API Well Number: 43047520740000

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

FORM 3

AMENDED REPORT ☐

## APPLICATION FOR PERMIT TO DRILL

**1. WELL NAME and NUMBER**
BONANZA 1023-5L3BS

**2. TYPE OF WORK**
DRILL NEW WELL ■ REENTER P&A WELL ☐ DEEPEN WELL ☐

**3. FIELD OR WILDCAT**
NATURAL BUTTES

**4. TYPE OF WELL**
Gas Well Coalbed Methane Well: NO

**5. UNIT or COMMUNITIZATION AGREEMENT NAME**

**6. NAME OF OPERATOR**
KERR-MCGEE OIL & GAS ONSHORE, L.P.

**7. OPERATOR PHONE**
720 929-6515

**8. ADDRESS OF OPERATOR**
P.O. Box 173779, Denver, CO, 80217

**9. OPERATOR E-MAIL**
julie.jacobson@anadarko.com

**10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)**
UTU33433

**11. MINERAL OWNERSHIP**
FEDERAL ■ INDIAN ☐ STATE ☐ FEE ☐

**12. SURFACE OWNERSHIP**
FEDERAL ■ INDIAN ☐ STATE ☐ FEE ☐

**13. NAME OF SURFACE OWNER (if box 12 = 'fee')**

**14. SURFACE OWNER PHONE (if box 12 = 'fee')**

**15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')**

**16. SURFACE OWNER E-MAIL (if box 12 = 'fee')**

**17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')**

**18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS**
YES ■ (Submit Commingling Application) NO ☐

**19. SLANT**
VERTICAL ☐ DIRECTIONAL ■ HORIZONTAL ☐

| 20. LOCATION OF WELL | FOOTAGES | QTR-QTR | SECTION | TOWNSHIP | RANGE | MERIDIAN |
|---|---|---|---|---|---|---|
| LOCATION AT SURFACE | 2654 FNL 136 FWL | SWNW | 5 | 10.0 S | 23.0 E | S |
| Top of Uppermost Producing Zone | 1936 FSL 182 FWL | NWSW | 5 | 10.0 S | 23.0 E | S |
| At Total Depth | 1936 FSL 182 FWL | NWSW | 5 | 10.0 S | 23.0 E | S |

**21. COUNTY**
UINTAH

**22. DISTANCE TO NEAREST LEASE LINE (Feet)**
182

**23. NUMBER OF ACRES IN DRILLING UNIT**
1923

**25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)**
634

**26. PROPOSED DEPTH**
MD: 8501 TVD: 8436

**27. ELEVATION - GROUND LEVEL**
5224

**28. BOND NUMBER**
WYB000291

**29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE**
43-8496

### Hole, Casing, and Cement Information

| String | Hole Size | Casing Size | Length | Weight | Grade & Thread | Max Mud Wt. | Cement | Sacks | Yield | Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| Surf | 11 | 8.625 | 0 - 2260 | 28.0 | J-55 LT&C | 0.2 | Type V | 180 | 1.15 | 15.8 |
| | | | | | | | Class G | 270 | 1.15 | 15.8 |
| Prod | 7.875 | 4.5 | 0 - 8501 | 11.6 | I-80 LT&C | 12.5 | Premium Lite High Strength | 270 | 3.38 | 11.0 |
| | | | | | | | 50/50 Poz | 1140 | 1.31 | 14.3 |

### ATTACHMENTS

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

- ✔ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
- ✔ COMPLETE DRILLING PLAN
- ☐ AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)
- ☐ FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
- ✔ DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)
- ✔ TOPOGRAPHICAL MAP

**NAME** Gina Becker | **TITLE** Regulatory Analyst II | **PHONE** 720 929-6086

**SIGNATURE** | **DATE** 10/17/2011 | **EMAIL** gina.becker@anadarko.com

**API NUMBER ASSIGNED**
43047520740000

**APPROVAL**
Permit Manager

**RECEIVED: October 26, 2011**

# Kerr-McGee Oil & Gas Onshore. L.P.

**BONANZA 1023-5L3BS**

| | | |
|---|---|---|
| Surface: | 2654 FNL / 136 FWL | SWNW |
| BHL: | 1936 FSL / 182 FWL | NWSW |

Section 5 T10S R23E

Uintah County, Utah
Mineral Lease: UTU-33433

**ONSHORE ORDER NO. 1**

**DRILLING PROGRAM**

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

| Formation | Depth | Resource |
|---|---|---|
| Uinta | 0 - Surface | |
| Green River | 1201 | |
| Birds Nest | 1458 | Water |
| Mahogany | 1811 | Water |
| Wasatch | 4178 | Gas |
| Mesaverde | 6301 | Gas |
| MVU2 | 7261 | Gas |
| MVL1 | 7798 | Gas |
| TVD | 8436 | |
| TD | 8501 | |

**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



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**7. Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 8436' TVD, approximately equals 5,399 psi 0.64 psi/ft = actual bottomhole gradient

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

Maximum anticipated surface pressure equals approximately 3,531 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

**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.



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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 for the first 200 feet, then will drill a 11inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 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 8-5/8 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



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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.

**Variance for FIT Requirements**
KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

**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.



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# KERR-McGEE OIL & GAS ONSHORE LP

## DRILLING PROGRAM

| | | | |
|---|---|---|---|
| COMPANY NAME | KERR-McGEE OIL & GAS ONSHORE LP | DATE | October 14, 2011 |
| WELL NAME | **BONANZA 1023-5L3BS** | TD | 8,436' TVD 8,501' MD |
| FIELD | Natural Buttes | COUNTY Uintah | STATE Utah |
| FINISHED ELEVATION | 5224 | | |
| SURFACE LOCATION | SWNW 2654 FNL 136 FWL Sec 5 T 10S R 23E | | |
| | Latitude: 39.977957 Longitude: -109.359637 NAD 83 | | |
| BTM HOLE LOCATION | NWSW 1936 FSL 182 FWL Sec 5 T 10S R 23E | | |
| | Latitude: 39.976008 Longitude: -109.359472 NAD 83 | | |
| OBJECTIVE ZONE(S) | Wasatch/Mesaverde | | |
| ADDITIONAL INFO | Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept. | | |

| GEOLOGICAL | | | MECHANICAL | | |
|---|---|---|---|---|---|
| LOGS | FORMATION TOPS | DEPTH | HOLE SIZE | CASING SIZE | MUD WEIGHT |
| | | 40' | | 14" | |
| | | 200' | 12-1/4 | 8-5/8", 28#, IJ-55, LTC | Air mist |
| | | | 11' | 8-5/8", 28#, IJ-55, LTC | Air mist |
| | Green River @ | 1,201' | | | |
| | Top of Birds Nest @ | 1,458' | | | |
| | Mahogany @ | 1,811' | | | |
| | Preset f/ GL @ 2,260' TVD | | | | |
| | Wasatch @ | 4,178' | | | |
| Mud logging program TBD<br>Cased hole logging program from TD - surf csg | | | 7-7/8" | 4-1/2" 11.6# I-80 Ultra DQX/LTC csg | Water / Fresh Water Mud 8.3-12.5 ppg |
| | Mverde @ | 6,301' TVD | | | |
| | MVU2 @ | 7,261' TVD | | | |
| | MVU1 @ | 7,798' TVD | | | |
| Max anticipated Mud required 12.5 ppg | TD @ | 8,436' TVD<br>8,501' MD | | | |

**All water flows encountered while drilling will be reported to the appropriate agencies.**

Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.



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API Well Number: 43047520740000

# KERR-McGEE OIL & GAS ONSHORE LP

## DRILLING PROGRAM

### CASING PROGRAM

| | SIZE | INTERVAL | | | WT. | GR. | CPLG. | DESIGN FACTORS BURST | COLLAPSE | COLLAPSE LTC | TENSION DQX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CONDUCTOR | 14" | 0-40' | | | | | | | | | |
| | | | | | | | | 3,390 | 1,880 | 348,000 | N/A |
| SURFACE | 8-5/8" | 0 | to | 2,260 | 28.00 | IJ-55 | LTC | 2.39 | 1.78 | 6.28 | N/A |
| | | | | | | | | 7,780 | 6,350 | 223,000 | 267,035 |
| PRODUCTION | 4-1/2" | 0 | to | 5,000 | 11.60 | I-80 | DQX | 1.11 | 1.16 | | 3.35 |
| | 4-1/2" | 5,000 | to | 8,501' | 11.60 | I-80 | LTC | 1.11 | 1.16 | 6.79 | |

**Surface Casing:**

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

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

**Production casing:**

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient

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

### CEMENT PROGRAM

| | | FT. OF FILL | DESCRIPTION | SACKS | EXCESS | WEIGHT | | YIELD |
|---|---|---|---|---|---|---|---|---|
| SURFACE | LEAD | 500' | Premium cmt + 2% CaCl | 180 | 60% | 15.80 | | 1.15 |
| **Option 1** | | | + 0.25 pps flocele | | | | | |
| | TOP OUT CMT (6 jobs) | 1,200' | 20 gals sodium silicate + Premium cmt | 270 | 0% | 15.80 | | 1.15 |
| | | | + 2% CaCl + 0.25 pps flocele | | | | | |
| SURFACE | | **NOTE: If well will circulate water to surface, option 2 will be utilized** | | | | | | |
| **Option 2** | LEAD | 1,760' | 65/35 Poz + 6% Gel + 10 pps gilsonite | 160 | 35% | 11.00 | | 3.82 |
| | | | + 0.25 pps Flocele + 3% salt BWOW | | | | | |
| | TAIL | 500' | Premium cmt + 2% CaCl | 150 | 35% | 15.80 | | 1.15 |
| | | | + 0.25 pps flocele | | | | | |
| | TOP OUT CMT | as required | Premium cmt + 2% CaCl | as req. | | 15.80 | | 1.15 |
| PRODUCTION | LEAD | 3,671' | Premium Lite II +0.25 pps | 270 | 20% | 11.00 | | 3.38 |
| | | | celloflake + 5 pps gilsonite + 10% gel | | | | | |
| | | | + 0.5% extender | | | | | |
| | TAIL | 4,830' | 50/50 Poz/G + 10% salt + 2% gel | 1,140 | 35% | 14.30 | | 1.31 |
| | | | + 0.1% R-3 | | | | | |

*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:** Nick Spence / Danny Showers / Chad Loesel **DATE:**

**DRILLING SUPERINTENDENT:** Kenny Gathings / Lovel Young **DATE:**



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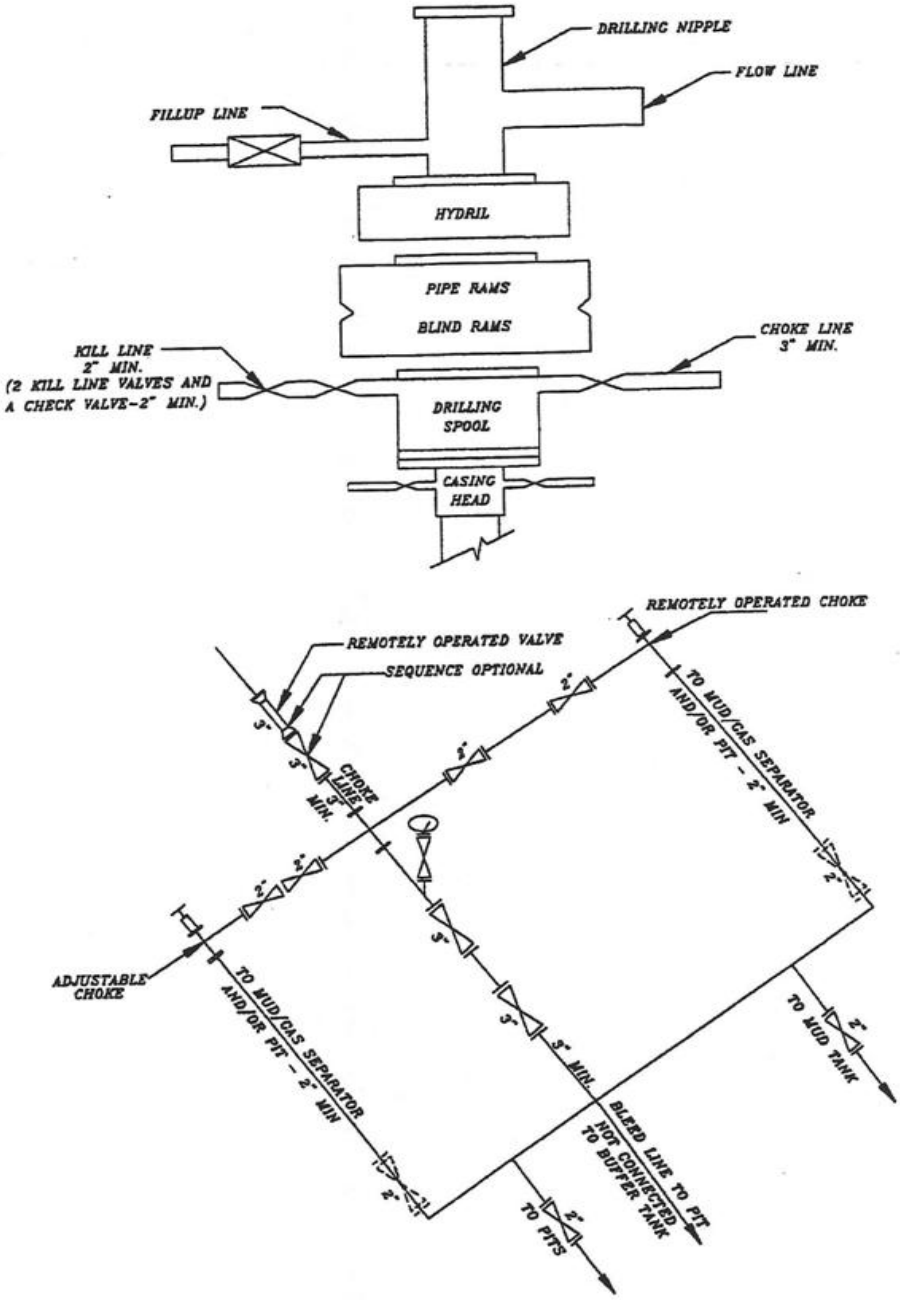
**EXHIBIT A**
**BONANZA 1023-5L3BS**




**SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK**

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

Found 1977 Brass Cap

N89°59'W - 40.03 (G.L.O.)
N89°55'38"E - 2641.42' (Meas.)

Found 1977 Brass Cap

S89°56'W - 39.93 (G.L.O.)
S89°52'21"W - 2635.29' (Meas.)

Found 1977 Brass Cap

N00°02'W - 40.28 (G.L.O.)
N00°06'02"W - 2658.77' (Meas.)
20.285 (G.L.O.)
19.995 (G.L.O.)

LOT 4 | LOT 3 | LOT 2 | LOT 1

20.24 (G.L.O)
19.93 (G.L.O.)
N00°02'39"E - 2651.50' (Meas.)
N00°07'E - 40.17 (G.L.O.)

2654'

**WELL LOCATION:**
**BONANZA 1023-5L3BS**
ELEV. UNGRADED GROUND = 5224.0'

136'

Corner position determined from prior survey (not monumented)

Well Surface Position

5

Found 1995 Aluminum Cap

182'

Bottom of Hole

BONANZA 1023-5L3BS (Surface Position)
NAD 83 LATITUDE = 39.977957° (39° 58' 40.644")
LONGITUDE = 109.359637° (109° 21' 34.694")
NAD 27 LATITUDE = 39.977991° (39° 58' 40.767")
LONGITUDE = 109.358958° (109° 21' 32.248")

BONANZA 1023-5L3BS (Bottom Hole)
NAD 83 LATITUDE = 39.976008° (39° 58' 33.630")
LONGITUDE = 109.359472° (109° 21' 34.100")
NAD 27 LATITUDE = 39.976042° (39° 58' 33.753")
LONGITUDE = 109.358793° (109° 21' 31.654")

N00°02'W - 40.04 (G.L.O.)
N00°06'19"W - 2641.93' (Measured)

1936'

N00°00'38"W - 2638.25' (Meas.)
N00°04'E - 39.97 (G.L.O.)

Found 1995 Aluminum Cap in Pile of Stones.

**S89°50'12"W (Basis of Bearings)**
2667.08' (Measured)
S89°54'W - 40.41 (G.L.O.)

Found 1995 Aluminum Cap in Pile of Stones

S89°43'23"W - 2598.59' (Meas.)
S89°48'W - 39.37 (G.L.O.)

Found 1995 Aluminum Cap in Pile of Stones

1000' 500' 0' 1000'
SCALE

N

NOTES:

▲ = Section Corners Located

1. Well footages are measured at right angles to the Section Lines.
2. G.L.O. distances are shown in feet or chains. 1 chain = 66 feet.
3. The Bottom of hole bears S03°47'43"E 711.41' from the Surface Position.
4. Bearings are based on Global Positioning Satellite observations.
5. Basis of elevation is Tri-Sta "Two Water" located in the NW $\frac{1}{4}$ of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.

SURVEYOR'S 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.

PROFESSIONAL LAND SURVEYOR No.6028691 JOHN R STAUGH STATE OF UTAH

PROFESSIONAL LAND SURVEYOR
REGISTRATION No. 6028691
STATE OF UTAH

**Kerr-McGee Oil & Gas Onshore, LP**
**1099 18th Street - Denver, Colorado 80202**

**WELL PAD: BONANZA 1023-5L**

**BONANZA 1023-5L3BS**
**WELL PLAT**
**1936' FSL, 182' FWL (Bottom Hole)**
**NW $\frac{1}{4}$ SW $\frac{1}{4}$ OF SECTION 5, T10S, R23E, S.L.B.&M., UINTAH COUNTY, UTAH.**

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

**TIMBERLINE** (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

| | | |
|---|---|---|
| DATE SURVEYED: 03-11-10 | SURVEYED BY: D.J.S. | SHEET NO: |
| DATE DRAWN: 03-13-10 | DRAWN BY: E.M.S. | 4 |
| SCALE: 1" = 1000' | Date Last Revised: 06-14-10 E.M.S. | 4 OF 16 |

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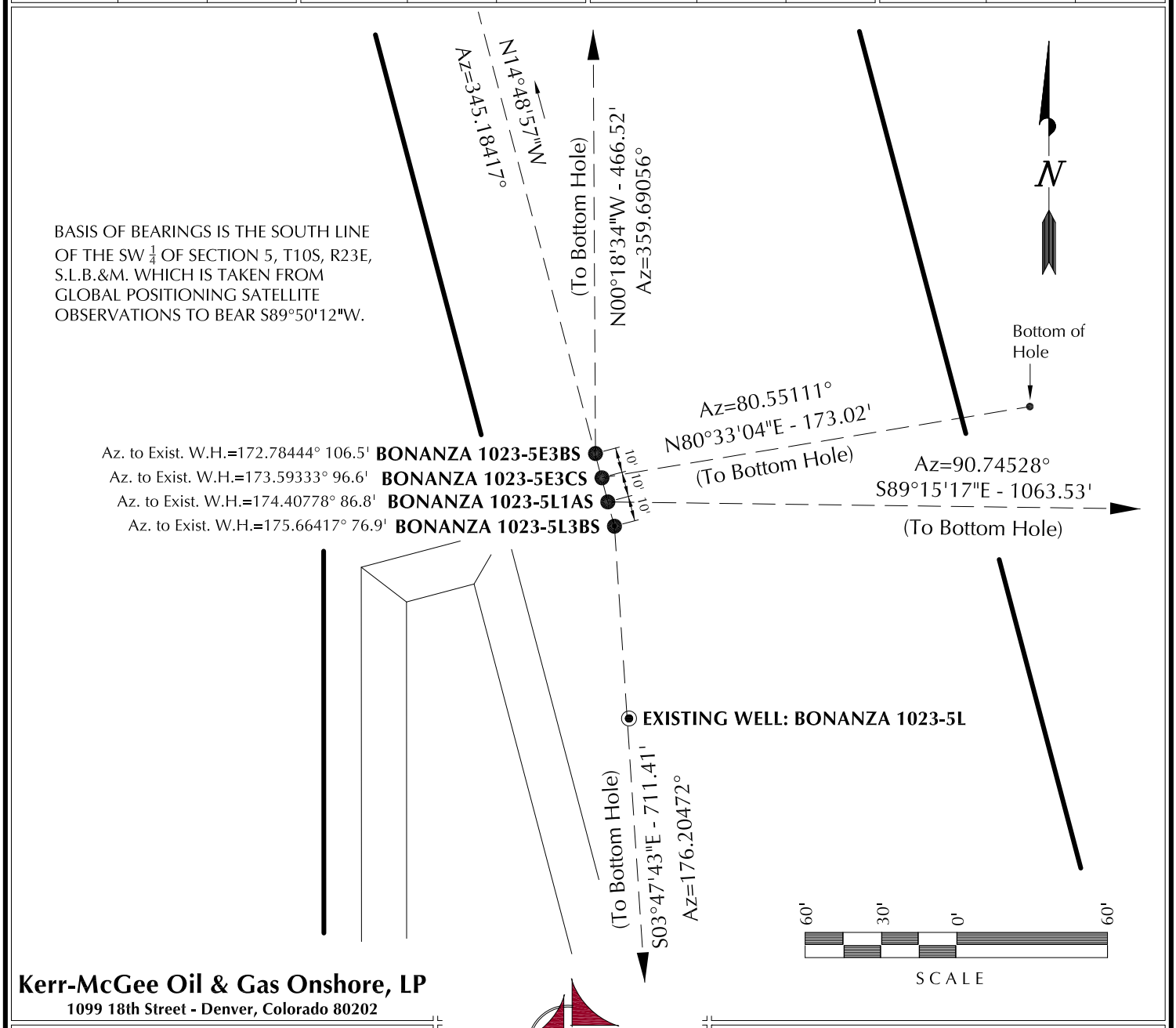
API Well Number: 43047520740000

| WELL NAME | SURFACE POSITION | | | | | BOTTOM HOLE | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | NAD83 | | NAD27 | | | NAD83 | | NAD27 | | |
| | LATITUDE | LONGITUDE | LATITUDE | LONGITUDE | FOOTAGES | LATITUDE | LONGITUDE | LATITUDE | LONGITUDE | FOOTAGES |
| **BONANZA 1023-5E3BS** | 39°58'40.930"<br>39.978036° | 109°21'34.791"<br>109.359664° | 39°58'41.053"<br>39.978070° | 109°21'32.345"<br>109.358985° | 2625' FNL<br>129' FWL | 39°58'45.539"<br>39.979316° | 109°21'34.816"<br>109.359671° | 39°58'45.662"<br>39.979351° | 109°21'32.370"<br>109.358992° | 2159' FNL<br>127' FWL |
| **BONANZA 1023-5E3CS** | 39°58'40.835"<br>39.978010° | 109°21'34.757"<br>109.359655° | 39°58'40.958"<br>39.978044° | 109°21'32.312"<br>109.358976° | 2635' FNL<br>131' FWL | 39°58'41.113"<br>39.978087° | 109°21'32.565"<br>109.359046° | 39°58'41.236"<br>39.978121° | 109°21'30.120"<br>109.358367° | 2607' FNL<br>302' FWL |
| **BONANZA 1023-5L1AS** | 39°58'40.740"<br>39.977983° | 109°21'34.728"<br>109.359647° | 39°58'40.862"<br>39.978017° | 109°21'32.282"<br>109.358967° | 2645' FNL<br>134' FWL | 39°58'40.590"<br>39.977942° | 109°21'21.071"<br>109.355853° | 39°58'40.713"<br>39.977976° | 109°21'18.626"<br>109.355174° | 2639' FSL<br>1197' FWL |
| **BONANZA 1023-5L3BS** | 39°58'40.644"<br>39.977957° | 109°21'34.694"<br>109.359637° | 39°58'40.767"<br>39.977991° | 109°21'32.248"<br>109.358958° | 2654' FNL<br>136' FWL | 39°58'33.630"<br>39.976008° | 109°21'34.100"<br>109.359472° | 39°58'33.753"<br>39.976042° | 109°21'31.654"<br>109.358793° | 1936' FSL<br>182' FWL |
| **BONANZA 1023-5L** | 39°58'39.886"<br>39.977746° | 109°21'34.620"<br>109.359617° | 39°58'40.009"<br>39.977780° | 109°21'32.175"<br>109.358937° | 2569' FSL<br>142' FWL | | | | | |

**RELATIVE COORDINATES** - From Surface Position to Bottom Hole

| WELL NAME | NORTH | EAST | WELL NAME | NORTH | EAST | WELL NAME | NORTH | EAST | WELL NAME | NORTH | EAST |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **BONANZA 1023-5E3BS** | 466.5' | -2.5' | **BONANZA 1023-5E3CS** | 28.4' | 170.7' | **BONANZA 1023-5L1AS** | -13.8' | 1,063.4' | **BONANZA 1023-5L3BS** | -709.8' | 47.1' |




**Kerr-McGee Oil & Gas Onshore, LP**
1099 18th Street - Denver, Colorado 80202

## WELL PAD - BONANZA 1023-5L

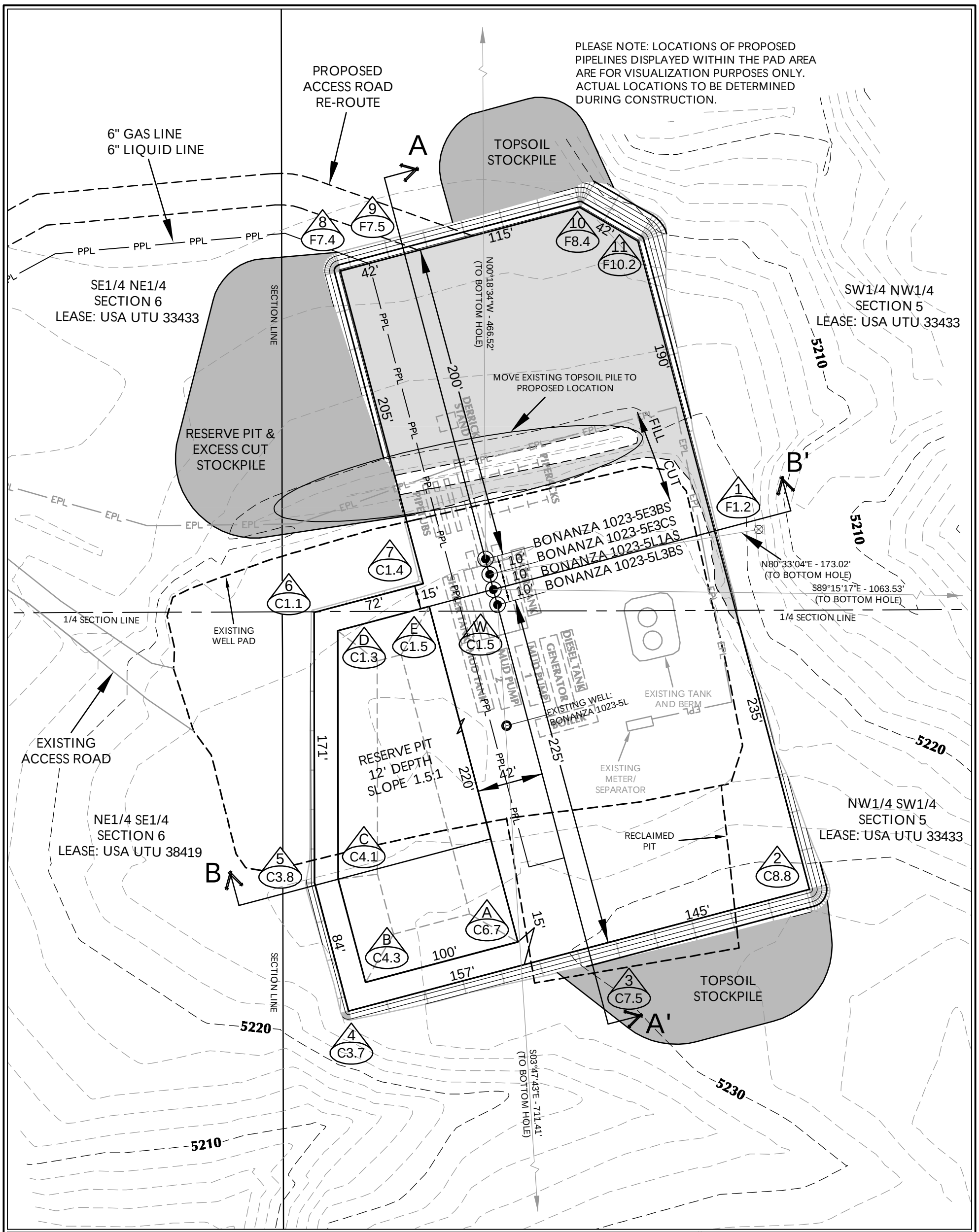
**WELL PAD INTERFERENCE PLAT**
**WELLS - BONANZA 1023-5E3BS, BONANZA 1023-5E3CS, BONANZA 1023-5L1AS & BONANZA 1023-5L3BS**
**LOCATED IN SECTION 5, T10S, R23E, S.L.B.&M., UINTAH COUNTY, UTAH.**

609
CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

**TIMBERLINE** (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

| | | |
|---|---|---|
| DATE SURVEYED: 03-11-10 | SURVEYED BY: D.J.S. | SHEET NO: |
| DATE DRAWN: 03-13-10 | DRAWN BY: E.M.S. | 5 |
| SCALE: 1" = 60' | Date Last Revised: 06-14-10 E.M.S. | 5 OF 16 |

RECEIVED: October 17, 2011




## WELL PAD - BONANZA 1023-5L DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5224.1'
FINISHED GRADE ELEVATION = 5222.6'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 2.77 ACRES
TOTAL DAMAGE AREA = 5.13 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

**WELL PAD QUANTITIES**

TOTAL CUT FOR WELL PAD = 8,268 C.Y.
TOTAL FILL FOR WELL PAD = 6,895 C.Y.
TOPSOIL @ 6" DEPTH = 1,312 C.Y.
EXCESS MATERIAL = 1,373 C.Y.

