

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

FORM 3  
 AMENDED REPORT

<b>APPLICATION FOR PERMIT TO DRILL</b>				<b>1. WELL NAME and NUMBER</b> Bonanza 1023-18E2DS		
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>				<b>3. FIELD OR WILDCAT</b> NATURAL BUTTES		
<b>4. TYPE OF WELL</b> Gas Well <input type="checkbox"/> Coalbed Methane Well: NO <input type="checkbox"/>				<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b>		
<b>6. NAME OF OPERATOR</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.				<b>7. OPERATOR PHONE</b> 720 929-6587		
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217				<b>9. OPERATOR E-MAIL</b> mary.mondragon@anadarko.com		
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UTU 38421		<b>11. MINERAL OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		<b>12. SURFACE OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>		
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>		
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>		<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		<b>19. SLANT</b> VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>		
<b>20. LOCATION OF WELL</b>	<b>FOOTAGES</b>	<b>QTR-QTR</b>	<b>SECTION</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>MERIDIAN</b>
LOCATION AT SURFACE	1624 FNL 1301 FWL	SWNW	18	10.0 S	23.0 E	S
Top of Uppermost Producing Zone	1730 FNL 500 FWL	SWNW	18	10.0 S	23.0 E	S
At Total Depth	1730 FNL 500 FWL	SWNW	18	10.0 S	23.0 E	S
<b>21. COUNTY</b> UINTAH		<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 500		<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 637		
		<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 365		<b>26. PROPOSED DEPTH</b> MD: 8464 TVD: 8300		
<b>27. ELEVATION - GROUND LEVEL</b> 5310		<b>28. BOND NUMBER</b> WYB000291		<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> Permit #43-8496		

**ATTACHMENTS**

**VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES**

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP

<b>NAME</b> Danielle Piernot	<b>TITLE</b> Regulatory Analyst	<b>PHONE</b> 720 929-6156
<b>SIGNATURE</b>	<b>DATE</b> 06/01/2009	<b>EMAIL</b> danielle.piernot@anadarko.com
<b>API NUMBER ASSIGNED</b> 43047504500000	<b>APPROVAL</b>   Permit Manager	

**Proposed Hole, Casing, and Cement**

<b>String</b>	<b>Hole Size</b>	<b>Casing Size</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>		
Prod	7.875	4.5	0	8464		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade I-80 LT&C	8464	11.6			

**Proposed Hole, Casing, and Cement**

<b>String</b>	<b>Hole Size</b>	<b>Casing Size</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>		
Surf	12.25	9.625	0	2000		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade J-55 LT&C	2000	36.0			

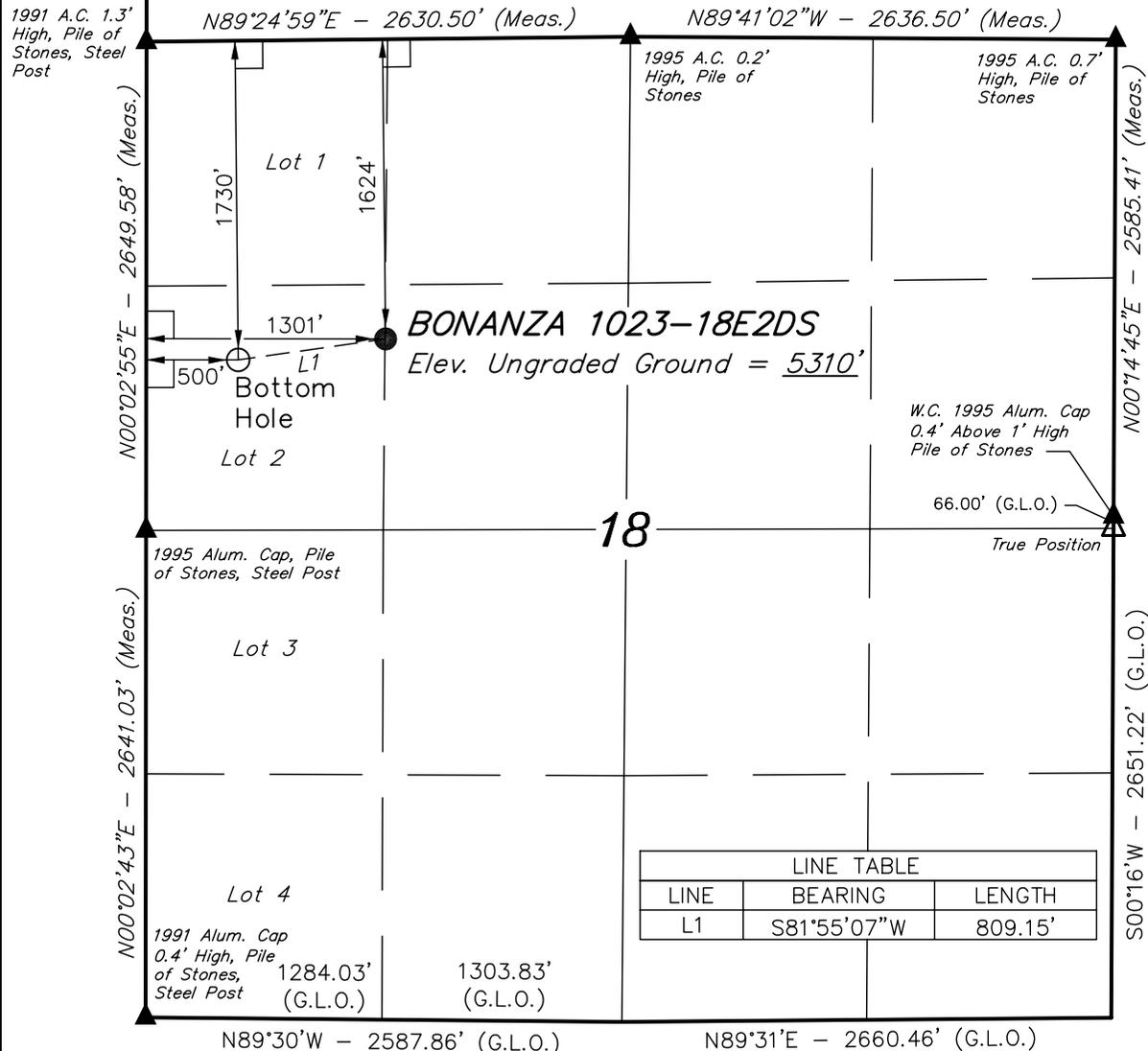
Kerr-McGee Oil & Gas Onshore LP

Well location, BONANZA #1023-18E2DS, located as shown in the SE 1/4 NW 1/4 of Section 18, T10S, R23E, S.L.B.&M., Uintah County, Utah.

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

R  
22  
E

R  
23  
E

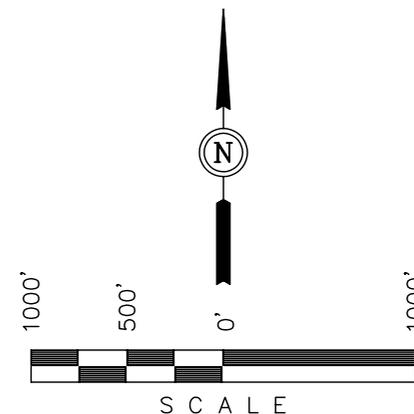


BASIS OF ELEVATION

BENCH MARK (58 EAM) LOCATED IN THE NE 1/4 OF SECTION 30, T9S, R23E, S.L.B.&M. TAKEN FROM THE RED WASH SE, QUADRANGLE, UTAH, UTAH 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.

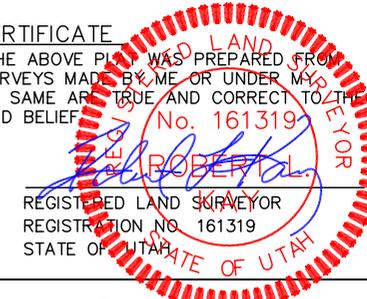
BASIS OF BEARINGS

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



CERTIFICATE

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



REVISED: 12-22-08 S.P.

**UINTAH ENGINEERING & LAND SURVEYING**  
85 SOUTH 200 EAST - VERNAL, UTAH 84078  
(435) 789-1017

LEGEND:

- └─┘ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.
- △ = SECTION CORNERS RE-ESTABLISHED. (Not Set on Ground)

NAD 83 (TARGET BOTTOM HOLE)	NAD 83 (SURFACE LOCATION)
LATITUDE = 39°57'05.18" (39.951439)	LATITUDE = 39°57'06.31" (39.951753)
LONGITUDE = 109°22'37.57" (109.377103)	LONGITUDE = 109°22'27.29" (109.374247)
NAD 27 (TARGET BOTTOM HOLE)	NAD 27 (SURFACE LOCATION)
LATITUDE = 39°57'05.30" (39.951472)	LATITUDE = 39°57'06.43" (39.951786)
LONGITUDE = 109°22'35.12" (109.376422)	LONGITUDE = 109°22'24.84" (109.373567)

SCALE 1" = 1000'	DATE SURVEYED: 11-11-08	DATE DRAWN: 11-13-08
PARTY D.K. D.S. D.P.	REFERENCES G.L.O. PLAT	
WEATHER COOL	FILE Kerr-McGee Oil & Gas Onshore LP	

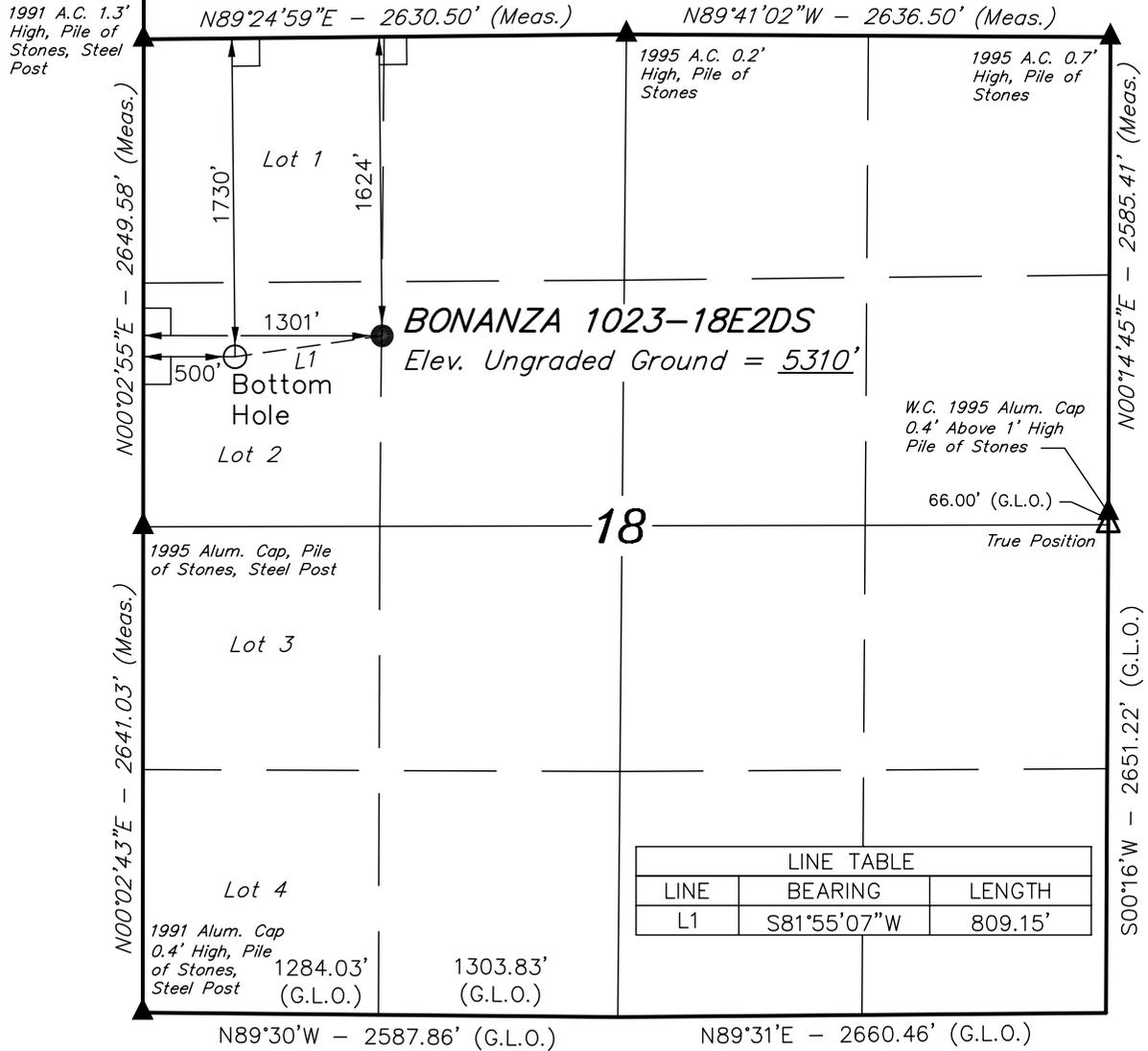
APIWellNo:43047504500000

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

Well location, BONANZA #1023-18E2DS, located as shown in the SE 1/4 NW 1/4 of Section 18, T10S, R23E, S.L.B.&M., Uintah County, Utah.

**T10S, R23E, S.L.B.&M.**

**R 22 E**  
**R 23 E**

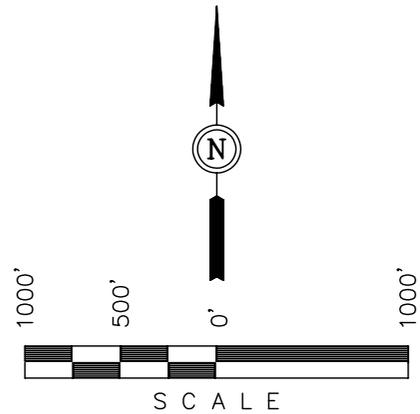


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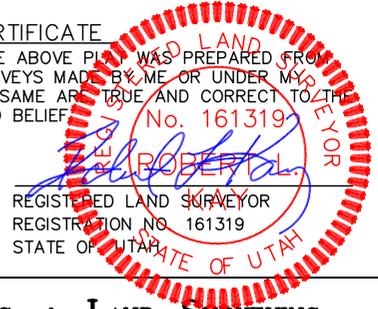
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REVISED: 12-22-08 S.P.

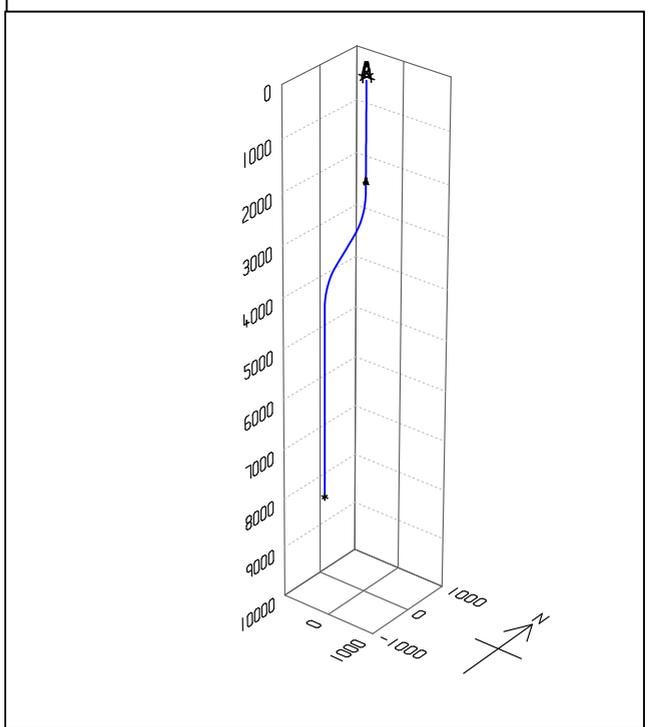
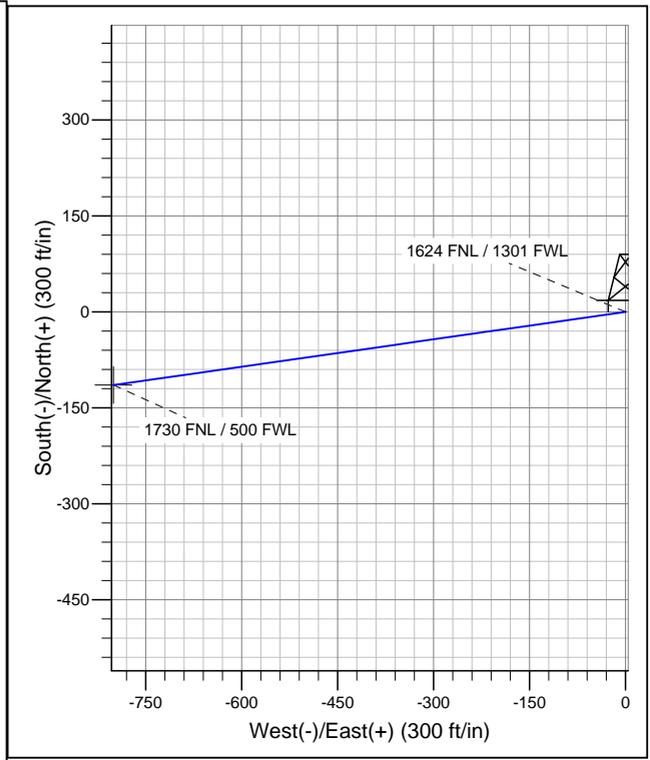
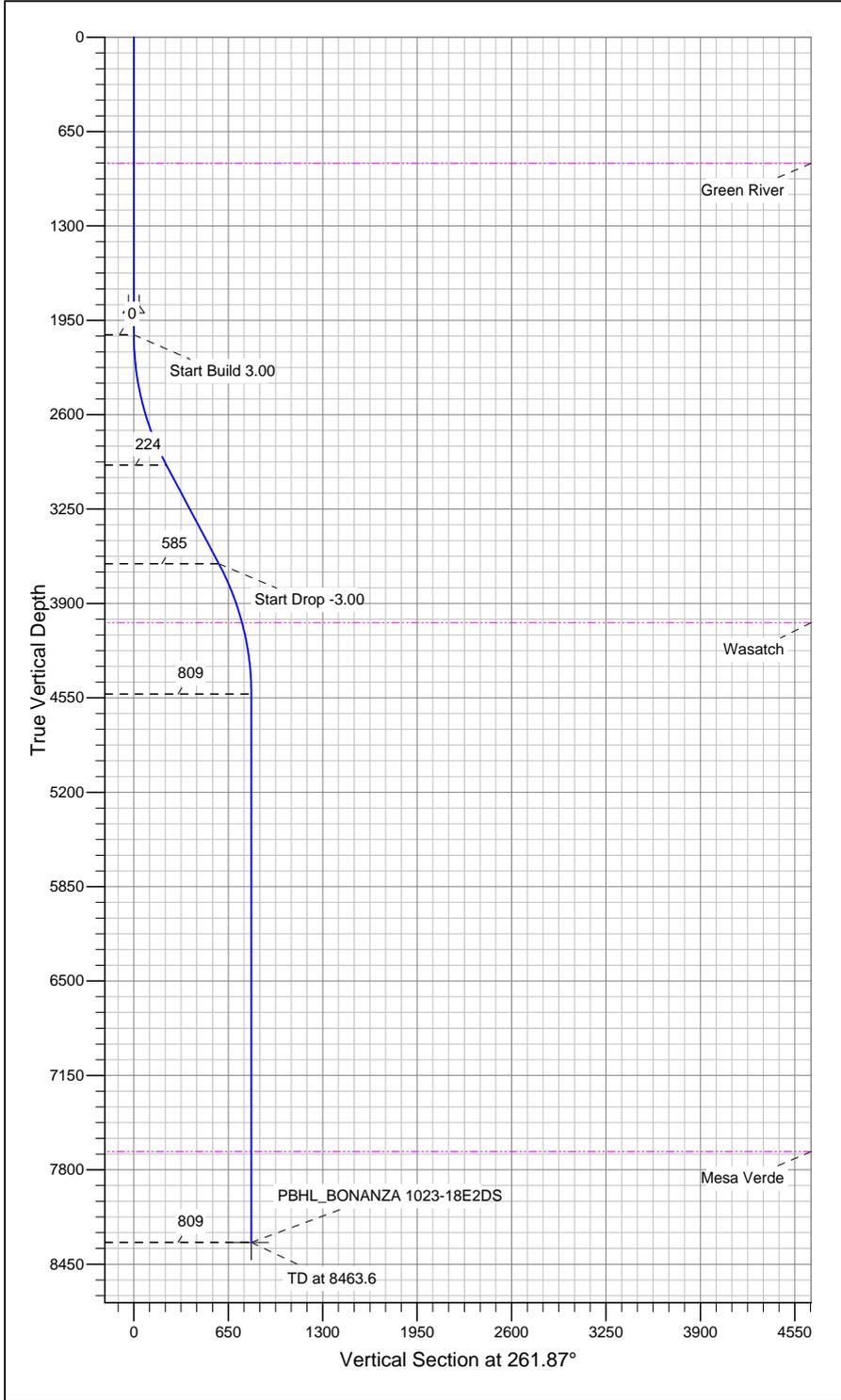
<b>UINTAH ENGINEERING &amp; LAND SURVEYING</b> 85 SOUTH 200 EAST - VERNAL, UTAH 84078 (435) 789-1017			
SCALE 1" = 1000'	DATE SURVEYED: 11-11-08	DATE DRAWN: 11-13-08	
PARTY D.K. D.S. D.P.	REFERENCES G.L.O. PLAT		
WEATHER COOL	FILE Kerr-McGee Oil & Gas Onshore LP		

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<b>NAD 27 (TARGET BOTTOM HOLE)</b>	<b>NAD 27 (SURFACE LOCATION)</b>
LATITUDE = 39°57'05.30" (39.951472) LONGITUDE = 109°22'35.12" (109.376422)	LATITUDE = 39°57'06.43" (39.951786) LONGITUDE = 109°22'24.84" (109.373567)



Well Name: P\_BONANZA 1023-18E2DS  
 Surface Location: UINTAH\_BONANZA 1023-18E PAD  
 NAD 1927 (NADCON CONUS)US State Plane 1927 (Exact solution)  
 UTAH CENTRAL ZONE - 27  
 Ground Elevation: 5308.0  
 Northing 596569.49 Easting 2596067.16 Latitude 39.951786°N Longitude 109.373567°W



SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
2	2050.0	0.00	0.00	2050.0	0.0	0.0	0.00	0.00	0.0
3	2983.3	28.00	261.87	2946.6	-31.6	-221.3	3.00	261.87	223.6
4	3753.4	28.00	261.87	3626.6	-82.7	-579.2	0.00	0.00	585.1
5	4686.8	0.00	0.00	4523.2	-114.3	-800.5	3.00	180.00	808.7
6	8463.6	0.00	0.00	8300.0	-114.3	-800.5	0.00	0.00	808.7

Azimuths to True North  
Magnetic North: 11.28°

Magnetic Field  
Strength: 52561.7snT  
Dip Angle: 65.92°  
Date: 4/9/2009  
Model: IGRF200510

# **ROCKIES - PLANNING**

**UTAH CENTRAL ZONE - 27**

**UINTAH\_BONANZA 1023-18E PAD**

**P\_BONANZA 1023-18E2DS**

**P\_BONANZA 1023-18E2DS**

**Plan: Plan #1 04-09-09 ZJRA6**

## **Standard Planning Report - Geographic**

**14 April, 2009**

## APC Planning Report - Geographic

<b>Database:</b> apc_edmp	<b>Local Co-ordinate Reference:</b> Well P_BONANZA 1023-18E2DS
<b>Company:</b> ROCKIES - PLANNING	<b>TVD Reference:</b> WELL @ 5308.0ft (Original Well Elev)
<b>Project:</b> UTAH CENTRAL ZONE - 27	<b>MD Reference:</b> WELL @ 5308.0ft (Original Well Elev)
<b>Site:</b> UINTAH_BONANZA 1023-18E PAD	<b>North Reference:</b> True
<b>Well:</b> P_BONANZA 1023-18E2DS	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Wellbore:</b> P_BONANZA 1023-18E2DS	
<b>Design:</b> Plan #1 04-09-09 ZJRA6	

<b>Project</b> UTAH CENTRAL ZONE - 27	
<b>Map System:</b> US State Plane 1927 (Exact solution)	<b>System Datum:</b> Mean Sea Level
<b>Geo Datum:</b> NAD 1927 (NADCON CONUS)	
<b>Map Zone:</b> Utah Central 4302	

<b>Site</b> UINTAH_BONANZA 1023-18E PAD		
<b>Site Position:</b>	<b>Northing:</b> 596,581.75ft	<b>Latitude:</b> 39.951822°N
<b>From:</b> Lat/Long	<b>Easting:</b> 2,596,029.48ft	<b>Longitude:</b> 109.373700°W
<b>Position Uncertainty:</b> 0.0 ft	<b>Slot Radius:</b> "	<b>Grid Convergence:</b> 1.36 °

<b>Well</b> P_BONANZA 1023-18E2DS			
<b>Well Position</b>	<b>+N/-S</b> 0.0 ft	<b>Northing:</b> 596,569.49 ft	<b>Latitude:</b> 39.951786°N
	<b>+E/-W</b> 0.0 ft	<b>Easting:</b> 2,596,067.16 ft	<b>Longitude:</b> 109.373567°W
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b> ft	<b>Ground Level:</b> 5,308.0ft

<b>Wellbore</b> P_BONANZA 1023-18E2DS					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	4/9/2009	11.28	65.92	52,562

<b>Design</b> Plan #1 04-09-09 ZJRA6				
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b> PLAN	<b>Tie On Depth:</b>	0.0	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	261.87

<b>Plan Sections</b>										
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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,050.0	0.00	0.00	2,050.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,983.3	28.00	261.87	2,946.6	-31.6	-221.3	3.00	3.00	0.00	261.87	
3,753.4	28.00	261.87	3,626.6	-82.7	-579.2	0.00	0.00	0.00	0.00	
4,686.8	0.00	0.00	4,523.2	-114.3	-800.5	3.00	-3.00	0.00	180.00	
8,463.6	0.00	0.00	8,300.0	-114.3	-800.5	0.00	0.00	0.00	0.00	PBHL_BONANZA 1

## APC Planning Report - Geographic

<b>Database:</b> apc_edmp	<b>Local Co-ordinate Reference:</b> Well P_BONANZA 1023-18E2DS
<b>Company:</b> ROCKIES - PLANNING	<b>TVD Reference:</b> WELL @ 5308.0ft (Original Well Elev)
<b>Project:</b> UTAH CENTRAL ZONE - 27	<b>MD Reference:</b> WELL @ 5308.0ft (Original Well Elev)
<b>Site:</b> UINTAH_BONANZA 1023-18E PAD	<b>North Reference:</b> True
<b>Well:</b> P_BONANZA 1023-18E2DS	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Wellbore:</b> P_BONANZA 1023-18E2DS	
<b>Design:</b> Plan #1 04-09-09 ZJRA6	

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	596,569.49	2,596,067.16	39.951786°N	109.373567°W	
869.0	0.00	0.00	869.0	0.0	0.0	596,569.49	2,596,067.16	39.951786°N	109.373567°W	
<b>Green River</b>										
1,900.0	0.00	0.00	1,900.0	0.0	0.0	596,569.49	2,596,067.16	39.951786°N	109.373567°W	
<b>Surface Casing</b>										
2,050.0	0.00	0.00	2,050.0	0.0	0.0	596,569.49	2,596,067.16	39.951786°N	109.373567°W	
2,983.3	28.00	261.87	2,946.6	-31.6	-221.3	596,532.63	2,595,846.66	39.951699°N	109.374356°W	
3,753.4	28.00	261.87	3,626.6	-82.7	-579.2	596,473.03	2,595,490.07	39.951559°N	109.375633°W	
4,190.0	14.90	261.87	4,032.0	-105.2	-736.9	596,446.77	2,595,332.94	39.951497°N	109.376195°W	
<b>Wasatch</b>										
4,686.8	0.00	0.00	4,523.2	-114.3	-800.5	596,436.17	2,595,269.57	39.951472°N	109.376422°W	
7,837.6	0.00	0.00	7,674.0	-114.3	-800.5	596,436.17	2,595,269.57	39.951472°N	109.376422°W	
<b>Mesa Verde</b>										
8,463.6	0.00	0.00	8,300.0	-114.3	-800.5	596,436.17	2,595,269.57	39.951472°N	109.376422°W	

Targets										
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL_BONANZA 102	- plan hits target center	0.00	0.00	8,300.0	-114.3	-800.5	596,436.17	2,595,269.57	39.951472°N	109.376422°W
	- Point									

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")		
1,900.0	1,900.0	Surface Casing	9-5/8	12-1/4		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
869.0	869.0	Green River		0.00		
4,190.0	4,032.0	Wasatch		0.00		
7,837.6	7,674.0	Mesa Verde		0.00		

**Bonanza 1023-18E2DS**

Pad: Bonanza 1023-18E

Surface: 1,624' FNL, 1,301' FWL (SW/4NW/4) Lot 2

BHL: 1,730' FNL 500' FWL (SW/4NW/4) Lot 2

Sec. 18 T10S R23E

Uintah, Utah

Mineral Lease: UTU 38421

**ONSHORE ORDER NO. 1**

***DRILLING PROGRAM***

1. – 2. **Estimated Tops of Important Geologic Markers:**  
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 – Surface	
Green River	869'	
Birds Nest	1,313'	Water
Mahogany	1,796'	Water
Wasatch	4,032'	Gas
Mesaverde	6,130'	Gas
MVU2	7,059'	Gas
MVL1	7,674'	Gas
TVD	8,300'	
TD	8,464'	

3. **Pressure Control Equipment** (Schematic Attached)

*Please refer to the attached Drilling Program.*

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

*Please refer to the attached Drilling Program.*

5. **Drilling Fluids Program:**

*Please refer to the attached Drilling Program.*

6. **Evaluation Program:**

*Please refer to the attached Drilling Program.*

**7. Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 8,464' TD, approximately equals 4,913 psi (calculated at 0.59 psi/foot).

