. P.O. Box 219 Moab, Utah 84532

MOAC Report No. 09-009

March 3, 2009

United States Department of Interior (FLPMA)
Permit No. 08-UT-60122

Public Lands Policy Coordination Office Archaeological Survey Permit No. 117

#### INTRODUCTION

A Class I literature review was completed Montgomery Archaeological Consultants Inc. (MOAC) in February 2009 of Kerr-McGee Onshore's 11 proposed directional well locations with associated access and pipeline corridors in Township 10S, Range 23E, Sections 2 and 7. The project area is situated north of the White River, south of the town of Vernal, Uintah County, Utah. The well pads are designated: (Bonanza #1023-02B) Directional Pad, Bonanza #1023-02G1BS, Bonanza #1023-02G3BS, Bonanza #1023-02G2CS, Bonanza #1023-02H3CS, Bonanza #1023-02F Directional Pad, Bonanza #1023-02K1S, Bonanza #1023-02K4S, Bonanza #1023-02L2S, Bonanza #1023-02M1S, and Bonanza #1023-7E-4. This document was implemented at the request of Ms. Raleen White, Kerr-McGee Onshore LP, Denver, Colorado. Land status includes state lands administered by the State of Utah School & Institutional Trust Lands Administration (SITLA) and public lands administered by the Bureau of Land Management, Vernal Field Office.

The purpose of this Class I review is to identify, classify, and evaluate the previously conducted cultural resource inventories and archaeological sites in the project area in order to comply with Section 106 of 36 CFR 800, the National Historic Preservation Act of 1966 (as amended). Also, the inventory was implemented to attain compliance with a number of federal and state mandates, including the National Environmental Policy Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979, the American Indian Religious Freedom Act of 1978, and the Utah State Antiquities Act of 1973 (amended 1990).

The project area, in which Kerr-McGee Onshore's 11 proposed directional well locations occur, was previously inventoried by MOAC in 2003 for two Class III block inventories of Westport Oil & Gas Company's proposed oil and gas development in Sections 2 and 7 (Elkins and Montgomery 2003a,b). A file search was completed by consulting MOAC's Class I existing data review of 459 square miles (293,805 acres) covering the Greater NBU study area between Bonanza and Ouray in Uintah County, northeastern Utah (Patterson et al. 2008). Kerr-McGee Oil & Gas Onshore LP proposes to explore and develop oil and natural gas resources throughout the area. Record searches were performed for this Class I project by Marty Thomas at the Utah State Historic Preservation Office (SHPO) on various dates between June 14, 2006 and January 27, 2007. The results of this Class I data review and Class III inventory indicated that one previous archaeological site (42Un3475) occurs near the current project area.

#### DESCRIPTION OF THE PROJECT AREA

The project area is situated near the Southman Canyon Gas Field and north of the White River in the Uinta Basin. The legal description is Township 10 South, Range 23 East, Sections 2 and 7 (Table 1; Figure 1).

Table 1. Kerr-McGee Onshore's 11 Proposed Directional Well Locations.

Well Designation	Legal Description	Access/Pipeline Corridor	Cultural Resources
(Bonanza #1023-02B) Directional Pad Bonanza #1023-02G1BS Bonanza #1023-02G3BS Bonanza #1023-02G2CS Bonanza #1023-02H3CS	NW/NE Sec. 2, T10S, R23E	Access: 142 ft Pipeline: 204 ft	None
Bonanza #1023-02F Directional Pad Bonanza #1023-02K1S Bonanza #1023-02K4S Bonanza #1023-02L2S Bonanza #1023-02M1S	SE/NW Sec. 2, T10S, R23E	Pipeline: 3844 ft	42Un3475
Bonanza #1023-7E-4	SW/NW Sec. 7, T10S, R23E	Pipeline: 573 ft Access: 310 ft	None

#### **Environmental Setting**

The study area lies within the Uinta Basin physiographic unit, a distinctly bowl-shaped geologic structure (Stokes 1986:231). The Uinta Basin ecosystem is within the Green River drainage, considered to be the northernmost extension of the Colorado Plateau. The geology is comprised of Tertiary age deposits, which include Paleocene age deposits and Eocene age fluvial and lacustrine sedimentary rocks. The Uinta Formation, which is predominate in the project area, occurs as eroded outcrops (formed by fluvial deposited, stream laid interbedded sandstone and mudstone), and is known for its prolific paleontological localities. Specifically, the inventory area is situated adjacent to the White River and Bitter Creek. Elevation averages 4860 ft asl. The project occurs within the Upper Sonoran Desert Shrub Association which includes; sagebrush, shadscale, greasewood, mat saltbush, snakeweed, rabbitbrush, and prickly pear cactus. Modern disturbances include livestock grazing, roads, and oil/gas development.

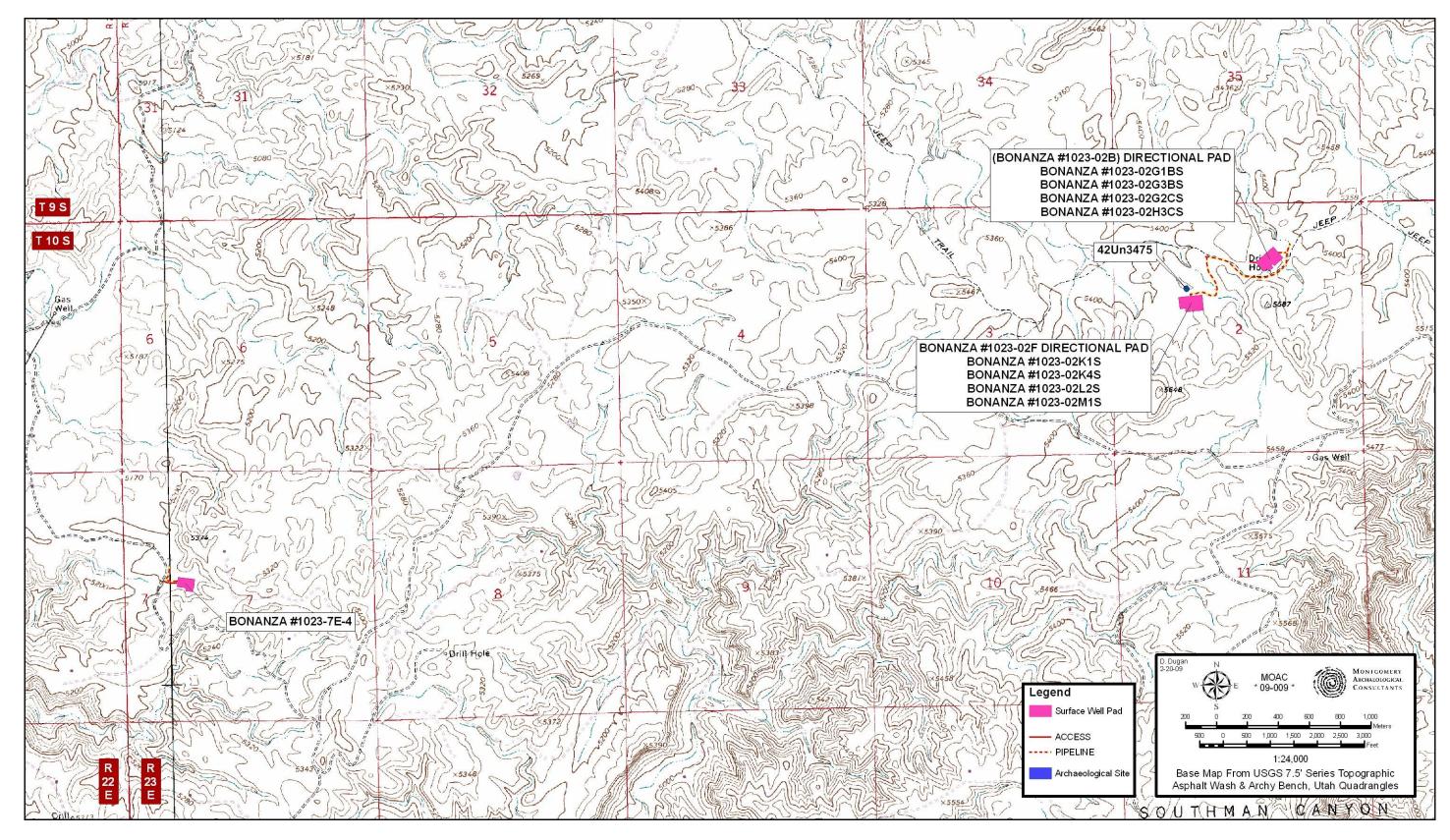


Figure 1. Kerr-McGee Oil & Gas Onshore LP's 11 Proposed Well Locations with Access and Pipeline Corridors, Uintah County, Utah.

#### CLASS I RESULTS AND RECOMMENDATIONS

The Class I literature review resulted in the location of one previously documented site, 42Un3475. Site 42Un3475 is a prehistoric temporary camp documented by MOAC in 2003 (Elkins and Montgomery 2003a). The site consists of a rockshelter with a hearth and an artifact scatter. 42Un3475 has been recommended as eligible to the NRHP under Criterion D.

The Class I literature review of 11 proposed well locations with associated pipeline and access corridors in Township 10S, Range 23E, Sections 2 and 7 resulted in the location of one previously documented archaeological site (42Un3474). Site 42Un3475 has been evaluated as eligible to the NRHP under Criterion D. It is recommended that site 42Un3475 be avoided by the undertaking. The Bonanza #1023-02F well pad is situated 100 ft from the site and 75 ft from the associated pipeline, which should provide avoidance of the site. Based on the adherence to this avoidance recommendation, a determination of "no adverse impact" is proposed pursuant to Section 106, CFR 800.

#### REFERENCES CITED

Elkins, M. and K. Montgomery

2003a Cultural Resource Block Inventory of Section 2, Township 10 South, Range 23 East for Westport Oil & Gas Company, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-03-MQ-883s.

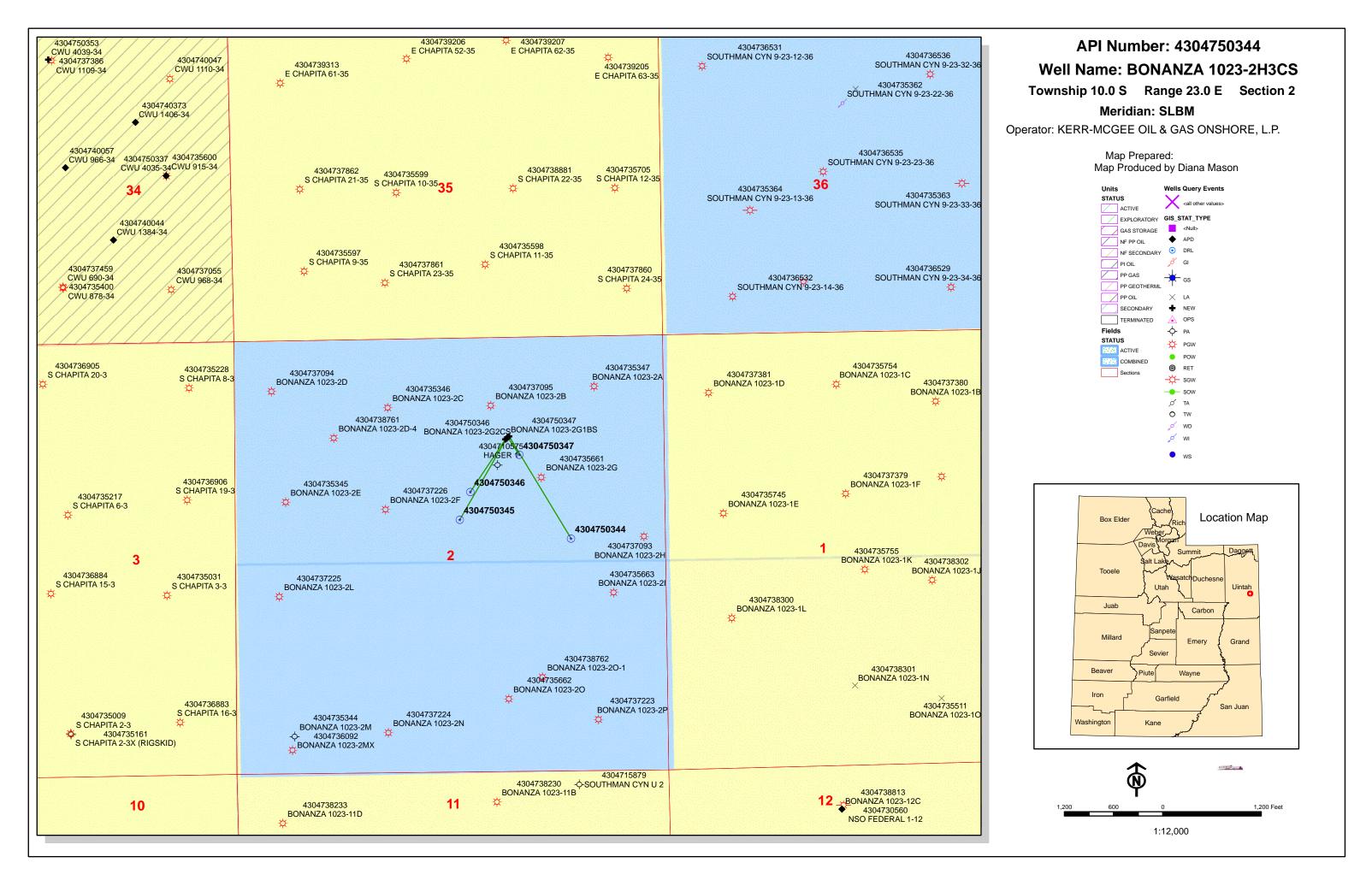
2003b Cultural Resource Block Inventory of Sections 4, 5, 6, 7, and 8, Township 10 South, Range 23 East for Westport Oil & Gas Company, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-03-MQ-882b.

Patterson, J. J., J. Fritz, K. Lower-Eskelson, R. Stash and A. Thomas

2008 NBU Class I Existing Data Review for Kerr-McGee Oil & Gas Onshore LP, Uintah
County, Utah. Montgomery Archaeological Consultants, Moab, Utah.

Stokes, W. L.

1986 Geology of Utah. Utah Museum of Natural History and Utah Geological and Mineral Survey, Salt Lake City.



From: Davis, Jim(Jim Davis)
To: Mason, Diana
Date: 4/23/2009 7:37 AM
Subject: Kmg well approvals (8)

**CC:** Garrison, LaVonne, Bonner, Ed, "White, Raleen" <Raleen.White@anadarko.com> The following wells have been approved by SITLA including arch and paleo clearance.

NBU 922-32E2S -4304750351 NBU 922-32F2S -4304750350 NBU 922-32F3T - 4304750349 NBU 922-32K1S - 4304750348

BONANZA 1023-2G1BS - 4304750347 BONANZA 1023-2G2CS - 4304750346 BONANZA 1023-2G3BS - 4304750345 BONANZA 1023-2H3CS - 4304750344

-Jim

Jim Davis State of Utah Trust Lands Administration (801) 538-5156

# BOPE REVIEW KERR-MCGEE OIL & GAS ONSHORE, L.P. BONANZA 1023-2H3CS 43047503440000

Well Name	KERR-MCGEE C	KERR-MCGEE OIL & GAS ONSHORE, L.P. BONANZA 1023-2H3CS 43047			
String	Surf Prod				
Casing Size(")	9.625	4.500			
Setting Depth (TVD)	2200	8000			
Previous Shoe Setting Depth (TVD)	20	2200			
Max Mud Weight (ppg)	8.4	11.6			
BOPE Proposed (psi)	500	5000			
Casing Internal Yield (psi)	3520	7780			
Operators Max Anticipated Pressure (psi)	4560	11.0			

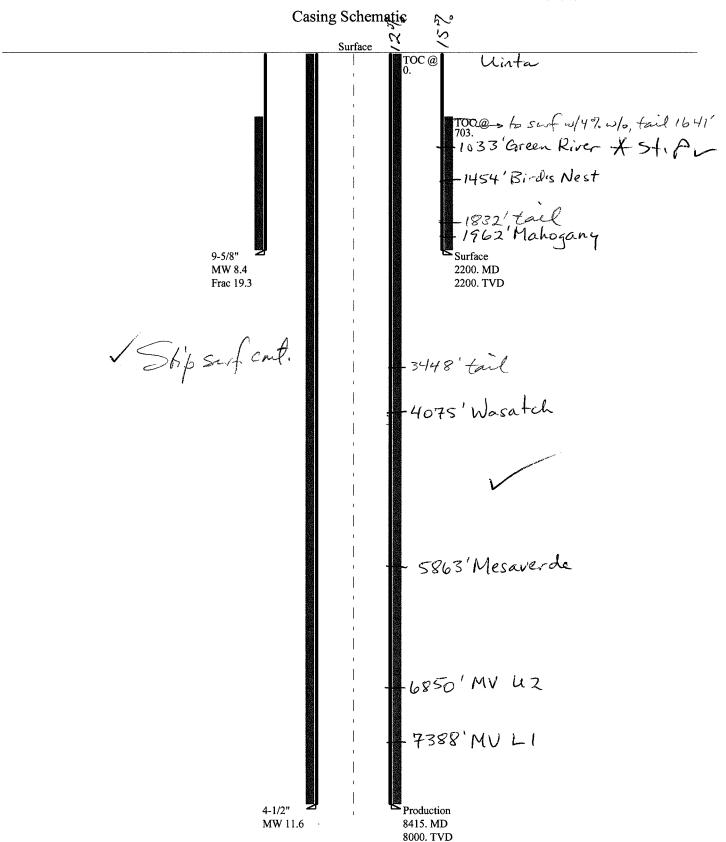
Calculations	Surf String	9.625	"
Max BPH (psi)	.052*Setting Depth*MW=	961	
			<b>BOPE</b> Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	697	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	477	YES Reasonable depth in area, no expected pressure
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting Depth - Previous Shoe Depth)=	481	NO Reasonable depth in area, no expected pressure
Required Casing/BOPE To	st Pressure=	2200	psi
*Max Pressure Allowed @	Previous Casing Shoe=	20	psi *Assumes 1psi/ft frac gradient

Calculations	Prod String	4.500	"
Max BPH (psi)	.052*Setting Depth*MW=	4826	
			<b>BOPE</b> Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	3866	YES
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3066	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting Depth - Previous Shoe Depth)=	3550	NO Reasonable, note max allowed pressure
Required Casing/BOPE To	est Pressure=	5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2200	psi *Assumes 1psi/ft frac gradient

Calculations	String	"
Max BPH (psi)	.052*Setting Depth*MW=	
		BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	NO
		*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting Depth - Previous Shoe Depth)=	NO
Required Casing/BOPE To	est Pressure=	psi
*Max Pressure Allowed @	Previous Casing Shoe=	psi *Assumes 1psi/ft frac gradient

Calculations	String	"
Max BPH (psi)	.052*Setting Depth*MW=	
		BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	NO
		*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting Depth - Previous Shoe Depth)=	NO
Required Casing/BOPE To	est Pressure=	psi
*Max Pressure Allowed @	Previous Casing Shoe=	psi *Assumes 1psi/ft frac gradient

# 43047503440000 BONANZA 1023-2H3CS



43047503440000 BONANZA 1023-2H3CS Well name:

Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

String type: Surface

Project ID: 43-047-50344

**UINTAH** COUNTY \_ocation:

**Design parameters:** Minimum design factors: **Environment:** Collapse Collapse: H2S considered? No 8.400 ppg 75 °F Mud weight: Design factor Surface temperature: 1.125 106 °F Design is based on evacuated pipe. Bottom hole temperature: Temperature gradient: 1.40 °F/100ft Minimum section length: 1,000 ft **Burst:** 1.00 Design factor Cement top: 703 ft **Burst** Max anticipated surface 1,936 psi pressure: Internal gradient: 0.120 psi/ft **Tension:** Directional well information: Calculated BHP 2,200 psi 8 Round STC: 1.80 (J) Kick-off point O ft 1.80 (J) 8 Round LTC: Departure at shoe: 3 ft No backup mud specified. **Buttress:** 1.60 (J) Maximum dogleg: 3 °/100ft 3° Premium: 1.50 (J) Inclination at shoe: Body yield: 1.60 (B) Re subsequent strings: Next setting depth: 8,000 ft

Tension is based on air weight. Next mud weight: 11.600 ppg 1.927 ft Next setting BHP: Neutral point: 4,821 psi Fracture mud wt: 19.250 ppg Fracture depth: 2,200 ft 2,200 psi

Injection pressure:

Run Segment **Nominal** End True Vert Measured Drift Est. Seq Length Size Weight Grade **Finish** Depth Depth Diameter Cost (ft) (lbs/ft) (in) (ft) (ft) (in) (\$) 2200 9.625 36.00 J-55 2200 2200 17990 1 LT&C 8.796 Run Collapse Collapse Collapse **Burst Burst Burst Tension Tension Tension** Strength Design Strength Seq Load Load Design Load Strength Design **Factor** (psi) (psi) (psi) (psi) **Factor** (kips) (kips) **Factor** 1 960 1948 2.029 2200 3520 1.60 79.2 5.72 J 453

Helen Sadik-Macdonald Prepared Div of Oil, Gas & Mining by:

Phone: 801 538-5357 FAX: 801-359-3940

Date: April 29,2009 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2200 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

43047503440000 BONANZA 1023-2H3CS Well name:

KERR-MCGEE OIL & GAS ONSHORE, L.P. Operator:

String type: Production Project ID: 43-047-50344

**UINTAH** COUNTY Location:

Design parameters: Minimum design factors: **Environment:** Collapse Collapse: H2S considered?

Body yield:

4821

75 °F Mud weight: 11,600 ppg Design factor 1.125 Surface temperature: Design is based on evacuated pipe. Bottom hole temperature: 187 °F

1.40 °F/100ft Temperature gradient: Minimum section length: 1,000 ft

**Burst:** 1.00 Design factor Cement top: Surface

**Burst** 

Max anticipated surface pressure: 3,061 psi

Internal gradient: 0.220 psi/ft Tension: Directional well information: Calculated BHP 4,821 psi 8 Round STC: 1.80 (J) Kick-off point 0 ft 8 Round LTC: Departure at shoe: 1.80 (J) 1454 ft

No backup mud specified. **Buttress:** 1.60 (J) Maximum dogleg: 3 °/100ft 0° Inclination at shoe: Premium: 1.50 (J)

1.60 (B)

1.61

92.8

Tension is based on air weight. Neutral point: 7,028 ft

1.319

Segment **Nominal** End True Vert Measured Drift Est. Run Length Size Weight Grade **Finish** Depth Depth Diameter Cost Seq (lbs/ft) (ft) (in) (ft) (ft) (in) (\$) 111078 1 8415 4.5 11.60 I-80 LT&C 8000 8415 3.875 Collapse Collapse **Burst** Run Collapse **Burst** Burst **Tension Tension Tension** Seq Load Strength Design Load Strength Design Load Strength Design (psi) **Factor** (psi) (psi) **Factor** (kips) (kips) **Factor** 

7780

Helen Sadik-Macdonald Prepared Div of Oil, Gas & Mining bv:

6360

Phone: 801 538-5357 FAX: 801-359-3940

Date: April 29,2009 Salt Lake City, Utah

212

No

2.28 J

Remarks:

1

Collapse is based on a vertical depth of 8000 ft, a mud weight of 11.6 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

(psi)

4821

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

# **ON-SITE PREDRILL EVALUATION**

# **Utah Division of Oil, Gas and Mining**

**Operator** KERR-MCGEE OIL & GAS ONSHORE, L.P.

Well Name BONANZA 1023-2H3CS

API Number 43047503440000 APD No 1406 Field/Unit NATURAL BUTTES

**Location: 1/4,1/4** NWNE **Sec 2 Tw** 10.0S **Rng** 23.0E 1191 FNL 1917 FEL

GPS Coord (UTM) Surface Owner

#### **Participants**

Floyd Bartlett (DOGM), Jim Davis (SITLA), Ramie Hoopes, Griz Oleen and Tony Kzneck (Kerr McGee), Pat Rainbolt (UDWR) and David Kay (Uintah Engineering and Land Surveying).

#### Regional/Local Setting & Topography

The general area is within the south edge of the Coyote Wash Drainage southwest of Bonanza, Utah. This drainage is a major drainage beginning near the Utah-Colorado border to the east and joining the White River approximately 8 miles to the west. The drainage consists of several significant side drainages. The drainage is dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. The topography is characterized by rolling hills, frequently divided by gentle to deep draws, which flow into Coyote Wash. The draws are often rimmed with steep side hills with exposed sand stone bedrock cliffs. Ouray, Utah is approximately 31.6 road miles to the northwest with Vernal, Utah approximately 35 air miles to the northwest. The area is accessed by Utah State, Uintah County and existing oilfield development Roads to within 300 feet of the site.

Four gas wells are proposed to be directionally drilled from this pad. Part of the location is on the old reclaimed pad of the Hagar #1 well, which has been plugged. The pad will be oriented in a southwest to northeast direction. It is on a gentle to moderately steep north slope which extends away from a high ridge to the south. To the north the pad will end near the pad of another active well. This pad could not be used because of the additional distance from down-hole targets of some wells from this location. An active drainage angle across the location from corner 8 to corner 1. This draw will be diverted along the northwest corner of the pad. A small dam exists in this draw which furnishes water for antelope. A new pond will be constructed in the general area to replace this pond. No stability problems were noted with the old pad. The selected site appears to be a good location for constructing a pad and drilling and operating the proposed wells.

A reserve pit 100'x 250'x 10' deep is planned in an area of cut in the south west corner of the location. Because the length of time the reserve pit will be used and the roughness of the terrain, Kerr McGee committed to line it with a double 20-mil.liner and an appropriate thickness of felt sub-liner to cushion the rock. A second pit for completion flows is shown on the Layout Sheet. If it is to be constructed it will be applied for separately.

Both the surface and minerals for this location are owned by SITLA.

#### Surface Use Plan

**Current Surface Use** 

Grazing Recreational Wildlfe Habitat

New Road Miles Well Pad Src Const Material Surface Formation

0.02 Width 335 Length 440 Onsite UNTA

**Ancillary Facilities** N

4/30/2009 Page 1

# Waste Management Plan Adequate?

#### **Environmental Parameters**

# Affected Floodplains and/or Wetlands N

#### Flora / Fauna

Vegetation is poor with halogeton, annual mustard, greasewood, broom snakeweed and shadscale present.

Antelope, coyote, small mammals and birds. Winter domestic sheep grazing

## **Soil Type and Characteristics**

Soils are a rocky shallow sandy loam

#### **Erosion Issues** Y

. An active drainage angle across the location from corner 8 to corner 1. This draw will be diverted along the northwest corner of the pad.

#### **Sedimentation Issues** N

# Site Stability Issues N

#### **Drainage Diverson Required?** Y

. An active drainage angle across the location from corner 8 to corner 1. This draw will be diverted along the northwest corner of the pad.

### Berm Required? N

# **Erosion Sedimentation Control Required?** N

Paleo Survey Run? Paleo Potental Observed? N Cultural Survey Run? Cultural Resources?

# **Reserve Pit**

Site-Specific Factors	Site R	anking	
Distance to Groundwater (feet)	100 to 200	5	
Distance to Surface Water (feet)	300 to 1000	2	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)		20	
<b>Native Soil Type</b>	Mod permeability	10	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
<b>Annual Precipitation (inches)</b>		0	
<b>Affected Populations</b>			
<b>Presence Nearby Utility Conduits</b>	Not Present	0	
	<b>Final Score</b>	42	1 Sensitivity Level

# **Characteristics / Requirements**

4/30/2009 Page 2

A reserve pit 100'x 250'x 10' deep is planned in an area of cut in the south west corner of the location. Because the length of time the reserve pit will be used and the roughness of the terrain, Kerr McGee committed to line it with a double 20-mil.liner and an appropriate thickness of felt sub-liner to cushion the rock. A second pit for completion flows is shown on the Layout Sheet. If it is to be constructed it will be applied for separately.

Closed Loop Mud Required? N Liner Required? Y Liner Thickness 40 Pit Underlayment Required? Y

# **Other Observations / Comments**

Write-up completed 04-14-2009

Floyd Bartlett **Evaluator** 

11/18/2008

Date / Time

4/30/2009 Page 3

# **Application for Permit to Drill Statement of Basis**

# Utah Division of Oil, Gas and Mining

API WellNo Surf Owner CBM APD No **Status** Well Type 1406 43047503440000 **SITLA** GW No KERR-MCGEE OIL & GAS ONSHORE, L.P. **Operator** Surface Owner-APD Well Name BONANZA 1023-2H3CS Unit

NATURAL BUTTES Field Type of Work **DRILL** 

NWNE 2 10S 23E S 1191 FNL 1917 FEL GPS Coord (UTM) 645922E 4426939N Location

#### **Geologic Statement of Basis**

5/6/2009

Kerr McGee proposes to set 2,200' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 3,400'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the proposed location. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Production casing cement should be brought to above the base of the moderately saline groundwater in order to isolate it from fresher waters uphole.

> **Brad Hill** 4/15/2009 **APD Evaluator** Date / Time

#### **Surface Statement of Basis**

The general area is within the south edge of the Coyote Wash Drainage southwest of Bonanza, Utah. This drainage is a major drainage beginning near the Utah-Colorado border to the east and joining the White River approximately 8 miles to the west. The drainage consists of several significant side drainages. The drainage is dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. The topography is characterized by rolling hills, frequently divided by gentle to deep draws, which flow into Coyote Wash. The draws are often rimmed with steep side hills with exposed sand stone bedrock cliffs. Ouray, Utah is approximately 31.6 road miles to the northwest with Vernal, Utah approximately 35 air miles to the northwest. The area is accessed by Utah State, Uintah County and existing oilfield development Roads to within 300 feet of the site.

Four gas wells are proposed to be directionally drilled from this pad. Part of the location is on the old reclaimed pad of the Hagar #1 well, which has been plugged. The pad will be oriented in a southwest to northeast direction. It is on a gentle to moderately steep north slope which extends away from a high ridge to the south. To the north the pad will end near the pad of another active well. This pad could not be used because of the additional distance from down-hole targets of some wells from this location. An active drainage angle across the location from corner 8 to corner 1. This draw will be diverted along the northwest corner of the pad. A small dam exists in this draw which furnishes water for antelope. A new pond will be constructed in the general area to replace this pond. No stability problems were noted with the old pad. The selected site appears to be a good location for constructing a pad and drilling and operating the proposed wells.

A reserve pit 100'x 250'x 10' deep is planned in an area of cut in the south west corner of the location. Because the length of time the reserve pit will be used and the roughness of the terrain, Kerr McGee committed to line it with a double 20-mil.liner and an appropriate thickness of felt sub-liner to cushion the rock. A second pit for completion flows is shown on the Layout Sheet. If it is to be constructed it will be applied for separately.

Both the surface and minerals for this location are owned by SITLA. Jim Davis of SITLA attended the pre-site visit and had no concerns regarding the proposed location.