**RESERVE PIT QUANTITIES**

TOTAL CUT FOR RESERVE PIT
+/- 6,190 CY
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 23,340 BARRELS

**WELL PAD LEGEND**

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE

HORIZONTAL 0 30 60 1" = 60'
2' CONTOURS

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - BONANZA 1023-5L

WELL PAD - LOCATION LAYOUT
BONANZA 1023-5E3BS,
BONANZA 1023-5E3CS, BONANZA 1023-5L1AS
& BONANZA 1023-5L3BS
LOCATED IN SECTION 5, T10S, R23E,
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
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TIMBERLINE (435) 789-1365
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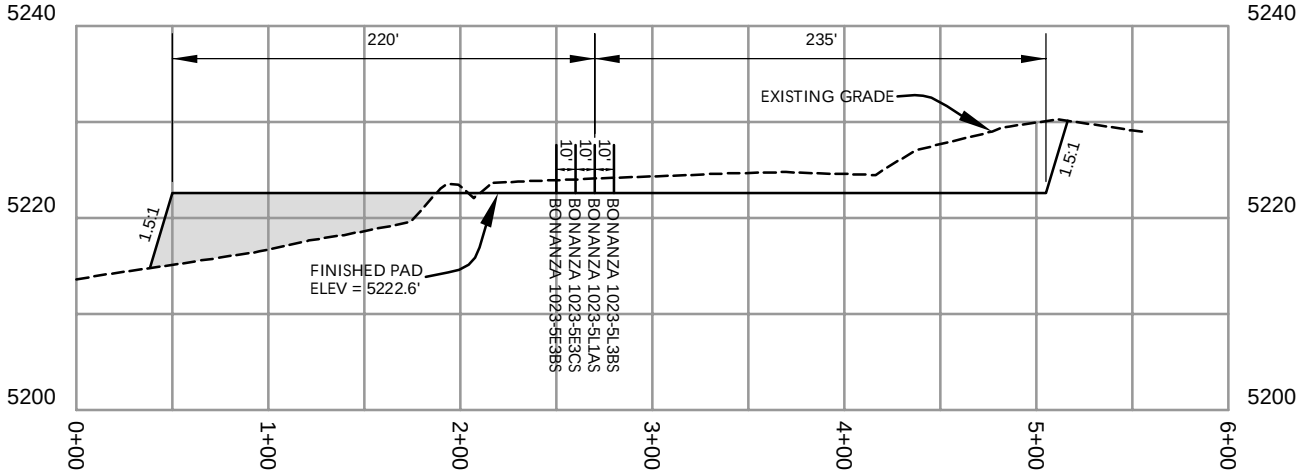
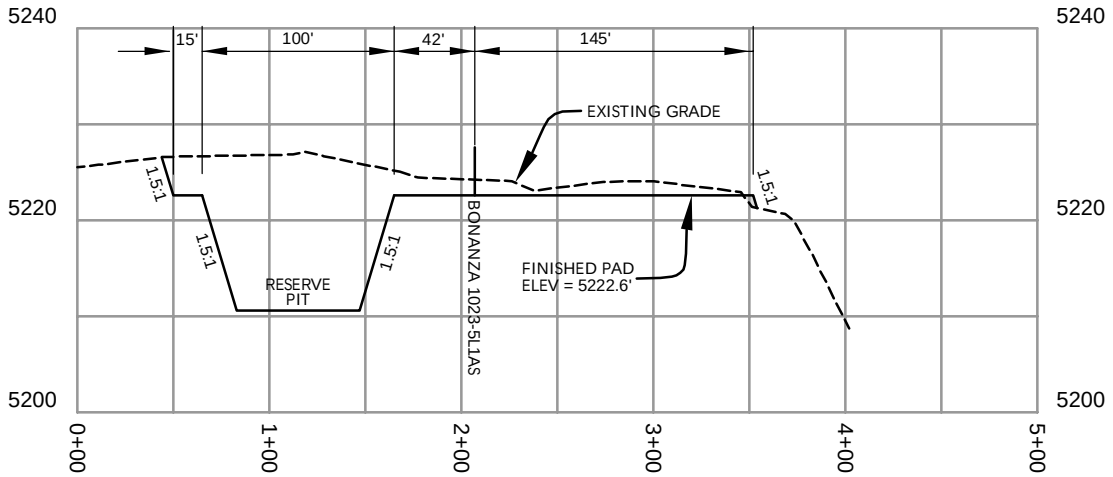
209 NORTH 300 WEST - VERNAL, UTAH 84078

| Scale: 1"=60' | Date: 3/30/10 | SHEET NO: |
|---|---|---|
| REVISED: | SEA 6/25/10 | 6 OF 16 |

RECEIVED: October 17, 2011




## CROSS SECTION A-A'




## CROSS SECTION B-B'

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - BONANZA 1023-5L

WELL PAD - CROSS SECTIONS
BONANZA 1023-5E3BS,
BONANZA 1023-5E3CS, BONANZA 1023-5L1AS
& BONANZA 1023-5L3BS
LOCATED IN SECTION 5, T10S, R23E,
S.L.B.&M., UINTAH COUNTY, UTAH

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CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

HORIZONTAL 0 50 100 1" = 100'
VERTICAL 0 10 20 1" = 20'

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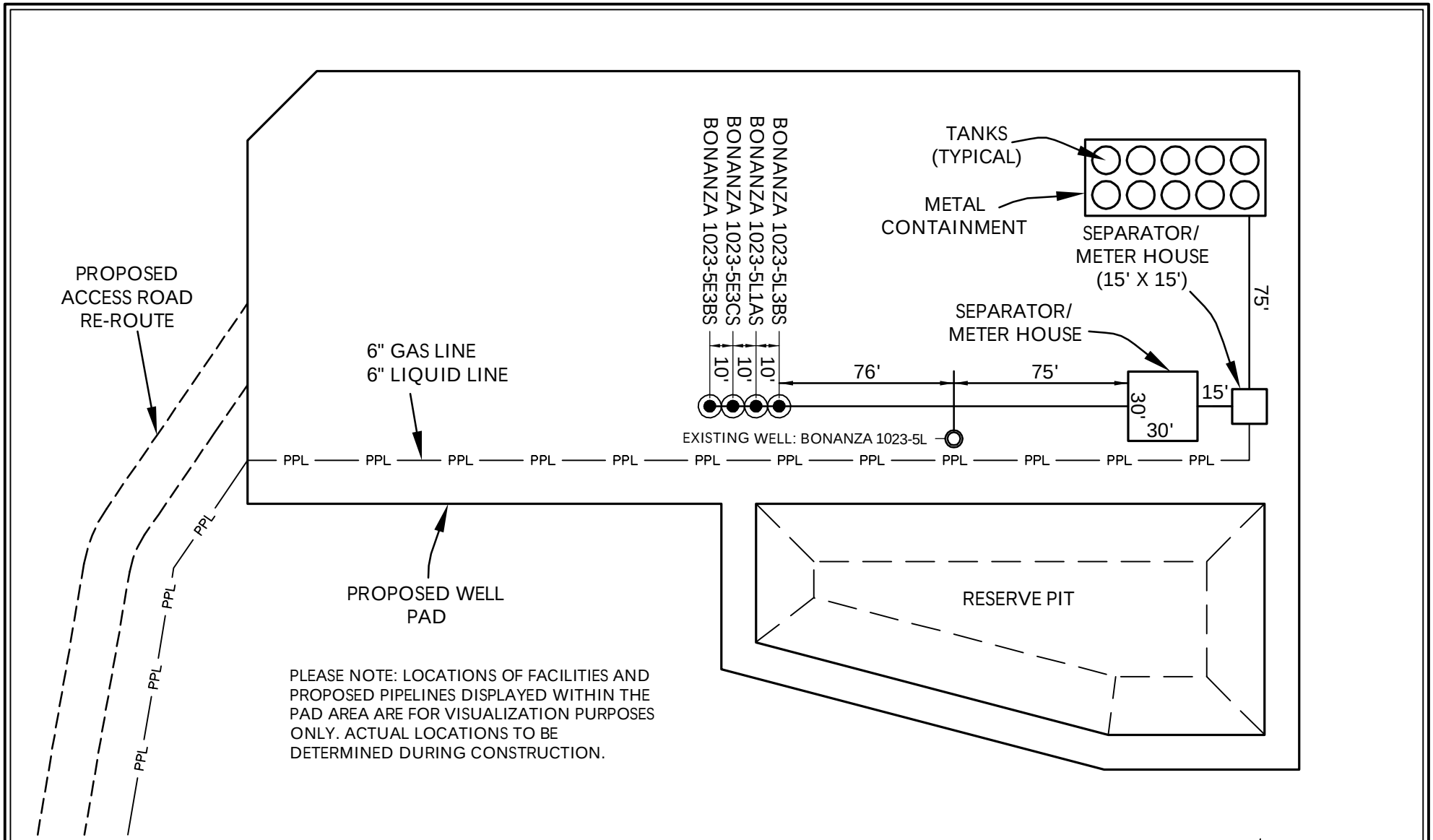
209 NORTH 300 WEST - VERNAL, UTAH 84078

Scale: 1"=100' | Date: 3/30/10 | SHEET NO: 7
REVISED: SEA 6/25/10 | 7 OF 16

K:\ANADARKO\2010_11_BON_FOCUS_SEC_5-1023\DWGS\BONANZA 1023-5L\1023-5L_20100601.dwg, 7/28/2010 10:12:52 AM

RECEIVED: October 17, 2011




PLEASE NOTE: LOCATIONS OF FACILITIES AND PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - BONANZA 1023-5L

WELL PAD - FACILITIES DIAGRAM
BONANZA 1023-5E3BS,
BONANZA 1023-5E3CS, BONANZA 1023-5L1AS
& BONANZA 1023-5L3BS
LOCATED IN SECTION 5, T10S, R23E,
S.L.B.&M., UINTAH COUNTY, UTAH

609
CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE

HORIZONTAL 0 30' 60' 1" = 60'

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

| Scale: 1"=60' | Date: 3/30/10 | SHEET NO: |
|---|---|---|
| REVISED: | SEA 6/25/10 | 8 8 OF 16 |

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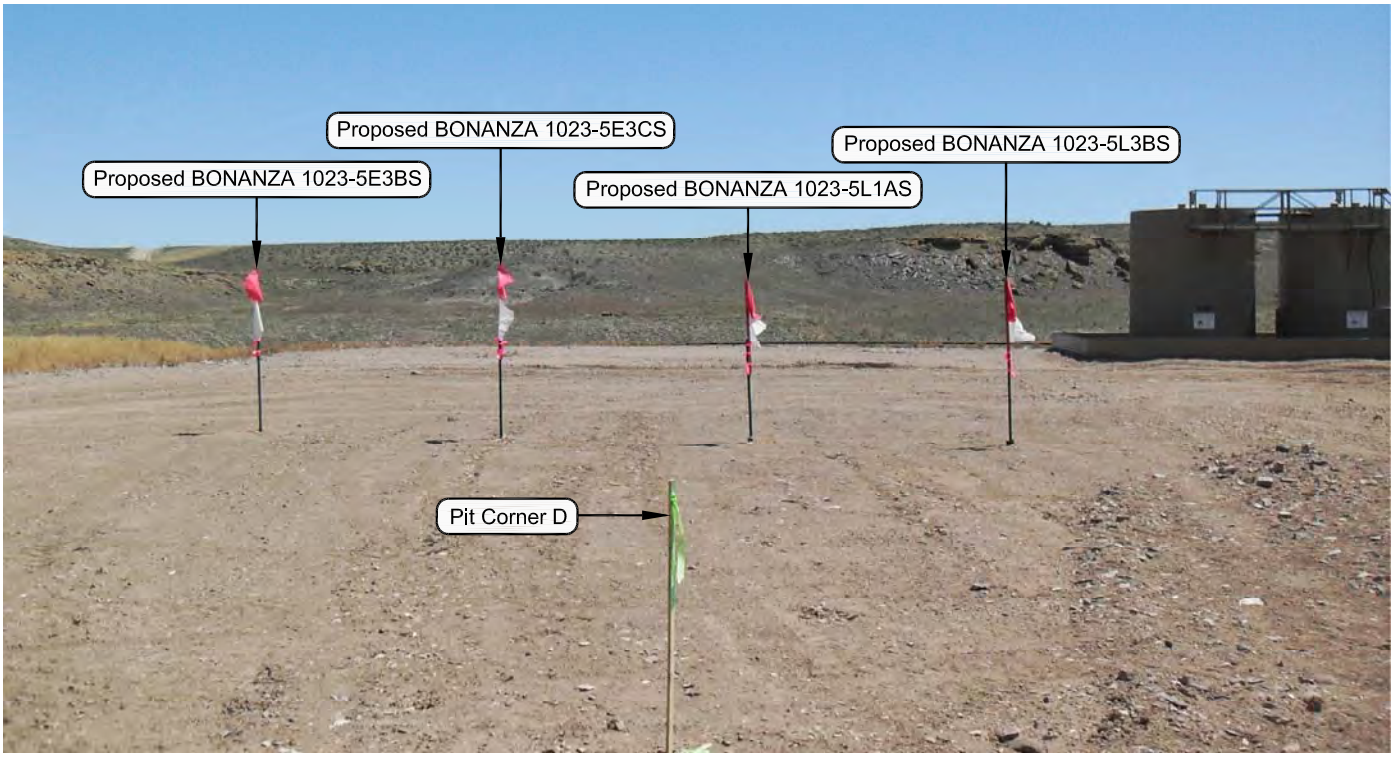


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE CAMERA ANGLE: NORTHEASTERLY

PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD CAMERA ANGLE: NORTHEASTERLY

**Kerr-McGee Oil & Gas Onshore, LP**
1099 18th Street - Denver, Colorado 80202

**WELL PAD - BONANZA 1023-5L**

LOCATION PHOTOS
BONANZA 1023-5E3BS, BONANZA 1023-5E3CS,
BONANZA 1023-5L1AS & BONANZA 1023-5L3BS
LOCATED IN SECTION 5, T10S, R23E,
S.L.B.&M., UINTAH COUNTY, UTAH.

609
CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

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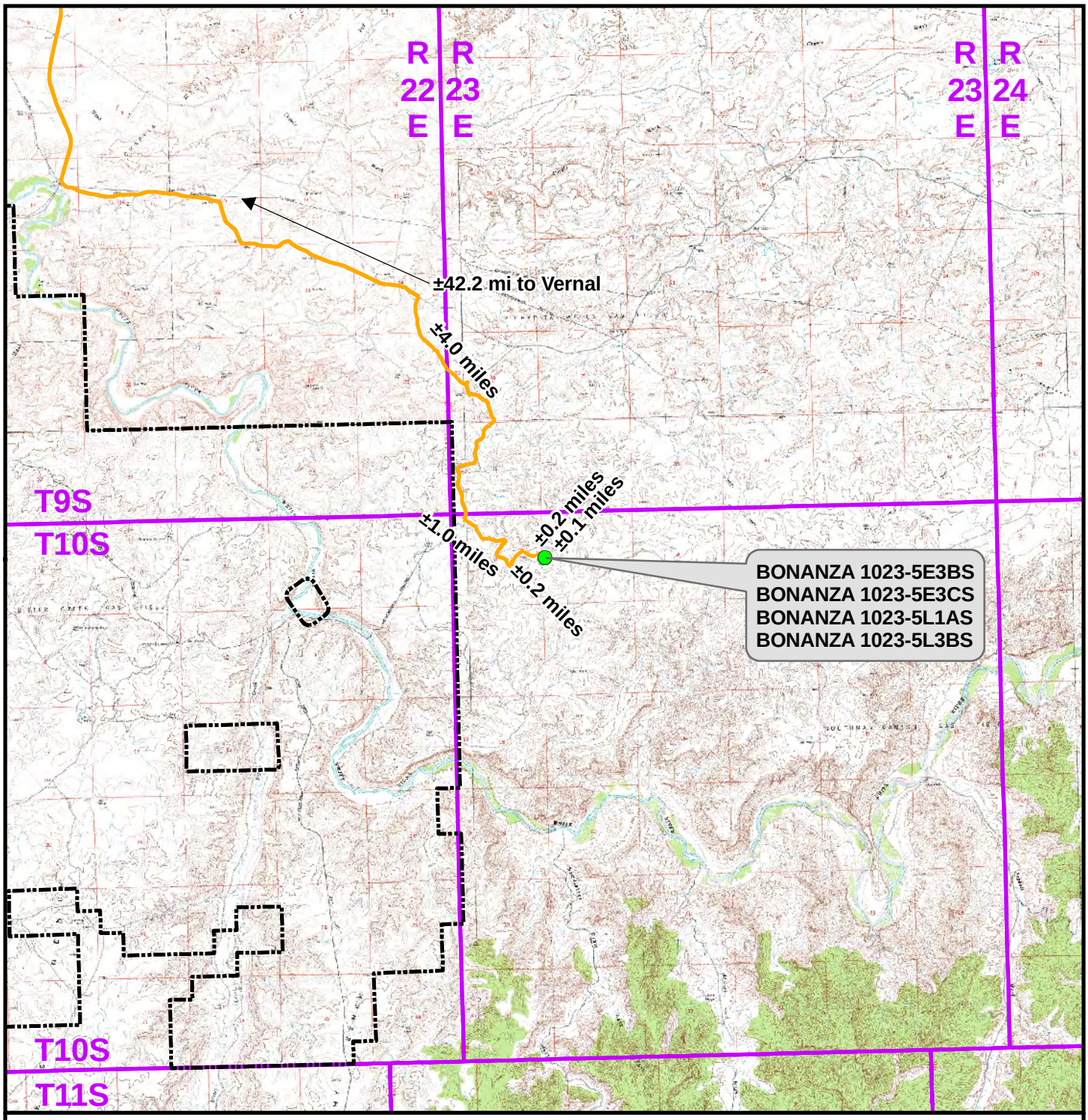
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

| | | |
|---|---|---|
| DATE PHOTOS TAKEN: 03-11-10 | PHOTOS TAKEN BY: D.J.S. | SHEET NO: |
| DATE DRAWN: 03-13-10 | DRAWN BY: E.M.S. | 9 |
| Date Last Revised: 06-14-10 E.M.S. | | 9 OF 16 |

RECEIVED: October 17, 2011




**Legend**

Distance From Well Pad - BONANZA 1023-5L To Unit Boundary: ±5,365ft

- Proposed Well Location
- Natural Buttes Unit Boundary
- Access Route - Proposed

**Kerr-McGee Oil & Gas Onshore, LP**
1099 18th Street, Denver, Colorado 80202

**WELL PAD - BONANZA 1023-5L**

TOPO A
BONANZA 1023-5E3BS, BONANZA 1023-5E3CS,
BONANZA 1023-5L1AS & BONANZA 1023-5L3BS
LOCATED IN SECTION 5, T10S, R23E
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

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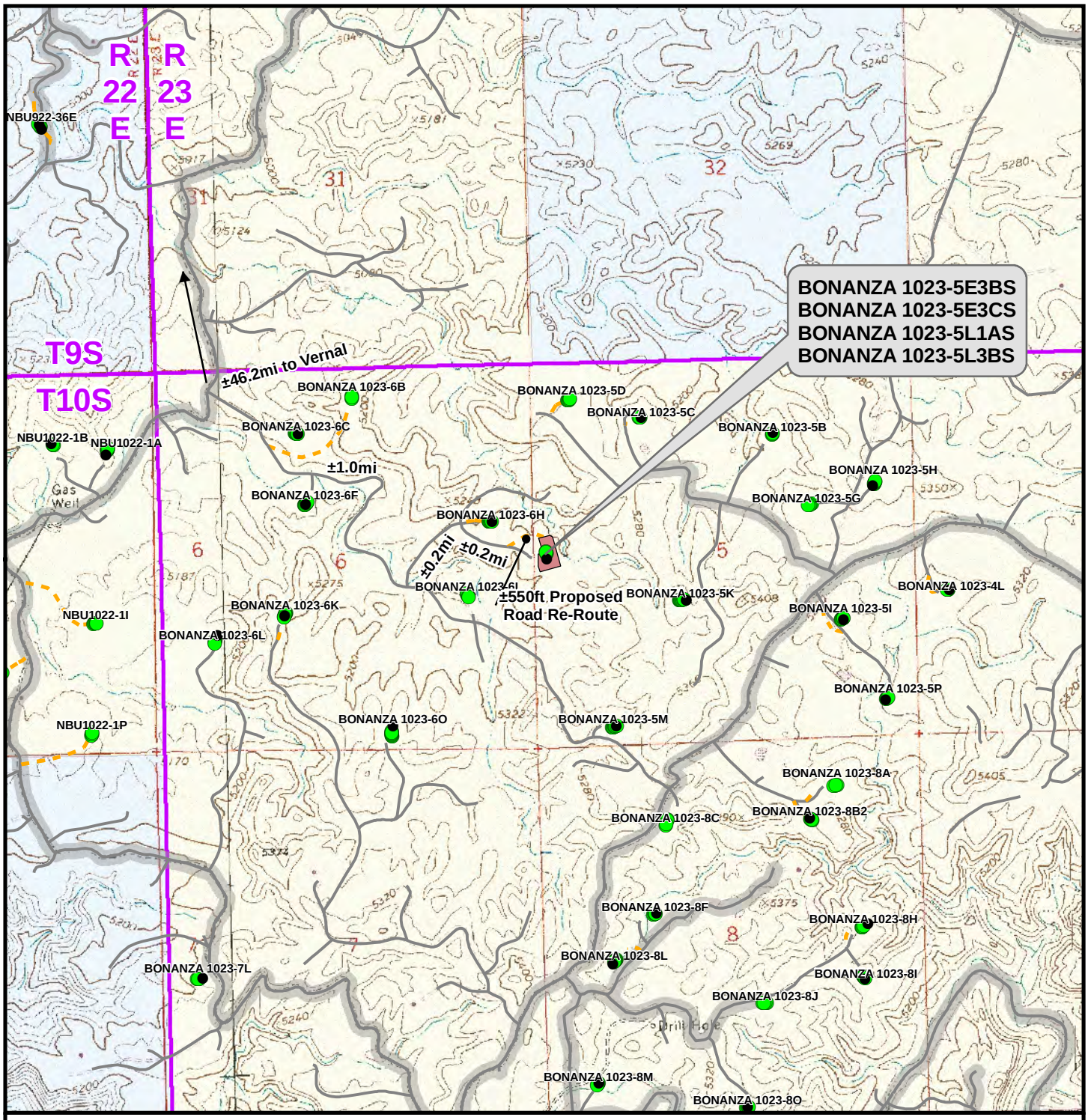
| | | | |
|---|---|---|---|
| Scale: 1:100,000 | NAD83 USP Central | | Sheet No: 10 |
| Drawn: CPS | Date: 30 Mar 2010 | | 10 of 16 |
| Revised: CPS | Date: 25 June 2010 | | |

RECEIVED: October 17, 2011

API Well Number: 43047520740000




Total Proposed Road Re-Route Length: ±550ft

**Legend**

- Well - Proposed
- Well - Existing
- Well Pad
- Road - Proposed
- Road - Existing
- County Road
- Bureau of Land Management
- Indian Reservation
- State
- Private

**Kerr-McGee Oil & Gas Onshore, LP**
1099 18th Street, Denver, Colorado 80202

**WELL PAD - BONANZA 1023-5L**

TOPO B
BONANZA 1023-5E3BS, BONANZA 1023-5E3CS, BONANZA 1023-5L1AS & BONANZA 1023-5L3BS
LOCATED IN SECTION 5, T10S, R23E
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

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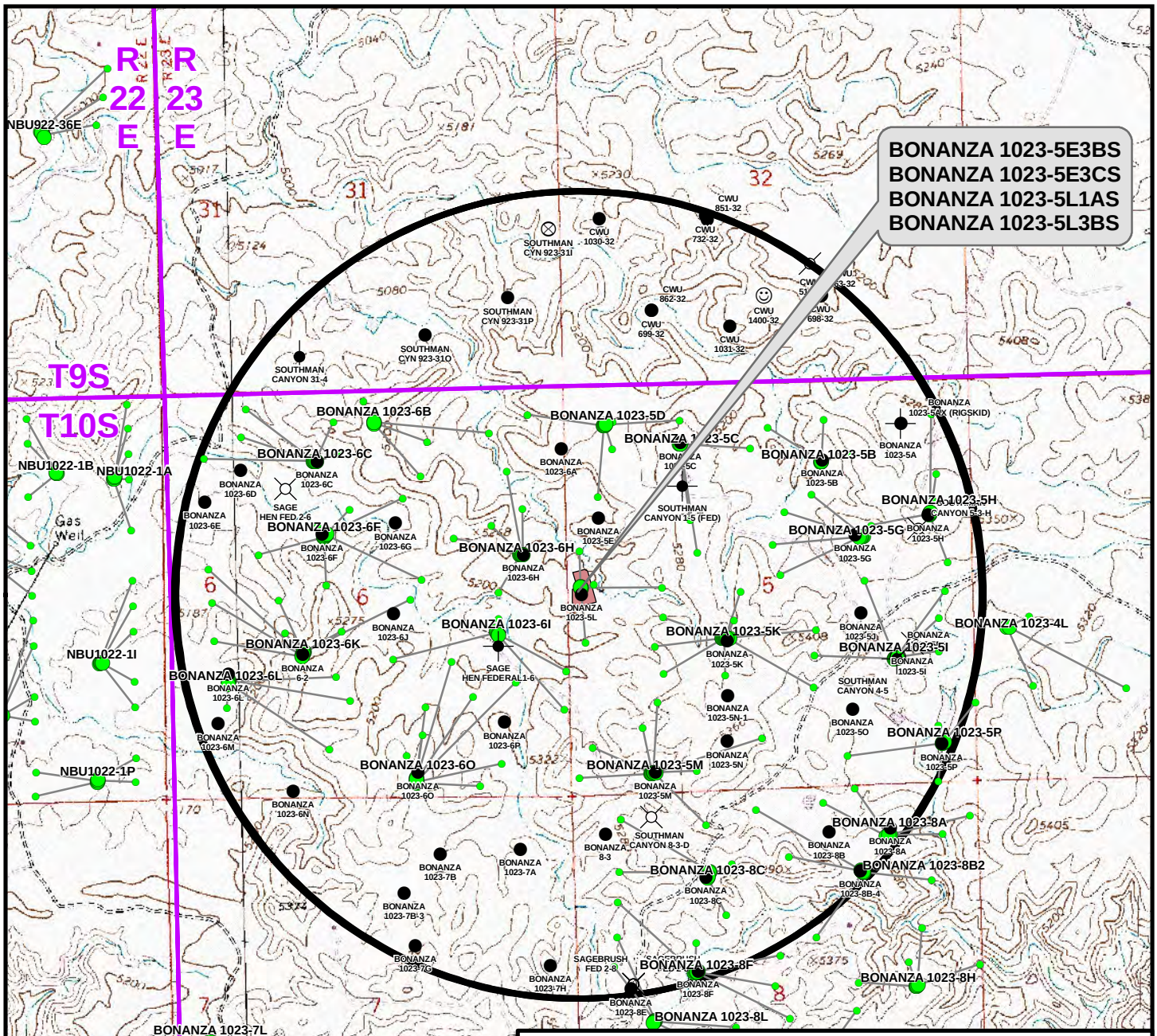
|---|---|---|---|
| Scale: 1" = 2,000ft | NAD83 USP Central | Sheet No: 11 | |
| Drawn: CPS | Date: 30 Mar 2010 | | |
| Revised: CPS | Date: 25 June 2010 | | 11 of 16 |

RECEIVED: October 17, 2011

API Well Number: 43047520740000




| Proposed Well | Nearest Well Bore | Footage |
|---|---|---|
| BONANZA 1023-5E3BS | BONANZA 1023-5E | 494ft |
| BONANZA 1023-5E3CS | BONANZA 1023-5L | 203ft |
| BONANZA 1023-5L1AS | BONANZA 1023-5L | 1,057ft |
| BONANZA 1023-5L3BS | BONANZA 1023-5L | 634ft |

**Legend**

Well locations derived from State of Utah, Dept. of Natural Resources, Division of Oil, Gas and Mining

- Well - Proposed
- Bottom Hole - Proposed
- Well Path
- Well Pad
- Well - 1 Mile Radius

- Producing
- Active
- Spudded (Drilling commenced: Not yet completed)
- Approved permit (APD); not yet spudded
- New Permit (Not yet approved or drilled)
- Inactive
- Drilling Operations Suspended
- Temporarily-Abandoned
- Shut-In
- Plugged and Abandoned
- Location Abandoned
- Dry hole marker, buried
- Returned APD (Unapproved)

**Kerr-McGee Oil & Gas Onshore, LP**
1099 18th Street, Denver, Colorado 80202

**WELL PAD - BONANZA 1023-5L**

**TOPO C**
**BONANZA 1023-5E3BS, BONANZA 1023-5E3CS, BONANZA 1023-5L1AS & BONANZA 1023-5L3BS**
**LOCATED IN SECTION 5, T10S, R23E**
**S.L.B.&M., UINTAH COUNTY, UTAH**

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

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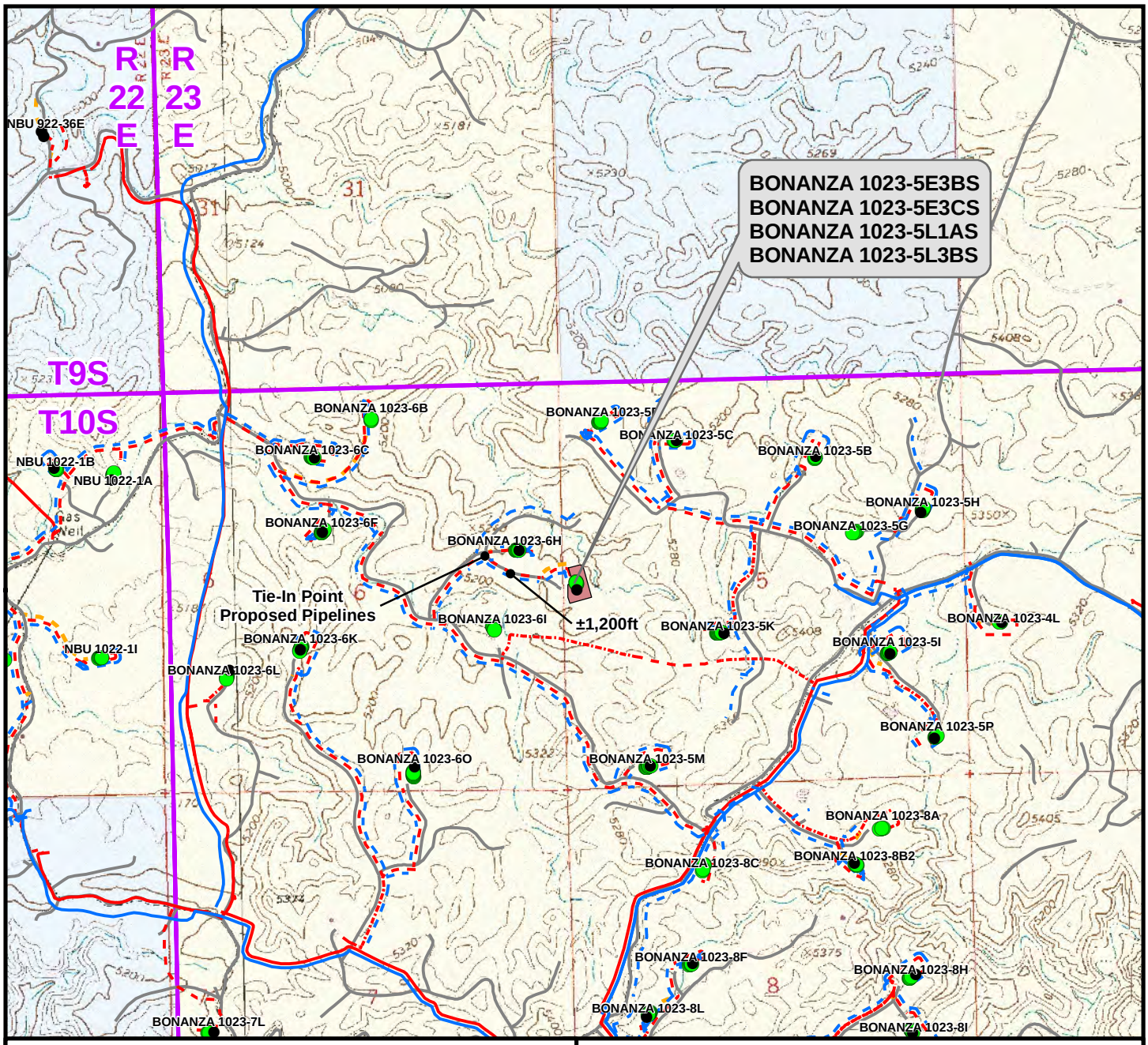
|---|---|---|---|
| Scale: 1" = 2,000ft | NAD83 USP Central | | Sheet No: 12 |
| Drawn: CPS | Date: 30 Mar 2010 | | 12 of 16 |
| Revised: CPS | Date: 25 June 2010 | | |

RECEIVED: October 17, 2011




| Proposed Liquid Pipeline | Length |
|---|---|
| Proposed 6" (First Meter House to Edge of Pad) | ±460ft |
| Proposed 6" (Edge of Pad to 6H Intersection) | ±1,200ft |
| TOTAL PROPOSED LIQUID PIPELINE = | ±1,660ft |

| Proposed Gas Pipeline | Length |
|---|---|
| Proposed 6" (First Meter House to Edge of Pad) | ±460ft |
| Proposed 6" (Edge of Pad to 6H Intersection) | ±1,200ft |
| TOTAL PROPOSED GAS PIPELINE = | ±1,660ft |

**Legend**

- Well - Proposed
- Well - Existing
- Well Pad
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Liquid Pipeline - Proposed
- Liquid Pipeline - To Be Upgraded
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

**Kerr-McGee Oil & Gas Onshore, LP**
1099 18th Street, Denver, Colorado 80202

**WELL PAD - BONANZA 1023-5L**

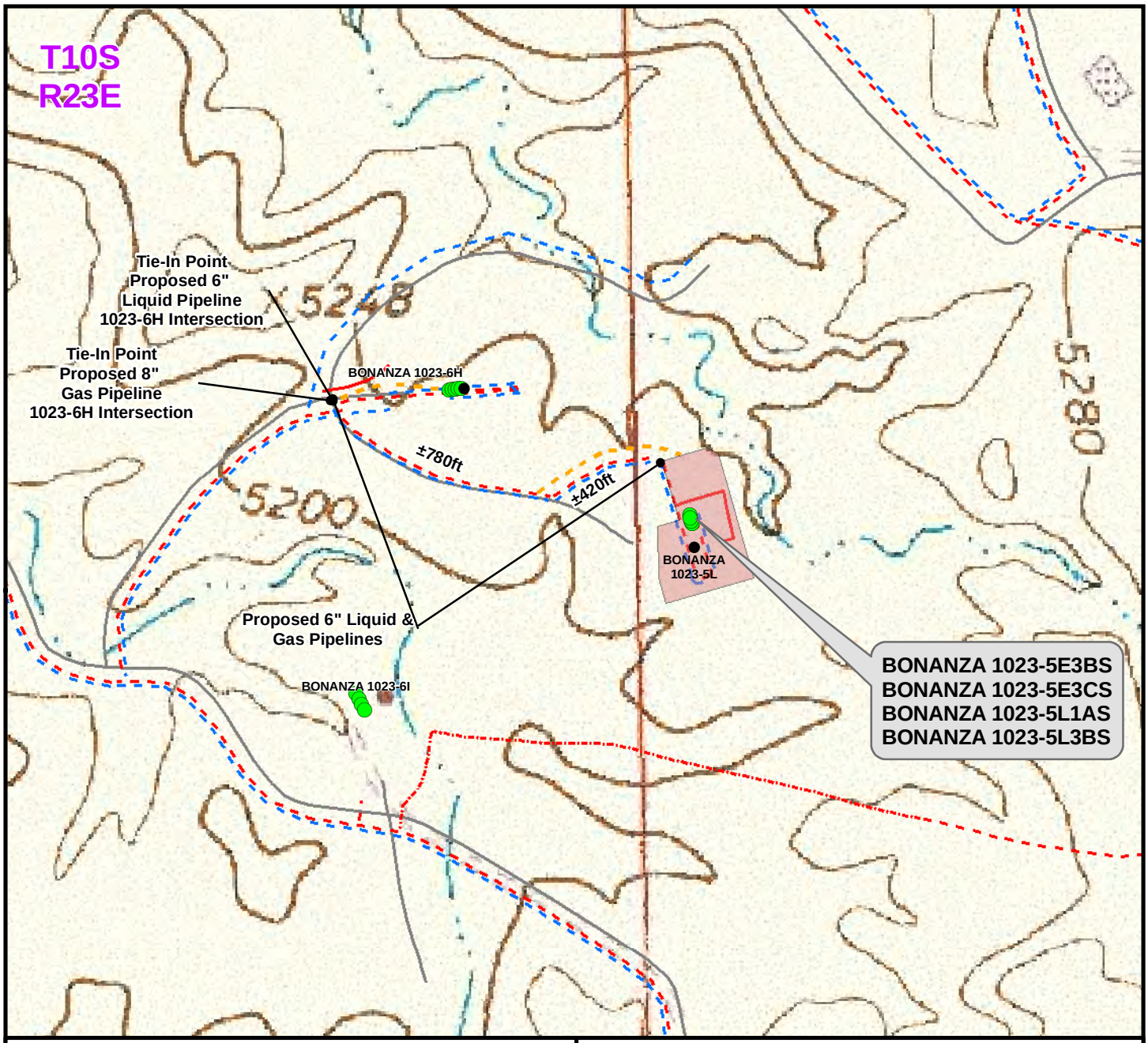
TOPO D
BONANZA 1023-5E3BS, BONANZA 1023-5E3CS,
BONANZA 1023-5L1AS & BONANZA 1023-5L3BS
LOCATED IN SECTION 5, T10S, R23E
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

| | | | |
|---|---|---|---|
| Scale: 1" = 2,000ft | NAD83 USP Central | | Sheet No: 13 |
| Drawn: CPS | Date: 30 Mar 2010 | | 13 of 16 |
| Revised: CPS | Date: 15 Oct 2010 | | |