Maximum anticipated surface pressure equals approximately 3,087 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.*

*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

### CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'						
						3520	2020	453000
SURFACE	9-5/8"	0 to 2,000	36.00	J-55	LTC	1.09	2.16	8.01
						7,780	6,350	201,000
PRODUCTION	4-1/2"	0 to 8,464	11.60	I-80	LTC	2.45	1.27	2.35

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 3,087 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 4,913 psi**

### CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500	Premium cmt + 2% CaCl + 0.25 pps flocele	215	60%	15.60	1.18
<b>Option 1</b>	TOP OUT CMT (1)	200	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	50		15.60	1.18
	TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
SURFACE		<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>					
<b>Option 2</b>	LEAD	1500	65/35 Poz + 6% Gel + 10 pps gilsonite +.25 pps Flocele + 3% salt BWOW	360	35%	12.60	1.81
	TAIL	500	Premium cmt + 2% CaCl + 0.25 pps flocele	180	35%	15.60	1.18
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	3,524'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	340	40%	11.00	3.38
	TAIL	4,940'	50/50 Poz/G + 10% salt + 2% gel +.1% R-3	1210	40%	14.30	1.31

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

\*Substitute caliper hole volume plus 10% excess for TAIL 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.

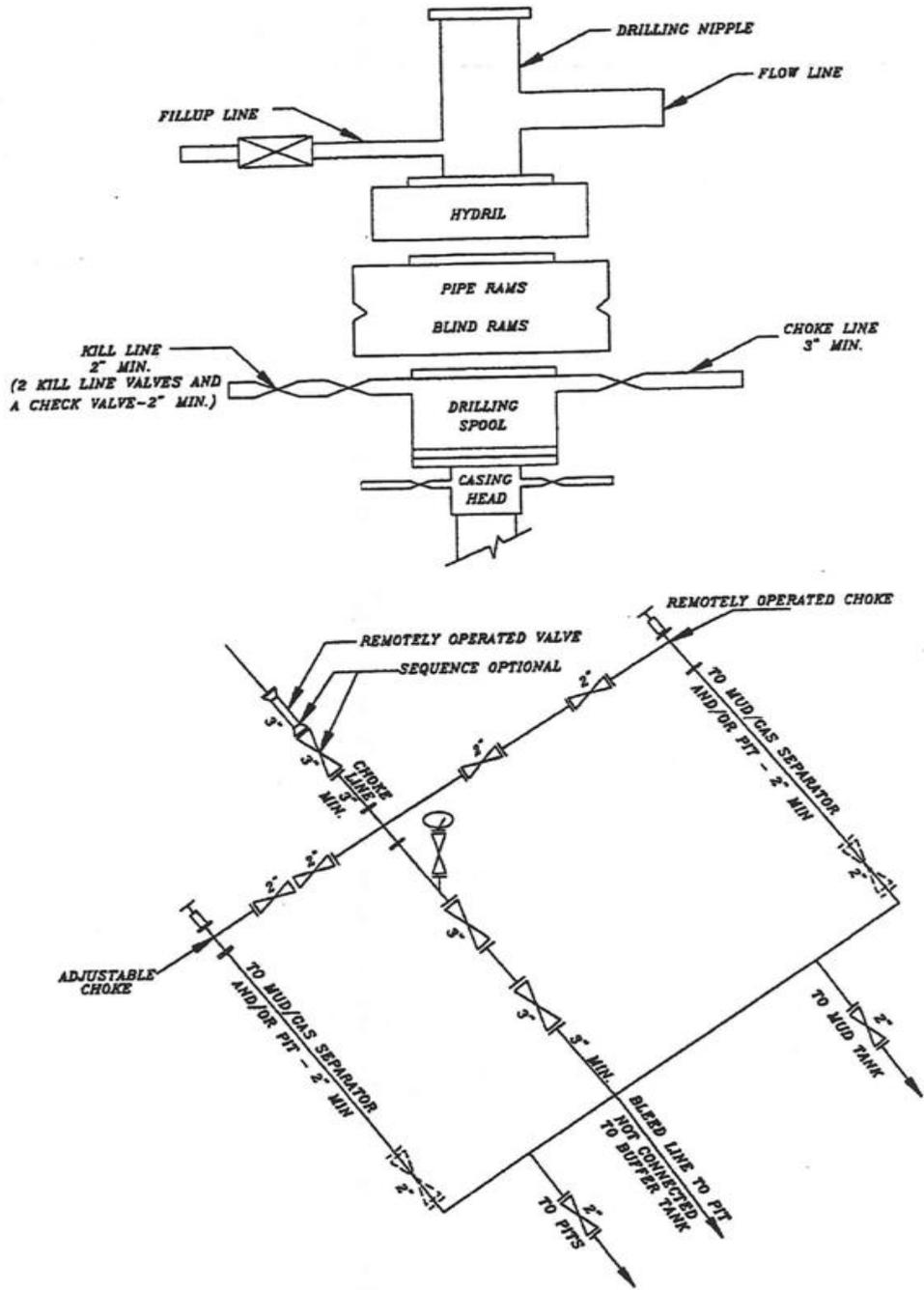
Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

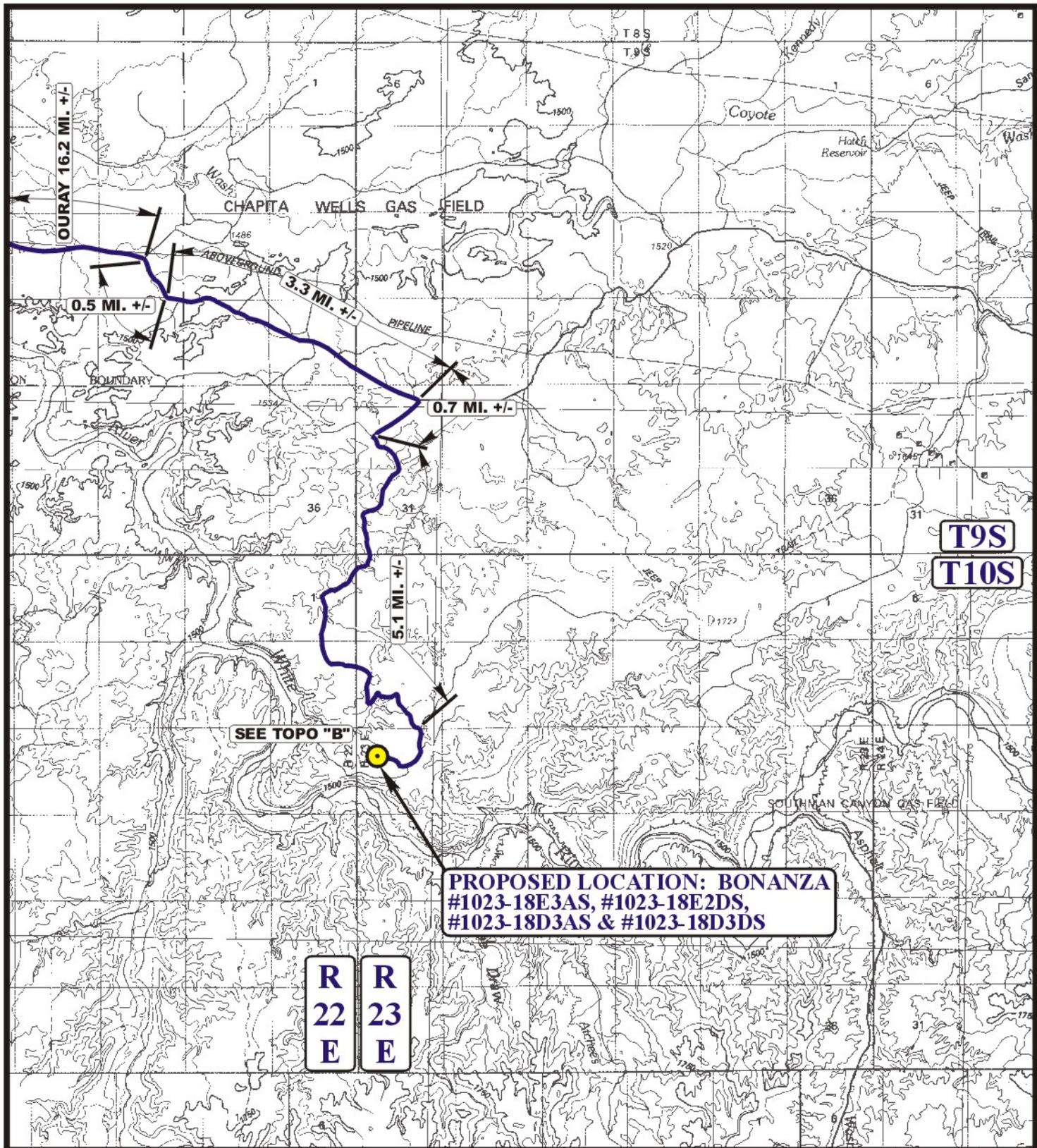
DRILLING ENGINEER: \_\_\_\_\_ DATE: \_\_\_\_\_  
 John Huycke / Grant Schluender

DRILLING SUPERINTENDENT: \_\_\_\_\_ DATE: \_\_\_\_\_  
 John Merkel / Lovel Young

### EXHIBIT A Bonanza 1023-18E2DS



SCHMATIC DIAGRAM OF 5,000 PSI BOP STACK



**LEGEND:**

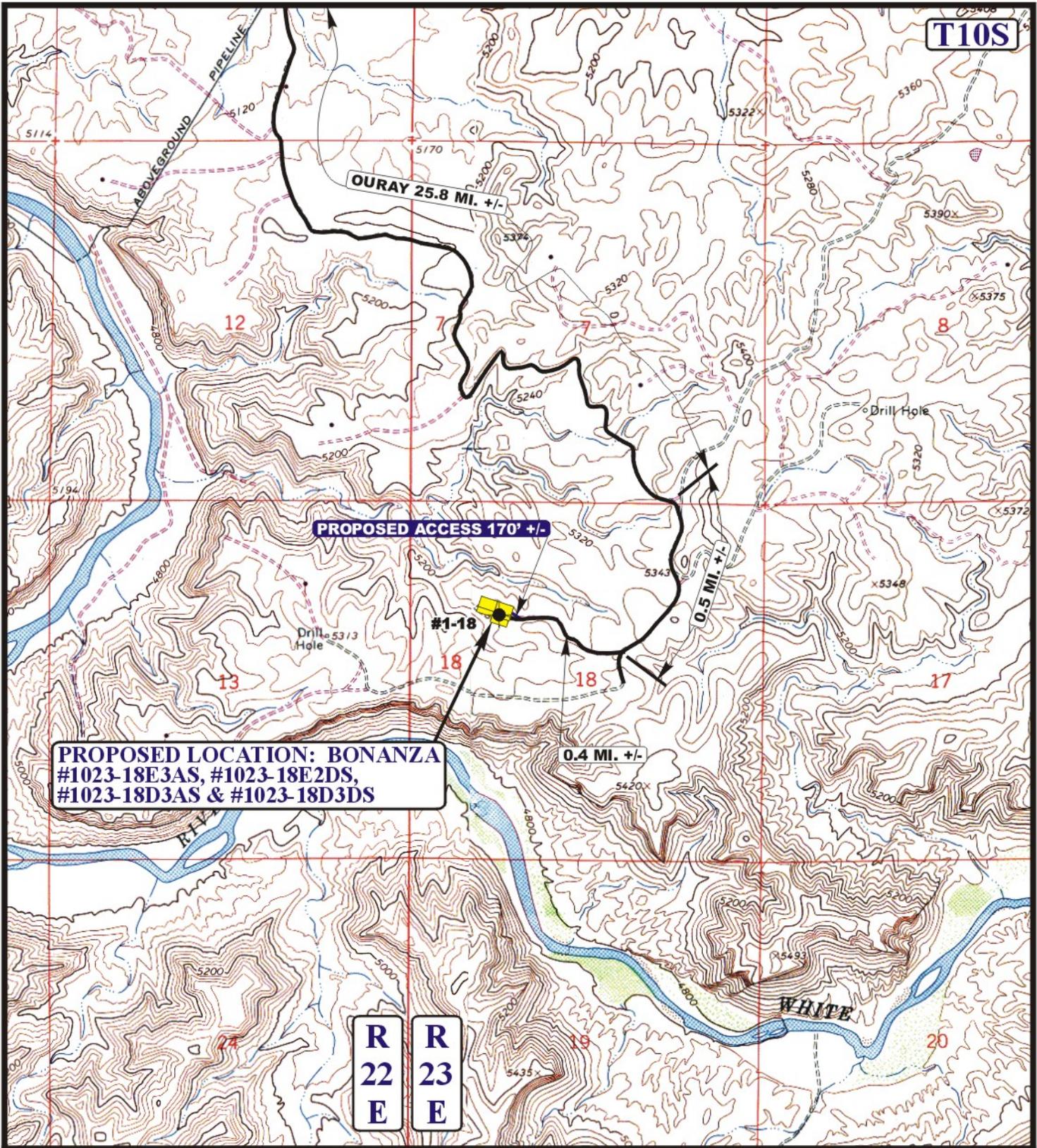
 PROPOSED LOCATION

**Kerr-McGee Oil & Gas Onshore LP**  
**BONANZA #1023-18E2DS, #1023-18E3AS,**  
**#1023-18D3AS & #1023-18D3DS**  
**SECTION 18, T10S, R23E, S.L.B.&M.**  
**NW 1/4**

**U&L S** Utah Engineering & Land Surveying  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC** **11 14 08**  
**MAP** MONTH DAY YEAR  
 SCALE: 1:100,000 DRAWN BY: D.P. REV: J.H. 12-22-08





**PROPOSED LOCATION: BONANZA  
#1023-18E3AS, #1023-18E2DS,  
#1023-18D3AS & #1023-18D3DS**

**LEGEND:**

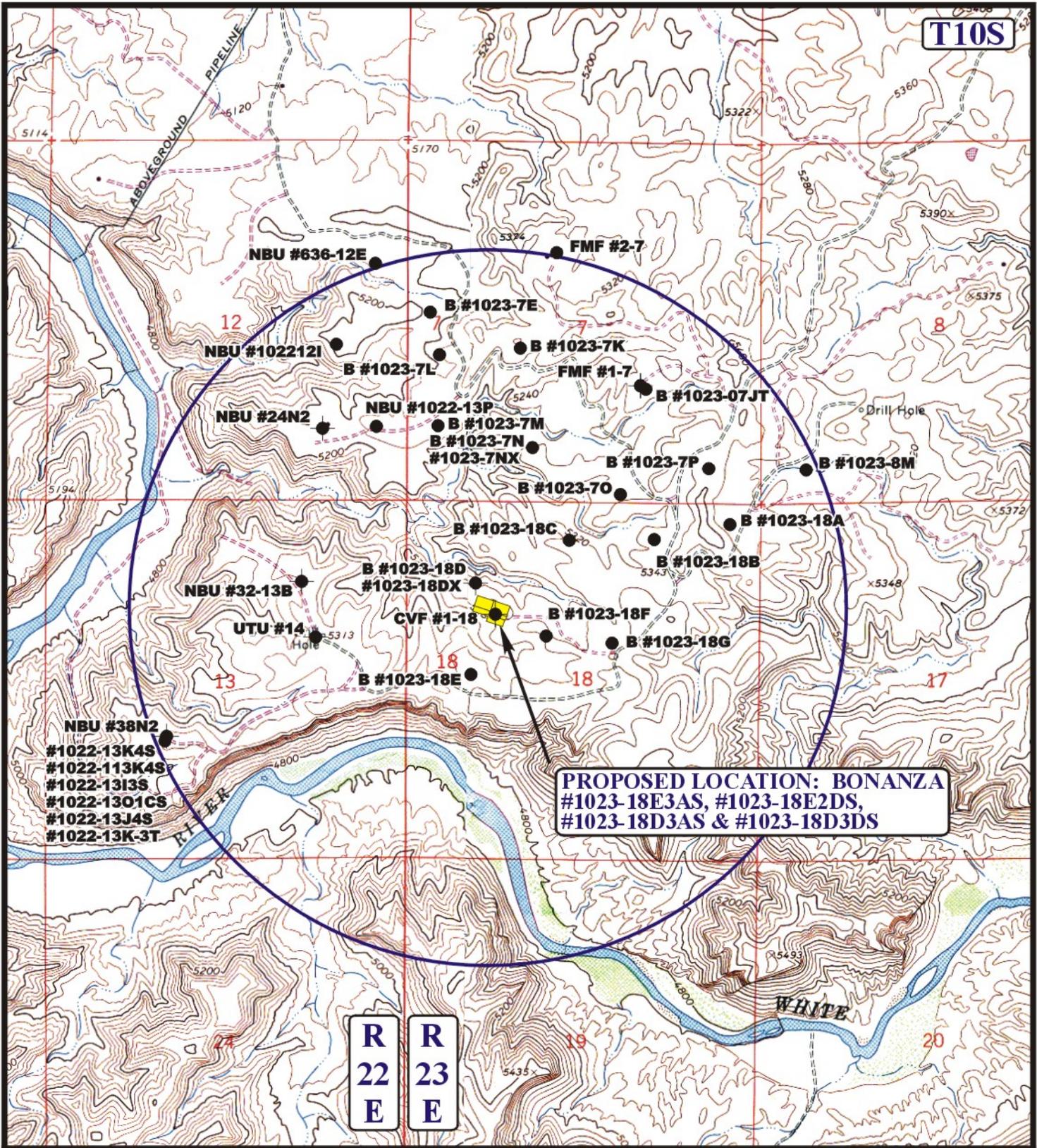
- EXISTING ROAD
- PROPOSED ACCESS ROAD



**Kerr-McGee Oil & Gas Onshore LP  
BONANZA #1023-18E2DS, #1023-18E3AS,  
#1023-18D3AS & #1023-18D3DS  
SECTION 18, T10S, R23E, S.L.B.&M.  
NW 1/4**

**U&L S** Utah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC** **11 14 08**  
**MAP** MONTH DAY YEAR  
SCALE: 1" = 2000' DRAWN BY: D.P. REV: J.H. 12-22-08 **B TOPO**



**PROPOSED LOCATION: BONANZA  
#1023-18E3AS, #1023-18E2DS,  
#1023-18D3AS & #1023-18D3DS**

**LEGEND:**

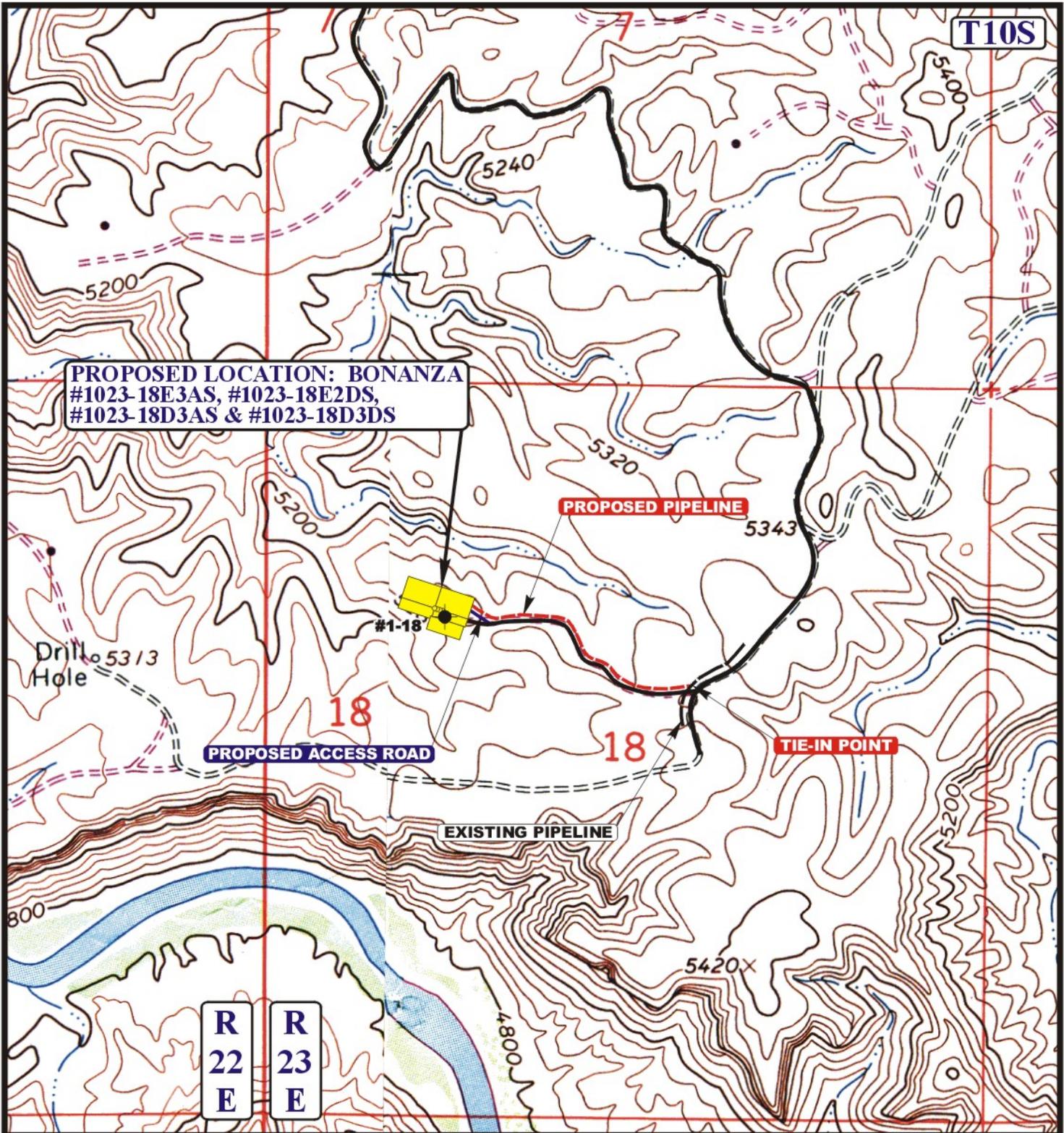
- DISPOSAL WELLS
- PRODUCING WELLS
- SHUT IN WELLS
- WATER WELLS
- ABANDONED WELLS
- TEMPORARILY ABANDONED

**Kerr-McGee Oil & Gas Onshore LP  
BONANZA #1023-18E2DS, #1023-18E3AS,  
#1023-18D3AS & #1023-18D3DS  
SECTION 18, T10S, R23E, S.L.B.&M.  
NW 1/4**

**U&L S** Utah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813



**TOPOGRAPHIC MAP** 11 14 08  
MONTH DAY YEAR  
SCALE: 1" = 2000' DRAWN BY: D.P. REV: J.H. 12-22-08 **TOPO**



APPROXIMATE TOTAL PIPELINE DISTANCE = 1,860' +/-

**LEGEND:**

-  PROPOSED ACCESS ROAD
-  EXISTING PIPELINE
-  PROPOSED PIPELINE

**Kerr-McGee Oil & Gas Onshore LP**  
**BONANZA #1023-18E2DS, #1023-18E3AS,**  
**#1023-18D3AS & #1023-18D3DS**  
**SECTION 18, T10S, R23E, S.L.B.&M.**  
**NW 1/4**

**U&L S** Utah Engineering & Land Surveying  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813



**TOPOGRAPHIC** 11 14 08  
 MAP MONTH DAY YEAR  
 SCALE: 1" = 1000' DRAWN BY: D.P. REV: J.H. 12-22-08

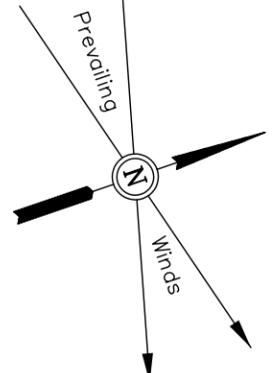
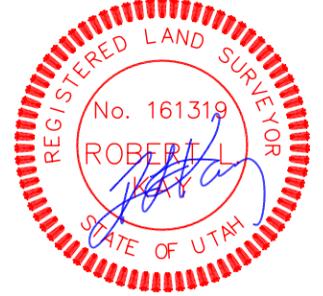
**D**  
**TOPO**

# Kerr-McGee Oil & Gas Onshore LP

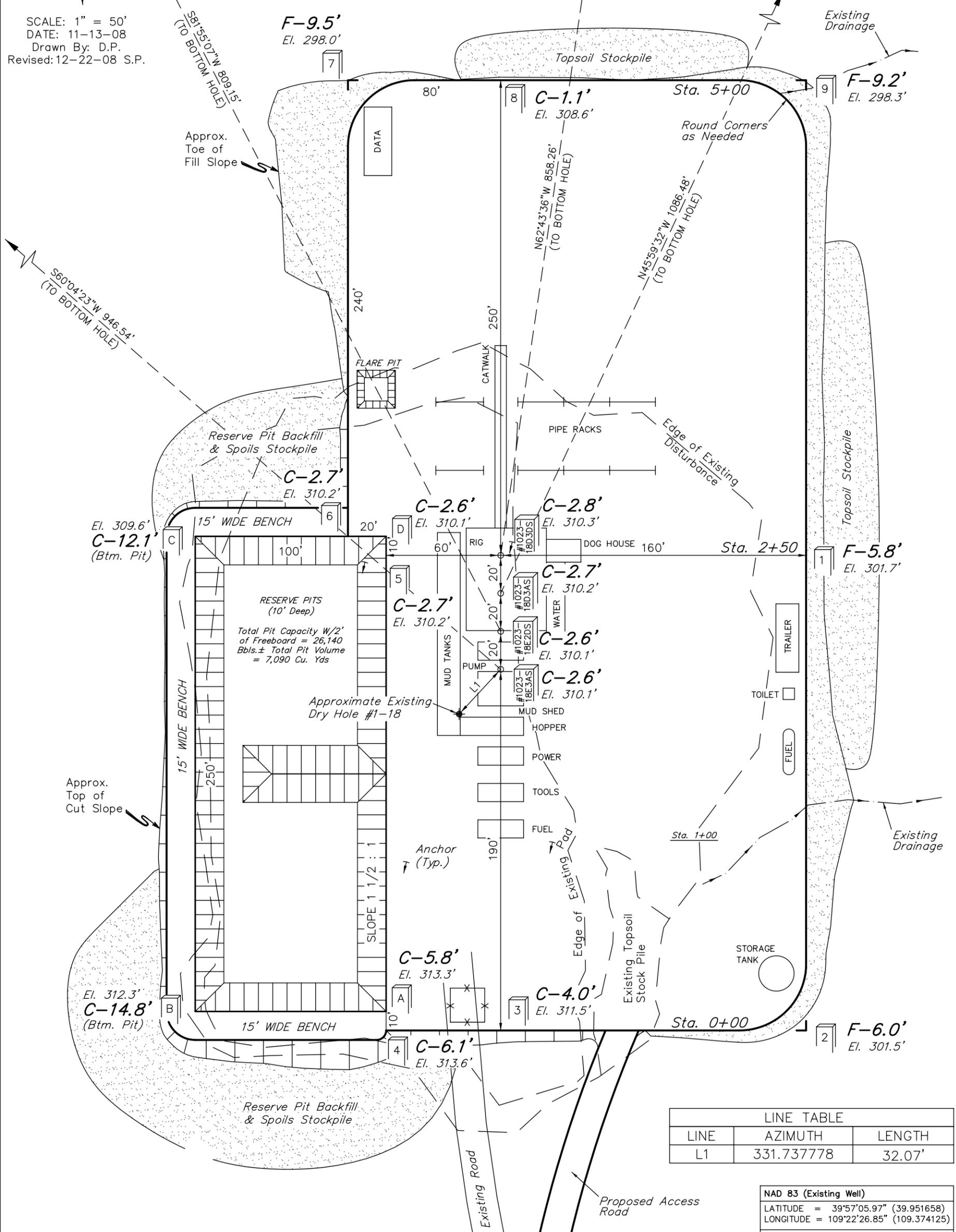
## LOCATION LAYOUT FOR

BONANZA #1023-18E2DS, #1023-18E3AS, #1023-18D3AS & #1023-18D3DS  
SECTION 18, T10S, R23E, S.L.B.&M.  
NW 1/4

FIGURE #1



SCALE: 1" = 50'  
DATE: 11-13-08  
Drawn By: D.P.  
Revised: 12-22-08 S.P.