Pat Rainbolt represented the Utah Division of Wildlife Resources. Mr. Rainbolt stated the area is classified as

Page 1

# **Application for Permit to Drill Statement of Basis**

**Utah Division of Oil, Gas and Mining** 

Page 2

critical yearlong habitat for antelope. He however recommended no stipulations for this species as the loss of forage from this location is not significant and water not forage is the factor limiting the herd population in the area. He encouraged replacement of the existing pond with another pond in the general area. No other wildlife is expected to be affected. He gave Ramie Hoopes, representing Kerr McGee and Mr. Davis a copy of his evaluation and a DWR recommended seed mix to use when re-vegetating the area.

Floyd Bartlett 11/18/2008
Onsite Evaluator Date / Time

#### **Conditions of Approval / Application for Permit to Drill**

Category	Condition
----------	-----------

5/6/2009

Pits A double synthetic liner each with a minimum thickness of 20 mils and an appropriate thickness of felt sub-liner to cushion

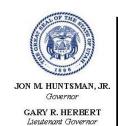
the liners shall be properly installed and maintained in the reserve pit.

Surface Drainages adjacent to the proposed pad shall be diverted around the location. Surface The reserve pit shall be fenced upon completion of drilling operations.

# WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIV	<b>ED:</b> 4/13/2009	API NO. ASSIGNED:	43047503440000
WELL NAI	ME: BONANZA 1023-2H3CS		
	OR: KERR-MCGEE OIL & GAS ONSI	HORE, L.P. (N2995) PHONE NUMBER:	720 929-6007
CONTA	ACT: Kathy Schneebeck-Dulnoan		
PROPOSED LOCATION	<b>ON:</b> NWNE 2 100S 230E	Permit Tech Review:	
SURFA	CE: 1191 FNL 1917 FEL	Engineering Review:	
вотто	<b>DM:</b> 2445 FNL 1175 FEL	Geology Review:	
COUN	ITY: UINTAH		
LATITU	<b>DE:</b> 39.98192	LONGITUDE:	-109.29104
UTM SURF EASTIN	<b>GS:</b> 645922.00	NORTHINGS:	4426939.00
FIELD NAI	ME: NATURAL BUTTES		
LEASE TY	PE: 3 - State		
LEASE NUMB	<b>ER:</b> ML 23608	PROPOSED FORMATION:	WSMVD
SURFACE OWN	ER: 3 - State	COALBED METHANE:	NO
RECEIVED AND/OR R	EVIEWED:	LOCATION AND SITING:	
<u>r</u> ∕ PLAT		R649-2-3.	
<b>▶ Bond:</b> STATE/FEE	- 22013542	Unit:	
Potash		R649-3-2. General	
Oil Shale 190-5			
Oil Shale 190-3		R649-3-3. Exception	
Oil Shale 190-13	1	✓ Drilling Unit	
<b>✓</b> Water Permit: Pe	ermit #43-8496	Board Cause No: Cause 179-14	
RDCC Review:		Effective Date: 6/12/2008	
Fee Surface Agre	eement	Siting: 460' fr ext. drl. unit boundary	
Intent to Commi	ngle	✓ R649-3-11. Directional Drill	
Commingling Appr	roved		
Comments: Pres	site Completed		
15	Statement of Basis - bhill - Directional - dmason - Surface Casing - ddoucet		

API Well No: 43047503440000



# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

# **Permit To Drill**

\*\*\*\*\*

Well Name: BONANZA 1023-2H3CS

**API Well Number:** 43047503440000

Lease Number: ML 23608 Surface Owner: STATE Approval Date: 4/30/2009

#### **Issued to:**

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

### **Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 179-14.

#### **Duration:**

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

#### 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.

#### **Conditions of Approval:**

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.

Surface casing shall be cemented to the surface.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

#### **Notification Requirements:**

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

- 24 hours prior to cementing or testing casing contact Dan Jarvis
- 24 hours prior to testing blowout prevention equipment contact Dan Jarvis
- 24 hours prior to spudding the well contact Carol Daniels
- Within 24 hours of any emergency changes made to the approved drilling program contact

API Well No: 43047503440000

#### **Dustin Doucet**

• Prior to commencing operations to plug and abandon the well - contact Dan Jarvis

The operator is required to get approval from the Division of Oil, Gas and Mining before performing any of the following actions during the drilling of this well:

- Plugging and abandonment or significant plug back of this well contact Dustin Doucet
- Any changes to the approved drilling plan contact Dustin Doucet

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

• Dan Jarvis at: (801) 538-5338 office

(801) 942-0871 home

Carol Daniels at: (801) 538-5284 office
Dustin Doucet at: (801) 538-5281 office (801) 733-0983 home

# **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.

**Approved By:** 

Gil Hunt

Associate Director, Oil & Gas

Die Hunt

# DIVISION OF OIL, GAS AND MINING

# **SPUDDING INFORMATION**

Name of Con	npany:I	<u> </u>	E OIL &	z GAS O	NSHOR	E, L.P.	
Well Name:	:	BONANZ	ZA 1023	-2H3CS			
Api No <u>:</u>	43-047-503	344	_Lease	Гуре:	STATE		<del></del>
Section 02	Township	10S Range_	23E	_County_	U	INTAH	
Drilling Con	tractor	PETE MAR	TIN DR	LG	_RIG #	BUCKET	
SPUDDE	D:						
	Date	12/14/2009	<u>_</u>				
	Time	10:30 AM					
	How	DRY					
Drilling wi	II Commen	ce:				· • · · · · · · · · · · · · · · · · · ·	
Reported by		JAM)	ES GOE	BER			
Telephone #_		(435)	828-20	79			
Date	12/14/2009	_Signed	CHD				

Do not use this form for proposition—hole depth, reenter pludrill form for such proposals  1. TYPE OF WELL Gas Well  2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS  3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	5.LEASE DESIGNATION AND SERIAL NUMBER: ML 47062  6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  7.UNIT OF CA AGREEMENT NAME:  8. WELL NAME and NUMBER: BONANZA 1023-2H3CS  9. API NUMBER: 43047503440000  9. FIELD and POOL OF WILDCAT: NATURAL BUTTES		
11.	Township: 10.0S Range: 23.0E Meridian: \$		COUNTY: UINTAH  STATE: UTAH
TYPE OF SUBMISSION	ECK APPROPRIATE BOXES TO INDICAT	TYPE OF ACTION	OR OTHER DATA
	ACIDIZE  CHANGE TO PREVIOUS PLANS  CHANGE WELL STATUS  DEEPEN  OPERATOR CHANGE  PRODUCTION START OR RESUME  REPERFORATE CURRENT FORMATION  TUBING REPAIR  WATER SHUTOFF  WILDCAT WELL DETERMINATION  OMPLETED OPERATIONS. Clearly show all peril	ONDUCTOR HOLE TO 40'.	
RAN 14" SCHED	ULE 10 PIPE. CMT W/28 SX RE CATION ON 12/14/2009 AT 10	FADY MIX. SPUD WELL AD: 30 HRS. Coi	Accepted by the Utah Division of I, Gas and Mining R RECORD ONLY December 15, 2009
NAME (PLEASE PRINT) Andy Lytle SIGNATURE	720 929-6100	TITLE Regulatory Analyst  DATE	
N/A		12/15/2009	

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

# **ENTITY ACTION FORM**

Operator:

KERR McGEE OIL & GAS ONSHORE LP

Operator Account Number: N 2995

Address:

P.O. Box 173779

city DENVER

state CO zip 80217 Phone Number: (720) 929-6100

#### Well 1

API Number	Well	Name	QQ	Sec	Twp	Rng	County
4304750344	BONANZA	1023-2H3CS	NWNE	2	108	23E	UINTAH
Action Code	Current Entity Number	New Entity Number	S	pud Da	te		y Assignment fective Date
A	99999	17426	12	2/14/200	09	12	122/09

SPUD WELL LOCATION ON 12/14/2009 AT 10:30 HRS.

BHL = SWNE

#### Well 2

Action Code Current Entity New Entity Spud Date Entity Assignment Number Number Effective Date	API Number	Sec Tw	l Name	Sec	Twp	Rng	County
Number Number Effective Da	4304750347	2 10	A 1023-2G1BS	2	108	23E	UINTAH
$1 \qquad 174177 \qquad 13443000 \qquad 10/221$	Action Code	pud Date	1	ud [	te	T .	Ity Assignment Iffective Date
$A = \frac{99999}{1/42'} = \frac{12/14/2009}{2009} = \frac{13/33}{6}$	A	2/14/2009	17427	/14/2	09	13	1/22/09

Comments:

MIRU PETE MARTIN BUCKET RIG. WSMVDSPUD WELL LOCATION ON 12/14/2009 AT 12:30 HRS.

BHL = SWNE

#### Well 3

API Number	Well	Name	QQ	Sec	Twp	Rng	County
4304750345	BONANZA	1023-2G3BS	NWNE	2	108	23E	UINTAH
Action Code	Current Entity Number	New Entity Number	S	pud Da	te		tity Assignment  Iffective Date
A	99999	17428	1:	2/14/20	09	18	3/22/09
Comments:		1,75,700	1/1				

MIRU PETE MARTIN BUCKET RIG. WOTINV D

SPUD WELL LOCATION ON 12/14/2009 AT 14:30 HRS.

BAL = SWAE

#### **ACTION CODES:**

- A Establish new entity for new well (single well only)
- B 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

DEC 1 5 2009

ANDYLYILE	
Name (Please Print)	
Signature REGULATORY ANALYST	12/15/2009
Title	Date

Date

	STATE OF UTAH		FORM 9			
DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING			5.LEASE DESIGNATION AND SERIAL NUMBER ML 47062			
SUND	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:					
Do not use this form for propo- bottom-hole depth, reenter plu DRILL form for such proposals.	7.UNIT or CA AGREEMENT NAME:					
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: BONANZA 1023-2H3CS					
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS		9. API NUMBER: 43047503440000				
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	treet, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1191 FNL 1917 FEL			COUNTY: UINTAH			
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NWNE Section: 2	IP, RANGE, MERIDIAN: Township: 10.0S Range: 23.0E Meridian: S		STATE: UTAH			
11.	CK APPROPRIATE BOXES TO INDICATE	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			
	☐ CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE			
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION			
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK			
SPUD REPORT Date of Spud:	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION			
Date of Spud.	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON			
✓ DRILLING REPORT	☐ TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL			
Report Date: 12/17/2009	☐ WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION			
12/17/2009	WILDCAT WELL DETERMINATION	OTHER	OTHER:			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  MIRU PROPETRO AIR RIG ON 12/15/2009. DRILLED 12-1/4" SURFACE HOLE  TO 1960'. RAN 9-5/8" 36# J-55 SURFACE CSG. PUMP 150 BBLS OF H20. Accepted by the  PUMP 20 BBLS OF GEL WATER. PUMP 350 SX CLASS G PREM LITE TAIL CMTUtah Division of  @ 15.8 PPG, 1.15 YIELD. DROP PLUG ON FLY & DISPLACE W/146.1 BBLSOII, Gas and Mining  FRESH WATER. 100 PSI OF LIFT. NO RETURNS. BUMP PLUG 600 PSI. FOR RECORD ONLY  OUT # 1 W/100 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YIELD. WAIT 2  HRS AND PUMP TOP OUT #2 W/100 SX SAME CMT. WAIT 1 HOUR AND PUMP  TOP OUT # 3 W/100 SX SAME CMT. NO CMT TO SURFACE. WILL REDIMIX  WITH PETE MARTIN DRILLING. WORT.						
NAME (PLEASE PRINT) Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	TITLE Regulatory Analyst				
SIGNATURE N/A		<b>DATE</b> 12/21/2009				

	STATE OF UTAH DEPARTMENT OF NATURAL RESOUR	ICES	FORM 9			
	5.LEASE DESIGNATION AND SERIAL NUMBER: ML 47062					
SUND	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:					
Do not use this form for propo- bottom-hole depth, reenter plu DRILL form for such proposals	7.UNIT or CA AGREEMENT NAME:					
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: BONANZA 1023-2H3CS			
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		<b>9. API NUMBER:</b> 43047503440000			
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	treet, Suite 600, Denver, CO, 80217 377	<b>PHONE NUMBER:</b> 79 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1191 FNL 1917 FEL			COUNTY: UINTAH			
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NWNE Section: 2	IP, RANGE, MERIDIAN: Township: 10.0S Range: 23.0E Meridian	: S	STATE: UTAH			
11. CHE	CK APPROPRIATE BOXES TO INDIC	ATE 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			
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE			
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION			
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK			
SPUD REPORT Date of Spud:	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION			
Date or Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON			
✓ DRILLING REPORT	☐ TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL			
Report Date:	☐ WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION			
2/2/2010	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. FINISHED DRILLING FROM 1960' TO 8370' ON 1/31/2010. RAN 4-1/2" 11.6# I-80 PRODUCTION CSG. PUMP 40 BBLS WATER AHEAD. LEAD CMT W/560 SAccepted by the CLASS G PREM LITE @ 11.8 PPG, 2.42 YIELD. TAILED CMT W/1100 SX CLASUTAH Division of G 50/50 POZ MIX @ 14.3 PPG, 1.31 YIELD. DISPLACE W/129 BBLS WATERII, Gas and Mining BUMPED PLUG, FLOATS HELD, 1 1/2 BBLS BACK TO TRUCK. CEMENTION RECORD ONLY SURFACE GOOD CIRC THROUGHOUT JOB, 2300 PSI FINAL LIFT. CLEAN MUD TANKS. RELEASE ENSIGN 146 RIG ON 2/2/2010 AT 05:30 HRS.						
NAME (PLEASE PRINT) Andy Lytle	<b>PHONE NUMBE</b> 720 929-6100	Regulatory Analyst				
SIGNATURE N/A		<b>DATE</b> 2/2/2010				

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND M		5.LEASE DESIGNATION AND SERIAL NUMBER: ML 47062
	RY NOTICES AND REPORTS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	sals to drill new wells, significantly deepe ugged wells, or to drill horizontal laterals.		7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: BONANZA 1023-2H3CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	9. API NUMBER: 43047503440000		
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	itreet, Suite 600, Denver, CO, 80217 377	<b>PHONE NUMBER:</b> '9 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1191 FNL 1917 FEL		COUNTY: UINTAH	
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NWNE Section: 2	: S	STATE: UTAH	
11. CHE	CK APPROPRIATE BOXES TO INDICA	ATE NATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
THE SUBJECT WELL	□ ACIDIZE □ CHANGE TO PREVIOUS PLANS □ CHANGE WELL STATUS □ DEEPEN □ OPERATOR CHANGE ✓ PRODUCTION START OR RESUME □ REPERFORATE CURRENT FORMATION □ TUBING REPAIR □ WATER SHUTOFF □ WILDCAT WELL DETERMINATION  DMPLETED OPERATIONS. Clearly show all p WAS PLACED ON PRODUCTI DGICAL WELL HISTORY WILL WELL COMPLETION REPO	ON ON 4/15/2010 AT 1:30 BE SUBMITTED WITH THE ORT. Oi	
NAME (PLEASE PRINT) Andy Lytle	<b>PHONE NUMBE</b> 720 929-6100	R TITLE Regulatory Analyst	
SIGNATURE N/A		<b>DATE</b> 4/15/2010	

				STA TMENT O ON OF	OF NA		RESO					(hi 5. L	IENDE ghlight EASE DI ML 47	chan ESIGNA	iges) ATION A		F	ORM	18
WELL	CON	ADI ET	ION (	OP PI	=	MDI	ETIC	N DI		RT AND	N L OG					R TRI	BE NAME		
1a. TYPE OF WELL;							DRY		OTH		7 200	7. (	JNIT or C	A AGR	EEMEN	T NAN	Æ.		·
		VVI	ELL I	VVE	ILL BEL	ul .		<del></del> -l	011	13m1 3						<u> </u>			
	HORIZ. [		EP-	RE EN	TRY [	]	DIFF. RESVR.		ОТН	IER				ANZ			H3CS		
2. NAME OF OPERA KERR Mc(		L & GA	S ONS	SHORE	LP							1	4304		344				
3. ADDRESS OF OP P.O. BOX 1		GI	TY DEI	NVER		STATE	со	zip 802	217		NUMBER: 0) 929-6100		IELD AN						
4. LOCATION OF W		•					<del></del>	<del></del>					QTR/QT	R, SEC	TION, T	OWN	SHIP, RAN	GE,	
AT SURFACE:	NWNE	1191 F	NL & 1	1917 FE	EL								WNE				23E		
AT TOP PRODUC	CING INTER	RVAL REPOR	RTED BEL	ow: SE	NE 2	437 F	FNL &	1187	FEL S	EC.2-10	S-23E								
AT TOTAL DEPTI								23E	·				COUNT JINTA				13. STATE	UT	AH
14. DATE SPUDDED 12/14/2009		16. DATE T. 1/31/2		HED: 10		COMPL 2010		A	BANDON	IED 🗌	READY TO PRODU	CE 🗾		EVATIC		, RKB	, RT, GL):		
18. TOTAL DEPTH		370		9. PLUG B/		: MD			20. IF	MULTIPLE CO	OMPLETIONS, HOW	/MANY?*	21. DE		RIDGE	MD			
22. TYPE ELECTRIC	The second second		ICAL LOG	S RUN (Su	bmit cop					23.			L		<del></del>	1 V L			
SECTOR CE	BL-GR	HDIL/ZI	OL/CN							WAS WELI WAS DST DIRECTION		NO NO NO	$\overline{Z}$	YES [ YES [	<u> </u>	(Subr	mit analysis mit report) mit copy)	<del>)</del> )	
24. CASING AND LI	NER RECO	RD (Report	all strings	set in well	)					<del></del>			<u></u>	l	<u> </u>				
HOLE SIZE	SIZE/GI	RADE	WEIGHT	(#/ft.)	TOP (I	MD)	вотто	M (MD)		CEMENTER EPTH	CEMENT TYPE & NO. OF SACKS		RRY IE (BBL)	CE	MENT T	OP **	AMOUN	NT PUL	LED
20"	14"	STL	36.7	7#			4	0			28			1			1		
12 1/4"	9 5/8	J-55	36#	#			1,9	946			650								
7 7/8"	4 1/2	I-80	11.6	3#			8,3	356			1660								
					·							<u> </u>							
***************************************			·											<u> </u>			<del> </del>		
	<u></u>			L								<u></u>					<u> </u>		
25. TUBING RECOR		SET (MD)	DACKE	R SET (MD		SIZE		DEDTW	SET (MD	BACKES	SET (MD)	CIZE		DEDT	LOST A	#D\	BACKED	OFT /	140)
2 3/8"		,952	FACILE	TK OF I (IND	4-	SIZE		DEFIN	SET (MD	PACKET	R SET (MD)	SIZE		DEPTH	SET (N	(טוו	PACKER	SE1 (	MD)
26. PRODUCING IN			.1							27. PERFOI	RATION RECORD						<del></del>		
FORMATION	NAME	TOP	(MD)	воттом	(MD)	TOP	(TVD)	вотто	M (TVD)		L (Top/Bot - MD)	SIZE	NO. HC	LES	PE	RFOF	RATION ST.	ATUS	
(A) MESAVE	RDE	6,8	342	8,28	34	<u></u>				6,842	8,284	0.36	12	4	Open	Z	Squeezed		
(B)															Open		Squeezed		
(C)															Open		Squeezed		
(D)															Open		Squeezed		
28. ACID, FRACTUR	RE, TREATI	MENT, CEME	NT SQUE	EZE, ETC.															-
DEPTH I	NTERVAL								AM	OUNT AND T	YPE OF MATERIAL		,			.,	<del></del>	• • • • •	
6,842-8,284			PMP	9,828	BBLS	SLIC	CK H2	0 & 36	39,899	LBS 30	/50 SD.						<del></del>		
				······································															
29. ENCLOSED ATT	rachment	'S:							•						30	, WEL	L STATUS:	:	
=		HANICAL LO		CEMENT VI	ERIFICA	TION		GEOLOGI			OST REPORT	Z DIREC	TIONAL	SURVE	ΞΥ	l	PRO	D	

(CONTINUED ON BACK)

(5/2000)

RECEIVED

MAY 2 0 2010

24	IMITIAL	DECEMBER

### INTERVAL A (As shown in item #26)

OI. HAILMET ING	, poolion					E1184E 4 (40 0110	wii ili itolii waoj				
DATE FIRST PR	ODUCED:	TEST DA	ATE:		HOURS TESTED	);	TEST PRODUCTION	N OIL-88L:	GAS - MCF:	WATER - BBL	.: PROD. METHOD:
4/15/2010	)	4/25/	/2010			24	RATES: →	0	1,495	332	FLOWING
CHOKE SIZE:	TBG. PRES	S, CSG. PR	ESS. API G	RAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTIO	N OIL - BBL:	GAS - MCF:	WATER BBL	: INTERVAL STATUS:
20/64	751	1,3	74				RATES: →	0	1,495	332	PROD
				,	INT	ERVAL B (As sho	wn in item #26)				
DATE FIRST PR	ODUCED:	TEST DA	ATE:		HOURS TESTED	):	TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL	.: PROD. METHOD:
CHOKE SIZE:	TBG. PRES	S, CSG. PR	RESS, APIG	RAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTIO RATES: →	N OIL - BBL:	GAS - MCF:	WATER - 881	: INTERVAL STATUS:
	. <u> </u>		<del>- , , , ! , , , .</del>	<del>11 / 11 / 11 / 11 / 11 / 11 / 11 / 11 </del>	INT	ERVAL C (As sho	wn in item #26)		·····		<del></del>
DATE FIRST PR	ODUCED:	TEST DA	ATE:	<del></del>	HOURS TESTED	):	TEST PRODUCTION RATES: →	N OIL-BBL:	GAS - MCF:	WATER - BBL	.: PROD. METHOD:
CHOKE SIZE:	TBG. PRES	S. CSG. PR	RESS. API G	RAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTIO RATES: →	N OIL - BBL:	GAS - MCF:	WATER - BBL	.: INTERVAL STATUS:
			<del></del>	****	INT	ERVAL D (As sho	wn in Item #26)	, <del>- , - 1                              </del>		·· • · · · · · · · · · · · · · · · · ·	
DATE FIRST PR	ODUCED:	TEST DA	ATE:	<del></del>	HOURS TESTED	);	TEST PRODUCTION RATES: →	N OIL - BBL:	GAS - MCF:	WATER - BBL	.: PROD. METHOD:
CHOKE SIZE:	TBG. PRES	S, CSG. PR	RESS. API G	RAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTIO RATES: →	N OIL - BBL:	GAS - MCF:	WATER - BBL	.: INTERVAL STATUS:
32. DISPOSITIO	N OF GAS (S	old, Used for I	Fuel, Vented, E	tc.)		•			<del></del>		
33. SUMMARY	OF POROUS	ZONES (Includ	le Aquifers):			***		34. FORMATION	(Log) MARKERS:		
Show all importar tested, cushion u					is and all drill-stem recoveries.	tests, including de	epth interval				
Formatio	on .	Top (MD)	Bottom (MD)		Descript	tions, Contents, etc	3.		Name		Top (Measured Depth)
GREEN R MAHOGAI WASATCH MESAVER	NY I	1,350 1,956 4,330 6,075	6,075 8,370	(TD)							

35. ADDITIONAL REMARKS (Include plugging procedure)

### ATTACHED IS THE CHRONOLOGICAL WELL HISTORY AND FINAL SURVEY.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

NAME (PLEASE PRINT) ANDY LYTLE	TITLE	REGULATORY ANALYST
SIGNATURE	DATE	5/14/2010

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

<sup>\*</sup> ITEM 20: Show the number of completions if production is measured separately from two or more formations.



## ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27) Bonanza 1023-2B Pad Bonanza 1023-2H3CS

Bonanza 1023-2H3CS

Survey: WFT MWD SVY

# **Standard Survey Report**

01 February, 2010





Bonanza 1023-2H3CS UINTAH COUNTY, UTAH (nad 27) SECTION 2 T10S R23E 1191 FNL 1917 FEL 39° 58' 55.090 N 109° 17' 27.570 W



WELL DETAILS: Bonanza 1023-2H3CS

Ground Level: 5442.00

+N/-S +E/-W Northing 0.00 0.00 14524067.50

Easting 2119177.03

Latittude 39° 58' 55.090 N

Longitude 109° 17' 27,570 W Slot



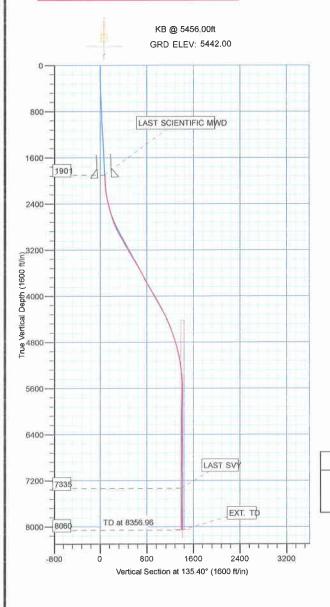
Azimuths to True North Magnetic North 11 19\*

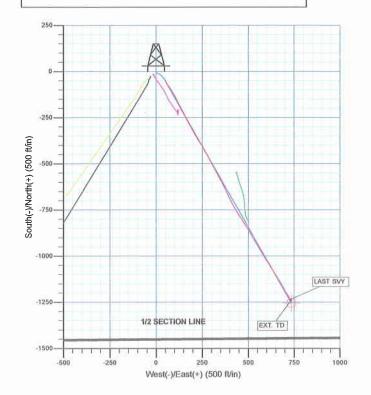
Magnetic Field

Magnetic Field Strength: 52498 4snT Dip Angle 65.95" Date 1/14/2010 Model BGGM2009

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1903.00	3,26	153.55	1901.15	-52.65	51.92	0.00	0.00	71.66	
2047.00	3.26	153.55	2044.92	-59.98	55.57	0.00	0.00	79.83	
2913.52	29.25	150.35	2869.69	-269,62	173,31	3.00	-3.57	320.24	
4485.46	29,25	150,35	4241.21	-937.12	553,31	0.00	0.00	1088.27	
5947.96	0.00	0.00	5641.00	-1254.56	734.02	2.00	180,00	1453,51	
8356,96	0.00	0.00	8050.00	-1254.56	734.02	0.00	0.00	1453.51	PBHL_Bonanza 1023-2H3CS(2445 FNL 1175 FEL)

### FORMATION TOP DETAILS





### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	8050.00	-1254.56	734.0239° 58'	42.690 ND9°	17' 18.140 W	Circle (Radius: 25.00)

	CASING D	ETAILS		
TVD	MD	Name	Size	
1944.68	1946.60	9 5/8"	9.62	

Survey: WFT MWD SVY (Bonanza 1023-2H3CS/Bonanza 1023-2H3CS)

Created By: Robert H. Scott



Survey Report



Company:

ANADARKO PETROLEUM CORP.

**Project:** 

UINTAH COUNTY, UTAH (nad 27)

Site:

Bonanza 1023-2B Pad

Well:

Bonanza 1023-2H3CS Bonanza 1023-2H3CS

Wellbore: Design:

Bonanza 1023-2H3CS

**Local Co-ordinate Reference:** 

Well Bonanza 1023-2H3CS

**TVD Reference:** 

KB @ 5456.00ft KB @ 5456.00ft

**MD Reference:** 

Database:

True

North Reference:

**Survey Calculation Method:** 

Minimum Curvature

EDM 2003.21 Single User Db

**Project** 

UINTAH COUNTY, UTAH (nad 27),

Map System:

Universal Transverse Mercator (US Survey Fee System Datum:

Mean Sea Level

Geo Datum:

NAD 1927 (NADCON CONUS)

Map Zone:

Zone 12N (114 W to 108 W)

Site

Bonanza 1023-2B Pad, SECTION 2 T10S R23E

Site Position:

Lat/Long

Northing:

14,524,067.50ft

Latitude:

Longitude:

39° 58' 55.090 N

From: **Position Uncertainty:** 

0.00 ft

Easting: Slot Radius: 2,119,177.03ft

**Grid Convergence:** 

109° 17' 27.570 W

1.10°

Well

Bonanza 1023-2H3CS

**Well Position** +N/-S

+E/-W

0.00 ft 0.00 ft Northing:

1/14/2010

14,524,067.50 ft

Latitude:

39° 58' 55.090 N

52,498

0.00 ft

Easting: Wellhead Elevation: 2,119,177.03 ft ft

11.19

Longitude: **Ground Level:** 

65.95

109° 17' 27.570 W 5,442.00 ft

**Position Uncertainty** 

Weilbore **Magnetics** 

**Model Name** 

Bonanza 1023-2H3CS

Sample Date

Declination (°)

Dip Angle (°)

Field Strength

(nT)

BGGM2009

Bonanza 1023-2H3CS

**Audit Notes:** 

Design

Version:

1.0

Phase:

ACTUAL

Tie On Depth:

0.00

**Vertical Section:** 

Depth From (TVD) (ft) 0.00

+N/-S (ft) 0.00

+E/-W (ft) 0.00

Direction (°) 135.40

**Survey Program** 

Date 2/1/2010

From (ft)

To (ft)

Survey (Wellbore)

**Tool Name** 

Description

143.00 2.008.00 1.903.00 SCIENTIFIC MWD (Bonanza 1023-2H3C5 MWD) 8,370.00 WFT MWD SVY (Bonanza 1023-2H3CS)

MWD - Standard MWD - Standard

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)
1,903.00	3.26	153.55	1,901.15	-52.65	51.92	73.95	0.00	0.00	0.00
2,008.00	3.00	158.19	2,005.99	-57.87	54.27	79.32	0.35	-0.25	4.42
2,053.00	3.25	154.82	2,050.93	-60.12	55.25	81.61	0.69	0.56	-7.49
2,099.00	5.13	152.57	2,096.80	-63.13	56.76	84.80	4.10	4.09	- <b>4</b> .89
2,144.00	6.75	147.44	2,141.56	-67.14	59.11	89.31	3.78	3.60	-11.40
2,189.00	7.88	144.07	2,186.19	-71.87	62.34	94.95	2.68	2.51	-7.49
2,235.00	9.06	144.36	2,231.69	-77.37	66.30	101.64	2.57	2.57	0.63
2,280.00	10.13	143.19	2,276.06	-83.41	70.74	109.06	2.42	2.38	-2.60
2,325.00	11.23	144.47	2,320.28	-90.15	75.65	117.31	2.50	2.44	2.84
2,371.00	13.13	146.69	2,365.24	-98.16	81.13	126.86	4.25	4.13	4.83
2,416.00	14.00	149.44	2,408.99	-107.12	86.70	137.15	2.41	1.93	6.11
2,462.00	15.13	148.44	2,453.51	-117.03	92.67	148.40	2.52	2.46	-2.17



Survey Report



Company:

ANADARKO PETROLEUM CORP.