RECEIVED: October 17, 2011




| Proposed Liquid Pipeline | Length |
|---|---|
| Proposed 6" (First Meter House to Edge of Pad) | ±460ft |
| Proposed 6" (Edge of Pad to 6H Intersection) | ±1,200ft |
| TOTAL PROPOSED LIQUID PIPELINE = | ±1,660ft |

| Proposed Gas Pipeline | Length |
|---|---|
| Proposed 6" (First Meter House to Edge of Pad) | ±460ft |
| Proposed 6" (Edge of Pad to 6H Intersection) | ±1,200ft |
| TOTAL PROPOSED GAS PIPELINE = | ±1,660ft |

**Legend**

- Well - Proposed
- Well - Existing
- Well Pad
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Liquid Pipeline - Proposed
- Liquid Pipeline - To Be Upgraded
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

**Kerr-McGee Oil & Gas Onshore, LP**
1099 18th Street, Denver, Colorado 80202

**WELL PAD - BONANZA 1023-5L**

TOPO D (PAD & PIPELINE DETAIL)
BONANZA 1023-5E3BS, BONANZA 1023-5E3CS,
BONANZA 1023-5L1AS & BONANZA 1023-5L3BS
LOCATED IN SECTION 5, T10S, R23E
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
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|---|---|---|---|
| Scale: 1" = 500ft | NAD83 USP Central | | Sheet No: 14 |
| Drawn: CPS | Date: 30 Mar 2010 | | 14 of 16 |
| Revised: CPS | Date: 15 Oct 2010 | | |

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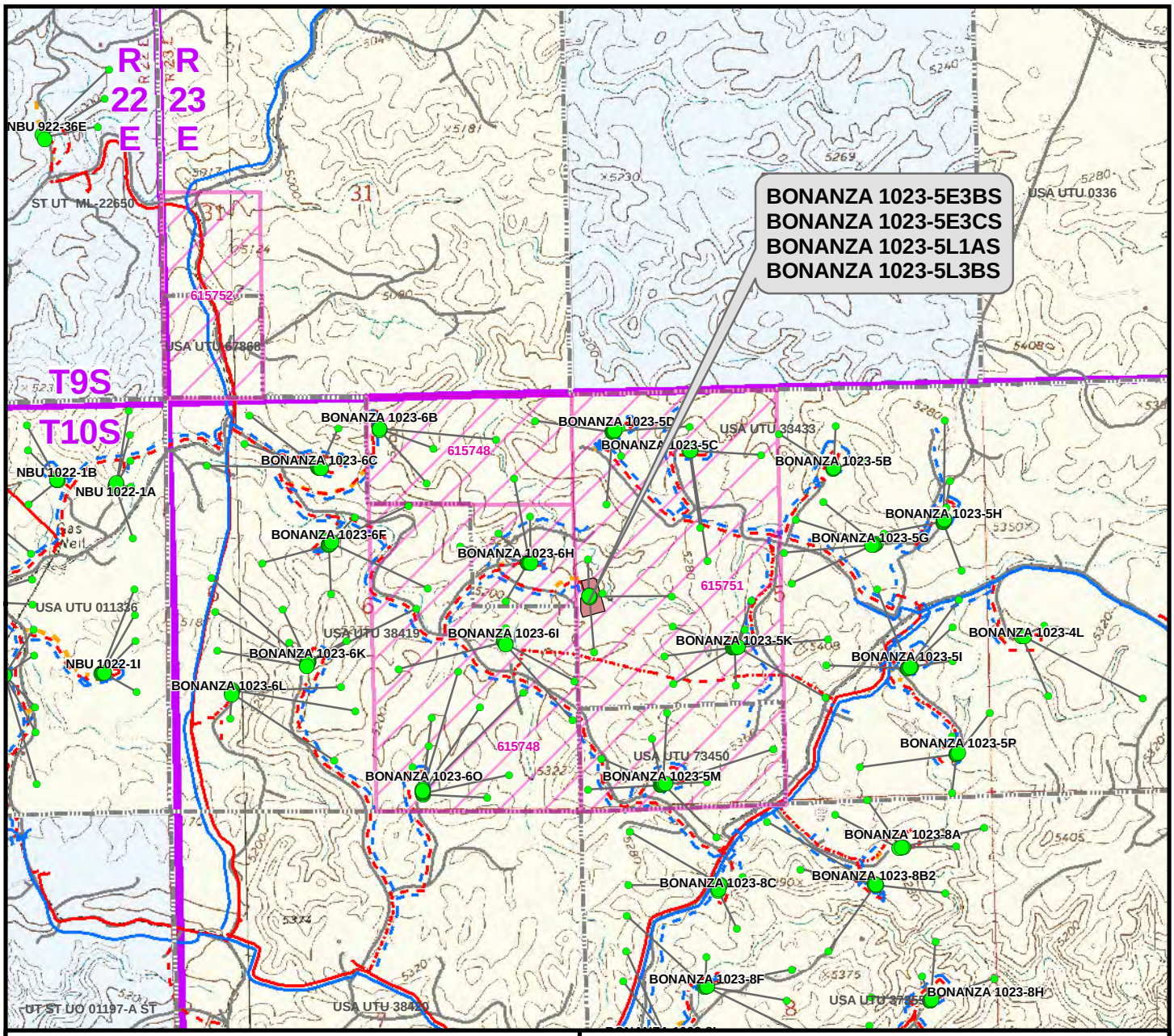
API Well Number: 43047520740000




| Proposed Well | Distance To Nearest CA Boundary |
|---|---|
| BONANZA 1023-5E3BS | 127ft |
| BONANZA 1023-5E3CS | 302ft |
| BONANZA 1023-5L1AS | 1,197ft |
| BONANZA 1023-5L3BS | 182ft |

| Proposed Well | Distance To Nearest Lease Boundary |
|---|---|
| BONANZA 1023-5E3BS | 515ft |
| BONANZA 1023-5E3CS | 306ft |
| BONANZA 1023-5L1AS | 1,197ft |
| BONANZA 1023-5L3BS | 182ft |

**Legend**

- Well - Proposed
- Bottom Hole - Proposed
- Well Path
- Well Pad
- CA Agreement
- Lease Boundary
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Liquid Pipeline - Proposed
- Liquid Pipeline - To Be Upgraded
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

**Kerr-McGee Oil & Gas Onshore, LP**
1099 18th Street, Denver, Colorado 80202

**WELL PAD - BONANZA 1023-5L**

TOPO E
BONANZA 1023-5E3BS, BONANZA 1023-5E3CS,
BONANZA 1023-5L1AS & BONANZA 1023-5L3BS
LOCATED IN SECTION 5, T10S, R23E
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

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|---|---|---|---|
| Scale: 1" = 2,000ft | NAD83 USP Central | | Sheet No: 15 |
| Drawn: CPS | Date: 30 Mar 2010 | | 15 of 16 |
| Revised: CPS | Date: 15 Oct 2010 | | |

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**Kerr-McGee Oil & Gas Onshore, LP**
**WELL PAD – BONANZA 1023-5L**
**WELLS – BONANZA 1023-5E3BS, BONANZA 1023-5E3CS, BONANZA 1023-5L1AS & BONANZA 1023-5L3BS**
**Section 5, T10S, R23E, S.L.B.&M.**

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45; exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 14.4 miles to the intersection of the Chipeta Wells Road (County B Road 3410) which road intersection is approximately 400 feet northeast of the Mountain Fuel Bridge, at the White River. Exit left and proceed in a southeasterly direction along the Chipeta Wells Road approximately 4.3 miles to the intersection of the Atchee Wash Road (County B Road 4240). Exit right and proceed in a southeasterly, then southerly direction along the Atchee Wash Road approximately 4.0 miles to a service road to the left. Exit left and proceed in a southeasterly direction along service road approximately 1.0 miles to a second service road to the left. Exit left and proceed in a northeasterly direction along second service road approximately 0.2 miles to a third service road to the right. Exit right and proceed in a southeasterly direction along third service road approximately 0.2 miles to the proposed access road. Exit left and follow road flags in a northeasterly direction approximately 550 feet to the proposed well pad.

Total distance from Vernal, Utah to the proposed well location is approximately 47.7 miles in a southerly direction.



RECEIVED: October 17, 2011

API Well Number: 43047520740000

Scientific Drilling
Rocky Mountain Operations

Project: Uintah County, UT UTM12
Site: Bonanza 1023-5L PAD
Well: BONANZA 1023-5L3BS
Wellbore: OH
Design: PLAN #1

Anadarko Petroleum Corporation

Kerr McGee Oil and Gas Onshore LP

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| PBHL | 8436.00 | -709.87 | 46.24 | 14521552.03 | 2100222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W | Circle (Radius: 25.00) |

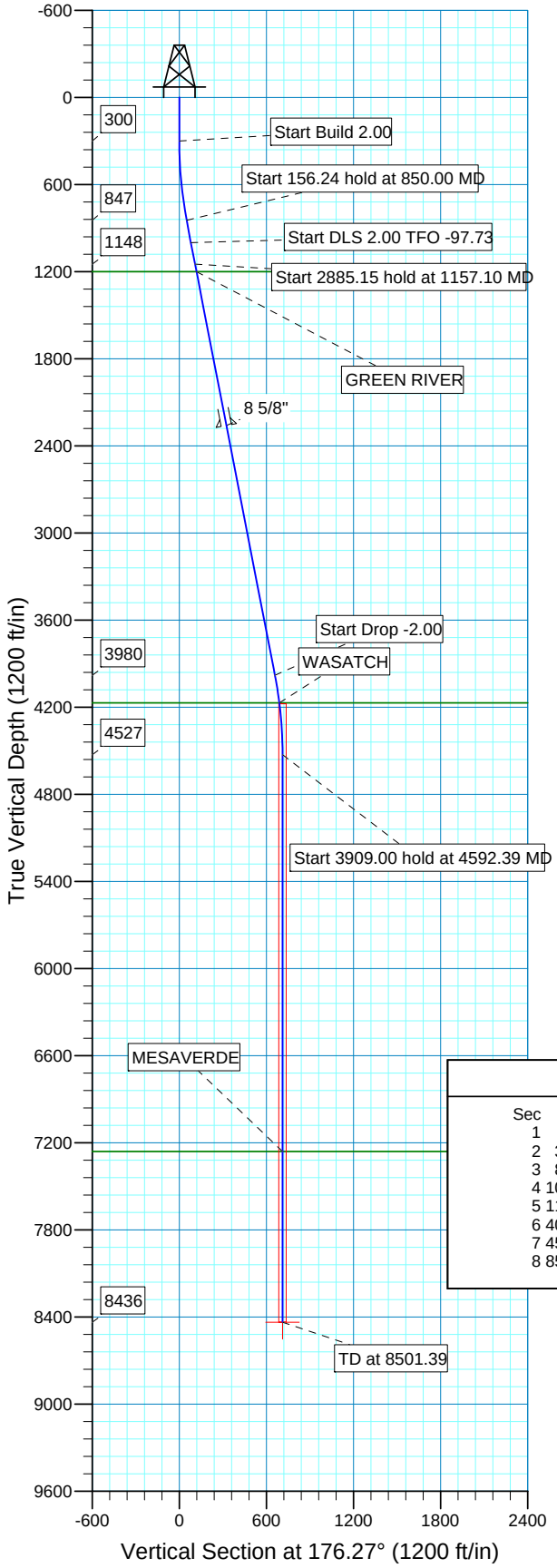
T M
Azimuths to True North
Magnetic North: 11.26°

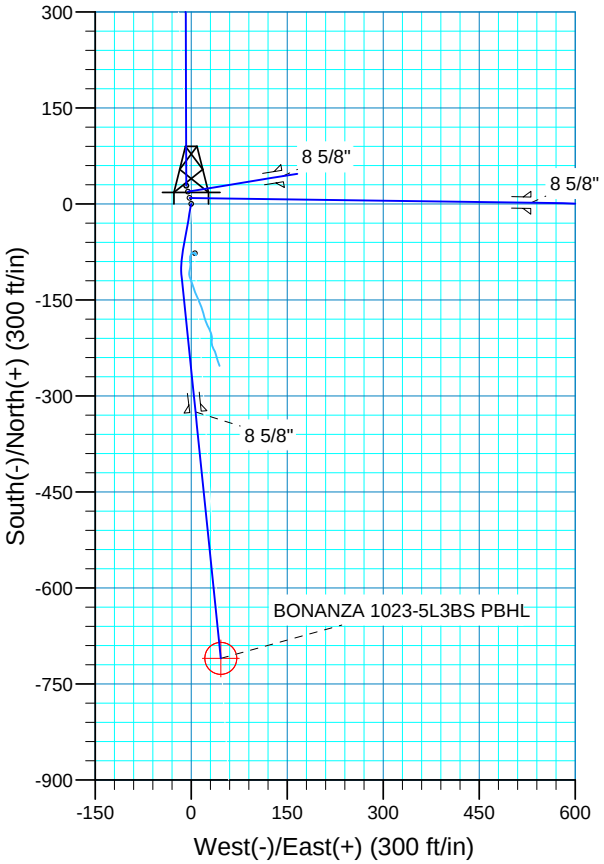
Magnetic Field
Strength: 52524.6snT
Dip Angle: 65.93°
Date: 07/22/2009
Model: IGRF2010

WELL DETAILS: BONANZA 1023-5L3BS

GL 5223' & RKB 14' @ 5237.00ft (ASSUMED) 5223.00

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14522260.93 | 2100162.72 | 39° 58' 40.768 N | 109° 21' 32.249 W |




SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | DLeg | TFace | VSec | Target |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2 | 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3 | 850.00 | 11.00 | 190.00 | 846.63 | -51.83 | -9.14 | 2.00 | 190.00 | 51.13 | |
| 4 | 1006.24 | 11.00 | 190.00 | 1000.00 | -81.19 | -14.32 | 0.00 | 0.00 | 80.09 | |
| 5 | 1157.10 | 11.00 | 174.14 | 1148.11 | -109.69 | -15.35 | 2.00 | -97.73 | 108.47 | |
| 6 | 4042.24 | 11.00 | 174.14 | 3980.23 | -657.48 | 40.86 | 0.00 | 0.00 | 658.75 | |
| 7 | 4592.39 | 0.00 | 0.00 | 4527.00 | -709.87 | 46.24 | 2.00 | 180.00 | 711.37 | |
| 8 | 8501.39 | 0.00 | 0.00 | 8436.00 | -709.87 | 46.24 | 0.00 | 0.00 | 711.37 | BONANZA 1023-5L3BS PBHL |

FORMATION TOP DETAILS

| TVDPath | MDPath | Formation |
|---|---|---|
| 1200.00 | 1209.95 | GREEN RIVER |
| 4170.00 | 4234.46 | WASATCH |
| 7260.00 | 7325.39 | MESAVERDE |

PROJECT DETAILS: Uintah County, UT UTM12

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 - Western US
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SEC 5 T10S R23E
System Datum: Mean Sea Level
Local North: True

Plan: PLAN #1 (BONANZA 1023-5L3BS/OH)

Created By: Robert H. Scott Date: 12:52, July 22 2010

Scientific Drilling
Rocky Mountain Operations

# Kerr McGee Oil and Gas Onshore LP

**Uintah County, UT UTM12**
**Bonanza 1023-5L PAD**
**BONANZA 1023-5L3BS**
**OH**

**Plan: PLAN #1**

# Standard Planning Report

**22 July, 2010**

Anadarko
Petroleum Corporation

RECEIVED: October 17, 2011

Scientific Drilling
Rocky Mountain Operations

# SDI
## Planning Report

Anadarko Petroleum Corporation

| | | | |
|---|---|---|---|
| **Database:** | EDM 2003.16 Single User Db | **Local Co-ordinate Reference:** | Well BONANZA 1023-5L3BS |
| **Company:** | Kerr McGee Oil and Gas Onshore LP | **TVD Reference:** | GL 5223' & RKB 14' @ 5237.00ft (ASSUMED) |
| **Project:** | Uintah County, UT UTM12 | **MD Reference:** | GL 5223' & RKB 14' @ 5237.00ft (ASSUMED) |
| **Site:** | Bonanza 1023-5L PAD | **North Reference:** | True |
| **Well:** | BONANZA 1023-5L3BS | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | PLAN #1 | | |

**Project** Uintah County, UT UTM12

| | | | |
|---|---|---|---|
| **Map System:** | Universal Transverse Mercator (US Survey Fee | **System Datum:** | Mean Sea Level |
| **Geo Datum:** | NAD 1927 - Western US | | |
| **Map Zone:** | Zone 12N (114 W to 108 W) | | |

**Site** Bonanza 1023-5L PAD, SEC 5 T10S R23E

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 14,522,260.93 ft | **Latitude:** | 39° 58' 40.768 N |
| **From:** | Lat/Long | **Easting:** | 2,100,162.72 ft | **Longitude:** | 109° 21' 32.249 W |
| **Position Uncertainty:** | 0.00 ft | **Slot Radius:** | in | **Grid Convergence:** | 1.05 ° |

**Well** BONANZA 1023-5L3BS, 2564' FNL 136' FWL

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 0.00 ft | **Northing:** | 14,522,260.93 ft | **Latitude:** | 39° 58' 40.768 N |
| | **+E/-W** | 0.00 ft | **Easting:** | 2,100,162.72 ft | **Longitude:** | 109° 21' 32.249 W |
| **Position Uncertainty** | | 0.00 ft | **Wellhead Elevation:** | ft | **Ground Level:** | 5,223.00 ft |

**Wellbore** OH

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | IGRF2010 | 07/22/2009 | 11.26 | 65.93 | 52,525 |

**Design** PLAN #1

**Audit Notes:**

| | | | | | |
|---|---|---|---|---|---|
| **Version:** | | **Phase:** | PLAN | **Tie On Depth:** | 0.00 |

| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
|---|---|---|---|---|
| | 0.00 | 0.00 | 0.00 | 176.27 |

**Plan Sections**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 850.00 | 11.00 | 190.00 | 846.63 | -51.83 | -9.14 | 2.00 | 2.00 | 0.00 | 190.00 | |
| 1,006.24 | 11.00 | 190.00 | 1,000.00 | -81.19 | -14.32 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,157.10 | 11.00 | 174.14 | 1,148.11 | -109.69 | -15.35 | 2.00 | 0.00 | -10.51 | -97.73 | |
| 4,042.24 | 11.00 | 174.14 | 3,980.23 | -657.48 | 40.86 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4,592.39 | 0.00 | 0.00 | 4,527.00 | -709.87 | 46.24 | 2.00 | -2.00 | 0.00 | 180.00 | |
| 8,501.39 | 0.00 | 0.00 | 8,436.00 | -709.87 | 46.24 | 0.00 | 0.00 | 0.00 | 0.00 | BONANZA 1023-5L |



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Scientific Drilling
Rocky Mountain Operations

# SDI
## Planning Report

Anadarko Petroleum Corporation

| | | | |
|---|---|---|---|
| **Database:** | EDM 2003.16 Single User Db | **Local Co-ordinate Reference:** | Well BONANZA 1023-5L3BS |
| **Company:** | Kerr McGee Oil and Gas Onshore LP | **TVD Reference:** | GL 5223' & RKB 14' @ 5237.00ft (ASSUMED) |
| **Project:** | Uintah County, UT UTM12 | **MD Reference:** | GL 5223' & RKB 14' @ 5237.00ft (ASSUMED) |
| **Site:** | Bonanza 1023-5L PAD | **North Reference:** | True |
| **Well:** | BONANZA 1023-5L3BS | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | PLAN #1 | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 200.00 | 0.00 | 0.00 | 200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Start Build 2.00** | | | | | | | | | |
| 400.00 | 2.00 | 190.00 | 399.98 | -1.72 | -0.30 | 1.70 | 2.00 | 2.00 | 0.00 |
| 500.00 | 4.00 | 190.00 | 499.84 | -6.87 | -1.21 | 6.78 | 2.00 | 2.00 | 0.00 |
| 600.00 | 6.00 | 190.00 | 599.45 | -15.46 | -2.73 | 15.25 | 2.00 | 2.00 | 0.00 |
| 700.00 | 8.00 | 190.00 | 698.70 | -27.46 | -4.84 | 27.08 | 2.00 | 2.00 | 0.00 |
| 800.00 | 10.00 | 190.00 | 797.47 | -42.86 | -7.56 | 42.28 | 2.00 | 2.00 | 0.00 |
| 850.00 | 11.00 | 190.00 | 846.63 | -51.83 | -9.14 | 51.13 | 2.00 | 2.00 | 0.00 |
| **Start 156.24 hold at 850.00 MD** | | | | | | | | | |
| 900.00 | 11.00 | 190.00 | 895.71 | -61.23 | -10.80 | 60.40 | 0.00 | 0.00 | 0.00 |
| 1,000.00 | 11.00 | 190.00 | 993.87 | -80.02 | -14.11 | 78.93 | 0.00 | 0.00 | 0.00 |
| 1,006.24 | 11.00 | 190.00 | 1,000.00 | -81.19 | -14.32 | 80.09 | 0.00 | 0.00 | 0.00 |
| **Start DLS 2.00 TFO -97.73** | | | | | | | | | |
| 1,100.00 | 10.91 | 180.13 | 1,092.06 | -98.87 | -15.89 | 97.63 | 2.00 | -0.10 | -10.53 |
| 1,157.10 | 11.00 | 174.14 | 1,148.11 | -109.69 | -15.35 | 108.47 | 2.00 | 0.17 | -10.49 |
| **Start 2885.15 hold at 1157.10 MD** | | | | | | | | | |
| 1,200.00 | 11.00 | 174.14 | 1,190.23 | -117.84 | -14.51 | 116.65 | 0.00 | 0.00 | 0.00 |
| 1,209.95 | 11.00 | 174.14 | 1,200.00 | -119.73 | -14.32 | 118.55 | 0.00 | 0.00 | 0.00 |
| **GREEN RIVER** | | | | | | | | | |
| 1,300.00 | 11.00 | 174.14 | 1,288.39 | -136.83 | -12.56 | 135.72 | 0.00 | 0.00 | 0.00 |
| 1,400.00 | 11.00 | 174.14 | 1,386.55 | -155.81 | -10.61 | 154.79 | 0.00 | 0.00 | 0.00 |
| 1,500.00 | 11.00 | 174.14 | 1,484.72 | -174.80 | -8.67 | 173.87 | 0.00 | 0.00 | 0.00 |
| 1,600.00 | 11.00 | 174.14 | 1,582.88 | -193.79 | -6.72 | 192.94 | 0.00 | 0.00 | 0.00 |
| 1,700.00 | 11.00 | 174.14 | 1,681.04 | -212.77 | -4.77 | 212.01 | 0.00 | 0.00 | 0.00 |
| 1,800.00 | 11.00 | 174.14 | 1,779.20 | -231.76 | -2.82 | 231.09 | 0.00 | 0.00 | 0.00 |
| 1,900.00 | 11.00 | 174.14 | 1,877.36 | -250.75 | -0.87 | 250.16 | 0.00 | 0.00 | 0.00 |
| 2,000.00 | 11.00 | 174.14 | 1,975.52 | -269.73 | 1.07 | 269.23 | 0.00 | 0.00 | 0.00 |
| 2,100.00 | 11.00 | 174.14 | 2,073.69 | -288.72 | 3.02 | 288.30 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 11.00 | 174.14 | 2,171.85 | -307.70 | 4.97 | 307.38 | 0.00 | 0.00 | 0.00 |
| 2,289.80 | 11.00 | 174.14 | 2,260.00 | -324.75 | 6.72 | 324.51 | 0.00 | 0.00 | 0.00 |
| **8 5/8"** | | | | | | | | | |
| 2,300.00 | 11.00 | 174.14 | 2,270.01 | -326.69 | 6.92 | 326.45 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 11.00 | 174.14 | 2,368.17 | -345.68 | 8.87 | 345.52 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 11.00 | 174.14 | 2,466.33 | -364.66 | 10.82 | 364.60 | 0.00 | 0.00 | 0.00 |
| 2,600.00 | 11.00 | 174.14 | 2,564.49 | -383.65 | 12.76 | 383.67 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 11.00 | 174.14 | 2,662.66 | -402.64 | 14.71 | 402.74 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 11.00 | 174.14 | 2,760.82 | -421.62 | 16.66 | 421.81 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 11.00 | 174.14 | 2,858.98 | -440.61 | 18.61 | 440.89 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 11.00 | 174.14 | 2,957.14 | -459.60 | 20.56 | 459.96 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 11.00 | 174.14 | 3,055.30 | -478.58 | 22.50 | 479.03 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 11.00 | 174.14 | 3,153.46 | -497.57 | 24.45 | 498.11 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 11.00 | 174.14 | 3,251.63 | -516.55 | 26.40 | 517.18 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 11.00 | 174.14 | 3,349.79 | -535.54 | 28.35 | 536.25 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 11.00 | 174.14 | 3,447.95 | -554.53 | 30.30 | 555.32 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 11.00 | 174.14 | 3,546.11 | -573.51 | 32.24 | 574.40 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 11.00 | 174.14 | 3,644.27 | -592.50 | 34.19 | 593.47 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 11.00 | 174.14 | 3,742.43 | -611.49 | 36.14 | 612.54 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 11.00 | 174.14 | 3,840.60 | -630.47 | 38.09 | 631.62 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 11.00 | 174.14 | 3,938.76 | -649.46 | 40.04 | 650.69 | 0.00 | 0.00 | 0.00 |
| 4,042.24 | 11.00 | 174.14 | 3,980.23 | -657.48 | 40.86 | 658.75 | 0.00 | 0.00 | 0.00 |



RECEIVED: October 17, 2011

Scientific Drilling
Rocky Mountain Operations

# SDI
## Planning Report

Anadarko Petroleum Corporation

| | | | |
|---|---|---|---|
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| **Company:** | Kerr McGee Oil and Gas Onshore LP | **TVD Reference:** | GL 5223' & RKB 14' @ 5237.00ft (ASSUMED) |
| **Project:** | Uintah County, UT UTM12 | **MD Reference:** | GL 5223' & RKB 14' @ 5237.00ft (ASSUMED) |
| **Site:** | Bonanza 1023-5L PAD | **North Reference:** | True |
| **Well:** | BONANZA 1023-5L3BS | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | PLAN #1 | | |

**Planned 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) |
|---|---|---|---|---|---|---|---|---|---|
| **Start Drop -2.00** | | | | | | | | | |
| 4,100.00 | 9.85 | 174.14 | 4,037.03 | -667.88 | 41.93 | 669.19 | 2.00 | -2.00 | 0.00 |
| 4,200.00 | 7.85 | 174.14 | 4,135.83 | -683.18 | 43.50 | 684.56 | 2.00 | -2.00 | 0.00 |
| 4,234.46 | 7.16 | 174.14 | 4,170.00 | -687.65 | 43.96 | 689.06 | 2.00 | -2.00 | 0.00 |
| **WASATCH** | | | | | | | | | |
| 4,300.00 | 5.85 | 174.14 | 4,235.11 | -695.04 | 44.71 | 696.47 | 2.00 | -2.00 | 0.00 |
| 4,400.00 | 3.85 | 174.14 | 4,334.75 | -703.44 | 45.58 | 704.92 | 2.00 | -2.00 | 0.00 |
| 4,500.00 | 1.85 | 174.14 | 4,434.62 | -708.39 | 46.08 | 709.88 | 2.00 | -2.00 | 0.00 |
| 4,592.39 | 0.00 | 0.00 | 4,527.00 | -709.87 | 46.24 | 711.37 | 2.00 | -2.00 | 0.00 |
| **Start 3909.00 hold at 4592.39 MD** | | | | | | | | | |
| 4,600.00 | 0.00 | 0.00 | 4,534.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 0.00 | 0.00 | 4,634.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 0.00 | 0.00 | 4,734.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 4,900.00 | 0.00 | 0.00 | 4,834.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 0.00 | 0.00 | 4,934.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 0.00 | 0.00 | 5,034.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 0.00 | 0.00 | 5,134.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 0.00 | 0.00 | 5,234.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 0.00 | 0.00 | 5,334.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 0.00 | 0.00 | 5,434.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 0.00 | 0.00 | 5,534.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 0.00 | 0.00 | 5,634.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 0.00 | 0.00 | 5,734.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 0.00 | 0.00 | 5,834.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 0.00 | 0.00 | 5,934.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 0.00 | 0.00 | 6,034.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 0.00 | 0.00 | 6,134.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 0.00 | 0.00 | 6,234.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 6,400.00 | 0.00 | 0.00 | 6,334.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 0.00 | 0.00 | 6,434.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 6,600.00 | 0.00 | 0.00 | 6,534.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 6,700.00 | 0.00 | 0.00 | 6,634.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 6,800.00 | 0.00 | 0.00 | 6,734.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 6,900.00 | 0.00 | 0.00 | 6,834.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 7,000.00 | 0.00 | 0.00 | 6,934.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 7,100.00 | 0.00 | 0.00 | 7,034.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 7,200.00 | 0.00 | 0.00 | 7,134.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 7,300.00 | 0.00 | 0.00 | 7,234.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 7,325.39 | 0.00 | 0.00 | 7,260.00 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| **MESAVERDE** | | | | | | | | | |
| 7,400.00 | 0.00 | 0.00 | 7,334.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 0.00 | 0.00 | 7,434.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 7,600.00 | 0.00 | 0.00 | 7,534.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 0.00 | 0.00 | 7,634.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 0.00 | 0.00 | 7,734.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 0.00 | 0.00 | 7,834.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 0.00 | 0.00 | 7,934.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 0.00 | 0.00 | 8,034.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 0.00 | 0.00 | 8,134.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 0.00 | 0.00 | 8,234.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 0.00 | 0.00 | 8,334.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 0.00 | 0.00 | 8,434.61 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |
| 8,501.39 | 0.00 | 0.00 | 8,436.00 | -709.87 | 46.24 | 711.37 | 0.00 | 0.00 | 0.00 |



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Scientific Drilling
Rocky Mountain Operations

# SDI
## Planning Report

Anadarko Petroleum Corporation

| | | | |
|---|---|---|---|
| **Database:** | EDM 2003.16 Single User Db | **Local Co-ordinate Reference:** | Well BONANZA 1023-5L3BS |
| **Company:** | Kerr McGee Oil and Gas Onshore LP | **TVD Reference:** | GL 5223' & RKB 14' @ 5237.00ft (ASSUMED) |
| **Project:** | Uintah County, UT UTM12 | **MD Reference:** | GL 5223' & RKB 14' @ 5237.00ft (ASSUMED) |
| **Site:** | Bonanza 1023-5L PAD | **North Reference:** | True |
| **Well:** | BONANZA 1023-5L3BS | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | PLAN #1 | | |

### Planned 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) |
|---|---|---|---|---|---|---|---|---|---|
| **TD at 8501.39 - BONANZA 1023-5L3BS PBHL** | | | | | | | | | |

### Targets

| Target Name<br>- hit/miss target<br>- Shape | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| BONANZA 1023-5L3E<br>- plan hits target center<br>- Circle (radius 25.00) | 0.00 | 0.00 | 8,436.00 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |

### Casing Points

| Measured Depth (ft) | Vertical Depth (ft) | Name | Casing Diameter (in) | Hole Diameter (in) |
|---|---|---|---|---|
| 2,289.80 | 2,260.00 | 8 5/8" | 8.620 | 11.000 |

### Formations

| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|---|---|---|---|---|---|
| 4,234.46 | 4,170.00 | WASATCH | | 0.00 | |
| 1,209.95 | 1,200.00 | GREEN RIVER | | 0.00 | |
| 7,325.39 | 7,260.00 | MESAVERDE | | 0.00 | |

### Plan Annotations

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates +N/-S (ft) | Local Coordinates +E/-W (ft) | Comment |
|---|---|---|---|---|
| 300.00 | 300.00 | 0.00 | 0.00 | Start Build 2.00 |
| 850.00 | 846.63 | -51.83 | -9.14 | Start 156.24 hold at 850.00 MD |
| 1,006.24 | 1,000.00 | -81.19 | -14.32 | Start DLS 2.00 TFO -97.73 |
| 1,157.10 | 1,148.11 | -109.69 | -15.35 | Start 2885.15 hold at 1157.10 MD |
| 4,042.24 | 3,980.23 | -657.48 | 40.86 | Start Drop -2.00 |
| 4,592.39 | 4,527.00 | -709.87 | 46.24 | Start 3909.00 hold at 4592.39 MD |
| 8,501.39 | 8,436.00 | -709.87 | 46.24 | TD at 8501.39 |



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Scientific Drilling
Rocky Mountain Operations

# Kerr McGee Oil and Gas Onshore LP

**Uintah County, UT UTM12**
**Bonanza 1023-5L PAD**
**BONANZA 1023-5L3BS**
**OH**

**Plan: PLAN #1**

# Standard Planning Report - Geographic

**22 July, 2010**

Anadarko
Petroleum Corporation

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Scientific Drilling
Rocky Mountain Operations

# SDI
## Planning Report - Geographic

Anadarko Petroleum Corporation

| | | | |
|---|---|---|---|
| **Database:** | EDM 2003.16 Single User Db | **Local Co-ordinate Reference:** | Well BONANZA 1023-5L3BS |
| **Company:** | Kerr McGee Oil and Gas Onshore LP | **TVD Reference:** | GL 5223' & RKB 14' @ 5237.00ft (ASSUMED) |
| **Project:** | Uintah County, UT UTM12 | **MD Reference:** | GL 5223' & RKB 14' @ 5237.00ft (ASSUMED) |
| **Site:** | Bonanza 1023-5L PAD | **North Reference:** | True |
| **Well:** | BONANZA 1023-5L3BS | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | PLAN #1 | | |

**Project** Uintah County, UT UTM12

| | | | |
|---|---|---|---|
| **Map System:** | Universal Transverse Mercator (US Survey Fee | **System Datum:** | Mean Sea Level |
| **Geo Datum:** | NAD 1927 - Western US | | |
| **Map Zone:** | Zone 12N (114 W to 108 W) | | |