LINE TABLE		
LINE	AZIMUTH	LENGTH
L1	331.737778	32.07'

NAD 83 (Existing Well)	
LATITUDE	= 39°57'05.97" (39.951658)
LONGITUDE	= 109°22'26.85" (109.374125)
NAD 27 (Existing Well)	
LATITUDE	= 39°57'06.09" (39.951692)
LONGITUDE	= 109°22'24.40" (109.373444)

**NOTES:**

Elev. Ungraded Ground At #1023-18D3DS Loc. Stake = 5310.3'  
FINISHED GRADE ELEV. AT #1023-18D3DS LOC. STAKE = 5307.5'

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

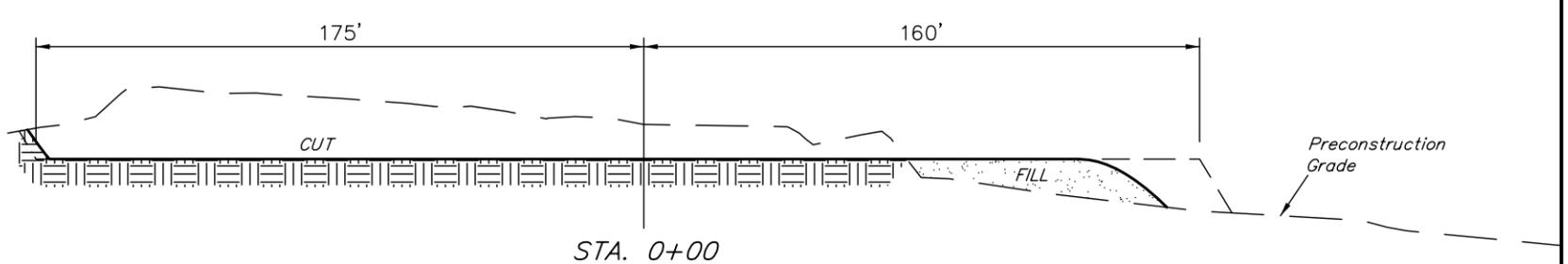
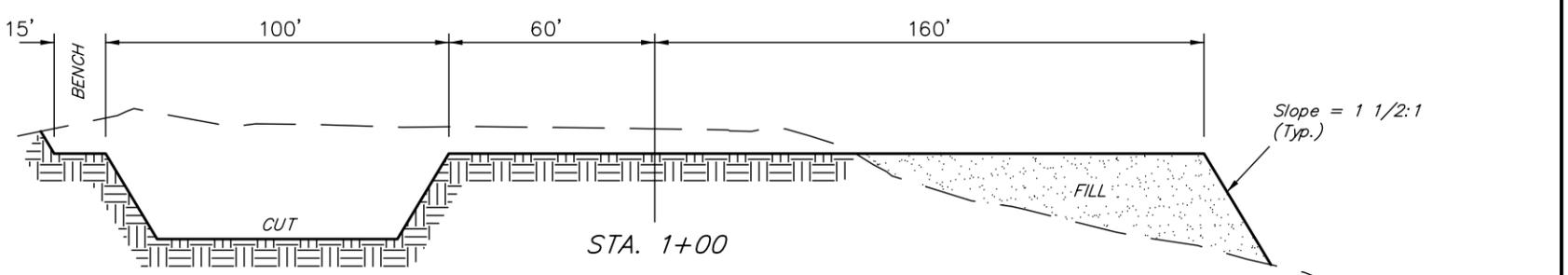
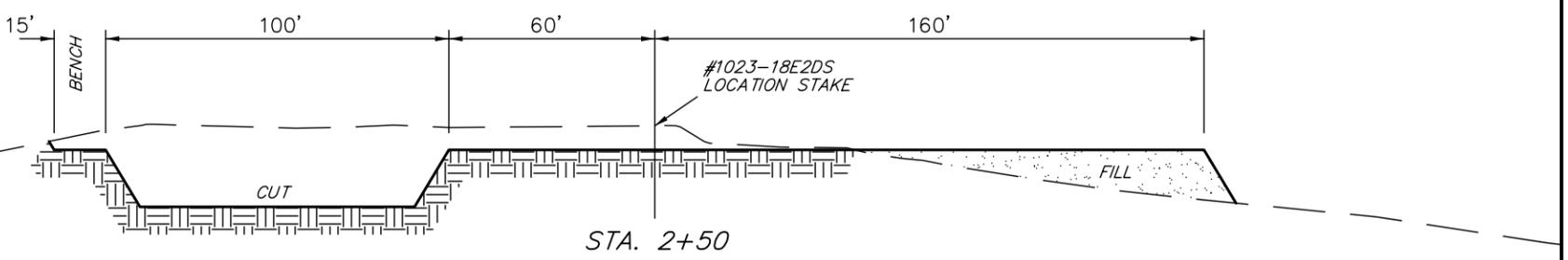
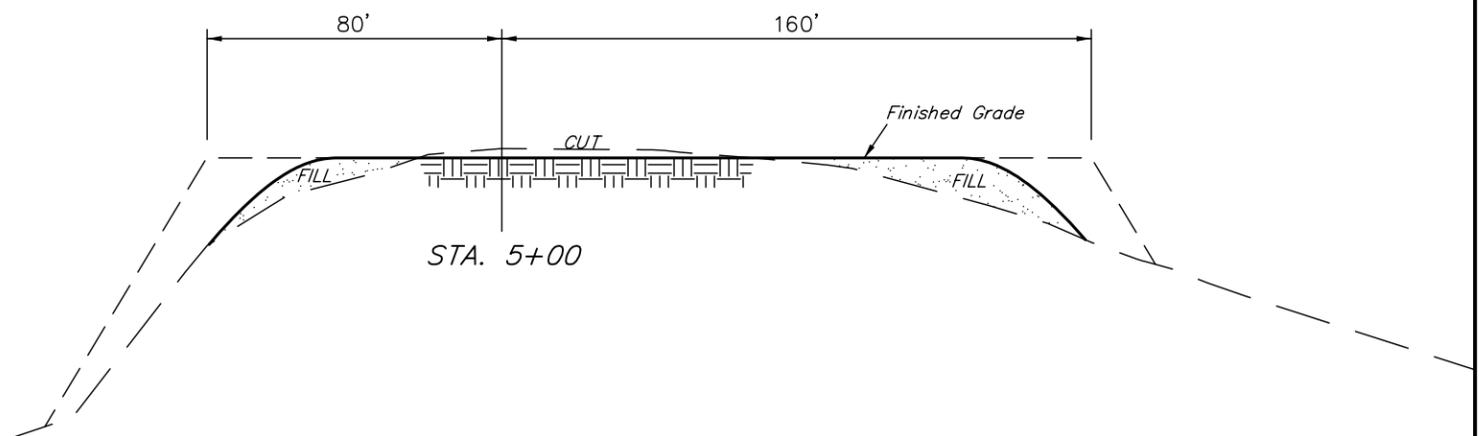
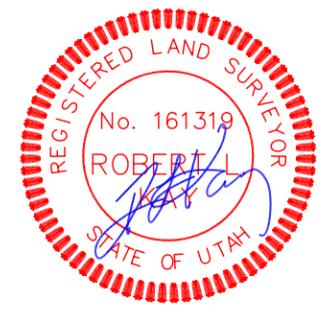
TYPICAL CROSS SECTIONS FOR

BONANZA #1023-18E2DS, #1023-18E3AS, #1023-18D3AS & #1023-18D3DS  
SECTION 18, T10S, R23E, S.L.B.&M.  
NW 1/4

FIGURE #2

1" = 20'  
X-Section Scale  
1" = 50'

DATE: 11-13-08  
Drawn By: D.P.  
Revised: 12-22-08 S.P.



NOTE:  
Topsoil should not be Stripped Below Finished Grade on Substructure Area.

\* NOTE:  
FILL QUANTITY INCLUDES 5% FOR COMPACTION

**APPROXIMATE ACREAGES**

NEW CONSTRUCTION WELL SITE DISTURBANCE	= ± 2.175 ACRES
EXISTING WELL SITE DISTURBANCE	= ± 2.165 ACRES
ACCESS ROAD DISTURBANCE	= ± 0.114 ACRES
PIPELINE DISTURBANCE	= ± 1.281 ACRES
<b>TOTAL</b>	<b>= ± 5.735 ACRES</b>

**APPROXIMATE YARDAGES**

(6") Topsoil Stripping	= 3,080 Cu. Yds.
Remaining Location	= 14,680 Cu. Yds.
<b>TOTAL CUT</b>	<b>= 17,760 CU.YDS.</b>
<b>FILL</b>	<b>= 11,130 CU.YDS.</b>

EXCESS MATERIAL	= 6,630 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	= 6,630 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	= 0 Cu. Yds.

# Kerr-McGee Oil & Gas Onshore LP

BONANZA #1023-18E2DS, #1023-18E3AS, #1023-18D3AS & #1023-18D3DS

LOCATED IN UINTAH COUNTY, UTAH  
SECTION 18, T10S, R23E, S.L.B.&M.

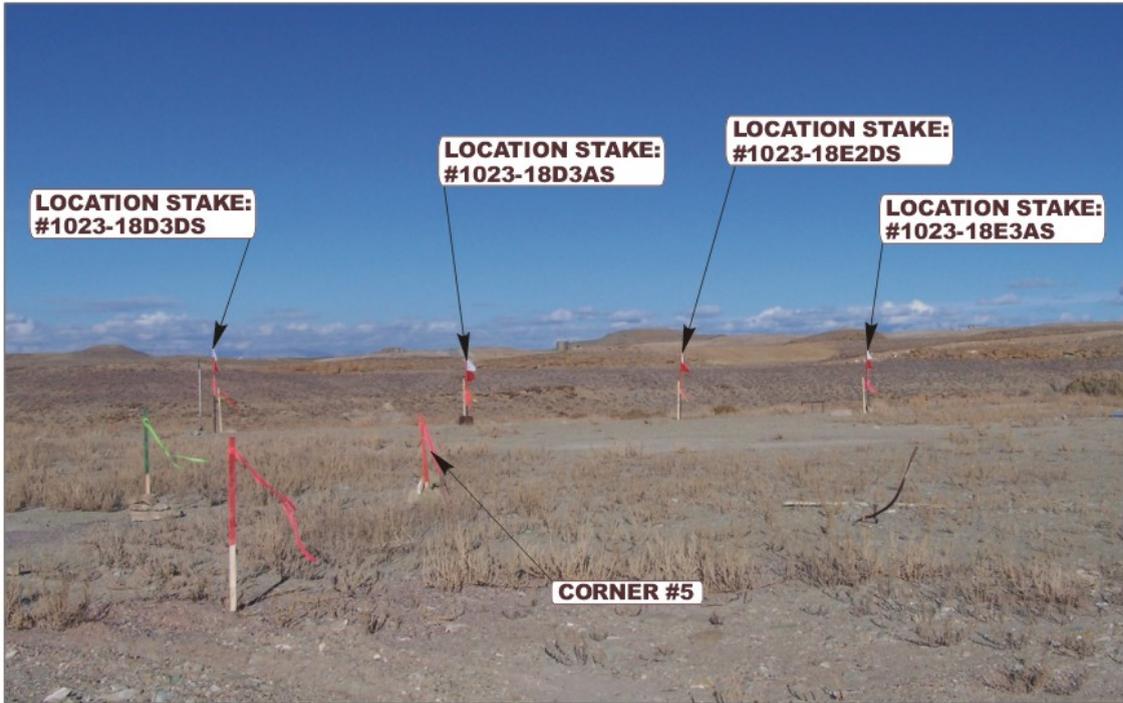


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKES

CAMERA ANGLE: NORTHEASTERLY



PHOTO: VIEW OF LOCATION STAKES

CAMERA ANGLE: WESTERLY



- Since 1964 -

**UELS**

Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

LOCATION PHOTOS	11	14	08	PHOTO
	MONTH	DAY	YEAR	
TAKEN BY: D.K.	DRAWN BY: D.P.	REV: J.H. 12-22-08		

# Kerr-McGee Oil & Gas Onshore LP

BONANZA #1023-18E2DS, #1023-18E3AS, #1023-18D3AS & #1023-18D3DS  
PIPELINE ALIGNMENT

LOCATED IN UINTAH COUNTY, UTAH  
SECTION 18, T10S, R23E, S.L.B.&M.



PHOTO: VIEW OF TIE-IN POINT

CAMERA ANGLE: WESTERLY



PHOTO: VIEW OF PIPELINE ALIGNMENT

CAMERA ANGLE: EASTERLY



- Since 1964 -

**UELS** Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

<b>PIPELINE PHOTOS</b>			<b>11</b>	<b>14</b>	<b>08</b>	<b>PHOTO</b>
			MONTH	DAY	YEAR	
TAKEN BY: D.K.		DRAWN BY: D.P.		REV: J.H. 12-22-08		

**Kerr-McGee Oil & Gas Onshore LP  
BONANZA #1023-18E2DS, #1023-18E3AS,  
#1023-18D3AS & #1023-18D3DS  
SECTION 18, 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 SOUTH; TURN RIGHT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 0.5 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE WEST; TURN RIGHT AND PROCEED IN A WESTERLY DIRECTION APPROXIMATELY 0.4 MILES TO THE BEGINNING OF THE PROPOSED ACCESS ROAD TO THE NORTHWEST; FOLLOW ROAD FLAGS IN A NORTHWESTERLY DIRECTION APPROXIMATELY 170' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 57.7 MILES.

**Bonanza 1023-18D3AS**

Surface: 1,618' FNL 1,282' FWL (SW/4 NW/4) – Lot 2  
BHL: 855' FNL 500' FWL (NW/4 NW/4) – Lot 1

**Bonanza 1023-18D3DS**

Surface: 1,611' FNL 1,263' FWL (SW/4 NW/4) – Lot 2  
BHL: 1,210' FNL 500' FWL (NW/4 NW/4) – Lot 1

**Bonanza 1023-18E2DS**

Surface: 1,624' FNL 1,301' FWL (SW/4 NW/4) – Lot 2  
BHL: 1,730' FNL 500' FWL (SW/4 NW/4) – Lot 2

**Bonanza 1023-18E3AS**

Surface: 1,631' FNL 1,320' FWL (SE/4 NW/4)  
BHL: 2,095' FNL 500' FWL (SW/4 NW/4) – Lot 2

Pad: Bonanza 1023-18E  
Sec. 18 T10S R23E

Uintah, Utah  
Mineral Lease: UTU 38421

**ONSHORE ORDER NO. 1**

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

This Application for Permit to Drill (APD) is filed under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) documents. An NOS was submitted on December 2008 showing the surface locations in SW/4 NW/4 and SE/4 NW/4 of Section 18 T10S R23E.

This Surface Use Plan of Operations (SUPO) or 13-point plan is submitted under the Master Development Plan (MDP) for Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee) and provides details specific to this pad. General information is provided in the MDP, which is available upon request and at the BLM-Vernal Field Office.

An on-site meeting was held on February 3, 2009. Present were:

- Verlyn Pindell, Dave Gordon, Scott Ackerman, Karl Wright – BLM;
- David Kay – Uintah Engineering & Land Surveying;
- Kolby Kay – 609 Consulting, LLC
- Tony Kazeck, Clay Einerson, Raleen White, Ramey Hoopes, Grizz Oleen, Charles Chase and Spencer Biddle – Kerr-McGee.

**Directional Drilling:**

In accordance with Utah 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:**

- A) Refer to Topo Map A for directions to the location.
- B) Refer to Topo Maps A and B for location of access roads within a 2-mile radius.
- C) Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

**2. Planned Access Roads:**

*See MDP for additional details on road construction.*

Approximately  $\pm 0.1$  ( $\pm 170'$ ) mile of new access road is proposed. Please refer to the attached Topo Map B. No pipelines will be crossed with the new construction.

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. There will be no turn outs.

*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 and are typically shown on the attached Exhibits and Topo maps.*

Surfacing material may be necessary, depending upon weather conditions.

**3. Location of Existing Wells within a 1-Mile Radius:**

Please refer to Topo Map C.

**4. Location of Existing and Proposed Facilities:**

*See MDP for additional details on Existing and 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. The required color is Shadow Gray, a non-reflective earthtone, or as specified by BLM. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded.

**Approximately ±1,860' of new 10" pipeline will be installed. Refer to Topo D for the existing pipeline.** Pipeline segments will be welded or zaplocked together on disturbed areas in or near the location, whenever possible, and dragged into place

**5. Location and Type of Water Supply:**

*See MDP for additional details on Location and Type of Water Supply.*

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:**

*See MDP for additional details on Source of Construction Materials.*

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

If needed, gravel will be obtained from a commercial source.

**7. Methods of Handling Waste Materials:**

*See MDP for additional details on Methods of Handling Waste Materials.*

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. Ancillary Facilities:**

*See MDP for additional details on Ancillary Facilities.*

None are anticipated.

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

*See MDP for additional details on Well Site Layout.*

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

Net wire (39-inch) 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 re-surveyed and a Sundry Notice Form shall be submitted.

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

*See MDP for additional details on Plans for Reclamation of the Surface.*

**11. Surface/Mineral Ownership:**

United States of America  
Bureau of Land Management  
170 South 500 East  
Vernal, UT 84078  
(435)781-4400

**12. Other Information:**

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 MDP and SUPO, 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.

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

The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the AO. Within five (5) working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places;
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in site preservation is not necessary); and,
- a timeframe for the AO to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the finds of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of the mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed the operator will then be allowed to resume construction.

“The holder of this authorization shall immediately bring any paleontological resources or fossils discovered as a result of operations under this authorization to the attention of the authorized officer. The holder shall suspend all activities in the vicinity of such discovery until notified to proceed by the authorized officer. The authorized officer will evaluate, or will have evaluated, such discoveries not later than five (5) working days after being notified, and will determine what action shall be taken with respect to such discoveries. The decision as to the appropriate measures to mitigate adverse effects to significant paleontological resources will be made by the authorized officer after consulting with the holder. The holder may be responsible for the cost of any investigations necessary for the evaluation, and for any mitigative measures.”

**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 Bureau of Land Management Nationwide Bond WYB000291.

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

June 1, 2009  
\_\_\_\_\_  
Date

CULTURAL RESOURCE INVENTORY OF  
KERR-MCGEE OIL AND GAS ONSHORE LP'S  
TWELVE PROPOSED WELL LOCATIONS  
IN TOWNSHIP 10S, RANGE 23E, SECTIONS 9, 17, AND 18,  
UINTAH COUNTY, UTAH

CULTURAL RESOURCE INVENTORY OF  
KERR-MCGEE OIL AND GAS ONSHORE LP'S  
TWELVE PROPOSED WELL LOCATIONS  
IN TOWNSHIP 10S, RANGE 23E, SECTIONS 9, 17, AND 18,  
UINTAH COUNTY, UTAH

By:

Patricia Stavish

Prepared For:

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. 09-012

March 20, 2009

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

State of Utah Antiquities Project (Survey)  
Permit No. U-09-MQ-0113b

## INTRODUCTION

A cultural resource inventory was completed Montgomery Archaeological Consultants, Inc. (MOAC) in March 2009 of Kerr-McGee Oil and Gas Onshore LP's 12 proposed well locations with associated access and pipeline corridors in Township 10S, Range 23E, Sections 3, 9, 10, 17, and 18. The project area is situated north of the White River, south of the town of Vernal, Uintah County, Utah. The well pads are designated: CF #1-9 (Bonanza #1023-H) Directional Pad, Bonanza #1023-09B3BS, Bonanza #1023-09H2BS, Bonanza #1023-09H2CS, Bonanza #1023-09B3CS, CCF #1-17 (Bonanza #1023-17C) Directional Pad, Bonanza #1023-17D3S, Bonanza #1023-17E2S, Bonanza #1023-17E3AS, Bonanza #1023-17E3CS, CVF #1-8 (Bonanza #1023-18E) Directional Pad, Bonanza #1023-18E3AS, Bonanza #1023-18E2DS, Bonanza #1023-18D3AS, and Bonanza #1023-18D3DS. This document was implemented at the request of Ms. Raleen White, Kerr-McGee Oil and Gas Onshore LP, Denver, Colorado. Land status is public lands administered by the Bureau of Land Management (BLM), Vernal Field Office.

The objectives of the inventory were to locate, document, and evaluate any cultural resources within the project area in accordance 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 Historic Preservation Act (NHPA) of 1969 (as amended), the Archaeological and Historic Conservation Act of 1974, the Archaeological Resources Protection Act of 1979, and the American Indian Religious Freedom Act of 1978.

The fieldwork was performed between August 20, 2008 and October 24, 2008 by various MOAC personnel under the supervision of Keith Montgomery (Principal Investigator). The project was conducted under the auspices of U.S.D.I. (FLPMA) Permit No. 08-UT-60122 and State of Utah Antiquities Permit (Survey) No. U-09-MQ-0113b issued to Montgomery Archaeological Consultants, Inc., Moab, Utah.

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 indicated that two previous archaeological sites (42Un3049 and 42Un5768) occur in the current project area. Site 42Un3049 is a historic can scatter that was documented in 2002 by TRC Mariah Associates and is recommended as not eligible to the NRHP (Craven and Highland 2002). Site 42Un5768 is a historic corral complex that was documented in 2007 by MOAC and is recommended as not eligible (Stavish 2007).

## 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 3, 9, 10, 17, and 18 ( Figure 1; Table 1).

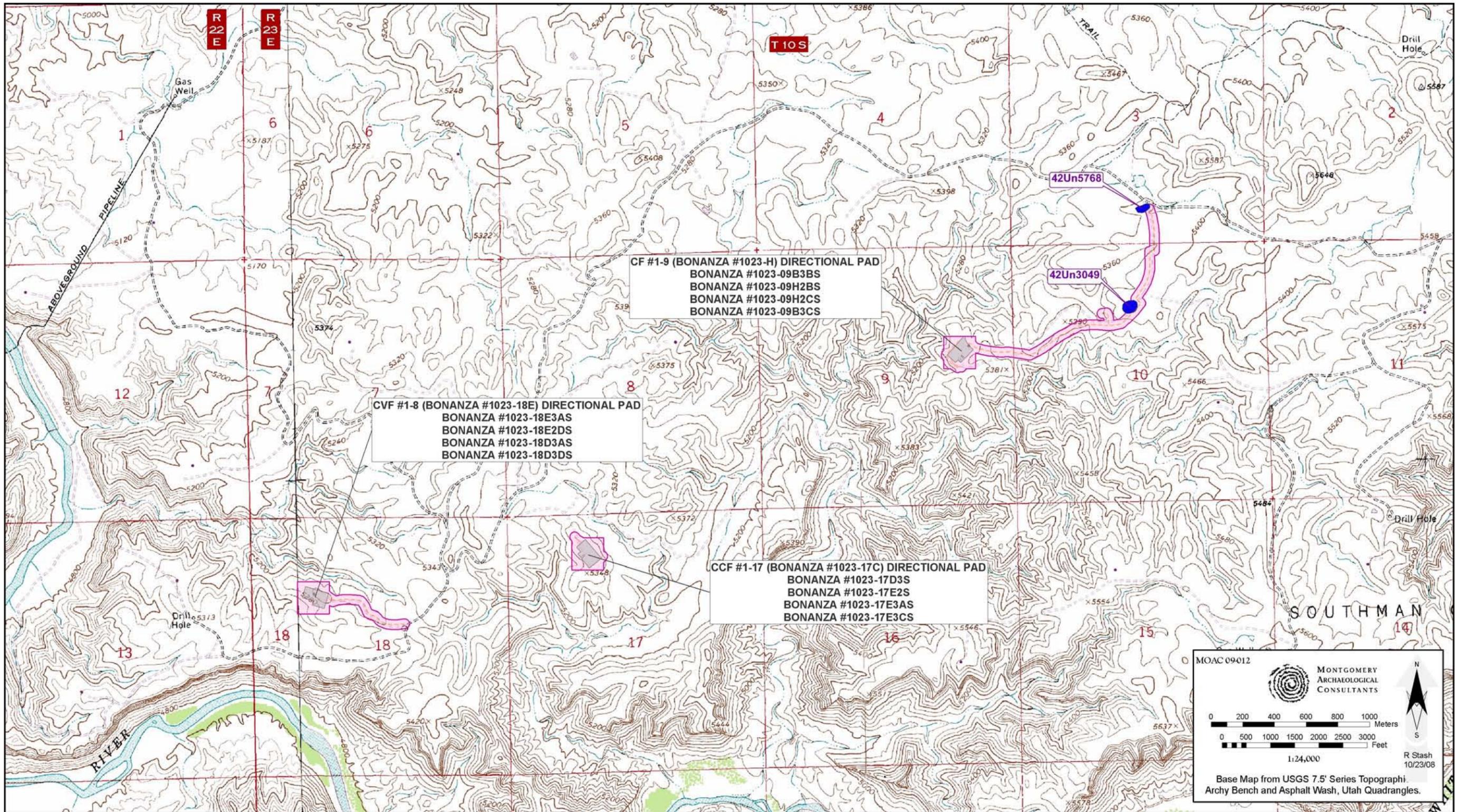


Figure 1. Kerr-McGee Oil & Gas Onshore LP's 12 Proposed Well Locations with Access and Pipeline Corridors, Uintah County, Utah.

Table 1. Kerr-McGee Onshore's 12 Proposed Directional Well Locations.

Well Designation	Legal Description	Access/Pipeline Corridor	Cultural Resources
CF #1-9 (Bonanza #1023-H) Directional Pad Bonanza #1023-09B3BS Bonanza #1023-09H2BS Bonanza #1023-09H2CS Bonanza #1023-09B3CS	SE/NE Sec. 9, T10S, R23E	Access: 294 ft Pipeline: 7223 ft	42Un3049 42Un5768
CVF #1-17 (Bonanza #1023-17C) Directional Pad Bonanza #1023-17D3S Bonanza #1023-17E2S Bonanza #1023-17E3AS Bonanza #1023-17E3CS	NE/NW Sec. 17, T10S, R23E	Access: 192 ft Pipeline: 52 ft	None
CVF #1-8 (Bonanza #1023-18E) Directional Pad Bonanza #1023-18E3AS Bonanza #1023-18E2DS Bonanza #1023-18D3AS Bonanza #1023-18D3DS	SW/NW Sec. 18, T10S, R23E	Access: 131 ft Pipeline: 1828 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 530 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.

### Historical Overview

The earliest recorded visit by Europeans to Utah was the Dominguez-Escalante expedition, of 1776. From the early 1820s to 1845, the Uinta Basin became an important part of the expanding western fur trade. Homesteading began in 1878 with Thomas Smart, one of the first white settlers to settle east of Ouray. In 1879, about forty cowboys and several large herds of cattle wintered on the White River. The winter of 1879-1880 saw the establishment of a settlement near the White River by several pioneers and their families including Ephraim Ellsworth, the Remingtons, and the Campbells. The person most responsible for organizing a permanent homesteading movement in Ouray Valley was William H. Smart, the brother of Thomas Smart, who became president of the Wasatch LDS Stake in 1901 (Burton 1998). When the Ute reservation was opened to white homesteaders in 1905, Smart organized several exploration trips into the area that later attracted many LDS families.

Initially, livestock was the main industry of white homesteaders in Uintah County. Two factors - free grass and the availability of water - influenced men to move their cattle into the county. Most of the land in the area was part of the public domain and no territory or state could tax it. Cattle were eventually brought up east as far as the Green River and then to the surrounding mountains. Large cattle herds had been coming to Brown's Park from Texas and other eastern areas since the early 1850s. The K Ranch, a large cattle operation owned by P.R. Keiser, brought many cowboys to the area. The ranch was located on the Utah-Colorado line with property in both states. Charley Hill, who came to Ashley Valley as a trapper for the Hudson Bay Company, started a cattle company on Hill Creek and Willow Creek in the Book Cliffs (Burton 1996:109). They later moved out when the government set this section aside for the Ouray Indian Agency. Other prominent men in the cattle industry included A.C. Hatch, Dan Mosby, and James McKee. Cattle rustling became an increasingly large problem as cattle herds grew, and conflict resulted between the small and large cattle companies. In 1912, the Uintah Cattle and Horse Growers Association was organized to protect the livestock industry from thieves and to issue an authorized brand book (Ibid: 110).