Project:

UINTAH COUNTY, UTAH (nad 27)

Site: Well: Bonanza 1023-2B Pad Bonanza 1023-2H3CS Bonanza 1023-2H3CS

Wellbore: Design:

Bonanza 1023-2H3CS

Local Co-ordinate Reference:

**TVD Reference:** MD Reference:

North Reference:

**Survey Calculation Method:** 

Database:

Well Bonanza 1023-2H3CS

KB @ 5456.00ft KB @ 5456.00ft

True

Minimum Curvature

EDM 2003.21 Single User Db

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)
2,507.00	15.75	149.82	2,496.88	-127.31	98.82	160.03	1.60	1.38	3.07
2,552.00	16.50	153.57	2,540.11	-138.31	104.73	172.02	2.85	1.67	8.33
2,598.00	17.06	155.07	2,584.16	-150.28	110.48	184.58	1.54	1.22	3.26
2,643.00	18.00	154.07	2,627.07	-162.52	116.31	197.38	2.19	2.09	-2.22
2,688.00	19.00	151.44	2,669.74	-175.21	122.85	211.01	2.89	2.22	-5.84
2,734.00	20.44	150.44	2,713.04	-188.77	130.39	225.97	3.22	3.13	-2.17
2,779.00	22.50	152.44	2,754.92	-203.24	138.25	241.79	4.86	4.58	4.44
2,824.00	24.13	153.82	2,796.24	-219.13	146.30	258.75	3.82	3.62	3.07
2,870.00	26.81	154.69	2,837.77	-236.95	154.88	277.46	5.88	5.83	1.89
2,915.00	28.50	153.07	2,877.63	-255.70	164.08	297.27	4.11	3.76	-3.60
2,960.00	29.56	151.19	2,916.97	-275.00	174.30	318.19	3.11	2.36	-4.18
3,006.00	31.13	150.94	2,956.67	-295.33	185.54	340.56	3.42	3.41	-0.54
3,051.00	31.06	150.57	2,995.20	-315.61	196.89	362.97	0.45	-0.16	-0.82
3,096.00	29.06	150.19	3,034.15	-335.21	208.03	384.74	4.46	-4.44	-0.84
3,142.00	29.19	149.19	3,074.33	-354.54	219.33	406.44	1.10	0.28	-2.17
3,187.00	29.75	148.94	3,113.51	-373.53	230.71	427.95	1.27	1.24	-0.56
3,232.00	30.81	148.82	3,152.37	-392.95	242.44	450.02	2.36	2.36	-0.27
3,278.00	30.75	149.19	3,191.89	-413.13	254.56	472.90	0.43	-0.13	0.80
3,323.00	31.31	150.69	3,230.45	-433.20	266.18	495.35	2.12	1.24	3.33
3,368.00	31.31	151.19	3,268.90	-453.65	277.54	517.88	0.58	0.00	1.11
3,414.00	30.63	151.19	3,308.34	-474.39	288.94	540.65	1.48	-1.48	0.00
3,459.00	31.00	151.57	3,346.99	-494.62	299.98	562.82	0.93	0.82	0.84
3,504.00	31.69	152.44	3,385.42	-515.29	310.97	585.25	1.83	1.53	1.93
3,549.00	31.94	152.19	3,423.66	-536.30	321.99	607.94	0.63	0.56	-0.56
3,595.00	32.00	152.07	3,462.68	-557.83	333.38	631.27	0.19	0.13	-0.26
3,640.00	31.00	151.82	3,501.05	-578.58	344.44	653.81	2.24	-2.22	-0.56
3,685.00	30.00	152.57	3,539.82	-598.78	355.09	675.67	2.38	-2.22	1.67
3,731.00	29.00	154.32	3,579.86	-619.04	365.22	697.21	2.87	-2.17	3.80
3,776.00	28.35	154.33	3,619.34	-638.50	374.58	717.63	1.44	-1.44	0.02
3,821.00	28.38	153.32	3,658.94	-657.68	384.01	737.91	1.07	0.07	-2.24
3,867.00	29.56	154.19	3,699.18	-677.67	393.86	759.06	2.72	2.57	1.89
3,912.00	30.38	154.07	3,738.16	-697.89	403.67	780.35	1.83	1.82	-0.27
3,957.00	30.13	151.19	3,777.04	-718.03	414.08	802.00	3.27	-0.56	-6.40
4,002.00	30.88	150.82	3,815.81	-738.00	425.16	824.00	1.72	1.67	-0.82
4,048.00	31.13	149.44	3,855.24	-758.55	436.96	846.91	1.64	0.54	-3.00
4,093.00	30.88	147.69	3,893.81	-778.33	449.05	869.48	2.08	-0.56	-3.89
4,138.00	30.06	145.94	3,932.59	-797.42	461.53	891.84	2.68	-1.82	-3.89
4,184.00	29.31	147.19	3,972.56	-816.43	474.08	914.19	2.11	-1.63	2.72
4,229.00	29.06	148.07	4,011.84	-834.96	485.83	935.64	1.10	-0.56	1.96
4,320.00	28.38	149.19	4,091.65	-872.30	508.60	978.20	0.95	-0.75	1.23
4,410.00	28.81	149.82	4,170.67	-909.41	530.46	1,019.98	0.58	0.48	0.70
4,501.00	27.44	148.44	4,250.92	-946.24	552.45	1,061.64	1.67	-1.51	-1.52
4,592.00	26.13	148.69	4,332.16	-981.22	573.84	1,101.57	1.44	-1.44	0.27
4,682.00	24.31	148.94	4,413.58	-1,014.03	593.70	1,138.88	2.03	-2.02	0.28
4,773.00	23.00	147.82	4,496.93	-1,045.12	612.83	1,174.45	1.52	-1.44	-1.23
4,863.00	22.31	147.94	4,579.98	-1,074.48	631.27	1,208.30	0.77	-0.77	0.13
4,954.00	20.10	147.37	4,664.82	-1,102.29	648.87	1,240.46	2.44	-2.43	-0.63
5,045.00	19.00	147.69	4,750.57	-1,127.98	665.22	1,270.23	1.21	-1.21	0.35
5,135.00	16.63	149.94	4,836.25	-1,151.52	679.50	1,297.01	2.74	-2.63	2.50
5,226.00	14.63	151.32	4,923.88	-1,172.87	691.54	1,320.67	2.24	-2.20	1.52
5,317.00	12.19	149.19	5,012.39	-1,191.21	701.98	1,341.06	2.74	-2.68	-2.34
5,407.00	10.38	145.94	5,100.65	-1,206.09	711.39	1,358.26	2.13	-2.01	-3.61
5,498.00	8.81	154.82	5,190.38	-1,219.19	718.95	1,372.89	2.37	-1.73	9.76
5,589.00	6.88	148.07	5,280.53	-1,230.12	724.79	1,384.78	2.35	-2.12	-7.42



Survey Report

**TVD Reference:** 

MD Reference:

Database:

North Reference:



Company:

ANADARKO PETROLEUM CORP.

Project: Site:

UINTAH COUNTY, UTAH (nad 27)

Bonanza 1023-2B Pad Well: Bonanza 1023-2H3CS Wellbore: Bonanza 1023-2H3CS

Bonanza 1023-2H3CS

Local Co-ordinate Reference:

Well Bonanza 1023-2H3CS

KB @ 5456.00ft KB @ 5456.00ft

True

**Survey Calculation Method:** Minimum Curvature

EDM 2003.21 Single User Db

### Design: 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)
5.679.00	5.25	154.32	5,370.02	-1,238.41	729.43	1,393.94	1.95	-1.81	6.94
5,770.00	3.25	169.94	5,460.77	-1,244.70	731.68	1,400.00	2.52	-2.20	17.16
5,861.00	1.13	149.18	5,551.70	-1,248.01	732.59	1,403.00	2.45	-2.33	-22.81
5,952.00	1.38	318.32	5,642.69	-1,247.96	732.33	1,402.78	2.75	0.27	185.87
6.042.00	1.31	322.69	5,732.66	-1,246.33	730.98	1,400.67	0.14	-0.08	4.86
6,133.00	1.38	330.69	5,823.64	-1,244.55	729.81	1,398.58	0.22	0.08	8.79
6,223.00	1.19	339.32	5,913.62	-1,242.73	728.95	1,396.68	0.30	-0.21	9.59
6,314.00	0.88	327.82	6,004.60	-1,241.26	728.25	1,395.14	0.41	-0.34	-12.64
6,405.00	0.44	293.32	6,095.60	-1,240.53	727.56	1,394.13	0.63	-0.48	-37.91
6,495.00	0.19	297.44	6,185.59	-1,240.32	727.11	1,393.67	0.28	-0.28	4.58
6,586.00	0.19	201.07	6,276.59	-1,240.39	726.92	1,393.59	0.31	0.00	-105.90
6,677.00	0.25	220.32	6,367.59	-1,240.68	726.73	1,393.67	0.10	0.07	21.15
6,767.00	0.63	204.07	6,457.59	-1,241.29	726.41	1,393.86	0.44	0.42	-18.06
6,858.00	0.69	168.32	6,548.59	-1,242.28	726.31	1,394.51	0.45	0.07	-39.29
6,948.00	0.75	159.32	6,638.58	-1,243.36	726.63	1,395.50	0.14	0.07	-10.00
7,039.00	0.25	329.07	6,729.58	-1,243.75	726.74	1,395.85	1.10	-0.55	186.5 <b>4</b>
7,130.00	0.44	309.57	6,820.57	-1,243.35	726.37	1,395.31	0.24	0.21	-21.43
7,220.00	0.13	314.57	6,910.57	-1,243.06	726.03	1,394.87	0.35	-0.34	5.56
7,311.00	1.69	314.69	7,001.56	-1,242.05	725.00	1,393.42	1.71	1.71	0.13
7,402.00	1.56	315.94	7,092.52	-1,240.21	723.19	1,390.84	0.15	-0.14	1.37
7,492.00	1.13	19.44	7,182.50	-1,238.50	722.63	1,389.23	1.62	-0.48	70.56
7,583.00	0.94	60.57	7,273.49	-1,237.28	723.58	1,389.03	0.82	-0.21	45.20
LAST SVY									
7,645.00	0.94	85.82	7,335.48	-1,237.00	724.53	1,389.49	0.66	0.00	40.73
EXT. TD									
8,370.00	0.94	85.82	8,060.38	-1,236.13	736.39	1,397.20	0.00	0.00	0.00

### **Survey Annotations**

Measured	Vertical	Local Coor	<b>Local Coordinates</b>					
Depth	Depth	+N/-S	+E/-W	Comment				
(ft)	(ft)	(ft)	(ft)					
7,645.00	7,335.48	-1,237.00	724.53	LAST SVY				
8,370.00	8,060.38	-1,236.13	736.39	EXT. TD				

Checked By:	Approved By:	Date:



## ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27) Bonanza 1023-2B Pad Bonanza 1023-2H3CS

Bonanza 1023-2H3CS

Design: Bonanza 1023-2H3CS

**Survey Report - Geographic** 

01 February, 2010





Survey Report - Geographic



Company: Project:

Site:

ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27) Bonanza 1023-2B Pad

Well: Wellbore: Design:

Bonanza 1023-2H3CS Bonanza 1023-2H3CS Bonanza 1023-2H3CS Local Co-ordinate Reference:

**TVD Reference:** MD Reference:

North Reference:

**Survey Calculation Method:** 

Database:

Well Bonanza 1023-2H3CS

KB @ 5456.00ft KB @ 5456.00ft

True

Minimum Curvature

EDM 2003.21 Single User Db

**Project** 

UINTAH COUNTY, UTAH (nad 27),

Map System: Geo Datum:

Map Zone:

Universal Transverse Mercator (US Survey Fee System Datum:

NAD 1927 (NADCON CONUS) Zone 12N (114 W to 108 W)

Mean Sea Level

Site

From:

Bonanza 1023-2B Pad, SECTION 2 T10S R23E

Site Position:

Lat/Long

Northing: Easting:

14,524,067.50ft 2,119,177.03ft Latitude:

Longitude:

39° 58' 55.090 N

1.10 °

**Position Uncertainty:** 

0.00 ft

Slot Radius:

in

**Grid Convergence:** 

109° 17' 27.570 W

Well

Bonanza 1023-2H3CS

**Well Position** 

+N/-S

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

14,524,067.50 ft 2,119,177.03 ft Latitude: Longitude: 39° 58' 55.090 N

**Position Uncertainty** 

0.00 ft

Wellhead Elevation:

ft

**Ground Level:** 

109° 17' 27.570 W 5,442.00 ft

Wellbore

Bonanza 1023-2H3CS

**Magnetics** 

**Model Name** 

Sample Date

Declination (°)

**Dip Angle** (°)

Field Strength

(nT)

**BGGM2009** 

1/14/2010

11.19

65.95

52,498

Design

Bonanza 1023-2H3CS

**Audit Notes:** 

Version:

1.0

Phase:

ACTUAL

Tie On Depth:

0.00

**Vertical Section:** 

Depth From (TVD) (ft) 0.00

+N/-S (ft)

0.00

+E/-W (ft)

0.00

Direction (°)

135.40

**Survey Program** 

Date 2/1/2010

From (ft)

To

(ft) Survey (Wellbore) **Tool Name** 

Description

143.00 2.008.00 1,903.00 SCIENTIFIC MWD (Bonanza 1023-2H3C\$ MWD 8,370.00 WFT MWD SVY (Bonanza 1023-2H3CS)

MWD - Standard MWD - Standard



Survey Report - Geographic



Company: Project: Site:

Well: Wellbore:

Design:

ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27) Bonanza 1023-2B Pad

Bonanza 1023-2H3CS Bonanza 1023-2H3CS

Bonanza 1023-2H3CS

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Database:

Well Bonanza 1023-2H3CS

KB @ 5456.00ft KB @ 5456.00ft

True

Minimum Curvature

EDM 2003.21 Single User Db

urvey				-					
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.00		0.00	0.00	0.00	0.00	14,524,067.50	2,119,177.03	39° 58' 55.090 N	109° 17' 27.570 W
143.00		269.80	143.00	0.00	-0.46	14,524,067.49	2,119,176.57	39° 58′ 55.090 N	109° 17' 27.576 W
233.00		187.68	233.00	-0.46	-0.81	14,524,067.02	2,119,176.22	39° 58' 55.085 N	109° 17' 27.580 W
323.00		157.07	322.98	-1.92	-0.45	14,524,065.57	2,119,176.61	39° 58' 55.071 N	109° 17' 27.576 W
393.00		155.53	392.96	-3.70	0.33	14,524,063.80	2,119,177.43	39° 58′ 55.053 N	109° 17' 27.566 W
483.00		138.58	482.91	-6.14	1.93	14,524,061.40	2,119,179.08	39° 58′ 55.029 N	109° 17' 27.545 W
573.00		115.57	572.85	-8.01	4.47	14,524,059.57	2,119,181.65	39° 58′ 55.011 N	109° 17' 27.513 W
663.00		105.57	662.78	-9.27	7.90	14,524,058.38	2,119,185.10	39° 58' 54.998 N	109° 17' 27.469 W
753.00		105.27	752.69	-10.34	11.75	14,524,057.39	2,119,188.97	39° 58' 54.988 N	109° 17' 27.419 W
843.00		117.88	842.59	-11.86	15.58	14,524,055.93	2,119,192.84	39° 58' 54.973 N	109° 17' 27.370 W
933.00		124.60	932.49	-14.07	19.22	14,524,053.80	2,119,196.52	39° 58' 54.951 N	109° 17' 27.323 W
1,023.00		129.37	1,022.39	-16.67	22.67	14,524,051.27	2,119,200.01	39° 58' 54.925 N	109° 17' 27.279 W
1,113.00		134.13	1,112.28	-19.69	26.04	14,524,048.31	2,119,203.44	39° 58' 54.895 N	109° 17' 27.235 W
1,203.00		138.20	1,202.15	-23.11	29.32	14,524,044.96	2,119,206.79	39° 58' 54.862 N	109° 17' 27.193 W
1,293.00		135.10	1,292.02	-26.62	32.64	14,524,041.51	2,119,210.17	39° 58' 54.827 N	109° 17' 27.151 W
1,383.00		141.38	1,381.89	-30.28	35.90	14,524,037.91	2,119,213.50	39° 58' 54.791 N	109° 17' 27.109 W
1,473.00		144.17	1,471.74	-34.40	39.03	14,524,033.85	2,119,216.71	39° 58' 54.750 N	109° 17' 27.069 W
1,563.00		137.60	1,561.59	-38.34	42.21	14,524,029.97	2,119,219.96	39° 58' 54.711 N	109° 17' 27.028 W
1,653.00		140.36	1,651.48	-41.80	45.22	14,524,026.57	2,119,223.04	39° 58' 54.677 N	109° 17' 26.989 W
1,743.00		146.89	1,741.37	-45.37	47.85	14,524,023.05	2,119,225.74	39° 58' 54.642 N	109° 17' 26.955 W
1,833.00		151.50	1,831.25	-49.27	50.17	14,524,019.19	2,119,228.14	39° 58' 54.603 N	109° 17' 26.925 W
	CIENTIFIC I								
1,903.00		153.55	1,901.15	-52.65	51.92	14,524,015.85	2,119,229.95	39° 58' 54.570 N	109° 17' 26.903 W
2,008.00		158.19	2,005.99	-57.87	54.27	14,524,010.67	2,119,232.40	39° 58' 54.518 N	109° 17' 26.873 W
2,053.00		154.82	2,050.93	-60.12	55.25	14,524,008.44	2,119,233.43	39° 58' 54.496 N	109° 17' 26.860 W
2,099.00		152.57	2,096.80	-63.13	56.76	14,524,005.47	2,119,234.99	39° 58' 54.466 N	109° 17' 26.841 W
2,144.00		147.44	2,141.56	-67.14	59.11	14,524,001.50	2,119,237.41	39° 58′ 54.426 N	109° 17' 26.811 W
2,189.00		144.07	2,186.19	-71.87	62,34	14,523,996.84	2,119,240.74	39° 58' 54.380 N	109° 17' 26.769 W
2,235.00		144.36	2,231.69	-77.37	66.30	14,523,991.42	2,119,244.80	39° 58' 54.325 N	109° 17' 26.718 W
2,280.00		143.19	2,276.06	-83.41	70.74	14,523,985.45	2,119,249.35	39° 58' 54.266 N	109° 17' 26.661 W
2,325.00		144.47	2,320.28	-90.15	75.65	14,523,978.81	2,119,254.40	39° 58' 54.199 N	109° 17' 26.598 W
2,371.00		146.69	2,365.24	-98.16	81.13	14,523,970.91	2,119,260.02	39° 58' 54.120 N	109° 17′ 26.528 W
2,416.00		149.44	2,408.99	-107.12	86.70	14,523,962.06	2,119,265.77	39° 58' 54.031 N	109° 17' 26.456 W
2,462.00		148.44	2,453.51	-117.03	92.67	14,523,952.27	2,119,271.93	39° 58' 53.933 N	109° 17' 26.379 W
2,507.00		149.82	2,496.88	-127.31	98.82	14,523,942.10	2,119,278.27	39° 58' 53.832 N	109° 17′ 26.300 W
2,552.00		153.57	2,540.11	-138.31	104.73	14,523,931.22	2,119,284.39	39° 58' 53.723 N	109° 17' 26.224 W
2,598.00		155.07	2,584.16	-150.28	110.48	14,523,919.36	2,119,290.37	39° 58' 53.605 N	109° 17' 26.151 W
2,643.00		154.07	2,627.07	-162.52	116.31	14,523,907.24	2,119,296.43	39° 58' 53,484 N	109° 17' 26.076 W
2,688.00		151.44	2,669.74	-175.21	122.85	14,523,894.68	2,119,303.21	39° 58' 53.358 N	109° 17' 25.992 W
2,734.00		150.44	2,713.04	-188.77	130.39	14,523,881.26	2,119,311.02	39° 58' 53.224 N	109° 17' 25.895 W
2,779.00		152.44	2,754.92	-203.24	138.25	14,523,866.94	2,119,319.15	39° 58' 53.081 N	109° 17' 25.794 W
2,824.00		153.82	2,796.24	-219.13	146.30	14,523,851.21	2,119,327.50	39° 58' 52.924 N	109° 17' 25.690 W
2,870.00		154.69	2,837.77	-236.95	154.88	14,523,833.56	2,119,336.42	39° 58' 52.748 N	109° 17′ 25.580 W
2,915.00		153.07	2,877.63	-255.70	164.08	14,523,814.99	2,119,345.98	39° 58' 52.563 N	109° 17' 25.462 W
2,960.00		151.19	2,916.97	-275.00	174.30	14,523,795.89	2,119,356.56	39° 58' 52.372 N	109° 17' 25.331 W
3,006.00		150.94	2,956.67	-295.33	185.54	14,523,775.77	2,119,368.20	39° 58' 52.171 N	109° 17' 25.186 W
3,051.00		150.57	2,995.20	-315.61	196.89	14,523,755.72	2,119,379.94	39° 58' 51.971 N	109° 17' 25.040 W
3,096.00		150.19	3,034.15	-335.21	208.03	14,523,736.34	2,119,391.45	39° 58' 51.777 N	109° 17' 24.897 W
3,142.00		149.19	3,074.33	-354.54	219.33	14,523,717.23	2,119,403.11	39° 58' 51.586 N	109° 17' 24.752 W
3,187.00		148.94	3,113.51	-373.53	230.71	14,523,698.46	2,119,414.86	39° 58' 51.398 N	109° 17' 24.606 W
3,232.00		148.82	3,152.37	-392.95	242.44	14,523,679.27	2,119,426.96	39° 58' 51.206 N	109° 17' 24.455 W
3,278.00		149.19	3,191.89	-413.13	254.56	14,523,659.32	2,119,439.46	39° 58' 51.007 N	109° 17' 24.300 W
3,323.00		150.69	3,230.45	-433.20	266.18	14,523,639.47	2,119,451.46	39° 58' 50.808 N	109° 17' 24.150 W
3,368.00		151.19	3,268.90	-453.65	277.54	14,523,619.25	2,119,463.21	39° 58' 50.606 N	109° 17' 24.004 W
3,414.00	30.63	151.19	3,308.34	-474.39	288.94	14,523,598.74	2,119,475.01	39° 58' 50.401 N	109° 17' 23.858 W



Survey Report - Geographic



Company: Project: Site:

ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27) Bonanza 1023-2B Pad

Bonanza 1023-2H3CS Well: Bonanza 1023-2H3CS Wellbore:

Design: Bonanza 1023-2H3CS **Local Co-ordinate Reference:** 

TVD Reference: **MD** Reference:

North Reference:

**Survey Calculation Method:** 

Database:

Well Bonanza 1023-2H3CS

KB @ 5456.00ft KB @ 5456.00ft

True

Minimum Curvature

EDM 2003.21 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
3,459.00	31.00	151.57	3,346.99	-494.62	299.98	14,523,578.72	2,119,486.44	39° 58′ 50.201 N	109° 17' 23.716 W
3,504.00	31.69	152.44	3,385.42	-515.29	310.97	14,523,558.26	2,119,497.82	39° 58′ 49.997 N	109° 17' 23.575 W
3,549.00	31.94	152.19	3,423.66	-536.30	321.99	14,523,537.47	2,119,509.24	39° 58' 49.789 N	109° 17' 23.433 W
3,595.00		152.07	3,462.68	-557.83	333.38	14,523,516.16	2,119,521.04	39° 58′ 49.576 N	109° 17' 23.287 W
3,640.00	31.00	151.82	3,501.05	-578.58	344.44	14,523,495.63	2,119,532.49	39° 58′ 49.371 N	109° 17' 23.145 W
3,685.00		152.57	3,539.82	-598.78	355.09	14,523,475.63	2,119,543.53	39° 58' 49.172 N	109° 17' 23.008 W
3,731.00		154.32	3,579.86	-619.04	365.22	14,523,455.57	2,119,554.05	39° 58' 48.971 N	109° 17' 22.878 W
3,776.00		154.33	3,619.34	-638.50	374.58	14,523,436.30	2,119,563.78	39° 58' 48.779 N	109° 17' 22.758 W
3,821.00		153.32	3,658.94	-657.68	384.01	14,523,417.30	2,119,573.57	39° 58' 48.590 N	109° 17' 22.637 W
3,867.00	29.56	154.19	3,699.18	-677.67	393.86	14,523,397.50	2,119,583.80	39° 58' 48.392 N	109° 17' 22.510 W
3,912.00		154.07	3,738.16	-697.89	403.67	14,523,377.47	2,119,594.00	39° 58′ 48.192 N	109° 17' 22.384 W
3,957.00	30.13	151.19	3,777.04	-718.03	414.08	14,523,357.54	2,119,604.80	39° 58' 47.993 N	109° 17' 22.250 W
4,002.00		150.82	3,815.81	-738.00	425.16	14,523,337.78	2,119,616.25	39° 58' 47.796 N	109° 17' 22.108 W
4,048.00	31.13	149.44	3,855.24	-758.55	436.96	14,523,317.46	2,119,628.45	39° 58' 47.593 N	109° 17' 21.956 W
4,093.00		147.69	3,893.81	-778.33	449.05	14,523,297.92	2,119,640.91	39° 58′ 47.397 N	109° 17' 21.801 W
4,138.00		145.94	3,932.59	-797.42 -816.43	461.53	14,523,279.07	2,119,653.76 2,119,666,68	39° 58' 47.208 N	109° 17' 21.641 W
4,184.00		147.19	3,972.56	-834.96	474.08 485.83	14,523,260.30 14,523,242.00	2,119,678.78	39° 58' 47.020 N 39° 58' 46.837 N	109° 17' 21.479 W 109° 17' 21.328 W
4,229.00	29.06	148.07	4,011.84	-872.30	508.60	14,523,242.00	2,119,702.25	39° 58' 46.468 N	109° 17' 21.036 W
4,320.00	28.38	149.19	4,091.65		530.46	14,523,203.11	, ,	39° 58' 46.101 N	109° 17' 21.036 W
4,410.00	28.81 27. <del>44</del>	149.82 148.44	4,170.67 4,250.92	-909.41 -946.24	552.45	14,523,132.03	2,119,724.82 2,119,747.52	39° 58' 45.737 N	109° 17' 20.472 W
4,501.00 4,592.00		148.69	4,230.92	-940.24 -981.22	573.84	14,523,132.03	2,119,769.57	39° 58' 45.392 N	109 17 20.472 W
4,682.00		148.94	4,413.58	-1,014.03	593.70	14,523,065.04	2,119,790.06	39° 58' 45.067 N	109° 17' 19.943 W
4,773.00		147.82	4,496.93	-1,014.03	612.83	14,523,003.04	2,119,809.78	39° 58′ 44.760 N	109° 17' 19.697 W
4,773.00		147.82	4,579.98	-1,043.12	631.27	14,523,005.31	2,119,828.78	39° 58' 44.470 N	109° 17' 19.460 W
4,954.00	20.10	147.37	4,664.82	-1,102.29	648.87	14,522,977.85	2,119,846.91	39° 58' 44.195 N	109° 17' 19.234 W
5,045.00		147.69	4,750.57	-1,127.98	665.22	14,522,952.47	2,119,863.75	39° 58' 43.941 N	109° 17' 19.024 W
5,135.00	16.63	149.94	4,836.25	-1,151.52	679.50	14,522,929.22	2,119,878.48	39° 58' 43.708 N	109° 17' 18.840 W
5,226.00		151.32	4,923.88	-1,172.87	691.54	14,522,908.10	2,119,890.92	39° 58' 43.497 N	109° 17' 18.686 W
5,317.00		149.19	5,012.39	-1,191.21	701.98	14,522,889.97	2,119,901.71	39° 58′ 43.316 N	109° 17' 18.552 W
5,407.00		145.94	5,100.65	-1,206.09	711.39	14,522,875.27	2,119,911.40	39° 58' 43.169 N	109° 17' 18.431 W
5,498.00		154.82	5,190.38	-1,219.19	718.95	14,522,862.32	2,119,919.21	39° 58' 43.040 N	109° 17' 18.334 W
5,589.00		148.07	5,280.53	-1,230.12	724.79	14,522,851.50	2,119,925.27	39° 58' 42.932 N	109° 17' 18.259 W
5,679.00		154.32	5,370.02	-1,238.41	729.43	14,522,843.30	2,119,930.06	39° 58' 42.850 N	109° 17' 18.199 W
5,770.00		169.94	5,460.77	-1,244.70	731.68	14,522,837.05	2,119,932.44	39° 58′ 42.787 N	109° 17' 18.170 W
5,861.00		149.18	5,551.70	-1,248.01	732.59	14,522,833.76	2,119,933.41	39° 58' 42.755 N	109° 17' 18.158 W
5,952.00	1.38	318.32	5,642.69	-1,247.96	732.33	14,522,833.80	2,119,933.14	39° 58' 42.755 N	109° 17' 18.162 W
6,042.00		322.69	5,732.66	-1,246.33	730.98	14,522,835.41	2,119,931.77	39° 58' 42.771 N	109° 17' 18.179 W
6,133.00	1.38	330.69	5,823.64	-1,244.55	729.81	14,522,837.17	2,119,930.56	39° 58' 42.789 N	109° 17' 18.194 W
6,223.00	1.19	339.32	5,913.62	-1,242.73	728.95	14,522,838.97	2,119,929.67	39° 58' 42.807 N	109° 17' 18.205 W
6,314.00	0.88	327.82	6,004.60	-1,241.26	728.25	14,522,840.43	2,119,928.94	39° 58′ 42.821 N	109° 17' 18.214 W
6,405.00	0.44	293.32	6,095.60	-1,240.53	727.56	14,522,841.15	2,119,928.23	39° 58' 42.829 N	109° 17' 18.223 W
6,495.00	0.19	297.44	6,185.59	-1,240.32	727.11	14,522,841.34	2,119,927.77	39° 58' 42.831 N	109° 17' 18.229 W
6,586.00	0.19	201.07	6,276.59	-1,240.39	726.92	14,522,841.27	2,119,927.59	39° 58′ 42.830 N	109° 17' 18.231 W
6,677.00	0.25	220.32	6,367.59	-1,240.68	726.73	14,522,840.97	2,119,927.41	39° 58' 42.827 N	109° 17' 18.234 W
6,767.00	0.63	204.07	6,457.59	-1,241.29	726.41	14,522,840.37	2,119,927.09	39° 58′ 42.821 N	109° 17' 18.238 W
6,858.00		168.32	6,548.59	-1,242.28	726.31	14,522,839.37	2,119,927.02	39° 58' 42.811 N	109° 17' 18.239 W
6,948.00		159.32	6,638.58	-1,243.36	726.63	14,522,838.30	2,119,927.36	39° 58' 42.801 N	109° 17′ 18.235 W
7,039.00		329.07	6,729.58	-1,243.75	726.74	14,522,837.91	2,119,927.47	39° 58' 42.797 N	109° 17' 18.234 W
7,130.00		309.57	6,820.57	-1,243.35	726.37	14,522,838.30	2,119,927.10	39° 58′ 42.801 N	109° 17' 18.238 W
7,220.00	0.13	314.57	6,910.57	-1,243.06	726.03	14,522,838.58	2,119,926.75	39° 58′ 42.804 N	109° 17' 18.243 W
7,311.00		314.69	7,001.56	-1,242.05	725.00	14,522,839.58	2,119,925.70	39° 58' 42.814 N	109° 17' 18.256 W
7,402.00		315.94	7,092.52	-1,240.21	723.19	14,522,841.38	2,119,923.85	39° 58' 42.832 N	109° 17' 18.279 W
7,492.00		19.44	7,182.50	-1,238.50	722.63	14,522,843.08	2,119,923.26	39° 58' 42.849 N	109° 17' 18.286 W
7,583.00	0.94	60.57	7,273.49	-1,237.28	723.58	14,522,844.31	2,119,924.19	39° 58' 42.861 N	109° 17' 18.274 W



Survey Report - Geographic

TVD Reference:

MD Reference:



Company:

ANADARKO PETROLEUM CORP.