**Site** Bonanza 1023-5L PAD, SEC 5 T10S R23E

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 14,522,260.93 ft | **Latitude:** | 39° 58' 40.768 N |
| **From:** | Lat/Long | **Easting:** | 2,100,162.72 ft | **Longitude:** | 109° 21' 32.249 W |
| **Position Uncertainty:** | 0.00 ft | **Slot Radius:** | in | **Grid Convergence:** | 1.05 ° |

**Well** BONANZA 1023-5L3BS, 2564' FNL 136' FWL

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 0.00 ft | **Northing:** | 14,522,260.93 ft | **Latitude:** | 39° 58' 40.768 N |
| | **+E/-W** | 0.00 ft | **Easting:** | 2,100,162.72 ft | **Longitude:** | 109° 21' 32.249 W |
| **Position Uncertainty** | | 0.00 ft | **Wellhead Elevation:** | ft | **Ground Level:** | 5,223.00 ft |

**Wellbore** OH

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | IGRF2010 | 07/22/2009 | 11.26 | 65.93 | 52,525 |

**Design** PLAN #1

**Audit Notes:**

| | | | | | |
|---|---|---|---|---|---|
| **Version:** | | **Phase:** | PLAN | **Tie On Depth:** | 0.00 |

| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
|---|---|---|---|---|
| | 0.00 | 0.00 | 0.00 | 176.27 |

**Plan Sections**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 850.00 | 11.00 | 190.00 | 846.63 | -51.83 | -9.14 | 2.00 | 2.00 | 0.00 | 190.00 | |
| 1,006.24 | 11.00 | 190.00 | 1,000.00 | -81.19 | -14.32 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,157.10 | 11.00 | 174.14 | 1,148.11 | -109.69 | -15.35 | 2.00 | 0.00 | -10.51 | -97.73 | |
| 4,042.24 | 11.00 | 174.14 | 3,980.23 | -657.48 | 40.86 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4,592.39 | 0.00 | 0.00 | 4,527.00 | -709.87 | 46.24 | 2.00 | -2.00 | 0.00 | 180.00 | |
| 8,501.39 | 0.00 | 0.00 | 8,436.00 | -709.87 | 46.24 | 0.00 | 0.00 | 0.00 | 0.00 | BONANZA 1023-5L |



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Scientific Drilling
Rocky Mountain Operations

# SDI
## Planning Report - Geographic

Anadarko Petroleum Corporation

| | | | |
|---|---|---|---|
| **Database:** | EDM 2003.16 Single User Db | **Local Co-ordinate Reference:** | Well BONANZA 1023-5L3BS |
| **Company:** | Kerr McGee Oil and Gas Onshore LP | **TVD Reference:** | GL 5223' & RKB 14' @ 5237.00ft (ASSUMED) |
| **Project:** | Uintah County, UT UTM12 | **MD Reference:** | GL 5223' & RKB 14' @ 5237.00ft (ASSUMED) |
| **Site:** | Bonanza 1023-5L PAD | **North Reference:** | True |
| **Well:** | BONANZA 1023-5L3BS | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | PLAN #1 | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (ft) | Map Easting (ft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14,522,260.93 | 2,100,162.72 | 39° 58' 40.768 N | 109° 21' 32.249 W |
| 100.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 14,522,260.93 | 2,100,162.72 | 39° 58' 40.768 N | 109° 21' 32.249 W |
| 200.00 | 0.00 | 0.00 | 200.00 | 0.00 | 0.00 | 14,522,260.93 | 2,100,162.72 | 39° 58' 40.768 N | 109° 21' 32.249 W |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 14,522,260.93 | 2,100,162.72 | 39° 58' 40.768 N | 109° 21' 32.249 W |
| **Start Build 2.00** | | | | | | | | | |
| 400.00 | 2.00 | 190.00 | 399.98 | -1.72 | -0.30 | 14,522,259.21 | 2,100,162.45 | 39° 58' 40.751 N | 109° 21' 32.253 W |
| 500.00 | 4.00 | 190.00 | 499.84 | -6.87 | -1.21 | 14,522,254.04 | 2,100,161.64 | 39° 58' 40.700 N | 109° 21' 32.264 W |
| 600.00 | 6.00 | 190.00 | 599.45 | -15.46 | -2.73 | 14,522,245.43 | 2,100,160.28 | 39° 58' 40.615 N | 109° 21' 32.284 W |
| 700.00 | 8.00 | 190.00 | 698.70 | -27.46 | -4.84 | 14,522,233.39 | 2,100,158.39 | 39° 58' 40.496 N | 109° 21' 32.311 W |
| 800.00 | 10.00 | 190.00 | 797.47 | -42.86 | -7.56 | 14,522,217.94 | 2,100,155.95 | 39° 58' 40.344 N | 109° 21' 32.346 W |
| 850.00 | 11.00 | 190.00 | 846.63 | -51.83 | -9.14 | 14,522,208.94 | 2,100,154.54 | 39° 58' 40.255 N | 109° 21' 32.366 W |
| **Start 156.24 hold at 850.00 MD** | | | | | | | | | |
| 900.00 | 11.00 | 190.00 | 895.71 | -61.23 | -10.80 | 14,522,199.51 | 2,100,153.05 | 39° 58' 40.162 N | 109° 21' 32.388 W |
| 1,000.00 | 11.00 | 190.00 | 993.87 | -80.02 | -14.11 | 14,522,180.66 | 2,100,150.09 | 39° 58' 39.977 N | 109° 21' 32.430 W |
| 1,006.24 | 11.00 | 190.00 | 1,000.00 | -81.19 | -14.32 | 14,522,179.49 | 2,100,149.90 | 39° 58' 39.965 N | 109° 21' 32.433 W |
| **Start DLS 2.00 TFO -97.73** | | | | | | | | | |
| 1,100.00 | 10.91 | 180.13 | 1,092.06 | -98.87 | -15.89 | 14,522,161.78 | 2,100,148.65 | 39° 58' 39.790 N | 109° 21' 32.453 W |
| 1,157.10 | 11.00 | 174.14 | 1,148.11 | -109.69 | -15.35 | 14,522,150.97 | 2,100,149.40 | 39° 58' 39.683 N | 109° 21' 32.446 W |
| **Start 2885.15 hold at 1157.10 MD** | | | | | | | | | |
| 1,200.00 | 11.00 | 174.14 | 1,190.23 | -117.84 | -14.51 | 14,522,142.84 | 2,100,150.38 | 39° 58' 39.603 N | 109° 21' 32.435 W |
| 1,209.95 | 11.00 | 174.14 | 1,200.00 | -119.73 | -14.32 | 14,522,140.96 | 2,100,150.61 | 39° 58' 39.584 N | 109° 21' 32.433 W |
| **GREEN RIVER** | | | | | | | | | |
| 1,300.00 | 11.00 | 174.14 | 1,288.39 | -136.83 | -12.56 | 14,522,123.89 | 2,100,152.68 | 39° 58' 39.415 N | 109° 21' 32.410 W |
| 1,400.00 | 11.00 | 174.14 | 1,386.55 | -155.81 | -10.61 | 14,522,104.95 | 2,100,154.98 | 39° 58' 39.228 N | 109° 21' 32.385 W |
| 1,500.00 | 11.00 | 174.14 | 1,484.72 | -174.80 | -8.67 | 14,522,086.00 | 2,100,157.27 | 39° 58' 39.040 N | 109° 21' 32.360 W |
| 1,600.00 | 11.00 | 174.14 | 1,582.88 | -193.79 | -6.72 | 14,522,067.05 | 2,100,159.57 | 39° 58' 38.852 N | 109° 21' 32.335 W |
| 1,700.00 | 11.00 | 174.14 | 1,681.04 | -212.77 | -4.77 | 14,522,048.10 | 2,100,161.87 | 39° 58' 38.665 N | 109° 21' 32.310 W |
| 1,800.00 | 11.00 | 174.14 | 1,779.20 | -231.76 | -2.82 | 14,522,029.16 | 2,100,164.16 | 39° 58' 38.477 N | 109° 21' 32.285 W |
| 1,900.00 | 11.00 | 174.14 | 1,877.36 | -250.75 | -0.87 | 14,522,010.21 | 2,100,166.46 | 39° 58' 38.289 N | 109° 21' 32.260 W |
| 2,000.00 | 11.00 | 174.14 | 1,975.52 | -269.73 | 1.07 | 14,521,991.26 | 2,100,168.76 | 39° 58' 38.102 N | 109° 21' 32.235 W |
| 2,100.00 | 11.00 | 174.14 | 2,073.69 | -288.72 | 3.02 | 14,521,972.32 | 2,100,171.06 | 39° 58' 37.914 N | 109° 21' 32.210 W |
| 2,200.00 | 11.00 | 174.14 | 2,171.85 | -307.70 | 4.97 | 14,521,953.37 | 2,100,173.35 | 39° 58' 37.726 N | 109° 21' 32.185 W |
| 2,289.80 | 11.00 | 174.14 | 2,260.00 | -324.75 | 6.72 | 14,521,936.35 | 2,100,175.42 | 39° 58' 37.558 N | 109° 21' 32.162 W |
| **8 5/8"** | | | | | | | | | |
| 2,300.00 | 11.00 | 174.14 | 2,270.01 | -326.69 | 6.92 | 14,521,934.42 | 2,100,175.65 | 39° 58' 37.539 N | 109° 21' 32.160 W |
| 2,400.00 | 11.00 | 174.14 | 2,368.17 | -345.68 | 8.87 | 14,521,915.47 | 2,100,177.95 | 39° 58' 37.351 N | 109° 21' 32.135 W |
| 2,500.00 | 11.00 | 174.14 | 2,466.33 | -364.66 | 10.82 | 14,521,896.53 | 2,100,180.25 | 39° 58' 37.163 N | 109° 21' 32.110 W |
| 2,600.00 | 11.00 | 174.14 | 2,564.49 | -383.65 | 12.76 | 14,521,877.58 | 2,100,182.54 | 39° 58' 36.976 N | 109° 21' 32.085 W |
| 2,700.00 | 11.00 | 174.14 | 2,662.66 | -402.64 | 14.71 | 14,521,858.63 | 2,100,184.84 | 39° 58' 36.788 N | 109° 21' 32.060 W |
| 2,800.00 | 11.00 | 174.14 | 2,760.82 | -421.62 | 16.66 | 14,521,839.69 | 2,100,187.14 | 39° 58' 36.600 N | 109° 21' 32.035 W |
| 2,900.00 | 11.00 | 174.14 | 2,858.98 | -440.61 | 18.61 | 14,521,820.74 | 2,100,189.43 | 39° 58' 36.413 N | 109° 21' 32.010 W |
| 3,000.00 | 11.00 | 174.14 | 2,957.14 | -459.60 | 20.56 | 14,521,801.79 | 2,100,191.73 | 39° 58' 36.225 N | 109° 21' 31.985 W |
| 3,100.00 | 11.00 | 174.14 | 3,055.30 | -478.58 | 22.50 | 14,521,782.84 | 2,100,194.03 | 39° 58' 36.037 N | 109° 21' 31.960 W |
| 3,200.00 | 11.00 | 174.14 | 3,153.46 | -497.57 | 24.45 | 14,521,763.90 | 2,100,196.33 | 39° 58' 35.850 N | 109° 21' 31.935 W |
| 3,300.00 | 11.00 | 174.14 | 3,251.63 | -516.55 | 26.40 | 14,521,744.95 | 2,100,198.62 | 39° 58' 35.662 N | 109° 21' 31.910 W |
| 3,400.00 | 11.00 | 174.14 | 3,349.79 | -535.54 | 28.35 | 14,521,726.00 | 2,100,200.92 | 39° 58' 35.474 N | 109° 21' 31.885 W |
| 3,500.00 | 11.00 | 174.14 | 3,447.95 | -554.53 | 30.30 | 14,521,707.05 | 2,100,203.22 | 39° 58' 35.287 N | 109° 21' 31.860 W |
| 3,600.00 | 11.00 | 174.14 | 3,546.11 | -573.51 | 32.24 | 14,521,688.11 | 2,100,205.52 | 39° 58' 35.099 N | 109° 21' 31.835 W |
| 3,700.00 | 11.00 | 174.14 | 3,644.27 | -592.50 | 34.19 | 14,521,669.16 | 2,100,207.81 | 39° 58' 34.911 N | 109° 21' 31.810 W |
| 3,800.00 | 11.00 | 174.14 | 3,742.43 | -611.49 | 36.14 | 14,521,650.21 | 2,100,210.11 | 39° 58' 34.724 N | 109° 21' 31.784 W |
| 3,900.00 | 11.00 | 174.14 | 3,840.60 | -630.47 | 38.09 | 14,521,631.27 | 2,100,212.41 | 39° 58' 34.536 N | 109° 21' 31.759 W |
| 4,000.00 | 11.00 | 174.14 | 3,938.76 | -649.46 | 40.04 | 14,521,612.32 | 2,100,214.70 | 39° 58' 34.348 N | 109° 21' 31.734 W |



RECEIVED: October 17, 2011

Scientific Drilling
Rocky Mountain Operations

# SDI
## Planning Report - Geographic

Anadarko Petroleum Corporation

| | | | |
|---|---|---|---|
| **Database:** | EDM 2003.16 Single User Db | **Local Co-ordinate Reference:** | Well BONANZA 1023-5L3BS |
| **Company:** | Kerr McGee Oil and Gas Onshore LP | **TVD Reference:** | GL 5223' & RKB 14' @ 5237.00ft (ASSUMED) |
| **Project:** | Uintah County, UT UTM12 | **MD Reference:** | GL 5223' & RKB 14' @ 5237.00ft (ASSUMED) |
| **Site:** | Bonanza 1023-5L PAD | **North Reference:** | True |
| **Well:** | BONANZA 1023-5L3BS | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | PLAN #1 | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (ft) | Map Easting (ft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| 4,042.24 | 11.00 | 174.14 | 3,980.23 | -657.48 | 40.86 | 14,521,604.31 | 2,100,215.68 | 39° 58' 34.269 N | 109° 21' 31.724 W |
| **Start Drop -2.00** | | | | | | | | | |
| 4,100.00 | 9.85 | 174.14 | 4,037.03 | -667.88 | 41.93 | 14,521,593.94 | 2,100,216.93 | 39° 58' 34.166 N | 109° 21' 31.710 W |
| 4,200.00 | 7.85 | 174.14 | 4,135.83 | -683.18 | 43.50 | 14,521,578.67 | 2,100,218.78 | 39° 58' 34.015 N | 109° 21' 31.690 W |
| 4,234.46 | 7.16 | 174.14 | 4,170.00 | -687.65 | 43.96 | 14,521,574.20 | 2,100,219.33 | 39° 58' 33.971 N | 109° 21' 31.684 W |
| **WASATCH** | | | | | | | | | |
| 4,300.00 | 5.85 | 174.14 | 4,235.11 | -695.04 | 44.71 | 14,521,566.83 | 2,100,220.22 | 39° 58' 33.898 N | 109° 21' 31.674 W |
| 4,400.00 | 3.85 | 174.14 | 4,334.75 | -703.44 | 45.58 | 14,521,558.45 | 2,100,221.24 | 39° 58' 33.815 N | 109° 21' 31.663 W |
| 4,500.00 | 1.85 | 174.14 | 4,434.62 | -708.39 | 46.08 | 14,521,553.51 | 2,100,221.83 | 39° 58' 33.766 N | 109° 21' 31.657 W |
| 4,592.39 | 0.00 | 0.00 | 4,527.00 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| **Start 3909.00 hold at 4592.39 MD** | | | | | | | | | |
| 4,600.00 | 0.00 | 0.00 | 4,534.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 4,700.00 | 0.00 | 0.00 | 4,634.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 4,800.00 | 0.00 | 0.00 | 4,734.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 4,900.00 | 0.00 | 0.00 | 4,834.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 5,000.00 | 0.00 | 0.00 | 4,934.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 5,100.00 | 0.00 | 0.00 | 5,034.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 5,200.00 | 0.00 | 0.00 | 5,134.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 5,300.00 | 0.00 | 0.00 | 5,234.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 5,400.00 | 0.00 | 0.00 | 5,334.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 5,500.00 | 0.00 | 0.00 | 5,434.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 5,600.00 | 0.00 | 0.00 | 5,534.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 5,700.00 | 0.00 | 0.00 | 5,634.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 5,800.00 | 0.00 | 0.00 | 5,734.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 5,900.00 | 0.00 | 0.00 | 5,834.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 6,000.00 | 0.00 | 0.00 | 5,934.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 6,100.00 | 0.00 | 0.00 | 6,034.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 6,200.00 | 0.00 | 0.00 | 6,134.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 6,300.00 | 0.00 | 0.00 | 6,234.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 6,400.00 | 0.00 | 0.00 | 6,334.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 6,500.00 | 0.00 | 0.00 | 6,434.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 6,600.00 | 0.00 | 0.00 | 6,534.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 6,700.00 | 0.00 | 0.00 | 6,634.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 6,800.00 | 0.00 | 0.00 | 6,734.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 6,900.00 | 0.00 | 0.00 | 6,834.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 7,000.00 | 0.00 | 0.00 | 6,934.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 7,100.00 | 0.00 | 0.00 | 7,034.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 7,200.00 | 0.00 | 0.00 | 7,134.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 7,300.00 | 0.00 | 0.00 | 7,234.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 7,325.39 | 0.00 | 0.00 | 7,260.00 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| **MESAVERDE** | | | | | | | | | |
| 7,400.00 | 0.00 | 0.00 | 7,334.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 7,500.00 | 0.00 | 0.00 | 7,434.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 7,600.00 | 0.00 | 0.00 | 7,534.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 7,700.00 | 0.00 | 0.00 | 7,634.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 7,800.00 | 0.00 | 0.00 | 7,734.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 7,900.00 | 0.00 | 0.00 | 7,834.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 8,000.00 | 0.00 | 0.00 | 7,934.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 8,100.00 | 0.00 | 0.00 | 8,034.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 8,200.00 | 0.00 | 0.00 | 8,134.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 8,300.00 | 0.00 | 0.00 | 8,234.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 8,400.00 | 0.00 | 0.00 | 8,334.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| 8,500.00 | 0.00 | 0.00 | 8,434.61 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |



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Scientific Drilling
Rocky Mountain Operations

# SDI
## Planning Report - Geographic

Anadarko Petroleum Corporation

| | | | |
|---|---|---|---|
| **Database:** | EDM 2003.16 Single User Db | **Local Co-ordinate Reference:** | Well BONANZA 1023-5L3BS |
| **Company:** | Kerr McGee Oil and Gas Onshore LP | **TVD Reference:** | GL 5223' & RKB 14' @ 5237.00ft (ASSUMED) |
| **Project:** | Uintah County, UT UTM12 | **MD Reference:** | GL 5223' & RKB 14' @ 5237.00ft (ASSUMED) |
| **Site:** | Bonanza 1023-5L PAD | **North Reference:** | True |
| **Well:** | BONANZA 1023-5L3BS | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | PLAN #1 | | |

### Planned Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (ft) | Map Easting (ft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| 8,501.39 | 0.00 | 0.00 | 8,436.00 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |
| **TD at 8501.39 - BONANZA 1023-5L3BS PBHL** | | | | | | | | | |

### Targets

| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| BONANZA 1023-5L3E<br>- plan hits target center<br>- Circle (radius 25.00) | 0.00 | 0.00 | 8,436.00 | -709.87 | 46.24 | 14,521,552.03 | 2,100,222.01 | 39° 58' 33.751 N | 109° 21' 31.655 W |

### Casing Points

| Measured Depth (ft) | Vertical Depth (ft) | Name | Casing Diameter (in) | Hole Diameter (in) |
|---|---|---|---|---|
| 2,289.80 | 2,260.00 | 8 5/8" | 8.620 | 11.000 |

### Formations

| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|---|---|---|---|---|---|
| 4,234.46 | 4,170.00 | WASATCH | | 0.00 | |
| 1,209.95 | 1,200.00 | GREEN RIVER | | 0.00 | |
| 7,325.39 | 7,260.00 | MESAVERDE | | 0.00 | |

### Plan Annotations

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates +N/-S (ft) | Local Coordinates +E/-W (ft) | Comment |
|---|---|---|---|---|
| 300.00 | 300.00 | 0.00 | 0.00 | Start Build 2.00 |
| 850.00 | 846.63 | -51.83 | -9.14 | Start 156.24 hold at 850.00 MD |
| 1,006.24 | 1,000.00 | -81.19 | -14.32 | Start DLS 2.00 TFO -97.73 |
| 1,157.10 | 1,148.11 | -109.69 | -15.35 | Start 2885.15 hold at 1157.10 MD |
| 4,042.24 | 3,980.23 | -657.48 | 40.86 | Start Drop -2.00 |
| 4,592.39 | 4,527.00 | -709.87 | 46.24 | Start 3909.00 hold at 4592.39 MD |
| 8,501.39 | 8,436.00 | -709.87 | 46.24 | TD at 8501.39 |



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# Kerr-McGee Oil & Gas Onshore. L.P.

## Bonanza 1023-5L Pad

| API # | BONANZA 1023-5E3BS | | |
|---|---|---|---|
| Surface: | 2625 FNL / 129 FWL | SWNW | Lot |
| BHL: | 2159 FNL / 127 FWL | SWNW | Lot |

| API # | BONANZA 1023-5E3CS | | |
|---|---|---|---|
| Surface: | 2635 FNL / 131 FWL | SWNW | Lot |
| BHL: | 2607 FNL / 302 FWL | SWNW | Lot |

| API # | BONANZA 1023-5L1AS | | |
|---|---|---|---|
| Surface: | 2645 FNL / 134 FWL | SWNW | Lot |
| BHL: | 2639 FSL / 1197 FWL | NWSW | Lot |

| API # | BONANZA 1023-5L3BS | | |
|---|---|---|---|
| Surface: | 2654 FNL / 136 FWL | SWNW | Lot |
| BHL: | 1936 FSL / 182 FWL | NWSW | Lot |

This Surface Use Plan of Operations (SUPO) or 13-point plan provides site-specific information for the above-referenced wells.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

An on-site meeting was held on May 19, 2010. Present were:

- David Gordon, NRS; Kevin Sadiler, NRS; Ryan Angus, PET Engineer; Steve Strong, Reclamation; Dan Emmett, Wildlife Biologist - BLM;
- John Slaugh, Mitch Batty, Brian Venn, Jacob Dunham, Jake Edmunds, B.J. Reenders - 609 & Timberline Engineering & Land Surveying, Inc.
- Danielle Piernot and Kathy Schneebeck Dulnoan, Regulatory; Brad Burman, Completions; Clay Einerson, Construction; Grizz Oleen, Environmental; Charles Chase, Reclamation; Lovell Young, Drilling, Roger Parry and Ramey Hoopes, Construction

**A. Existing Roads:**

Existing roads consist of county and improved/unimproved access roads (two-tracks). In accordance with Onshore Order #1, Kerr-McGee will, in accordance with BMPs, improve or maintain existing roads in a condition that is the same as or better than before operations began. New or reconstructed proposed access roads are discussed in Section B.

The existing roads will be maintained in a safe and usable condition. Maintenance for existing roads will continue until final abandonment and reclamation of well pads and/or other facilities, as applicable. Road maintenance will include, but is not limited to, blading, ditching, and/or culvert installation and cleanout. To ensure safe operating conditions, gravel surfacing will be performed where excessive rutting or erosion may occur. Dust control will be performed as necessary to ensure safe operating conditions.

Roads, gathering lines and electrical distribution lines will occupy common disturbance corridors where possible. Where available, roadways will be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor will overlap each other to the maximum extent possible, while maintaining safe and sound construction and installation practices. Unless otherwise approved or requested in site specific



RECEIVED: October 17, 2011

documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

Please refer to Topo B, for existing roads.

**The following segments are "on-lease"**

±780' (0.1 miles) – Section 6 T10S R23E (SE/4 NE/4) – On-lease UTU33433, from the proposed road re-route to the 1023-6H intersection. Please refer to Topo B and Exhibit B2.

±310' (0.01 miles) – Section 6 T10S R23E (SE/4 NE/4) – On-lease UTU33433, from the 1023-6H intersection to the edge of the lease line to tie-in to the ROW that is in progress for the Bonanza 1023-6H Pad. Please refer to Exhibit B2.

**The following segment is a "ROW in Progress" with the Bonanza 1023-6H Pad**

±6,080' (1.2 miles) – Section 6 T10S R23E (SW/4 NE/4) – On-lease UTU38419, traveling southeast through NE/4 of Section 5 T10S R23E on lease UTU73450. Continuing on southeasterly through the NW/4 of Section 8 T10S R23E on lease UTU37355 to tie-in to the county road interesection. Please see Exhibit B2, Lines 7, 6, 5, 4, 3, 2 and 1.

**B. New or Reconstructed Access Roads:**

All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BLM. BMPs. Described in the BLM's Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition (Gold Book) (USDI and USDA, 2007) and/or BLM Manual Section 9113 (1985) will be considered in consultation with the BLM in the design, construction, improvement and maintenance of all new or reconstructed roads. If a new road would cross a water of the United States, Kerr-McGee will adhere to the requirements of applicable Nationwide Permits of the Department of Army Corps of Engineers.

Each new well pad or pad expansion may require construction of a new access road and/or de-commissioning of an older road. Plans, routes, and distances for new roads and road improvements are provided in design packages, exhibits and maps for a project. Project-specific maps are submitted to depict the locations of existing, proposed, and/or decommissioned and include the locations for supporting structures, including, but not limited to, culverts, bridges, low water crossings, range infrastructure, and haul routes, as per OSO 1. Designs for cuts and fills, including spoils source and storage areas, are provided with the road designs, as necessary.

Where safety objectives can be met. As applicable, Kerr-McGee may use unimproved and/or two-track roads for lease operations, to lessen total disturbance.

Road designs will be based on the road safety requirements, traffic characteristics, environmental conditions, and the vehicles the road is intended to carry. Generally, newly constructed unpaved lease roads will be crowned and ditched with the running surfaces of the roads approximately 12-18 feet wide and a total road corridor width not to exceed 45 feet, except where noted in the road design for a specific project. Maximum grade will generally not exceed 8%. Borrow ditches will be back sloped 3:1 or less. Construction BMPs will be employed to control onsite and offsite erosion.

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities, such as V- or wing-ditches, will be constructed to divert surface water runoff. Drainage features, including culverts, will be constructed or installed prior to commencing other operations, including drilling or facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s), as necessary.



RECEIVED: October 17, 2011

Prior to construction, new access road(s) will be staked according to the requirements of OSO 1. Construction activity will not be conducted using frozen or saturated materials or during periods when significant watershed damage (e.g. rutting, extensive sheet soil erosion, formation of rills/gullies, etc.) is likely to occur. Vegetative debris will not be placed in or under fill embankments.

New road maintenance will include, but is not limited to, blading, ditching, culvert installation and cleanout, gravel surfacing where excessive rutting or erosion may occur and dust control, as necessary to ensure safe operating conditions. All vehicular traffic, personnel movement, construction/restoration operations will be confined to the approved area and to existing roadways and/or access routes.

Snow removal will be conducted on an as-needed basis to accommodate safe travel. Snow removal will occur as necessary throughout the year, as will necessary drainage ditch construction. Removed snow may be stored on permitted well pads to reduce hauling distances and/or at the aerial extent of approved disturbance boundaries to facilitate snow removal for the remainder of the season.

If a county road crossing or encroachment permit is needed, it will be obtained prior to construction.

**The following segments are "on-lease"**

±550' (0.1 miles) – Section 5 T10S R23E (SW/4 NW/4) On-lease UTU33433, from the edge of pad to the proposed road re-route to tie-in to the T-intersection in the SE/4 NE/4 of Section 6. Please refer to Topo B and Exhibit B2.

**C. Location of Existing Wells:**

A) Refer to Topo Map C.

**D. Location of Existing and/or Proposed Facilities:**

This pad will expand the existing pad for the Bonanza 1023-5L, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on May 26, 2011. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad. A berm will be constructed completely around production components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will generally be constructed of compacted subsoil or corrugated metal, and will hold the capacity of the largest tank and have sufficient freeboard to accomodate a 25 year rainfall event. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with the BLM (typically Shadow Gray). A production facility layout is provided as part of a project-specific APD, ROW or NOS submission.

**GAS GATHERING**

*Please refer to Exhibit B and Topo D- Pad and Pipeline Detail.*

The gas gathering pipeline material: Steel line pipe. Surface = Bare pipe. Buried = Coated with fusion bonded epoxy coating (or equivalent). The total gas gathering pipeline distance from the meter to the tie in point is ±15,030' and the individual segments are broken up as follows:



RECEIVED: October 17, 2011

**The following segments are "onlease", no ROW needed.**

±460' (0.1 miles) – Section 5 T10S R23E (NW/4 SW/4) – On-lease UTU33433, BLM surface, New 6" buried gas gathering pipeline from the first meter house to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

±1,200' (0.2 miles) – Section 5 T10S R23E (SW/4 Nw/4) – On-lease UTU33433, BLM surface, New 6" buried gas gathering pipeline from the edge of the pad to tie-in to the proposed 10" gas gathering pipeline at the 1023-6H intersection. Please refer to Topo D and Exhibit A, Line 13.

±340' (0.1 miles) – Section 6 T10S R23E (SE/4 NE/4) – On-lease UTU33433, BLM surface, New 10" buried gas gathering pipeline from the 1023-6H intersection to the edge of the lease line to tie-in to the ROW that is in progress for the Bonanza 1023-6H Pad. Please refer to Exhibit A, Line 12. This pipeline will be used concurrently with the Bonanza 1023-6H Pad.

**The following segment is a "ROW in Progress" with the Bonanza 1023-6H Pad**

±13,030' (2.5 miles) – Section 6 T10S R23E (SW/4 NE/4) – On-lease UTU38419, traveling northwest through Section 6 T10S R23E up to the Section 1, T10S R22E lease boundary. Continuing on southwesterly direction through the W/2 of Section 1 T10S R22E on lease UTU011336 to state section boundary at Section 2, T10S R22E. Please see Exhibit A1, Lines 7, 8, 9 and 10.

The remaining gas pipeline section that will go to the existing Tank Battery, will be on state surface. Kerr-McGee will apply for the appropriate state rights of way.

Kerr-McGee, additionally will install a gas gathering line in a southeasterly direction to tie into an existing buried pipeline. The total of this proposed gas gathering from the meter to the tie in point is ±7,990 and the individual segments are broken up as follows:

**The following segments are "onlease", no ROW needed.**

±460' (0.1 miles) – Section 5 T10S R23E (NW/4 SW/4) – On-lease UTU33433, BLM surface, New 6" buried gas gathering pipeline from the first meter house to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

±1,200' (0.2 miles) – Section 5 T10S R23E (SW/4 Nw/4) – On-lease UTU33433, BLM surface, New 6" buried gas gathering pipeline from the edge of the pad to tie-in to the proposed 10" gas gathering pipeline at the 1023-6H intersection. Please refer to Topo D and Exhibit A, Line 13.

±340' (0.1 miles) – Section 6 T10S R23E (SE/4 NE/4) – On-lease UTU33433, BLM surface, New 10" buried gas gathering pipeline from the 1023-6H intersection to the edge of the lease line to tie-in to the ROW that is in progress for the Bonanza 1023-6H Pad. Please refer to Exhibit A, Line 12. This pipeline will be used concurrently with the Bonanza 1023-6H Pad.

**The following segment is a "ROW in Progress" with the Bonanza 1023-6H Pad**

±5,990' (1.1 miles) – Section 6 T10S R23E (SW/4 NE/4) – On-lease UTU38419, traveling southeast through NE/4 of Section 5 T10S R23E on lease UTU73450. Continuing on southeasterly through the NW/4 of Section 8 T10S R23E on lease UTU37355 to tie-in the existing 16" gas gathering pipeline. Please see Exhibit A1, Lines 7, 6, 5, 4, 3, 2 and 1.

## LIQUID GATHERING

The total liquid gathering pipeline distance from the separator to the tie in point is ±15,030' and the individual segments are broken up as follows:



RECEIVED: October 17, 2011

**The following segments are "onlease", no ROW needed.**

±460' (0.1 miles) – Section 5 T10S R23E (SW/4 NW/4) – On-lease UTU33433, BLM surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 Pad and Pipeline Detail.

±1,200' (0.2 miles) – Section 5 T10S R23E (SW/4 NW/4) – On-lease UTU33433, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad to tie-in to the proposed 6" liquid gathering pipeline at the 1023-6H intersection. Please refer to Topo D and Exhibit B, Line 14.

±340' (0.1 miles) – Section 6 T10S R23E (SE/4 NE/4) – On-lease UTU33433, BLM surface, New 6" buried liquid gathering pipeline from the 1023-6H intersection to tie-in to the ROW that is in progress for the Bonanza 1023-6H Pad. Please refer to Exhibit B, Line 15. This pipeline will be used concurrently with the Bonanza 1023-6H Pad.

**The following segment is a "ROW in Progress" with the Bonanza 1023-6H Pad**

±13,030' (2.5 miles) – Section 6 T10S R23E (SW/4 NE/4) – On-lease UTU38419, traveling northwest through Section 6 T10S R23E up to the Section 1, T10S R22E lease boundary. Continuing on southwesterly direction through the W/2 of Section 1 T10S R22E on lease UTU011336 to state section boundary at Section 2, T10S R22E. Please see Exhibit B1, Lines 4, 3, 2 and 1.

The remaining liquid pipeline section that will go to the existing Tank Battery, will be on state surface. Kerr-McGee will apply for the appropriate state rights of way.

Kerr-McGee, additionally will install a liquid gathering line in a southeasterly direction to tie into an existing buried pipeline. The total of this proposed liquid gathering from the separator to the tie in point is ±7,990 and the individual segments are broken up as follows:

**The following segments are "onlease", no ROW needed.**

±460' (0.1 miles) – Section 5 T10S R23E (SW/4 NW/4) – On-lease UTU33433, BLM surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 Pad and Pipeline Detail.