The sheep industry later became part of Uintah County's economic backbone, and contributed to the decline of the cattle industry. Sheep were first introduced to the valley during the winter of 1879 when Robert Bodily brought in sixty head (Burton 1996:111). Sheep were able to survive the hard winters much better than cattle. By the mid-1890s, more than 50,000 head of sheep were in the region; and the production of wool became very important. In 1897, C.S. Carter began building shearing corrals. In 1899, 500,000 pounds of wool were shipped from the county and sold for 12.5 cents per pound (Ibid:111). In 1906, the Uintah Railway Company built shearing pens on the Green River to encourage the shipping of wool by train; and in 1912, pens were built at Bonanza and Dragon. Beginning in the 1940s Mexican sheep-shearing crews and Greek sheepmen from the Price and Helper areas came into the area. The Taylor Grazing Act was passed in 1934, allotting specific areas or "districts" to stockmen for livestock grazing that required permits. This act was a forerunner of the Bureau of Land Management, which was established in 1946 and eventually assumed responsibility for the administration of grazing laws on public land (Burton 1996:115).

Uintah County is also known for its natural resources. Coal, copper, iron, asphalt, shale, and especially gilsonite, were important to the mining industry. When gilsonite was discovered in the Uinta Basin in the 1880s, Congress was persuaded to apportion 7,040 acres from the Ute reservation so the mineral could be mined. This area became known as "The Strip" and later developed into the townsite of Moffat (later renamed Gusher). Gilsonite is a light-weight lustrous black hydrocarbon mineral that can easily be crushed into a black-brown powder. It can be found in commercial quantities only in the Uinta Basin. The earliest use of the mineral was in buggy paints and beer-vat linings. Today it is used in over a hundred products ranging from printing inks to explosives and automobile body sealer and radiator paint (Burton 1998:343). Mining camps also sprang up near the Colorado line in Bonanza, Dragon, and Watson starting in about 1903. Many immigrants, including Greeks and Chinese, worked in the mines. Bonanza became one of the largest and most modern functioning mining camps in the area beginning in 1921, reaching its peak in 1937. It was chosen as the Barber gilsonite company headquarters, because it was near the largest deposits of gilsonite in the area. Miners from Dragon, Rainbow, and other neighboring communities were relocated to Bonanza.

## SURVEY METHODOLOGY

An intensive pedestrian survey was performed for this project which is considered 100% coverage. At each of the well locations, a 10-acre square parcel was defined, laid out on the cardinal directions and centered on the well pad center stake. The interiors of the parcels were examined for cultural resources with a series of parallel transects spaced at 10 m (33 ft) intervals. The 200 ft wide access and pipeline corridors were surveyed in the same manner. A total of 69.9 acres was inventoried on public lands administered by the Bureau of Land Management (BLM) Vernal Field Office.

## INVENTORY RESULTS

The inventory of Kerr McGee Oil and Gas Onshore LP's 12 proposed directional well locations resulted in the location of two previously recorded sites (42Un3049 and 42Un5768).

### Archaeological Sites

Smithsonian Site No.: 42Un3049  
Temporary Site No.: N/A  
NRHP Eligibility: Not Eligible

Description: The site is a historic trash scatter located on a flat bench near the western end of a low finger ridge, which overlooks the upper part of a deep canyon to the southwest. Twenty artifacts were documented at the site, including: nine sanitary cans, one soldered milk can, three pocket tobacco tins, one rectangular can with pour spout, one rifle cartridge, one lard pail, one coffee can lid, one Coca-Cola bottle, and two mentholatum jars. No features were associated with the trash scatter. The site was documented in 2002 by TRC Mariah Associates (Craven and Highland 2002).

Smithsonian Site No.: 42Un5768  
Temporary Site No.: 06-623-02  
NRHP Eligibility: Not Eligible

Description: The site is an abandoned corral complex that consists of a two-pen corral and three wood chip scatters. The site is located on a low, flat ridge east of a heavily utilized bladed dirt road. Historic artifacts are limited to an amethyst glass fragment. Modern glass and other trash is scattered across the site. Feature A is a wood chip scatter that measures 50 ft (north-south) x 35 ft (east-west) which contains at least 750 sawed and axe cut wood fragments. Feature B is a corral complex that includes two livestock holding facilities, measuring 50 ft (north-south) x 31 ft (east-west). The northern pen is circular and measures approximately 16 ft in diameter. This holding pen consists of 11 upright posts, which have a maximum height of 6 ft and a maximum diameter of 7 inches. Barbed wire is stretched between the posts, as well as several vertical wooden slats that are used to fill the areas between upright posts. The rectangular southern pen measures 39 ft (north-south) x 34 ft (east-west). This portion of the corral consists of 19 upright and partially buried posts. The posts consist of six metal t-posts and 13 sawed juniper logs. The juniper posts have a maximum height of 81 inches and a maximum diameter of 8 inches. Barbed wire is stretched in between the upright posts and the barbed wire has a maximum height of 40 inches. The corner posts are braced with milled lumber and saw cut juniper. The corral appears to have undergone modification and repair. Feature C is a wood chip scatter that measures 31 ft (east-west) x 10 ft (north-south). This wood chip scatter consist of approximately 500 pieces of sawed wood. The

feature is located at the south end of the corral complex (Feature B) and modern trash is scattered across the feature area. Feature D is a wood chip scatter that measures 39 ft (north-south) x 31 ft (east-west). It contains at least 1000 fragmented wood chips that exhibit sawed ends. Modern trash is scattered across the feature.

## NATIONAL REGISTER OF HISTORIC PLACES EVALUATION

The National Register Criteria for Evaluation of Significance and procedures for nominating cultural resources to the National Register of Historic Places (NRHP) are outlined in 36 CFR 60.4 as follows:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, material, workmanship, feeling, and association, and that they:

- a)...are associated with events that have made a significant contribution to the broad patterns of our history; or
- b)...are associated with the lives of persons significant to our past; or
- c)...embody the distinctive characteristics of a type, period, or method of construction; or that represents the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d)...have yielded or may be likely to yield information important in prehistory or history.

The inventory resulted in the location of two previously recorded sites (42Un3049 and 42Un5768). Sites 42Un3049 and 42Un5768 are recommended as not eligible to the NRHP as they fail to meet the outlined criteria for nomination to the register. Site 42Un3049 is a historic trash scatter that has a low density of artifacts with limited significance. Site 42Un5768 is a historic period corral complex that lacks structural integrity and is associated with common artifact types. These sites are not associated with any known historic person(s) or event(s) (Criteria A and B), nor do they represent the work of a master or embody the distinctive characteristics of a type, period or method of construction (Criterion C); nor are they likely to contribute further information important to the history of the region (Criterion D).

## MANAGEMENT RECOMMENDATIONS

The cultural resource inventory of Kerr-McGee Oil and Gas Onshore LP's 12 proposed well locations with associated access and pipeline corridors resulted in the location of two previously documented archaeological sites (42Un3049 and 42Un5768). Site 42Un3049 is a historic trash scatter that is recommended as not eligible to the NRHP. Site 42Un5768 is a historic corral complex that is recommended as not eligible to the NRHP. Based on the findings, a determination of "no adverse impact" is proposed for this undertaking pursuant to Section 106, CFR 800.

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**IPC #08-346**

# **Paleontological Reconnaissance Survey Report**

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**Survey of Kerr McGee's Proposed Well Pad, Access Road &  
Pipeline for "Bonanza #1023-18D3AS, D3DS, E3AS &  
E2DS" (Sec. 18, T 10 S, R 23 E)**

Asphalt Wash  
Topographic Quadrangle  
Uintah County, Utah

December 17, 2008

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 Oil & Gas Onshore LP and authorized by the BLM Vernal Field Office, a paleontological reconnaissance survey of Kerr McGee's proposed well pad, access road and pipeline for "Bonanza #1023-18D3AS, D3DS, E3AS & E2DS" (Sec. 18, T 10 S, R 23 E) was conducted by Simon Masters and Leith Tidwell on December 2, 2008. The reconnaissance survey was conducted under the Utah BLM Paleontological Resources Use Permit #UT08-006C. 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 US Department of the Interior Bureau of Land Management, paleontologically sensitive geologic formations in BLM 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);

BLM, 2008: BLM IM 2009-011 Assessment and Mitigation of Potential Impacts to Paleontological Resources. USDI – BLM Washington Office directive, October 29, 2008 replaces the Condition Classification System from Handbook H-8270-1. The following section outlines the new Potential Fossil Yield Classification (PFYC) System. 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.
  - **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.
  - **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 well pad, access road and pipeline for "Bonanza #1023-18D3AS, D3DS, E3AS & E2DS" (Sec. 18, T 10 S, R 23 E) are on land managed by the BLM about half a mile north of the White Rive, two miles east of Bitter Creek, and some 20 miles southwest of Bonanza, Utah. The project area can be found on the Asphalt Wash 7.5 minute U. S. Geological Survey Quadrangle Map, 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 paleo-magnetostratigraphic 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**

**Bonanza #1023-18D3AS, D3DS, E3AS & E2DS**

The project area is situated in the Wagonhound Member (Uinta A & B) of the Uinta Formation. The proposed well pad is a twin on a previously abandoned well pad located in the NW\SW quarter-quarter section of Sec. 18, T 20 S, R 23 E (Figure 1). The proposed pipeline ties into an existing pipeline located in the SW\NE quarter-quarter section of Sec. 18 and is staked adjacent to an existing access road. The proposed well pad is located on an abandoned well pad and is primarily over previously disturbed and reworked material. The proposed access road and pipeline tie-in are located on a small hilltop adjacent to the existing well pad with small exposures of light-brown sandstone. No fossils were discovered.

**SURVEY RESULTS**

<b>PROJECT</b>	<b>GEOLOGY</b>	<b>PALEONTOLOGY</b>
<p><b>“Bonanza #1023-18D3AS, D3DS, E3AS &amp; E2DS”</b> (Sec. 18, T 10 S, R 23 E)</p>	<p>The proposed well pad is located on an abandoned well pad and is primarily over previously disturbed and reworked material. The proposed access road and pipeline tie-in are located on a small hilltop adjacent to the existing well pad with small exposures of light-brown sandstone.</p>	<p>No fossils were discovered. <b>Class 3a</b></p>

## **RECOMMENDATIONS**

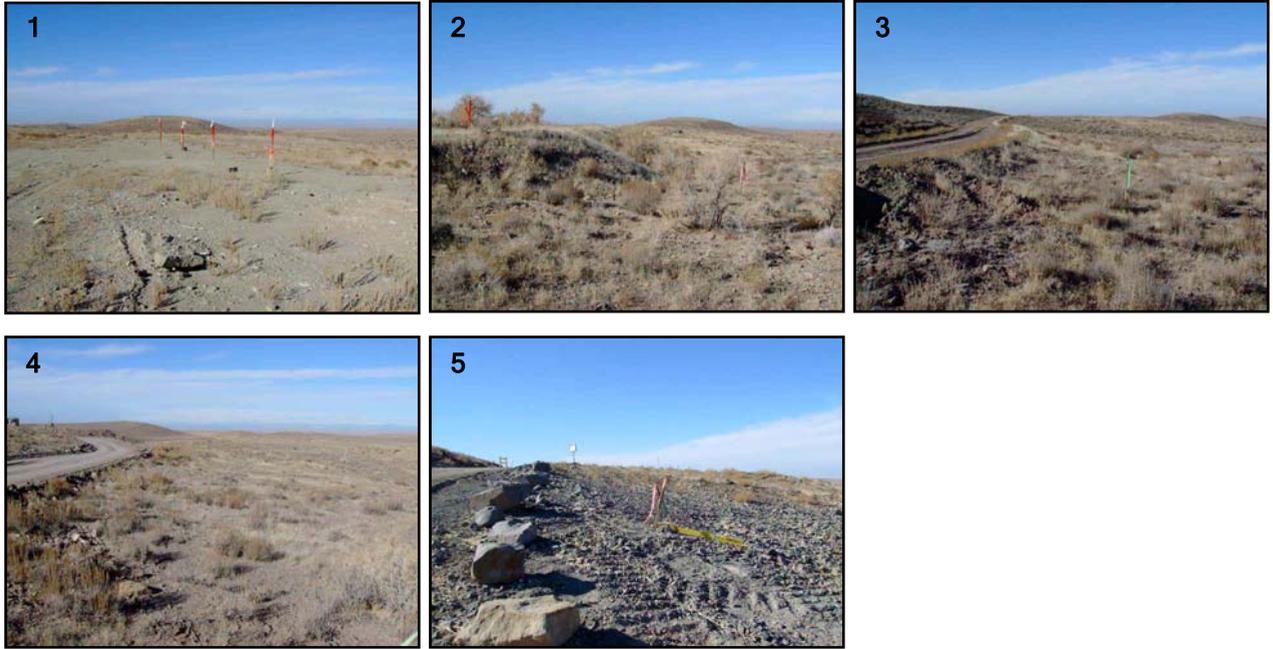
A reconnaissance survey was conducted for Kerr McGee's proposed well pad, access road and pipeline for "Bonanza #1023-18D3AS, D3DS, E3AS & E2DS" (Sec. 18, T 10 S, R 23 E). The well pad and the associated access road and pipeline covered in this report showed no signs of vertebrate fossils. Therefore, we recommend that no paleontological restrictions should be placed on the development of the projects included in this report.

Buried pipeline will encounter Uinta formational sediments along most of the staked pipeline corridors yet indications from surface fossils predict that little if any vertebrate fossils will be disturbed.

**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. 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 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.**



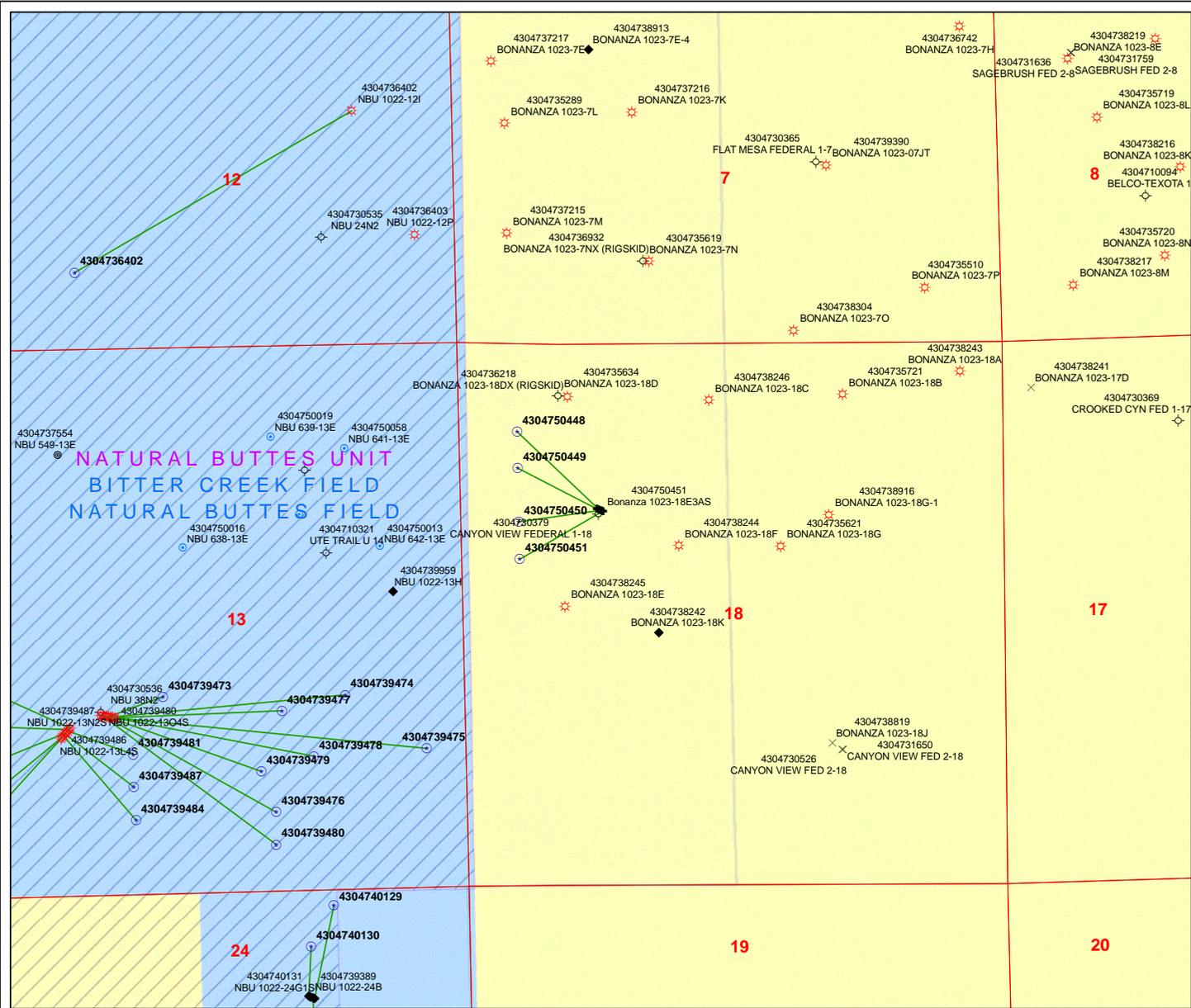
**Figure 1.** *continued...*



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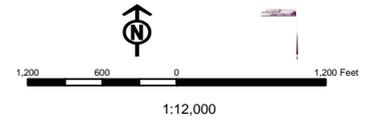
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**API Number: 4304750450**  
**Well Name: Bonanza 1023-18E2DS**  
**Township 10.0 S Range 23.0 E Section 18**  
**Meridian: SLBM**  
 Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:  
 Map Produced by Diana Mason

<b>Units</b>	<b>Wells Query Events</b>
<b>STATUS</b>	<b>GIS_STAT_TYPE</b>
ACTIVE	<Null>
EXPLORATORY	APD
GAS STORAGE	DRL
NF PP OIL	GI
NF SECONDARY	GS
PI OIL	LA
PP GAS	NEW
PP GEOTHERMIL	OPS
PP OIL	PA
SECONDARY	PGW
TERMINATED	RET
<b>Fields</b>	SGW
<b>STATUS</b>	SOW
ACTIVE	TA
COMBINED	TW
Sections	WD
	WI
	WS



# WORKSHEET APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 6/1/2009

**API NO. ASSIGNED:** 43047504500000

**WELL NAME:** Bonanza 1023-18E2DS

**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)

**PHONE NUMBER:** 720 929-6156

**CONTACT:** Danielle Piernot

**PROPOSED LOCATION:** SWNW 18 100S 230E

**Permit Tech Review:**

**SURFACE:** 1624 FNL 1301 FWL

**Engineering Review:**

**BOTTOM:** 1730 FNL 0500 FWL

**Geology Review:**

**COUNTY:** UINTAH

**LATITUDE:** 39.95173

**LONGITUDE:** -109.37358

**UTM SURF EASTINGS:** 638936.00

**NORTHINGS:** 4423456.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 1 - Federal

**LEASE NUMBER:** UTU 38421

**PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE

**SURFACE OWNER:** 1 - Federal

**COALBED METHANE:** NO

## RECEIVED AND/OR REVIEWED:

- PLAT
- Bond: FEDERAL - WYB000291
- Potash
- Oil Shale 190-5
- Oil Shale 190-3
- Oil Shale 190-13
- Water Permit: Permit #43-8496
- RDCC Review:
- Fee Surface Agreement
- Intent to Commingle

Commingle Approved

## LOCATION AND SITING:

- R649-2-3.
- Unit:
- R649-3-2. General
- R649-3-3. Exception
- Drilling Unit
- Board Cause No: Cause 179-14
- Effective Date: 6/12/2008
- Siting: 460' fr ext. drl. unit boundary
- R649-3-11. Directional Drill

**Comments:** Presite Completed

**Stipulations:** 3 - Commingle - ddoucet  
4 - Federal Approval - dmason  
15 - Directional - dmason



JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

# 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 1023-18E2DS  
**API Well Number:** 43047504500000  
**Lease Number:** UTU 38421  
**Surface Owner:** FEDERAL  
**Approval Date:** 6/18/2009

### 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. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

### 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

### Commingle:

In accordance with Board Cause No. 179-14, completion into and commingling of production from the Wasatch and Mesaverde formations is allowed.

### 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:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

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.

### Notification Requirements:

Notify the Division within 24 hours of spudding the well.

API Well No: 43047504500000

- Contact Carol Daniels at (801) 538-5284.

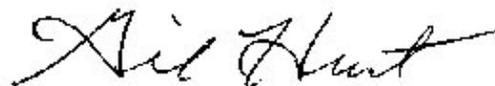
Notify the Division prior to commencing operations to plug and abandon the well.

- Contact 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:**

A handwritten signature in black ink, appearing to read "Gil Hunt". The signature is written in a cursive, flowing style with a long horizontal stroke at the end.

Gil Hunt  
Associate Director, Oil & Gas

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

FORM APPROVED  
OMB No. 1004-0136  
Expires July 31, 2010

JUN 01 2009

APPLICATION FOR PERMIT TO DRILL OR REENTER **BLM**

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU38421
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator KERR MCGEE OIL & GAS ONSHORE Contact: KATHY SCHNEEBECK DULNOAN Email: kathy.schneebeckdulnoan@anadarko.com		7. If Unit or CA Agreement, Name and No.
3a. Address 1368 SOUTH 1200 EAST VERNAL, UT 84078	3b. Phone No. (include area code) Ph: 720-929-6007 Fx: 720-929-7007	8. Lease Name and Well No. BONANZA 1023-18E2DS
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface SENW 1624FNL 1301FWL 39.95175 N Lat, 109.37425 W Lon At proposed prod. zone Lot 2 1730FNL 500FWL 39.95144 N Lat, 109.37710 W Lon		9. API Well No. 43-047-50450
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 27 MILES SOUTHEAST OF OURAY, UT		10. Field and Pool, or Exploratory NATURAL BUTTES
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) APPROXIMATELY 500' TO LEASE LINE	16. No. of Acres in Lease	11. Sec., T., R., M., or Blk. and Survey or Area Sec 18 T10S R23E Mer SLB SME: BLM
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. APPROXIMATELY 365'	19. Proposed Depth 8464 MD 8300 TVD	12. County or Parish UINTAH
21. Elevations (Show whether DF, KB, RT, GL, etc.) 5310 GL	22. Approximate date work will start 06/26/2009	13. State UT
24. Attachments		17. Spacing Unit dedicated to this well 318.70
20. BLM/BIA Bond No. on file WYB000291		23. Estimated duration 60-90 DAYS

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature (Electronic Submission)	Name (Printed/Typed) KATHY SCHNEEBECK DULNOAN Ph: 720-929-6007	Date 06/01/2009
--	---	--------------------

Title  
STAFF REGULATORY ANALYST

Approved by (Signature) 	Name (Printed/Typed) Stephanie J. Howard	Date 12/14/09
Title Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

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

Additional Operator Remarks (see next page)

Electronic Submission #70375 verified by the BLM Well Information System  
For KERR MCGEE OIL & GAS ONSHORE L, sent to the Vernal  
Committed to AFMSS for processing by GAYLE JENKINS on 06/03/2009 (09GXJ4688AE)

CONDITIONS OF APPROVAL ATTACHED

DEC 22 2009

NOTICE OF APPROVAL

\*\* BLM REVISED \*\*

09SX50342A NOS: 12-11-2008

DIV. OF OIL, GAS & MINING

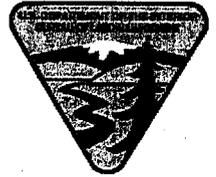


UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
VERNAL FIELD OFFICE

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



**CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL**

Company: Kerr McGee Oil and Gas Onshore LP      Location:      SENW, Sec.18, T10S R23E  
Well No: Bonanza 1023-18E2DS      Lease No:      UTU-38421  
API No: 43-047-50450      Agreement:      N/A

**OFFICE NUMBER:      (435) 781-4400**

**OFFICE FAX NUMBER:      (435) 781-3420**

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR  
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit was processed using a 390 CX tied to NEPA approved 02/05/2007. Therefore, this permit is approved for a two (2) year period OR until lease expiration OR the well must be spud by 02/05/2012 (5 years from the NEPA approval date), whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

**NOTIFICATION REQUIREMENTS**

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <a href="mailto:ut_vn_opreport@blm.gov">ut_vn_opreport@blm.gov</a> .
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

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**SURFACE USE PROGRAM  
CONDITIONS OF APPROVAL (COAs)**

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.

**SITE SPECIFIC CONDITIONS OF APPROVAL**

- The following seed mix will be used for Interim Reclamation

Interim Reclamation seed mix

Ephraim crested wheatgrass	<i>Agropyron cristatum v. Epharim</i>	1 lbs. /acre
bottlebrush squirreltail	<i>Elymus elymoides</i>	1 lbs. /acre
Siberian wheatgrass	<i>Agropyron fragile</i>	1 lbs. /acre
western wheatgrass	<i>Agropyron smithii</i>	1 lbs. /acre
scarlet globemallow	<i>Spaeralcea coccinea</i>	1 lbs. /acre
shadscale	<i>Atriplex confertifolia</i>	2 lbs. /acre
fourwing saltbush	<i>Atriplex canescens</i>	2 lbs. /acre

Seed shall be applied with a rangeland drill, unless topography and /or rockiness precludes the use of equipment. Seed shall be applied between August 15 and ground freezing. All seed rates are in terms of Pure Live Seed. Operator shall notify the Authorized Officer when seeding has commenced, and shall retain all seed tags.

- The operator will control noxious weeds along the well pad, access road, and the pipeline route by spraying or mechanical removal. On BLM administered land, a Pesticide Use Proposal (PUP) will be submitted and approved prior to the application of herbicides or pesticides or possibly hazardous chemicals.
- All permanent (on-site six months or longer), above ground structures constructed or installed, including pumping units, would be painted a flat, non-reflective, earth tone color to match one of the standard environmental colors, as determined by the five state Rocky Mountain Inter-Agency Committee. All facilities would be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) would be excluded. The requested color is Shadow Gray as determined during the on-site inspection.
- As discussed on the onsite conducted on February 3, 2009 the pit shall be lined with double felt.

**RECEIVED**  
**DEC 22 2009**  
DIV. OF OIL, GAS & MINING

- The lessee/operator is given notice that lands on the lease have a stipulation. It is requested that the lessee/operator not initiate surface disturbing activities or drilling from May 15 through July 20.
- The lessee/operator is given notice that lands in the lease have been identified as containing great horned owl nesting habitat. It is requested that the lessee/operator not initiate surface disturbing activities or drilling from February 1 to August 15. A survey may be conducted by a qualified biologist or a BLM representative during this timing period to determine if great horned owls are in the area.

**RECEIVED**  
**DEC 22 2009**  
**DIV. OF OIL, GAS & MINING**

**DOWNHOLE PROGRAM  
CONDITIONS OF APPROVAL (COAs)**

**SITE SPECIFIC DOWNHOLE COAs:**

- A copy of Kerr McGee's Standard Operating Practices (SOP version: dated 7/17/08 and approved 7/28/08) shall be on location.

**All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to.** The following items are emphasized:

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

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- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well in LAS format to UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

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DIV. OF OIL, GAS & MINING

**OPERATING REQUIREMENT REMINDERS:**

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location ( $\frac{1}{4}$ , Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4.

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Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

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DIV. OF OIL, GAS & MINING

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 38421
---	--

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  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.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b>
--	--

<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> Bonanza 1023-18E2DS
------------------------------------	--

<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047504500000
---	---

<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6007 Ext	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
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<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1624 FNL 1301 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWNW Section: 18 Township: 10.0S Range: 23.0E Meridian: S	<b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH
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11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> <b>DRILLING REPORT</b> Report Date: 2/15/2010	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

MIRU PROPETRO AIR RIG ON 2/14/2010. DRILLED 11" SURFACE HOLE TO 1935'. RAN 8-5/8" 28# J-55 SURFACE CSG. PUMP 20 BBLS GEL WATER. PUMP 185 SX CLASS G PREM LITE TAIL CMT @ 15.8 PPG, 1.15 YIELD. DROPPED PLUG ON FLY AND DISPLACE W/118.3 BBLS FRESH WATER, 20 PSI OF LIQUID. NO RETURNS. BUMP PLUG W/500 PSI, FLOAT HELD. TOP OUT W/125 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YIELD. WAIT 2 HRS AND PUMP 140 SX SAME CMT. WAIT 2 HRS AND PUMP 225 SX SAME CMT. WAIT 2 HRS AND PUMP 125 SX SAME CMT. WAIT 2 HOURS AND PUMP 100 SX SAME CMT. CMT TO SURFACE. WORT.

