

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 NBU 1022-11C4CS |
| 2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/> | | 3. FIELD OR WILDCAT NATURAL BUTTES |
| 4. TYPE OF WELL Gas Well Coalbed Methane Well: NO | | 5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES |
| 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) UO1197A-ST | 11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/> | |
| 12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/> | | 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 <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/> | | 19. SLANT VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/> |

| 20. LOCATION OF WELL | FOOTAGES | QTR-QTR | SECTION | TOWNSHIP | RANGE | MERIDIAN |
|--|-------------------|---------|---------|----------|--------|----------|
| LOCATION AT SURFACE | 1651 FNL 2625 FEL | SWNE | 11 | 10.0 S | 22.0 E | S |
| Top of Uppermost Producing Zone | 1071 FNL 2131 FWL | NENW | 11 | 10.0 S | 22.0 E | S |
| At Total Depth | 1071 FNL 2131 FWL | NENW | 11 | 10.0 S | 22.0 E | S |

| | | |
|---|---|---|
| 21. COUNTY UINTAH | 22. DISTANCE TO NEAREST LEASE LINE (Feet) 603 | 23. NUMBER OF ACRES IN DRILLING UNIT 1674 |
| 24. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 826 | 25. PROPOSED DEPTH MD: 8597 TVD: 8476 | |
| 26. ELEVATION - GROUND LEVEL 5032 | 27. BOND NUMBER 22013542 | 28. 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 - 2070 | 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 - 8597 | 11.6 | I-80 LT&C | 12.5 | Premium Lite High Strength | 270 | 3.38 | 11.0 |
| | | | | | | | 50/50 Poz | 1190 | 1.31 | 14.3 |

ATTACHMENTS

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

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

| | | |
|--|---|--|
| NAME Andy Lytle | TITLE Regulatory Analyst | PHONE 720 929-6100 |
| SIGNATURE | DATE 08/10/2011 | EMAIL andrew.lytle@anadarko.com |
| API NUMBER ASSIGNED 43047518180000 | APPROVAL  Permit Manager | |

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 1022-11C4CS**

Surface: 1651 FNL / 2625 FEL SWNE
 BHL: 1071 FNL / 2131 FWL NENW

Section 11 T10S R22E

Uintah County, Utah
 Mineral Lease: UO1197A-ST

ONSHORE ORDER NO. 1**DRILLING PROGRAM**

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

| <u>Formation</u> | <u>Depth</u> | <u>Resource</u> |
|------------------|--------------|-----------------|
| Uinta | 0 - Surface | |
| Green River | 896 | |
| Birds Nest | 1254 | Water |
| Mahogany | 1619 | Water |
| Wasatch | 4050 | Gas |
| Mesaverde | 6306 | Gas |
| MVU2 | 7300 | Gas |
| MVL1 | 7861 | Gas |
| TVD | 8476 | Gas |
| TD | 8597 | Gas |

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

Please refer to the attached Drilling Program

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

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 8476' TVD, approximately equals
 5,425 psi 0.64 psi/ft = actual bottomhole gradient

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

Maximum anticipated surface pressure equals approximately 3,548 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.

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 11 inch 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

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

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

Conclusion

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

10. **Other Information:**

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

CASING PROGRAM

| | SIZE | INTERVAL | WT. | GR. | CPLG. | DESIGN FACTORS | | | |
|------------|--------|------------|-------|-------|---------|----------------|----------|---------|---------|
| | | | | | | BURST | COLLAPSE | LTC | BTC |
| CONDUCTOR | 14" | 0-40' | | | | | | | |
| SURFACE | 8-5/8" | 0 to 2,070 | 28.00 | IJ-55 | LTC | 3,390 | 1,880 | 348,000 | N/A |
| | | | | | | 2.61 | 1.94 | 6.86 | N/A |
| PRODUCTION | 4-1/2" | 0 to 8,597 | 11.60 | I-80 | LTC/BTC | 7,780 | 6,350 | 279,000 | 367,000 |
| | | | | | | 1.11 | 1.15 | 3.46 | 4.55 |

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 Option 1 | LEAD 500' | Premium cmt + 2% CaCl + 0.25 pps flocele | 180 | 60% | 15.80 | 1.15 |
| | TOP OUT CMT (6 jobs) 1,200' | 20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele | 270 | 0% | 15.80 | 1.15 |
| NOTE: If well will circulate water to surface, option 2 will be utilized | | | | | | |
| SURFACE Option 2 | LEAD 1,570' | 65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW | 150 | 35% | 11.00 | 3.82 |
| | TAIL 500' | Premium cmt + 2% CaCl + 0.25 pps flocele | 150 | 35% | 15.80 | 1.15 |
| | TOP OUT CMT as required | Premium cmt + 2% CaCl | as req. | | 15.80 | 1.15 |
| PRODUCTION | LEAD 3,547' | Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender | 270 | 20% | 11.00 | 3.38 |
| | TAIL 5,050' | 50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3 | 1,190 | 35% | 14.30 | 1.31 |