±1,200' (0.2 miles) – Section 5 T10S R23E (SW/4 NW/4) – On-lease UTU33433, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad to tie-in to the proposed 6" liquid gathering pipeline at the 1023-6H intersection. Please refer to Topo D and Exhibit B, Line 14.

±340' (0.1 miles) – Section 6 T10S R23E (SE/4 NE/4) – On-lease UTU33433, BLM surface, New 6" buried liquid gathering pipeline from the 1023-6H intersection to tie-in to the ROW that is in progress for the Bonanza 1023-6H Pad. Please refer to Exhibit B, Line 15. This pipeline will be used concurrently with the Bonanza 1023-6H Pad.

**The following segment is a "ROW in Progress" with the Bonanza 1023-6H Pad**

±5,990' (1.1 miles) – Section 6 T10S R23E (SW/4 NE/4) – On-lease UTU38419, traveling southeast through NE/4 of Section 5 T10S R23E on lease UTU73450. Continuing on southeasterly through the NW/4 of Section 8 T10S R23E on lease UTU37355 to tie-in the existing liquid gathering pipeline. Please see Exhibit A1, Lines 7, 6, 5, 4, 3, 2 and 1.

## Pipeline Gathering Construction

Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee. Gas gathering pipeline(s,) gas lift, or liquids pipelines may be constructed to lie on the surface or be buried. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. The area of disturbance during construction from the edge of road or well pad will typically be 30' in width. Where pipelines run cross country, the width of disturbance will typically be 45 ft for buried lines and 30 ft for surface lines. In addition, Kerr-McGee requests for a permanent 30'



RECEIVED: October 17, 2011

distrubance width that will be maintained for the portion adjacent to the road. The need for the 30' permanent distrubance width is for maintenance and repairs. Cross country permanent distrubance width also are required to be 30ft.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. In some surface pipeline installation instances pipe cannot be constructed where it will lay. In these cases where an above-ground pipeline is constructed parallel and adjacent to a road, it will be welded/fused on the road and then lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment.

Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2 inches (typically fuel gas lines) to 24 inches (typically transportation lines) in diameter, but 6 to 16 inches is typical for a buried gas line. The diameter of liquids pipelines may vary from 2 inches to 12 inches, but 6 inches is the typical diameter. Gas lift lines may vary from 2 to 12 inches in diameter, but 6-inch diameter pipes are generally used for gas lift. If two or more pipelines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

Typically, to install a buried pipeline, topsoil will be removed, windrowed and placed on the non-working side of the route for later reclamation. Because working room is limited, the spoil may be spread out across the working side and construction will take place on the spoil. The working side of the corridor will be used for pipe stringing, bending, welding and equipment travel. Small areas on the working side displaying ruts or uneven ground will be groomed to facilitate the safe passage of equipment. After the pipelines are installed, spoil will be placed back into the trench, and the topsoil will be redistributed over the disturbed corridor prior to final reclamation. Typical depth of the trench will be 6 feet, but depths may vary according to site-specific conditions (presence of bedrock, etc.). The proposed trench width for the pipeline would range from 18-48 inches.

The pipeline will be welded along the proposed route and lowered into place. Trenching equipment will cut through the soil or into the bedrock and create good backfill, eliminating the need to remove large rocks. The proposed buried pipeline will be visually and radiographically inspected and the entire pipeline will be pneumatically or hydrostatically tested before being placed into service. Routine vehicle traffic will be prevented from using pipeline routes as travel ways by posting signs at the route's intersection with an access road.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, Kerr-McGee will apply all applicable Army Corps mandates as well as the BLM's Hydraulic Considerations for Pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface.

Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations for production integrity and safety purposes.



RECEIVED: October 17, 2011

Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation.

When no longer deemed necessary by the operator, Kerr-McGee or it's successor will consult with the BLM, Vernal Field Office before terminating of the use of the pipeline(s).

**The Anadarko Completions Transportation System (ACTS) information:**

Please refer to Exhibit C for ACTs Lines

Kerr-McGee will use either a closed loop drilling system that will require one pit and one storage area to be constructed on the drilling pad or a traditional drilling operation with one pit. The storage area will be used to contain only the de-watered drill cuttings and will be lined and reclaimed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit is lined and will be used for the wells drilled on the pad or used as part of our Anadarko Completions Transportation (ACTS) system which is disussed in more detail below. Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completion pit.

If Kerr-McGee does not use a closed loop system, it will construct a drilling reserve pit to contain drill cuttings and for use in completion operations. Depending on the location of the pit, its relation to future drilling locations, the reserve/completion pit will be utilized for the completion of the wells on that pad and/or be used as part of our ACTS system.

Kerr-McGee will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of frac fluids by utilizing existing reserve pits and temporary, surface-laid aluminum liquids transfer lines between frac locations. The pit will be refurbished as follows when a traditional drill pit is used: mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom of pit with cat. Kerr-McGee will reline the pit with a 30 mil liner and double felt padding. The refurbished pit will be the same size or smaller as specified in the originally approved ROW/APD. The pit refurb will be done in a normal procedure and there will be no modification to the pit.

All four sides of the completions pit will be fenced in according to standard pit fencing procedures. Netting will be installed over all pits.

The collected hydrocarbons will be treated and sold at approved sales facilities. A loading rack with drip containment will also be installed where water trucks would unload and load to prevent damage caused from pulling hoses in and out of the pit .

ACTS will require temporarily laying multiple 6” aluminum water transfer lines on the surface between either existing or refurbished reserve pits. Please see the attached ACTS exhibit C for placement of the proposed temporary lines. The temporary aluminum transfer lines will be utilized to transport frac fluid being injected and/or recovered during the completion process and will be laid adjacent to existing access roads or pipeline corridors. Upon completion of the frac operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. Kerr-McGee requests to keep the netted pit open for one year from first production of the first produced well on the pad. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other frac jobs in the area. After one year Kerr-McGee will backfill the pit and reclaim. If the pit is not needed for an entire year it will be backfilled and reclaimed earlier. Kerr-McGee understands that due to the



RECEIVED: October 17, 2011

temporary nature of this system, BLM considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BLM.

**E. Location and Types of Water Supply:**

Water for drilling and completion operations will be obtained from the following sources:

| | | |
|---|---|---|
| Permit # 49-2307 | JD Field Services | Green River- Section 15, T2N, R22E |
| Permit # 49-2321 | R.N. Industries | White River- Section 2, T10S, R24E |
| Permit # 49-2319 | R.N. Industries | White River- Various Sources |
| Permit # 49-2320 | R.N. Industries | Green River- Section 33, T8S, R23E |

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.

**F. Construction Materials:**

Construction operations will typically be completed with native materials found on location. Construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source (described in site-specific documents). No construction materials will be removed from federal lands without prior approval from the BLM. A source location other than an on-location construction site will be designated either via a map or narrative within the project specific materials provided to the BLM.

**G. Methods for Handling Waste:**

All wastes subject to regulation will be handled in compliance with applicable laws to minimize the potential for leaks or spills to the environment. Kerr-McGee also maintains a Spill Control and Countermeasure Plan, which includes notification requirements, including the BLM, for all reportable spills of oil, produced liquids, and hazardous materials.

Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of CERCLA, Section 102 B. If a release involves petroleum hydrocarbons or produced liquids, Kerr-McGee will comply with the notification requirements of NTL-3A. Drill cuttings and/or drilling fluids will be contained in the reserve/frac pit whether a closed loop system is used or not. Cuttings will be buried in pit(s) upon closure. Unless specifically approved by the BLM, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface precipitation runoff into the pit (via appropriate placement of subsoil storage areas and/or construction of berms, ditches, etc). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/ sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by the BLM. Should timely removal not be feasible, the pit will be netted as soon as practical. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with an impermeable liner. The liner will be a synthetic material 30 mil or thicker. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. After evaporation and when dry, the reserve pit liners will be cut off,



RECEIVED: October 17, 2011

ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions (freeboard, etc.) allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per Onshore Order Number 7 (OSO 7). Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Otherwise, fluids disposal locations and associated haul routes, for ROW consideration, are typically depicted on Topo A of individual projects. Revisions to the water source or method of transportation will be subject to written approval from the BLM.

Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after one year from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse (trash and other solid waste including cans, paper, cable, etc.) generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility. Immediately after removal of the drilling rig, all debris and other waste materials not contained within trash receptacles will be collected and removed from the well location.

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as 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. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements. Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

**Materials Management**

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term “hazardous materials” as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. Kerr-McGee maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is



RECEIVED: October 17, 2011

regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time. Chemicals meeting the criteria for being an acutely hazardous material/substance or meet the quantities criteria per BLM Instruction Memorandum No. 93-344 will not be used.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities (crude oil/condensate, produced water). They may also be kept in limited quantities on drilling sites (barite, diesel fuel, cement, cottonseed hulls etc.) for short periods of time during drilling or completion activities.

Fluids disposal and pipeline/haul routes are depicted on Topo Map A.

Any produced water separated from recoverable condensate from the proposed well will be contained in a water tank and will then be transported by pipeline and/or 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

Or to one of the following Kerr-McGee active Salt Water Disposal (SWD) wells:

NBU 159 SWD in Sec. 35 T9S R21E
CIGE 112D SWD in Sec. 19 T9S R21E
CIGE 114 SWD in Sec. 34 T9S R21E
NBU 921-34K SWD in Sec. 34 T9S R21E
NBU 921-33F SWD in Sec. 34 T9S R21E

**H. Ancillary Facilities:**

No additional ancillary facilities are planned for this location.

**I. Well Site Layout:**

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit (for closed loop or non-closed loop operations), access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure, proposed cuts and fills, and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment depending on whether a closed loop system is used. Surface distance may be less if using closed loop. But in either case, the area of distrubance will not exceed the maximum disturbance outlined in the attached exhibits.

For the protection of livestock and wildlife, all open pits and cellars will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as 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.



RECEIVED: October 17, 2011

Each well will utilize either a centralized tank battery, centralized fluids management system, or have tanks installed on its pad. Production/ Produced Liquid tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks will be kept reasonably free from surface accumulations of liquid hydrocarbons. The tanks are not to be used for disposal of liquids from additional sources without prior approval of BLM.

**J. Plans for Surface Reclamation:**

The surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. Interim reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

**Interim Reclamation**

Interim reclamation may include pit evaporation, fluid removal, pit solidification, re-contouring, ripping, spreading top soil, seeding, and/or weed control. Interim reclamation will be performed in accordance with OSO 1, or written notification will be provided to the BLM for approval. Where feasible, drilling locations, reserve pits, or access routes not utilized for production operations will be re-contoured to a natural appearance.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left “rough” after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit. Disposal of pit fluids and linings is discussed in Section G.

**Final Reclamation**

Final reclamation will be performed for unproductive wells and after the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by Kerr-McGee. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BLM will be notified prior to commencement of reclamation operations. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring the site to the approximate contour that existed prior to pad construction, final grading will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers, where practical. The surface soil material will be pitted with small depressions to



RECEIVED: October 17, 2011

form longitudinal depressions 12 to 18 inches deep, where practical. The entire area will be uniformly covered with the depressions constructed perpendicular to the natural flow of water.

Reclamation of roads will be performed at the discretion of the BLM. All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded in accordance with the seeding specifications of the BLM.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to the BLM.

**Measures Common to Interim and Final Reclamation**

Soil preparation will be conducted using a disk for areas in need of more soil preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeding, compacted areas will be scarified by ripping or chiseling to loosen compacted soils, promote water infiltration, and improve soil aeration and root penetration.

Seeding will occur year-round as conditions allow and will typically be accomplished through the use of a no-till rangeland style seed drill with a “picker box” in order to seed “fluffy” seed. Where drill seeding is not the preferred method, seed will be broadcast and then raked into the ground at double the rate of drill seeding. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The seed mixes will be selected from a list provided by or approved by the BLM, or a specific seed mix will be proposed by Kerr-McGee to the BLM and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be maintained by Kerr-McGee. Every effort will be made to obtain “cheat grass free seed”.

Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

| **Bonanza Area Mix** | **Pure Live Seed lbs/acre** |
|---|---|
| Crested Wheat (Hycrest) | 2 |
| Bottlebrush Squirreltail | 1 |
| Western Wheatgrass (Arriba) | 1 |
| Indian Ricegrass | 1 |
| Fourwing Saltbush | 2 |
| Shadscale | 2 |
| Forage Kochia | 0.25 |
| Rocky Mountain Bee | 0.5 |
| **Total** | 9.75 |

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. Slopes will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to: erosion control blankets, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage. Soil amendments such as “Sustain” (an organic fertilizer that will be applied at the rate 1,800 – 2,100 lbs/acre with seed) may also be dry broadcast or applied with hydro-seeding equipment.

**Weed Control**

All weed management will be done in accordance with the Vernal BLM Surface Disturbance Weed Policy. Noxious weeds will be controlled, as applicable, on project areas. Monitoring and management of noxious and/or invasive weeds of concern will be completed annually until the project is deemed successfully reclaimed by the surface management agency and/or owner according to the Anadarko Integrated Weed Management Plan. Noxious weed infestations will be mapped using a GPS unit and submitted to the BLM with information required in the Vernal BLM Surface Disturbance Weed Policy. If herbicide is to be applied it will be done according to an approved Pesticide Use Permit (PUP), inclusive of



RECEIVED: October 17, 2011

applicable locations. All pesticide applications will be recorded using a Pesticide Application Record (PAR) and will be submitted along with a Pesticide Use Report (PUR) annually prior to Dec. 31.

**Monitoring**

Monitoring of reclaimed project areas will be completed annually during the growing season and actions to ensure reclamation success will be taken as needed. During the first two growing seasons an ocular methodology will be used to determine the success of the reclamation activities. During the 3rd growing season a 200 point line intercept (quantitative) methodology will be used to obtain basal cover. The goal is to have the reclaimed area reach 30% basal cover when compared to the reference site. If after three growing seasons the area has not reached 30% basal cover, additional reclamation activities may be necessary. Monitoring will continue until the reclaimed area reaches 75% basal cover of desirable vegetation when compared to the reference site. (Green River District Reclamation Guidelines)

All monitoring reports will be submitted electronically to the Vernal BLM in the form of a geo-database no later than March 1st of the calendar year following the data collection.

**K. Surface/Mineral Ownership:**

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

**L. Other Information:**

**Onsite Specifics:**

- Construction: 30 Mil Double Felt
- Facilities: Will be painted Shadow Grey
- Top Soil: Need to save 6" topsoil
- Need to reclaim portion of existing pad in section 6 that is off lease and the existing road

**Cultural and Paleontological Resources**

All personnel are strictly prohibited from collecting artifacts, any paleontological specimens or fossils, and from disturbing any significant cultural resources in the area. If artifacts, fossils, or any culturally sensitive materials are exposed or identified in the area of construction, all construction operations that would affect the newly discovered resource will cease, and Kerr-McGee will provide immediate notification to the BLM.

**Resource Reports:**

A Class I literature survey was completed on April 23, 2010 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 10-066.

A paleontological reconnaissance survey was completed on August 20, 2010 by SWCA Environmental Consultants. For additional details please refer to report UT10-14314-15.

Biological field survey was completed on April 26, 2010 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-207.



RECEIVED: October 17, 2011

**Proposed Action Annual Emissions Tables:**

**Table 1: Proposed Action Annual Emissions (tons/year)[1]**

| Pollutant | Development | Production | Total |
|---|---|---|---|
| NOx | 3.8 | 0.12 | 3.92 |
| CO | 2.2 | 0.11 | 2.31 |
| VOC | 0.1 | 4.9 | 5 |
| $SO_2$ | 0.005 | 0.0043 | 0.0093 |
| $PM_{10}$ | 1.7 | 0.11 | 1.81 |
| $PM_{2.5}$ | 0.4 | 0.025 | 0.425 |
| Benzene | 2.2E-03 | 0.044 | 0.046 |
| Toluene | 1.6E-03 | 0.103 | 0.105 |
| Ethylbenzene | 3.4E-04 | 0.005 | 0.005 |
| Xylene | 1.1E-03 | 0.076 | 0.077 |
| n-Hexane | 1.7E-04 | 0.145 | 0.145 |
| Formaldehyde | 1.3E-02 | 8.64E-05 | 1.31E-02 |

[1] Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

**Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison**

| Species | Proposed Action Production Emissions (ton/yr) | 2012 Uintah Basin Emission Inventory[a] (ton/yr) | Percentage of Proposed Action to WRAP Phase III |
|---|---|---|---|
| NOx | 15.68 | 16,547 | 0.09% |
| VOC | 20 | 127,495 | 0.02% |

[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html Uintah Basin Data



RECEIVED: October 17, 2011

**M. Lessee's or Operators' Representative & Certification:**

Gina T. Becker
Regulatory Analyst II
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6086

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.

Gina T. Becker

Gina T.Becker

October 12, 2011
Date

Joseph D. Johnson
LANDMAN

Kerr-McGee Oil & Gas Onshore LP
P.O. Box 173779
Denver, CO 80217-3779

June 7, 2011

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

Re: Exception Location R649-3-3 and Directional Drilling R649-3-11
Bonanza 1023-5L3BS
T10S- R23E
Section 5: SWNW/NWSW
2654' FNL, 136' FWL (surface)
1936' FSL, 182' FWL (bottom hole)
Uintah County, Utah

Dear Ms. Mason:

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

- Kerr-McGee's Bonanza 1023-5L3BS is located within the area covered by Docket No. 2008-011 authorizing the equivalent of an approximate 10-acre well density pattern, and requiring approval for wells drilled at an exception location and wells drilled directionally in accordance with the referenced rules.

- Kerr-McGee is permitting this well at this location for geological reasons. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to minimize surface disturbance.

- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

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

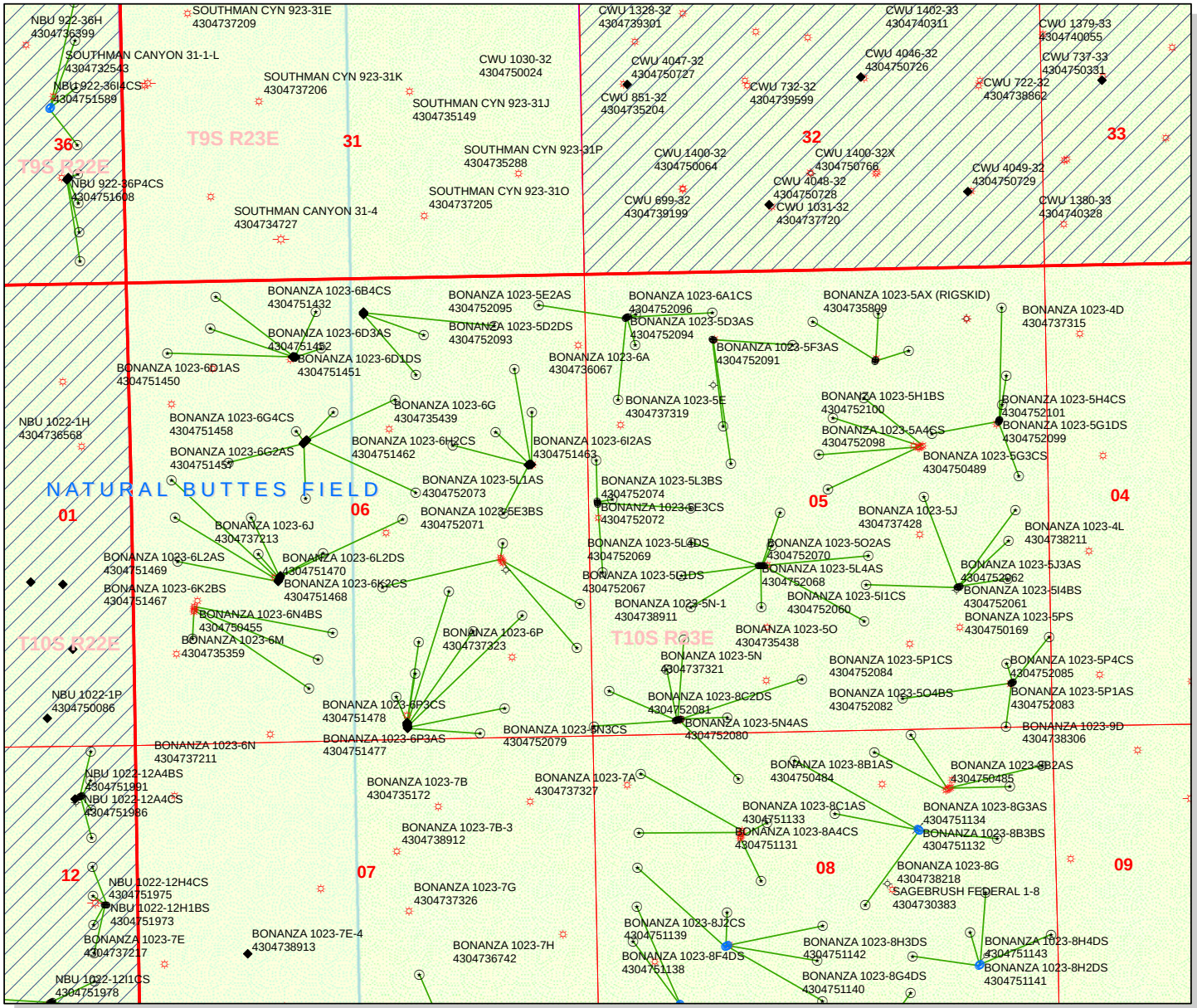
Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Joseph D. Johnson
Landman

RECEIVED: October 17, 2011

API Well Number: 43047520740000




**API Number: 4304752074**

**Well Name: BONANZA 1023-5L3BS**

**Township T1.0 . Range R2.3 . Section 05**

**Meridian: SLBM**

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

Map Prepared:
Map Produced by Diana Mason

**Units**
**STATUS**
- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

**Fields**
**STATUS**
- Unknown
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- STORAGE
- TERMINATED

**Wells Query**
**Status**
- APD - Aproved Permit
- DRL - Spuded (Drilling Commenced)
- GIW - Gas Injection
- GS - Gas Storage
- LA - Location Abandoned
- LOC - New Location
- OPS - Operation Suspended
- PA - Plugged Abandoned
- PGW - Producing Gas Well
- POW - Producing Oil Well
- RET - Returned APD
- SGW - Shut-in Gas Well
- SOW - Shut-in Oil Well
- TA - Temp. Abandoned
- TW - Test Well
- WDW - Water Disposal
- WIW - Water Injection Well
- WSW - Water Supply Well

1,500 750 0 1,500 Feet

1:14,184

**RECEIVED: October 26, 2011**

# WORKSHEET
# APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 10/17/2011 **API NO. ASSIGNED:** 43047520740000
**WELL NAME:** BONANZA 1023-5L3BS
**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6086
**CONTACT:** Gina Becker

**PROPOSED LOCATION:** SWNW 05 100S 230E **Permit Tech Review:** ✔

**SURFACE:** 2654 FNL 0136 FWL **Engineering Review:** ✔

**BOTTOM:** 1936 FSL 0182 FWL **Geology Review:** ✔

**COUNTY:** UINTAH
**LATITUDE:** 39.97800 **LONGITUDE:** -109.35976
**UTM SURF EASTINGS:** 640059.00 **NORTHINGS:** 4426604.00
**FIELD NAME:** NATURAL BUTTES
**LEASE TYPE:** 1 - Federal
**LEASE NUMBER:** UTU33433 **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:** 43-8496
- ☐ **RDCC Review:**
- ☐ **Fee Surface Agreement**
- ✔ **Intent to Commingle**

**Commingling 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:**
1 - Exception Location - dmason
3 - Commingling - ddoucet
4 - Federal Approval - dmason
15 - Directional - dmason

**RECEIVED: October 26, 2011**

GARY R. HERBERT
*Governor*
GREGORY S. BELL
*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 1023-5L3BS
**API Well Number:** 43047520740000
**Lease Number:** UTU33433
**Surface Owner:** FEDERAL
**Approval Date:** 10/26/2011

**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

**Exception Location:**
Appropriate information has been submitted to DOGM and administrative approval of the requested exception location is hereby granted.

**Commingle:**
In accordance with Board Cause No. 179-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well 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:**

API Well No: 43047520740000

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

- Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)
  OR
  submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at http://oilgas.ogm.utah.gov

**Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

**Approved By:**

For John Rogers
Associate Director, Oil & Gas

Form 3160-3
(August 2007)

UDOGM

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
JUL 22 2011
BLM

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

# APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
UTU33433

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.
CA-UTU-74473

8. Lease Name and Well No.
BONANZA 1023-5L3BS

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone

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

9. API Well No.
43-047-52074

3a. Address
P.O. BOX 173779
DENVER, CO 80202-3779

3b. Phone No. (include area code)
Ph: 720-929-6086
Fx: 720-929-7086

10. Field and Pool, or Exploratory
BONANZA

4. Location of Well (*Report location clearly and in accordance with any State requirements.**)

At surface SWNW 2654FNL 136FWL 39.977957 N Lat, 109.359637 W Lon

At proposed prod. zone NWSW 1936FSL 182FWL 39.976008 N Lat, 109.359472 W Lon

11. Sec., T., R., M., or Blk. and Survey or Area
Sec 5 T10S R23E Mer SLB

14. Distance in miles and direction from nearest town or post office*
APPROXIMATELY 48 MILES SOUTHEAST OF VERNAL, UTAH

12. County or Parish
UINTAH

13. State
UT

15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
182

16. No. of Acres in Lease
1923.00

17. Spacing Unit dedicated to this well

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.
182

19. Proposed Depth
8501 MD
8436 TVD

20. BLM/BIA Bond No. on file
WYB000291

21. Elevations (Show whether DF, KB, RT, GL, etc.
5224 GL

22. Approximate date work will start
12/31/2011

23. Estimated duration
60-90 DAYS

## 24. Attachments

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

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

25. Signature
(Electronic Submission)

Name (Printed/Typed)
GINA T BECKER Ph: 720-929-6086

Date
07/10/2011

Title
REGULATORY ANALYST II

Approved by (Signature)

Name (Printed/Typed) Jerry Kenczka

Date MAR 02 2012

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.

**CONDITIONS OF APPROVAL 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 #112596 verified by the BLM Well Information System**
**For KERR-MCGEE OIL & GAS ONSHORE, sent to the Vernal**

NOTICE OF APPROVAL
RECEIVED
MAR 14 2012
DIV. OF OIL, GAS & MINING

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE
170 South 500 East VERNAL, UT 84078 (435) 781-440(

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

| | | | |
|---|---|---|---|
| **Company:** | **Kerr McGee Oil & Gas Onshore, LP** | **Location:** | **SWNW, Sec. 5, T10S, R23E (S)**<br>**NWSW, Sec. 5, T10S, R23E (B)** |
| **Well No:** | **Bonanza 1023-5L3BS** | **Lease No:** | **UTU-33433** |
| **API No:** | **43-047-52074** | **Agreement:** | **CA UTU-74473** |

**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 is approved for a two (2) year period, or until lease expiration, 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<br>(Notify Environmental Scientist) | - | Forty-Eight (48) hours prior to construction of location and access roads. |
| Location Completion<br>(Notify Environmental Scientist) | - | Prior to moving on the drilling rig. |
| Spud Notice<br>(Notify Petroleum Engineer) | - | Twenty-Four (24) hours prior to spudding the well. |
| Casing String & Cementing<br>(Notify Supv. Petroleum Tech.) | - | Twenty-Four (24) hours prior to running casing and cementing all casing strings to: ut_vn_opreport@blm.gov. |
| BOP & Related Equipment Tests<br>(Notify Supv. Petroleum Tech.) | - | Twenty-Four (24) hours prior to initiating pressure tests. |
| First Production Notice<br>(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. |

## *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 $NO_x$ 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 $NO_x$ 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 COAs

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horse power must not emit more than 2 grams of NOx per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower-hour.

- All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gram of NOx per horsepower-hour.

- Construction or drilling is not allowed for the Bonanza 1023-5M and Bonanza 1023-5P pads from January 1 – August 31 to minimize impacts during golden eagle nesting.

- If it is anticipated that construction or drilling will occur during the given timing restriction, a BLM or qualified biologist shall be notified to conduct surveys for raptors. Depending upon the results of the surveys, permission to proceed may or may not be granted by the Authorized Officer.

- All reclamation will comply with the Green River Reclamation Guidelines

- All vehicles and equipment shall be cleaned either through power-washing, or other approved method, if the vehicles or equipment were previously operated outside the Uinta Basin, to prevent weed seed introduction.

- All disturbance areas shall be monitored for noxious weeds annually, for a minimum of three growing seasons following completion of project or until desirable vegetation is established

- Noxious and invasive weeds will be controlled throughout the area of project disturbance.

- Noxious weeds will be inventoried and reported to BLM in the annual reclamation report. Where an integrated pest management program is applicable, coordination has been undertaken with the state and local management program (if existing). A copy of the pest management plan will be submitted for each project.

- A pesticide use permit (PUP) will be obtained for the project, if applicable.

- A permitted paleontologist is to be present to monitor construction at well pads 1023-5C, 5D, 5K, 5L, 5M and 5P during all surface disturbing actives: examples include the following building of the well pad, access road, and pipelines.

- The best method to avoid entrainment is to pump from an off-channel location – one that does not connect to the river during high spring flows. An infiltration gallery constructed in a BLM and Service approved location is best.

- If the pump head is located in the river channel where larval fish are known to occur, the following measures apply:
    a. do not situate the pump in a low-flow or no-flow area as these habitats tend to concentrate larval fishes;
    b. limit the amount of pumping, to the greatest extent possible, during that period of the year when larval fish may be present (April 1 to August 31); and
    c. limit the amount of pumping, to the greatest extent possible, during the pre-dawn hours as larval drift studies indicate that this is a period of greatest daily activity.
- Screen all pump intakes with 3/32" mesh material.

- Approach velocities for intake structures will follow the National Marine Fisheries Service's document "Fish Screening Criteria for Anadromous Salmonids". For projects with an in-stream intake that operate in stream reaches where larval fish may be present, the approach velocity will not exceed 0.33 feet per second (ft/s).

- Report any fish impinged on the intake screen to the Service (801.975.3330) and the Utah Division of Wildlife Resources:
    Northeastern Region
    152 East 100 North, Vernal, UT 84078
    Phone: (435) 781-9453

- Discovery Stipulation: Re-initiation of section 7 consultation with the USFWS will be sought immediately if any loss of plants or occupied habitat for Pariette cactus or Uinta Basin hookless cactus is anticipated as a result of project activities.

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

***SITE SPECIFIC DRILLING PLAN COA's:***

1. Gamma ray log shall be run from Total Depth to Surface.

**Variances Granted**:

Air Drilling

- Properly lubricated and maintained rotating head. Variance granted to use a properly maintained and lubricated diverter bowl in place of a rotating head.
- Blooie line discharge 100' from the well bore. Variance granted for blooie line discharge to be 45' from the well bore.
- Compressors located in the opposite direction from the blooie line a minimum of 100' from the well bore. Variance granted for truck/trailer mounted air compressors located 40' from the well bore.
- In lieu of mud products on location, Kerr McGee will fill the reserve pit with water for the kill medium and will utilize a skid pump near the reserve pit to supply the water to the well bore if necessary.
- Automatic igniter. Variance granted for igniter, due to there being no productive formations encountered while air drilling.
- FIT test. Variance granted due to well known geology and problems that can occur with the FIT test.

**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.

- 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.

**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.

- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.

- 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 (¼¼, 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. 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.

SUBMIT AS EMAIL | Print Form

# BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
Submitted By J. Scharnowske Phone Number 720.929.6304
Well Name/Number BONANZA 1023-5L3BS
Qtr/Qtr SWNW Section 5 Township 10S Range 23E
Lease Serial Number UTU33433
API Number 4304752074

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 06/11/2012 15:00 HRS AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☑ Surface Casing
- ☐ Intermediate Casing
- ☐ Production Casing
- ☐ Liner
- ☐ Other

Date/Time 07/06/2012 08:00 HRS AM ☐ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point
- ☐ BOPE test at intermediate casing point
- ☐ 30 day BOPE test
- ☐ Other

Date/Time _____ _____ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT 435.828.0986 OR LOVEL YOUNG AT 435.781.7051

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

**FORM 9**

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU33433

## 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.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL**
Gas Well

**8. WELL NAME and NUMBER:**
BONANZA 1023-5L3BS

**2. NAME OF OPERATOR:**
KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:**
43047520740000

**3. ADDRESS OF OPERATOR:**
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:**
720 929-6515 EXT

**9. FIELD and POOL or WILDCAT:**
NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:**
2654 FNL 0136 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:**
Qtr/Qtr: SWNW Section: 05 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:**
UINTAH

**STATE:**
UTAH

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT<br>Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| ✓ SPUD REPORT<br>Date of Spud:<br>6/11/2012 | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| ☐ DRILLING REPORT<br>Report Date: | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

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

MIRU TRIPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 CONDUCTOR PIPE. CEMENT WITH 28 SACKS READY MIX. SPUD WELL LOCATION ON JUNE 11, 2012 AT 08:00 HRS.