Project: Site: UINTAH COUNTY, UTAH (nad 27)

Well: Wellbore: Bonanza 1023-2B Pad Bonanza 1023-2H3CS Bonanza 1023-2H3CS Bonanza 1023-2H3CS Local Co-ordinate Reference:

ce: We

Well Bonanza 1023-2H3CS KB @ 5456.00ft

KB @ 5456.00ft

North Reference:

True

**Survey Calculation Method:** 

Minimum Curvature

Database:

EDM 2003.21 Single User Db

Design: Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
<b>LAST S</b> 7,645.00		85.82	7,335.48	-1,237.00	724.53	14,522,844.62	2,119,925.13	39° 58′ 42.864 N	109° 17' 18. <b>2</b> 62 W
<b>EXT. TI</b> 8,370.00	_	85.82	8,060.38	-1,236.13	736.39	14,522,845.71	2,119,936.98	39° 58' 42.872 N	109° 17' 18.110 W

Measu	red	Vertical	Local Coo	ordinates		
Depti (ft)	h	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
1,903	3.00	1,901.15	-52.65	51.92	LAST SCIENTIFIC MWD	
7,645	5.00	7,335.48	-1,237.00	724.53	LAST SVY	
8,370	0.00	8,060.38	-1,236.13	736.39	EXT. TD	

1						
10: 10:	Α	and the state of t		D-4		
Checked By:	Anni	roved Bv:		Date:		
TOHECKER Dy.	, (PP)	ioved by.		Date.		

# US ROCKIES REGION Operation Summary Report

Nell: BONANZ	ZA 1023-2H3CS [6	GREEN]	Spud Co	onductor	: 12/14/2	:009	Spud Date: 12			
Project: UTAH	-UINTAH		Site: BO	NANZA	1023-2B	PAD		Rig Name No: ENSIGN 146/146, PROPETRO/		
Event: DRILLII	NG		Start Da	te: 1/27/	2010			End Date: 2/2/2010		
Active Datum:	RKB @5,457.00f	(above Mear	Sea Leve	a Leve UWI: NW/NE/0/10/S/23/E/2/0/0/26/PM/				/1,191.00/E/0/1,917.00/0/0		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation		
12/15/2009	17:30 - 21:00	3.50	MIRU	01	В	Р		MIRU, DRESS CONDUCTOR, INSTALL AIR BOWL, RIG UP BOWIE LINE, RIG UP RIG., BUILD DITCH, RIG UP PUMPS, DOG HOUSE, AIR COMPRESSOR AND BOOSTER.		
	21:00 - 22:30	1.50	DRLSUR	02	Α	Р		AIR SPUD 12/15/2009 21:00 AIR HAMMER FROM 44'-150'.		
	22:30 - 0:00	1.50	DRLSUR	06	Α	Р		LD AIR HAMMER, P/U 1.83 BENT HOUSE MOTOR SN 8039, M/U NEW 12-1/4" Q507 SN 7018337. MAKE UP WRENCH SUB, AND SCRIBE MOTOR.		
12/16/2009	0:00 - 3:00	3.00	DRLSUR	06	Α	Р		P/U SCIENTIFIC MWD TOOLS AND ORIENT. INSTALL WRENCH SUBS ON DIRECTIONAL MONELS.		
	3:00 - 21:00	18.00	DRLSUR	02	D	P		DRILL W/ MWD 150'-1960' (1810', 100'/HR) TD 12/16/2009 21:00 WOB 25K, ROT 45, GPM 650, DH ROT 104, PSI 1200/1500, UP/DOWN//ROT 64/64/64 LOSS CIRC ZONE 1050'. HEAVY LOSSES @ 1500 HAD TO REDUCE PUMP TO 210 GPM AND AERATE TO KEEP PIT VOLUME UP. ROP STILL 60'/HR.		
	21:00 - 22:30	1.50	CSG	05	F	Р		CIRC W/ 84 GPM AND AERATE TO INCREASE PIT VOLUME AND CLEAN HOLE.		
	22:30 - 0:00	1.50	CSG	06	D	P		LAYING DOWN DRILL PIPE. TO BHA @ REPORT TIME		
12/17/2009	0:00 - 1:00	1.00	CSG	06	D	P		LD DIRECTIONAL TOOLS. LD MOTOR AND BIT.		
	1:00 - 3:30 3:30 - <b>4</b> :00	2.50 0.50	CSG RDMO	12 01	C E	P P		RUN 45 JTS OF 9-5/8" J-55 36# W/ 8RD LTC THREADS AND LAND SHOE FLOAT 1936' KB. BAFFLE PLATE RAN IN TOP OF SHOE JT. LANDEI @ 1894'KB FILL PIPE @ 800'. RIG DOWN RELEASE RIG 12/17/2009 04:00		
	4:00 - 9:30	5.50	CSG	12	E	, P		HOLD SAFETY MEETING AND PSI TEST 1500.		
			000		_	•	•	PUMP 150 BBLS OF H20, PUMP 20 BBLS OF GEL WATER. PUMP 350 SX (72 BBLS) OF 15.8#, 1.15 YD, 5 GAL/SK TAIL CEMENT. DROP PLUG ON FLY DISPLACE W/ 146.1 BBLS OF FRESH WATER. 100 PSI OF LIFT. NO RETURNS. BUMP PLUG 600 PSI. TOP OUT 100 SX( 20 BBLS) OF 15.8#, 1.15 YD, 5 GAL/SK 4% CALC CEMENT. WAIT 2 HRS PUMP 100 SX(20 BBLS) OF SAME CEMENT. CEMENT. WAIT 1 HOUR PUMP 100 SX (20 BBLS) OF SAME CEMENT. NO CEMENT TO SURFACE. WILL REDIMIX WITH PETE MARTIN DRILLING.		
1/26/2010	12:30 - 14:30	2.00	MIRU	01	С	Р		SKID RIG OVER HOLE		
	14:30 - 16:30		DRLPRO	14	Α	P		NIPPLE UP BOP		
	16:30 - 19:30		DRLPRO	15	A	P		TEST BOP		
	19:30 - 20:00		DRLPRO	14	Α	Z		NIPPLE DOWN, WOULD NOT TEST		
	20:00 - 21:00	1.00	DRLPRO	14	С	Z		WHILE LIFTING BOP OFF OF WELL HEAD TO CHECK GASKET, DRILLER WAS BEING TOLD TO LIFT, AND WAS NOT PAYING ATTENTION TO WEIGHT INDICATOR. WELLHEAD ADAPTER WAS HUNG UP ON WELLHEAD, 110,000 WAS PULLED INDENTED ADAPTER SEAL AREA. HAD TO REMOVE BOTH ADAPTERS AND WAIT ON NEW ONES.		
	21:00 - 0:00	3.00	DRLPRO	21	D	Z		WAIT ON NEW ADAPTERS FROM VERNAL		
1/27/2010	0:00 - 1:30	1.50	DRLPRO	21	D	Z		WAIT ON ADAPTERS FOR BOP & WELLHEAD		
	1:30 - 3:30	2.00	DRLPRO	14	Α	Z		INSTALL NEW ADAPTERS & NIPPLE BACK UP		

5/4/2010

### **Operation Summary Report**

Well: BONANZA 1023-2H3CS [GREEN] Spud Conductor: 12/14/2009 Spud Date: 12/15/2009 Rig Name No: ENSIGN 146/146, PROPETRO/ Project: UTAH-UINTAH Site: BONANZA 1023-2B PAD End Date: 2/2/2010 Event: DRILLING Start Date: 1/27/2010

Date	Time	Duration	Phase	Code	Sub	P/U	MD From	Operation
	Start-End	(hr)	551.550	4-	Code		(ft)	
	3:30 - 7:00	3.50	DRLPRO	15	Α	Р		FINISH TESTING BOP RAMS, CHOKE, KILLINE, HCR TO 5000 PSI, ANNULAR 2500 PSI, CASING TO 1500 PSI
	7:00 - 10:30	3.50	DRLPRO	06	Α	P		P/U NEW BIT, MOTOR, SCRIBE TO MWD & R.I.H TAG CMT. @ 1806 FT.
	10:30 - 12:00	1.50	DRLPRO	02	F	P		DRILL CMT. FLOAT, SHOE
	12:00 - 21:30	9.50	DRLPRO	02	D	Р		DRILL & SLIDE F/ 1970 TO 2829 - WOB 18, RPM 45 MMRPM 105, GPM 504 - SLIDES 2058-2072,2103-2117,2149-2163,2194-2208,2239-24,2285-2301,2330-2348,2375-2393,2421-2437,2466483,2512-2530,2557-2575,2602-2621,2648-26692692715,2738-2762,2784-2807,
	21:30 - 0:00	2.50	DRLPRO	80	Α	Z		WORK ON PECO (WEIGHT INDICATOR)
1/28/2010	0:00 - 1:30	1.50	DRLPRO	80	Α	Z		WORK ON PECO (WEIGHT INDICATOR) DRAWORKS WON'T PICK UP OR GO DOWN
	1:30 - 12:30	11.00	DRLPRO	02	D	Р		DRILL & SLIDE F/ 2829 TO 3917, WATER - 1088 F7 99 FPH WOB 20, RPM 45, MMRPM 105, GPM 504 - SLIDES 2829-2851,2874-2896,2920-2938,2965-2981,3010-3(2,3056-3065,3101-3114,3146-31613192-3206,3237-353,3282-3298,3328-3344,3373-3386,3418-3431,346-3479,3509-3521,3554-3566,3599-3609,3645-3655,360-3705,3735-3748,3781-3796,3826-3841,3871-3885,917-3929
	12:30 - 13:00	0.50	DRLPRO	07	Α	P		RIG SERVICE
	13:00 - 0:00	11.00	DRLPRO	02	D	P		DRILL & SLIDE F/ 3917 - 5188 - 1271, WATER 116 FPH. WOB 20, RPM 45, MMRPM 105, GPM 504, 65-345 BG GAS, 120-1865 CONN. GAS, 3345 MAX GAS - SLIDES 3962-3972,4007-4022,4052-4060,4098-4108,4143-41 5,4188-4200,4234-4246,4279-4289,4370-4382,4913- 923,5095-5107,5185-5195
1/29/2010	0:00 - 13:30	13.50	DRLPRO	02	D	Р		DRILL & SLIDE F/ 5188 TO 6364 - 1176 87 FPH. MW 9.7, VIS 38, WOB 18, RPM 45, MMRPM 105, GPM 504, SLIDES 5185-5195,5276-5286,5367-5375,5457-5466,5548-5 7,5639-5649,5729-5744,5820-5838,5911-5929, BG GAS 15-320, CONN. GAS 258-3011, MAX GAS 3694, NO FLARE
	13:30 - 14:00	0.50	DRLPRO	07	Α	Р		RIG SERVICE
	14:00 - 0:00	10.00	DRLPRO	02	D	Р		DRILL & SLIDE F/ 6364 TO 7170 - 806 FT. 80 FPH. MW 10.5, VIS 45, WOB 20, RPM 50, MMRPM 105, GPM 504, SLIDES 6998-7012,7270-7281, BG GAS 15-670, CONN. GAS 495-4745, MAX GAS 4800, NO FLARE
1/30/2010	0:00 - 14:00	14.00	DRLPRO	02	D	Р		DRILL & SLIDE F/ 7170 TO 7695 - 525 FT. 37.5 FPH MW 11.2, VIS 45, WOB 23, RPM 50, MMRPM 105, GPM 504, SLIDES 7270-7281,7452-7466, BG GAS 350-1600, CONN. GAS 2800-4850, MAX GAS 4983, NO FLARE
	14:00 - 14:30	0.50	DRLPRO	05	С	Р		CIRC. PREPAIR FOR TRIP
	14:30 - 22:30	8.00	DRLPRO	06	Α	Р		TRIP OUT FOR BIT, PUMP 12 STDS OFF BTM, PUMP SLUG T.O.H, L/D MOTOR & MWD TOOL, STAND BACK DIRECTIONAL TOOLS IN DERRICK
	22:30 - 0:00	1.50	DRLPRO	06	Α	P		STRAP NEW MOTOR & MONEL, P/U NEW BIT & R.I.H
1/31/2010	0:00 - 7:30	7.50	DRLPRO	06	Α	Р		FINISH TRIPPING IN, FILL PIPE @ SHOE, & 4000 FT.
	7:30 - 8:00	0.50	DRLPRO	03	E	Р		WASH & REAM 100 FT. TO BTM.

5/4/2010 12:31:12PM

				US	ROCI	KIES R	EGION			
			0	perat	ion S	umma	ary Repor			
Well: BONANZ	A 1023-2H3CS [GR	REEN]	Spud Co	onductor	: 12/14/2	2009	Spud Date: 12	5/2009		
Project: UTAH	-UINTAH		Site: BO	NANZA	1023-2E	PAD		Rig Name No: ENSIGN 146/146, PROPETRO/		
Event: DRILLII	NG	· · · · ·	Start Dat	te: 1/27/	2010			End Date: 2/2/2010		
Active Datum:	RKB @5,457.00ft (a	above Mear	Sea Leve	UWI: N	W/NE/0	/10/S/23/	E/2/0/0/26/PM/	N/1,191.00/E/0/1,917.00/0/0		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation		
	8:00 - 16:00	8.00	DRLPRO	02	D	Р		DRILL F/ 7695 TO 8370 - 675 FT. 84 FPH. MW 11.8, VIS 41, WOB 19, RPM 50, MMRPM 81, GPM 504, BG. GAS 400 - 1000, CONN. GAS 3500 - 4300, TRIP GAS 7070, MAX GAS 7070		
	16:00 - 18:30	2.50	DRLPRO	06	E	Р		WIPER TRIP 10 STDS. PUMP OUT ALL 10		
	18:30 - 20:30	2.00	DRLPRO	05	С	P		COND. MUD RAISE VIS CIRC. 2 BTMS. UP		
	20:30 - 0:00	3.50	DRLPRO	06	В	P		PUMP 15 STDS. OFF BTM., PUMP SLUG, STRAIGHT PULL OUT OF HOLE		
2/1/2010	0:00 - 0:30	0.50	DRLPRO	08	Α	Z		REPAIR HYDROLIC HOSE ON IRON ROUGHNECK		
	0:30 - 7:00	6.50	DRLPRO	06	В	Р		T.O.H FOR LOGS		
	7:00 - 14:00	7.00	DRLPRO	11	D	Р		HELD SAFETY MEETING W/ BAKER ATLAS, RIG UP & RUN OPEN HOLE LOGS, LOGGERS TD 8370 FT.		
	14:00 - 22:30	8.50	DRLPRO	12	С	Р		HELD SAFETY MEETING W/ FRANKS CASING CREW, RIG UP & RUN 197 JTS. 4 1/2, 11.6#, I-80, BTC CASING, LANDED SHOE @ 8356 FT., FLOAT COLLAR @ 8311 FT.		
	22:30 - 23:30	1.00	DRLPRO	05	D	Р		CIRC. THROUGH CASING - MAX GAS 4378, NO FLARE		
	23:30 - 0:00	0.50	DRLPRO	12	В	Р		HELD SAFETY MEETING W/ BJ - RIG UP EQUIPMENT & PRIME TRUCKS		
2/2/2010	0:00 - 3:30	3.50	CSG	12	Ε	Р		PUMP 40 BBLS. WATER AHEAD, LEAD W/ 241 BBLS. 560 SKS., 11.8# 2.42 YIELD, TAIL W/ 256 BBLS., 1100 SKS. 14.3# 1.31 YIELD, & DISPLACE W/ 129 BBLS. WATER, BUMPED PLUG, FLOATS HELD, 1 1/2 BBLS. BACK TO TRUCK, 39 BBLS. CEMENT TO SURFACE GOOD CIRC. THROUGH OUT JOB, 2300 PSI FINAL LIFT		
	3:30 - 5:30	2.00	RDMO	14	Α,	Р		NIPPLE DOWN CLEAN MUD TANKS, RIG RELEASED @ 05:30 HRS. 2/2/2010		

5/4/2010 12:31:12PM

Mall: BONAN	ZA 1023-2H3CS [GREEN]	Spud Con	ductor: 12/14/2	009	Spud Date: 12	2/15/2009			
Project: UTAH		<del>-</del>	ANZA 1023-2B		Opad Bato. 1.	Rig Name No: ENSIGN 146/146, PROPETRO/			
Event: DRILL			: 1/27/2010			End Date: 2/2/2010			
	RKB @5,457.00ft (above Mear			10/5/23	/E/2/0/0/26/PM/				
Date	Time Duration		Code Sub	P/U	MD From	Operation			
Date	Start-End (hr)	rilase	Code	- 10	(ft)	Operation			
	5:30 - 5:30 0.00	RDMO				CONDUCTOR CASING:			
						Cond. Depth set: 44 Cement sx used:			
						SPUD DATE/TIME: 12/15/2010 21:00			
						SURFACE HOLE:			
						Surface From depth:44			
						Surface To depth: 1,960			
						Total SURFACE hours: 19.50 Surface Casing size:9 5/8			
						# of casing joints ran: 45			
						Casing set MD:1,936.0			
						# sx of cement:350			
						Cement blend (ppg;)15.8 Cement yield (ft3/sk): 1.15			
						# of bbls to surface: 0			
						Describe cement issues: NO RETURNS TOP OUT			
						W/ 300 SKS. STILL NO RETURNS CALLED OUT			
						READYMIX (PETE MARTIN)			
						Describe hole issues: HEAVY LOSSES @ 1500 FT.			
						1 1.			
						PRODUCTION:			
						Rig Move/Skid start date/time: 1/26/2010 12:30			
						Rig Move/Skid finish date/time:1/26/2010 14:30			
						Total MOVE hours: 2.0 Prod Rig Spud date/time: 1/27/2010 10:30			
						Rig Release date/time: 2/2/2010 5:30			
						Total SPUD to RR hours: 139.0			
						Planned depth MD 8,357			
						Planned depth TVD 8,050			
						Actual MD: 8,370			
						Actual TVD: 8,066 Open Wells \$: \$630,931			
						AFE\$: \$651,858			
						Open wells \$/ft:\$75.38			
						PRODUCTION HOLE:			
						Prod. From depth: 1,970			
						Prod. To depth:8,370 Total PROD hours: 77			
						Production Casing size: 4 1/2			
						# of casing joints ran: 197			
						Casing set MD:8,356.8			
						# sx of cement:1,660			
						Cement blend (ppg:)11.8/14.3 Cement yield (ft3/sk): 2.42/1.31			
						Est. TOC (Lead & Tail) or 2 Stage : 2030			
						Describe cement issues:			
						Describe hole issues: RUNNING SHALES			
						DIRECTIONAL INFO:			
						KOP: 320 May angle: 32.00			
						Max angle: 32.00 Departure: 1406.85			
						Max dogleg MD: 5.88			

5/4/2010 12:31:12PM 4

# US ROCKIES REGION Operation Summary Report

	ZA 1023-2H3CS [G	IVEEIN	<del>'</del>	nductor:			Spud Date: 12/15/2009	
Project: UTAH	-UINTAH		Site: BO	NANZA	1023-2B	PAD	Rig Name No: I	MILES-GRAY 1/1
Event: COMPI			Start Dat				End Date: 4/13/	
Active Datum:	RKB @5,457.00ft	(above Mean		UWI: N	W/NE/0		/2/0/0/26/PM/N/1,191.00/E/0/1,9	
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/26/2010	7:00 - 7:15	0.25	COMP	48		Р	HSM, MIRU 1ST	
	7:15 - 16:00	8.75	COMP	36	E	Р	TO 7000# [GOOI CASED HOLE SO USING 3-3/8 EXF HOLE 8282'-8284' 4 SP 8247'-8248' 4 SP 8212'-8213' 4 SP 8153'-8154' 4 SP SWI.	ERS, P/T CAG & FRAC VALVES D TEST] R/D TESTERS, MIRU DLUTIONS, PERF MESAVERDE PEND [SCALLOP] 23 GRM, 0.36" F, 90* PH, 8 HOLES. F, 90* PH, 4 HOLES. F, 90* PH, 4 HOLES. F, 90* PH, 4 HOLES.
3/29/2010	7:00 - 7:15	0.25	COMP	48		Р	HSM, MIRU, PEF	RF & FRAC
	7:15 - 18:00	10.75	COMP	36	E	P		R FRAC, P/T SUREFACE LINE TO G #1 MESAVERDE 8153'-8284' [20
3/30/2010	7:00 - 7:15	0.25	COMP	48		P	RT=50, ÎNJ PSI=: PUMP'D 1085 BE MESH W/ 5000# FG=.69, AR=49.6	60#, BRK DN PERFS=4390#, INJ 4430#, ISIP=2320#, FG=.72, BLS SLK WTR W/ 32888# 30/50 RESIN COAT IN TAIL, ISIP=2075# 5, AP=4275#, MR=50.9, MP=6419# 0 CALC PERFS OPEN 100%
	7:15 -		COMP	36	Е	Р	GUN, SÉT CBP ( USING 3-3/8 EXF HOLE.	W/ HALIBURTON 8K CBP & PER ② 8116', PERF MESAVERDE PEND [SCALLOP] 23 GRM, 0.36" F, 90* PH, 8 HOLES.
							8042'-8043' 4 SP 8023'-8024' 4 SP 7991'-7992' 4 SP	F, 90* PH, 4 HOLES. F, 90* PH, 4 HOLES. F, 90* PH, 4 HOLES. [20 HOLES]
							INJ PSI=6161#, I BBLS SLK WTR RESIN COAT IN	K DN PERFS=2804#, INJ RT=43.7 SIP=2170#, FG=.71, PUMP'D 712 W/ 22351# 30/50 MESH W/ 5000# TAIL, ISIP=2110#, FG=.70, 22#, MR=50.3, MP=6758#, NPI=-6 IFS OPEN 65%
							GUN, SÉT CBL ( USING 3-3/8 EXI HOLE.	W/ HALIBURTON 8K CBL & PER ② 7869', PERF MESAVERDE PEND [SCALLOP] 23 GRM, 0.36"
							7817'-7818' 4 SP 7724'-7725' 4 SP	F, 90* PH, 8 HOLES. F, 9-* PH, 4 HOLES. F, 90* PH, 4 HOLES. F, 90* PH, 4 HOLES. [20 HOLES]
							INJ PSI=6130#, I BBLS SLK WTR RESIN COAT IN AR=45.7, AP=56; 15/20 CALC PER SCREENED OFF	EDN PERFS=3549#, INJ RT=47.4, SIP=2320#, FG=.74, PUMP'D 206 W/ 80477# 30/50 MESH W/ NO TAIL, ISIP=2313#, FG=.74, 20#, MR=51.4, MP=6973#, NPI=-7 RFS OPEN 75% F, CUT SAND 5000# SHORT, DID RESIN, FLOWED BACK 15 MIN,

12:31:46PM 5/4/2010

Well: BONANZA 1023-2H3CS [GREEN	N] Spud Conduct	or: 12/14/2009	Spud Date: 12	2/15/2009
Project: UTAH-UINTAH	Site: BONANZ	A 1023-2B PA	D	Rig Name No: MILES-GRAY 1/1
Event: COMPLETION	Start Date: 3/2	5/2010		End Date: 4/13/2010
Active Datum: RKB @5,457.00ft (abov	e Mean Sea Leve UWI:	: NW/NE/0/10/	S/23/E/2/0/0/26/PM/N	N/1,191.00/E/0/1,917.00/0/0
Start-End ( 3/31/2010 7:00 - 7:15 0	ration   Phase   Cod hr)	Code		Operation  HSM, PERF & FRAC  STG #4] P/U RIH W/ HALIBURTON 8K CBL & PERF GUN, SET CBL @ 7676', PERF MESAVERDE  USING 3-3/8 EXPEND [SCALLOP] 23 GRM, 0.36"  HOLE.  7644-7646' 3 SPF, 120* PH, 6 HOLES.
				7586'-7587' 4 SPF, 90* PH, 4 HOLES. 7586'-7587' 4 SPF, 90* PH, 4 HOLES. 7533'-7534' 3 SPF, 120* PH, 3 HOLES. 7509'-7510' 3 SPF, 120* PH, 3 HOLES. 7459'-7460' 3 SPF, 120* PH, 3 HOLES. 7409'-7410' 3 SPF, 120* PH, 3 HOLES.
				WHP=1482#, BRK DN PERFS=3410#, INJ RT=52.1 INJ PSI=4938#, ISIP=1750#, FG=67, PUMP'D 2860 BBLS SLK WTR W/ 112558# 30/50 MESH W/ 5000#, RESIN COAT IN TAIL, ISIP=1565#, FG=65, AR=52.1, AP=4718#, MR=54.7, MP=6038#, NPI=-185#, 19/22 CALC PERFS OPEN 88%
				STG #5] P/U RIH W/ HALIBURTON 8K CBL & PERF GUN, SET CBL @ 7336', PERF MESAVERDE USING 3-3/8 EXPEND [SCALLOP] 23 GRM, 0.36" HOLE.
				7305'-7306' 4 SPF, 90* PH, 4 HOLES. 7250'7251' 3 SPF, 120* PH, 3 HOLES. 7218'-7219' 3 SPF, 120* PH, 3 HOLES. 7168'-7169' 3 SPF, 120* PH, 3 HOLES. 7135'-7136' 3 SPF, 120* PH, 3 HOLES. 7109'-7110' 3 SPF, 120* PH, 3 HOLES. 7076'-7077' 3 SPF, 120* PH, 3 HOLES. [22 HOLES]
				WHP=1351#, BRK DN PERFS=2249#, INJ RT=50.8 INJ PSI=4050#, ISIP=1439#, FG=64, PUMP'D 2407 BBLS SLK WTR W/ 96736# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=1646#, FG=.67, AR=53.3, AP=3903#, MR=54.9, MP=4719#, NPI=208#, 22/22 CALC PERFS OPEN 100%
				STG #6] P/U RIH W/ HALIBURTON 8K CBL & PERI GUN, SET CBL @ 6934', PERF MESAVERDE USING 3-3/8 EXPEND [SCALLOP] 23 GRM, 0.36" HOLE. 6902'-6904' 4 SPF, 90* PH, 8 HOLES.
				6855'-6856' 4 SPF, 90* PH, 4 HOLES. 6842'-6844' 4 SPF, 90* PH, 8 HOLES. [20 HOLES]
				WHP=517#, BRK DN PERFS=5187#, INJ RT=39.7, INJ PSI=4583#, ISIP=1995#, FG=.73, PUMP'D 697 BBLS SLK WTR W/ 24889# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=1865#, FG=.71, AR=47.1, AP=4853#, MR=48.4, MP=5975#, NPI=-130#, 15/20 CALC PERFS OPEN 76%
4/12/2010 7:00 - 7:30 (	0.50 COMP 48	į.	<b>)</b>	P/U RIH W/ HALIBURTON 8K CBP FOR KILL PLUG SET @ 6792' SWI. HSM, RIGGING DWN & UP AROUND OTHER
7:30 - 10:00 2	2.50 COMP 30	A I	,	FLOWING WELLS.  RD OFF BON 1023-2G1BS, MOVE OVER & RIG UI  ND FRAC VALVES, NU WEATHERFORDS WH  SECTION & BOPS, RU FLOOR.

5/4/2010 12:31:46PM

Well: BONANZ	ZA 1 <u>0</u> 23-2H	3CS [G	REEN]	Spud Co	onductor	: 12/14/2	009	Spud Date: 12	2/15/2009
Project: UTAH-	-UINTAH			Site: BC	NANZA	1023-2B	PAD		Rig Name No: MILES-GRAY 1/1
Event: COMPL					te: 3/25/				End Date: 4/13/2010
Active Datum:	RKB @5,4	57.00ft (	above Mean	Sea Leve	UWI: N	W/NE/0/	10/S/23/	E/2/0/0/26/PM/I	N/1,191.00/E/0/1,917.00/0/0
Date	Tim Start-	End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
4/13/2010	10:00 - 7:00 -		5.00	COMP	31 48	ı	P P		TALLY & PU 37/8 SEALED BEARING BIT, POBS, 1.875 X/N & 213 JTS 23/8 L-80 TBG, TAG UP @ 6739 'RU DRL EQUIP. EOT@ 6712'. PREP TO D/O IN AM. SWI SDFN.( DUE TO HIGH WINDS.) HSM, DRILL PLUGS W/ POWER SWIVEL.
4,10,2010	7:30 -		7.50	COMP	44	С	P		BROK CIRC CONVENTIONAL, TEST BOPS TO 3,000# PSI, RIH
									C/O 53' SAND TAG 1ST PLUG @ 6792' DRL PLG IN 3 MIN, 0# PSI INCREASE RIH.
									C/O 30' SAND TAG 2ND PLUG @ 6934' DRL PLG IN 4 MIN, 200# PSI INCREASE RIH.
									C/O 30' SAND TAG 3RD PLUG @ 7336' DRL PLG IN 3 MIN, 100# PSI INCREASE RIH.
									C/O 30' SAND TAG 4TH PLUG @ 7676' DRL PLG IN 5 MIN, 400# PSI INCREASE RIH.
									C/O 30' SAND TAG 5TH PLUG @ 7869' DRL PLG IN 3 MIN, 200# PSI INCREASE RIH.
									C/O 30' SAND TAG 6TH PLUG @ 8116' DRL PLG IN 3 MIN, 200# PSI INCREASE RIH. C/O TO PBTD @ 8313', CIRC CLEAN, RD SWIVEL, L/D 11 JTS 23/8. LAND TBG ON 251 JTS 23/8 L-80 TBG. ND BOPS NU WH, PUMP OFF BIT LET WELL SET FOR 30 MIN FOR BIT TO FALL.TURN WELL OVER TO FB CREW. WIND BLOWING TO HARD TO RIG DWN. SDFD
									KB = 15' WEATHERFORD 7 1/16 HANGER = .83' 251 JTS 23/8 L-80 = 7934.08' POBS W/ 1.875 X/N = 2.20' EOT @ 7952.11' FTP 150
									1400 315 JTS HAULED OUT 251 LANDED 64 TO RETURN
									TWTR = 10,029 BBLS TWR = 1100 BBLS TWLTR = 8929 BBLS
4/14/2010	7:00 -				33	Α			7 AM FLBK REPORT: CP 2500#, TP 1450#, 20/64" CK, 48 BWPH, TRACE SAND, LIGHT GAS TTL BBLS RECOVERED: 2064 BBLS LEFT TO RECOVER: 7965
4/15/2010	7:00 -			PROD	33	Α			7 AM FLBK REPORT: CP 2400#, TP 1400#, 20/64" CK, 40 BWPH, trace SAND, 1309 GAS TTL BBLS RECOVERED: 3112
	13:30 -			PROD	50		,		BBLS LEFT TO RECOVER: 6917  WELL TURNED TO SALES @ 1045 HR ON 4/7/10 - 2300 MCFD, 648 BWPD, CP 2850#, FTP 2025#, CK 20/64"
4/16/2010	7:00 -				33	Α			7 AM FLBK REPORT: CP 2350#, TP 1350#, 20/64" CK, 30 BWPH, TRACE SAND, - GAS TTL BBLS RECOVERED: 3916

5/4/2010 12:31:46PM

						EGION ary Report		
Well: BONANZ	A 1023-2H3CS [GF	REEN] Spud C	onducto	r: 12/14/	2009	Spud Date: 12/	15/2009	
Project: UTAH-	oject: UTAH-UINTAH			Site: BONANZA 1023-2B PAD			Rig Name No: MILES-GRAY 1/1	
Event: COMPL	ETION	Start D	ate: 3/25	/2010		End Date: 4/13/2010		
Active Datum: I	RKB @5,457.00ft (	above Mean Sea Leve	UWI: N	W/NE/0	/10/S/23/	/E/2/0/0/26/PM/N	/1,191.00/E/0/1,917.00/0/0	
Date	Time Start-End	Duration Phase (hr)	Code	Sub Code	P/U	MD From (ft)	Operation	
4/17/2010	7:00 -		33	Α			7 AM FLBK REPORT: CP 2100#, TP 1300#, 20/64" CK, 20 BWPH, TRACE SAND, - GAS TTL BBLS RECOVERED: 4496 BBLS LEFT TO RECOVER: 5533	
4/25/2010	7:00 -	PROD	50				WELL IP'D ON 4/25/10 - 1495 MCFD, 0 BOPD, 332 BWPD, CP 1374#, FTP 751#, CK 20/64", LP 86#, 24 HRS	

5/4/2010 12:31:46PM

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

### **ENTITY ACTION FORM**

Operator:

KERR McGEE OIL & GAS ONSHORE LP

Operator Account Number: N 2995

Address:

P.O. Box 173779

city DENVER

zip 80217 state CO

Phone Number: \_(720) 929-6100

Well 1

NWNE

71E I			1,001,0	-					
API Number	Well	Name	QQ	Sec	Twp	Rng	County		
4304750344	BONANZA	1023-2H3CS	NENE	2	10\$	23E	UINTAH		
Action Code	Current Entity Number	New Entity Number	S	pud Da	te		ty Assignment fective Date		
E	17426	17426	1:	12/14/2009		4/	4/15/10		
omments:						· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		

THIS WELL IS PRODUCING OUT OF THE MVRD ONLY.