Accepted by the  
 Utah Division of  
 Oil, Gas and Mining  
**FOR RECORD ONLY**  
 February 16, 2010

<b>NAME (PLEASE PRINT)</b> Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 2/16/2010	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  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.	<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 38421
	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b>
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> Bonanza 1023-18E2DS
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047504500000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6007 Ext
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1624 FNL 1301 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWNW Section: 18 Township: 10.0S Range: 23.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES  <b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> <b>DRILLING REPORT</b> Report Date: 4/14/2010	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

FINISHED DRILLING FROM 1935' TO 8500' ON 4/12/2010. RAN 4-1/2" 11.6# I-80 PRODUCTION CSG. 40 BBLs FRESH WATER. LEAD CMT W/660 SKS CLASS G PREM LITE @ 11.7 PPG, 2.5 YIELD. TAILED CMT W/621 SKS CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.31 YIELD. DROPPED PLUG & DISPLACED W/131 BBLs FRESH WATER W/0.1 gal/bbl CLAYFIX II, 0.01 gal/bbl ALL-GIDE G @ 2050 PSI, BUMPED PLUG @ 2696 PSI, FLOATS HELD W/1.0 BBL RETURN, GOOD RETURNS DURING CMT JOB W/30 BBLs CEMENT TO SURFACE. L/OUT LANDING JT, N/DN BOPE, TRANSFER 1000 BBLs MUD TO SECONDARY TANKS, CLEAN RIG TANKS. RELEASED ENSIGN RIG 146 ON 4/14/2010 AT 09:00 HRS.

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**  
**FOR RECORD ONLY**  
 April 15, 2010

<b>NAME (PLEASE PRINT)</b> Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/14/2010	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 38421
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<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  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.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b>
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<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> Bonanza 1023-18E2DS
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<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047504500000
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<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6007 Ext	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
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<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1624 FNL 1301 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWNW Section: 18 Township: 10.0S Range: 23.0E Meridian: S	<b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH
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11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> <b>DRILLING REPORT</b> Report Date: 4/14/2010	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

FINISHED DRILLING FROM 1935' TO 8500' ON 4/12/2010. RAN 4-1/2" 11.6# I-80 PRODUCTION CSG. 40 BBLs FRESH WATER. LEAD CMT W/660 SKS CLASS G PREM LITE @ 11.7 PPG, 2.5 YIELD. TAILED CMT W/621 SKS CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.31 YIELD. DROPPED PLUG & DISPLACED W/131 BBLs FRESH WATER W/0.1 gal/bbl CLAYFIX II, 0.01 gal/bbl ALL-GIDE G @ 2050 PSI, BUMPED PLUG @ 2696 PSI, FLOATS HELD W/1.0 BBL RETURN, GOOD RETURNS DURING CMT JOB W/30 BBLs CEMENT TO SURFACE. L/OUT LANDING JT, N/DN BOPE, TRANSFER 1000 BBLs MUD TO SECONDARY TANKS, CLEAN RIG TANKS. RELEASED ENSIGN RIG 146 ON 4/14/2010 AT 09:00 HRS.

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
**FOR RECORD ONLY**  
April 15, 2010

<b>NAME (PLEASE PRINT)</b> Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/14/2010	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 38421
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<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  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.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b>
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<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> Bonanza 1023-18E2DS
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<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047504500000
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<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6007 Ext	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
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<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1624 FNL 1301 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWNW Section: 18 Township: 10.0S Range: 23.0E Meridian: S	<b>COUNTY:</b> Uintah  <b>STATE:</b> Utah
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11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> <b>DRILLING REPORT</b> Report Date: 8/13/2010	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input checked="" type="checkbox"/> <b>PRODUCTION START OR RESUME</b>	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON AUGUST 13, 2010 AT 10:25 A.M. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**  
**FOR RECORD ONLY**  
 August 16, 2010

<b>NAME (PLEASE PRINT)</b> Gina Becker	<b>PHONE NUMBER</b> 720 929-6086	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A		<b>DATE</b> 8/16/2010

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**COPY**

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

5. Lease Serial No.  
UTU38421

1a. Type of Well  Oil Well  Gas Well  Dry  Other  
b. Type of Completion  New Well  Work Over  Deepen  Plug Back  Diff. Resvr.  
Other \_\_\_\_\_

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

2. Name of Operator **KERR-MCGEE OIL&GAS ONSHORE** Contact: GINA T BECKER  
Mail: GINA.BECKER@ANADARKO.COM

8. Lease Name and Well No.  
BONANZA 1023-18E2DS

3. Address P.O. BOX 173779  
DENVER, CO 80217

3a. Phone No. (include area code)  
Ph: 720-929-6086

9. API Well No.  
43-047-50450

4. Location of Well (Report location clearly and in accordance with Federal requirements)\*  
At surface SWNW 1624FNL 1301FWL 39.95175 N Lat, 109.37425 W Lon  
At top prod interval reported below SWNW 1728FNL 493FWL  
At total depth SWNW 1746<sup>7</sup>FNL 503FWL

10. Field and Pool, or Exploratory  
NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey  
or Area Sec 18 T10S R23E Mer SLB

12. County or Parish  
UINTAH

13. State  
UT

14. Date Spudded  
02/10/2010

15. Date T.D. Reached  
04/12/2010

16. Date Completed  
 D & A  Ready to Prod.  
08/13/2010

17. Elevations (DF, KB, RT, GL)\*  
5310 GL

18. Total Depth: MD 8500  
TVD 8363<sup>4</sup>

19. Plug Back T.D.: MD 8447  
TVD 8311<sup>8871</sup>

20. Depth Bridge Plug Set: MD  
TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)  
MDIL/ZDLCN-CBL

22. Was well cored?  No  Yes (Submit analysis)  
Was DST run?  No  Yes (Submit analysis)  
Directional Survey?  No  Yes (Submit analysis)

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20.000	14.000 STEEL	36.7		40		28			
11.000	8.625 IJ-55	28.0		1920		900			
7.875	4.500 I-80	11.6		8490		1281			

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	7979							

25. Producing Intervals

26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) MESAVERDE	6970	8382	6970 TO 8382	0.360	210	OPEN
B)						
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
6970 TO 8382	PUMP 7,765 BBLs SLICK H2O & 299,758 LBS 30/50 SAND.

**RECEIVED**  
**SEP 22 2010**  
**DIV. OF OIL, GAS & MINING**

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
08/13/2010	08/18/2010	24	→	0.0	2067.0	456.0			FLOWS FROM WELL
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
20/64	SI 1525	2150.0	→	0	2067	456		PGW	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
	SI		→						

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #92822 VERIFIED BY THE BLM WELL INFORMATION SYSTEM  
\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

29. Disposition of Gas(Sold, used for fuel, vented, etc.)  
SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
GREEN RIVER	1015				
BIRD'S NEST	1310				
MAHOGANY	1676				
WASATCH	4155	6268			
MESAVERDE	6268	8500	TD		

32. Additional remarks (include plugging procedure):  
CHRONO DRILLING AND COMPLETION HISTORY AND DIRECTIONAL SURVEY ATTACHED.

33. Circle enclosed attachments:

- 1. Electrical/Mechanical Logs (1 full set req'd.)
- 2. Geologic Report
- 3. DST Report
- 4. Directional Survey
- 5. Sundry Notice for plugging and cement verification
- 6. Core Analysis
- 7 Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

**Electronic Submission #92822 Verified by the BLM Well Information System.  
For KERR-MCGEE OIL&GAS ONSHORE,L.P, sent to the Vernal**

Name (please print) GINA T BECKER Title REGULATORY ANALYST II  
 Signature  Date 09/14/2010  
 (Electronic Submission)

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



Azimuths to True North  
 Magnetic North: 11.19°

Magnetic Field  
 Strength: 52454.5nT  
 Dip Angle: 65.91°  
 Date: 3/23/2010  
 Model: BGGM2009

SECTION DETAILS										
MD	Inc	Azi	TVD	+N-S	+E-W	DLeg	TFace	VSec	Annotation	
1898.00	2.11	270.54	1896.75	-9.15	-57.89	0.00	0.00	58.60	Start 112.40 hold at 1898.00 MD	
2010.40	2.11	270.54	2009.07	-9.11	-62.03	0.00	0.00	62.69	Start DLS 3.00 TFO -9.49	
2899.21	28.75	261.69	2858.19	-40.43	-294.08	3.00	-9.49	296.84	Start 329.63 hold at 2899.21 MD	
3228.84	28.75	261.69	3147.19	-63.36	-450.95	0.00	0.00	455.38	Start Drop -2.00	
4666.20	0.00	0.00	4525.00	-114.41	-800.32	2.00	180.00	808.46	Start 3770.00 hold at 4666.20 MD	
8436.20	0.00	0.00	8295.00	-114.41	-800.32	0.00	0.00	808.46	TD at 8436.20	

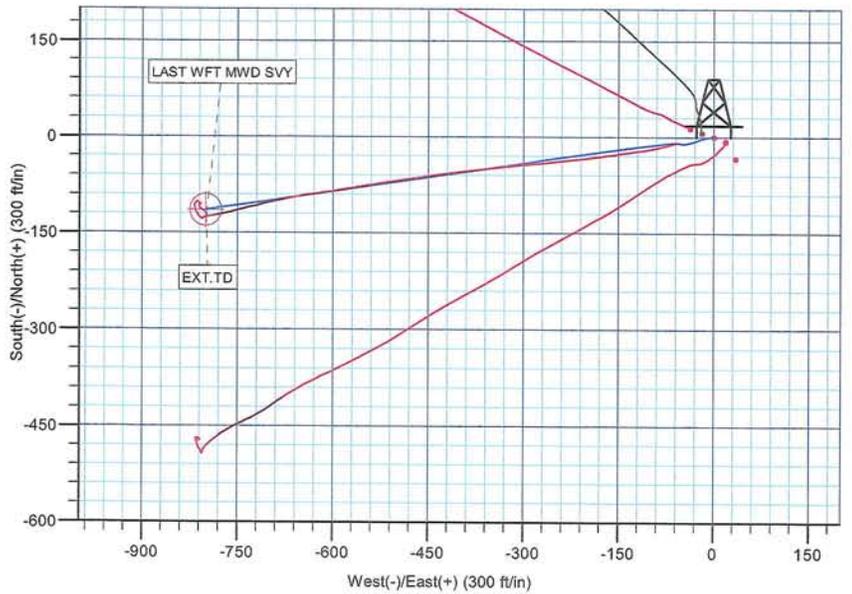
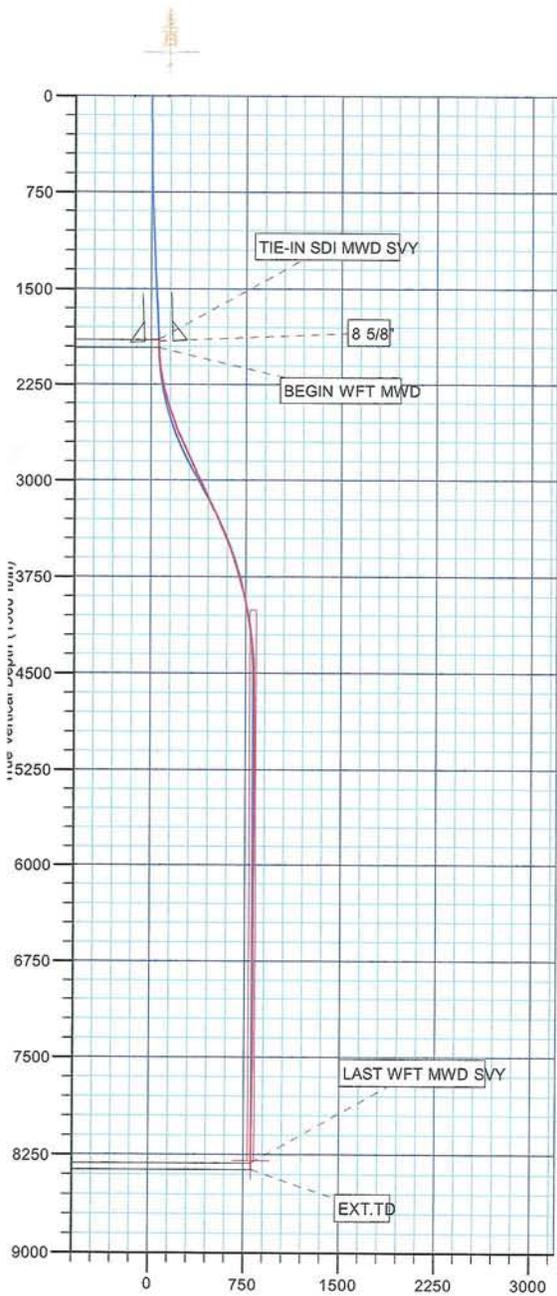
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4009.00	4147.37	Wasatch
7039.00	7180.20	Mesaverde

CASING DETAILS			
TVD	MD	Name	Size
1909.14	1910.40	8 5/8"	8.62

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)							
Name	TVD	+N-S	+E-W	Latitude	Longitude	Shape	
PBHL	8295.00	-114.41	-800.32	39° 57' 5.299 N	109° 22' 35.119 W	Circle (Radius: 25.00)	

WELL DETAILS: BONANZA 1023-18E2DS							
+N-S	+E-W	Ground Level:	5307.00		Slot		
0.00	0.00	Northing	2096243.80	Latitude	39° 57' 6.430 N	Longitude	109° 22' 24.841 W

LEGEND	
—	BONANZA 1023-18D3AS, BONANZA 1023-18D3AS, BONANZA 1023-18D3AS V0
—	BONANZA 1023-18D3AS, BONANZA 1023-18D3AS, PLAN #1 3-23-10 RHS V0
—	BONANZA 1023-18E2DS, BONANZA 1023-18E2DS, PLAN #1 3-23-10 RHS V0
—	BONANZA 1023-18D3DS, BONANZA 1023-18D3DS, BONANZA 1023-18D3DS V0
—	BONANZA 1023-18D3DS, BONANZA 1023-18D3DS, PLAN #1 3-23-10 RHS V0
—	Canyon View Federal 1-18 EXISTING, Canyon View Federal 1-18 EXISTING (NO SVY), Canyon View Federal 1-18 EXISTING NO SVY V0
—	BONANZA 1023-18E3AS, BONANZA 1023-18E3AS, BONANZA 1023-18E3AS V0
—	BONANZA 1023-18E2DS
—	WFT MWD SVY



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well BONANZA 1023-18E2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5321.00ft (Original Well Elev)
Site:	BONANZA 1023-18E PAD	MD Reference:	WELL @ 5321.00ft (Original Well Elev)
Well:	BONANZA 1023-18E2DS	North Reference:	True
Wellbore:	BONANZA 1023-18E2DS	Survey Calculation Method:	Minimum Curvature
Design:	BONANZA 1023-18E2DS	Database:	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 1023-18E PAD, SECTION 18 T10S R23E				
Site Position:	Lat/Long	Northing:	14,512,636.58ft	Latitude:	39° 57' 6.361 N
From:		Easting:	2,096,262.69ft	Longitude:	109° 22' 24.600 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	1.04 °

Well	BONANZA 1023-18E2DS					
Well Position	+N/-S	0.00 ft	Northing:	14,512,643.21 ft	Latitude:	39° 57' 6.430 N
	+E/-W	0.00 ft	Easting:	2,096,243.80 ft	Longitude:	109° 22' 24.841 W
Position Uncertainty	0.00 ft		Wellhead Elevation:	ft	Ground Level:	5,307.00 ft

Wellbore	BONANZA 1023-18E2DS				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	3/23/2010	11.19	65.91	52,455

Design	BONANZA 1023-18E2DS				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	261.02	

Survey Program	Date 4/13/2010				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
158.00	1,898.00	SDI MWD SVY (BONANZA 1023-18E2DS	MWD	MWD - Standard	
1,959.00	8,500.00	WFT MWD SVY (BONANZA 1023-18E2D	MWD	MWD - Standard	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
158.00	0.55	259.40	158.00	-0.14	-0.75	0.76	0.35	0.35	0.00
248.00	0.40	260.81	247.99	-0.27	-1.48	1.50	0.17	-0.17	1.57
338.00	0.54	283.47	337.99	-0.22	-2.20	2.21	0.26	0.16	25.18
428.00	0.42	292.26	427.99	0.00	-2.92	2.88	0.16	-0.13	9.77
518.00	0.48	293.64	517.99	0.28	-3.57	3.48	0.07	0.07	1.53
638.00	0.93	268.99	637.98	0.46	-5.01	4.87	0.44	0.37	-20.54
728.00	1.56	267.34	727.95	0.39	-6.96	6.81	0.70	0.70	-1.83
818.00	2.40	258.68	817.90	-0.03	-10.03	9.91	0.99	0.93	-9.62
908.00	2.58	251.73	907.82	-1.04	-13.80	13.79	0.39	0.20	-7.72
998.00	2.46	255.42	997.73	-2.16	-17.59	17.72	0.22	-0.13	4.10
1,088.00	2.39	252.19	1,087.65	-3.22	-21.25	21.49	0.17	-0.08	-3.59

Company: ANADARKO PETROLEUM CORP.  
Project: Uintah County, Utah (nad 27)  
Site: BONANZA 1023-18E PAD  
Well: BONANZA 1023-18E2DS  
Wellbore: BONANZA 1023-18E2DS  
Design: BONANZA 1023-18E2DS

Local Co-ordinate Reference: Well BONANZA 1023-18E2DS  
TVD Reference: WELL @ 5321.00ft (Original Well Elev)  
MD Reference: WELL @ 5321.00ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature  
Database: 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)
1,178.00	2.66	251.48	1,177.56	-4.46	-25.02	25.41	0.30	0.30	-0.79
1,268.00	2.67	249.03	1,267.46	-5.87	-28.96	29.52	0.13	0.01	-2.72
1,358.00	2.36	251.69	1,357.38	-7.20	-32.67	33.40	0.37	-0.34	2.96
1,448.00	3.21	258.00	1,447.27	-8.31	-36.90	37.74	1.00	0.94	7.01
1,538.00	3.49	254.07	1,537.12	-9.58	-41.99	42.98	0.40	0.31	-4.37
1,628.00	2.85	269.80	1,626.98	-10.34	-46.87	47.91	1.19	-0.71	17.48
1,718.00	2.30	282.92	1,716.89	-9.95	-50.86	51.79	0.89	-0.61	14.58
1,808.00	2.31	275.95	1,806.82	-9.36	-54.43	55.22	0.31	0.01	-7.74
TIE-IN SDI MWD SVY									
1,898.00	2.11	270.54	1,896.75	-9.15	-57.89	58.61	0.32	-0.22	-6.01
BEGIN WFT MWD									
1,959.00	2.03	257.87	1,957.71	-9.37	-60.07	60.79	0.76	-0.13	-20.77
2,050.00	4.86	254.20	2,048.54	-10.76	-65.35	66.23	3.12	3.11	-4.03
2,141.00	8.15	254.30	2,138.94	-13.55	-75.28	76.47	3.62	3.62	0.11
2,231.00	11.27	258.99	2,227.64	-16.96	-90.05	91.60	3.57	3.47	5.21
2,322.00	14.50	259.57	2,316.34	-20.72	-109.99	111.88	3.55	3.55	0.64
2,413.00	16.38	262.57	2,404.05	-24.44	-133.92	136.10	2.24	2.07	3.30
2,504.00	19.06	261.44	2,490.72	-28.32	-161.34	163.79	2.97	2.95	-1.24
2,594.00	22.00	263.19	2,575.00	-32.50	-192.62	195.33	3.34	3.27	1.94
2,685.00	24.31	263.69	2,658.66	-36.58	-228.17	231.08	2.55	2.54	0.55
2,776.00	25.75	264.82	2,741.12	-40.43	-266.47	269.52	1.67	1.58	1.24
2,866.00	24.69	264.44	2,822.54	-44.01	-304.65	307.79	1.19	-1.18	-0.42
2,957.00	24.38	263.69	2,905.32	-47.92	-342.24	345.52	0.48	-0.34	-0.82
3,048.00	25.44	262.82	2,987.85	-52.43	-380.30	383.82	1.23	1.16	-0.96
3,138.00	25.46	263.53	3,069.12	-57.02	-418.70	422.47	0.34	0.02	0.79
3,229.00	25.25	261.19	3,151.36	-62.20	-457.32	461.42	1.13	-0.23	-2.57
3,320.00	25.38	261.69	3,233.62	-67.99	-495.79	500.33	0.27	0.14	0.55
3,410.00	24.00	261.44	3,315.39	-73.50	-532.98	537.92	1.54	-1.53	-0.28
3,501.00	23.00	260.32	3,398.84	-79.25	-568.81	574.20	1.20	-1.10	-1.23
3,591.00	21.13	261.19	3,482.24	-84.69	-602.17	608.01	2.11	-2.08	0.97
3,682.00	19.38	262.57	3,567.61	-89.15	-633.35	639.51	1.99	-1.92	1.52
3,773.00	16.88	256.57	3,654.10	-94.17	-661.18	667.78	3.43	-2.75	-6.59
3,863.00	17.06	259.69	3,740.18	-99.57	-686.88	694.00	1.03	0.20	3.47
3,954.00	15.81	255.19	3,827.46	-105.13	-712.00	719.68	1.96	-1.37	-4.95
4,044.00	13.25	256.44	3,914.58	-110.68	-733.88	742.17	2.87	-2.84	1.39
4,135.00	11.13	253.57	4,003.52	-115.61	-752.45	761.27	2.42	-2.33	-3.15
4,226.00	9.81	258.57	4,093.01	-119.63	-768.47	777.73	1.76	-1.45	5.49
4,316.00	7.94	260.57	4,181.92	-122.17	-782.12	791.61	2.11	-2.08	2.22
4,407.00	5.31	260.69	4,272.31	-123.88	-792.48	802.10	2.89	-2.89	0.13
4,498.00	4.75	252.44	4,362.96	-125.70	-800.23	810.04	1.00	-0.62	-9.07
4,588.00	1.88	234.57	4,452.80	-127.68	-804.98	815.05	3.35	-3.19	-19.86
4,679.00	0.88	303.44	4,543.78	-128.16	-806.78	816.90	1.94	-1.10	75.68
4,769.00	2.31	305.32	4,633.74	-126.73	-808.84	818.71	1.59	1.59	2.09
4,860.00	2.81	328.82	4,724.65	-123.76	-811.49	820.86	1.27	0.55	25.82
4,951.00	2.69	330.32	4,815.55	-120.00	-813.70	822.46	0.15	-0.13	1.65
5,041.00	2.06	318.07	4,905.47	-116.96	-815.83	824.09	0.90	-0.70	-13.61
5,132.00	1.56	1.18	4,996.43	-114.51	-816.90	824.76	1.55	-0.55	47.37
5,223.00	1.88	348.69	5,087.39	-111.80	-817.17	824.60	0.54	0.35	-13.73
5,313.00	1.50	347.19	5,177.35	-109.21	-817.72	824.74	0.43	-0.42	-1.67
5,404.00	1.75	25.06	5,268.32	-106.79	-817.39	824.04	1.19	0.27	41.62
5,495.00	1.50	28.69	5,359.28	-104.48	-816.23	822.53	0.30	-0.27	3.99
5,585.00	1.13	34.19	5,449.25	-102.72	-815.17	821.21	0.43	-0.41	6.11
5,676.00	0.44	44.44	5,540.25	-101.73	-814.42	820.31	0.77	-0.76	11.26
5,767.00	0.25	58.94	5,631.24	-101.37	-814.00	819.85	0.23	-0.21	15.93

Company: ANADARKO PETROLEUM CORP.  
 Project: UINTAH COUNTY, UTAH (nad 27)  
 Site: BONANZA 1023-18E PAD  
 Well: BONANZA 1023-18E2DS  
 Wellbore: BONANZA 1023-18E2DS  
 Design: BONANZA 1023-18E2DS

Local Co-ordinate Reference: Well BONANZA 1023-18E2DS  
 TVD Reference: WELL @ 5321.00ft (Original Well Elev)  
 MD Reference: WELL @ 5321.00ft (Original Well Elev)  
 North Reference: True  
 Survey Calculation Method: Minimum Curvature  
 Database: 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)
5,857.00	0.50	110.44	5,721.24	-101.41	-813.47	819.32	0.44	0.28	57.22
5,948.00	0.38	132.94	5,812.24	-101.75	-812.87	818.79	0.23	-0.13	24.73
6,039.00	0.69	129.57	5,903.24	-102.31	-812.23	818.24	0.34	0.34	-3.70
6,130.00	0.64	129.30	5,994.23	-102.98	-811.42	817.54	0.06	-0.05	-0.30
6,220.00	0.69	146.94	6,084.22	-103.75	-810.73	816.99	0.23	0.06	19.60
6,311.00	0.94	153.69	6,175.21	-104.88	-810.10	816.54	0.29	0.27	7.42
6,401.00	0.88	130.57	6,265.20	-105.99	-809.25	815.87	0.41	-0.07	-25.69
6,492.00	0.50	19.44	6,356.20	-106.07	-808.59	815.23	1.27	-0.42	-122.12
6,583.00	0.50	18.69	6,447.20	-105.32	-808.33	814.86	0.01	0.00	-0.82
6,673.00	0.38	47.57	6,537.19	-104.75	-807.98	814.42	0.28	-0.13	32.09
6,764.00	0.31	139.07	6,628.19	-104.73	-807.60	814.04	0.55	-0.08	100.55
6,854.00	0.44	309.07	6,718.19	-104.70	-807.70	814.15	0.83	0.14	188.89
6,945.00	0.58	269.70	6,809.19	-104.48	-808.44	814.83	0.40	0.15	-43.26
7,036.00	0.25	217.69	6,900.19	-104.64	-809.02	815.43	0.52	-0.36	-57.15
7,126.00	0.81	201.94	6,990.18	-105.38	-809.38	815.90	0.64	0.62	-17.50
7,217.00	0.63	200.57	7,081.17	-106.45	-809.79	816.48	0.20	-0.20	-1.51
7,308.00	0.56	200.32	7,172.17	-107.33	-810.12	816.95	0.08	-0.08	-0.27
7,398.00	0.75	193.07	7,262.16	-108.32	-810.41	817.38	0.23	0.21	-8.06
7,489.00	0.50	164.94	7,353.16	-109.28	-810.44	817.56	0.43	-0.27	-30.91
7,580.00	0.95	162.98	7,444.15	-110.39	-810.12	817.42	0.50	0.49	-2.15
7,671.00	1.38	137.19	7,535.13	-111.91	-809.15	816.70	0.73	0.47	-28.34
7,761.00	1.13	120.32	7,625.11	-113.16	-807.65	815.41	0.49	-0.28	-18.74
7,852.00	1.50	130.69	7,716.09	-114.39	-805.97	813.95	0.48	0.41	11.40
7,943.00	1.13	134.32	7,807.06	-115.79	-804.43	812.64	0.42	-0.41	3.99
8,034.00	1.20	121.93	7,898.04	-116.92	-802.97	811.38	0.29	0.08	-13.62
8,124.00	1.06	124.94	7,988.03	-117.90	-801.49	810.07	0.17	-0.16	3.34
8,215.00	0.94	152.44	8,079.01	-119.04	-800.46	809.23	0.54	-0.13	30.22
8,306.00	0.81	153.32	8,170.00	-120.28	-799.82	808.79	0.14	-0.14	0.97
8,396.00	0.75	151.82	8,259.99	-121.36	-799.26	808.41	0.07	-0.07	-1.67
LAST WFT MWD SVY									
8,450.00	0.84	140.46	8,313.99	-121.98	-798.84	808.09	0.34	0.17	-21.04
EXT.TD									
8,500.00	0.84	140.46	8,363.98	-122.55	-798.37	807.72	0.00	0.00	0.00

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,450.00	8,313.99	-121.98	-798.84	LAST WFT MWD SVY
8,500.00	8,363.98	-122.55	-798.37	EXT.TD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



# **ANADARKO PETROLEUM CORP.**

UINTAH COUNTY, UTAH (nad 27)

BONANZA 1023-18E PAD

BONANZA 1023-18E2DS

BONANZA 1023-18E2DS

Design: BONANZA 1023-18E2DS

## **Survey Report - Geographic**

13 April, 2010



**Weatherford®**

Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well BONANZA 1023-18E2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5321.00ft (Original Well Elev)
Site:	BONANZA 1023-18E PAD	MD Reference:	WELL @ 5321.00ft (Original Well Elev)
Well:	BONANZA 1023-18E2DS	North Reference:	True
Wellbore:	BONANZA 1023-18E2DS	Survey Calculation Method:	Minimum Curvature
Design:	BONANZA 1023-18E2DS	Database:	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 1023-18E PAD, SECTION 18 T10S R23E				
Site Position:	Northing:	14,512,636.58 ft	Latitude:	39° 57' 6.361 N	
From:	Lat/Long	Easting:	2,096,262.69 ft	Longitude:	109° 22' 24.600 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	1.04 °

Well	BONANZA 1023-18E2DS					
Well Position	+N/-S	0.00 ft	Northing:	14,512,643.21 ft	Latitude:	39° 57' 6.430 N
	+E/-W	0.00 ft	Easting:	2,096,243.80 ft	Longitude:	109° 22' 24.841 W
Position Uncertainty	0.00 ft		Wellhead Elevation:	ft	Ground Level:	5,307.00 ft

Wellbore	BONANZA 1023-18E2DS				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	3/23/2010	11.19	65.91	52,455

Design	BONANZA 1023-18E2DS				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	261.02	