**Accepted by the Utah Division of Oil, Gas and Mining**
**FOR RECORD ONLY**
June 21, 2012

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Jaime Scharnowske | 720 929-6304 | Regulartory Analyst |
| **SIGNATURE** | | **DATE** |
| N/A | | 6/18/2012 |

**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) 929-6304

**Well 1**

| API Number | Well Name | | QQ | Sec | Twp | Rng | County |
|---|---|---|---|---|---|---|---|
| 4304752074 | Bonanza 1023-5L3BS | | SWNW | 5 | 10S | 23E | UINTAH |
| **Action Code** | **Current Entity Number** | **New Entity Number** | **Spud Date** | | | **Entity Assignment Effective Date** | |
| A | 99999 | 18580 | 6/11/2012 | | | 6/20/2012 | |

**Comments:** MIRU TRIPLE A BUCKET RIG. WSMVD
SPUD WELL LOCATION ON 06/11/2012 AT 08:00 HRS. BHL: NWSW —

**Well 2**

| API Number | Well Name | | QQ | Sec | Twp | Rng | County |
|---|---|---|---|---|---|---|---|
| 4304752073 | Bonanza 1023-5L1AS | | SWNW | 5 | 10S | 23E | UINTAH |
| **Action Code** | **Current Entity Number** | **New Entity Number** | **Spud Date** | | | **Entity Assignment Effective Date** | |
| A | 99999 | 18581 | 6/11/2012 | | | 6/20/2012 | |

**Comments:** MIRU TRIPLE A BUCKET RIG. WSMVD
SPUD WELL LOCATION ON 06/11/2012 AT 10:30 HRS. BHL: NWSW —

**Well 3**

| API Number | Well Name | | QQ | Sec | Twp | Rng | County |
|---|---|---|---|---|---|---|---|
| 4304752072 | Bonanza 1023-5E3CS | | SWNW | 5 | 10S | 23E | UINTAH |
| **Action Code** | **Current Entity Number** | **New Entity Number** | **Spud Date** | | | **Entity Assignment Effective Date** | |
| A | 99999 | 18582 | 6/11/2012 | | | 6/20/2012 | |

**Comments:** MIRU TRIPLE A BUCKET RIG. WSMVD
SPUD WELL LOCATION ON 06/11/2012 AT 12:30 HRS. BHL: SWNW —

**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)

JAIME SCHARNOWSKE
**Name (Please Print)**

Jaime Scharnowske
**Signature**

REGULATORY ANALYST — **Title**

6/18/2012 — **Date**

RECEIVED
JUN 18 2012
Div. of Oil, Gas & Mining

(5/2000)

FORM 9

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

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU33433

## 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.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL**
Gas Well

**8. WELL NAME and NUMBER:**
BONANZA 1023-5L3BS

**2. NAME OF OPERATOR:**
KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:**
43047520740000

**3. ADDRESS OF OPERATOR:**
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:**
720 929-6515 EXT

**9. FIELD and POOL or WILDCAT:**
NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:**
2654 FNL 0136 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:**
Qtr/Qtr: SWNW Section: 05 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:**
UINTAH

**STATE:**
UTAH

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT<br>Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| ✓ DRILLING REPORT<br>Report Date:<br>6/27/2012 | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

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

MIRU AIR RIG ON JUNE 27, 2012. DRILLED SURFACE HOLE TO 2460'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.

**Accepted by the Utah Division of Oil, Gas and Mining**
**FOR RECORD ONLY**
July 02, 2012

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Jaime Scharnowske | 720 929-6304 | Regulartory Analyst |
| **SIGNATURE** | | **DATE** |
| N/A | | 7/2/2012 |

RECEIVED: Jul. 02, 2012

**FEDERAL APPROVAL OF THIS ACTION IS NECESSARY**

FORM 9

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

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU33433

## 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.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL**
Gas Well

**8. WELL NAME and NUMBER:**
BONANZA 1023-5L3BS

**2. NAME OF OPERATOR:**
KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:**
43047520740000

**3. ADDRESS OF OPERATOR:**
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:**
720 929-6515 EXT

**9. FIELD and POOL or WILDCAT:**
NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:**
2654 FNL 0136 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:**
Qtr/Qtr: SWNW Section: 05 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:**
UINTAH

**STATE:**
UTAH

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ✓ NOTICE OF INTENT<br>Approximate date work will start:<br>7/10/2012 | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| | ✓ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| ☐ DRILLING REPORT<br>Report Date: | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

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

The Operator requests approval for changes in the drilling plan. Specifically, the Operator requests approval for a FIT wavier, closed loop drilling option and a production casing change. The production casing change includes a switch from 4-1/2 inch I-80 11.6 LB BTC/LTC casing to 4-1/2 inch I-80 11.6 LB Ultra DQX/LTC casing. All other aspects of the previously approved drilling plan will not change. These proposals do not deviate from previously submitted and approved plans. Please see closed loop attachment. Thank you.

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

**Date:** July 12, 2012

**By:** Dark K Quist

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Cara Mahler | 720 929-6029 | Regulatory Analyst I |

| SIGNATURE | DATE |
|---|---|
| N/A | 7/10/2012 |

RECEIVED: Jul. 10, 2012

Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

RECEIVED: Jul. 10, 2012

State of Utah - Notification Form

Operator KERR MCGEE OIL AND GAS Rig Name/# XTREME 12
Submitted By DALTON KING Phone Number 435- 828-0985
Well Name/Number BONANZA 1023-5L3BS
Qtr/Qtr SW/NW Section 5 Township 10S Range 23E
Lease Serial Number UTU-33433
API Number 43-047-52074

Casing – Time casing run starts, not cementing times.

☐ Production Casing
☐ Other

Date/Time _____ _____ AM ☐ PM ☐

RECEIVED
AUG 14 2012
DIV. OF OIL, GAS & MINING

BOPE
☒ Initial BOPE test at surface casing point
☐ Other

Date/Time 8/15/2012 08:00 AM ☒ PM ☐

Rig Move
Location To: BONANZA 1023-5L3BS

Date/Time 8/14/2012 10:00 AM ☒ PM ☐

Remarks TIME IS ESTIMATED

FORM 9

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

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU33433

## 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.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL**
Gas Well

**8. WELL NAME and NUMBER:**
BONANZA 1023-5L3BS

**2. NAME OF OPERATOR:**
KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:**
43047520740000

**3. ADDRESS OF OPERATOR:**
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:**
720 929-6515 EXT

**9. FIELD and POOL or WILDCAT:**
NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:**
2654 FNL 0136 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:**
Qtr/Qtr: SWNW Section: 05 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:**
UINTAH

**STATE:**
UTAH

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT<br>Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| ✓ DRILLING REPORT<br>Report Date:<br>8/21/2012 | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

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

FINISHED DRILLING TO 8550' ON 8/19/2012. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED XTREME 12 RIG ON 8/21/2012.DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES.

**Accepted by the Utah Division of Oil, Gas and Mining**
**FOR RECORD ONLY**
August 24, 2012

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Cara Mahler | 720 929-6029 | Regulatory Analyst I |
| **SIGNATURE** | | **DATE** |
| N/A | | 8/24/2012 |

RECEIVED: Aug. 24, 2012

State of Utah - Notification Form

Operator KERR MCGEE OIL AND GAS Rig Name/# XTREME 12
Submitted By Jerry Barnes Phone Number 435- 828-0985
Well Name/Number BONANZA 1023-5L3BS
Qtr/Qtr SW/NW Section 5 Township 10S Range 23E
Lease Serial Number UTU-33433 CA-UTU-74473
API Number _____43-047-52074

Casing – Time casing run starts, not cementing times.

☒ Production Casing
☐ Other

Date/Time 8/20/2012 1:00 AM ☒ PM ☐

BOPE
☐ Initial BOPE test at surface casing point
☐ Other

Date/Time _____ _____ AM ☐ PM ☐

RECEIVED
AUG 2 1 2012
DIV. OF OIL, GAS & MINING

Rig Move
Location To: ___

Date/Time _____ _____ AM ☐ PM ☐

Remarks TIME IS ESTIMATED

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

FORM 9

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU33433

## 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.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:** PONDEROSA

**1. TYPE OF WELL** Gas Well

**8. WELL NAME and NUMBER:** BONANZA 1023-5L3BS

**2. NAME OF OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:** 43047520740000

**3. ADDRESS OF OPERATOR:** P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:** 720 929-6515 EXT

**9. FIELD and POOL or WILDCAT:** NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 2654 FNL 0136 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: SWNW Section: 05 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT<br>Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| ✓ DRILLING REPORT<br>Report Date:<br>10/2/2012 | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

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

No Activity for the month of September 2012. Well TD at 8,550.

**Accepted by the Utah Division of Oil, Gas and Mining**
**FOR RECORD ONLY**
October 02, 2012

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Lindsey Frazier | 720 929-6857 | Regulatory Analyst II |

| SIGNATURE | DATE |
|---|---|
| N/A | 10/2/2012 |

RECEIVED: Oct. 02, 2012

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

FORM 9

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU33433

## 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.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:** PONDEROSA

**1. TYPE OF WELL** Gas Well

**8. WELL NAME and NUMBER:** BONANZA 1023-5L3BS

**2. NAME OF OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:** 43047520740000

**3. ADDRESS OF OPERATOR:** P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:** 720 929-6515 EXT

**9. FIELD and POOL or WILDCAT:** NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 2654 FNL 0136 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: SWNW Section: 05 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT<br>Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| ✓ DRILLING REPORT<br>Report Date:<br>11/2/2012 | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

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

No Activity for the month of October 2012. Well TD at 8,550.

**Accepted by the Utah Division of Oil, Gas and Mining**
**FOR RECORD ONLY**
November 02, 2012

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Lindsey Frazier | 720 929-6857 | Regulatory Analyst II |

| SIGNATURE | DATE |
|---|---|
| N/A | 11/2/2012 |

RECEIVED: Nov. 02, 2012

FORM 6

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

# ENTITY ACTION FORM

Operator: KERR McGEE OIL & GAS ONSHORE LP
Operator Account Number: N 2995
Address: P.O. Box 173779
city DENVER
state CO zip 80217
Phone Number: (720) 929-6304

**Well 1**

| API Number | Well Name | | QQ | Sec | Twp | Rng | County |
|---|---|---|---|---|---|---|---|
| Various | Ponderosa Wells | | | | | | UINTAH |
| **Action Code** | **Current Entity Number** | **New Entity Number** | **Spud Date** | | | **Entity Assignment Effective Date** | |
| | 18421 | 18519 | | | | 5/1/2012 | |

**Comments:** Move the attached wells into the Ponderosa unit. All wells are WSMVD. 11/16/2012

**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** | |
| | | | | | | | |

**Comments:**

**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** | |
| | | | | | | | |

**Comments:**

**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)

JAIME SCHARNOWSKE
**Name (Please Print)**

Jaime Scharnowske
**Signature**

REGULATORY ANALYST
**Title**

11/8/2012
**Date**

RECEIVED
NOV 08 2012
Div. of Oil, Gas & Mining

(5/2000)

| Well Name | Quarter/Quarter | Section | Township | Range | APUI Number | County | New Entity Number | Formation |
|---|---|---|---|---|---|---|---|---|
| BONANZA 1023-6J2AS | NESW | 6 | 10S | 23E | 4304751465 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6K1CS | NESW | 6 | 10S | 23E | 4304751466 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6K2BS | NESW | 6 | 10S | 23E | 4304751467 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6K2CS | NESW | 6 | 10S | 23E | 4304751468 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6L2AS | NESW | 6 | 10S | 23E | 4304751469 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6L2DS | NESW | 6 | 10S | 23E | 4304751470 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6O1BS | SWSE | 6 | 10S | 23E | 4304751473 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6O2DS | SWSE | 6 | 10S | 23E | 4304751474 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6O3AS | SWSE | 6 | 10S | 23E | 4304751475 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6P2BS | SWSE | 6 | 10S | 23E | 4304751476 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6P3CS | SWSE | 6 | 10S | 23E | 4304751478 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5J2DS | NESW | 5 | 10S | 23E | 4304752063 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5K1BS | NESW | 5 | 10S | 23E | 4304752064 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5K1CS | NESW | 5 | 10S | 23E | 4304752065 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5K3DS | NESW | 5 | 10S | 23E | 4304752066 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5L1DS | NESW | 5 | 10S | 23E | 4304752067 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5L4AS | NESW | 5 | 10S | 23E | 4304752068 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5L4DS | NESW | 5 | 10S | 23E | 4304752069 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5O2AS | NESW | 5 | 10S | 23E | 4304752070 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5E3BS | SWNW | 5 | 10S | 23E | 4304752071 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5E3CS | SWNW | 5 | 10S | 23E | 4304752072 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5L1AS | SWNW | 5 | 10S | 23E | 4304752073 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5L3BS | SWNW | 5 | 10S | 23E | 4304752074 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5M1AS | SWSW | 5 | 10S | 23E | 4304752075 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5M1CS | SWSW | 5 | 10S | 23E | 4304752076 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5M3BS | SWSW | 5 | 10S | 23E | 4304752077 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5M3CS | SWSW | 5 | 10S | 23E | 4304752078 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5N3CS | SWSW | 5 | 10S | 23E | 4304752079 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5O4BS | SESE | 5 | 10S | 23E | 4304752082 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5P1AS | SESE | 5 | 10S | 23E | 4304752083 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5P1CS | SESE | 5 | 10S | 23E | 4304752084 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5P4CS | SESE | 5 | 10S | 23E | 4304752085 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5C4AS | NENW | 5 | 10S | 23E | 4304752089 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5F2CS | NENW | 5 | 10S | 23E | 4304752090 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5F3AS | NENW | 5 | 10S | 23E | 4304752091 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5C2CS | NWNW | 5 | 10S | 23E | 4304752092 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5D2DS | NWNW | 5 | 10S | 23E | 4304752093 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5D3AS | NWNW | 5 | 10S | 23E | 4304752094 | Uintah | 18519 | WSMVD |
| BONANZA 1023-5E2AS | NWNW | 5 | 10S | 23E | 4304752095 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6A1CS | NWNW | 5 | 10S | 23E | 4304752096 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6I3AS | SWNW | 5 | 10S | 23E | 4304752387 | Uintah | 18519 | WSMVD |
| BONANZA 11-2 | SWNW | 11 | 10S | 23E | 4304734773 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6E4AS | SENW | 6 | 10S | 23E | 4304751453 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6F1AS | SENW | 6 | 10S | 23E | 4304751454 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6F1CS | SENW | 6 | 10S | 23E | 4304751455 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6F4CS | SENW | 6 | 10S | 23E | 4304751456 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6G2AS | SENW | 6 | 10S | 23E | 4304751457 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6G4CS | SENW | 6 | 10S | 23E | 4304751458 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6A3DS | SENE | 6 | 10S | 23E | 4304751459 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6G1DS | SENE | 6 | 10S | 23E | 4304751460 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6H1BS | SENE | 6 | 10S | 23E | 4304751461 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6H2CS | SENE | 6 | 10S | 23E | 4304751462 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6I2AS | SENE | 6 | 10S | 23E | 4304751463 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6I3DS | SWSE | 6 | 10S | 23E | 4304751471 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6J4AS | SWSE | 6 | 10S | 23E | 4304751472 | Uintah | 18519 | WSMVD |
| BONANZA 1023-6P3AS | SWSE | 6 | 10S | 23E | 4304751477 | Uintah | 18519 | WSMVD |

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

FORM 9

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU33433

## 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.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:** PONDEROSA

**1. TYPE OF WELL** Gas Well

**8. WELL NAME and NUMBER:** BONANZA 1023-5L3BS

**2. NAME OF OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:** 43047520740000

**3. ADDRESS OF OPERATOR:** P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:** 720 929-6515 EXT

**9. FIELD and POOL or WILDCAT:** NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 2654 FNL 0136 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: SWNW Section: 05 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT<br>Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| ✓ DRILLING REPORT<br>Report Date:<br>12/3/2012 | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

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

No Activity for the month of November 2012. Well TD at 8,550.

**Accepted by the Utah Division of Oil, Gas and Mining**
**FOR RECORD ONLY**
December 03, 2012

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Jaime Scharnowske | 720 929-6304 | Regulartory Analyst |

| SIGNATURE | DATE |
|---|---|
| N/A | 12/3/2012 |

RECEIVED: Dec. 03, 2012

FORM 9

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

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU33433

## 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.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:** PONDEROSA

**1. TYPE OF WELL** Gas Well

**8. WELL NAME and NUMBER:** BONANZA 1023-5L3BS

**2. NAME OF OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:** 43047520740000

**3. ADDRESS OF OPERATOR:** P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:** 720 929-6515 EXT

**9. FIELD and POOL or WILDCAT:** NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 2654 FNL 0136 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: SWNW Section: 05 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT<br>Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| ☐ SPUD REPORT<br>Date of Spud: | ✓ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| ✓ DRILLING REPORT<br>Report Date:<br>1/1/2013 | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

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

The subject well was placed on production on 01/01/2013. 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**
January 03, 2013

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Lindsey Frazier | 720 929-6857 | Regulatory Analyst II |
| **SIGNATURE** N/A | | **DATE** 1/3/2013 |

RECEIVED: Jan. 03, 2013

FORM 9

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

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU33433

## 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.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:** PONDEROSA

**1. TYPE OF WELL** Gas Well

**8. WELL NAME and NUMBER:** BONANZA 1023-5L3BS

**2. NAME OF OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:** 43047520740000

**3. ADDRESS OF OPERATOR:** P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:** 720 929-6515 EXT

**9. FIELD and POOL or WILDCAT:** NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 2654 FNL 0136 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: SWNW Section: 05 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT<br>Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| ✓ DRILLING REPORT<br>Report Date:<br>1/3/2013 | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

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

Started completing the well. Well TD at 8,550

**Accepted by the Utah Division of Oil, Gas and Mining**
**FOR RECORD ONLY**
January 07, 2013

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Laura Abrams | 720 929-6356 | Regulatory Analyst II |
| **SIGNATURE** | | **DATE** |
| N/A | | 1/3/2013 |

RECEIVED: Jan. 03, 2013

Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

# WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No. UTU33433

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. UTU88209A

2. Name of Operator KERR MCGEE OIL & GAS ONSHORE LP — Contact: LINDSEY A FRAZIER — E-Mail: lindsey.frazier@anadarko.com

8. Lease Name and Well No. BONANZA 1023-5L3BS

3. Address PO BOX 173779 DENVER, CO 80217 — 3a. Phone No. (include area code) Ph: 720-929-6857

9. API Well No. 43-047-52074

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
At surface SWNW 2654FNL 136FWL 39.977957 N Lat, 109.359637 W Lon
At top prod interval reported below NWSW 1961FSL 178FWL
At total depth NWSW 1946FSL 192FWL

10. Field and Pool, or Exploratory NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey or Area Sec 5 T10S R23E Mer SLB

12. County or Parish UINTAH — 13. State UT

14. Date Spudded 06/11/2012 — 15. Date T.D. Reached 08/19/2012 — 16. Date Completed ☐ D & A ☒ Ready to Prod. 01/01/2013 — 17. Elevations (DF, KB, RT, GL)* 5238 KB

18. Total Depth: MD 8550 TVD 8456 — 19. Plug Back T.D.: MD 8493 TVD 8400 — 20. Depth Bridge Plug Set: MD TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each) SD/DSN/ACTR-CBL/GR/CCL/TEMP

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 Sks. & Type of Cement | Slurry Vol. (BBL) | Cement Top* | Amount Pulled |
|---|---|---|---|---|---|---|---|---|---|
| 20.000 | 14.000 STL | 36.7 | 0 | 40 | | 28 | | | |
| 11.000 | 8.625 IJ-55 | 28.0 | 0 | 2425 | | 575 | | 0 | |
| 7.875 | 4.500 I-80 | 11.6 | 0 | 8540 | | 1431 | | 1634 | |

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 | 7901 | | | | | | | |

25. Producing Intervals

| Formation | Top | Bottom |
|---|---|---|
| A) WASATCH | 5474 | 6174 |
| B) MESAVERDE | 7081 | 8449 |
| C) | | |
| D) | | |

26. Perforation Record

| Perforated Interval | Size | No. Holes | Perf. Status |
|---|---|---|---|
| 5474 TO 6174 | 0.360 | 48 | OPEN |
| 7081 TO 8449 | 0.360 | 120 | OPEN |

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

| Depth Interval | Amount and Type of Material |
|---|---|
| 5474 TO 8449 | PUMP 7,011 BBLS SLICK H2O AND 156,450 LBS 30/50 OTTAWA SAND |

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 |
|---|---|---|---|---|---|---|---|---|---|
| 01/01/2013 | 01/06/2013 | 24 | → | 0.0 | 1865.0 | 0.0 | | | 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 | 1750 SI | 2150.0 | → | 0 | 1865 | 0 | | 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. SI | Csg. Press. | 24 Hr. Rate | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio | Well Status |
|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | |

RECEIVED
JAN 30 2013
DIV. OF OIL, GAS & MINING

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

**ELECTRONIC SUBMISSION #188027 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 | 1153 |
| | | | | BIRD'S NEST | 1470 |
| | | | | MAHOGANY | 1956 |
| | | | | WASATCH | 4284 |
| | | | | MESAVERDE | 6412 |

32. Additional remarks (include plugging procedure):
The first 210? of the surface hole was drilled with a 12 ?? bit. The remainder of surface hole was drilled with an 11? bit. DQX csg was run from surface to 5028?; LTC csg was run from 5028? to 8540?. Attached is the chronological well history, perforation report & final survey.

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 #188027 Verified by the BLM Well Information System.**
**For KERR MCGEE OIL & GAS ONSHORE L, sent to the Vernal**

Name *(please print)* LINDSEY A FRAZIER Title REGUALTORY ANALYST

Signature (Electronic Submission) Date 01/22/2013

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 fradulent statements or representations as to any matter within its jurisdiction.

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-5L3BS RED | | Spud Date: 6/28/2012 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-5L PAD | Rig Name No: PROPETRO 12/12, XTC 12/12 |
| Event: DRILLING | Start Date: 6/13/2012 | End Date: 8/21/2012 |
| Active Datum: RKB @5,238.00usft (above Mean Sea Level) | UWI: SW/NW/0/10/S/23/E/5/0/0/26/PM/N/2654/W/0/136/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|---|---|---|---|---|---|---|---|---|
| 6/27/2012 | 12:00 - 21:00 | 9.00 | DRLSUR | 01 | A | P | | MOVE RIG 5 MILES TO THE 1023-5L PAD |
| | 21:00 - 0:00 | 3.00 | DRLSUR | 01 | B | P | | RIG UP ON THE BON 1023-5L3BS WELL 1/5 |
| 6/28/2012 | 0:00 - 1:30 | 1.50 | DRLSUR | 02 | C | P | | SPUD<br>DRILL 12.25" HOLE 44 ft TO 210 ft<br>(166 FT, 111 FPH).<br>WOB 5-15 Kips.<br>GPM 491. PSI ON/OFF 600/400.<br>SURFACE RPM 55, MOTOR 83,<br>TOTAL RPM 138.<br>UP/DOWN/ ROT 20/20/20 K.<br>DRAG 0 Kips .<br>CIRCULATE CLOSED LOOP SYSTEM DRILL DOWN TO 210 ft W/6 in COLLARS. |
| | 1:30 - 4:30 | 3.00 | DRLSUR | 06 | A | P | | TOOH AND INSTALL DIRECTIONAL ASSEMBLY AND 11" BIT. INSTALL EM TOOL AND ORIENT TO MUD MOTOR AND TIH |
| | 4:30 - 8:00 | 3.50 | DRLSUR | 02 | C | P | | DRILL 11" SURFACE HOLE 210' - 450' ROP 68 FT HR<br>WEIGHT ON BIT 15-25 K.<br>STROKES PER MINUTE 120 GALLONS PER MINUTE 491.<br>PRESSURE ON/OFF(BOTTOM) 1090/880.<br>ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138.<br>UP/DOWN/ ROTATE 80/60/70 K. DRAG 20 K.<br><br>SLIDING 12' - 20' PER 90'OF ROTATION GETTING 1.8 DEGREE BUILD RATES LANDED 5' HIGH 2' LEFT<br>SLIDING 16%<br><br>CIRCULATE CLOSED LOOP SYSTEM WITH 8.6# WATER.<br>RUNNING VOLUME OVER BOTH SHAKERS<br>200 API SCREENS ON SHAKERS<br>NO HOLE ISSUES |
| | 8:00 - 10:00 | 2.00 | DRLSUR | 08 | A | Z | | *** FAILURE MUD PUMP: CHANGE SWABS |