-7/13/10

Well 2

API Number	Well	Name	QQ	QQ Sec Twp		Rng County		
4304750379	BONANZA	1023-2M1S	SENW	2	108	23E	UINTAH	
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date			
E	17443	17443		1/7/201	0	4/	28/10	

### Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County		
4304750380	BONANZA 1	023-2L2S	SENW	SENW 2 10S		23E	23E UINTAH		
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date				
E.	17444	17444		1/7/2010		4/:	4/29/10		

### **ACTION CODES:**

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

RECEIVED

**ANDY LYTLE** 

Name (Please Print)

**REGULATORY ANALYST** 

7/13/2010

Title

Date

JUL 1 3 2010

	STATE OF UTAH	F0	FORM 9
	DEPARTMENT OF NATURAL RESOURC DIVISION OF OIL, GAS, AND MII		5.LEASE DESIGNATION AND SERIAL NUMBER: ML 47062
SUNDF	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	sals to drill new wells, significantly deepen ugged wells, or to drill horizontal laterals. U		7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: BONANZA 1023-2H3CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047503440000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	<b>PHO</b> treet, Suite 600, Denver, CO, 80217 3779	<b>NE NUMBER:</b> 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1191 FNL 1917 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NWNE Section: 02	IP, RANGE, MERIDIAN: ! Township: 10.0S Range: 23.0E Meridian:	S	STATE: UTAH
11. CHE	CK APPROPRIATE BOXES TO INDICA	TE 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
4/6/2011	☐ 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
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
DRILLING REPORT	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	APD EXTENSION
Report Date:	☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: Wellhead
12 DESCRIBE PROPOSED OR CO	MPLETED OPERATIONS. Clearly show all per	rtinent details including dates, denths	, <del></del>
l .	ts approval to conduct wellhe		
on the subject we	ell location. Please find the att	ached procedure for the	
propos	sed repair work on the subject	well location.	Approved by the
			Utah Division of Oil, Gas and Mining
		D	ate: 04/06/2011
		_	Lork Lunt
		В	y:
NAME (PLEASE PRINT)	PHONE NUMBER		
Andy Lytle	720 929-6100	Regulatory Analyst	
SIGNATURE N/A		<b>DATE</b> 4/6/2011	

### WORKORDER # 88119307

Name: <u>BONANZA 1023-2H3CS - 1023-2B PAD</u> 4/5/11

Surface Location: NWNE Sec. 2, T10S, R23E

Uintah County, UT

**API:** 4304750344 **LEASE#:** ML-47062

**ELEVATIONS:** 5443' GL 5457' KB

**TOTAL DEPTH:** 8370' **PBTD:** 8313'

**SURFACE CASING:** 9 5/8", 36# J-55 @ 1946'

**PRODUCTION CASING:** 4 1/2", 11.6#, I-80 @ 8356'

TOC @ Surface per CBL

**PERFORATIONS:** Mesaverde 6842' – 8284'

Tubular/Borehole	Drift	Collapse psi	Burst psi	Capacities			
	inches			Gal./ft.	Cuft/ft.		Bbl./ft.
2.375" 4.7# J-55 tbg.	1.901	8100	7700	0.1624		0.02171	0.00387
4.5" 11.6# I-80	3.875	6350	7780	0.6528		0.0872	0.0155
9.625" 36# J-55	8.921	2020	3520	3.247		0.434	0.0773
Annular Capacities							
2.375" tbg. X 4 ½" 11.6# cs	sg			0.4227	0.0565		0.01

### **GEOLOGICAL TOPS:**

1350' Green River 1956' Mahogany 4330' Wasatch 6075' Mesaverde

### BONANZA 1023-2H3CS - WELLHEAD REPLACEMENT PROCEDURE -

### PREP-WORK PRIOR TO MIRU:

- 1. Dig out down to the 2" surface casing valve or to the valve on the riser off the surface casing.
- 2. Install a tee with 2 valves, with a pressure gauge and sensor on one valve.
- 3. Open casing valve and record pressures.
- 4. Install nipple and steel hose on the other valve, the relief valve,. Do not use hammer unions. No impact equipment or tools to be used for any of this installation. Extend hose and hard piping to a downwind location at least 100' from the wellhead. Consider installing a manifold so that vent area could be in two locations approx. 90 degrees apart from the wellhead.
- 5. Open the relief valve and blow well down to the atmosphere.
- 6. Make a determination of amount of gas flow, either by installation of a choke nipple, bucket test or other.
- 7. Shut well in. Observe for rate of build-up by utilizing sensor data. Do not build-up for more than 24 hours. Vent gas through the vent line and leave open to the atmosphere.

### **WORKOVER PROCEDURE:**

- 1. MIRU workover rig.
- 2. Kill well with 10# brine / KCL (dictated by well pressure ).
- 3. Remove tree, install double BOP with blind and 2 3/8" pipe rams, with accumulator closing unit and manual back-ups. Function test BOP system.
- 4. POOH w/ tubing laying down extra tubing.
- 5. Rig up wireline service. RIH and set CBP @ ~6792'. Dump bail 4 sx cement on top of plug. POOH and RD wireline service. TIH w/ tubing and seating nipple. Land tubing ±60' above cement. RDMO.
- 6. Monitor well pressures. If surface casing is dead. MIRU. ND WH and NU BOP. POOH w/ tubing.
- 7. Depending on conditions at wellsite, continue with either CUT/PATCH Procedure or BACK-OFF Procedure.

### **CUT/PATCH PROCEDURE:**

- 1. PU internal casing cutters and RIH. Cut casing at +/- 30' from surface.
- 2. POOH, LD cutters and casing.
- 3. PU 7 3/8" overshot with 4 ½" right hand standard wicker grapple, 1 4 ¾" drill collar with 3 ½" IF threads, pup joint, manual bumper sub, and crossovers. If casing cut is deeper than ±30' utilize >7000 ft-lb torque pipe as needed. Pull a minimum of 10,000# to keep grapple engaged if cement top is high (<~900'). If cement top is low (>~900'), more weight will be required to put casing in neutral. Torque casing string to ±7000 ft-lbs, count number of turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place ±7000 ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out, release overshot, POOH, and lay down.
- 4. TIH w/ skirted mill and dress off the fish top for approximately ½ hour. TOOH.
- 5. PU & RIH w/  $4\frac{1}{2}$ " 10k external casing patch on  $4\frac{1}{2}$ " P-110 casing. Ensure that sliding sleeve assembly shifts ±3' and casing tags no-go portion of patch. NOTE: Shear pins will shear at 3500 to 4500 lbs.
- 6. Latch fish, PU to 100,000# tension. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.
- 7. Install slips. Land casing w/ 80,000# tension.
- 8. Cut-off and dress 4 ½" casing stub.
- 9. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~6742. Clean out to PBTD (8313').
- 10. POOH, land tbg and pump off POBS.
- 11. NUWH, RDMO. Turn well over to production ops.

### **BACK-OFF PROCEDURE:**

- 1. PU internal casing cutters and RIH. Cut casing at +/- 6' from surface.
- 2. POOH, LD cutters and casing.
- 3. PU 4 ½" overshot. RIH, latch fish. Pick string weight to neutral.
- 4. MIRU casing crew and wireline services. RIH and shoot string shot at casing collar @ ± 46'.
- 5. Back-off casing, POOH.

- 6. PU new casing joint with buttress threads and entry guide and RIH. Tag casing top. Thread into casing and torque up to ±7000 ft-lbs, count number of additional turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place ±7000 ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out go to step 7.
- 7. PU 100,000# tension string weight. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.
- 8. Install slips. Land casing w/ 80,000# tension.
- 9. Cut-off and dress 4 ½" casing stub.
- 10. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~6742. Clean out to PBTD (8313').
- 11. POOH, land tbg and pump off POBS.
- 12. NUWH, RDMO. Turn well over to production ops.

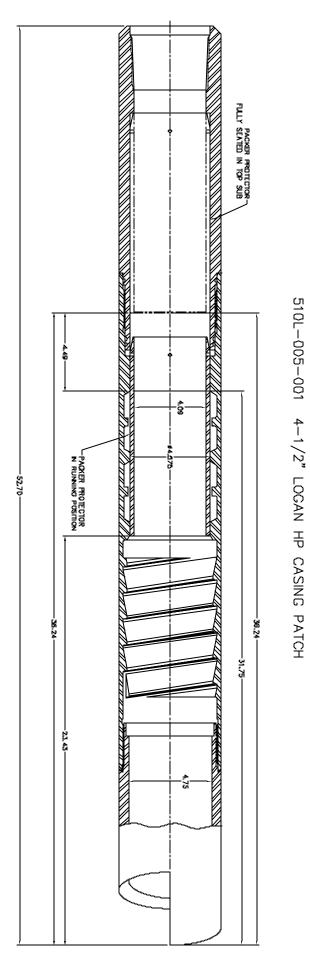


# **Logan High Pressure Casing Patches Assembly Procedure**

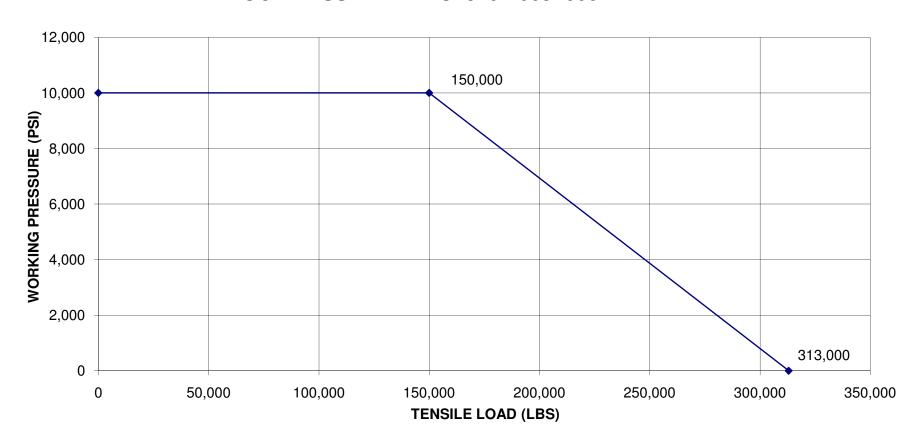
All parts should be thoroughly greased before being assembled.

- 1. Install all four Logan Type "L" Packers in the spaces provided in the Casing Patch Bowl. Refer to diagram provided for proper installation.
- 2. Install Packer Protector from the Basket Grapple end of the Bowl. The beveled end of the Packer Protector goes in first. Carefully push the Packer Protector through the four Type "L" Packers.
- 3. Align Shear Pin Holes in Packer Protector so that the holes have just passed into the counter bore at the Top Sub end, refer to diagram. The Packer Protector is provided with four Shear Pin Holes. Use only two holes, 180 degrees apart and install the pins.
- 4. Screw the Basket Grapple in from the lower end of the Bowl, using left-hand rotation. The Tang Slot in the Basket Grapple must land in line with the slot in the Bowl.
- 5. Insert the Basket Grapple Control into the end of the Bowl. Align Tang on the Basket Grapple Control with the Tang Slot of the Bowl and Basket Grapple. This secures the Bowl and the Basket Grapple together.
- 6. Install the Cutlipped Guide into the lower end of the Bowl.
- 7. Install O-Rings on the two five-foot long Extensions. Screw the first Extension into the top end of the Bowl. Screw the second Extension into the top end of the first Extension.
- 8. Install O-Ring on Top Sub. Screw Top Sub into top end of second Extension.

Follow recommended Make-Up Torque as provided in chart.



# STRENGTH DATA FOR LOGAN 5.88" OD "L" TYPE CSG PATCH 4-1/2 CASING, 10K PSI MAX WP 125K YIELD MAT'L LOGAN ASSEMBLY NO. 510L-005 -000



COLLAPSE PRESSURE: 11,222 PSI @ 0 TENSILE 8,634 PSI @ 220K TENSILE

Tensile Strength @ Yield: Tensile Strength w/ 0 Int. Press.= 472,791lbs. Tensile Strength w/ 10K Int. Press.= 313,748lbs.

DATA BY SLS 11/16/2009

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINI		5.LEASE DESIGNATION AND SERIAL NUMBER: ML 47062
SUND	RY NOTICES AND REPORTS O	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	sals to drill new wells, significantly deepen e igged wells, or to drill horizontal laterals. Uso		7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: BONANZA 1023-2H3CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		<b>9. API NUMBER:</b> 43047503440000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	PHONE treet, Suite 600, Denver, CO, 80217 3779	<b>E NUMBER:</b> 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1191 FNL 1917 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHI	IP, RANGE, MERIDIAN: Township: 10.0S Range: 23.0E Meridian: S		STATE: UTAH
11. CHE	CK APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
The operator has	CHANGE TO PREVIOUS PLANS  CHANGE WELL STATUS  DEEPEN  OPERATOR CHANGE  PRODUCTION START OR RESUME  REPERFORATE CURRENT FORMATION  TUBING REPAIR  WATER SHUTOFF  WILDCAT WELL DETERMINATION  OMPLETED OPERATIONS. Clearly show all perting concluded wellhead/casing repaire the attached chronological hoperations.	airs on the subject well istory for details of the Output  Discovery for details of the   Output  Discovery for details of the   Out	CASING REPAIR  CHANGE WELL NAME  CONVERT WELL TYPE  NEW CONSTRUCTION  PLUG BACK  RECOMPLETE DIFFERENT FORMATION  TEMPORARY ABANDON  WATER DISPOSAL  APD EXTENSION  OTHER: Wellhead Repair  Folumes, etc.  ACCEPTED by the Jtah Division of I, Gas and Mining RECORD ONLY
NAME (PLEASE PRINT)	PHONE NUMBER	TITLE	
Gina Becker	720 929-6086	Regulatory Analyst II	
<b>SIGNATURE</b> N/A		<b>DATE</b> 5/9/2011	

	US ROCKIES REGION									
			0	perat	ion S	umm	ary Repor	t		
Well: BONANZ	A 1023-2H3CS [GI	REEN]	Spud Co	onductor	: 12/14/2	009	Spud Date: 12	2/15/2009		
Project: UTAH-UINTAH			Site: BO	NANZA	1023-2B	PAD	PAD Rig Name No: MILES 2/2			
Event: WELL W	Event: WELL WORK EXPENSE			te: 4/12/	2011		End Date: 4/29/2011			
Active Datum: F	RKB @5,457.00ft (	above Mean	Sea Leve	UWI: N	IW/NE/0/	10/S/23	/E/2/0/0/26/PM/I	N/1,191.00/E/0/1,917.00/0/0		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation		
4/27/2011	7:00 - 7:30	0.50	MAINT	48		Р		TRIPPING WITH PLUNGERS IN TBG		
	7:30 - 17:30	10.00	MAINT	35				MIRU, KILL WELL, NDWH, NU BOP'S, UNLAN TBG, POOH TBG, TBG PLUGGED, SWAB TB STD BACK 125 STANDS, PLUS A SINGLE, B' JTS FULL OF SAND, PARAFIN, PLUGGED SO REMOVE 2 PLUNGERS, BUMPER SPRING, I CUTTERS, TIH GAUGE RING TO 6810', POO 10K CBP, TIH SET AT 6785', POOH, PU BAIL BAIL 4 SX CEMENT ON PLUG, RD CUTTERS SWIFN	G, TM 3 OLID, RU H, PU ER,	
4/28/2011	7:00 - 7:30	0.50	MAINT	48		Р		REPAIR CSG		
	7:30 - 16:30	9.00	MAINT	33		Р		NDWH, CEMENT 16' BELOW SURFACE, RU WEATHERFORD, CUT CSG 1 1/2' DWN, TIH OVERSHOT, RU CUTTERS, STRING SHOT CAT 4', BACK OFF PUP JT.STING IN PUP JT, TORQUE TO 7000# 15 TURNS,PRESS TEST 1500# 15 MIN,3500# 30 MIN, NU TBG HD, TIH TO 6700' TAG PLUG, SWIFN	CSG	
4/29/2011	7:00 - 7:30	0.50	MAINT	48		Р		DRILLING PLUGS		
	7:30 - 17:00	9.50	MAINT	44		P		KB       14.         HANGER       2.         XNSX       2.         EOT       7947         PBTD       8313         WTR PUMPED       46         BBLS       46	FORD 8313', 5, 0.48" 0.00' 83' 2.2' 6.51' 6.00' 660 0.00 BBLS	

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: ML 47062
SUNDR	RY NOTICES AND REPORTS (	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	oposals to drill new wells, significantly or reenter plugged wells, or to drill horizor n for such proposals.		7.UNIT or CA AGREEMENT NAME: PONDEROSA
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: BONANZA 1023-2H3CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		9. API NUMBER: 43047503440000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18tl	h Street, Suite 600, Denver, CO, 80217	<b>PHONE NUMBER:</b> 3779 720 929-0	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1191 FNL 1917 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 02 Township: 10.0S Range: 23.0E Merid	ian: 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	
The operator request operator requests commingle with t	CHANGE TO PREVIOUS PLANS CHANGE WELL STATUS DEEPEN OPERATOR CHANGE PRODUCTION START OR RESUME REPERFORATE CURRENT FORMATION TUBING REPAIR WATER SHUTOFF WILDCAT WELL DETERMINATION Sts authorization to recomple approval to recomplete the Vine existing Mesaverde format attached procedure. Thank y	te the subject well. The Vasatch formation and ition. Please see the	
NAME (PLEASE PRINT)	PHONE NUMBE	ER   TITLE	
Cara Mahler	720 929-6029	Regulatory Analyst I	
SIGNATURE N/A		<b>DATE</b> 5/22/2012	

## **Greater Natural Buttes Unit**



# BONANZA 1023-2H3CS RE-COMPLETIONS PROCEDURE

DATE: 05/10/2012

AFE#:

API#: 4304750344

**USER ID: WIU473** (Frac Invoices Only)

**COMPLETIONS ENGINEER: Patricia Cuba, Denver, CO** 

(720) 929-6348 (Office) (303) 601-7259 (Cell)

SIGNATURE:

**ENGINEERING MANAGER: JEFF DUFRESNE** 

SIGNATURE:

## REMEMBER SAFETY FIRST!

RECEIVED: May. 22, 2012

Name: Bonanza 1023-2H3CS

Location: SW SW SE NE Sec 2 T10S R23E

LAT: 39.981936 LONG: -109.291667 COORDINATE: NAD83 (Surface Location)

**Uintah County, UT** 

Date: 05/10/2012

**ELEVATIONS:** 5442' GL 5457' KB Frac Registry TVD: 8066

**TOTAL DEPTH:** 8370' **PBTD:** 8312'

**SURFACE CASING:** 9 5/8", 36# J-55 LT&C @ 1947' **PRODUCTION CASING:** 4 1/2". 11.6#. I-80 BT&C @ 8357'

Marker Joint 4408'-4429'

### **TUBULAR PROPERTIES:**

	BURST	COLLAPSE	DRIFT DIA.	CAPAC	ITIES
	(psi)	(psi)	(in.)	(bbl/ft)	(gal/ft)
2 3/8" 4.7# J-55 tbg	7,700	8,100	1.901"	0.00387	0.1624
4 ½" 11.6# I-80 (See above)	7780	6350	3.875"	0.0155	0.6528
2 3/8" by 4 ½" Annulus				0.0101	0.4227

TOPS: BOTTOMS:

1106' Green River Top

1391' Bird's Nest Top

1956' Mahogany Top

4330' Wasatch Top 6146' Wasatch Bottom

6146' Mesaverde Top 8370' Mesaverde Bottom (TD)

T.O.C. @ 40'

### **GENERAL**:

- A minimum of 4 tanks (cleaned lined 500 bbl) of recycled water will be required. Note: Use biocide in tanks and the water needs to be at least 45°F at pump time.
- All perforation depths are from Schlumbergers Induction-Density-Neutron log dated 02/09/2010
- 2 fracturing stages required for coverage.
- Hydraulic isolation estimated at **46**' based upon from Casedhole Solutions's cbl dated 02/17/2010.
- Procedure calls for 3 CBP's (8000 psi).
- Calculate open perforations after each breakdown. If less than 60% of the perforations appear to be open, ball out with 15% HCl.
- Pump scale inhibitor at 0.5 gpt. Remember to pre-load the casing with scale inhibitor for the very first stage with 0.5 gpt.
- 30/50 mesh Ottawa sand, **Slickwater frac**.
- Maximum surface pressure 6200 psi.
- If casing pressure test fails. MIRU with tubing and packer. Isolate leak by pressure testing above and below the packer. RIH and set appropriate casing leak remediation

2

<sup>\*</sup>Based on latest geological interpretation

(specific details on remediation will be provided in post-job-report). Re-pressure test to 1000 and 3500 psi for 15 minutes each and to 6200 psi for 30 minutes.

- Flush volumes are the sum of slick water and acid used during displacement (include scale inhibitor as mentioned above). Stage acid and scale inhibitor if necessary to cover the next perforated interval.
- Call flush at 0 PPG @ inline densiometers. Slow to 5 bbl/min over last 10-20 bbls of flush. Flush to top perf.
- Tubing Currently Landed @~7948'
- Originally completed on 03/26/2010

### **Existing Perforations:**

Formation	Zone	Top	Btm	spf	Shots	Date	Reason
MESAVERDE		6842	6844	4	8	03/26/2010	PRODUCTION
MESAVERDE		6855	6856	4	4	03/26/2010	PRODUCTION
MESAVERDE		6902	6904	4	8	03/26/2010	PRODUCTION
MESAVERDE		7076	7077	3	3	03/26/2010	PRODUCTION
MESAVERDE		7109	7110	3	3	03/26/2010	PRODUCTION
MESAVERDE		7135	7136	3	3	03/26/2010	PRODUCTION
MESAVERDE		7168	7169	3	3	03/26/2010	PRODUCTION
MESAVERDE		7218	7219	3	3	03/26/2010	PRODUCTION
MESAVERDE		7250	7251	3	3	03/26/2010	PRODUCTION
MESAVERDE		7305	7306	4	4	03/26/2010	PRODUCTION
MESAVERDE		7409	7410	3	3	03/26/2010	PRODUCTION
MESAVERDE		7459	7460	3	3	03/26/2010	PRODUCTION
MESAVERDE		7509	7510	3	3	03/26/2010	PRODUCTION
MESAVERDE		7533	7534	3	3	03/26/2010	PRODUCTION
MESAVERDE		7586	7587	4	4	03/26/2010	PRODUCTION
MESAVERDE		7644	7646	3	6	03/26/2010	PRODUCTION
MESAVERDE		7693	7694	4	4	03/26/2010	PRODUCTION
MESAVERDE		7724	7725	4	4	03/26/2010	PRODUCTION
MESAVERDE		7817	7818	4	4	03/26/2010	PRODUCTION
MESAVERDE		7837	7839	4	8	03/26/2010	PRODUCTION
MESAVERDE		7991	7992	4	4	03/26/2010	PRODUCTION
MESAVERDE		8023	8024	4	4	03/26/2010	PRODUCTION
MESAVERDE		8042	8043	4	4	03/26/2010	PRODUCTION
MESAVERDE		8084	8086	4	8	03/26/2010	PRODUCTION
MESAVERDE		8153	8154	4	4	03/26/2010	PRODUCTION
MESAVERDE		8212	8213	4	4	03/26/2010	PRODUCTION
MESAVERDE		8247	8248	4	4	03/26/2010	PRODUCTION
MESAVERDE		8282	8284	4	8	03/26/2010	PRODUCTION

### **Relevant History:**

03/26/2010: Completed the Mesaverde formation with 385,560 gallons of slickwater, 343,245 lbs of

30/50 Ottawa sand and ~ 30,000 lbs of resin coated sand.

04/28/2011: Wellhead repair 04/29/2011: Land tubing @ 7948' 06/28/2011: Last slickline report:

TIH, TAG CEMENT PLUG, DRILL CEMENT, CBP, TIH 261 JTS 8250', TAG FILL, RU WEATHERFORD FOAM UNIT, BREAK CIRC, PU 3 JTS C/O TO 8313', 63' OF FILL, LD 12 JTS, BROACH TBG, POBS, 2500#, LAND TBG, NUWH, TURN TO PROD

TBG RUN 251 JTS 7930.48" KB 14.00' **HANGER** .83' **XNSX** 2.2' 7947.51' **EOT PBTD** 8313.00' WTR PUMPED 460 BBLS WTR RCVD 420 BBLS

TBG REPLACED 4 JTS 126.45' WITH 4 JTS 126.45' + 1 JT BENT

31.65'

## H<sub>2</sub>S History:

Production Date	Gas (avg mcf/day)	Water (avg bbl/day)	Oil (avg bbl/day)	LGR (bbl/Mmcf)	Max H2S Seperator (ppm)
4/30/2010	678.20	0.00	0.00	0.00	
5/31/2010	833.32	62.35	9.58	86.32	
6/30/2010	556.47	72.27	5.77	140.23	10.00
7/31/2010	464.48	64.68	5.35	150.77	12.00
8/31/2010	441.87	69.16	3.61	164.70	0.00
9/30/2010	401.93	59.87	4.17	159.31	6.00
10/31/2010	348.65	47.68	1.71	141.65	5.00
11/30/2010	308.53	38.20	2.30	131.27	22.00
12/31/2010	286.00	34.48	2.06	127.79	14.00
1/31/2011	27.48	4.32	0.84	187.79	7.00
2/28/2011	180.96	15.96	1.64	97.30	9.00
3/31/2011	117.29	5.81	2.71	72.61	0.00
4/30/2011	138.90	10.60	0.57	80.39	0.00
5/31/2011	255.61	56.87	1.39	227.92	0.00
6/30/2011	206.20	38.17	2.37	196.57	0.00
7/31/2011	157.13	19.45	0.03	124.00	
8/31/2011	184.16	32.68	0.03	177.61	
9/30/2011	174.57	25.90	0.03	148.56	
10/31/2011	179.45	23.55	0.03	131.40	
11/30/2011	144.93	19.73	0.43	139.14	
12/31/2011	112.90	13.00	0.06	115.71	0.00
1/31/2012	97.10	18.77	0.00	193.36	
2/29/2012	73.97	20.59	0.07	279.25	
3/31/2012	70.48	16.29	1.08	246.38	
4/30/2012	119.66	12.60	0.53	109.75	

<u>PROCEDURE</u>: (If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work.)

1. MIRU. Control well with recycled water and biocide as required. ND WH, NU BOP's and test.

- 2. The tubing is below the proposed CBP depth, TOOH with 2-3/8", 4.7#, J-55 (or N-80) tubing (currently landed at ~7948'). Visually inspect for scale and consider replacing if needed.
- 3. If tbg looks ok consider running a gauge ring to 6020 (50' below proposed CBP). Otherwise P/U a mill and C/O to 6020' (50' below proposed CBP).
- 4. Set 8000 psi CBP at ~ 5970'. ND BOPs and NU frac valves. Test frac valves and casing to 1000 and 3500 psi for 15 minutes each and to 6200 psi for 30 minutes; if pressure test fails contact Denver engineer and see notes. As per standard operating procedure install steel blowdown line to reserve pit from 4-1/2" X 9-5/8" annulus. Lock **OPEN** the Braden head valve. Annulus will be monitored throughout stimulation. If release occurs, stimulation will be shut down. Well conditions will be assessed and actions taken as necessary to secure the well. UDOGM will be notified if a release to the annulus occurs.
- 5. Perf the following with 3-3/8" gun, 23 gm, 0.36"hole:

Zone	From	To	spf	# of shots
WASATCH	5726	5727	3	3
WASATCH	5786	5787	3	3
WASATCH	5862	5864	3	6
WASATCH	5937	5940	3	9

- 6. Breakdown perfs and establish injection rate (<u>include scale inhibitor in fluid</u>). Spot 250 gals of 15% HCL and let soak 5-10 min. Fracture as outlined in Stage 1 on attached listing. Under-displace to ~5726' and trickle 250gal 15% HCL w/ scale inhibitor in flush.
- 7. Set 8000 psi CBP at ~5664'. Perf the following 3-3/8" gun, 23 gm, 0.36"hole:

Zone	From	To	spf	# of shots
WASATCH	5412	5413	3	3
WASATCH	5506	5507	3	3
WASATCH	5554	5556	3	6
WASATCH	5609	5611	3	6
WASATCH	5632	5634	3	6

- 8. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 7 on attached listing. Under-displace to ~5412' and flush only with recycled water.
- 9. Set 8000 psi CBP at~5362'.
- 10. ND Frac Valves, NU and Test BOPs.
- 11. TIH with 3 7/8" mill, pump open sub, XN nipple and tubing.
- 12. Mill 2 plugs and clean out to a depth of 5960'.
- 13. Land tubing at 5696', drop ball and pump open sub. Flow back completion load. RDMO
- 14. MIRU, POOH tbg and mill. TIH with POBS and mill.