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

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

| | |
|------------|--|
| SURFACE | Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe |
| PRODUCTION | Float shoe, 1 jt, float collar. No centralizers will be used. |

ADDITIONAL INFORMATION

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

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

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

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

DRILLING ENGINEER:

Nick Spence / Danny Showers

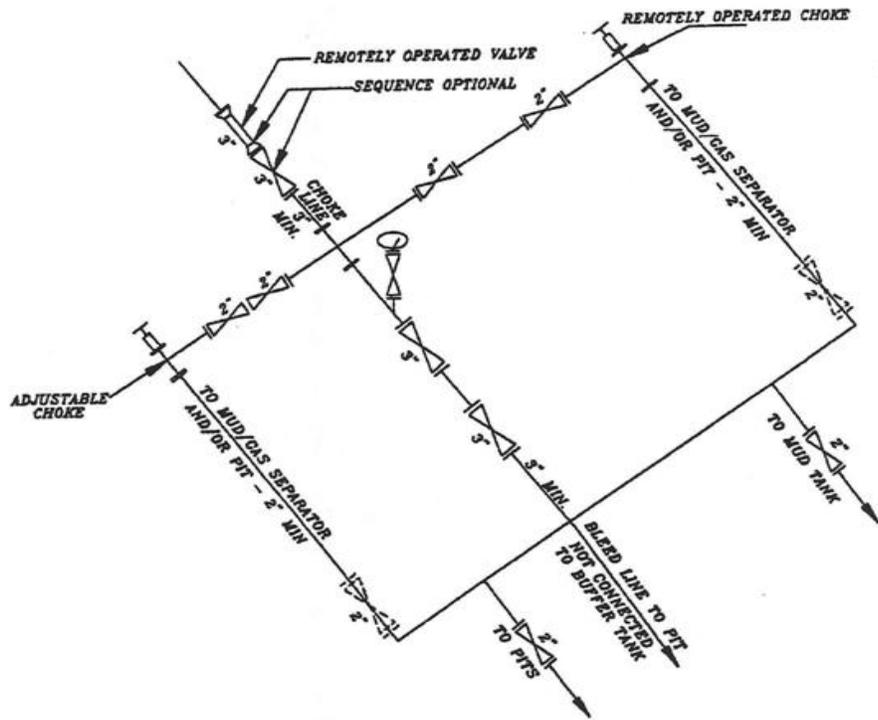
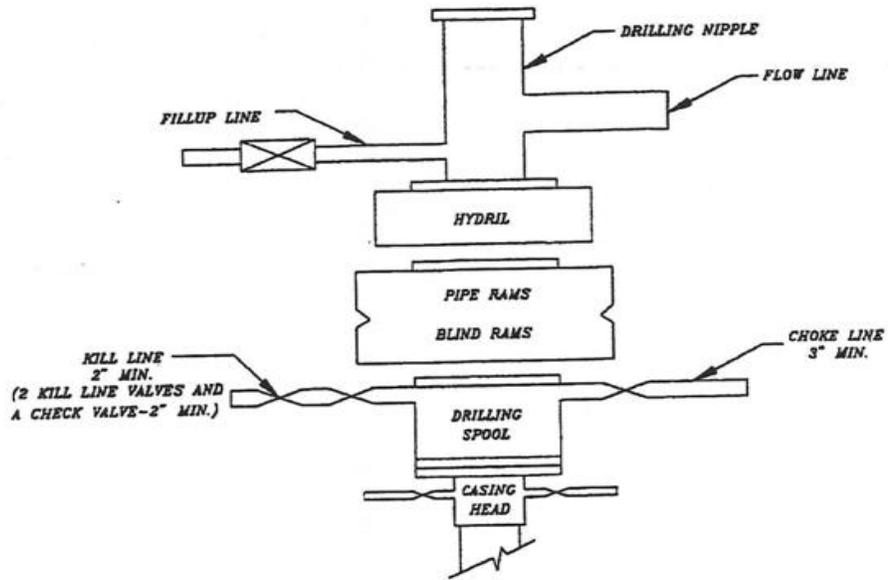
DATE: _____