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-5L3BS RED | Spud Date: 6/28/2012 | |
| Project: UTAH-UINTAH | Site: BONANZA 1023-5L PAD | Rig Name No: PROPETRO 12/12, XTC 12/12 |
| Event: DRILLING | Start Date: 6/13/2012 | End Date: 8/21/2012 |
| Active Datum: RKB @5,238.00usft (above Mean Sea Level) | UWI: SW/NW/0/10/S/23/E/5/0/0/26/PM/N/2654/W/0/136/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|---|---|---|---|---|---|---|---|---|
| | 10:00 - 15:30 | 5.50 | DRLSUR | 02 | C | P | | DRILL 11" SURFACE HOLE 450' - 1020 ROP 103 FT HR<br>WEIGHT ON BIT 15-25 K.<br>STROKES PER MINUTE 120 GALLONS PER MINUTE 491.<br>PRESSURE ON/OFF(BOTTOM) 1090/880.<br>ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138.<br>UP/DOWN/ ROTATE 80/60/70 K. DRAG 20 K.<br><br>SLIDING 12' - 20' PER 90'OF ROTATION GETTING 1.8 DEGREE BUILD RATES LANDED 5' HIGH 2' LEFT SLIDING 16%<br><br>CIRCULATE CLOSED LOOP SYSTEM WITH 8.6# WATER.<br>RUNNING VOLUME OVER BOTH SHAKERS<br>200 API SCREENS ON SHAKERS<br>NO HOLE ISSUES |
| | 15:30 - 20:00 | 4.50 | DRLSUR | 08 | A | Z | | *** FAILURE AIR PACKAGE: BOOSTER DOWN WAIT FOR NEW ONE FROM TOWN |
| | 20:00 - 0:00 | 4.00 | DRLSUR | 02 | C | P | | DRILL 11" SURFACE HOLE 1020' - 1500' ROP 120 FT HR<br>WEIGHT ON BIT 15-25 K.<br>STROKES PER MINUTE 120 GALLONS PER MINUTE 491.<br>PRESSURE ON/OFF(BOTTOM) 1090/880.<br>ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138.<br>UP/DOWN/ ROTATE 80/60/70 K. DRAG 20 K.<br><br>SLIDING 12' - 20' PER 90'OF ROTATION GETTING 1.8 DEGREE BUILD RATES LANDED 5' HIGH 2' LEFT SLIDING 16%<br><br>CIRCULATE CLOSED LOOP SYSTEM WITH 8.6# WATER.<br>RUNNING VOLUME OVER BOTH SHAKERS<br>200 API SCREENS ON SHAKERS<br>NO HOLE ISSUES |
| 6/29/2012 | 0:00 - 13:00 | 13.00 | DRLSUR | 02 | C | P | | DRILL 11" SURFACE HOLE 1500' - 2460' T.D. ROP 73 FT HR<br>WEIGHT ON BIT 15-25 K.<br>STROKES PER MINUTE 120 GALLONS PER MINUTE 491.<br>PRESSURE ON/OFF(BOTTOM) 1090/880.<br>ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138.<br>UP/DOWN/ ROTATE 80/60/70 K. DRAG 20 K.<br><br>SLIDING 12' - 20' PER 90'OF ROTATION GETTING 1.8 DEGREE BUILD RATES LANDED 5' HIGH 2' LEFT SLIDING 16%<br><br>CIRCULATE CLOSED LOOP SYSTEM WITH 8.6# WATER.<br>RUNNING VOLUME OVER BOTH SHAKERS<br>200 API SCREENS ON SHAKERS<br>NO HOLE ISSUES |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-5L3BS RED | Spud Date: 6/28/2012 | |
| Project: UTAH-UINTAH | Site: BONANZA 1023-5L PAD | Rig Name No: PROPETRO 12/12, XTC 12/12 |
| Event: DRILLING | Start Date: 6/13/2012 | End Date: 8/21/2012 |
| Active Datum: RKB @5,238.00usft (above Mean Sea Level) | UWI: SW/NW/0/10/S/23/E/5/0/0/26/PM/N/2654/W/0/136/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|---|---|---|---|---|---|---|---|---|
| | 13:00 - 15:00 | 2.00 | DRLSUR | 05 | C | P | | CIRCULATE AND CONDITION MUD PRIOR TO LDDS |
| | 15:00 - 20:00 | 5.00 | DRLSUR | 06 | A | P | | TOOH LAYING DOWN DRILL STRING BREAK CDOE BHA FOR INSPECTION L/D EM TOOLS MUD MOTOR AND BIT |
| | 20:00 - 0:00 | 4.00 | DRLSUR | 12 | C | P | | RIG UP AND RUN 55 JOINTS 8.625 28# J55 SURFACE CASING SHOE AT 2420' NO PROBLEMS |
| 6/30/2012 | 0:00 - 0:30 | 0.50 | DRLPRV | 12 | C | P | | RUN 200' OF 1" PIPE DOWN BACKSIDE AND RIG DOWN |
| | 0:30 - 4:30 | 4.00 | DRLPRV | 12 | E | P | | PRESSURE TEST LINES TO 2000 PSI. PUMP 135 BBLS OF WATER AHEAD. CATCH PSI. PUMP 20 BBLS OF 8.3# GEL WATER AHEAD. MIX AND PUMP (300 SX) 61.4 BBLS OF 15.8# 1.15 YD 5 GAL/SK PREMIUM CEMENT W/ 2% CALC. DROP PLUG ON FLY. DISPLACE W/ 143 BBLS OF H20. NO CIRC THROUGH OUT. FINAL LIFT OF 210 PSI AT 4 BBL/MIN. BUMP PLUG WITH 500 PSI FOR 5 MIN. FLOAT HELD. MIX AND PUMP (150 SX) 30.7 BBLS OF SAME TAIL CEMENT W/ 4% CALC. DOWN BACKSIDE, NO CEMENT TO SURFACE. SHUT DOWN AND CLEAN TRUCK.. WAIT 1.5 HOURS MIX AND PUMP (125 SX) 22.4 BBLS OF SAME TAIL CEMENT W/ 4% CALC. DOWN BACKSIDE NO CEMENT TO SURFACE. NO CEMENT TO SURFACE. SHUT DOWN AND CLEAN TRUCK. WILL TOP OUT ON NEXT JOB |
| | | | | | | | | RELEASE RIG 6-30-12 04:30 |
| 8/14/2012 | 9:30 - 13:30 | 4.00 | RDMO | 01 | A | P | | HOLD SAFETY MEETING WITH R W JONES, RIG HANDS, AND MOUNTAIN WEST. TEAR DOWN RIG AND MOVE OUT RIG WITH<br>R W JONES 8 TRUCKS. 2 FORKLIFTS, 3 SWAMPERS, 1 FLAGGER AND 2 TRUCK PUSHERS. MOUNTAIN WEST HAD 1- 1 TONS TRUCKS AND 2 HAUL TRUCK TO MOVE TRAILERS WITH TOTAL OF 6 HANDS. RELEASED MOUNTAIN WEST HANDS AT 01:30<br>JD HAD 6 WATER TRUCKS AND 1 BED TRUCK TRANSFERING MUD. LAST JD WAS RELEASED @ 12:00<br>STUBBS AND STUBBS 1 BACKHOE, 2 PICKUP, 3 HANDS FOR CONTAINMENTS<br>JD ROUSTABOUT 1 PICK UP 1 DITCH WITCH 2 HANDS<br>MOVE OUT BACK YARD AND RIG DOWN DERRICK AND SUB. LOWER DOG HOUSE INTO WATER TANK. MOVE WATER TANK. MOVED TRAILERS IN AND RIGGED UP TRAILERS. |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-5L3BS RED | Spud Date: 6/28/2012 | |
| Project: UTAH-UINTAH | Site: BONANZA 1023-5L PAD | Rig Name No: PROPETRO 12/12, XTC 12/12 |
| Event: DRILLING | Start Date: 6/13/2012 | End Date: 8/21/2012 |
| Active Datum: RKB @5,238.00usft (above Mean Sea Level) | UWI: SW/NW/0/10/S/23/E/5/0/0/26/PM/N/2654/W/0/136/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|---|---|---|---|---|---|---|---|---|
| | 13:30 - 19:00 | 5.50 | MIRU | 01 | B | P | | MOVED RIG 3 AND 9 MILES ( 1 ROUTE FOR HIGH LOADS) TO BONANZA 1023-5L PAD. FINISH SETTING IN MATTING BOARDS AND SKID RAILS. SET IN MATTING BOARDS. SET IN SUB. INSTALL DERRICK. SET IN COMBO HOUSE, PITS, SOLID CONTROL UNIT. PUMP HOUSES VFD AND GENERATOR HOUSE. SET IN FUEL TANK AND OIL BUNKER. PLACE PLASTIC UNDER BACK YARD EQUIPMENT. DITCHED AROUND ALL BUILDINGS. SET MUD SOLID CONTROL AND MUD PITS. FINISH SETTING IN ALL MISCELLANEOUS EQUIPMENT AND RELEASED R.W.JONES TRUCKING @ 19:00. |
| | 19:00 - 0:00 | 5.00 | MIRU | 01 | B | P | | RIG UP LIGHTS AND ELECTRICAL AND HYDRAULICS. RAISE DOG HOUSE, SET CATWALK, RIG UP WATER, AIR LINES, 4" MUD LINES. THE RIG COMPUTER WENT DOWN AND WE WERE UNABLE TO RAISE THE DERRICK AS XTREME PERSONEL COULD NOT RESET THE CROWN SAVER WITHOUT IT WORKING PROPERLY. THERE IS A TECH COMING IN FROM DENVER IN THE AM. CONTINUED WITH ALL GROUND WORK. |
| 8/15/2012 | 0:00 - 11:00 | 11.00 | MIRU | 01 | B | P | | RIG UP MUD LINES, WATER LINES, FLARE LINES, PAYSON SYSTEM, HYDRAULIC LINES AND FINISH UP ELECTRIC. RIG UP MUD TANKS, RIG FLOOR, AND CHOKE LINES |
| | 11:00 - 11:30 | 0.50 | DRLPRO | 07 | A | P | | RIG SERVICE |
| | 11:30 - 15:30 | 4.00 | DRLPRO | 08 | A | Z | | RIG REPAIR / REPROGRAM RIG COMPUTER |
| | 15:30 - 21:00 | 5.50 | DRLPRO | 15 | A | P | | PJSM / TEST BOPS / PICK UP & SET TEST PLUG / TEST ANULAR TO 250 LOW - 2500 PSI HIGH FOR 10 MINUTES. TEST PIPE & BLIND RAMS, KILL LINE VALVES, CHOKE LINE VALVES, CHOKE LINE, CHOKE MANIFOLD VALVES, FLOOR VALVES, & IBOP TO 250 LOW - 5000 PSI HIGH FOR 10 MINUTES EACH. PULLED TEST PLUG AND TEST CASING TO 1500 PSI FOR 30 MINUTES. FUNCTIONED BOTH CHOKES WITH PRESSURE. |
| | 21:00 - 21:30 | 0.50 | DRLPRO | 14 | B | P | | INSTALL WEAR BUSHING |
| | 21:30 - 0:00 | 2.50 | DRLPRO | 06 | A | P | | PICK UP DIRECTIONAL BHA / TEST MOTOR & SCRIBE MWD. TRIP IN HOLE |
| 8/16/2012 | 0:00 - 1:30 | 1.50 | DRLPRO | 06 | A | P | | TRIP IN HOLE TO 1047' |
| | 1:30 - 2:30 | 1.00 | DRLPRO | 09 | A | P | | SLIP & CUT 52' DRLG LINE |
| | 2:30 - 3:30 | 1.00 | DRLPRO | 06 | A | P | | FINISH TRIP IN HOLE / TAG CEMENT @ 2300' |
| | 3:30 - 4:00 | 0.50 | DRLPRO | 07 | A | P | | RIG SERVICE |
| | 4:00 - 5:30 | 1.50 | DRLPRO | 02 | F | P | | DRLG SHOE TRACK 2300' TO 2471' |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-5L3BS RED | Spud Date: 6/28/2012 | |
| Project: UTAH-UINTAH | Site: BONANZA 1023-5L PAD | Rig Name No: PROPETRO 12/12, XTC 12/12 |
| Event: DRILLING | Start Date: 6/13/2012 | End Date: 8/21/2012 |
| Active Datum: RKB @5,238.00usft (above Mean Sea Level) | UWI: SW/NW/0/10/S/23/E/5/0/0/26/PM/N/2654/W/0/136/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|---|---|---|---|---|---|---|---|---|
| | 5:30 - 15:30 | 10.00 | DRLPRO | 02 | D | P | | DRLG ROTATE/SLIDE/SURVEY 2471' TO 3551' / 1080' @ 108 FPH<br>WOB 16 TO 20K<br>TD RPM 60 TO 65<br>MM RPM 83<br>PUMPING 518 GPM / 115 SPM<br>PSI ON/OFF 1790/1540 DIFF 250<br>TORQUE HIGH/LOW 7450/4960<br>PU 80 / SO 60 / ROT 72<br>MUD WT IN 8.3 / OUT 8.3 / VIS 26<br>NOV RUNNING CONE WITH 2 CENTRIFUGES ON DEWATER<br>SLIDE 72' IN 60 MINUTES = 10% OF TIME & 67% OF FOOTAGE DRILLED<br>ROTATE 1008' IN 540 MINUTES = 90% OF TIME & 93.3 % OF FOOTAGE DRILLED.<br>.7' SOUTH & 10.6' EAST OF CENTER<br>NO FLARE<br>NO LOSSES / PUMPING 40 VIS- LCM SWEEPS EACH 135' |
| | 15:30 - 16:00 | 0.50 | DRLPRO | 07 | A | P | | RIG SERVICE |
| | 16:00 - 19:30 | 3.50 | DRLPRO | 08 | A | Z | | RIG REPAIR / FOUND PASON MILLIAMP SPLITTER BAD - WIRE PASON SIGNAL TO RIG COMPUTER TO ENABLE SLIDE & ROTATE. |
| | 19:30 - 0:00 | 4.50 | DRLPRO | 02 | D | P | | DRLG ROATATE/SLIDE/SURVEY 3551 TO 3960' / 409' @ 90.8 FPH<br>WOB 16 TO 20K<br>TD RPM 60<br>MM RPM 80<br>PUMPING 496 GPM / 110 SPM<br>PSI ON/OFF 1610/1235 DIFF 375<br>TORQUE HIGH/LOW 8540/5070<br>PU 90 / SO 70 / ROT 78<br>MUD WT IN 8.3 / OUT 8.3 / VIS 26<br>NOV RUNNING CONE WITH 2 CENTRIFUGES ON DEWATER<br>SLIDE 60' IN 95 MINUTES = 35.2% OF TIME & 14.7% OF FOOTAGE DRILLED<br>ROTATE 346' IN 175 MINUTES = 64.8% OF TIME & 85.3% OF FOOTAGE DRILLED.<br>19.8' NORTH & 2.7' WEST OF CENTER.<br>NO FLARE<br>NO LOSSES / PUMPING 40 VIS LCM SWEEPS EVERY 135' |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-5L3BS RED | | Spud Date: 6/28/2012 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-5L PAD | Rig Name No: PROPETRO 12/12, XTC 12/12 |
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| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|---|---|---|---|---|---|---|---|---|
| 8/17/2012 | 0:00 - 5:30 | 5.50 | DRLPRO | 02 | D | P | | DRLG ROTATE/SLIDE/SURVEY 3960' TO 4548' / 588' @ 106.9 FPH<br>WOB 16 TO 20K<br>TD RPM 65 TO 70<br>MM RPM 83<br>PUMPING 518 GPM / 115 SPM<br>PSI ON/OFF 2090/1640 / DIFF 450<br>TORQUE HIGH/LOW 9480/8510<br>PU 90 / SO 60 / ROT 78<br>MUD WT IN 8.3 / OUT 8.3 / VIS 26<br>NOV RUNNING CONE WITH 2 CENTRIFUGES ON DEWATER<br>SLIDE 18' IN 20 MINUTES = 6.1% OF TIME & 3.1% OF FOOTAGE DRILLED<br>ROTATE 570' IN 310 MINUTES = 93.9% OF TIME & 96.9% OF FOOTAGE DRILLED<br>17.2' NORTH & 1.7' EAST OF CENTER<br>NO FLARE<br>NO LOSSES / PUMPING 40 VIS LCM SWEEPS EVERY CONNECTION |
| | 5:30 - 6:00 | 0.50 | DRLPRO | 07 | A | P | | RIG SERVICE |
| | 6:00 - 15:00 | 9.00 | DRLPRO | 02 | D | P | | DRLG ROTATE/SLIDE/SURVEY 4548' TO 5817' / 1269' @ 141 FPH<br>WOB 16 TO 20K<br>TD RPM 65 TO 70<br>MM RPM 83<br>PUMPING 518 GPM / 115 SPM<br>PSI ON/OFF 2250/1720 / DIFF 530<br>TORQUE HIGH/LOW 10,950/8440<br>PU 120 / SO 75 / ROT 85<br>MUD WT IN 8.3 / OUT 8.4 / VIS 26<br>NOV RUNNING CONE WITH 2 CENTRIFUGES ON DEWATER<br>SLIDE 32' IN 40 MINUTES = 7.4% OF TIME & 2.5% OF FOOTAGE DRILLED<br>ROTATE 1237' IN 500 MINUTES = 92.6% OF TIME & 97.5% OF FOOTAGE DRILLLED<br>6' FLARE 4580' TO 4589'<br>NO LOSSES / PUMPING 40 VIS LCM SWEEPS EACH CONNECTION |
| | 15:00 - 15:30 | 0.50 | DRLPRO | 07 | A | P | | RIG SERVICE |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-5L3BS RED | | Spud Date: 6/28/2012 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-5L PAD | Rig Name No: PROPETRO 12/12, XTC 12/12 |
| Event: DRILLING | Start Date: 6/13/2012 | End Date: 8/21/2012 |
| Active Datum: RKB @5,238.00usft (above Mean Sea Level) | UWI: SW/NW/0/10/S/23/E/5/0/0/26/PM/N/2654/W/0/136/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|---|---|---|---|---|---|---|---|---|
| | 15:30 - 0:00 | 8.50 | DRLPRO | 02 | D | P | | DRLG ROTATE/SLIDE/SURVEY 5817' TO 6519' / 702' @ 82.5 FPH<br>WOB 18 TO 22K<br>TD RPM 55 TO 60<br>MM RPM 83<br>PUMPING 518 GPM / 115 SPM<br>PSI ON/OFF 2120/1880 / DIFF 240<br>TORQUE HIGH/LOW 8810/7910<br>PU 130 / SO 85 / ROT 105<br>MUD WT IN 8.3 / OUT 8.4 / VIS 26<br>NOV RUNNING CONE WITH 2 CENTRIFUGES ON DEWATER<br>SLIDE 26' IN 35 MINUTES = 6.9% OF TIME & 3.7% OF FOOTAGE DRILLED<br>ROTATE 676' IN 475 MINUTES = 93.1% OF TIME & 96.3% OF FOOTAGE DRILLED<br>19.6' NORTH & 3.1' EAST OF CENTER<br>NO FLARE<br>NO LOSSES / PUMPING 40 VIS LCM SWEEPS EACH CONNECTION |
| 8/18/2012 | 0:00 - 5:30 | 5.50 | DRLPRO | 02 | D | P | | DRLG ROTATE/SLIDE/SURVEY 6519' TO 6951' / 432' @ 78.5 FPH\<br>WOB 20 TO 22K<br>TD ROP 60 TO 65<br>MM RPM 83<br>PUMPING 518 GPM / 115 SPM<br>PSI ON/OFF 2300/1900 / DIFF 400<br>TORQUE HIGH/LOW 11,460/8030<br>PU 130 / SO 85 / ROT 105<br>MUD WT IN 8.3 / OUT 8.4 / VIS 26<br>NOV RUNNING CONE WITH 2 CENTRIFUGES ON DEWATER<br>SLIDE 48' IN 95 MINUTEWS = 22% OF TIME & 11.1% OF FOOTAGE DRILLLED<br>ROTATE 384' IN 337 MINUTES = 78% OF TIME & 88.9% OF FOOTAGE DRILLED<br>17' NORTH & 9' EAST OF CENTER<br>NO FLARE<br>NO LOSSES / PUMPING 40 VIS LCM SWEEPS EACH CONNECTION |
| | 5:30 - 6:00 | 0.50 | DRLPRO | 07 | A | P | | RIG SERVICE |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-5L3BS RED | Spud Date: 6/28/2012 | |
| Project: UTAH-UINTAH | Site: BONANZA 1023-5L PAD | Rig Name No: PROPETRO 12/12, XTC 12/12 |
| Event: DRILLING | Start Date: 6/13/2012 | End Date: 8/21/2012 |
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| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|---|---|---|---|---|---|---|---|---|
| | 6:00 - 17:30 | 11.50 | DRLPRO | 02 | D | P | | DRLG ROTATE/SLIDE/SURVEY 6951' TO 7767' / 816' @ 70.9 FPH<br>WOB 20 TO 24K<br>TD RPM 50 TO 60<br>MM RPM 83<br>PUMPING 518 GPM / 115 SPM<br>PSI ON/OFF 2310 / 2090 / DIFF 220<br>TORQUE HIGH / LOW 9315 / 7930<br>PU 180 / SO 120 / ROT 140<br>MUD WT IN 8.5 / OUT 8.5 / VIS 30 / STARTED LIGHT MUD UP @ 7500'<br>NOV RUNNING CONE WITH 2 CENTRIFUGES ON DEWATER / @ 7500' SWITCH TO 1 CENTRIFUGE CONVENTIONAL<br>SLIDE 103' IN 240 MINUTES = 34.8% OF TIME & 12.6 % OF FOOTAGE DRILLED.<br>ROTATE 713' IN 450 MINUTES = 65.2% OF TIME & 87.4% OF FOOTAGE DRILLED<br>21.6' NORTH & 8.5' EAST OF CENTER<br>6' FLARE STARTING @ 7270' INCREASED TO 10'<br>NO LOSSES / PUMPING 40 VIS LCM SWEEPS CONNECTION |
| | 17:30 - 18:00 | 0.50 | DRLPRO | 07 | A | P | | RIG SERVICE |
| | 18:00 - 0:00 | 6.00 | DRLPRO | 02 | D | P | | DRLG ROTATE/SLIDE/SURVEY 7767' TO 8020' / 253' @ 42.2 FPH<br>WOB 20 TO 24K<br>TD RPM 55<br>MM RPM 83<br>PUMPING 518 GPM / 115 SPM<br>PSI ON/OFF 2470/2180 / DIFF 290<br>TORQUE HIGH/LOW 11,647/6670<br>PU 189 / SO 130 / ROT 140<br>MUD WT IN 8.5 / OUT 8.5 / VIS 31<br>NOV RUNNING CONE WITH 1 CENTRIFUGE ON CONVENTIONAL<br>SLIDE 46' IN 145 MINUTES = 40.3% OF TIME & 18.2% OF FOOTAGE DRILLED<br>ROTATE 207' IN 215 MINUTES = 59.7% OF TIME & 81.8% OF FOOTAGE DRILLED<br>22.98' NORTH & 9.41' EAST OF CENTER<br>6 TO 8' FLARE<br>NO LOSSES / PUMPING 40 VIS LCM SWEEPS EACH CONNECTION |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-5L3BS RED | | Spud Date: 6/28/2012 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-5L PAD | Rig Name No: PROPETRO 12/12, XTC 12/12 |
| Event: DRILLING | Start Date: 6/13/2012 | End Date: 8/21/2012 |
| Active Datum: RKB @5,238.00usft (above Mean Sea Level) | UWI: SW/NW/0/10/S/23/E/5/0/0/26/PM/N/2654/W/0/136/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|---|---|---|---|---|---|---|---|---|
| 8/19/2012 | 0:00 - 1:30 | 1.50 | DRLPRO | 02 | D | P | | DRLG ROTATE/SURVEY 8020' TO 8129'-109' @ 72.7 FPH<br>WOB 22K<br>TD RPM 55<br>MM RPM 83<br>PUMPING 518 GPM / 115 SPM<br>PSI ON / OFF 2590 / 2180 / DIFF 410<br>TORQUE HIGH / LOW 12,680 / 6152<br>PU 190 / SO 130 / ROT 140<br>MUD WT IN 8.5 / OUT 8.5 / VIS 31<br>NO SLIDE<br>ROTATE 109' IN 90 MINUTES = 100% ROTATE @ 72.7 FPH<br>22.64' NORTH & 8.08' EAST OF CENTER<br>8' FLARE<br>NO LOSSES / PUMPING 40 VIS LCM SWEEPS EACH CONNECTION |
| | 1:30 - 2:00 | 0.50 | DRLPRO | 07 | A | P | | RIG SERVICE |
| | 2:00 - 9:00 | 7.00 | DRLPRO | 02 | D | P | | DRLG ROTATE/SURVEY 8129' TO 8550'-41' @ 60.1 FPH<br>WOB 25K<br>TD RPM 65<br>MM RPM 83<br>PUMPING 518 GPM / 115 SPM<br>PSI ON / OFF 2590 / 2180 / DIFF 410<br>TORQUE HIGH / LOW 10,840 / 9880<br>PU 190 / SO 130 / ROT 145<br>MUD WT IN 11.5 / OUT 11.5 / VIS 41 / START HEAVY MUD UP @ 8300'<br>NO SLIDE<br>ROTATE 421' IN 420 MINUTES = 100% ROTATE @ 60.1 FPH<br>8.96' NORTH & 9.33' EAST OF CENTER<br>8' FLARE - OUT @ 8490' DUE TO HEAVY MUD UP<br>NO LOSSES |
| | 9:00 - 9:30 | 0.50 | DRLPRO | 07 | A | P | | RIG SERVICE |
| | 9:30 - 11:00 | 1.50 | DRLPRO | 05 | C | P | | CIRCULATE & CONDITION MUD |
| | 11:00 - 16:00 | 5.00 | DRLPRO | 06 | E | P | | WIPER TRIP OUT TO 2463' ROTATE & PUMP FIRST 17 JTS OFF BOTTOM |
| | 16:00 - 21:00 | 5.00 | DRLPRO | 06 | E | P | | TRIP IN HOLE WASH THROUGH BRIDGES @ 3716', 3940', 5185', 5728', WASH 30' TO BOTTOM |
| | 21:00 - 23:00 | 2.00 | DRLPRO | 05 | C | P | | CIRCULATE & CONDITION HOLE / 6' FLARE BOTTOMS UP |
| | 23:00 - 0:00 | 1.00 | DRLPRO | 06 | E | P | | WIPER TRIP # 2 OUT / ROTATE & PUMP @ 7941' |
| 8/20/2012 | 0:00 - 3:30 | 3.50 | DRLPRO | 06 | E | P | | WIPER TRIP # 2 OUT TO 3258' / TIGHT @ 5540' |
| | 3:30 - 7:30 | 4.00 | DRLPRO | 06 | E | P | | TRIP IN HOLE / WASH 30' TO BOTTOM |
| | 7:30 - 9:30 | 2.00 | DRLPRO | 05 | C | P | | CIRCULATE & CONDITION HOLE / 8' FLARE BOTTOMS UP |
| | 9:30 - 14:30 | 5.00 | DRLPRO | 06 | B | P | | TRIP OUT OF HOLE FOR LOGS |
| | 14:30 - 15:00 | 0.50 | DRLPRO | 07 | A | P | | RIG SERVICE / FUNCTIONED BLIND RAMS |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-5L3BS RED | | Spud Date: 6/28/2012 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-5L PAD | Rig Name No: PROPETRO 12/12, XTC 12/12 |
| Event: DRILLING | Start Date: 6/13/2012 | End Date: 8/21/2012 |
| Active Datum: RKB @5,238.00usft (above Mean Sea Level) | UWI: SW/NW/0/10/S/23/E/5/0/0/26/PM/N/2654/W/0/136/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|---|---|---|---|---|---|---|---|---|
| | 15:00 - 20:00 | 5.00 | DRLPRO | 11 | D | P | | PJSM / RIG UP HALLIBURTON WIRELINE & RUN TRIPLE COMBO OPEN HOLE LOGS / TOOLS STOOD UP @ 6182' / LOG OUT / TOOL HUNG UP @ 4535' / WORKED LOOSE & PULLED OUT OF HOLE AS PER LOVEL. |
| | 20:00 - 20:30 | 0.50 | DRLPRO | 14 | B | P | | PULL WEAR BUSHING |
| | 20:30 - 0:00 | 3.50 | DRLPRO | 12 | C | P | | PJSM / RIG UP KIMZEY CASING & RUN 8545.23' OF 4.5" CASING. 80 JOINTS OF 4.5", 11.6#, I-80, LTC CASING & 114 JOINT OF 4.5", 11.6#, I-80, DQX CASING WITH WEATHERFORD FLOAT SHOE & FLOAT COLLAR LOCATED 1 JOINT ABOVE SHOE / 15 CENTRALIZERS SPACED 10' ABOVE SHOE, 2ND & 3RD COLLARS AND EVERY THIRD COLLAR TO 6859' / MESA VERDS MARKER JOINT @ 6329' / CROSS OVER JOINT @ 5023' / LANDED CASING @ 8540' KB / TOP OF FLOAT COLLAR @ 8494' / LANDED CASING ON A CAMERON CASING HANGER WITH 82K |
| 8/21/2012 | 0:00 - 4:00 | 4.00 | DRLPRO | 12 | C | P | | FINISH RUNNING CASING |
| | 4:00 - 6:00 | 2.00 | DRLPRO | 05 | D | P | | CIRCULATE CASING WITH RIG PUMP PUMPING 405 GPM / 90 SPM MUD WT 11.6 / VIS 43 |
| | 6:00 - 8:30 | 2.50 | DRLPRO | 12 | E | P | | PJSM / RIG UP BAKER HUGHES & CEMENT 4 1/2" CASING WITH 466 SX OF PREMIUM LITE II LEAD CEMENT WITH 6% GEL, 0.05% STATIC FREE, 0.3% R-3, 1/4 #/SX CELLO FLAKE, 5 #/SX KOL SEAL, 0.4% FL-52, & 0.2% SODIUM METASILICATE / TAILED IN WITH 965 SX OF 50:50 POZ MIX WITH 2% GEL, 0.15% R-3, 10% SALT, & 5 #/BLEND STATIC FREE. TESTED LINES TO 5000 PSI / DROPPED BOTTOM PLUG & PUMPED 25 BBL FRESH WATER FLUSH AHEAD OF CEMENT / MIXED LEAD CEMENT @ 12.5 PPG WITH YIELD OF 1.98 CF/SX / MIXED TAIL @ 14.3 PPG WITH YIELD OF 1.31 CF/SX / DROPPED TOP PLUG & DISPLACED WITH 132.8 BBL FRESH WATER WITH 0.1% CLAY CARE & 0.01 GAL/BBL MAGNACIDE / HOLE CIRCULATED GOOD THROUGH OUT JOB / NO CEMENT TO SURFACE / FINAL LIFT PRESSURE = 2350 PSI / BUMPED PLUG TO 2995 PSI / FLOATS HELD / PLUG DOWN @ 08:15, 8/21/2012. |
| | 8:30 - 9:30 | 1.00 | DRLPRO | 14 | B | P | | PULL LANDING JOINT & PACK OFF HEAD |
| | 9:30 - 10:00 | 0.50 | DRLPRO | 01 | C | P | | RIG DOWN & PREPARE TO SKID |
| | 10:00 - 11:00 | 1.00 | DRLPRO | 14 | A | P | | NIPPLE DOWN BOP & CLEAN MUD TANKS / RELEASE RIG @ 11:00 8/21/2012. |

# 1 General

## 1.1 Customer Information

| | |
|---|---|
| **Company** | US ROCKIES REGION |
| **Representative** | |
| **Address** | |

## 1.2 Well/Wellbore Information

| | | | |
|---|---|---|---|
| **Well** | BONANZA 1023-5L3BS RED | **Wellbore No.** | OH |
| **Well Name** | BONANZA 1023-5L3BS | **Wellbore Name** | BONANZA 1023-5L3BS |
| **Report No.** | 1 | **Report Date** | 12/5/2012 |
| **Project** | UTAH-UINTAH | **Site** | BONANZA 1023-5L PAD |
| **Rig Name/No.** | | **Event** | COMPLETION |
| **Start Date** | 12/5/2012 | **End Date** | 1/1/2013 |
| **Spud Date** | 6/28/2012 | **Active Datum** | RKB @5,238.00usft (above Mean Sea Level) |
| **UWI** | SW/NW/0/10/S/23/E/5/0/0/26/PM/N/2654/W/0/136/0/0 | | |

## 1.3 General

| | | | | | |
|---|---|---|---|---|---|
| **Contractor** | | **Job Method** | | **Supervisor** | |
| **Perforated Assembly** | | **Conveyed Method** | | | |

## 1.4 Initial Conditions

| | | | |
|---|---|---|---|
| **Fluid Type** | | **Fluid Density** | |
| **Surface Press** | | **Estimate Res Press** | |
| **TVD Fluid Top** | | **Fluid Head** | |
| **Hydrostatic Press** | | **Press Difference** | |
| **Balance Cond** | NEUTRAL | | |

## 1.5 Summary

| | | | |
|---|---|---|---|
| **Gross Interval** | 5,474.0 (usft)-8,449.0 (usft | **Start Date/Time** | 12/31/2012 12:00AM |
| **No. of Intervals** | 43 | **End Date/Time** | 12/31/2012 12:00AM |
| **Total Shots** | 168 | **Net Perforation Interval** | 52.00 (usft) |
| **Avg Shot Density** | 3.23 (shot/ft) | **Final Surface Pressure** | |
| | | **Final Press Date** | |

# 2 Intervals

## 2.1 Perforated Interval

| Date | Formation/ Reservoir | CCL@ (usft) | CCL-TS (usft) | MD Top (usft) | MD Base (usft) | Shot Density (shot/ft) | Misfires/ Add. Shot | Diameter (in) | Carr Type /Stage No | Carr Size (in) | Phasing (°) | Charge Desc /Charge Manufacturer | Charge Weight (gram) | Reason | Misrun |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/31/2012 12:00AM | WASATCH/ | | | 5,474.0 | 5,476.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |

## 2.1 Perforated Interval (Continued)

| Date | Formation/ Reservoir | CCL@ (usft) | CCL-TS (usft) | MD Top (usft) | MD Base (usft) | Shot Density (shot/ft) | Misfires/ Add. Shot | Diameter (in) | Carr Type /Stage No | Carr Size (in) | Phasing (°) | Charge Desc /Charge Manufacturer | Charge Weight (gram) | Reason | Misrun |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/31/2012 12:00AM | WASATCH/ | | | 5,481.0 | 5,483.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | WASATCH/ | | | 5,677.0 | 5,679.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | WASATCH/ | | | 5,782.0 | 5,784.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | WASATCH/ | | | 5,875.0 | 5,876.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | WASATCH/ | | | 5,900.0 | 5,901.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | WASATCH/ | | | 5,982.0 | 5,983.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | WASATCH/ | | | 6,007.0 | 6,008.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | WASATCH/ | | | 6,090.0 | 6,092.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | WASATCH/ | | | 6,138.0 | 6,139.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | WASATCH/ | | | 6,173.0 | 6,174.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,081.0 | 7,082.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,179.0 | 7,180.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,196.0 | 7,197.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,255.0 | 7,256.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTION | |

## 2.1 Perforated Interval (Continued)

| Date | Formation/ Reservoir | CCL@ (usft) | CCL-TS (usft) | MD Top (usft) | MD Base (usft) | Shot Density (shot/ft) | Misfires/ Add. Shot | Diameter (in) | Carr Type /Stage No | Carr Size (in) | Phasing (°) | Charge Desc /Charge Manufacturer | Charge Weight (gram) | Reason | Misrun |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,274.0 | 7,275.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,325.0 | 7,326.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,593.0 | 7,594.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,605.0 | 7,606.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,623.0 | 7,624.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,642.0 | 7,643.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,651.0 | 7,652.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,682.0 | 7,683.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,741.0 | 7,742.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,768.0 | 7,769.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,795.0 | 7,796.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,827.0 | 7,828.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,840.0 | 7,841.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,854.0 | 7,855.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |

## 2.1 Perforated Interval (Continued)

| Date | Formation/ Reservoir | CCL@ (usft) | CCL-TS (usft) | MD Top (usft) | MD Base (usft) | Shot Density (shot/ft) | Misfires/ Add. Shot | Diameter (in) | Carr Type /Stage No | Carr Size (in) | Phasing (°) | Charge Desc /Charge Manufacturer | Charge Weight (gram) | Reason | Misrun |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,870.0 | 7,871.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,890.0 | 7,891.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,949.0 | 7,950.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,963.0 | 7,964.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,985.0 | 7,986.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 7,995.0 | 7,996.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 8,011.0 | 8,012.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 8,028.0 | 8,029.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 8,063.0 | 8,064.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 8,079.0 | 8,080.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 8,377.0 | 8,379.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 8,385.0 | 8,387.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 8,428.0 | 8,430.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12/31/2012 12:00AM | MESAVERDE/ | | | 8,447.0 | 8,449.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-5L3BS RED | | Spud Date: 6/28/2012 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-5L PAD | Rig Name No: SWABBCO 8/8 |
| Event: COMPLETION | Start Date: 12/5/2012 | End Date: 1/1/2013 |
| Active Datum: RKB @5,238.00usft (above Mean Sea Level) | UWI: SW/NW/0/10/S/23/E/5/0/0/26/PM/N/2654/W/0/136/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|---|---|---|---|---|---|---|---|---|
| 6/28/2012 | - | | | | | | | |
| 12/5/2012 | 13:15 - 13:30 | 0.25 | FRAC | 33 | C | P | | RU HOT OILER, ATTEMPT TO PUMP DOWN 8 5/8 X 4 1/2 ANNULAR FILLED WITH 2 BBLS PRESSURED TO 1500, PSI 3 TIMES NO BLEED OFF BLED WELL DOWN MOVED TO NEXT WELL |
| 12/6/2012 | - | | | | | | | |
| 12/12/2012 | 10:00 - 14:05 | 4.08 | FRAC | 33 | C | P | | FILL SURFACE CSG. MIRU B&C QUICK TEST. 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST 61 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. MOVE T/ NEXT WELL.SWIFN |
| 12/14/2012 | 7:00 - 8:00 | 1.00 | FRAC | 37 | | P | | PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF AS PER PERF DESIGN. POOH. SWIFW |
| 12/17/2012 | 7:00 - 7:15 | 0.25 | FRAC | 48 | | P | | SAFETY = JSA AND PRE-JOB GATHERING. |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-5L3BS RED | Spud Date: 6/28/2012 | |
| Project: UTAH-UINTAH | Site: BONANZA 1023-5L PAD | Rig Name No: SWABBCO 8/8 |
| Event: COMPLETION | Start Date: 12/5/2012 | End Date: 1/1/2013 |
| Active Datum: RKB @5,238.00usft (above Mean Sea Level) | UWI: SW/NW/0/10/S/23/E/5/0/0/26/PM/N/2654/W/0/136/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|---|---|---|---|---|---|---|---|---|
| | 7:15 - 18:00 | 10.75 | FRAC | 36 | B | P | | FINISH SPOTTING IN EQUIPMENT AND R/U. PRESSURE TEST LINES GOOD @ 8000 PSI. PERF & FRAC FOLLOWING WELL AS PER DESIGN W/ 30/50 MESH SAND & SLK WTR.<br>ALL CBP'S ARE HALIBURTON 8K CBP'S.<br><br>FRAC STG 1) WHP 908 PSI, BRK 2759 PSI @ 4.7 BPM. ISIP 1537 PSI, FG .0.62, CALC PERFS OPEN @ 48.6 BPM @ 4830 PSI = 92% HOLES OPEN. 0 ISIP 2263 PSI, FG .0.71, NPI 726 PSI. 0 MP 5610 PSI, MR 49.4 BPM, AP 4198 PSI, AR 47.9 BPM, PUMPED 30/50 OWATTA SAND.<br><br>PERF STG #2] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8110', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW<br><br>FRAC STG 2) WHP 1260 PSI, BRK 3970 PSI @ 4.9 BPM. ISIP 2279 PSI, FG .0.72, CALC PERFS OPEN @ 45.3 BPM @ 5364 PSI = 71% HOLES OPEN. 0 ISIP 2387 PSI, FG .0.74, NPI 108 PSI. 0 MP 5735 PSI, MR 48.9 BPM, AP 4808 PSI, AR 46.5 BPM, PUMPED 30/50 OWATTA SAND.<br><br>PERF STG #3] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=7921', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW<br><br>FRAC STG 3) WHP 1919 PSI, BRK 2664 PSI @ 4.9 BPM. ISIP 2119 PSI, FG .0.71, CALC PERFS OPEN @ 48.7 BPM @ 4064 PSI = 100% HOLES OPEN. 0 ISIP 2339 PSI, FG .0.74, NPI 220 PSI. 0 MP 4358 PSI, MR 48.9 BPM, AP 4046 PSI, AR 47.2 BPM, PUMPED 30/50 OWATTA SAND.<br><br>SWI. SDFN. |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-5L3BS RED | Spud Date: 6/28/2012 | |
| Project: UTAH-UINTAH | Site: BONANZA 1023-5L PAD | Rig Name No: SWABBCO 8/8 |
| Event: COMPLETION | Start Date: 12/5/2012 | End Date: 1/1/2013 |
| Active Datum: RKB @5,238.00usft (above Mean Sea Level) | UWI: SW/NW/0/10/S/23/E/5/0/0/26/PM/N/2654/W/0/136/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|---|---|---|---|---|---|---|---|---|
| 12/18/2012 | 7:00 - 18:00 | 11.00 | FRAC | 36 | B | P | | CONT PERF AND FRAC AS FOLLOWS:<br><br>PERF STG #4] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=7713', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW<br><br>FRAC STG 4) WHP 1434 PSI, BRK 2540 PSI @ 4.7 BPM. ISIP 1923 PSI, FG .0.69, CALC PERFS OPEN @ 48.3 BPM @ 4200 PSI = 100% HOLES OPEN. 0 ISIP 2326 PSI, FG .0.74, NPI 403 PSI. 0 MP 4246 PSI, MR 48.8 BPM, AP 3962 PSI, AR 47.1 BPM, PUMPED 30/50 OWATTA SAND.<br><br>PERF STG #5] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=7356', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW<br><br>FRAC STG 5) WHP 490 PSI, BRK 2437 PSI @ 4.7 BPM. ISIP 1118 PSI, FG .0.59, CALC PERFS OPEN @ 47.9 BPM @ 3745 PSI = 83% HOLES OPEN. 0 ISIP 2166 PSI, FG .0.74, NPI 2166 PSI. 0 MP 4049 PSI, MR 48.6 BPM, AP 3848 PSI, AR 46.7 BPM, PUMPED 30/50 OWATTA SAND.<br><br>PERF STG 6] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=6204', PERF WASATCH USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW<br><br>FRAC STG 6) WHP 130 PSI, BRK 1800 PSI @ 4.7 BPM. ISIP 1166 PSI, FG .0.63, CALC PERFS OPEN @ 47.3 BPM @ 3762 PSI = 79% HOLES OPEN. 0 ISIP 1757 PSI, FG .0.73, NPI 591 PSI. 0 MP 4642 PSI, MR 48.3 BPM, AP 3754 PSI, AR 45.7 BPM, PUMPED 30/50 OWATTA SAND.<br><br>PERF STG 7] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=5814', PERF WASATCH USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW<br><br>SWI. SDFN. |
| 12/19/2012 | 7:00 - 9:30 | 2.50 | FRAC | 46 | E | Z | | FRAC CREW BLENDER BROKE DOWN. WAIT ON REPAIRS OR REPLACEMENT OF EQUIPMENT. |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-5L3BS RED | | Spud Date: 6/28/2012 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-5L PAD | Rig Name No: SWABBCO 8/8 |
| Event: COMPLETION | Start Date: 12/5/2012 | End Date: 1/1/2013 |
| Active Datum: RKB @5,238.00usft (above Mean Sea Level) | UWI: SW/NW/0/10/S/23/E/5/0/0/26/PM/N/2654/W/0/136/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|---|---|---|---|---|---|---|---|---|
| 12/20/2012 | 7:00 - 18:00 | 11.00 | FRAC | 36 | B | P | | BEGIN PERF AND FRAC.<br><br>FRAC STG 7) WHP 45 PSI, BRK 1449 PSI @ 6.8 BPM. ISIP 1036 PSI, FG .0.62, CALC PERFS OPEN @ 50.9 BPM @ 5088 PSI = 63% HOLES OPEN. 0 ISIP 1531 PSI, FG .0.71, NPI 495 PSI. 0 MP 5669 PSI, MR 51.7 BPM, AP 4587 PSI, AR 49.5 BPM, PUMPED 30/50 OWATTA SAND.<br><br>SET HAL 8K CBP @5424'. KILL PLUG. SWI. FRAC COMPLETE. READY FOR D/O.<br><br>TOTAL SAND =156450#<br>TOTAL FLUID PUMPED =7011BBLS |
| 12/31/2012 | 7:00 - 7:30 | 0.50 | DRLOUT | 48 | | P | | HSM, WORKING IN COLD WEATHER, & MOVING EQUIP ON SLICK ROADS. |
| | 7:30 - 12:00 | 4.50 | DRLOUT | 30 | A | P | | WEATHER - 4 DEG, MIRU, ND WH NU BOPS, RU FLOOR & TBG EQUIP. |
| | 12:00 - 17:00 | 5.00 | DRLOUT | 31 | I | P | | TALLY & PU 3 7/8 BIT, POBS, 1.875 X/N & 169 JTS 23/8 L-80 OFF FLOAT EOT @ 5360 ' RU DRLG EQUIP, PREP TO D/O IN AM. SWI SDFN. |
| 1/1/2013 | 7:00 - 7:30 | 0.50 | DRLOUT | 48 | | P | | HSM, WORKING IN COLD WEATHER |
| | 7:30 - 9:00 | 1.50 | DRLOUT | | | P | | - 10 DEGS, GOT EQUIP RUNNING & WARMED UP, BROKE CIRC CONV, TEST BOPS TO 4,000# RIH. |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-5L3BS RED | | Spud Date: 6/28/2012 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-5L PAD | Rig Name No: SWABBCO 8/8 |
| Event: COMPLETION | Start Date: 12/5/2012 | End Date: 1/1/2013 |
| Active Datum: RKB @5,238.00usft (above Mean Sea Level) | UWI: SW/NW/0/10/S/23/E/5/0/0/26/PM/N/2654/W/0/136/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|---|---|---|---|---|---|---|---|---|
| | 9:00 - 17:00 | 8.00 | DRLOUT | 44 | C | P | | C/O 10' SAND TAG 1ST PLUG @ 5424' DRL PLG IN 8 MIN, 0 PSI INCREASE RIH.<br><br>C/O 30' SAND TAG 2ND PLUG @ 5814' DRL PLG IN 3 MIN, 0 PSI INCREASE RIH.<br><br>C/O 25' SAND TAG 3RD PLUG @ 6204' DRL PLG IN 9 MIN, 300 PSI INCREASE RIH.<br><br>C/O 30' SAND TAG 4TH PLUG @ 7356' DRL PLG IN 10 MIN, 500 PSI INCREASE RIH.<br><br>C/O 20' SAND TAG 5TH PLUG @ 7713' DRL PLG IN 4 MIN, 600 PSI INCREASE RIH.<br><br>C/O 30' SAND TAG 6TH PLUG @ 7921' DRL PLG IN 5 MIN, 400 PSI INCREASE RIH.<br><br>C/O 25' SAND TAG 7TH PLUG @ 8110' DRL PLG IN 5 MIN, 400 PSI INCREASE RIH.<br><br>C/O TO PBTD @ 8493', CIRC CLN, HAND SWIVEL, L/D 19 JTS 23/8 L-80, LAND TBG ON 249 JTS, ND BOPS NU WH, TEST FLOW LINE TO 4,000#, PUMP OFF BIT, TURN WELL OVER TO FB.DRAIN EQUIP SDFN.<br><br>KB = 15'<br>41/16 HANGER = .83' ( SURFACE OPEN & LOCKED )<br>249 JTS 23/8 L-80 = 7882.57' SICP 1800, FTP 100,<br>POBS W/ 1.875 X/N = 2.20'<br>EOT @ 7900.60'<br><br>TWTR = 7291 BBLS<br>TWR = 900 BBLS<br>TWLTR = 6391 BBLS<br><br>283 JTS DELIVERED<br>249 LANDED<br>34 TO RETURN |
| | 17:00 - 17:00 | 0.00 | DRLOUT | 50 | | | | WELL TURNED TO SALES @ 1630 HR ON 1/1/2013, 1849 MCFD, 1680 BWPD, FCP 1800#, FTP 1200#, 20/64" CK. |
| 1/6/2013 | 7:00 - | | | 50 | | | | WELL IP'D ON 1/6/13 - 1865 MCFD, 0 BWPD, 0 BOPD, CP 5#, FTP #, LP 135#, 24 HRS, CK 20/64 |