Survey Program	Date 4/13/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
158.00	1,898.00	SDI MWD SVY (BONANZA 1023-18E2DS	MWD	MWD - Standard
1,959.00	8,500.00	WFT MWD SVY (BONANZA 1023-18E2D:	MWD	MWD - Standard

Company: ANADARKO PETROLEUM CORP.  
Project: UINTAH COUNTY, UTAH (nad 27)  
Site: BONANZA 1023-18E PAD  
Well: BONANZA 1023-18E2DS  
Wellbore: BONANZA 1023-18E2DS  
Design: BONANZA 1023-18E2DS

Local Co-ordinate Reference: Well BONANZA 1023-18E2DS  
TVD Reference: WELL @ 5321.00ft (Original Well Elev)  
MD Reference: WELL @ 5321.00ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature  
Database: 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
0.00	0.00	0.00	0.00	0.00	0.00	14,512,643.21	2,096,243.80	39° 57' 6.430 N	109° 22' 24.841 W
158.00	0.55	259.40	158.00	-0.14	-0.75	14,512,643.06	2,096,243.06	39° 57' 6.429 N	109° 22' 24.851 W
248.00	0.40	260.81	247.99	-0.27	-1.48	14,512,642.92	2,096,242.32	39° 57' 6.427 N	109° 22' 24.860 W
338.00	0.54	283.47	337.99	-0.22	-2.20	14,512,642.95	2,096,241.60	39° 57' 6.428 N	109° 22' 24.869 W
428.00	0.42	292.26	427.99	0.00	-2.92	14,512,643.16	2,096,240.88	39° 57' 6.430 N	109° 22' 24.879 W
518.00	0.48	293.64	517.99	0.28	-3.57	14,512,643.43	2,096,240.22	39° 57' 6.433 N	109° 22' 24.887 W
638.00	0.93	268.99	637.98	0.46	-5.01	14,512,643.58	2,096,238.79	39° 57' 6.435 N	109° 22' 24.905 W
728.00	1.56	267.34	727.95	0.39	-6.96	14,512,643.48	2,096,236.83	39° 57' 6.434 N	109° 22' 24.930 W
818.00	2.40	258.68	817.90	-0.03	-10.03	14,512,643.00	2,096,233.77	39° 57' 6.430 N	109° 22' 24.970 W
908.00	2.58	251.73	907.82	-1.04	-13.80	14,512,641.92	2,096,230.02	39° 57' 6.420 N	109° 22' 25.018 W
998.00	2.46	255.42	997.73	-2.16	-17.59	14,512,640.73	2,096,226.25	39° 57' 6.409 N	109° 22' 25.067 W
1,088.00	2.39	252.19	1,087.65	-3.22	-21.25	14,512,639.61	2,096,222.61	39° 57' 6.398 N	109° 22' 25.114 W
1,178.00	2.66	251.48	1,177.56	-4.46	-25.02	14,512,638.30	2,096,218.87	39° 57' 6.386 N	109° 22' 25.162 W
1,268.00	2.67	249.03	1,267.46	-5.87	-28.96	14,512,636.82	2,096,214.96	39° 57' 6.372 N	109° 22' 25.213 W
1,358.00	2.36	251.69	1,357.38	-7.20	-32.67	14,512,635.42	2,096,211.26	39° 57' 6.359 N	109° 22' 25.261 W
1,448.00	3.21	258.00	1,447.27	-8.31	-36.90	14,512,634.23	2,096,207.06	39° 57' 6.348 N	109° 22' 25.315 W
1,538.00	3.49	254.07	1,537.12	-9.58	-41.99	14,512,632.86	2,096,201.99	39° 57' 6.335 N	109° 22' 25.380 W
1,628.00	2.85	269.80	1,626.98	-10.34	-46.87	14,512,632.02	2,096,197.13	39° 57' 6.328 N	109° 22' 25.443 W
1,718.00	2.30	282.92	1,716.89	-9.95	-50.86	14,512,632.34	2,096,193.12	39° 57' 6.332 N	109° 22' 25.494 W
1,808.00	2.31	275.95	1,806.82	-9.36	-54.43	14,512,632.87	2,096,189.55	39° 57' 6.338 N	109° 22' 25.540 W
TIE-IN SDI MWD SVY									
1,898.00	2.11	270.54	1,896.75	-9.15	-57.89	14,512,633.01	2,096,186.09	39° 57' 6.340 N	109° 22' 25.584 W
BEGIN WFT MWD									
1,959.00	2.03	257.87	1,957.71	-9.37	-60.07	14,512,632.75	2,096,183.91	39° 57' 6.337 N	109° 22' 25.612 W
2,050.00	4.86	254.20	2,048.54	-10.76	-65.35	14,512,631.27	2,096,178.65	39° 57' 6.324 N	109° 22' 25.680 W
2,141.00	8.15	254.30	2,138.94	-13.55	-75.28	14,512,628.29	2,096,168.78	39° 57' 6.296 N	109° 22' 25.808 W
2,231.00	11.27	258.99	2,227.64	-16.96	-90.05	14,512,624.61	2,096,154.07	39° 57' 6.262 N	109° 22' 25.998 W
2,322.00	14.50	259.57	2,316.34	-20.72	-109.99	14,512,620.49	2,096,134.20	39° 57' 6.225 N	109° 22' 26.254 W
2,413.00	16.38	262.57	2,404.05	-24.44	-133.92	14,512,616.33	2,096,110.35	39° 57' 6.188 N	109° 22' 26.561 W
2,504.00	19.06	261.44	2,490.72	-28.32	-161.34	14,512,611.96	2,096,083.00	39° 57' 6.150 N	109° 22' 26.913 W
2,594.00	22.00	263.19	2,575.00	-32.50	-192.62	14,512,607.20	2,096,051.80	39° 57' 6.109 N	109° 22' 27.315 W
2,685.00	24.31	263.69	2,658.66	-36.58	-228.17	14,512,602.48	2,096,016.34	39° 57' 6.068 N	109° 22' 27.771 W
2,776.00	25.75	264.82	2,741.12	-40.43	-266.47	14,512,597.93	2,095,978.11	39° 57' 6.030 N	109° 22' 28.263 W
2,866.00	24.69	264.44	2,822.54	-44.01	-304.65	14,512,593.65	2,095,940.00	39° 57' 5.995 N	109° 22' 28.753 W
2,957.00	24.38	263.69	2,905.32	-47.92	-342.24	14,512,589.06	2,095,902.49	39° 57' 5.956 N	109° 22' 29.236 W
3,048.00	25.44	262.82	2,987.85	-52.43	-380.30	14,512,583.86	2,095,864.52	39° 57' 5.912 N	109° 22' 29.725 W
3,138.00	25.46	263.53	3,069.12	-57.02	-418.70	14,512,578.57	2,095,826.21	39° 57' 5.866 N	109° 22' 30.218 W
3,229.00	25.25	261.19	3,151.36	-62.20	-457.32	14,512,572.69	2,095,787.69	39° 57' 5.815 N	109° 22' 30.714 W
3,320.00	25.38	261.69	3,233.62	-67.99	-495.79	14,512,566.19	2,095,749.33	39° 57' 5.758 N	109° 22' 31.208 W
3,410.00	24.00	261.44	3,315.39	-73.50	-532.98	14,512,560.01	2,095,712.25	39° 57' 5.703 N	109° 22' 31.686 W
3,501.00	23.00	260.32	3,398.84	-79.25	-568.81	14,512,553.61	2,095,676.53	39° 57' 5.647 N	109° 22' 32.146 W
3,591.00	21.13	261.19	3,482.24	-84.69	-602.17	14,512,547.56	2,095,643.27	39° 57' 5.593 N	109° 22' 32.574 W
3,682.00	19.38	262.57	3,567.61	-89.15	-633.35	14,512,542.53	2,095,612.18	39° 57' 5.549 N	109° 22' 32.975 W
3,773.00	16.88	256.57	3,654.10	-94.17	-661.18	14,512,537.00	2,095,584.44	39° 57' 5.499 N	109° 22' 33.332 W
3,863.00	17.06	259.69	3,740.18	-99.57	-686.88	14,512,531.13	2,095,558.85	39° 57' 5.446 N	109° 22' 33.662 W
3,954.00	15.81	255.19	3,827.46	-105.13	-712.00	14,512,525.12	2,095,533.83	39° 57' 5.391 N	109° 22' 33.985 W
4,044.00	13.25	256.44	3,914.58	-110.68	-733.88	14,512,519.17	2,095,512.06	39° 57' 5.336 N	109° 22' 34.266 W
4,135.00	11.13	253.57	4,003.52	-115.61	-752.45	14,512,513.90	2,095,493.58	39° 57' 5.287 N	109° 22' 34.504 W
4,226.00	9.81	258.57	4,093.01	-119.63	-768.47	14,512,509.59	2,095,477.64	39° 57' 5.247 N	109° 22' 34.710 W
4,316.00	7.94	260.57	4,181.92	-122.17	-782.12	14,512,506.80	2,095,464.04	39° 57' 5.222 N	109° 22' 34.885 W
4,407.00	5.31	260.69	4,272.31	-123.88	-792.48	14,512,504.90	2,095,453.71	39° 57' 5.205 N	109° 22' 35.018 W
4,498.00	4.75	252.44	4,362.96	-125.70	-800.23	14,512,502.94	2,095,446.00	39° 57' 5.187 N	109° 22' 35.118 W
4,588.00	1.88	234.57	4,452.80	-127.68	-804.98	14,512,500.88	2,095,441.28	39° 57' 5.168 N	109° 22' 35.179 W
4,679.00	0.88	303.44	4,543.78	-128.16	-806.78	14,512,500.36	2,095,439.49	39° 57' 5.163 N	109° 22' 35.202 W
4,769.00	2.31	305.32	4,633.74	-126.73	-808.84	14,512,501.75	2,095,437.41	39° 57' 5.177 N	109° 22' 35.228 W

Company: ANADARKO PETROLEUM CORP.  
Project: UINTAH COUNTY, UTAH (nad 27)  
Site: BONANZA 1023-18E PAD  
Well: BONANZA 1023-18E2DS  
Wellbore: BONANZA 1023-18E2DS  
Design: BONANZA 1023-18E2DS

Local Co-ordinate Reference: Well BONANZA 1023-18E2DS  
TVD Reference: WELL @ 5321.00ft (Original Well Elev)  
MD Reference: WELL @ 5321.00ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature  
Database: 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
4,860.00	2.81	328.82	4,724.65	-123.76	-811.49	14,512,504.67	2,095,434.70	39° 57' 5.207 N	109° 22' 35.262 W
4,951.00	2.69	330.32	4,815.55	-120.00	-813.70	14,512,508.40	2,095,432.42	39° 57' 5.244 N	109° 22' 35.291 W
5,041.00	2.06	318.07	4,905.47	-116.96	-815.83	14,512,511.40	2,095,430.24	39° 57' 5.274 N	109° 22' 35.318 W
5,132.00	1.56	1.18	4,996.43	-114.51	-816.90	14,512,513.83	2,095,429.13	39° 57' 5.298 N	109° 22' 35.332 W
5,223.00	1.88	348.69	5,087.39	-111.80	-817.17	14,512,516.53	2,095,428.81	39° 57' 5.325 N	109° 22' 35.335 W
5,313.00	1.50	347.19	5,177.35	-109.21	-817.72	14,512,519.11	2,095,428.21	39° 57' 5.350 N	109° 22' 35.342 W
5,404.00	1.75	25.06	5,268.32	-106.79	-817.39	14,512,521.54	2,095,428.49	39° 57' 5.374 N	109° 22' 35.338 W
5,495.00	1.50	28.69	5,359.28	-104.48	-816.23	14,512,523.86	2,095,429.61	39° 57' 5.397 N	109° 22' 35.323 W
5,585.00	1.13	34.19	5,449.25	-102.72	-815.17	14,512,525.65	2,095,430.64	39° 57' 5.415 N	109° 22' 35.310 W
5,676.00	0.44	44.44	5,540.25	-101.73	-814.42	14,512,526.66	2,095,431.37	39° 57' 5.424 N	109° 22' 35.300 W
5,767.00	0.25	58.94	5,631.24	-101.37	-814.00	14,512,527.02	2,095,431.78	39° 57' 5.428 N	109° 22' 35.295 W
5,857.00	0.50	110.44	5,721.24	-101.41	-813.47	14,512,526.99	2,095,432.32	39° 57' 5.427 N	109° 22' 35.288 W
5,948.00	0.38	132.94	5,812.24	-101.75	-812.87	14,512,526.66	2,095,432.92	39° 57' 5.424 N	109° 22' 35.280 W
6,039.00	0.69	129.57	5,903.24	-102.31	-812.23	14,512,526.11	2,095,433.57	39° 57' 5.419 N	109° 22' 35.272 W
6,130.00	0.64	129.30	5,994.23	-102.98	-811.42	14,512,525.46	2,095,434.40	39° 57' 5.412 N	109° 22' 35.261 W
6,220.00	0.69	146.94	6,084.22	-103.75	-810.73	14,512,524.70	2,095,435.10	39° 57' 5.404 N	109° 22' 35.253 W
6,311.00	0.94	153.69	6,175.21	-104.88	-810.10	14,512,523.58	2,095,435.75	39° 57' 5.393 N	109° 22' 35.245 W
6,401.00	0.88	130.57	6,265.20	-105.99	-809.25	14,512,522.48	2,095,436.62	39° 57' 5.382 N	109° 22' 35.234 W
6,492.00	0.50	19.44	6,356.20	-106.07	-808.59	14,512,522.42	2,095,437.28	39° 57' 5.381 N	109° 22' 35.225 W
6,583.00	0.50	18.69	6,447.20	-105.32	-808.33	14,512,523.17	2,095,437.53	39° 57' 5.389 N	109° 22' 35.222 W
6,673.00	0.38	47.57	6,537.19	-104.75	-807.98	14,512,523.75	2,095,437.86	39° 57' 5.395 N	109° 22' 35.217 W
6,764.00	0.31	139.07	6,628.19	-104.73	-807.60	14,512,523.78	2,095,438.25	39° 57' 5.395 N	109° 22' 35.212 W
6,854.00	0.44	309.07	6,718.19	-104.70	-807.70	14,512,523.81	2,095,438.14	39° 57' 5.395 N	109° 22' 35.214 W
6,945.00	0.58	269.70	6,809.19	-104.48	-808.44	14,512,524.01	2,095,437.40	39° 57' 5.397 N	109° 22' 35.223 W
7,036.00	0.25	217.69	6,900.19	-104.64	-809.02	14,512,523.84	2,095,436.82	39° 57' 5.396 N	109° 22' 35.231 W
7,126.00	0.81	201.94	6,990.18	-105.38	-809.38	14,512,523.09	2,095,436.48	39° 57' 5.388 N	109° 22' 35.235 W
7,217.00	0.63	200.57	7,081.17	-106.45	-809.79	14,512,522.02	2,095,436.08	39° 57' 5.378 N	109° 22' 35.241 W
7,308.00	0.56	200.32	7,172.17	-107.33	-810.12	14,512,521.13	2,095,435.77	39° 57' 5.369 N	109° 22' 35.245 W
7,398.00	0.75	193.07	7,262.16	-108.32	-810.41	14,512,520.14	2,095,435.50	39° 57' 5.359 N	109° 22' 35.249 W
7,489.00	0.50	164.94	7,353.16	-109.28	-810.44	14,512,519.17	2,095,435.49	39° 57' 5.350 N	109° 22' 35.249 W
7,580.00	0.95	162.98	7,444.15	-110.39	-810.12	14,512,518.07	2,095,435.83	39° 57' 5.339 N	109° 22' 35.245 W
7,671.00	1.38	137.19	7,535.13	-111.91	-809.15	14,512,516.57	2,095,436.82	39° 57' 5.324 N	109° 22' 35.232 W
7,761.00	1.13	120.32	7,625.11	-113.16	-807.65	14,512,515.35	2,095,438.35	39° 57' 5.311 N	109° 22' 35.213 W
7,852.00	1.50	130.69	7,716.09	-114.39	-805.97	14,512,514.15	2,095,440.05	39° 57' 5.299 N	109° 22' 35.192 W
7,943.00	1.13	134.32	7,807.06	-115.79	-804.43	14,512,512.78	2,095,441.62	39° 57' 5.285 N	109° 22' 35.172 W
8,034.00	1.20	121.93	7,898.04	-116.92	-802.97	14,512,511.67	2,095,443.09	39° 57' 5.274 N	109° 22' 35.153 W
8,124.00	1.06	124.94	7,988.03	-117.90	-801.49	14,512,510.72	2,095,444.59	39° 57' 5.265 N	109° 22' 35.134 W
8,215.00	0.94	152.44	8,079.01	-119.04	-800.46	14,512,509.60	2,095,445.65	39° 57' 5.253 N	109° 22' 35.121 W
8,306.00	0.81	153.32	8,170.00	-120.28	-799.82	14,512,508.37	2,095,446.30	39° 57' 5.241 N	109° 22' 35.113 W
8,396.00	0.75	151.82	8,259.99	-121.36	-799.26	14,512,507.30	2,095,446.89	39° 57' 5.230 N	109° 22' 35.105 W
LAST WFT MWD SVY									
8,450.00	0.84	140.46	8,313.99	-121.98	-798.84	14,512,506.69	2,095,447.32	39° 57' 5.224 N	109° 22' 35.100 W
EXT.TD									
8,500.00	0.84	140.46	8,363.98	-122.55	-798.37	14,512,506.13	2,095,447.79	39° 57' 5.219 N	109° 22' 35.094 W

Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well BONANZA 1023-18E2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5321.00ft (Original Well Elev)
Site:	BONANZA 1023-18E PAD	MD Reference:	WELL @ 5321.00ft (Original Well Elev)
Well:	BONANZA 1023-18E2DS	North Reference:	True
Wellbore:	BONANZA 1023-18E2DS	Survey Calculation Method:	Minimum Curvature
Design:	BONANZA 1023-18E2DS	Database:	EDM 2003.21 Single User Db

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,898.00	1,896.75	-9.15	-57.89	TIE-IN SDI MWD SVY
1,959.00	1,957.71	-9.37	-60.07	BEGIN WFT MWD
8,450.00	8,313.99	-121.98	-798.84	LAST WFT MWD SVY
8,500.00	8,363.98	-122.55	-798.37	EXT.TD

Checked By: _____	Approved By: _____	Date: _____
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**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-18E2DS BLUE		Spud Conductor: 2/10/2010	Spud Date: 2/14/2010
Project: UTAH-UJINTAH		Site: BONANZA 1023-18E PAD	Rig Name No: ENSIGN 146/146, PROPETRO/
Event: DRILLING		Start Date: 2/10/2010	End Date: 4/14/2010
Active Datum: RKB @5,324.01ft (above Mean Sea Level)		UWI: SE/NW/0/10/S/23/E/18/0/0/6/PM/N/1,624.00/W/0/1,301.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
2/14/2010	13:30 - 17:00	3.50	MIRU	01	B	P		DRESS CONDUCTOR, INSTALL AIR BOWL, RIG UP BOWIE LINE, RIG UP RIG., BUILD DITCH, RIG UP PUMPS, DOG HOUSE, AIR COMPRESSOR AND BOOSTER. .P/U 1.5 BENT HOUSE MOTOR SN 8019 AND Q507 SN 7018945 6TH RUN.
	17:00 - 18:00	1.00	DRLSUR	02	B	P		DRILL 44'-150'. SPUD 2/14/2010 17:00.
	18:00 - 19:30	1.50	DRLSUR	06	A	P		LD 6" DC'S P/U DIRECTIONAL TOOLS.
	19:30 - 0:00	4.50	DRLSUR	02	D	P		DRILL W/ MWD 150'-870' (720, 160'/HR) WOB 5-25 K, ROT 45, DH RPM 104, GPM 650, ON/ OFF PSI 1300/1000, UP/ DOWN/ ROT56/56/56
2/15/2010	0:00 - 9:00	9.00	DRLSUR	02	D	P		DRILL W/ MWD 870'-1800' (930', 103'/HR) WOB 25 K, ROT 45, DH RPM 104, GPM 650, ON/ OFF PSI 1500/1300, UP/ DOWN/ ROT64/64/64 LOSS CIRC 1450'. DRILL W/ AERATED WATER. @ 1710'. CROSS COMMUNICATION BETWEEN HOLE AND CONDUCTOR #3. SHUT DOWN AIR. DRILL 90' WITH STRAIGHT WATER. UNABLE TO AERATE. LOSSING ALL RETURNS. LOSS 1200 BBLS.
	9:00 - 12:00	3.00	DRLSUR	22	G	X		WAIT FOR WATER TRUCKS TO BUILD VOLUME IN RESERVE PIT. RECIEVE 2080 BBLS.
	12:00 - 13:00	1.00	DRLSUR	02	D	P		DRILL 1800'-1935' TD 2/15/2010 13:00. WOB 25 K, ROT 45, DH RPM 104, GPM 650, ON/ OFF PSI 1500/1300, UP/ DOWN/ ROT 68/65/67. DRILL W/ NO RETURNS.LOSS 750 BBLS.
	13:00 - 14:00	1.00	CSG	05	F	P		PUMP W/ NO RETURNS. PUMP POLY SWEEPS. PUMP 500 BBLS TO CLEAN HOLE.
	14:00 - 17:00	3.00	CSG	06	D	P		LD DS, LD DIR. TOOLS. LD MOTOR AND BIT.
	17:00 - 19:30	2.50	CSG	12	C	P		RUN 43 JTS OF 8-5/8" 28# IJ-55 CSG W/ LTC THREADS. LAND FLOAT SHOE @ 1910'KB, BAFFLE RAN IN TOP OF FIRST JT, LANDED 1865'KB. FILL CSG 800'
	19:30 - 20:00	0.50	RDMO	01	E	P		RIG DOWN, RELEASE RIG 2/15/2010 20:00
	20:00 - 0:00	4.00	CSG	12	E	P		HELD SAFETY MTNG,PRESS TEST TO 2000 PSI,PUMP 100 BBLS H2O,PUMP 20 BBLS GEL WATER,PUMP 185 SX ( 37.8 BBLS) 15.8 # 1.15 YLD 5 GAL/SK TAIL CMNT DROP PLUG ON FLY DISP W/ 118.3 BBLS FRESH WATER 20 PSI LIFT NO RETURNS, BUMP PLUG W / 500 PSI, FLOAT HELD. TOP OUT 125 SX OF 15.8#. 1.15 YLD 5 GAL SK 4% CALC CMNT, . WAIT 2 HRS. PUMP 140 SX OF SAME CEMENT.WAIT 2 HRS PUMP 225 SX, WAIT 2 HRS PUMP 125 SX. WAIT 2 HRS PUMP 100 SX. CEMENT TO SURFACE.
4/9/2010	11:00 - 12:00	1.00	MIRU	01	C	P		RDRT, SKID RIG, RURT
	12:00 - 13:00	1.00	DRLPRO	14	A	P		N/UP BOPE
	13:00 - 16:30	3.50	DRLPRO	15	A	P		TEST BOPE - RAMS, BLINDS, CHOKE, CHOKE LINE, HCR, MANUAL VALVES, FLOOR VALVES, IBOP, 250 LOW 5000 HIGH, ANNULAR 250 LOW 2500 HIGH, CASING 1500
	16:30 - 17:00	0.50	DRLPRO	14	B	P		INSTALL WEARBUSHING
	17:00 - 18:30	1.50	DRLPRO	06	A	P		P/UP DIRECTIONAL BHA SCRIBE & ORIENT, RIH TO 1350'
	18:30 - 19:30	1.00	DRLPRO	08	A	Z		IRON ROUGHNECK - HYD HOSES
	19:30 - 20:30	1.00	DRLPRO	06	A	P		CONT RIH F/1350' TO 1810' - TAG CMT @ 1810'
20:30 - 21:30	1.00	DRLPRO	02	F	P		DRILLCMT, FE & RATHOLE F/1810' TO 1945'	

**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-18E2DS BLUE		Spud Conductor: 2/10/2010		Spud Date: 2/14/2010	
Project: UTAH-UINTAH		Site: BONANZA 1023-18E PAD		Rig Name No: ENSIGN 146/146, PROPETRO/	
Event: DRILLING		Start Date: 2/10/2010		End Date: 4/14/2010	
Active Datum: RKB @5,324.01ft (above Mean Sea Level)		UWI: SE/NW/0/10/S/23/E/18/0/0/6/PM/N/1,624.00/W/0/1,301.00/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	21:30 - 0:00	2.50	DRLPRO	02	D	P		DRILL/SLIDE F/1945' TO 2280' (335' @ 134fph) MW 8.3, WOB 19, RPM 35, MM RPM 140, TQ8, GPM 500, PSI OFF/ON 900/1250, SLIDE 2009 2021, 2055 2067, 2100 2112, 2145 2157, 2191 2203, 2236 2248, WOB 19, MM RPM 140, GPM 500, DIFF 300
4/10/2010	0:00 - 14:00	14.00	DRLPRO	02	D	P		DRILL/SLIDE F/2280' TO 4185' (1905' @ 136fph) MW 8.6, WOB 19, RPM 35, MM RPM 140, TQ 7, GPM 500, PSI OFF/ON 1280/1675, SLIDE 2281 2292, 2327 2338, 2372 2382, 2417 2427, 2463 2473, 2508 2520, 2554 2564, 2599 2609, 2644 2652, 2690 2696, 2735 2741, 2916 2928, 3007 3023, 3098 3108, 3188, 3200, 3279 3293, 3370 3384, 3460 3474, 3551 3567, 3641 3657, 3823 3839, 4004 4019, 4094 4109, WOB 19/20, MM RPM 140, GPM 500, DIFF 275
	14:00 - 14:30	0.50	DRLPRO	07	A	P		RIG SER
	14:30 - 0:00	9.50	DRLPRO	02	D	P		DRILL/SLIDE F/4185' TO 5345' (1160' @ 122fph) MW 9.3, WOB 19/20, RPM 35, MM RPM 137, TQ 10, GPM 490, PSI OFF/ON 1400/1750, SLIDE 4185 4200, 4276 4291, 4366 4384, 4457 4475, 4548 4568, 4636 4351, 4729 4741, 4819 4827, 5001 5011, 5091 5105, 5363 5376, WOB 19/20, MM RPM 137, GPM 490, DIFF 275
4/11/2010	0:00 - 13:00	13.00	DRLPRO	02	D	P		DRILL/SLIDE F/5345' TO 6723' (1369' @ 105fph) MW 10.9, WOB 20, RPM 35, MM RPM 490, TQ 12, GPM 490, PSI OFF/ON 2150/2515, SLIDE 5363 5376, 6451 6465, WOB 20, MM RPM 130, GPM 490, DIFF 275
	13:00 - 13:30	0.50	DRLPRO	07	A	P		RIG SER
	13:30 - 0:00	10.50	DRLPRO	02	D	P		DRILL/SLIDE F/6723' TO 7630' (907' @ 86fph) MW 11.6, WOB 22, RPM 35, MM RPM 130, TQ 13, GPM 490, PSI OFF/ON 2250/2550, SLIDE 6824 3836, WOB 22, MM RPM 130, GPM 490, DIFF 225
4/12/2010	0:00 - 13:30	13.50	DRLPRO	02	D	P		DRLG F/7630' TO 8500' (870' @ 64.4fph) MW 11.6, WOB 24, RPM 35, MM RPM 130, TQ 13, GPM 490, PSI OFF/ON 2250/2625
	13:30 - 14:30	1.00	DRLPRO	05	C	P		CIRC
	14:30 - 0:00	9.50	DRLPRO	06	E	P		W/TRIP TO 8 5/8 CASING SHOE @ 1920' - (BACKREAM 10 STDS)
4/13/2010	0:00 - 1:00	1.00	DRLPRO	06	E	P		W/TRIP - WASH F/8405' TO 8500'
	1:00 - 2:30	1.50	DRLPRO	05	C	P		CIRC
	2:30 - 11:00	8.50	DRLPRO	06	B	P		POOH F/LOGS (BACKREAM 10 STDS) - RACK BACK DIRECTIONAL BHA - L/DN BIT
	11:00 - 11:30	0.50	DRLPRO	14	B	P		RETRIEVE WEARBUSHING
	11:30 - 17:30	6.00	DRLPRO	11	D	P		HPJSM, R/UP BAKER ATLAS & RUN TRIPLE COMBO TO LOGGERS TD @ 8495'
	17:30 - 0:00	6.50	CSG	12	C	P		HPJSM, R/UP FRANKS & RUN 203 JTS & 1 MARKER JT 4.5" 11.60 I-80 BTC PROD CASING FLOAT SHOE @ 8491, FLOAT COLLAR 8448'
4/14/2010	0:00 - 1:30	1.50	CSG	12	C	P		RUN 203 JTS & 1 MARKER JT 4.5" 11.60 I-80 BTC PROD CASING FLOAT SHOE @ 8491, FLOAT COLLAR 8448'
	1:30 - 3:00	1.50	CSG	05	D	P		CIRC