- 15. Mill last plug @ 5970' clean out to PBTD at 8312'. Land tubing at  $\pm$ 7948' pump off bit and bit sub. This well WILL be commingled at this time.
- 16. Clean out well with foam and/or swabbing unit until steady flow has been established from completion.
- 17. Leave surface casing valve open. Monitor and report any flow from surface casing. RDMO

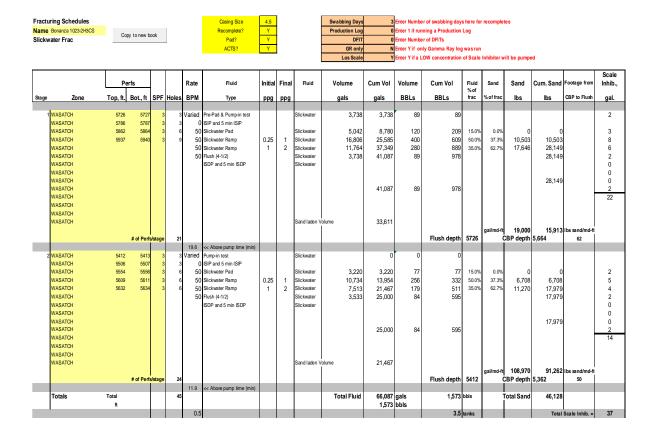
For design questions, please call Patricia Cuba, Denver, CO (720) 929-6348 (Office) (303) 601-7259 (Cell)

For field implementation questions, please call Jeff Samuels, Vernal, UT (435)-781-7046 (Office)

## NOTES:

If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work

Verify that the Braden head valve is locked OPEN.



Total Stages 2 stages Last Stage Flush 3,533 gals

## Service Company Supplied Chemicals - Job Totals

ıcer	31	gals @	0.5	GPT
tant	63	gals @	1.0	GPT
izer	31	gals @	0.5	GPT
Hcl	500	gals @	250	gal/stg
acid	3	gals @	5.0	GPT of acid
acid	1	gals @	2.0	GPT of acid
acid	3	gals @	6.0	GPT of acid
	tant izer Hcl acid acid	tant 63 izer 31 Hcl 500 acid 3 acid 1	tant 63 gals @ izer 31 gals @ Hcl 500 gals @ acid 3 gals @ acid 1 gals @	tant 63 gals @ 1.0 izer 31 gals @ 0.5 Hcl 500 gals @ 250 acid 3 gals @ 5.0 acid 1 gals @ 2.0

## Third Party Supplied Chemicals Job Totals - Include Pumping Charge if Applicable

Scale Inhibitor	37	gals pumped	0.5	GPT (see schedule)
Biocide	19	gals @	0.3	GPT

Name Bonanza 1023-2H3CS Perforation and CBP Summary

		Per	forations							
Stage	Zones	Top, ft	Bottom, ft	SPF	Holes	Frac	ture Cove	rage		
1	WASATCH	5726	5727	3	3	5719.5	to	5731.5		
	WASATCH	5786	5787	3	3	5775.5	to	5794		
	WASATCH	5862	5864	3	6	5852	to	5867.5		
	WASATCH	5937	5940	3	9	5932	to	5941		
	WASATCH									
	WASATCH									
	WASATCH									
	# of Perfs/stage				21	CBP DEPTH	5,664			
2	2 WASATCH	5412	5413	3	3	5411.5	to	5414		
	WASATCH	5506	5507	3	3	5504	to	5509.5		
	WASATCH	5554	5556	3	6	5546	to	5558		
	WASATCH	5609	5611	3	6	5606.5	to	5612		
	WASATCH	5632	5634	3	6	5628	to	5634.5		
	WASATCH									
	WASATCH									
	WASATCH									
	# of Perfs/stage				24	CBP DEPTH	5,362			
	Totals	Total			45			Total		

# Bonanza 1023-2H3CS

MD	TVD	EW	NS	INC	AZI
0.00	0.00	0.00	0.00	0.00	0.00
143.00	143.00	-0.46	0.00	0.37	269.80
233.00	233.00	-0.81	-0.46	0.59	187.68
323.00	322.98	-0.45	-1.92	1.38	157.07
393.00	392.96	0.33	-3.70	1.81	155.53
483.00	482.91	1.93	-6.14	1.94	138.58
573.00	572.85	4.47	-8.01	2.16	115.57
663.00	662.78	7.90	-9.27	2.51	105.57
753.00	752.69	11.75	-10.34	2.58	105.27
843.00	842.59	15.58	-11.86	2.71	117.88
933.00	932.49	19.22	-14.07	2.72	124.60
1023.00	1022.39 1112.28	22.67 26.04	-16.67	2.78	129.37 134.13
1113.00 1203.00	1202.15	29.32	-19.69	2.99 3.05	134.13
1293.00	1202.13	32.64	-23.11 -26.62	3.11	135.10
1383.00	1381.89	35.90	-30.28	3.14	141.38
1473.00	1471.74	39.03	-34.40	3.46	144.17
1563.00	1561.59	42.21	-38.34	3.00	137.60
1653.00	1651.48	45.22	-41.80	2.84	140.36
1743.00	1741.37	47.85	-45.37	2.82	146.89
1833.00	1831.25	50.17	-49.27	2.97	151.50
1903.00	1901.15	51.92	-52.65	3.26	153.55
2008.00	2005.99	54.27	-57.87	3.00	158.19
2053.00	2050.93	55.25	-60.12	3.25	154.82
2099.00	2096.80	56.76	-63.13	5.13	152.57
2144.00	2141.56	59.11	-67.14	6.75	147.44
2189.00	2186.19	62.34	-71.87	7.88	144.07
2235.00	2231.69	66.30	-77.37	9.06	144.36
2280.00	2276.06	70.74	-83.41	10.13	143.19
2325.00	2320.28	75.65	-90.15	11.23	144.47
2371.00	2365.24	81.13	-98.16	13.13	146.69
2416.00	2408.99	86.70	-107.12	14.00	149.44
2462.00	2453.51	92.67	-117.03	15.13	148.44
2507.00	2496.88	98.82	-127.31	15.75	149.82
2552.00	2540.11	104.73	-138.31	16.50	153.57
2598.00	2584.16	110.48	-150.28	17.06	155.07
2643.00	2627.07	116.31	-162.52	18.00	154.07
2688.00	2669.74	122.85	-175.21	19.00	151.44
2734.00	2713.04	130.39	-188.77	20.44	150.44
2779.00	2754.92	138.25	-203.24	22.50	152.44
2824.00	2796.24	146.30	-219.13	24.13	153.82
2870.00	2837.77	154.88	-236.95	26.81	154.69
2915.00	2877.63	164.08	-255.70	28.50	153.07
2960.00	2916.97	174.30	-275.00	29.56	151.19
3006.00	2956.67	185.54	-295.33	31.13	150.94
3051.00	2995.20	196.89	-315.61	31.06	150.57
3096.00	3034.15	208.03	-335.21	29.06	150.19
3142.00	3074.33	219.33	-354.54	29.19	149.19
3187.00	3113.51	230.71	-373.53	29.75	148.94
3232.00	3152.37	242.44	-392.95	30.81	148.82
3278.00	3191.89	254.56	-413.13	30.75	149.19
3323.00	3230.45	266.18	-433.20	31.31	150.69
3368.00	3268.90	277.54	-453.65	31.31	151.19
3414.00	3308.34	288.94	-474.39	30.63	151.19
3459.00 3504.00	3346.99	299.98	-494.62 -515.29	31.00	151.57
	3385.42	310.97		31.69	152.44
3549.00 3595.00	3423.66	321.99	-536.30 -557.83	31.94	152.19
	3462.68	333.38		32.00	152.07
3640.00	3501.05	344.44 355.09	-578.58	31.00	151.82
3685.00	3539.82		-598.78	30.00	152.57
3731.00 3776.00	3579.86 3619.34	365.22 374.58	-619.04 -638.50	29.00	154.32 154.33
3821.00	3658.94	384.01	-638.50 -657.68	28.35 28.38	153.32
3821.00	3699.18	393.86	-677.67	29.56	153.32
3912.00	3738.16	403.67	-697.89	30.38	154.19
3957.00	3777.04	414.08	-718.03	30.38	151.19

3006.00	2956.67	185.54	-295.33	31.13	150.94
3051.00	2995.20	196.89	-315.61	31.06	150.57
3096.00	3034.15	208.03	-335.21	29.06	150.19
3142.00	3074.33	219.33	-354.54	29.19	149.19
3187.00	3113.51	230.71	-373.53	29.75	148.94
3232.00	3152.37	242.44	-392.95	30.81	148.82
3278.00	3191.89	254.56	-413.13	30.75	149.19
3323.00	3230.45	266.18	-433.20	31.31	150.69
3368.00	3268.90	277.54	-453.65	31.31	151.19
3414.00	3308.34	288.94	-474.39	30.63	151.19
3459.00	3346.99	299.98	-494.62	31.00	151.57
3504.00	3385.42	310.97	-515.29	31.69	152.44
3549.00	3423.66	321.99	-536.30	31.94	152.19
3595.00	3462.68	333.38	-557.83	32.00	152.07
3640.00	3501.05	344.44	-578.58	31.00	151.82
3685.00	3539.82	355.09	-598.78	30.00	152.57
3731.00	3579.86	365.22	-619.04	29.00	154.32
3776.00	3619.34	374.58	-638.50	28.35	154.33
3821.00	3658.94	384.01	-657.68	28.38	153.32
3867.00	3699.18	393.86	-677.67	29.56	154.19
3912.00	3738.16	403.67	-697.89	30.38	154.07
3957.00	3777.04	414.08	-718.03	30.13	151.19
4002.00	3815.81	425.16	-738.00	30.88	150.82
4048.00	3855.24	436.96	-758.55	31.13	149.44
4093.00	3893.81	449.05	-778.33	30.88	147.69
4138.00					
	3932.59	461.53	-797.42	30.06	145.94
4184.00	3972.56	474.08	-816.43	29.31	147.19
4229.00	4011.84	485.83	-834.96	29.06	148.07
4320.00	4091.65	508.60	-872.30	28.38	149.19
4410.00	4170.67	530.46	-909.41	28.81	149.82
4501.00	4250.92	552.45	-946.24	27.44	148.44
4592.00	4332.16	573.84	-981.22	26.13	148.69
4682.00	4413.58	593.70	-1014.03	24.31	148.94
4773.00	4496.93	612.83	-1045.12	23.00	147.82
4863.00	4579.98	631.27	-1074.48	22.31	147.94
4954.00	4664.82	648.87	-1102.29	20.10	147.37
5045.00	4750.57	665.22	-1127.98	19.00	147.69
5135.00	4836.25	679.50	-1151.52	16.63	149.94
5226.00	4923.88	691.54	-1172.87	14.63	151.32
5317.00			-1191.21		
	5012.39	701.98		12.19	149.19
5407.00	5100.65	711.39	-1206.09	10.38	145.94
5498.00	5190.38	718.95	-1219.19	8.81	154.82
5589.00	5280.53	724.79	-1230.12	6.88	148.07
5679.00	5370.02	729.43	-1238.41	5.25	154.32
5770.00	5460.77	731.68	-1244.70	3.25	169.94
5861.00	5551.70	732.59	-1248.01	1.13	149.18
5952.00			-1247.96	1.38	
	5642.69	732.33			318.32
6042.00	5732.66	730.98	-1246.33	1.31	322.69
6133.00	5823.64	729.81	-1244.55	1.38	330.69
6223.00	5913.62	728.95	-1242.73	1.19	339.32
6314.00	6004.60	728.25	-1241.26	0.88	327.82
6405.00	6095.60	727.56	-1240.53	0.44	293.32
6495.00	6185.59	727.11	-1240.32	0.19	297.44
6586.00	6276.59	726.92	-1240.39	0.19	201.07
6677.00	6367.59	726.73	-1240.68	0.25	220.32
6767.00	6457.59	726.41	-1241.29	0.63	204.07
6858.00	6548.59	726.31	-1242.28	0.69	168.32
6948.00	6638.58	726.63	-1243.36	0.75	159.32
7039.00	6729.58	726.74	-1243.75	0.25	329.07
7130.00	6820.57	726.37	-1243.35	0.44	309.57
7220.00	6910.57	726.03	-1243.06	0.13	314.57
7311.00	7001.56	725.00	-1242.05	1.69	314.69
7402.00	7092.52	723.19	-1240.21	1.56	315.94
7492.00	7182.50	722.63	-1238.50	1.13	19.44
7583.00	7273.49	723.58	-1237.28	0.94	60.57
7645.00	7335.48	724.53	-1237.00	0.94	85.82
8370.00	8060.38	736.39	-1236.13	0.94	85.82
0010.00	5500.50	, 50.53	1200.10	0.54	03.02

# **Key Contact information**

Completion Engineer

Patricia Cuba: 303/601-7259. 720/929-6348

**Production Engineer** 

Ben Smiley: 435/781-7010, 936/524-4231 Blair Corbett: 435/322-0119, 435/781-9714

Completion Supervisor Foreman

Jeff Samuels: 435-828-6515, 435-781-7046

Completion Manager

Jeff Dufresne: 720-929-6281, 303-241-8428

Vernal Main Office

435-789-3342

Emergency Contact Information—Call 911

Vernal Regional Hospital Emergency: 435-789-3342

Police: (435) 789-5835

Fire: 435-789-4222

#### Acid Pickling and H2S Procedures (If Required)

\*\*PROCEDURE FOR PUMPING ACID DOWN TBG

WHEN FINDING SCALE IN TUBING THAT IS ACID SOLUBLE, ENSURE THAT PLUNGER EQUIPMENT IS REMOVED AND ABLE TO PUMP DOWN TBG. INSTALL A 'T' IN PUMP LINE W/2" VALVE THAT NALCO CAN TIE INTO. HAVE 60 BBLS 2% KCL MIXED W/ 10-15 GAL H2S SCAVENGER IN RIG FLAT TANK. (WE USED THE RIG FLAT TANK FOR MIXING CHEMICAL SO WE DIDN'T HAVE THE CHEMICAL IN ALL FLUIDS ON LOCATION, ONLY WHAT WE NEEDED TO PUMP DOWN HOLE)

- 1. PUMP 5-10 BBLS 2% KCL DOWN TBG (NALCO CANNOT PUMP AGAINST PRESSURE)
- 2. NALCO WILL PUMP 3 DRUMS HCL (31%) INTO PUMP LINE.
- 3. FLUSH BEHIND ACID WITH 10-15 BBL 2% KCL
- 4. PUMP 2—30 BBL 2% W/ H2S SCAVENGER DOWN TBG.
- 5. PUMP REMAINDER OF 2% W/ H2S SCAVENGER DOWN CASING AND SHUT WELL IN FOR MINIMUM OF 2 HRS.
- 6. OVER DISPLACE DOWN TBG AND CSG TO FLUSH ACID AND SCAVENGER INTO FORMATION
- 7. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

\*\* PROCEDURE FOR PUMPING H2S SCAVENGER WITHOUT ACID

PRIOR TO RIG MOVING ON OR AS RIG PULLS ONTO LOCATION. TEST CASING, TUBING AND SEPARATOR FOR H2S. IF FOUND MAKE SURE THAT PLUNGER SYSTEM IS REMOVED (IT IS POSSIBLE TO PUMP AROUND PLUNGERS BUT SOME WILL HAVE A STANDING VALVE IN SEATING NIPPLE).

- 1. MIX 10-15 GAL H2S SCAVENGER WITH 60-100 BBL 2% KCL IN RIG FLAT TANK.
- 2. PUMP 25 BBLS MIXTURE DOWN TUBING AND REST DOWN CASING. SHUT WELL IN FOR 2 HOURS.
- 3. IF WELL HAS PRESSURE AFTER 2 HOURS RETEST CASING AND TUBING FOR H2S.
- 4. FLUSH TUBING AND CASING PUSHING H2S SCAVENGER INTO FORMATION.
- 5. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

<sup>\*\*</sup> As per APC standard operating procedure, APC foreman will verify ALL volumes pumped and record on APC Volume Report Form

STATE OF UTAH	
DEPARTMENT OF NATURAL RESOURCE	s
DIVISION OF OIL, GAS AND MININ	iG

<del></del>			ENTITY ACTION	FORM	·		** ***********************************			
)naratar:	KERR	McGEE OIL & GAS ON	ISHORE LP					2005		
Operator:		ox 173779	TOTIONE EI	Operator Account Number: N 2995  Phone Number: (720) 929-6029  QQ Sec Twp Rng County  y Spud Date Entity Assignment Effective Date  6 Ponderosa Unit. 5130 12013						
\ddress:	-			-						
	city DE			-						
	state C	0	<sub>zip</sub> 80217	_	P	hone Nu	mber:	(720) 929-6029		
<b>W</b>				_						
Weil 1 API Nu	mber	NA/AJI	Name	1 66		T =	<u> </u>			
See A		1		QQ	Sec	Twp	Rng	County		
		See Atchm	r		<u> </u>					
Action	Code	Current Entity Number	New Entity Number	S	pud Da	te				
		99999	19519				<u> </u>	1112012		
Commen	ts: Diag-	o ooo otteebee all all all		<u>.</u>			<u> </u>	112012		
i - ve no		e see attachment with l	list of Wells in the Pon	derosa Uı	nit.		513	30 12012		
WSM	1/17							30 10010		
Weii 2		·								
API Nu	mber	Well	Name	QQ	Sec	Twp	Rng	County		
Action	Code	Current Entity	New Entity	s	pud Dat	l	Entity Applement			
		Number	Number							
				***************************************						
Comment	ts:									
				·						
Well 3										
API Nu	mber	Well	Name	QQ	Sec	Twp	Rng	County		
								×		
Action	Code	Current Entity	New Entity	-	Laud Dat	·^	F"4	L		
		Number	Number	١	puu Dai	. <del>C</del>		ity Assignment Effective Date		
				<del>                                     </del>						
Comment										
	<del>-</del>									
TION CODE										
A - Estat	olish new e	ntity for new well (single v	well only)	Ca	ra Mahle	r				
B - Add :	new well to	existing entity (group or a	unit well)	Nam	e (Please	Print)				
C - Re-a:	ssign well t ssign well t	rom one existing entity to	another existing entity	<del></del>						
E - Other	r (Explain i	rom one existing entity to n 'comments' section)	RECEIVED			DV ANA	I VOT	E/04/0040		
	, ,				Q Sec Twp I			5/21/2012		
			MAV a 4 2042	11110				Date		

(5/2000)

MAY 2 1 2012

well name	sec	twp	rng	api	entity	le	ease	well	stat	qtr_qtr	bhl	surf zone	a_stat	I_num	op_no
SOUTHMAN CANYON 31-3	31	090S	230E	4304734726	13717		1	GW	Р	SENW		1 WSMVD	P	U-33433	N2995
SOUTHMAN CANYON 31-4	31	090S	230E	4304734727	13742			GW	S	SESW		1 WSMVD	S	UTU-33433	N2995
SOUTHMAN CYN 31-2X (RIG SKID)	31	0908	230E	4304734898	13755		1	GW	Р	NWNW		1 WSMVD	Р	U-33433	N2995
SOUTHMAN CYN 923-31J	31	090S	230E	4304735149				GW	Р	NWSE		1 MVRD	Р	U-33433	N2995
SOUTHMAN CYN 923-31B	31	0908	230E	4304735150	<del></del>			GW	Р	NWNE		1 MVRD	Р	U-33433	N2995
SOUTHMAN CYN 923-31P	31	0908	230E	4304735288	14037			GW	Р	SESE		1 WSMVD	Р	UTU-33433	N2995
SOUTHMAN CYN 923-31H	31	090S	230E	4304735336	14157			GW	Р	SENE		1 WSMVD	Р	U-33433	N2995
SOUTHMAN CYN 923-310	31	090S	230E	4304737205			1	GW	Р	SWSE		1 MVRD	Р	UTU-33433	N2995
SOUTHMAN CYN 923-31K	31	090S	230E	4304737206	16503		1	GW	Р	NESW		1 WSMVD	Р	UTU-33433	N2995
SOUTHMAN CYN 923-31G	31	090S	230E	4304737208	16313		1	GW	Р	SWNE		1 WSMVD	Р	UTU-33433	N2995
SOUTHMAN CYN 923-31E	31	0908	230E	4304737209	16521		1	GW	Р	SWNW		1 WSMVD	Р	UTU-33433	N2995
SOUTHMAN CYN 923-31A	31	090S	230E	4304737210	16472		1	GW	Р	NENE		1 WSMVD	Р	UTU-33433	N2995
SOUTHMAN CYN 923-31C	31	090S	230E	4304737227	16522		1	GW	Р	NENW		1 WSMVD	Р	UTU-33433	N2995
BONANZA 1023-1G	01	100S	230E	4304735512	14458		1	GW	Р	SWNE		1 WSMVD	Р	U-40736	N2995
BONANZA 1023-1A	01	100S	230E	4304735717	14526		1	GW	Р	NENE		1 WSMVD	Р	U-40736	N2995
BONANZA 1023-1E	01	100S	230E	4304735745	14524		1	GW	Р	SWNW		1 WSMVD	Р	U-40736	N2995
BONANZA 1023-1C	01	100S	230E	4304735754	14684		1	GW	Р	NENW		1 MVRD	Р	U-40736	N2995
BONANZA 1023-1K	01	100S	230E	4304735755	15403		1	GW	Р	NESW		1 MVRD	Р	U-38423	N2995
BONANZA 1023-1F	01	100S	230E	4304737379	16872		1	GW	Р	SENW		1 MVRD	Р	UTU-40736	N2995
BONANZA 1023-1B	01	100S	230E	4304737380	16733		1	GW	Р	NWNE		1 MVRD	Р	UTU-40736	N2995
BONANZA 1023-1D	01	100S	230E	4304737381	16873		1	GW	Р	NWNW		1 MVRD	Р	UTU-40736	N2995
BONANZA 1023-1H	01	100S	230E	4304737430	16901		1	GW	Р	SENE		1 MVRD	Р	UTU-40736	N2995
BONANZA 1023-1L	01	100S	230E	4304738300	16735		1	GW	Р	NWSW		1 MVRD	Р	UTU-38423	N2995
BONANZA 1023-1J	01	100S	230E	4304738302	16871		1	GW	Р	NWSE		1 MVRD	Р	UTU-40736	N2995
BONANZA 1023-1I	01	100S	230E	4304738810	16750		1	GW	Р	NESE		1 MVRD	Р	UTU-40736	N2995
BONANZA 1023-2E	02	100S	230E	4304735345	14085		3	GW	Р	SWNW		3 WSMVD	Р	ML-47062	N2995
BONANZA 1023-2C	02	100S	230E	4304735346	14084		3	GW	Р	NENW		3 WSMVD	Р	ML-47062	N2995
BONANZA 1023-2A	02	100S	230E	4304735347	14068		3	GW	Р	NENE		3 MVRD	Р	ML-47062	N2995
BONANZA 1023-2G	02	100S	230E	4304735661	14291		3 (	GW	Р	SWNE		3 WSMVD	Р	ML-47062	N2995
BONANZA 1023-20	02	100S	230E	4304735662	14289		3 (	GW	Р	SWSE		3 WSMVD	Р	ML-47062	N2995
BONANZA 1023-2I	02	100S	230E	4304735663	14290		3 (	GW	S	NESE		3 WSMVD	S	ML-47062	N2995
BONANZA 1023-2MX	02	100S	230E	4304736092	14730		3 (	GW	Р	swsw		3 WSMVD	Р	ML-47062	N2995
BONANZA 1023-2H	02	100S	230E	4304737093	16004		3 (	GW	Р	SENE		3 WSMVD	Р	ML-47062	N2995
BONANZA 1023-2D	02	100S	230E	4304737094	15460		3 (	GW	Р	NWNW		3 WSMVD	Р	ML-47062	N2995
BONANZA 1023-2B	02	100S	230E	4304737095	15783		3 (	GW	Р	NWNE		3 MVRD	Р	ML-47062	N2995
BONANZA 1023-2P	02	100S	230E	4304737223	15970		3 (	GW	Р	SESE		3 WSMVD	Р	ML-47062	N2995
BONANZA 1023-2N	02	100S	230E	4304737224	15887		3 (	GW	Р	SESW		3 MVRD	Р	ML-47062	N2995
BONANZA 1023-2L	02		230E	4304737225	15833			ЭW	Р	NWSW		3 WSMVD		ML-47062	N2995
BONANZA 1023-2F	02		230E	4304737226	15386				Р	SENW		3 WSMVD	+	ML-47062	N2995
BONANZA 1023-2D-4	02		230E	4304738761	16033				Р	NWNW	-	3 WSMVD		ML-47062	N2995
BONANZA 1023-20-1	02	100S	230E	4304738762	16013				Р	SWSE		3 WSMVD	+	ML-47062	N2995
BONANZA 1023-2H3CS	02		230E	4304750344	17426				Р	1	D	3 MVRD		ML 47062	N2995
BONANZA 1023-2G3BS	02	100S	230E	4304750345	17428				Р		D	3 MVRD	·i	ML 47062	N2995
BONANZA 1023-2G2CS	02		230E	4304750346	17429				Р		D	3 MVRD		ML 47062	N2995
BONANZA 1023-2G1BS	02	<del></del>	230E	4304750347	17427				Р	<del> </del>	D	3 MVRD		ML 47062	N2995

								_					
BONANZA 1023-2M1S	02	100S	230E	4304750379	17443	3 GW	Р	SENW	D	3 MVRD	P	ML 47062	N2995
BONANZA 1023-2L2S	02	100S	230E	4304750380	17444	3 GW	Р	SENW	D	3 MVRD	Р	ML 47062	N2995
BONANZA 1023-2K4S	02	100S	230E	4304750381	17446	3 GW	Р	SENW	D	3 MVRD	Р	ML 47062	N2995
BONANZA 1023-2K1S	02	100S	230E	4304750382	17445	3 GW	Р	SENW	D	3 WSMVD	Р	ML 47062	N2995
BONANZA 4-6 😽	04	100S	230E	4304734751	13841	1 GW	Р	NESW		1 MNCS	Р	UTU-33433	N2995
BONANZA 1023-4A	04	100S	230E	4304735360	14261	1 GW	Р	NENE		1 WSMVD	Р	U-33433	N2995
BONANZA 1023-4E	04	100S	230E	4304735392	14155	1 GW	P	SWNW		1 WSMVD	Р	U-33433	N2995
BONANZA 1023-4C	04	100S	230E	4304735437	14252	1 GW	Р	NENW		1 WSMVD	Р	U-33433	N2995
BONANZA 1023-4M	04	100S	230E	4304735629	14930	1 GW	Р	SWSW		1 WSMVD	Р	U-33433	N2995
BONANZA 1023-40	04	100S	230E	4304735688	15111	1 GW	Р	SWSE		1 WSMVD	Р	UTU-33433	N2995
BONANZA 1023-4I	04	100S	230E	4304735689	14446	1 GW	Р	NESE		1 MVRD	Р	UTU-33433	N2995
BONANZA 1023-4G	04	100S	230E	4304735746	14445	1 GW	Р	SWNE		1 WSMVD	Р	UTU-33433	N2995
BONANZA 1023-4D	04	100S	230E	4304737315	16352	1 GW	Р	NWNW		1 WSMVD	Р	UTU-33433	N2995
BONANZA 1023-4H	04	100S	230E	4304737317	16318	1 GW	Р	SENE		1 WSMVD	Р	UTU-33433	N2995
BONANZA 1023-4B	04	100\$	230E	4304737328	16351	1 GW	Р	NWNE		1 MVRD	Р	UTU-33433	N2995
BONANZA 1023-4L	04	100S	230E	4304738211	16393	1 GW	Р	NWSW		1 MVRD	Р	UTU-33433	N2995
BONANZA 1023-4P	04	100S	230E	4304738212	16442	1 GW	Р	SESE		1 WSMVD	Р	UTU-33433	N2995
BONANZA 1023-4N	04	100S	230E	4304738303	16395	1 GW	Р	SESW		1 WSMVD	Р	UTU-33433	N2995
BONANZA 1023-4FX (RIGSKID)	04	100S	230E	4304739918	16356	1 GW	Р	SENW		1 WSMVD	Р	UTU-33433	N2995
BONANZA 1023-50	05	100S	230E	4304735438	14297	1 GW	Р	SWSE		1 WSMVD	Р	U-33433	N2995
BONANZA 1023-5AX (RIGSKID)	05	100S	230E	4304735809	14243	1 GW	Р	NENE		1 WSMVD	Р	U-33433	N2995
BONANZA 1023-5C	05	100S	230E	4304736176	14729	1 GW	Р	NENW		1 WSMVD	Р	UTU-33433	N2995
BONANZA 1023-5G	05	100S	230E	4304736177	14700	1 GW	Р	SWNE		1 WSMVD	Р	UTU-33433	N2995
BONANZA 1023-5M	05	100S	230E	4304736178	14699	1 GW	Р	SWSW		1 WSMVD	Р	UTU-73450	N2995
BONANZA 1023-5K	05	100S	230E	4304736741	15922	1 GW	Р	NESW		1 WSMVD	Р	UTU-33433	N2995
BONANZA 1023-5B	05	100S	230E	4304737318	16904	1 GW	Р	NWNE		1 WSMVD	Р	UTU-33433	N2995
BONANZA 1023-5E	05	100S	230E	4304737319	16824	1 GW	Р	SWNW		1 WSMVD	Р	UTU-33433	N2995
BONANZA 1023-5H	05	100S	230E	4304737320	16793	1 GW	Р	SENE		1 WSMVD	Р	UTU-33433	N2995
BONANZA 1023-5N	05	100S	230E	4304737321	16732	1 GW	Р	SESW		1 WSMVD	Р	UTU-73450	N2995
BONANZA 1023-5L	05	100S	230E	4304737322	16825	1 GW	Р	NWSW		1 MVRD	Р	UTU-33433	N2995
BONANZA 1023-5J	05	100S	230E	4304737428	17055	1 GW	Р	NWSE		1 WSMVD	Р	UTU-33433	N2995
BONANZA 1023-5P	05	100S	230E	4304738213	16795	1 GW	Р	SESE		1 MVRD	Р	UTU-33433	N2995
BONANZA 1023-5N-1	05	100S	230E	4304738911	17060	1 GW	Р	SESW		1 WSMVD	Р	UTU-73450	N2995
BONANZA 1023-5PS	05	100S	230E	4304750169	17323	1 GW	Р	NESE	D	1 WSMVD	Р	UTU-33433	N2995
BONANZA 1023-5G2AS	05	100S	230E	4304750486	17459	1 GW	Р	SWNE	D	1 MVRD	Р	UTU 33433	N2995
BONANZA 1023-5G2CS	05	100S	230E	4304750487	17462	1 GW	Р	SWNE	D	1 MVRD	Р	UTU 33433	N2995
BONANZA 1023-5G3BS	05	100S	230E	4304750488	17461	1 GW	Р	SWNE	D	1 MVRD	P	UTU 33433	N2995
BONANZA 1023-5G3CS	05	100S	230E	4304750489	17460	1 GW	Р	SWNE	D	1 MVRD	Р	UTU 33433	N2995
BONANZA 1023-5N4AS	05	100S	230E	4304752080	18484	1 GW	DRL	SWSW	D	1 WSMVD	DRL	UTU73450	N2995
BONANZA 1023-8C2DS	05	100S	230E	4304752081	18507	1 GW	DRL	SWSW	D	1 WSMVD	DRL	UTU37355	N2995
BONANZA 6-2	06	100S	230E	4304734843	13796	1 GW	TA	NESW		1 WSMVD	TA	UTU-38419	N2995
BONANZA 1023-6C	06	100S	230E	4304735153	13951	1 GW	Р	NENW		1 MVRD	Р	U-38419	N2995
BONANZA 1023-6E	06	100S	230E	4304735358	14170	1 GW	Р	SWNW		1 MVRD	Р	U-38419	N2995
BONANZA 1023-6M	06	100S	230E	4304735359	14233	1 GW	Р	SWSW		1 WSMVD	Р	U-38419	N2995
BONANZA 1023-6G	06	100S	230E	4304735439	14221	1 GW	Р	SWNE		1 WSMVD	Р	UTU-38419	N2995
BONANZA 1023-60	06	100S	230E	4304735630	14425	1 GW	TA	SWSE		1 WSMVD	TA	U-38419	N2995