Site: UINTAH_BONANZA 1023-5L PAD
Well: BONANZA 1023-5L3BS
Wellbore: BONANZA 1023-5L3BS
Section:
SHL:
Design: BONANZA 1023-5L3BS (wp01)
Latitude: 39.977991
Longitude: -109.358958
GL: 5223.00
KB: 15' RKB + 5223' GL @ 5238.00ft (XTREME 12)

| TVDPath | MDPath | Formation |
|---|---|---|
| 4138.00 | 4233.26 | WASATCH |
| 4738.00 | 4833.27 | INTERCEPT |
| 6242.00 | 6337.31 | MESAVERDE |
| 8454.00 | 8549.35 | SEGO |

WELL DETAILS: BONANZA 1023-5L3BS

Ground Level: 5223.00

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Slot |
|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 14522260.93 | 2100162.72 | 39.977991 | -109.358958 | |

CASING DETAILS

| TVD | MD | Name | Size |
|---|---|---|---|
| 2356.30 | 2420.83 | 8-5/8 | 8-5/8 |

T M

Azimuths to True Nort
Magnetic North: 10.8

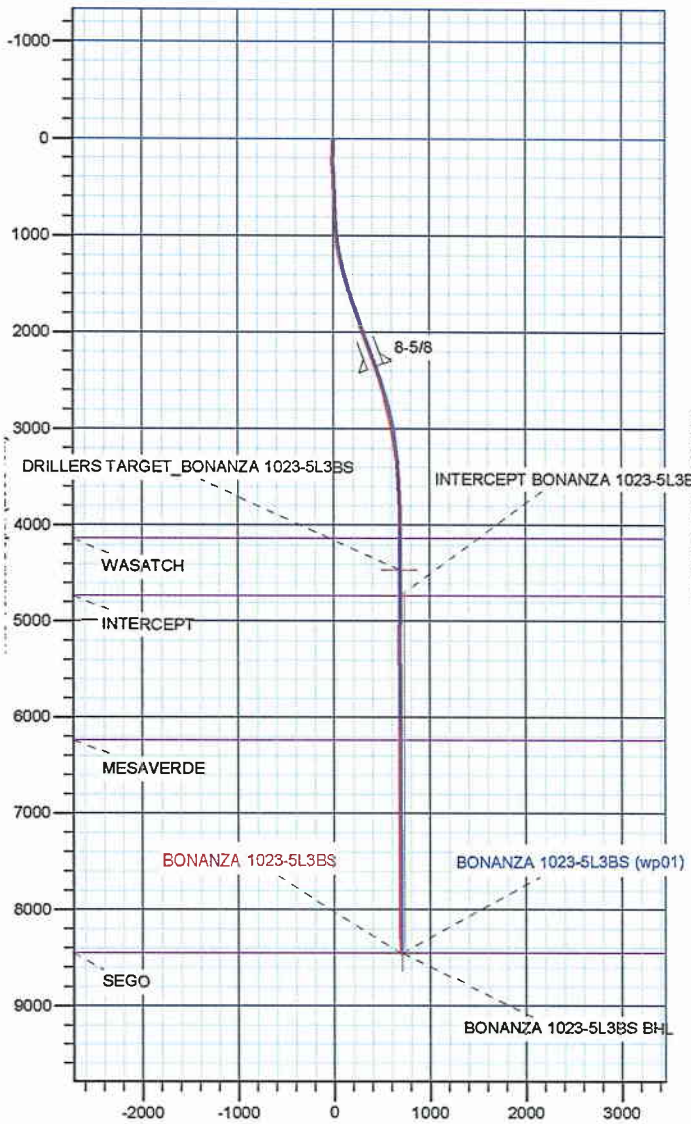
Magnetic Fie
Strength: 52220.6sr
Dip Angle: 65.8
Date: 8/6/201
Model: IGRF201

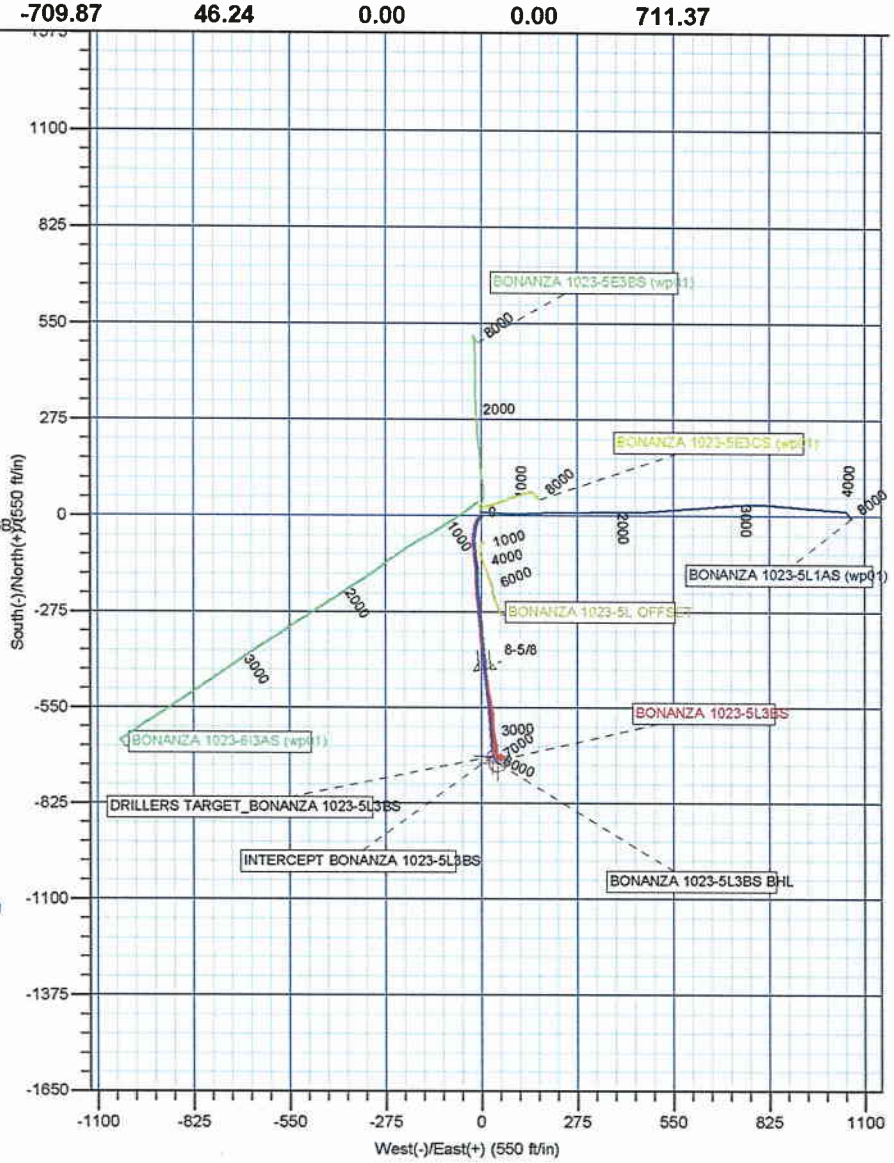
DESIGN TARGET DETAILS

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| DRILLERS TARGET_BONANZA 1023-5L3BS | 4460.73 | -688.60 | 31.92 | 14521573.03 | 2100207.31 | 39.976100 | -109.358844 | Circle (Radius: 15.00 |
| INTERCEPT BONANZA 1023-5L3BS | 4738.00 | -689.77 | 32.70 | 14521571.88 | 2100208.11 | 39.976097 | -109.358841 | Point |
| BONANZA 1023-5L3BS BHL | 8454.00 | -709.87 | 46.24 | 14521552.03 | 2100222.01 | 39.976042 | -109.358793 | Circle (Radius: 25.00 |

## SECTION DETAILS

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect |
|---|---|---|---|---|---|---|---|---|
| 2416.00 | 20.40 | 174.98 | 2351.77 | -439.64 | 10.05 | 0.00 | 0.00 | 439.37 |
| 2566.00 | 20.40 | 174.98 | 2492.36 | -491.73 | 14.62 | 0.00 | 0.00 | 491.64 |
| 3516.00 | 1.40 | 174.98 | 3420.95 | -669.86 | 30.27 | 2.00 | 180.00 | 670.41 |
| 4216.00 | 1.40 | 174.98 | 4120.74 | -686.90 | 31.77 | 0.00 | 0.00 | 687.51 |
| 4356.00 | 0.00 | 174.98 | 4260.73 | -688.60 | 31.92 | 1.00 | 180.00 | 689.22 |
| 4556.00 | 0.00 | 174.98 | 4460.73 | -688.60 | 31.92 | 0.00 | 174.98 | 689.22 |
| 4680.55 | 0.37 | 146.04 | 4585.28 | -688.94 | 32.14 | 0.30 | 146.04 | 689.57 |
| 8549.35 | 0.37 | 146.04 | 8454.00 | -709.87 | 46.24 | 0.00 | 0.00 | 711.37 |



# US ROCKIES REGION PLANNING

**UTAH - UTM (feet), NAD27, Zone 12N**
**UINTAH_BONANZA 1023-5L PAD**
**BONANZA 1023-5L3BS**

**BONANZA 1023-5L3BS**

**Design: BONANZA 1023-5L3BS**

# Standard Survey Report

**21 August, 2012**

# Anadarko Petroleum Corp

## Survey Report

| | | | |
|---|---|---|---|
| **Company:** | US ROCKIES REGION PLANNING | **Local Co-ordinate Reference:** | Well BONANZA 1023-5L3BS |
| **Project:** | UTAH - UTM (feet), NAD27, Zone 12N | **TVD Reference:** | 15' RKB + 5223' GL @ 5238.00ft (XTREME 12) |
| **Site:** | UINTAH_BONANZA 1023-5L PAD | **MD Reference:** | 15' RKB + 5223' GL @ 5238.00ft (XTREME 12) |
| **Well:** | BONANZA 1023-5L3BS | **North Reference:** | True |
| **Wellbore:** | BONANZA 1023-5L3BS | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | BONANZA 1023-5L3BS | **Database:** | edmp |

**Project** UTAH - UTM (feet), NAD27, Zone 12N

| | | | |
|---|---|---|---|
| **Map System:** | Universal Transverse Mercator (US Survey Feet) | **System Datum:** | Mean Sea Level |
| **Geo Datum:** | NAD 1927 (NADCON CONUS) | | |
| **Map Zone:** | Zone 12N (114 W to 108 W) | | |

**Site** UINTAH_BONANZA 1023-5L PAD

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 14,522,260.93 usft | **Latitude:** | 39.977991 |
| **From:** | Lat/Long | **Easting:** | 2,100,162.72 usft | **Longitude:** | -109.358958 |
| **Position Uncertainty:** | 0.00 ft | **Slot Radius:** | 13-3/16 " | **Grid Convergence:** | 1.05 ° |

**Well** BONANZA 1023-5L3BS

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 0.00 ft | **Northing:** | 14,522,260.93 usft | **Latitude:** | 39.977991 |
| | **+E/-W** | 0.00 ft | **Easting:** | 2,100,162.72 usft | **Longitude:** | -109.358958 |
| **Position Uncertainty** | | 0.00 ft | **Wellhead Elevation:** | ft | **Ground Level:** | 5,223.00 ft |

**Wellbore** BONANZA 1023-5L3BS

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | IGRF2010 | 8/6/2012 | 10.87 | 65.85 | 52,221 |

**Design** BONANZA 1023-5L3BS

**Audit Notes:**

| | | | | | |
|---|---|---|---|---|---|
| **Version:** | 1.0 | **Phase:** | ACTUAL | **Tie On Depth:** | 11.00 |

| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
|---|---|---|---|---|
| | 0.00 | 0.00 | 0.00 | 175.47 |

**Survey Program** Date 8/21/2012

| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description |
|---|---|---|---|---|
| 183.00 | 2,416.00 | Survey #1 (BONANZA 1023-5L3BS) | MWD | MWD - STANDARD |
| 2,504.00 | 8,550.00 | Survey #2 (BONANZA 1023-5L3BS) | MWD | MWD - STANDARD |

**Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 11.00 | 0.00 | 0.00 | 11.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 183.00 | 0.44 | 31.98 | 183.00 | 0.56 | 0.35 | -0.53 | 0.26 | 0.26 | 0.00 |
| 268.00 | 1.23 | 220.50 | 267.99 | 0.14 | -0.07 | -0.15 | 1.96 | 0.93 | -201.74 |
| 350.00 | 2.29 | 217.51 | 349.95 | -1.83 | -1.64 | 1.69 | 1.30 | 1.29 | -3.65 |
| 441.00 | 3.34 | 224.81 | 440.84 | -5.15 | -4.61 | 4.77 | 1.22 | 1.15 | 8.02 |
| 531.00 | 2.64 | 214.44 | 530.72 | -8.72 | -7.63 | 8.09 | 0.98 | -0.78 | -11.52 |
| 621.00 | 2.46 | 203.01 | 620.63 | -12.21 | -9.56 | 11.41 | 0.60 | -0.20 | -12.70 |
| 711.00 | 2.73 | 206.62 | 710.54 | -15.90 | -11.28 | 14.96 | 0.35 | 0.30 | 4.01 |
| 801.00 | 3.70 | 201.86 | 800.40 | -20.51 | -13.32 | 19.39 | 1.12 | 1.08 | -5.29 |
| 891.00 | 4.65 | 193.30 | 890.16 | -26.76 | -15.24 | 25.47 | 1.26 | 1.06 | -9.51 |

# Anadarko Petroleum Corp

Survey Report

| | | | |
|---|---|---|---|
| **Company:** | US ROCKIES REGION PLANNING | **Local Co-ordinate Reference:** | Well BONANZA 1023-5L3BS |
| **Project:** | UTAH - UTM (feet), NAD27, Zone 12N | **TVD Reference:** | 15' RKB + 5223' GL @ 5238.00ft (XTREME 12) |
| **Site:** | UINTAH_BONANZA 1023-5L PAD | **MD Reference:** | 15' RKB + 5223' GL @ 5238.00ft (XTREME 12) |
| **Well:** | BONANZA 1023-5L3BS | **North Reference:** | True |
| **Wellbore:** | BONANZA 1023-5L3BS | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | BONANZA 1023-5L3BS | **Database:** | edmp |

**Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 981.00 | 6.33 | 193.87 | 979.74 | -35.12 | -17.27 | 33.65 | 1.87 | 1.87 | 0.63 |
| 1,071.00 | 7.91 | 187.46 | 1,069.05 | -46.08 | -19.26 | 44.42 | 1.96 | 1.76 | -7.12 |
| 1,161.00 | 9.35 | 183.35 | 1,158.03 | -59.52 | -20.49 | 57.72 | 1.74 | 1.60 | -4.57 |
| 1,251.00 | 11.61 | 177.52 | 1,246.52 | -75.87 | -20.53 | 74.01 | 2.77 | 2.51 | -6.48 |
| 1,341.00 | 13.81 | 174.80 | 1,334.31 | -95.62 | -19.16 | 93.80 | 2.53 | 2.44 | -3.02 |
| 1,431.00 | 15.65 | 172.08 | 1,421.35 | -118.34 | -16.52 | 116.67 | 2.18 | 2.04 | -3.02 |
| 1,521.00 | 16.71 | 173.22 | 1,507.78 | -143.21 | -13.32 | 141.71 | 1.23 | 1.18 | 1.27 |
| 1,611.00 | 18.20 | 179.63 | 1,593.65 | -170.12 | -11.70 | 168.66 | 2.70 | 1.66 | 7.12 |
| 1,701.00 | 18.55 | 178.67 | 1,679.06 | -198.49 | -11.27 | 196.98 | 0.51 | 0.39 | -1.07 |
| 1,791.00 | 18.91 | 175.77 | 1,764.29 | -227.34 | -9.87 | 225.85 | 1.11 | 0.40 | -3.22 |
| 1,881.00 | 19.08 | 174.18 | 1,849.39 | -256.52 | -7.30 | 255.14 | 0.61 | 0.19 | -1.77 |
| 1,971.00 | 20.05 | 174.27 | 1,934.20 | -286.51 | -4.27 | 285.28 | 1.08 | 1.08 | 0.10 |
| 2,061.00 | 20.14 | 175.50 | 2,018.72 | -317.31 | -1.51 | 316.19 | 0.48 | 0.10 | 1.37 |
| 2,151.00 | 20.58 | 174.71 | 2,103.09 | -348.50 | 1.16 | 347.50 | 0.58 | 0.49 | -0.88 |
| 2,241.00 | 20.11 | 174.01 | 2,187.48 | -379.64 | 4.24 | 378.79 | 0.59 | -0.52 | -0.78 |
| 2,331.00 | 20.05 | 174.45 | 2,272.01 | -410.38 | 7.34 | 409.68 | 0.18 | -0.07 | 0.49 |
| 2,416.00 | 20.40 | 174.98 | 2,351.77 | -439.64 | 10.05 | 439.06 | 0.46 | 0.41 | 0.62 |
| **TIE ON** | | | | | | | | | |
| 2,504.00 | 18.54 | 173.05 | 2,434.73 | -468.81 | 13.08 | 468.38 | 2.24 | -2.11 | -2.19 |
| **FIRST MWD SURVEY** | | | | | | | | | |
| 2,595.00 | 17.16 | 170.20 | 2,521.35 | -496.41 | 17.12 | 496.21 | 1.79 | -1.52 | -3.13 |
| 2,686.00 | 15.50 | 166.49 | 2,608.68 | -521.46 | 22.25 | 521.59 | 2.15 | -1.82 | -4.08 |
| 2,776.00 | 14.06 | 169.52 | 2,695.70 | -543.90 | 27.04 | 544.34 | 1.82 | -1.60 | 3.37 |
| 2,867.00 | 13.19 | 172.77 | 2,784.14 | -565.07 | 30.36 | 565.71 | 1.27 | -0.96 | 3.57 |
| 2,957.00 | 12.69 | 178.39 | 2,871.86 | -585.14 | 31.93 | 585.84 | 1.50 | -0.56 | 6.24 |
| 3,048.00 | 12.25 | 175.64 | 2,960.71 | -604.76 | 32.95 | 605.47 | 0.81 | -0.48 | -3.02 |
| 3,139.00 | 9.63 | 173.52 | 3,050.05 | -621.95 | 34.54 | 622.74 | 2.91 | -2.88 | -2.33 |
| 3,229.00 | 8.88 | 169.02 | 3,138.88 | -636.25 | 36.71 | 637.16 | 1.16 | -0.83 | -5.00 |
| 3,320.00 | 7.56 | 172.77 | 3,228.94 | -649.09 | 38.80 | 650.12 | 1.56 | -1.45 | 4.12 |
| 3,411.00 | 6.38 | 174.39 | 3,319.27 | -660.06 | 40.05 | 661.16 | 1.31 | -1.30 | 1.78 |
| 3,501.00 | 5.31 | 176.14 | 3,408.80 | -669.19 | 40.82 | 670.32 | 1.21 | -1.19 | 1.94 |
| 3,592.00 | 4.13 | 174.52 | 3,499.49 | -676.65 | 41.42 | 677.81 | 1.30 | -1.30 | -1.78 |
| 3,682.00 | 3.38 | 176.89 | 3,589.30 | -682.53 | 41.87 | 683.70 | 0.85 | -0.83 | 2.63 |
| 3,773.00 | 2.38 | 163.89 | 3,680.18 | -687.02 | 42.54 | 688.23 | 1.31 | -1.10 | -14.29 |
| 3,864.00 | 1.56 | 158.14 | 3,771.13 | -689.99 | 43.53 | 691.27 | 0.93 | -0.90 | -6.32 |
| 3,954.00 | 1.24 | 116.97 | 3,861.10 | -691.56 | 44.85 | 692.95 | 1.14 | -0.36 | -45.74 |
| 4,045.00 | 0.69 | 47.77 | 3,952.09 | -691.64 | 46.13 | 693.13 | 1.30 | -0.60 | -76.04 |
| 4,136.00 | 0.38 | 59.39 | 4,043.09 | -691.12 | 46.80 | 692.66 | 0.36 | -0.34 | 12.77 |
| 4,226.00 | 0.25 | 122.39 | 4,133.09 | -691.07 | 47.22 | 692.64 | 0.39 | -0.14 | 70.00 |
| 4,317.00 | 0.63 | 162.52 | 4,224.08 | -691.66 | 47.54 | 693.25 | 0.51 | 0.42 | 44.10 |
| 4,407.00 | 0.75 | 152.27 | 4,314.08 | -692.65 | 47.96 | 694.27 | 0.19 | 0.13 | -11.39 |
| 4,498.00 | 1.06 | 158.27 | 4,405.07 | -693.96 | 48.55 | 695.63 | 0.36 | 0.34 | 6.59 |
| 4,589.00 | 0.25 | 81.64 | 4,496.06 | -694.71 | 49.06 | 696.42 | 1.13 | -0.89 | -84.21 |

# Anadarko Petroleum Corp

## Survey Report

| | | | |
|---|---|---|---|
| **Company:** | US ROCKIES REGION PLANNING | **Local Co-ordinate Reference:** | Well BONANZA 1023-5L3BS |
| **Project:** | UTAH - UTM (feet), NAD27, Zone 12N | **TVD Reference:** | 15' RKB + 5223' GL @ 5238.00ft (XTREME 12) |
| **Site:** | UINTAH_BONANZA 1023-5L PAD | **MD Reference:** | 15' RKB + 5223' GL @ 5238.00ft (XTREME 12) |
| **Well:** | BONANZA 1023-5L3BS | **North Reference:** | True |
| **Wellbore:** | BONANZA 1023-5L3BS | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | BONANZA 1023-5L3BS | **Database:** | edmp |

**Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 4,679.00 | 1.25 | 9.52 | 4,586.05 | -693.72 | 49.41 | 695.45 | 1.33 | 1.11 | -80.13 |
| 4,770.00 | 1.81 | 12.64 | 4,677.02 | -691.34 | 49.89 | 693.12 | 0.62 | 0.62 | 3.43 |
| 4,861.00 | 1.13 | 321.02 | 4,767.99 | -689.24 | 49.64 | 691.00 | 1.56 | -0.75 | -56.73 |
| 4,951.00 | 1.06 | 310.02 | 4,857.98 | -688.01 | 48.45 | 689.69 | 0.25 | -0.08 | -12.22 |
| 5,042.00 | 1.00 | 304.64 | 4,948.96 | -687.02 | 47.15 | 688.59 | 0.12 | -0.07 | -5.91 |
| 5,132.00 | 0.81 | 292.14 | 5,038.95 | -686.33 | 45.91 | 687.81 | 0.30 | -0.21 | -13.89 |
| 5,223.00 | 0.75 | 299.89 | 5,129.94 | -685.79 | 44.80 | 687.19 | 0.13 | -0.07 | 8.52 |
| 5,314.00 | 0.69 | 270.77 | 5,220.94 | -685.49 | 43.74 | 686.80 | 0.40 | -0.07 | -32.00 |
| 5,405.00 | 0.56 | 236.27 | 5,311.93 | -685.73 | 42.82 | 686.97 | 0.43 | -0.14 | -37.91 |
| 5,495.00 | 0.63 | 205.27 | 5,401.93 | -686.42 | 42.24 | 687.61 | 0.36 | 0.08 | -34.44 |
| 5,586.00 | 0.94 | 189.14 | 5,492.92 | -687.61 | 41.91 | 688.77 | 0.42 | 0.34 | -17.73 |
| 5,676.00 | 1.38 | 178.77 | 5,582.90 | -689.42 | 41.82 | 690.57 | 0.54 | 0.49 | -11.52 |
| 5,767.00 | 1.56 | 166.77 | 5,673.87 | -691.72 | 42.12 | 692.89 | 0.39 | 0.20 | -13.19 |
| 5,858.00 | 0.44 | 141.52 | 5,764.85 | -693.20 | 42.63 | 694.40 | 1.29 | -1.23 | -27.75 |
| 5,948.00 | 0.56 | 44.89 | 5,854.85 | -693.16 | 43.15 | 694.40 | 0.83 | 0.13 | -107.37 |
| 6,039.00 | 0.88 | 47.89 | 5,945.84 | -692.38 | 43.98 | 693.69 | 0.35 | 0.35 | 3.30 |
| 6,130.00 | 0.88 | 63.14 | 6,036.83 | -691.59 | 45.12 | 693.00 | 0.26 | 0.00 | 16.76 |
| 6,220.00 | 0.88 | 59.14 | 6,126.82 | -690.93 | 46.33 | 692.43 | 0.07 | 0.00 | -4.44 |
| 6,311.00 | 1.06 | 75.27 | 6,217.81 | -690.35 | 47.75 | 691.97 | 0.36 | 0.20 | 17.73 |
| 6,402.00 | 1.06 | 94.52 | 6,308.79 | -690.21 | 49.40 | 691.95 | 0.39 | 0.00 | 21.15 |
| 6,493.00 | 1.13 | 111.39 | 6,399.78 | -690.60 | 51.08 | 692.48 | 0.36 | 0.08 | 18.54 |
| 6,584.00 | 1.34 | 115.49 | 6,490.76 | -691.38 | 52.87 | 693.40 | 0.25 | 0.23 | 4.51 |
| 6,674.00 | 0.81 | 104.39 | 6,580.74 | -692.00 | 54.44 | 694.13 | 0.63 | -0.59 | -12.33 |
| 6,765.00 | 0.19 | 130.02 | 6,671.74 | -692.25 | 55.18 | 694.45 | 0.71 | -0.68 | 28.16 |
| 6,856.00 | 0.44 | 127.89 | 6,762.74 | -692.56 | 55.57 | 694.79 | 0.27 | 0.27 | -2.34 |
| 6,946.00 | 0.31 | 197.02 | 6,852.73 | -693.01 | 55.77 | 695.25 | 0.49 | -0.14 | 76.81 |
| 7,037.00 | 0.38 | 221.52 | 6,943.73 | -693.47 | 55.50 | 695.69 | 0.18 | 0.08 | 26.92 |
| 7,128.00 | 0.56 | 238.14 | 7,034.73 | -693.93 | 54.92 | 696.10 | 0.25 | 0.20 | 18.26 |
| 7,218.00 | 0.13 | 240.02 | 7,124.73 | -694.21 | 54.46 | 696.35 | 0.48 | -0.48 | 2.09 |
| 7,309.00 | 0.50 | 351.39 | 7,215.73 | -693.87 | 54.31 | 695.99 | 0.62 | 0.41 | 122.38 |
| 7,399.00 | 1.19 | 359.02 | 7,305.72 | -692.55 | 54.23 | 694.67 | 0.78 | 0.77 | 8.48 |
| 7,490.00 | 1.13 | 355.52 | 7,396.70 | -690.71 | 54.15 | 692.83 | 0.10 | -0.07 | -3.85 |
| 7,581.00 | 0.75 | 15.52 | 7,487.69 | -689.24 | 54.24 | 691.37 | 0.55 | -0.42 | 21.98 |
| 7,671.00 | 0.75 | 38.02 | 7,577.68 | -688.21 | 54.76 | 690.39 | 0.33 | 0.00 | 25.00 |
| 7,762.00 | 0.94 | 55.02 | 7,668.67 | -687.31 | 55.74 | 689.57 | 0.34 | 0.21 | 18.68 |
| 7,853.00 | 0.06 | 108.14 | 7,759.66 | -686.90 | 56.39 | 689.21 | 0.99 | -0.97 | 58.37 |
| 7,943.00 | 1.00 | 271.17 | 7,849.66 | -686.90 | 55.65 | 689.15 | 1.18 | 1.04 | 181.14 |
| 8,034.00 | 0.81 | 236.52 | 7,940.65 | -687.24 | 54.32 | 689.38 | 0.62 | -0.21 | -38.08 |
| 8,124.00 | 1.00 | 192.54 | 8,030.64 | -688.36 | 53.62 | 690.44 | 0.78 | 0.21 | -48.87 |
| 8,215.00 | 1.25 | 180.52 | 8,121.62 | -690.12 | 53.44 | 692.19 | 0.38 | 0.27 | -13.21 |
| 8,306.00 | 1.69 | 174.89 | 8,212.59 | -692.45 | 53.55 | 694.52 | 0.51 | 0.48 | -6.19 |
| 8,396.00 | 1.94 | 164.27 | 8,302.55 | -695.24 | 54.08 | 697.34 | 0.46 | 0.28 | -11.80 |
| 8,487.00 | 2.19 | 166.39 | 8,393.49 | -698.41 | 54.91 | 700.57 | 0.29 | 0.27 | 2.33 |
| 8,500.00 | 2.37 | 165.17 | 8,406.48 | -698.91 | 55.04 | 701.08 | 1.43 | 1.38 | -9.38 |

# Anadarko Petroleum Corp

Survey Report

| | | | |
|---|---|---|---|
| **Company:** | US ROCKIES REGION PLANNING | **Local Co-ordinate Reference:** | Well BONANZA 1023-5L3BS |
| **Project:** | UTAH - UTM (feet), NAD27, Zone 12N | **TVD Reference:** | 15' RKB + 5223' GL @ 5238.00ft (XTREME 12) |
| **Site:** | UINTAH_BONANZA 1023-5L PAD | **MD Reference:** | 15' RKB + 5223' GL @ 5238.00ft (XTREME 12) |
| **Well:** | BONANZA 1023-5L3BS | **North Reference:** | True |
| **Wellbore:** | BONANZA 1023-5L3BS | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | BONANZA 1023-5L3BS | **Database:** | edmp |

**Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| **LAST MWD SURVEY** | | | | | | | | | |
| 8,550.00 | 2.37 | 165.17 | 8,456.43 | -700.91 | 55.56 | 703.11 | 0.00 | 0.00 | 0.00 |
| **PROJECTION TO TD** | | | | | | | | | |

Checked By: _____ Approved By: _____ Date: _____