**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-18E2DS BLUE		Spud Conductor: 2/10/2010		Spud Date: 2/14/2010	
Project: UTAH-UINTAH			Site: BONANZA 1023-18E PAD		Rig Name No: ENSIGN 146/146, PROPETRO/
Event: DRILLING			Start Date: 2/10/2010		End Date: 4/14/2010
Active Datum: RKB @5,324.01ft (above Mean Sea Level)			UWI: SE/NW/0/10/S/23/E/18/0/0/6/PM/N/1,624.00/W/0/1,301.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	3:00 - 6:00	3.00	CSG	12	E	P		HPJSM, R/UP BJ & TEST LINES 4742 PSI, CEMENT 4.5" PROD CASING - 40 BBLs FRESH WATER, 660 SKS LEAD 11.7 PPG 2.5 YIELD, 621 SKS TAIL 14.3 1.31 YIELD, DROPPED PLUG & DISPLACED W/131 BBLs FRESH WATER W/0.1 gal/bbl CLAYFIX II, 0.01 gal/bbl ALDACIDE G @ 2050 PSI, BUMPED PLUG @ 2696 PSI, FLOATS HELD W/1.0 BBL RETURN, GOOD RETURNS DURING CMT JOB W/30 BBLs CEMENT TO SURFACE
	6:00 - 9:00	3.00	DRLPRO	14	A	P		L/OUT LANDING JT, N/DN BOPE, TRANSFER 1000 BBLs MUD TO SECONDARY TANKS, CLEAN RIG TANKS, RELEASE RIG @ 09:00

**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-18E2DS BLUE	Spud Conductor: 2/10/2010	Spud Date: 2/14/2010
Project: UTAH-UINTAH	Site: BONANZA 1023-18E PAD	Rig Name No: ENSIGN 146/146, PROPETRO/
Event: DRILLING	Start Date: 2/10/2010	End Date: 4/14/2010
Active Datum: RKB @5,324.01ft (above Mean Sea Level)	UWI: SE/NW/0/10/S/23/E/18/0/0/6/PM/N/1,624.00/W/0/1,301.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
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9:00 - 9:00 0.00 DRLPRO

**CONDUCTOR CASING:**  
 Cond. Depth set: 44  
 Cement sx used: 0

SPUD DATE/TIME: 2/14/2010 17:00

**SURFACE HOLE:**  
 Surface From depth: 44  
 Surface To depth: 1,945  
 Total SURFACE hours: 15.50  
 Surface Casing size: 8 5/8  
 # of casing joints ran: 43  
 Casing set MD: 1,920.0  
 # sx of cement: 525  
 Cement blend (ppg): 15.8  
 Cement yield (ft3/sk): 1.15  
 # of bbls to surface: 0  
 Describe cement issues: NO CMT TO SURFACE - 3 TOP OUTS  
 Describe hole issues: COMMUNICATION BETWEEN HOLE & CONDUCTOR

**PRODUCTION:**  
 Rig Move/Skid start date/time: 4/9/2010 11:00  
 Rig Move/Skid finish date/time: 4/9/2010 12:00  
 Total MOVE hours: 1.0  
 Prod Rig Spud date/time: 4/9/2010 20:30  
 Rig Release date/time: 4/14/2010 9:00  
 Total SPUD to RR hours: 108.5  
 Planned depth MD 8,491  
 Planned depth TVD 8,350  
 Actual MD: 8,500  
 Actual TVD: 8,364  
 Open Wells \$: \$492,796  
 AFE \$: \$648,165  
 Open wells \$/ft: \$57.98

**PRODUCTION HOLE:**  
 Prod. From depth: 1,945  
 Prod. To depth: 8,500  
 Total PROD hours: 63  
 Log Depth: 8495  
 Production Casing size: 4 1/2  
 # of casing joints ran: 203  
 Casing set MD: 8,491.0  
 # sx of cement: 1,281  
 Cement blend (ppg): LEAD 11.7, TAIL 14.3  
 Cement yield (ft3/sk): LEAD 2.5, TAIL 1.31  
 Est. TOC (Lead & Tail) or 2 Stage : 5750  
 Describe cement issues: 30 BBLs CEMENT TO SURFACE  
 Describe hole issues:

**DIRECTIONAL INFO:**  
 KOP: 150  
 Max angle: 25.75  
 Departure: 824.61  
 Max dogleg MD: 4.88

**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-18E2DS BLUE Spud Conductor: 2/10/2010 Spud Date: 2/14/2010  
 Project: UTAH-UINTAH Site: BONANZA 1023-18E PAD Rig Name No: SWABBCO 1/1  
 Event: COMPLETION Start Date: 7/30/2010 End Date:  
 Active Datum: RKB @5,324.01ft (above Mean Sea Level) UWI: SE/NW/0/10/S/23/E/18/0/0/6/PM/N/1,624.00/W/0/1,301.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
8/2/2010	7:00 - 12:00	5.00	COMP	36	E	P		( STG #1 ) RIH W/ PERF GUNS, PERF THE MESAVERDE @ 8378' - 8382', 3-SPF, 8256' - 8262', 2-SPF, USING 3 3/8" SCALLOP GUNS, 23gm, 0.36 HOLE, 90* PHS, 24 HOLES,
8/3/2010	7:00 - 17:00	10.00	COMP	36	E	P		( STG #1 ) WHP = 1204 #, BRK DN PERF @ 3146 #, @ 4.6 B/M, INJ- RT= 50.4 B/M, INJ-P = 4433 #, ISIP = 2297 #, F.G.= 0.71 , PUMP 250 GALS 15% HCL AHEAD OF INJ, CALC ALL PERF OPEN,PUMP 1357 BBLS SLK WTR & 48582 # OTTAWA SAND, ISIP = 2331 #, F.G.= 0.71 , NPI = 34 #, MP = 5917 #, MR = 51.3 B/M, AP = 3800 #, AR = 50.7 B/M, 43582 # 30/50 SAND, 5000 # SCL SAND, COMMENTS = GOOD JOB  ( STG #2 ) RIH W/ HALLIBURTON 8K CBP AND PERF GUNS, SET CBP @ 8118 ', PERF THE MESAVERDE @ 8082' - 8088', 8010' - 8014', 3-SPF, USING 3 3/8" SCALLOP GUNS, 23gm, 0.36 HOLE, 90* PHS, 30 HOLES, WHP = 2060 #, BRK DN PERF @ 3424 #, @ 4.2 B/M, INJ- RT= 50.9 B/M, INJ-P = 5680 #, ISIP = 2409 #, F.G.= 0.73 , CALC 97% PERF OPEN, PUMP 674 BBLS SLK WTR & 23685 # OTTAWA SAND, ISIP = 2325 #, F.G.= 0.72 , NPI = -84 #, MP = 6169 #, MR = 52.9 B/M, AP = 4100 #, AR = 51 B/M, 18685 # 30/50 SAND, 5000 # SCL SAND, COMMENTS = GOOD JOB  ( STG #3 ) RIH W/ HALLIBURTON 8K CBP AND PERF GUNS, SET CBP @ 7906 ', PERF THE MESAVERDE @ 7872' - 7876', 4-SPF, 7820' - 7824', 3-SPF, 7766' - 7770', 3-SPF, USING 3 3/8" SCALLOP GUNS, 23gm, 0.36 HOLE, 90* PHS, 40 HOLES, WHP = 2030 #, BRK DN PERF @ 5928 #, @ 3 B/M, INJ- RT= 50.3 B/M, INJ-P = 4829 #, ISIP = 2589 #, F.G.= 0.76 , CALC ALL PERF OPEN, PUMP 2038 BBLS SLK WTR & 79524 # OTTAWA SAND, ISIP = 2600 #, F.G.= 0.76 , NPI = 11 #, MP = 6382 #, MR = 51.2 B/M, AP = 4000 #, AR = 50 B/M, 74524 # 30/50 SAND, 5000 # SCL SAND, COMMENTS = GOOD JOB  ( STG #4 ) RIH W/ HALLIBURTON 8K CBP AND PERF GUNS, SET CBP @ 7632 ', PERF THE MESAVERDE @ 7596' - 7602', 7546' - 7550', 4-SPF, USING 3 3/8" SCALLOP GUNS, 23gm, 0.36 HOLE, 90* PHS, 40 HOLES, WHP = 2137 #, BRK DN PERF @ 2934 #, @ 5.4 B/M, INJ- RT= 46.9 B/M, INJ-P = 4002 #, ISIP = 2381 #, F.G.= 0.75 , CALC ALL PERF OPEN, PUMP 1432 BBLS SLK WTR & 58975 # OTTAWA SAND, ISIP = 2695 #, F.G.= 0.79 , NPI = 314 #, MP = 5665 #, MR = 52.2 B/M, AP = 4000 #, AR = 51.9 B/M, 53975 # 30/50 SAND, 5000 # SCL SAND, COMMENTS = good job

**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-18E2DS BLUE		Spud Conductor: 2/10/2010		Spud Date: 2/14/2010	
Project: UTAH-UINTAH			Site: BONANZA 1023-18E PAD		Rig Name No: SWABBCO 1/1
Event: COMPLETION			Start Date: 7/30/2010		End Date:
Active Datum: RKB @5,324.01ft (above Mean Sea Level)			UWI: SE/NW/0/10/S/23/E/18/0/0/6/PM/N/1,624.00/W/0/1,301.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
8/4/2010	7:00 - 17:00	10.00	COMP	36	E	P		<p>( STG #5 ) RIH W/ HALLIBURTON 8K CBP AND PERF GUNS, SET CBP @ 7306' , PERF THE MESAVERDE @ 7272 - 7276', 7248' - 7252', 7222' - 7226', 3-SPF, USING 3 3/8" SCALLOP GUNS, 23gm, 0.36 HOLE, 90* PHS, 36 HOLES, WHP = 354 #, BRK DN PERF @ 2479 #, @ 2 B/M, INJ- RT= 50 B/M, INJ-P = 3158 #, ISIP = 1849 #, F.G.= 0.69 , CALC ALL PERF OPEN, PUMP 1175 BBLS SLK WTR &amp; 45833 # OTTAWA SAND, ISIP = 1916#, F.G.= 0.70 , NPI = 67 #, MP = 4186 #, MR = 51 B/M, AP = 2000 #, AR = 50 B/M, 40833 # 30/50 SAND, 5000 # SCL SAND, COMMENTS = GOOD JOB</p> <p>( STG #6 ) RIH W/ HALLIBURTON 8K CBP AND PERF GUNS, SET CBP @ 7114' , PERF THE MESAVERDE @ 7080' - 7084', 4-SPF, 7052' - 7056', 3-SPF, 6970' - 6974', 3-SPF, USING 3 3/8" SCALLOP GUNS, 23gm, 0.36 HOLE, 90* PHS, HOLES, WHP = 667 #, BRK DN PERF @ 2397 #, @ 5.8 B/M, INJ- RT= 50.4 B/M, INJ-P = 3323 #, ISIP = 1659 #, F.G.= 0.67 , CALC ALL PERF OPEN, PUMP 1089 BBLS SLK WTR &amp; 43159 # OTTAWA SAND, ISIP = 1849 #, F.G.= 0.70 , NPI = 190 #, MP = 3006 #, MR = 50.5 B/M, AP = 3100 #, AR = 50 B/M, 38159 # 30/50 SAND, 5000 # SCL SAND, COMMENTS = GOOD JOB</p> <p>( KILL PLUG ) RIH W/ HALLIBURTON 8K CBP, SET CBP @ 6920' , R/D WIRELINE AND FRAC OFF WELL,</p> <p>TOTAL FLUID = 8435 BBLS SLK WTR, TOTAL SAND = 299758# SAND JSA= DRILL PLUGS</p>
8/12/2010	7:00 - 7:15	0.25	COMP	48		P		

**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-18E2DS BLUE		Spud Conductor: 2/10/2010		Spud Date: 2/14/2010	
Project: UTAH-UINTAH			Site: BONANZA 1023-18E PAD		Rig Name No: SWABBCO 1/1
Event: COMPLETION			Start Date: 7/30/2010		End Date:
Active Datum: RKB @5,324.01ft (above Mean Sea Level)			UWI: SE/NW/0/10/S/23/E/18/0/0/6/PM/N/1,624.00/W/0/1,301.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 - 17:00	9.75	COMP	30		P		<p>MOVE IN RU RIG ND WELLHEAD NU BOPS RU FLOOR &amp; TUBING EQUIP TALLEY &amp; PU TUBING TAG @ 6890'</p> <p>PLUG #1] TAG SAND @ 6890' (30' FILL) C/O &amp; DRILL THRU HALLI 8K CBP @ 6920' IN 9 MIN W/ 100# INCREASE</p> <p>PLUG #2] CONTINUE TO RIH TAG SAND @ 7114' (30' FILL) C/O &amp; DRILL THRU HALLI 8K CBP @ 7144' IN 11 MIN W/ 50# INCREASE</p> <p>PLUG #3] CONTINUE TO RIH TAG SAND @ 7276' (30' FILL) C/O &amp; DRILL THRU HALLI 8K CBP @ 7306 IN 8 MIN W/ 50# INCREASE</p> <p>PLUG #4] CONTINUE TO RIH TAG SAND @ 7602' (30' FILL) C/O &amp; DRILL THRU HALLI 8K CBP @ 7632' IN 10 MIN W/ 50# INCREASE</p> <p>PLUG #5] CONTINUE TO RIH TAG SAND @ 7881' (25' FILL) C/O &amp; DRILL THRU HALLI 8K CBP @ 7906' IN 8 MIN W/ 100# INCREASE (250# ON WELL)</p> <p>PLUG #6] CONTINUE TO RIH TAG SAND @ 8088' (30' FILL) C/O &amp; DRILL THRU HALLI 8K CBP @ 8118' IN 11 MIN W/ 100# INCREASE</p> <p>CONTINUE TO RIH TAG SAND @8387' (60' FILL) C/O &amp; DRILL TO PBTD @ 8447' CIRC CLEAN RD PWR SWVL POOH LD 15 JNTS LAND TUBING ON HANGER W/ 253 JNTS OF 2-3/8" L-80 TUBING RD FLOOR &amp; TUBING EQUIP ND BOPS NU WELLHEAD DROP BALL PUMP OFF BIT @ 2800 PSI SHUT WELL IN 30 MIN TO ALLOW BIT TO FALL TURN WELL OVER TO FBC @ 15:00 W/</p> <p>TOTAL PUMPED= 7765 BBLS RIG REC= 2200 BBLS LEFT TO REC= 5565 BBLS</p> <p>RIG DOWN RIG MOVE TO RED WELL RU RIG</p> <p>K.B.= 13.00 HANGER= 1.00 253 JNTS 2-3/8" L-80= 7962.89 POBS= 2.20 EOT @= 7979.09</p>
8/13/2010	7:00 -		PROD	33				<p>7 AM FLBK REPORT: CP 2675#, TP 1700#, 20/64" CK, 52 BWPH, TRACE SAND, LIGHT GAS TTL BBLS RECOVERED: 3218 BBLS LEFT TO RECOVER: 4547</p>
	10:25 -		PROD	50				<p>WELL TURNED TO SALES @ 10:25 HR ON 8/13/10 - 1000 MCFD, 1200 BWPD, CP 2750#, FTP 1700#, CK 20/64"</p>
8/14/2010	7:00 -			33	A			<p>7 AM FLBK REPORT: CP 2550#, TP 1770#, 20/64" CK, 33 BWPH, TRACE SAND, - GAS TTL BBLS RECOVERED: 4225 BBLS LEFT TO RECOVER: 3540</p>
8/15/2010	7:00 -			33	A			<p>7 AM FLBK REPORT: CP 2325#, TP 1625#, 20/64" CK, 26 BWPH, TRACE SAND, - GAS TTL BBLS RECOVERED: 4914 BBLS LEFT TO RECOVER: 2851</p>

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Project: UTAH-UINTAH			Site: BONANZA 1023-18E PAD		Rig Name No: SWABBCO 1/1
Event: COMPLETION			Start Date: 7/30/2010		End Date:
Active Datum: RKB @5,324.01ft (above Mean Sea Level)			UWI: SE/NW/0/10/S/23/E/18/0/0/6/PM/N/1,624.00/W/0/1,301.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
8/16/2010	7:00 -			33	A			7 AM FLBK REPORT: CP 2150#, TP 1525#, 20/64" CK, 19 BWPH, TRACE SAND, - GAS TTL BBLS RECOVERED: 5424 BBLS LEFT TO RECOVER: 2341
8/18/2010	7:00 -							WELL IP'D ON 8/18/10 - 2067 MCFD, 0 BOPD, 456 BWPD, CP 2150#, FTP 1525#, CK 20/64", LP 156#, 24 HRS

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 38421
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  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.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b>
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> BONANZA 1023-18E2DS
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047504500000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6515 Ext
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1624 FNL 1301 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWNW Section: 18 Township: 10.0S Range: 23.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES  <b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 4/14/2011  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input checked="" type="checkbox"/> <b>CASING REPAIR</b> <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 50px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The operator requests approval to conduct wellhead/casing repair operations on the subject well location. Please find the attached procedures for the propose repair work on the subject well location.

**Accepted by the  
Utah Division of  
Oil, Gas and Mining**

Date: 04/25/2011

By: *Derek Quist*

<b>NAME (PLEASE PRINT)</b> Gina Becker	<b>PHONE NUMBER</b> 720 929-6086	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/14/2011	

**WORKORDER #: 88119302**

Name: **BONANZA 1023-18E2DS- 1023-18E PAD** 3/8/11  
 Surface Location: SWNW SEC.18 T10S, R23E  
 Uintah County, UT

API: 4304750450 LEASE#: UTU-38421

ELEVATIONS: 5310' GL 5323' KB

TOTAL DEPTH: 8500' PBTD: 8447'

SURFACE CASING: 8 5/8", 28# J-55 @ 1920'

PRODUCTION CASING: 4 1/2", 11.6#, I-80 @ 8490'  
 TOC @ Surface per CBL

PERFORATIONS: Mesaverde 6970' - 8382'

Tubular/Borehole	Drift inches	Collapse psi	Burst psi	Capacities		
				Gal./ft.	Cuft/ft.	Bbl./ft.
2.375" 4.7# J-55 tbg.	1.901	8100	7700	0.1624	0.02173	0.00387
4.5" 11.6# I-80	3.875	6350	7780	0.6528	0.0872	0.01554
8.625" 28# J-55	8.097	1370	2950	2.6223	0.3505	0.0624
Annular Capacities						
2.375" tbg. X 4 1/2" 11.6# csg				0.4227	0.0565	0.01006

**GEOLOGICAL TOPS:**

1015' Green River  
 1310' Bird's Nest  
 1676' Mahogany  
 4155' Wasatch  
 6268' Mesaverde

## **BONANZA 1023-18E2DS - 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.
5. Rig up wireline service. RIH and set CBP @ ~6920'. Dump bail 4 sx cement on top of plug. POOH and RD wireline service.
6. Remove BOP and ND WH.
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 1 joint of 3 ½" IF drill pipe with 4 ½" right hand standard grapple overshot. 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. Release overshot, POOH, and lay down.
4. PU & RIH w/ 4 ½" 10k external casing patch on 4 ½" I-80 or P-110 casing.
5. Latch fish, PU to 100,000# tension. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.
6. Install C-22 slips. Land casing w/ 80,000# tension.
7. Cut-off and dress 4 ½" casing stub.
8. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~6870'. Clean out to PBTD (8447').
9. POOH, land tbg and pump off POBS.
10. 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 wireline services. RIH and shoot string shot at casing collar @ 46'.
5. MIRU casing crew.
6. Back-off casing, POOH.
7. PU new casing joint w/ 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.
8. PU 100,000# tension string weight. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.
9. Install C-22 slips. Land casing w/ 80,000# tension.

10. Cut-off and dress 4 1/2" casing stub.
11. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~6870'. Clean out to PBTB (8447').
12. POOH, land tbg and pump off POBS.
13. NUWH, RDMO. Turn well over to production ops.



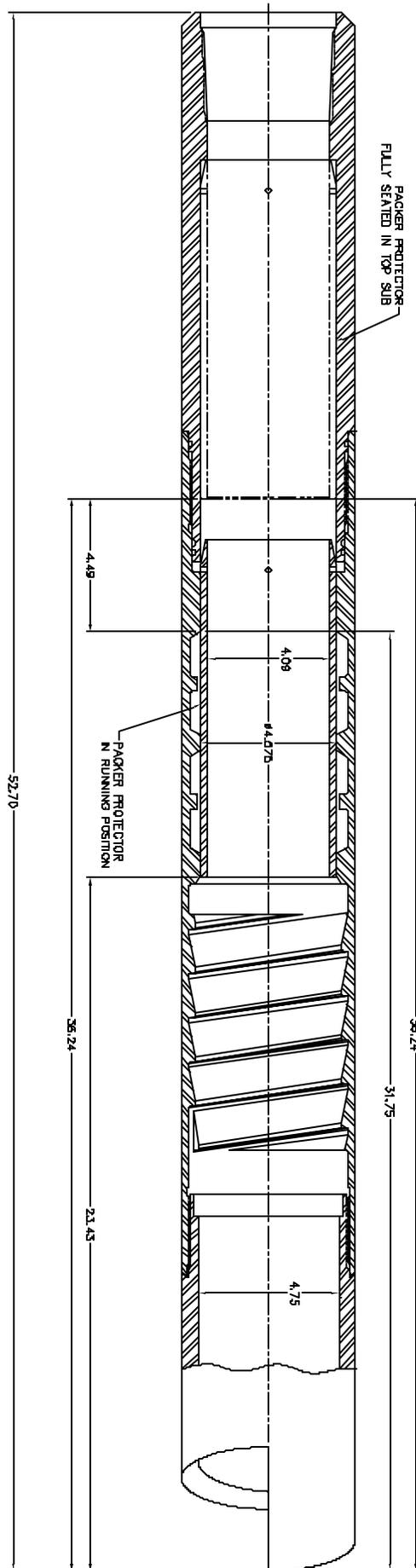
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## **Logan High Pressure Casing Patches Assembly Procedure**

All parts should be thoroughly greased before being assembled.

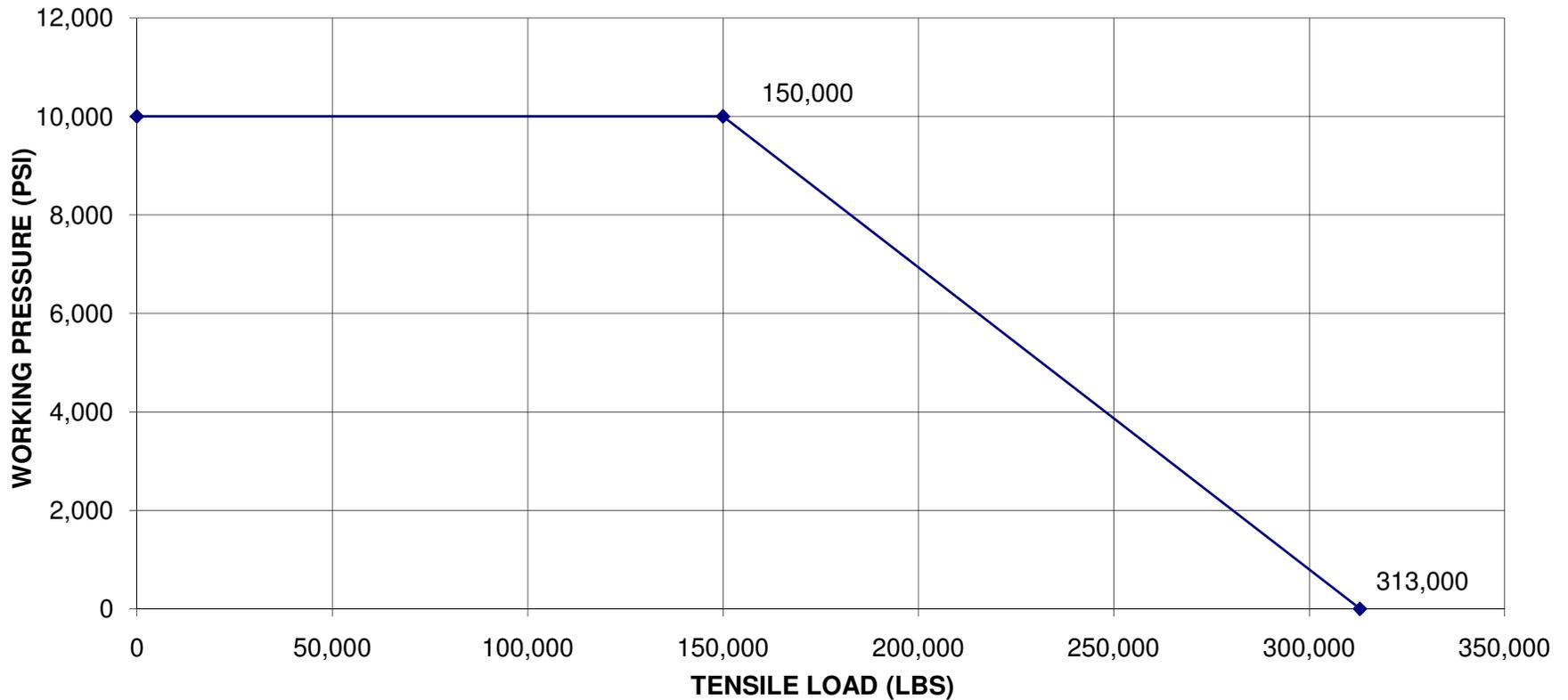
1. Install all four Logan Type "L" Packers in the spaces provided in the Casing Patch Bowl. Refer to diagram provided for proper installation.
2. Install Packer Protector from the Basket Grapple end of the Bowl. The beveled end of the Packer Protector goes in first. Carefully push the Packer Protector 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.