\* \$ · \_ , ·

DOMANIZA 1022 CA	06	1000	230E	4204726067	14775	4	GW	Р	NENE	1	1 WSMVD	Р	U-33433	N2995
BONANZA 1023-6A		1005	_	4304736067			GW	P	SESW		1 WSMVD	P	UTU-38419	N2995 N2995
BONANZA 1023-6N	06	1008	230E	4304737211 4304737212	15672	- <del></del>		P			1 WSMVD	P		
BONANZA 1023-6L	06	1008	230E		15673		GW		NWSW	-			UTU-38419	N2995
BONANZA 1023-6J	06	1008	230E	4304737213	15620		GW	P	NWSE	+	1 WSMVD	P	UTU-38419	N2995
BONANZA 1023-6F	06	1008	230E	4304737214	15576		GW	TA	SENW	-	1 WSMVD	TA	UTU-38419	N2995
BONANZA 1023-6P	06	1008	230E	4304737323	16794		GW	P	SESE	-	1 WSMVD	Р	UTU-38419	N2995
BONANZA 1023-6H	06	1008	230E	4304737324	16798		GW	S	SENE		1 WSMVD	S	UTU-33433	N2995
BONANZA 1023-6D	06	100\$	230E	4304737429	17020		GW	P	NWNW	-	1 WSMVD	P	UTU-38419	N2995
BONANZA 1023-6B	06	100S	230E	4304740398	18291		GW	P	NWNE	<u> </u>	1 WSMVD	Р	UTU-33433	N2995
BONANZA 1023-6M1BS	06	1008	230E	4304750452	17578		GW	P	NWSW	D	1 WSMVD	Р	UTU 38419	N2995
BONANZA 1023-6N1AS	06	1008	230E	4304750453	17581	<del>ii</del>	GW	Р	NWSW	D	1 WSMVD	Р	UTU 38419	N2995
BONANZA 1023-6N1CS	06	100S	230E	4304750454	17580		GW	Р	NWSW	D	1 WSMVD	Р	UTU 38419	N2995
BONANZA 1023-6N4BS	06	100S	230E	4304750455	17579		GW	Р	NWSW	D	1 WSMVD	Р	UTU 38419	N2995
BONANZA 1023-612S	06	100S	230E	4304750457	17790		GW	Р	NESE	D	1 WSMVD	Р	UTU 38419	N2995
BONANZA 1023-614S	06	100S	230E	4304750458	17792		GW	Р	NESE	D	1 WSMVD	Р	UTU 38419	N2995
BONANZA 1023-6J3S	06	100S	230E	4304750459	17791	1	GW	Р	NESE	D	1 WSMVD	Р	UTU 38419	N2995
BONANZA 1023-6P1S	06	100S	230E	4304750460	17793	1	GW	Р	NESE	D	1 WSMVD	Р	UTU 38419	N2995
BONANZA 1023-6A2CS	06	100S	230E	4304751430	18292	1	GW	Р	NWNE	D ·	1 WSMVD	Р	UTU33433	N2995
BONANZA 1023-6B4BS	06	100S	230E	4304751431	18293	1	GW	Р	NWNE	D	1 WSMVD	Р	UTU33433	N2995
BONANZA 1023-6B4CS	06	100S	230E	4304751432	18294	1	GW	Р	NWNE	D	1 WSMVD	Р	UTU33433	N2995
BONANZA 1023-6C4BS	06	100S	230E	4304751449	18318	1	GW	Р	NENW	D	1 WSMVD	Р	UTU38419	N2995
BONANZA 1023-6D1DS	06	100S	230E	4304751451	18316	1	GW	Р	NENW	D	1 WSMVD	Р	UTU38419	N2995
FLAT MESA FEDERAL 2-7	07	100S	230E	4304730545	18244	1	GW	S	NENW		1 WSMVD	S	U-38420	N2995
BONANZA 1023-7B	07	100S	230E	4304735172	13943	1	GW	Р	NWNE		1 MVRD	Р	U-38420	N2995
BONANZA 1023-7L	07	100S	230E	4304735289	14054	1	GW	Р	NWSW		1 WSMVD	Р	U-38420	N2995
BONANZA 1023-7D	07	100S	230E	4304735393	14171		GW	Р	NWNW		1 WSMVD	Р	U-38420	N2995
BONANZA 1023-7P	07	100S	230E	4304735510	14296		GW	Р	SESE		1 WSMVD	Р	U-38420	N2995
BONANZA 1023-7H	07	100S	230E	4304736742	15921		GW	Р	SENE	1	1 WSMVD	Р	UTU-38420	N2995
BONANZA 1023-7NX (RIGSKID)	07	100S	230E	4304736932	15923		GW	P	SESW		1 WSMVD	P		N2995
BONANZA 1023-7M	07	1005	230E	4304737215	16715		GW	P	SWSW		1 WSMVD	P		N2995
BONANZA 1023-7K	07	1005	230E	4304737216	16714		GW	P	NESW		1 WSMVD	P	UTU-38420	N2995
BONANZA 1023-7E	07	1005	230E	4304737217	16870		GW	P	SWNW		1 WSMVD	P	UTU-38420	N2995
BONANZA 1023-7G	07	1005	230E	4304737326	16765		GW	P	SWNE		1 WSMVD	P	UTU-38420	N2995
BONANZA 1023-7A	07	1005	230E	4304737327	16796		GW	P	NENE		1 WSMVD	P	UTU-38420	N2995
BONANZA 1023-7A	07	1005	230E	4304738304	16713		GW	P	SWSE		1 MVRD	P	UTU-38420	N2995
BONANZA 1023-70 BONANZA 1023-7B-3	07	100S	230E	4304738912	17016		GW	P	NWNE		1 WSMVD	P	UTU-38420	N2995
		100S	230E				GW	Р	NWSE		1 WSMVD	P		N2995
BONANZA 1023-07JT	07			4304739390	16869 17494		GW	P		D	1 WSMVD	P		N2995
BONANZA 1023-7J2AS	07	100S	230E	4304750474	-					+ +				
BONANZA 1023-7J2DS	07	1008	230E	4304750475	17495	<del>-</del>	GW	P		D	1 WSMVD	P		N2995
BONANZA 1023-7L3DS	07	1008	230E	4304750476	17939		GW	Р		D	1 WSMVD	P		N2995
BONANZA 1023-7M2AS	07	1008	230E	4304750477	17942		GW	P	· i	D	1 WSMVD	Р		N2995
BONANZA 1023-7N2AS	07	100S	230E	4304750478	17940		GW	Р		D	1 WSMVD	P		N2995
BONANZA 1023-7N2DS	07	100S	230E	4304750479	17941			P	NWSW	D	1 WSMVD	P		N2995
BONANZA 1023-704S	07	100S	230E	4304750480	17918		GW	P	SESE	D	1 WSMVD	Р		N2995
BONANZA 1023-7P2S	07	100S	230E	4304750482	17919			Р	SESE	D	1 WSMVD	Р		N2995
BONANZA 8-2	08	100S	230E	4304734087	13851	1 (	GW	Р	SESE		1 MVRD	Р	U-37355	N2995

BONANZA 1023-8A   08 1005   230E   4304738718   14932   110W   P   NENE   1 WSMVD   P   UTU-37355   N2995   BONANZA 1023-8B   08 1005   230E   4304738729   15104   10W   P   NENE   1 WSMVD   P   UTU-37355   N2995   BONANZA 1023-8F   08 1005   230E   4304738929   14877   1 0W   P   SESW   1 WSMVD   P   UTU-37355   N2995   BONANZA 1023-8B   08 1005   230E   4304738921   15355   1 0W   P   NESE   1 WSMVD   P   UTU-37355   N2995   BONANZA 1023-8G   08 1005   230E   4304738921   15355   1 0W   P   NESE   1 WSMVD   P   UTU-37355   N2995   BONANZA 1023-8G   08 1005   230E   4304738217   15564   1 0W   P   NESE   1 WSMVD   P   UTU-37355   N2995   BONANZA 1023-8G   08 1005   230E   4304738217   15564   1 0W   P   SWSW   1 MVRD   P   UTU-37355   N2995   BONANZA 1023-8G   08 1005   230E   4304738218   18397   1 0W   P   SWNW   1 MVRD   P   UTU-37355   N2995   BONANZA 1023-8G   08 1005   230E   4304738218   18397   1 0W   P   SWNW   1 WSWVD   P   UTU-37355   N2995   BONANZA 1023-8G   08 1005   230E   4304738218   16397   1 0W   P   NENW   1 WSWVD   P   UTU-37355   N2995   BONANZA 1023-8G   08 1005   230E   4304738218   16392   1 0W   P   NENW   1 WSWVD   P   UTU-37355   N2995   BONANZA 1023-8G   08 1005   230E   4304738221   16322   1 0W   P   NENW   1 WSWVD   P   UTU-37355   N2995   BONANZA 1023-8G   08 1005   230E   4304738218   16322   1 0W   P   NENW   1 WSWVD   P   UTU-37355   N2995   BONANZA 1023-8G   08 1005   230E   4304738218   16339   1 0W   P   SENE   1 WSWVD   P   UTU-37355   N2995   BONANZA 1023-8G   08 1005   230E   4304738218   16339   1 0W   P   NENW   1 WSWVD   P   UTU-37355   N2995   BONANZA 1023-8G   08 1005   230E   4304738918   17919   1 0W   P   NENE   1 WSWVD   P   UTU-37355   N2995   BONANZA 1023-8G   08 1005   230E   4304750481   17519   1 0W   P   NENE   D   WSWVD   P   UTU-37355   N2995   BONANZA 1023-8G   08 1005   230E   4304750481   17519   1 0W   P   NENE   D   WSWVD   P   UTU-37355   N2995   BONANZA 1023-8G   08 1005   230E   4304750481   17519   1 0W   P   NENE   D   WSWVD   P   UTU-37355	BONANZA 8-3	08	100S	230E	4304734770	13843	1 GW	Р	NWNW		1 MVRD	Р	U-37355	N2995
BONANZA 1023-8L 08 100S 230E 4304738719 14876 1 GW P NWSW 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8P 08 100S 230E 4304738729 15104 1 GW P NESW 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8P 08 100S 230E 4304738216 16354 1 GW P NESW 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8W 08 100S 230E 4304738216 16354 1 GW P NESW 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8W 08 100S 230E 4304738216 16354 1 GW P NESW 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8W 08 100S 230E 4304738216 16354 1 GW P NESW 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8W 08 100S 230E 4304738216 16354 1 GW P NESW 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B 08 100S 230E 4304738216 16903 1 GW P SWNE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B 08 100S 230E 4304738216 16903 1 GW P SWNE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B 08 100S 230E 4304738216 16397 1 GW P NENW 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B 08 100S 230E 4304738220 16355 1 GW P NENW 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B 08 100S 230E 4304738221 16392 1 GW P NENW 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B 08 100S 230E 4304738221 16392 1 GW P NENW 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B 08 100S 230E 4304738221 16392 1 GW P NENW 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B 08 100S 230E 4304738221 16393 1 GW P SENE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B 08 100S 230E 4304738216 16392 1 GW P NENW 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B 08 100S 230E 4304738216 16392 1 GW P NENW 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B 08 100S 230E 4304738414 17019 1 GW P NENE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B 10S 08 100S 230E 4304758481 17519 1 GW P NENE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B 10S 08 100S 230E 4304758481 17519 1 GW P NENE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B 10S 08 100S 230E 4304758498 17519 1 GW P NENE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B 10S 08 100S 230E 4304758498 17519 1 GW P NENE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B 10S 08 100S 230E 4304758498 17519 1 GW P NENE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B 10S 08 100S 230E 4304758498 17519 1 GW P NENE D 1 WSMVD P UTU-3735	BONANZA 1023-8A	08	100S	230E	4304735718	14932	1 GW	Р	NENE		1 WSMVD	Р	UTU-37355	N2995
BONANZA 1023-8N 08 100S 230E 4304735720 15104 1 GW P SESW 1 IWSMVD P UTU-37355 N2995 BONANZA 1023-8F 08 100S 230E 4304738215 16358 1 GW P NESE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 4304738215 16358 1 GW P NESE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 4304738216 16354 1 GW P NESE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 4304738216 16354 1 GW P NESW 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 4304738218 18903 1 GW P SWSW 1 MWRD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 4304738218 18903 1 GW P SWSW 1 MWRD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 4304738219 16397 1 GW P SWSW 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 4304738221 16222 1 GW P NWNE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 4304738221 16222 1 1 GW P NWNE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 4304738221 16222 1 1 GW P NWNE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 4304738236 1 1 GW P SWSW P NWNE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 4304738236 1 1 GW P SWSW P NWNE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 4304738363 1 1 GW P SWSW P NWNE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 4304738363 1 1 GW P SWSW P NWNE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 4304758438 1 1 GW P SWSW P NWNE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 4304758438 1 1 GW P SWSW P NWNE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 430475848 1 1 GW P NWNE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 430475848 1 1 GW P NWNE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 430475848 1 1 GW P NWNE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 430475849 1 1 GW P NWNE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 430475849 1 1 GW P NWNE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 430475849 1 1 GW P NWNE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 430475849 1 1 GW P NWNE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8 08 100S 230E 430475849 1 1 GW P NWNE D			100S	230E	4304735719	14876	1 GW	Р	NWSW		1 WSMVD	Р	UTU-37355	N2995
BONANZA 1023-8F   08 100S   230E   4304738298   14877   1 GW   S   SENW   1 WSMVD   D   UTU-37355   N2995   BONANZA 1023-8   08 100S   230E   4304738215   16358   1 GW   P   NESE   1 WSMVD   P   UTU-37355   N2995   BONANZA 1023-8M   08 100S   230E   4304738216   16354   1 GW   P   NESW   1 WSMVD   P   UTU-37355   N2995   BONANZA 1023-8M   08 100S   230E   4304738218   16903   1 GW   P   SWWE   1 WSMVD   P   UTU-37355   N2995   BONANZA 1023-8G   08 100S   230E   4304738219   16397   1 GW   P   SWWE   1 WSMVD   P   UTU-37355   N2995   BONANZA 1023-8G   08 100S   230E   4304738219   16397   1 GW   P   SWWE   1 WSMVD   P   UTU-37355   N2995   BONANZA 1023-8G   08 100S   230E   4304738221   16292   1 GW   P   SWWE   1 WSMVD   P   UTU-37355   N2995   BONANZA 1023-8B   08 100S   230E   4304738221   16292   1 GW   P   SWNE   1 WSMVD   P   UTU-37355   N2995   BONANZA 1023-8B   08 100S   230E   4304738221   16292   1 GW   P   SWNE   1 WSMVD   P   UTU-37355   N2995   BONANZA 1023-8B   08 100S   230E   4304738214   16292   1 GW   P   SWNE   1 WSMVD   P   UTU-37355   N2995   BONANZA 1023-8B   08 100S   230E   4304738214   17019   1 GW   P   SWNE   1 WSMVD   P   UTU-37355   N2995   BONANZA 1023-8B   08 100S   230E   4304758481   17019   1 GW   P   SWNE   1 WSMVD   P   UTU-37355   N2995   BONANZA 1023-8A   BONANZA 1023-8A   BONANZA 1023-8A   BONANZA 1023-8B   BONANZA 102		08	100S	230E	4304735720	15104	1 GW	Р	SESW	Ì	1 WSMVD	Р	UTU-37355	N2995
BONANZA 1023-8    08   100S   230E   4304738216   16358   1   GW   P   NESE   1   NESMVD   P   UTU-37355   N2956   BONANZA 1023-84   08   100S   230E   4304738217   16584   1   GW   P   NESW   1   NESWVD   P   UTU-37355   N2956   BONANZA 1023-8G   08   100S   230E   4304738217   16584   1   GW   P   SWSW   1   NESWVD   P   UTU-37355   N2956   BONANZA 1023-8G   08   100S   230E   4304738218   168903   1   GW   P   SWSWW   1   NESWVD   P   UTU-37355   N2956   RONANZA 1023-8G   08   100S   230E   4304738219   16395   1   GW   P   NESWW   1   NESWVD   P   UTU-37355   N2956   RONANZA 1023-8G   08   100S   230E   4304738229   16395   1   GW   P   NESW   1   NESWVD   P   UTU-37355   N2956   RONANZA 1023-8G   08   100S   230E   4304738222   16335   1   GW   P   SWSW   1   NESWVD   P   UTU-37355   N2956   RONANZA 1023-8H   08   100S   230E   4304738305   1   GW   P   SWSE   1   NESWVD   P   UTU-37355   N2956   RONANZA 1023-8H   08   100S   230E   4304738305   1   GW   P   SWSE   1   NESWVD   P   UTU-37355   N2956   RONANZA 1023-8H   08   100S   230E   4304738305   1   GW   P   SWSE   1   NESWVD   P   UTU-37355   N2956   RONANZA 1023-8H   08   100S   230E   4304738305   1   GW   P   NENE   D   1   NESWVD   P   UTU-37355   N2956   RONANZA 1023-8H   08   100S   230E   4304738036   17519   1   GW   P   NENE   D   1   NESWVD   P   UTU-37355   N2956   RONANZA 1023-8H   R					1	14877	1 GW	S	SENW		1 WSMVD	S	UTU-37355	N2995
BONANZA 1023-8K   08   100S   230E   4304738217   16584   1   1   1   1   1   1   1   1   1						i	1 GW	Р				Р	UTU-37355	N2995
BONANZA 1023-8M								Р			<u> </u>	Р		N2995
BONANZA 1023-8C								Р		1		Р		
BONANZA 1023-BE BONANZA 1023-BC BONANZA 1023-B		<del></del>			i constant and the second			Р				Р		
BONANZA 1023-8C  08 100S 230E 4304738220 18355 1 1 GW P NEWW 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8H 08 100S 230E 4304738221 18292 1 GW P NWWE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8D-4 08 100S 230E 4304738222 18353 1 GW P SENE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8D-4 08 100S 230E 4304738222 18353 1 GW P SENE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8D-1 08 100S 230E 4304738304 1 77019 1 GW P NWWE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8D-1 08 100S 230E 4304750481 177518 1 GW P NWWE 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8A4BS 08 100S 230E 4304750481 17519 1 GW P NENE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B-1 08 100S 230E 4304750481 17520 1 GW P NENE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B1AS 08 100S 230E 4304750484 17520 1 GW P NENE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B2AS 08 100S 230E 4304750484 17520 1 GW P NENE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B2AS 08 100S 230E 4304750484 17511 1 GW P NENE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B1S 08 100S 230E 4304750485 17521 1 GW P NENE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B1S 08 100S 230E 4304750495 17511 1 GW P NENE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B1S 08 100S 230E 4304750497 17512 1 GW P NWSE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B1S 08 100S 230E 4304750497 17512 1 GW P NWSE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B1S 08 100S 230E 4304750497 17512 1 GW P NWSE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B1S 08 100S 230E 4304750497 17512 1 GW P NWSE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B1S 08 100S 230E 4304750497 17510 1 GW P NWSE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B1S 08 100S 230E 4304750497 17512 1 GW P NWSE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B1S 08 100S 230E 4304750497 17512 1 GW P NWSE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B20S 08 100S 230E 4304750497 17512 1 GW P NWSE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B20S 08 100S 230E 4304750491 17546 1 GW P NWSE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B20S 08 100S 230E 4304750491 17546 1 GW P NWSE D 1 WSMVD P UTU-37355 N2995 BONANZA 1023-8B20S 08 100								Р			1 WSMVD	Р		
BONANZA 1023-8B								Р				Р		N2995
BONANZA 1023-8H   08								Р				Р		4
BONANZA 1023-80				i	·			Р				Р		
BONANZA 1023-8B-4   08 100S 230E								Р		1		Р		
BONANZA 1023-8A1DS								Р			+	Р		
BONANZA 1023-8AJABS								Р		D	<u> </u>	Р		
BONANZA 1023-8B1AS 08 100S 230E 4304750484 17520 1 1 GW P NENE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8B2AS 08 100S 230E 4304750485 17521 1 1 GW P NENE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-801S 08 100S 230E 4304750496 175509 1 1 GW P NWSE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-803S 08 100S 230E 4304750497 17512 1 GW P NWSE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-803S 08 100S 230E 4304750497 17512 1 GW P NWSE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8043 08 100S 230E 4304750499 17512 1 GW P NWSE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8045 08 100S 230E 4304750499 17544 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-802S 08 100S 230E 4304750499 17544 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-803DS 08 100S 230E 4304750500 17546 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-803DS 08 100S 230E 4304750501 17545 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-803DS 08 100S 230E 4304750501 17545 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-803DS 08 100S 230E 4304750502 17543 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-803DS 08 100S 230E 43047501501 17645 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-803DS 08 100S 230E 4304751131 18169 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-803DS 08 100S 230E 4304751132 18167 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-803DS 08 100S 230E 4304751132 18167 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-803AS 08 100S 230E 4304751133 18166 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-803AS 08 100S 230E 4304751134 18168 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-803AS 08 100S 230E 4304751135 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-803AS 08 100S 230E 4304751136 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-803AS 08 100S 230E 4304751136 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-803AS 08 100S 230E 4304751136 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-803AS 08 100S 230E 4304751136 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N29	The second secon				·			P			<del></del>	Р		
BONANZA 1023-8B2AS   08   100S   230E   4304750485   17521   1 GW   P   NENE   D   1   WSMVD   P   UTU 37355   N2995				1				Р	<del></del>			Р		
BONANZA 1023-802S   08   100S   230E   4304750496   17519   1   1   GW   P   NWSE   D   1   WSMVD   P   UTU 37355   N2995								Р		<del> </del>		Р		+
BONANZA 1023-8J1S   08   100S   230E   4304750496   17509   1 GW   P   NWSE   D   1 WSMVD   P   UTU 37355   N2995     BONANZA 1023-803S   08   100S   230E   4304750498   17512   1 GW   P   NWSE   D   1 WSMVD   P   UTU 37355   N2995     BONANZA 1023-8J3   08   100S   230E   4304750498   17510   1 GW   P   NWSE   D   1 WSMVD   P   UTU 37355   N2995     BONANZA 1023-8D2DS   08   100S   230E   4304750499   17544   1 GW   P   NENW   D   1 WSMVD   P   UTU 37355   N2995     BONANZA 1023-8D2DS   08   100S   230E   4304750500   17546   1 GW   P   NENW   D   1 WSMVD   P   UTU 37355   N2995     BONANZA 1023-8D3DS   08   100S   230E   4304750501   17545   1 GW   P   NENW   D   1 WSMVD   P   UTU 37355   N2995     BONANZA 1023-8D3DS   08   100S   230E   4304750502   17543   1 GW   P   NENW   D   1 WSMVD   P   UTU 37355   N2995     BONANZA 1023-8A4CS   08   100S   230E   4304751131   18169   1 GW   P   NENW   D   1 WSMVD   P   UTU 37355   N2995     BONANZA 1023-8B3BS   08   100S   230E   4304751132   18167   1 GW   P   NWNE   D   1 WSMVD   P   UTU 37355   N2995     BONANZA 1023-8C1AS   08   100S   230E   4304751133   18166   1 GW   P   NWNE   D   1 WSMVD   P   UTU 37355   N2995     BONANZA 1023-8G3AS   08   100S   230E   4304751133   18166   1 GW   P   NWNE   D   1 WSMVD   P   UTU 37355   N2995     BONANZA 1023-8F3BS   08   100S   230E   4304751133   18168   1 GW   P   NWNE   D   1 WSMVD   P   UTU 37355   N2995     BONANZA 1023-8F4AS   08   100S   230E   4304751135   18227   1 GW   P   SENW   D   1 WSMVD   P   UTU 37355   N2995     BONANZA 1023-8F4AS   08   100S   230E   4304751136   18227   1 GW   P   SENW   D   1 WSMVD   P   UTU 37355   N2995     BONANZA 1023-8F4AS   08   100S   230E   4304751136   18227   1 GW   P   SENW   D   1 WSMVD   P   UTU 37355   N2995     BONANZA 1023-8F4AS   08   100S   230E   4304751136   18224   1 GW   P   SENW   D   1 WSMVD   P   UTU 37355   N2995     BONANZA 1023-8F4AS   08   100S   230E   4304751136   18224   1 GW   P   SENW   D   1 WSMVD   P   UTU 37355   N2995     BONANZA 1023-8F4AS   08	THE RESERVE OF THE PROPERTY OF				J	i		P		-		P		
BONANZA 1023-803S   08   100S   230E   4304750497   17512   1 GW   P   NWSE   D   1 WSMVD   P   UTU 37355   N2995								P		D	+	Р		
BONANZA 1023-8J3								Р		D		Р		
BONANZA 1023-8C4CS 08 100S 230E 4304750499 17544 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8D2DS 08 100S 230E 4304750500 17546 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8B3DS 08 100S 230E 4304750501 17545 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8A4CS 08 100S 230E 4304751131 18169 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8B3BS 08 100S 230E 4304751132 18169 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8B3BS 08 100S 230E 4304751132 18167 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8B3BS 08 100S 230E 4304751133 18166 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8B3BS 08 100S 230E 4304751133 18166 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8C4S 08 100S 230E 4304751134 18168 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F3BS 08 100S 230E 4304751135 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F3BS 08 100S 230E 4304751136 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F3BS 08 100S 230E 4304751136 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F3BS 08 100S 230E 4304751137 18224 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4AS 08 100S 230E 4304751138 18224 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751138 18225 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751139 18224 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751134 18122 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751141 18144 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751144 18145 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751144 18145 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751144 18145 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995								Р				Р		
BONANZA 1023-8D2DS 08 100S 230E 4304750500 17546 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8D3DS 08 100S 230E 4304750502 17543 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8B3DS 08 100S 230E 4304750502 17543 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8B3DS 08 100S 230E 4304751131 18169 1 GW P NWNE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8B3DS 08 100S 230E 4304751132 18167 1 GW P NWNE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8G3AS 08 100S 230E 4304751133 18166 1 GW P NWNE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8B3DS 08 100S 230E 4304751134 18168 1 GW P NWNE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8B3DS 08 100S 230E 4304751135 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8B3DS 08 100S 230E 4304751135 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8B3DS 08 100S 230E 4304751136 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751136 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751138 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751138 18226 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751141 18142 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8B4DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H3DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H3DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H3DS 08 100S 230E 4304751142 18143 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995					<u> </u>			Р		D		Р		
BONANZA 1023-8F3DS 08 100S 230E 4304750501 17545 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F3DS 08 100S 230E 4304750502 17543 1 GW P NENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8B4CS 08 100S 230E 4304751131 18169 1 GW P NWNE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8G3DS 08 100S 230E 4304751132 18167 1 GW P NWNE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8G3DS 08 100S 230E 4304751133 18166 1 GW P NWNE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8G3DS 08 100S 230E 4304751134 18168 1 GW P NWNE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8G3DS 08 100S 230E 4304751134 18168 1 GW P NWNE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8G3DS 08 100S 230E 4304751135 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F3DS 08 100S 230E 4304751136 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751137 18224 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751138 18225 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751139 18226 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751139 18226 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751139 18226 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751140 18144 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751145 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995								Р		D	-i	Р		
BONANZA 1023-8F3DS					i			Р		D		Р		
BONANZA 1023-8A4CS								Р		D	<u> </u>	Р		
BONANZA 1023-8B3BS 08 100S 230E 4304751132 18167 1 GW P NWNE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8G1AS 08 100S 230E 4304751133 18166 1 GW P NWNE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8G3AS 08 100S 230E 4304751134 18168 1 GW P NWNE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F3BS 08 100S 230E 4304751135 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4AS 08 100S 230E 4304751136 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4AS 08 100S 230E 4304751137 18224 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751138 18225 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751139 18226 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8G4DS 08 100S 230E 4304751140 18144 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8G4DS 08 100S 230E 4304751140 18144 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8G4DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H2DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H2DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18143 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4BS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4BS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4BS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4BS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4BS 08 100S 230E 4304751146 18156 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4BS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4BS 08 100S 230E 4304751146 18156 1 GW P NESE D 1 WSMVD P UTU 37355 N2995			1					Р		D		P		
BONANZA 1023-8C1AS 08 100S 230E 4304751133 18166 1 GW P NWNE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8G3AS 08 100S 230E 4304751134 18168 1 GW P NWNE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F3BS 08 100S 230E 4304751135 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4AS 08 100S 230E 4304751136 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4AS 08 100S 230E 4304751137 18224 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751138 18225 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751139 18226 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8G4DS 08 100S 230E 4304751140 18144 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H3DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H3DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751141 18144 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751141 18144 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4BS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4BS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4BS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4BS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4BS 08 100S 230E 4304751146 18156 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4BS 08 100S 230E 4304751146 18156 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4BS 08 100S 230E 4304751146 18156 1 GW P NESE D 1 WSMVD P UTU 37355 N2995		+			4			Р		D		Р		
BONANZA 1023-8G3AS 08 100S 230E 4304751134 18168 1 GW P NWNE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8E2AS 08 100S 230E 4304751135 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4AS 08 100S 230E 4304751136 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4AS 08 100S 230E 4304751137 18224 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751138 18225 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8G4DS 08 100S 230E 4304751140 18144 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8G4DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H2DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751141 18144 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751146 18156 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751146 18156 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751146 18156 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751146 18156 1 GW P NESE D 1 WSMVD P UTU 37355 N2995					<del></del>			Р		D		Р		
BONANZA 1023-8E2AS 08 100S 230E 4304751135 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F3BS 08 100S 230E 4304751136 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4AS 08 100S 230E 4304751137 18224 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751138 18225 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8J2CS 08 100S 230E 4304751139 18226 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8G4DS 08 100S 230E 4304751140 18144 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H2DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H3DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751142 18143 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751143 18141 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8J4BS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8J4BS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8J4BS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8J4BS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8J4BS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8J4BS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8J4BS 08 100S 230E 4304751145 18156 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8J4BS 08 100S 230E 4304751146 18156 1 GW P NESE D 1 WSMVD P UTU 37355 N2995								Р		D		Р		
BONANZA 1023-8F3BS 08 100S 230E 4304751136 18227 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4AS 08 100S 230E 4304751137 18224 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8F4DS 08 100S 230E 4304751138 18225 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8J2CS 08 100S 230E 4304751139 18226 1 GW P SENW D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8G4DS 08 100S 230E 4304751140 18144 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H2DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H3DS 08 100S 230E 4304751141 18142 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751143 18141 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4DS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8H4BS 08 100S 230E 4304751144 18155 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8J4BS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8J4BS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8J4BS 08 100S 230E 4304751145 18154 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8J4BS 08 100S 230E 4304751146 18156 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8J4BS 08 100S 230E 4304751146 18156 1 GW P NESE D 1 WSMVD P UTU 37355 N2995 BONANZA 1023-8J4BS 08 100S 230E 4304751146 18156 1 GW P NESE D 1 WSMVD P UTU 37355 N2995					·			Р		D	<u> </u>	Р		
BONANZA 1023-8F4AS         08         100S         230E         4304751137         18224         1 GW         P         SENW         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8F4DS         08         100S         230E         4304751138         18225         1 GW         P         SENW         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8G4DS         08         100S         230E         4304751140         18144         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8H2DS         08         100S         230E         4304751141         18142         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8H3DS         08         100S         230E         4304751142         18143         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8H4DS         08         100S         230E         4304751143         18141         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355										D		Р		
BONANZA 1023-8F4DS         08         100S         230E         4304751138         18225         1 GW         P         SENW         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8J2CS         08         100S         230E         4304751139         18226         1 GW         P         SENW         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8G4DS         08         100S         230E         4304751140         18144         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8H2DS         08         100S         230E         4304751141         18142         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8H4DS         08         100S         230E         4304751142         18143         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8H4DS         08         100S         230E         4304751144         18155         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355			_ i				the state of the s	Р		D	.i	Р		
BONANZA 1023-8J2CS         08         100S         230E         4304751139         18226         1 GW         P         SENW         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8G4DS         08         100S         230E         4304751140         18144         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8H3DS         08         100S         230E         4304751142         18143         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8H4DS         08         100S         230E         4304751143         18141         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8H4BS         08         100S         230E         4304751144         18155         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8J4BS         08         100S         230E         4304751145         18154         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355								Р			<del></del>	Р		
BONANZA 1023-8G4DS         08         100S         230E         4304751140         18144         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8H2DS         08         100S         230E         4304751141         18142         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8H4DS         08         100S         230E         4304751143         18141         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8H4DS         08         100S         230E         4304751143         18141         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8J4BS         08         100S         230E         4304751145         18154         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8J4BS         08         100S         230E         4304751145         18154         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355								Р		D	1 WSMVD	Р		
BONANZA 1023-8H2DS         08         100S         230E         4304751141         18142         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8H3DS         08         100S         230E         4304751142         18143         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8H4DS         08         100S         230E         4304751143         18141         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8J4BS         08         100S         230E         4304751145         18154         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8J4BS         08         100S         230E         4304751145         18154         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8P1AS         08         100S         230E         4304751146         18156         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355								Р		D	<del>                                     </del>	Р		1
BONANZA 1023-8H3DS         08         100S         230E         4304751142         18143         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8H4DS         08         100S         230E         4304751143         18141         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8I4BS         08         100S         230E         4304751145         18154         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8J4BS         08         100S         230E         4304751145         18154         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8P1AS         08         100S         230E         4304751146         18156         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995								Р				Р		
BONANZA 1023-8H4DS       08       100S       230E       4304751143       18141       1 GW       P       NESE       D       1 WSMVD       P       UTU 37355       N2995         BONANZA 1023-8I4BS       08       100S       230E       4304751144       18155       1 GW       P       NESE       D       1 WSMVD       P       UTU 37355       N2995         BONANZA 1023-8J4BS       08       100S       230E       4304751145       18154       1 GW       P       NESE       D       1 WSMVD       P       UTU 37355       N2995         BONANZA 1023-8P1AS       08       100S       230E       4304751146       18156       1 GW       P       NESE       D       1 WSMVD       P       UTU 37355       N2995				<del>-</del>			<del></del>					-		
BONANZA 1023-8I4BS         08         100S         230E         4304751144         18155         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8J4BS         08         100S         230E         4304751145         18154         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8P1AS         08         100S         230E         4304751146         18156         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995				<del></del>	,			_			i and the second		NAME OF THE OWNER O	1
BONANZA 1023-8J4BS         08         100S         230E         4304751145         18154         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995           BONANZA 1023-8P1AS         08         100S         230E         4304751146         18156         1 GW         P         NESE         D         1 WSMVD         P         UTU 37355         N2995								-		-	<del></del>	+		
BONANZA 1023-8P1AS 08 100S 230E 4304751146 18156 1 GW P NESE D 1 WSMVD P UTU 37355 N2995				-				-		-		-		
										· · · · · · · · · · · · · · · · · · ·		-		÷
BONANZA 1023-8P2BS	BONANZA 1023-8P2BS	08	100S	230E	4304751147	18153	1 GW	P	NESE	D	1 WSMVD	Р		N2995
· · · · · · · · · · · · · · · · · · ·	BONANZA 1023-8P4AS										<del> </del>			
	BONANZA 1023-8E2DS			<u> </u>				1				-		

		<del></del>	1				1-	1			1	1	1.12
BONANZA 1023-8E3DS	80	100S	230E	4304751150	18200	1 GW	P	NWSW	D	1 WSMVD	Р	UTU 37355	N2995
BONANZA 1023-8K1CS	80	100S	230E	4304751151	18199	1 GW	P	NWSW	D	1 WSMVD	Р	UTU 37355	N2995
BONANZA 1023-8K4CS	08	100S	230E	4304751152	18198	1 GW	P	NWSW	D	1 WSMVD	Р	UTU 37355	N2995
BONANZA 1023-8L3DS	80	100S	230E	4304751153	18197	1 GW	P	NWSW	D	1 WSMVD	Р	UTU 37355	N2995
BONANZA 1023-8M2AS	80	100S	230E	4304751154	18217	1 GW	Р	SWSW	D	1 WSMVD	Р	UTU 37355	N2995
BONANZA 1023-8M2DS	80	100S	230E	4304751155	18216	1 GW	Р	SWSW	D	1 WSMVD	Р	UTU 37355	N2995
BONANZA 1023-8N2BS	80	100S	230E	4304751156	18218	1 GW	Р	swsw	D	1 WSMVD	Р	UTU 37355	N2995
BONANZA 1023-803CS	80	100S	230E	4304751157	18254	1 GW	Р	SWSE	D	1 WSMVD	Р	UTU 37355	N2995
BONANZA 1023-8N3DS	80	100S	230E	4304751158	18215	1 GW	Р	swsw	D	1 WSMVD	Р	UTU 37355	N2995
BONANZA 1023-804AS	08	100S	230E	4304751159	18252	1 GW	Р	SWSE	D	1 WSMVD	Р	UTU 37355	N2995
BONANZA 1023-8P2CS	08	100S	230E	4304751160	18251	1 GW	Р	SWSE	D	1 WSMVD	Р	UTU 37355	N2995
BONANZA 1023-8P3CS	08	100S	230E	4304751161	18253	1 GW	Р	SWSE	D	1 WSMVD	Р	UTU 37355	N2995
CANYON FEDERAL 2-9	09	100S	230E	4304731504	1468	1 GW	Р	NENW	1	1 MVRD	Р	U-37355	N2995
SOUTHMAN CANYON 9-3-M	09	100S	230E	4304732540	11767	1 GW	S	swsw		1 MVRD	S	UTU-37355	N2995
SOUTHMAN CANYON 9-4-J	09	100S	230E	4304732541	11685	1 GW	S	NWSE		1 MVRD	S	UTU-37355	N2995
BONANZA 9-6	09	100S	230E	4304734771	13852	1 GW	P	NWNE	]	1 MVRD	Р	U-37355	N2995
BONANZA 9-5	09	100S	230E	4304734866	13892	1 GW	Р	SESW		1 MVRD	Р	U-37355	N2995
BONANZA 1023-9E	09	100S	230E	4304735620	14931	1 GW	Р	SWNW		1 WSMVD	Р	U-37355	N2995
BONANZA 1023-9I	09	100S	230E	4304738223	16766	1 GW	Р	NESE		1 WSMVD	Р	UTU-37355	N2995
BONANZA 1023-9D	09	100S	230E	4304738306	16398	1 GW	Р	NWNW		1 WSMVD	Р	UTU-37355	N2995
BONANZA 1023-9J	09	100S	230E	4304738811	16989	1 GW	Р	NWSE		1 WSMVD	Р	UTU-37355	N2995
BONANZA 1023-9B3BS	09	100S	230E	4304750503	17965	1 GW	Р	SENE	D	1 WSMVD	Р	UTU 37355	N2995
BONANZA 1023-9B3CS	09	100S	230E	4304750504	17968	1 GW	Р	SENE	D	1 WSMVD	Р	UTU 37355	N2995
BONANZA 1023-9H2BS	09	100S	230E	4304750505	17966	1 GW	Р	SENE	D	1 WSMVD	Р	UTU 37355	N2995
BONANZA 1023-9H2CS	09	100S	230E	4304750506	17967	1 GW	Р	SENE	D	1 WSMVD	Р	UTU 37355	N2995
BONANZA 10-2	10	100S	230E	4304734704	13782	1 GW	Р	NWNW		1 MVRD	Р	U-72028	N2995
BONANZA 1023-10L	10	100S	230E	4304735660	15164	1 GW	Р	NWSW		1 WSMVD	Р	U-38261	N2995
BONANZA 1023-10E	10	100S	230E	4304738224	16501	1 GW	Р	SWNW		1 MVRD	Р	UTU-72028	N2995
BONANZA 1023-10C	10	100S	230E	4304738228	16500	1 GW	Р	NENW		1 MVRD	Р	UTU-72028	N2995
BONANZA 1023-10C-4	10	100S	230E	4304738915	17015	1 GW	Р	NENW		1 MVRD	Р	UTU-72028	N2995
BONANZA 11-2 🛠	11	100S	230E	4304734773	13768	1 GW	Р	SWNW		1 MVMCS	Р	UTU-38425	N2995
BONANZA 1023-11K	11	100S	230E	4304735631	15132	1 GW	Р	NESW		1 WSMVD	Р	UTU-38425	N2995
BONANZA 1023-11B	11	100S	230E	4304738230	16764	1 GW	Р	NWNE		1 MVRD	Р	UTU-38425	N2995
BONANZA 1023-11F	11	100S	230E	4304738232	16797	1 GW	Р	SENW		1 MVRD	Р	UTU-38425	N2995
BONANZA 1023-11D	11	100S	230E	4304738233	16711	1 GW	Р	NWNW		1 MVRD	Р	UTU-38425	N2995
BONANZA 1023-11G	11	100S	230E	4304738235	16826	1 GW	Р	SWNE		1 MVRD	Р	UTU-38425	N2995
BONANZA 1023-11C	11	100S	230E	4304738309	16736	1 GW	Р	NENW		1 MVRD	Р	UTU-38425	N2995
BONANZA 1023-11J	11	100S	230E	4304738310	16839	1 GW	Р	NWSE		1 WSMVD	Р	UTU-38424	N2995
BONANZA 1023-11N	11	100S	230E	4304738311	16646	1 GW	Р	SESW		1 MVRD	Р	UTU-38424	N2995
BONANZA 1023-11M	11	100S	230E	4304738312	16687	1 GW	Р	swsw	j	1 MVRD	Р	UTU-38424	N2995
BONANZA 1023-11L	11	100S	230E	4304738812	16987	1 GW	Р	NWSW		1 WSMVD	Р	UTU-38424	N2995
NSO FEDERAL 1-12	12	100S	230E	4304730560	1480	1 GW	Р	NENW		1 MVRD	Р		N2995
WHITE RIVER 1-14	14	100S	230E	4304730481	1500	1 GW	s	NENW		1 MVRD	S	U-38427	N2995
BONANZA 1023-14D	14	100S	230E	4304737030	16799	1 GW	Р	NWNW		1 MVRD	Р		N2995
BONANZA 1023-14C	14		230E	4304738299	16623	1 GW	Р	NENW			Р		N2995
BONANZA FEDERAL 3-15	15	1008	230E	4304731278	8406	1 GW	-	NENW		1 MVRD	Р	U-38428	N2995
DOIVAIVEAT EDETIVIE 0-10		1.550					1.	1			·		

\* not moved into unit

BONANZA 1023-15H	15	100S	230E	4304738316	16688		1 GW	Р	SENE		1 MVRD	Р	UTU-38427	N2995
BONANZA 1023-15J	15	100S	230E	4304738817	16988		1 GW	Р	NWSE		1 MVRD	Р	UTU-38427	N2995
BONANZA 1023-15H4CS	15	100S	230E	4304750741	17492		1 GW	Р	NESE	D	1 MVRD	Р	UTU 38427	N2995
BONANZA 1023-15I2AS	15	100S	230E	4304750742	17493		1 GW	Р	NESE	D	1 WSMVD	Р	UTU 38427	N2995
BONANZA 1023-15I4BS	15	100S	230E	4304750743	17490		1 GW	Р	NESE	D	1 WSMVD	Р	UTU 38427	N2995
BONANZA 1023-15P1BS	15	100S	230E	4304750744	17491		1 GW	Р	NESE	D	1 WSMVD	Р	UTU 38427	N2995
LOOKOUT POINT STATE 1-16	16	100S	230E	4304730544	1495		3 GW	P	NESE		3 WSMVD	Р	ML-22186-A	N2995
BONANZA 1023-16J	16	100S	230E	4304737092	15987		3 GW	OPS	NWSE		3 WSMVD	OPS	ML-22186-A	N2995
BONANZA 1023-17B	17	100S	230E	4304735747	15165		1 GW	Р	NWNE		1 WSMVD	Р	UTU-37355	N2995
BONANZA 1023-17C	17	100S	230E	4304738237	16585		1 GW	Р	NENW		1 WSMVD	Р	UTU-37355	N2995
BONANZA 1023-17D3S	17	100S	230E	4304750511	17943		1 GW	Р	NENW	D	1 WSMVD	Р	UTU 37355	N2995
BONANZA 1023-17E2S	17	100S	230E	4304750512	17944		1 GW	Р	NENW	D	1 WSMVD	Р	UTU 37355	N2995
BONANZA 1023-17E3AS	17	100S	230E	4304750513	17945		1 GW	Р	NENW	D	1 WSMVD	P	UTU 37355	N2995
BONANZA 1023-17E3CS	17	100S	230E	4304750514	17946		1 GW	Р	NENW	D	1 WSMVD	Р	UTU 37355	N2995
BONANZA 1023-18G	18	100S	230E	4304735621	14410		1 GW	Р	SWNE		1 WSMVD	Р	U-38241	N2995
BONANZA 1023-18B	18	100S	230E	4304735721	14395		1 GW	Р	NWNE		1 WSMVD	Р	U-38421	N2995
BONANZA 1023-18DX (RIGSKID)	18	100S	230E	4304736218	14668		1 GW	Р	NWNW		1 WSMVD	P	U-38241	N2995
BONANZA 1023-18A	18	100S	230E	4304738243	16625		1 GW	Р	NENE		1 WSMVD	Р	UTU-38421	N2995
BONANZA 1023-18F	18	100S	230E	4304738244	16624		1 GW	Ρ	SENW		1 WSMVD	Р	UTU-38421	N2995
BONANZA 1023-18E	18	100S	230E	4304738245	16645		I GW	Р	SWNW		1 MVRD	Р	UTU-38421	N2995
BONANZA 1023-18C	18	100S	230E	4304738246	16734		I GW	Р	NENW		1 MVRD	Р	UTU-38421	N2995
BONANZA 1023-18G-1	18	100S	230E	4304738916	17135	•	I GW	Р	SWNE		1 WSMVD	Р	UTU-38421	N2995
BONANZA 1023-18D3AS	18	100S	230E	4304750448	17498		GW	Р	SWNW	D	1 WSMVD	Р	UTU 38421	N2995
BONANZA 1023-18D3DS	18	100S	230E	4304750449	17499		GW	Р	SWNW	D	1 WSMVD	P	UTU 38421	N2995
BONANZA 1023-18E2DS	18	100S	230E	4304750450	17497		l GW	Р	SWNW	D	1 WSMVD	P	UTU 38421	N2995
BONANZA 1023-18E3AS	18	100S	230E	4304750451	17496	•	GW	Р	SENW	D	1 WSMVD	P	UTU 38421	N2995
BONANZA 1023-18L2S	18	100S	230E	4304750520	18111		GW	P	SWNW	D	1 WSMVD	Р	UTU 38421	N2995
BONANZA 1023-18L3S	18	100S	230E	4304750521	18110		GW	Р	SWNW	D	1 WSMVD	Р	UTU 38421	N2995
BONANZA 1023-18K3AS	18	100S	230E	4304751061	18112		GW	Р	SWNW	D	1 WSMVD	Р	UTU 38421	N2995
BONANZA 1023-18K3BS	18	100S	230E	4304751063	18113		GW	Р	SWNW	D	1 WSMVD	P	UTU 38421	N2995
BONANZA 1023-18M2AS	18	100S	230E	4304751064	18117	1	GW	Р	SWNW	D	1 WSMVD	Р	UTU 38421	N2995
BONANZA 1023-18M2DS	18	100S	230E	4304751065	18116		GW	Р	SWNW	D	1 WSMVD	Р	UTU 38421	N2995
BONANZA 1023-18N2AS	18	100S	230E	4304751066	18114		GW	Р	SWNW	D	1 WSMVD	Р	UTU 38421	N2995
BONANZA 1023-18N2DS	18	100S	230E	4304751067	18115	1	GW	P	SWNW	D	1 WSMVD	Р	UTU 38421	N2995
BONANZA 1023-10F		100S	230E	4304738225	16565		GW	Р	SENW		MVRD	Ρ	UTU 72028	N2995
BONANZA 1023-6D1AS		100S	230E	4304751450	18320		GW	Р	NENW	D	WSMVD	P	UTU 38419	N2995
BONANZA 1023-6C1CS	6	100S	230E	4304751448	18319		GW		NENW	D			UTU 38419	N2995
BONANZA 1023-6D3AS	6	100S	230E	4304751452	18317		GW	Р	NENW	D	WSMVD	Р	UTU 38419	N2995

6/30/2020

Effective Date.	0/30/2020	
FORMER OPERATOR:	NEW OPERATOR:	
Kerr-McGee Oil and Gas Onshore, L.P.	Caerus Uinta, LLC	
Groups: 10/0/2020 cont list to aparetors to ravis		

#### WELL INFORMATION:

Well Name	API Number	Town	Dir	Range	Dir	Sec	Entity Number	Туре	Status
See Attached list									

See operator file

Total Well Count:

11/10/2020

1. Sundry or legal documentation was received from the FORMER operator on:

8/11/2020 8/11/2020

10/16/2020

2. Sundry or legal documentation was received from the NEW operator on:

11801118-0161

Receipt of Acceptance of Drilling Procedures for APD on:

OPS/SI/TA well(s) reviewed for full cost bonding: Approved by Dustin

11/10/2020 11/9/2020

10/16/2020

East Bench

Archie Bench Bonanza Bridge

**Goat Pasture Manifold** 

Morgan State 921-36P **Morgan States** 

NBU 1022-14B NBU 921-25A NBU 922-29J NBU 922-32N

Sage Grouse Sand Wash

NEW OPERATOR BOND VERIFICATION:

State/fee well(s) covered by Bond Number(s):

6135000111

LPM9344488-Shut-In Bond

DATA ENTRY:

Well(s) update in the RBDMS on: Group(s) update in RDBMS on: Surface Facilities update in RBDMS on: Entities Updated in RBDMS on:

COMMENTS: Shut-In Wells that were reviewed.

CIGE 236 4304732861

Morgan State 16-36 4304733093

State 1022-32O 4304735315

12/3/2020

Pre-Notice Completed:

OPERATOR CHANGES DOCUMENTATION:

3. New operator Division of Corporations Business Number:

Reports current for Production/Disposition & Sundries:

UIC5 on all disposal/injection/storage well(s) Approved on: Approved by Dayne

Surface Facility(s) included in operator change:

**Goat Pasture** 

Pipeline

11/19/2020 11/19/2020 11/19/2020 11/19/2020

CIGE 42 4304730492 CIGE 55 4304730512

Love 1121-16N 4304736256

NBU 341-29E 4304733055 NBU 691-29E 4304750027

NBU 921-33F 4304736391

NBU 99 4304731745 Ouray SWD 1 4304733449

State 921-32M 4304734872

## STATE OF UTAH

	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING  5. LEASE DESIGNATION AND SERIAL NUMBER:								
				U-02278-ST					
SUNDRY	Y NOTICES AND REPORTS	S ON WELL	.s	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:					
Do not use this form for proposals to drill of drill horizontal	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.								
1. TYPE OF WELL OIL WELL	WELL NAME and NUMBER:     CIGE 20								
2. NAME OF OPERATOR:				9. API NUMBER:					
CAERUS UINTA LLC				43047304850000					
3. ADDRESS OF OPERATOR: 1001 17TH ST. STE 1600	DENVER STATE CO ZIP		PHONE NUMBER: 303-565-4600	10. FIELD AND POOL, OR WILDCAT:					
4. LOCATION OF WELL									
FOOTAGES AT SURFACE: 1162 FS	SL 1365 FWL			COUNTY: UINTAH					
QTR/QTR, SECTION, TOWNSHIP, RAN	NGE, MERIDIAN: SESW 20 10S	21E \$		STATE: UTAH					
11. CHECK APP	ROPRIATE BOXES TO INDICAT	TE NATURE O	F NOTICE, REPOR	RT, OR OTHER DATA					
TYPE OF SUBMISSION		TYI	PE OF ACTION						
NOTICE OF INTENT	ACIDIZE	DEEPEN		REPERFORATE CURRENT FORMATION					
(Submit in Duplicate)	ALTER CASING	FRACTURE T	REAT	SIDETRACK TO REPAIR WELL					
Approximate date work will start:	CASING REPAIR	■ NEW CONSTR	RUCTION	TEMPORARILY ABANDON					
06/30/2020	CHANGE TO PREVIOUS PLANS	✓ OPERATOR C	HANGE	TUBING REPAIR					
	CHANGE TUBING	PLUG AND AB	ANDON	VENT OR FLARE					
SUBSEQUENT REPORT	CHANGE WELL NAME	PLUG BACK		WATER DISPOSAL					
(Submit Original Form Only)	CHANGE WELL STATUS	PRODUCTION	(START/RESUME)	WATER SHUT-OFF					
Date of work completion:	COMMINGLE PRODUCING FORMATIONS	RECLAMATIO	N OF WELL SITE	X OTHER: Transfer remediation liabilities					
	CONVERT WELL TYPE	RECOMPLETE	- DIFFERENT FORMATION						
12. DESCRIBE PROPOSED OR CO	OMPLETED OPERATIONS. Clearly show all p	pertinent details inclu	iding dates, depths, volume	s, etc.					
Effective June 30, 2020, of Caerus Uinta LLC 1001 17th Street, Suite 16 Denver, CO 80202 303-565-4600	pperation of the following wells wa	as taken over t		Sill I from					
The previous Operator wa	as Kerr-McGee Oil & Gas Onshord PO Box 173779 Denver, CO 80217-3779	e LP		William C. Irons Attorney-in-Fact					
Please see the attached wells for a complete list that will be transferred upon approval. As the Attorney-in-Fact for Kerr-McGee Oil & Gas Onshore LP I ask that you accept this letter as Kerr-McGee's official resignation and request to transfer operating rights to Caerus Uinta LLC, whose operator number is 105039. UDOGM Bond# 6135000111 and BLM Bond# COB000387.									
Kerr-McGee will be transferring cleanup/soils remediation to Caerus Uinta LLC for Incident #5772. The new contact for Caerus is Grizz Oleen, EHS Field Lead (435) 790-9669.									
NAME (PLEASE PRINT) Aubree Besant TITLE Director of Land									
SIGNATURE DATE									
This space for State use only)				RECEIVED					

(This space for State use only)

**APPROVED** 

By: Raehel Medina

Utah Division of Oil, Gas, and Mining AUG 1 1 2020

DIV OF OIL, GAS & MINING

## STATE OF UTAH

	DEPARTMENT OF NATURAL RESOU	RCES					
C	DIVISION OF OIL, GAS AND MI	NING	5. LEASE DESIGNATION AND SERIAL NUMBER: U-02278-ST				
SUNDRY	NOTICES AND REPORT	S ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
Do not use this form for proposals to drill ne	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 unit horizontal faterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.						
1. TYPE OF WELL OIL WELL	8. WELL NAME and NUMBER:						
OIL WELL	OIL WELL GAS WELL OTHER						
2. NAME OF OPERATOR:			9. API NUMBER:				
CAERUS UINTA LLC			43047304850000				
3. ADDRESS OF OPERATOR: 1001 17TH ST. STE 1600	, DENVER STATE CO ZIE	,80202 PHONE NUMBER: 303-565-4600	10. FIELD AND POOL, OR WILDCAT:				
4. LOCATION OF WELL							
FOOTAGES AT SURFACE: 1162 FSI	L 1365 FWL		COUNTY: UINTAH				
QTR/QTR, SECTION, TOWNSHIP, RANG	GE, MERIDIAN: SESW 20 10S	21E S	STATE: UTAH				
11. CHECK APPR	ROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPO	RT. OR OTHER DATA				
TYPE OF SUBMISSION	T T	TYPE OF ACTION	,				
	ACIDIZE	DEEPEN	REPERFORATE CURRENT FORMATION				
NOTICE OF INTENT							
(Submit in Duplicate)	ALTER CASING	FRACTURE TREAT	SIDETRACK TO REPAIR WELL				
Approximate date work will start:	CASING REPAIR	NEW CONSTRUCTION	TEMPORARILY ABANDON				
06/30/2020	CHANGE TO PREVIOUS PLANS	✓ OPERATOR CHANGE	TUBING REPAIR				
	CHANGE TUBING	PLUG AND ABANDON	VENT OR FLARE				
SUBSEQUENT REPORT	CHANGE WELL NAME	PLUG BACK	WATER DISPOSAL				
(Submit Original Form Only)	CHANGE WELL STATUS	PRODUCTION (START/RESUME)	WATER SHUT-OFF				
Date of work completion:	COMMINGLE PRODUCING FORMATIONS	RECLAMATION OF WELL SITE	X OTHER: Transfer remediation liabilities				
	CONVERT WELL TYPE	RECOMPLETE - DIFFERENT FORMATION					
	I GOWERT WEEE THE	TOOM ELVE SIVERENT ON INTO					
12. DESCRIBE PROPOSED OR CO	MPLETED OPERATIONS. Clearly show all	pertinent details including dates, depths, volum	nes, etc.				
Effective June 30, 2020, o	peration of the following wells wa	as taken over by:					
Caerus Uinta LLC							
1001 17th Street, Suite 16	00						
Denver, CO 80202							
303-565-4600							
The provious Operator was	a Karr MaCaa Oil & Caa Onaha	ro I D					
The previous Operator was	s Kerr-McGee Oil & Gas Onshor PO Box 173779		William C. Irons				
	Denver, CO 80217-3779		Attorney-in-Fact				
	26.1.61, 22 30211 3713		,,				
Please see the attached w	ells for a complete list that will b	e transferred upon approval. As	the Attorney-in-Fact for Kerr-McGee				
Oil & Gas Onshore LP I as	k that you accept this letter as k	Kerr-McGee's official resignation a	and request to transfer operating				
rights to Caerus Uinta LLC	, whose operator number is 105	6039. UDOGM Bond# 613500011	1 and BLM Bond# COB000387.				
W N O W I I I		1. O	#5770 The result of the				
		to Caerus Uinta LLC for Incident	#5772. The new contact for				
Caerus is Grizz Oleen, Er	IS Field Lead (435) 790-9669.						
NAME (PLEASE PRINT) Aubree Be	sant	TITLE Director of Land					
(4)	I A A A A		1000				
SIGNATURE A	SUL	DATE ()UU 17,	<i>2000</i>				
		~ /	RECEIVED				
(This space for State use only)	APPROVED		AUG 1 1 2020				

By: Raehel Medina Utah Division of

DIV OF OIL, GAS & MINING

Sundry Number: 111528 API Well Number: 43047503440000

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES		FORM 9  5.LEASE DESIGNATION AND SERIAL NUMBER:			
DI	VISION OF OIL, GAS, AND MINI	NG	ML 47062			
SUNDRY	NOTICES AND REPORTS O	N WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
below current bottom-ho	proposals to drill new wells, significantly ple depth, reenter plugged wells, or to d PERMIT TO DRILL form for such proposal	rill horizontal laterals.	7.UNIT or CA AGREEMENT NAME: PONDEROSA			
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: Bonanza 1023-2H3CS			
2. NAME OF OPERATOR: Caerus Uinta, LLC		9. API NUMBER: 43047503440000				
<b>3. ADDRESS OF OPERATO</b> 1001 17th Street, Suite 1600,		PHONE NUMBER:	9. FIELD and POOL or WILDCAT: NATURAL BUTTES			
4. LOCATION OF WELL FOOTAGES AT SURFACE	:		COUNTY: UINTAH			
	WNSHIP, RANGE, MERIDIAN: Township: 10S Range: 23E Meridian: S		STATE: UTAH			
11. CHECK	APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE,	REPORT, OR OTHER DATA			
TYPE OF SUBMISSION		N				
CAERUS UINTA LLC W RETURNED TO PRODU	CHANGE TO PREVIOUS PLANS  CHANGE WELL STATUS  DEEPEN  OPERATOR CHANGE  PRODUCTION START OR RESUME  REPERFORATE CURRENT FORMATION  TUBING REPAIR  WATER SHUTOFF  WILDCAT WELL DETERMINATION  OOR COMPLETED OPERATIONS. Clearly SI  OULD LIKE TO REPORT THAT THE SI  JCTION ON 6/1/2021. FOR ANY QUE  RSIGNED. THANK YOU.	SUBJECT WELL WAS	□ NEW CONSTRUCTION         □ PLUG BACK         □ RECOMPLETE DIFFERENT FORMATION         □ TEMPORARY ABANDON         □ WATER DISPOSAL         □ APD EXTENSION         OTHER:			
NAME (PLEASE PRINT)	PHONE NUMB					
Chelsie Pratt  SIGNATURE	435 790-3135	Regulatory  DATE				
N/A		8/2/2021				