510L-005-001 4-1/2" LOGAN HP CASING PATCH

**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

**RECEIVED** Apr. 14, 2011

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

FORM 6

**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) 929-6029

**Well 1**

API Number	Well Name		QQ	Sec	Twp	Rng	County
See Atchmt	See Atchmt						
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
	99999	18519				5/11/2012	
<b>Comments:</b> Please see attachment with list of Wells in the Ponderosa Unit. <u>W5MVD</u>							5/30/2012

**Well 2**

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<b>Comments:</b>							

**Well 3**

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<b>Comments:</b>							

**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**

**MAY 21 2012**

Cara Mahler

Name (Please Print)

Signature

REGULATORY ANALYST

5/21/2012

Title

Date

well_name	sec	twp	rng	api	entity	lease	well	stat	qtr_qtr	bhl	surf	zone	a_stat	l_num	op_no
SOUTHMAN CANYON 31-3	31	090S	230E	4304734726	13717	1	GW	P	SENW		1	WSMVD	P	U-33433	N2995
SOUTHMAN CANYON 31-4	31	090S	230E	4304734727	13742	1	GW	S	SESW		1	WSMVD	S	UTU-33433	N2995
SOUTHMAN CYN 31-2X (RIG SKID)	31	090S	230E	4304734898	13755	1	GW	P	NWNW		1	WSMVD	P	U-33433	N2995
SOUTHMAN CYN 923-31J	31	090S	230E	4304735149	13994	1	GW	P	NWSE		1	MVRD	P	U-33433	N2995
SOUTHMAN CYN 923-31B	31	090S	230E	4304735150	13953	1	GW	P	NWNE		1	MVRD	P	U-33433	N2995
SOUTHMAN CYN 923-31P	31	090S	230E	4304735288	14037	1	GW	P	SESE		1	WSMVD	P	UTU-33433	N2995
SOUTHMAN CYN 923-31H	31	090S	230E	4304735336	14157	1	GW	P	SENE		1	WSMVD	P	U-33433	N2995
SOUTHMAN CYN 923-31O	31	090S	230E	4304737205	16827	1	GW	P	SWSE		1	MVRD	P	UTU-33433	N2995
SOUTHMAN CYN 923-31K	31	090S	230E	4304737206	16503	1	GW	P	NESW		1	WSMVD	P	UTU-33433	N2995
SOUTHMAN CYN 923-31G	31	090S	230E	4304737208	16313	1	GW	P	SWNE		1	WSMVD	P	UTU-33433	N2995
SOUTHMAN CYN 923-31E	31	090S	230E	4304737209	16521	1	GW	P	SWNW		1	WSMVD	P	UTU-33433	N2995
SOUTHMAN CYN 923-31A	31	090S	230E	4304737210	16472	1	GW	P	NENE		1	WSMVD	P	UTU-33433	N2995
SOUTHMAN CYN 923-31C	31	090S	230E	4304737227	16522	1	GW	P	NENW		1	WSMVD	P	UTU-33433	N2995
BONANZA 1023-1G	01	100S	230E	4304735512	14458	1	GW	P	SWNE		1	WSMVD	P	U-40736	N2995
BONANZA 1023-1A	01	100S	230E	4304735717	14526	1	GW	P	NENE		1	WSMVD	P	U-40736	N2995
BONANZA 1023-1E	01	100S	230E	4304735745	14524	1	GW	P	SWNW		1	WSMVD	P	U-40736	N2995
BONANZA 1023-1C	01	100S	230E	4304735754	14684	1	GW	P	NENW		1	MVRD	P	U-40736	N2995
BONANZA 1023-1K	01	100S	230E	4304735755	15403	1	GW	P	NESW		1	MVRD	P	U-38423	N2995
BONANZA 1023-1F	01	100S	230E	4304737379	16872	1	GW	P	SENW		1	MVRD	P	UTU-40736	N2995
BONANZA 1023-1B	01	100S	230E	4304737380	16733	1	GW	P	NWNE		1	MVRD	P	UTU-40736	N2995
BONANZA 1023-1D	01	100S	230E	4304737381	16873	1	GW	P	NWNW		1	MVRD	P	UTU-40736	N2995
BONANZA 1023-1H	01	100S	230E	4304737430	16901	1	GW	P	SENE		1	MVRD	P	UTU-40736	N2995
BONANZA 1023-1L	01	100S	230E	4304738300	16735	1	GW	P	NWSW		1	MVRD	P	UTU-38423	N2995
BONANZA 1023-1J	01	100S	230E	4304738302	16871	1	GW	P	NWSE		1	MVRD	P	UTU-40736	N2995
BONANZA 1023-1I	01	100S	230E	4304738810	16750	1	GW	P	NESE		1	MVRD	P	UTU-40736	N2995
BONANZA 1023-2E	02	100S	230E	4304735345	14085	3	GW	P	SWNW		3	WSMVD	P	ML-47062	N2995
BONANZA 1023-2C	02	100S	230E	4304735346	14084	3	GW	P	NENW		3	WSMVD	P	ML-47062	N2995
BONANZA 1023-2A	02	100S	230E	4304735347	14068	3	GW	P	NENE		3	MVRD	P	ML-47062	N2995
BONANZA 1023-2G	02	100S	230E	4304735661	14291	3	GW	P	SWNE		3	WSMVD	P	ML-47062	N2995
BONANZA 1023-2O	02	100S	230E	4304735662	14289	3	GW	P	SWSE		3	WSMVD	P	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	P	SWSW		3	WSMVD	P	ML-47062	N2995
BONANZA 1023-2H	02	100S	230E	4304737093	16004	3	GW	P	SENE		3	WSMVD	P	ML-47062	N2995
BONANZA 1023-2D	02	100S	230E	4304737094	15460	3	GW	P	NWNW		3	WSMVD	P	ML-47062	N2995
BONANZA 1023-2B	02	100S	230E	4304737095	15783	3	GW	P	NWNE		3	MVRD	P	ML-47062	N2995
BONANZA 1023-2P	02	100S	230E	4304737223	15970	3	GW	P	SESE		3	WSMVD	P	ML-47062	N2995
BONANZA 1023-2N	02	100S	230E	4304737224	15887	3	GW	P	SESW		3	MVRD	P	ML-47062	N2995
BONANZA 1023-2L	02	100S	230E	4304737225	15833	3	GW	P	NWSW		3	WSMVD	P	ML-47062	N2995
BONANZA 1023-2F	02	100S	230E	4304737226	15386	3	GW	P	SENW		3	WSMVD	P	ML-47062	N2995
BONANZA 1023-2D-4	02	100S	230E	4304738761	16033	3	GW	P	NWNW		3	WSMVD	P	ML-47062	N2995
BONANZA 1023-2O-1	02	100S	230E	4304738762	16013	3	GW	P	SWSE		3	WSMVD	P	ML-47062	N2995
BONANZA 1023-2H3CS	02	100S	230E	4304750344	17426	3	GW	P	NWNE	D	3	MVRD	P	ML 47062	N2995
BONANZA 1023-2G3BS	02	100S	230E	4304750345	17428	3	GW	P	NWNE	D	3	MVRD	P	ML 47062	N2995
BONANZA 1023-2G2CS	02	100S	230E	4304750346	17429	3	GW	P	NWNE	D	3	MVRD	P	ML 47062	N2995
BONANZA 1023-2G1BS	02	100S	230E	4304750347	17427	3	GW	P	NWNE	D	3	MVRD	P	ML 47062	N2995

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

\* not moved in unit

BONANZA 1023-6A	06	100S	230E	4304736067	14775			1	GW	P	NENE		1	WSMVD	P	U-33433	N2995
BONANZA 1023-6N	06	100S	230E	4304737211	15672			1	GW	P	SESW		1	WSMVD	P	UTU-38419	N2995
BONANZA 1023-6L	06	100S	230E	4304737212	15673			1	GW	P	NWSW		1	WSMVD	P	UTU-38419	N2995
BONANZA 1023-6J	06	100S	230E	4304737213	15620			1	GW	P	NWSE		1	WSMVD	P	UTU-38419	N2995
BONANZA 1023-6F	06	100S	230E	4304737214	15576			1	GW	TA	SENW		1	WSMVD	TA	UTU-38419	N2995
BONANZA 1023-6P	06	100S	230E	4304737323	16794			1	GW	P	SESE		1	WSMVD	P	UTU-38419	N2995
BONANZA 1023-6H	06	100S	230E	4304737324	16798			1	GW	S	SENE		1	WSMVD	S	UTU-33433	N2995
BONANZA 1023-6D	06	100S	230E	4304737429	17020			1	GW	P	NWNW		1	WSMVD	P	UTU-38419	N2995
BONANZA 1023-6B	06	100S	230E	4304740398	18291			1	GW	P	NWNE		1	WSMVD	P	UTU-33433	N2995
BONANZA 1023-6M1BS	06	100S	230E	4304750452	17578			1	GW	P	NWSW	D	1	WSMVD	P	UTU 38419	N2995
BONANZA 1023-6N1AS	06	100S	230E	4304750453	17581			1	GW	P	NWSW	D	1	WSMVD	P	UTU 38419	N2995
BONANZA 1023-6N1CS	06	100S	230E	4304750454	17580			1	GW	P	NWSW	D	1	WSMVD	P	UTU 38419	N2995
BONANZA 1023-6N4BS	06	100S	230E	4304750455	17579			1	GW	P	NWSW	D	1	WSMVD	P	UTU 38419	N2995
BONANZA 1023-6I2S	06	100S	230E	4304750457	17790			1	GW	P	NESE	D	1	WSMVD	P	UTU 38419	N2995
BONANZA 1023-6I4S	06	100S	230E	4304750458	17792			1	GW	P	NESE	D	1	WSMVD	P	UTU 38419	N2995
BONANZA 1023-6J3S	06	100S	230E	4304750459	17791			1	GW	P	NESE	D	1	WSMVD	P	UTU 38419	N2995
BONANZA 1023-6P1S	06	100S	230E	4304750460	17793			1	GW	P	NESE	D	1	WSMVD	P	UTU 38419	N2995
BONANZA 1023-6A2CS	06	100S	230E	4304751430	18292			1	GW	P	NWNE	D	1	WSMVD	P	UTU33433	N2995
BONANZA 1023-6B4BS	06	100S	230E	4304751431	18293			1	GW	P	NWNE	D	1	WSMVD	P	UTU33433	N2995
BONANZA 1023-6B4CS	06	100S	230E	4304751432	18294			1	GW	P	NWNE	D	1	WSMVD	P	UTU33433	N2995
BONANZA 1023-6C4BS	06	100S	230E	4304751449	18318			1	GW	P	NENW	D	1	WSMVD	P	UTU38419	N2995
BONANZA 1023-6D1DS	06	100S	230E	4304751451	18316			1	GW	P	NENW	D	1	WSMVD	P	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	P	NWNE		1	MVRD	P	U-38420	N2995
BONANZA 1023-7L	07	100S	230E	4304735289	14054			1	GW	P	NWSW		1	WSMVD	P	U-38420	N2995
BONANZA 1023-7D	07	100S	230E	4304735393	14171			1	GW	P	NWNW		1	WSMVD	P	U-38420	N2995
BONANZA 1023-7P	07	100S	230E	4304735510	14296			1	GW	P	SESE		1	WSMVD	P	U-38420	N2995
BONANZA 1023-7H	07	100S	230E	4304736742	15921			1	GW	P	SENE		1	WSMVD	P	UTU-38420	N2995
BONANZA 1023-7NX (RIGSKID)	07	100S	230E	4304736932	15923			1	GW	P	SESW		1	WSMVD	P	UTU-38420	N2995
BONANZA 1023-7M	07	100S	230E	4304737215	16715			1	GW	P	SWSW		1	WSMVD	P	UTU-38420	N2995
BONANZA 1023-7K	07	100S	230E	4304737216	16714			1	GW	P	NESW		1	WSMVD	P	UTU-38420	N2995
BONANZA 1023-7E	07	100S	230E	4304737217	16870			1	GW	P	SWNW		1	WSMVD	P	UTU-38420	N2995
BONANZA 1023-7G	07	100S	230E	4304737326	16765			1	GW	P	SWNE		1	WSMVD	P	UTU-38420	N2995
BONANZA 1023-7A	07	100S	230E	4304737327	16796			1	GW	P	NENE		1	WSMVD	P	UTU-38420	N2995
BONANZA 1023-7O	07	100S	230E	4304738304	16713			1	GW	P	SWSE		1	MVRD	P	UTU-38420	N2995
BONANZA 1023-7B-3	07	100S	230E	4304738912	17016			1	GW	P	NWNE		1	WSMVD	P	UTU-38420	N2995
BONANZA 1023-07JT	07	100S	230E	4304739390	16869			1	GW	P	NWSE		1	WSMVD	P	UTU-38420	N2995
BONANZA 1023-7J2AS	07	100S	230E	4304750474	17494			1	GW	P	NWSE	D	1	WSMVD	P	UTU 38420	N2995
BONANZA 1023-7J2DS	07	100S	230E	4304750475	17495			1	GW	P	NWSE	D	1	WSMVD	P	UTU 38420	N2995
BONANZA 1023-7L3DS	07	100S	230E	4304750476	17939			1	GW	P	NWSW	D	1	WSMVD	P	UTU 38420	N2995
BONANZA 1023-7M2AS	07	100S	230E	4304750477	17942			1	GW	P	NWSW	D	1	WSMVD	P	UTU 38420	N2995
BONANZA 1023-7N2AS	07	100S	230E	4304750478	17940			1	GW	P	NWSW	D	1	WSMVD	P	UTU 38420	N2995
BONANZA 1023-7N2DS	07	100S	230E	4304750479	17941			1	GW	P	NWSW	D	1	WSMVD	P	UTU 38420	N2995
BONANZA 1023-7O4S	07	100S	230E	4304750480	17918			1	GW	P	SESE	D	1	WSMVD	P	UTU 38420	N2995
BONANZA 1023-7P2S	07	100S	230E	4304750482	17919			1	GW	P	SESE	D	1	WSMVD	P	UTU 38420	N2995
BONANZA 8-2	08	100S	230E	4304734087	13851			1	GW	P	SESE		1	MVRD	P	U-37355	N2995

BONANZA 8-3	08	100S	230E	4304734770	13843			1	GW	P	NWNW			1	MVRD	P	U-37355	N2995
BONANZA 1023-8A	08	100S	230E	4304735718	14932			1	GW	P	NENE			1	WSMVD	P	UTU-37355	N2995
BONANZA 1023-8L	08	100S	230E	4304735719	14876			1	GW	P	NWSW			1	WSMVD	P	UTU-37355	N2995
BONANZA 1023-8N	08	100S	230E	4304735720	15104			1	GW	P	SESW			1	WSMVD	P	UTU-37355	N2995
BONANZA 1023-8F	08	100S	230E	4304735989	14877			1	GW	S	SESW			1	WSMVD	S	UTU-37355	N2995
BONANZA 1023-8I	08	100S	230E	4304738215	16358			1	GW	P	NESE			1	WSMVD	P	UTU-37355	N2995
BONANZA 1023-8K	08	100S	230E	4304738216	16354			1	GW	P	NESW			1	WSMVD	P	UTU-37355	N2995
BONANZA 1023-8M	08	100S	230E	4304738217	16564			1	GW	P	SWSW			1	MVRD	P	UTU-37355	N2995
BONANZA 1023-8G	08	100S	230E	4304738218	16903			1	GW	P	SWNE			1	WSMVD	P	UTU-37355	N2995
BONANZA 1023-8E	08	100S	230E	4304738219	16397			1	GW	P	SWNW			1	WSMVD	P	UTU-37355	N2995
BONANZA 1023-8C	08	100S	230E	4304738220	16355			1	GW	P	NENW			1	WSMVD	P	UTU-37355	N2995
BONANZA 1023-8B	08	100S	230E	4304738221	16292			1	GW	P	NWNE			1	WSMVD	P	UTU-37355	N2995
BONANZA 1023-8H	08	100S	230E	4304738222	16353			1	GW	P	SENE			1	WSMVD	P	UTU-37355	N2995
BONANZA 1023-8O	08	100S	230E	4304738305	16392			1	GW	P	SWSE			1	WSMVD	P	UTU-37355	N2995
BONANZA 1023-8B-4	08	100S	230E	4304738914	17019			1	GW	P	NWNE			1	WSMVD	P	UTU-37355	N2995
BONANZA 1023-8A1DS	08	100S	230E	4304750481	17518			1	GW	P	NENE	D		1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8A4BS	08	100S	230E	4304750483	17519			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	4304750485	17521			1	GW	P	NENE	D		1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8O2S	08	100S	230E	4304750495	17511			1	GW	P	NWSE	D		1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8J1S	08	100S	230E	4304750496	17509			1	GW	P	NWSE	D		1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8O3S	08	100S	230E	4304750497	17512			1	GW	P	NWSE	D		1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8J3	08	100S	230E	4304750498	17510			1	GW	P	NWSE			1	WSMVD	P	UTU 37355	N2995
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 1023-8D3DS	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 1023-8A4CS	08	100S	230E	4304751131	18169			1	GW	P	NWNE	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	4304751134	18168			1	GW	P	NWNE	D		1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8E2AS	08	100S	230E	4304751135	18227			1	GW	P	SESW	D		1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8F3BS	08	100S	230E	4304751136	18227			1	GW	P	SESW	D		1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8F4AS	08	100S	230E	4304751137	18224			1	GW	P	SESW	D		1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8F4DS	08	100S	230E	4304751138	18225			1	GW	P	SESW	D		1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8J2CS	08	100S	230E	4304751139	18226			1	GW	P	SESW	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	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
BONANZA 1023-8P2BS	08	100S	230E	4304751147	18153			1	GW	P	NESE	D		1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8P4AS	08	100S	230E	4304751148	18157			1	GW	P	NESE	D		1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8E2DS	08	100S	230E	4304751149	18201			1	GW	P	NWSW	D		1	WSMVD	P	UTU 37355	N2995

BONANZA 1023-8E3DS	08	100S	230E	4304751150	18200			1	GW	P	NWSW	D	1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8K1CS	08	100S	230E	4304751151	18199			1	GW	P	NWSW	D	1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8K4CS	08	100S	230E	4304751152	18198			1	GW	P	NWSW	D	1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8L3DS	08	100S	230E	4304751153	18197			1	GW	P	NWSW	D	1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8M2AS	08	100S	230E	4304751154	18217			1	GW	P	SWSW	D	1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8M2DS	08	100S	230E	4304751155	18216			1	GW	P	SWSW	D	1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8N2BS	08	100S	230E	4304751156	18218			1	GW	P	SWSW	D	1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8O3CS	08	100S	230E	4304751157	18254			1	GW	P	SWSE	D	1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8N3DS	08	100S	230E	4304751158	18215			1	GW	P	SWSW	D	1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8O4AS	08	100S	230E	4304751159	18252			1	GW	P	SWSE	D	1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8P2CS	08	100S	230E	4304751160	18251			1	GW	P	SWSE	D	1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-8P3CS	08	100S	230E	4304751161	18253			1	GW	P	SWSE	D	1	WSMVD	P	UTU 37355	N2995
CANYON FEDERAL 2-9	09	100S	230E	4304731504	1468			1	GW	P	NENW		1	MVRD	P	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	P	U-37355	N2995
BONANZA 9-5	09	100S	230E	4304734866	13892			1	GW	P	SESW		1	MVRD	P	U-37355	N2995
BONANZA 1023-9E	09	100S	230E	4304735620	14931			1	GW	P	SWNW		1	WSMVD	P	U-37355	N2995
BONANZA 1023-9I	09	100S	230E	4304738223	16766			1	GW	P	NESE		1	WSMVD	P	UTU-37355	N2995
BONANZA 1023-9D	09	100S	230E	4304738306	16398			1	GW	P	NWNW		1	WSMVD	P	UTU-37355	N2995
BONANZA 1023-9J	09	100S	230E	4304738811	16989			1	GW	P	NWSE		1	WSMVD	P	UTU-37355	N2995
BONANZA 1023-9B3BS	09	100S	230E	4304750503	17965			1	GW	P	SENE	D	1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-9B3CS	09	100S	230E	4304750504	17968			1	GW	P	SENE	D	1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-9H2BS	09	100S	230E	4304750505	17966			1	GW	P	SENE	D	1	WSMVD	P	UTU 37355	N2995
BONANZA 1023-9H2CS	09	100S	230E	4304750506	17967			1	GW	P	SENE	D	1	WSMVD	P	UTU 37355	N2995
BONANZA 10-2	10	100S	230E	4304734704	13782			1	GW	P	NWNW		1	MVRD	P	U-72028	N2995
BONANZA 1023-10L	10	100S	230E	4304735660	15164			1	GW	P	NWSW		1	WSMVD	P	U-38261	N2995
BONANZA 1023-10E	10	100S	230E	4304738224	16501			1	GW	P	SWNW		1	MVRD	P	UTU-72028	N2995
BONANZA 1023-10C	10	100S	230E	4304738228	16500			1	GW	P	NENW		1	MVRD	P	UTU-72028	N2995
BONANZA 1023-10C-4	10	100S	230E	4304738915	17015			1	GW	P	NENW		1	MVRD	P	UTU-72028	N2995
BONANZA 11-2 ★	11	100S	230E	4304734773	13768			1	GW	P	SWNW		1	MVMCS	P	UTU-38425	N2995
BONANZA 1023-11K	11	100S	230E	4304735631	15132			1	GW	P	NESW		1	WSMVD	P	UTU-38425	N2995
BONANZA 1023-11B	11	100S	230E	4304738230	16764			1	GW	P	NWNE		1	MVRD	P	UTU-38425	N2995
BONANZA 1023-11F	11	100S	230E	4304738232	16797			1	GW	P	SENW		1	MVRD	P	UTU-38425	N2995
BONANZA 1023-11D	11	100S	230E	4304738233	16711			1	GW	P	NWNW		1	MVRD	P	UTU-38425	N2995
BONANZA 1023-11G	11	100S	230E	4304738235	16826			1	GW	P	SWNE		1	MVRD	P	UTU-38425	N2995
BONANZA 1023-11C	11	100S	230E	4304738309	16736			1	GW	P	NENW		1	MVRD	P	UTU-38425	N2995
BONANZA 1023-11J	11	100S	230E	4304738310	16839			1	GW	P	NWSE		1	WSMVD	P	UTU-38424	N2995
BONANZA 1023-11N	11	100S	230E	4304738311	16646			1	GW	P	SESW		1	MVRD	P	UTU-38424	N2995
BONANZA 1023-11M	11	100S	230E	4304738312	16687			1	GW	P	SWSW		1	MVRD	P	UTU-38424	N2995
BONANZA 1023-11L	11	100S	230E	4304738812	16987			1	GW	P	NWSW		1	WSMVD	P	UTU-38424	N2995
NSO FEDERAL 1-12	12	100S	230E	4304730560	1480			1	GW	P	NENW		1	MVRD	P	UTU-38423	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	P	NWNW		1	MVRD	P	UTU-38427	N2995
BONANZA 1023-14C	14	100S	230E	4304738299	16623			1	GW	P	NENW		1	MVRD	P	UTU-38427	N2995
BONANZA FEDERAL 3-15	15	100S	230E	4304731278	8406			1	GW	P	NENW		1	MVRD	P	U-38428	N2995

★ not moved into unit

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

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 38421	
<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>	
<b>7. UNIT or CA AGREEMENT NAME:</b> PONDEROSA	
<b>8. WELL NAME and NUMBER:</b> BONANZA 1023-18E2DS	
<b>9. API NUMBER:</b> 43047504500000	
<b>9. FIELD and POOL or WILDCAT:</b> MATHEW BUTTES	
<b>COUNTY:</b> UINTAH	
<b>STATE:</b> UTAH	

**SUNDRY NOTICES AND REPORTS ON WELLS**

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.

<b>1. TYPE OF WELL</b> Gas Well	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6511
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1624 FNL 1301 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWNW Section: 18 Township: 10.0S Range: 23.0E Meridian: S	

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input checked="" type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 9/16/2011	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The operator has concluded the wellhead/casing repairs on the subject well location. Please see that attached chronological history for details of the operations.

**Accepted by the  
Utah Division of  
Oil, Gas and Mining**

**FOR RECORD ONLY**

July 26, 2012

<b>NAME (PLEASE PRINT)</b> Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	<b>TITLE</b> Regularatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 7/17/2012	

US ROCKIES REGION  
**Operation Summary Report**

Well: BONANZA 1023-18E2DS BLUE		Spud Conductor: 2/10/2010		Spud Date: 2/14/2010				
Project: UTAH-UINTAH			Site: BONANZA 1023-18E PAD			Rig Name No: SWABBCO 6/6		
Event: WELL WORK EXPENSE			Start Date: 9/14/2011			End Date: 9/16/2011		
Active Datum: RKB @5,324.01ft (above Mean Sea Level)				UWI: SE/NW/0/10/S/23/E/18/0/0/6/PM/N/1,624.00/W/0/1,301.00/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
9/14/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA= WELLCONTROL
	7:15 - 17:00	9.75	WO/REP	30		P		FWP= 100# MIRU CONT TUBING W/ TMAC ND WELLHEAD NU BOPS RU FLOOR & TUBING EQUIP CONTROL CSG W/ TMAC UNLAND TUBING LD HNGR POOH W/ 253 JNTS 2-3/8" L-80 TUBING LD BHA RU W/L RIH W/ GUAGE RNG TO 6950' PU RIH W/ 10K CIBP SET @ 6920' DUMP BAIL 2 SKS CEM ON CIBP FILL HOLE W/ TMAC PRESS TEST TO 500# SIW PREP TO REPAIR W/H IN AM
9/15/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA= CSG TONG SAFETY
	7:15 - 17:00	9.75	WO/REP	30		P		SIWP= 0 PSI ND BOPS & W/H PU INT CUTTER RIH CUT CSG BELOW HNGR PU OVERSHOT RIH OVER CSG B/O PUP JNT PU 10' PUP RIH TORQUE TO 6000# 14 ROUNDS PULL 90000# NU TESTER & TEST TO 3500# NU WELLHEAD & BOPS RU FLOOR & TUBING EQUIP PU BIT RIH TAG CEM 6900' PREP TO D/O SIW SDFN
9/16/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA= FOAMING
	7:15 - 17:00	9.75	WO/REP	30		P		EST CIRC W/ FOAMER C/O & DRILL THRU CEM & CIBP @ 6920' CIRC CLEAN CONTINUE TO RIH TAG @ 8050' C/O 30' CONTINUE TO RIH TAG @ 8400' C/O TO 8433' TAG SOLID CIRC CLEAN POOH LD 15 JNTS LAND WELL ON HNGR W/ 253 JNTS EOT @ 7978.90' DROP BALL PUMP OFF BIT @ 0 PSI PU RIH W/ BROACH TO XN NPL RD FLOOR & TUBING EQUIP ND BOPS NU WELLHEAD SIW RD RIG MOVE TO SIDE OF LOC TO MAKE REPAIRS SDFW

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
4304750451	BONANZA 1023-18E3AS		SENW	18	10S	23E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
A	99999	17496	2/10/2010			2/18/10	
<b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <i>WSTMVD</i> SPUD WELL LOCATION ON 2/10/2010 AT 9:00 HRS. <i>BHL = SWNW</i>							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750450	BONANZA 1023-18E2DS		SWNW	18	10S	23E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
A	99999	17497	2/10/2010			2/18/10	
<b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <i>WSTMVD</i> SPUD WELL LOCATION ON 2/10/2010 AT 11:00 HRS. <i>BHL = SWNW</i>							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750448	BONANZA 1023-18D3AS		SWNW	18	10S	23E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
A	99999	17498	2/10/2010			2/18/10	
<b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <i>WSTMVD</i> SPUD WELL LOCATION ON 2/10/2010 AT 13:00 HRS. <i>BHL = NWNW</i>							

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  
FEB 11 2010

ANDY LYTLE

Name (Please Print)

Signature

REGULATORY ANALYST

Title

2/11/2010

Date

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 38421
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  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.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b> PONDEROSA
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> BONANZA 1023-18E2DS
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047504500000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6511  <b>9. FIELD and POOL or WILDCAT:</b> MATHEW BUTTES
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1624 FNL 1301 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWNW Section: 18 Township: 10.0S Range: 23.0E Meridian: S	<b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 11/21/2013	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: <input type="text" value="Production Enhancement"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The operator conducted the following workover/wellbore cleanout on the subject well on 11/21/2013. Please see the attached chronological well history for details. Thank you.

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**  
**FOR RECORD ONLY**  
 January 08, 2014

<b>NAME (PLEASE PRINT)</b> Kay E. Kelly	<b>PHONE NUMBER</b> 720 929 6582	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 12/4/2013	

**US ROCKIES REGION  
Operation Summary Report**

Well: BONANZA 1023-18E2DS BLUE		Spud Conductor: 2/10/2010		Spud Date: 2/14/2010				
Project: UTAH-UINTAH			Site: BONANZA 1023-18E PAD			Rig Name No: SWABBCO 8/8		
Event: WELL WORK EXPENSE			Start Date: 11/18/2013			End Date: 11/21/2013		
Active Datum: RKB @5,324.00usft (above Mean Sea Level)				UWI: SE/NW/0/10/S/23/E/18/0/0/6/PM/N/1,624.00/W/0/1,301.00/0/0				

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
11/18/2013	13:30 - 15:00	1.50	MAINT	30	A	P		MIRU, 140# FCP, CONTROL WELL W/ 30 BBLS T-MAC, ND WH, NU BOP'S, RU FLOOR & TBG EQUIP, SPOT IN TBG TRAILER
	15:00 - 16:30	1.50	MAINT	31	I	P		P/U ON TBG, TBG WAS STUCK, WORK STUCK TBG 30 MINS, TBG CAME FREE, SDFN
11/19/2013	6:45 - 7:00	0.25	MAINT	48		P		HSM, JSA
	7:00 - 13:30	6.50	MAINT	31	I	P		140# FCP, BLOW CSG DN TO FLOWBACK TNK, MIRU SCAN TECH, TOOH & SCAN 2-3/8" TBG, TBG SCAN SHOWED 141 GOOD JTS & 112 BAD JTS, LITE EXTERNAL SCALE FROM JOINT 151-224, HEAVY EXTERNAL SCALE FROM JOINT 225-253, MEDIUM INTERNAL SCALE FROM JOINT 171-253, HEAVY PITTING FROM JOINT 221-253, SEVERAL HOLES WERE FOUND IN JTS 227, 228 & 229, RD SCAN TECH
	13:30 - 17:00	3.50	MAINT	31	I	P		P/U X-LONG 3-7/8" MILL, TIH W/ 220 JTS 2-3/8" TBG TO 7019', SWI, SDFN
11/20/2013	6:45 - 7:00	0.25	MAINT	48		P		HSM, JSA
	7:00 - 16:15	9.25	MAINT	44	D	P		MIRU TECH FOAM, P/U 7 JTS TBG, TAG FILL @ 7240', P/U PWR SWVL, ESTB CIRC IN 30 MINS, C/O FROM 7240' TO 8420' (38' BELOW BTM PERF), CIRC WELL CLEAN FOR 30 MINS, HANG BACK PWR SWVL
	16:15 - 17:00	0.75	MAINT	31	I	P		TOOH & LD 15 JTS ON TRAILER, STAND BACK 20 STANDS IN DERRICK, SWI, SDFN
11/21/2013	6:45 - 7:00	0.25	MAINT	48		P		HSM, JSA
	7:00 - 9:00	2.00	MAINT	31	I	P		TOOH W/ 2-3/8" TBG, LD X-LONG 3-7/8" MILL
	9:00 - 11:30	2.50	MAINT	31	I	P		MU LSN, TIH W/ 2-3/8" TBG, BROACH TBG TO LSN, LAND TBG ON HANGER W/ 252 JTS TBG
	11:30 - 15:00	3.50	MAINT	30	C	P		ND BOP'S, NU WH, SWI, RDMO
								KB 13'
								HANGER 1.00'
								211 JTS 2-3/8" L-80 TBG 6657.34'
								6' PUP JNT 6.20'
								41 JTS 2-3/8" J-55 TBG 1291.85'
								LSN .69'
								EOT @ 7970.08'
								TWLTR 80 BBLS