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

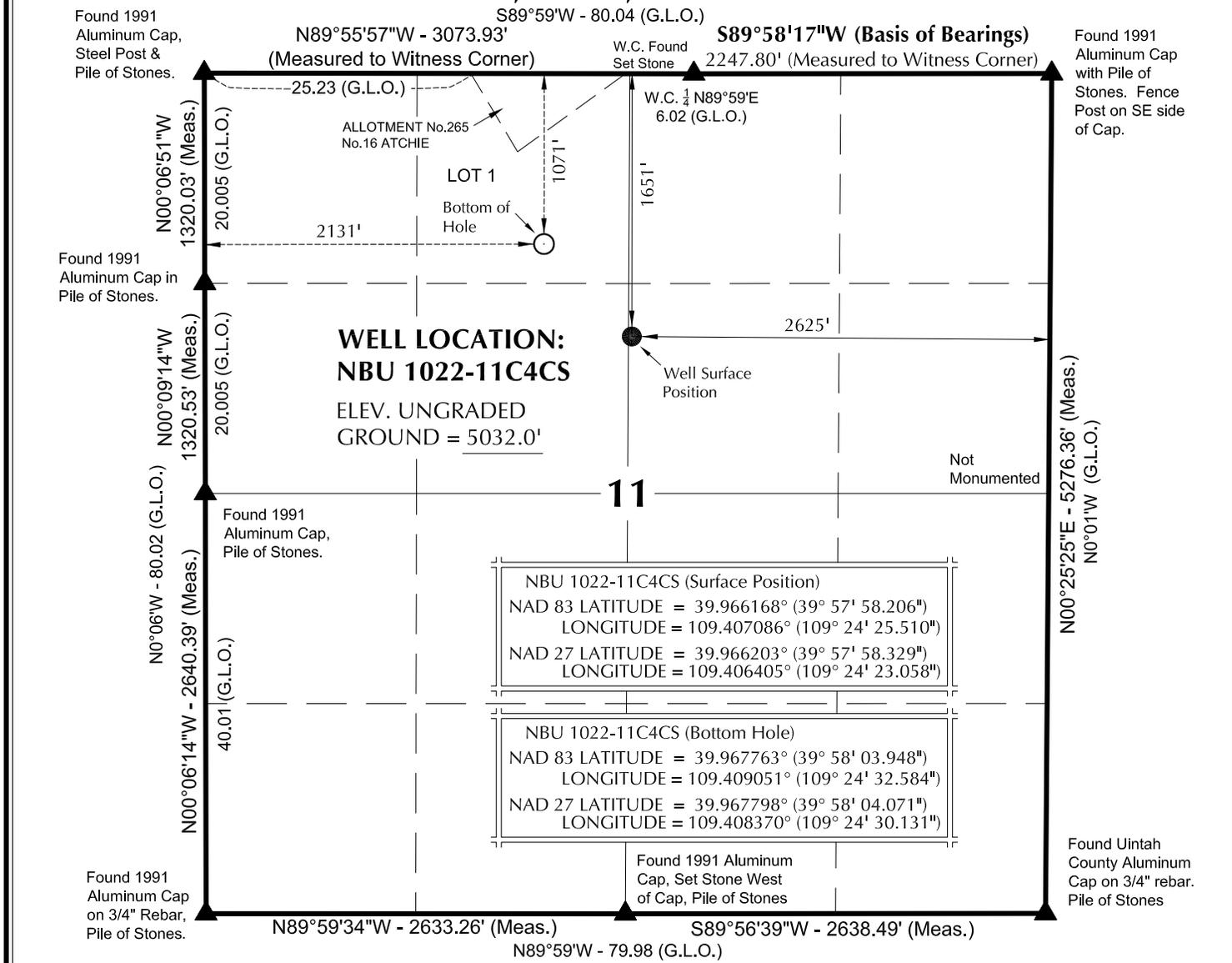
DATE: _____

EXHIBIT A
NBU 1022-11C4CS



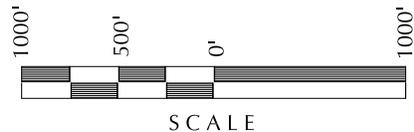
SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

T10S, R22E, S.L.B.&M.



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 N43°30'17"W 800.78' 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 ¼ 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.

John R. Slough
 PROFESSIONAL LAND SURVEYOR
 REGISTRATION NO. 6028691
 STATE OF UTAH 3-3-11

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

WELL PAD: NBU 1022-11G2

NBU 1022-11C4CS
WELL PLAT
1071' FNL, 2131' FWL (Bottom Hole)
LOT 1 OF SECTION 11, T10S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH.

609

CONSULTING, LLC
 2155 North Main Street
 Sheridan WY 82801
 Phone 307-674-0609
 Fax 307-674-0182

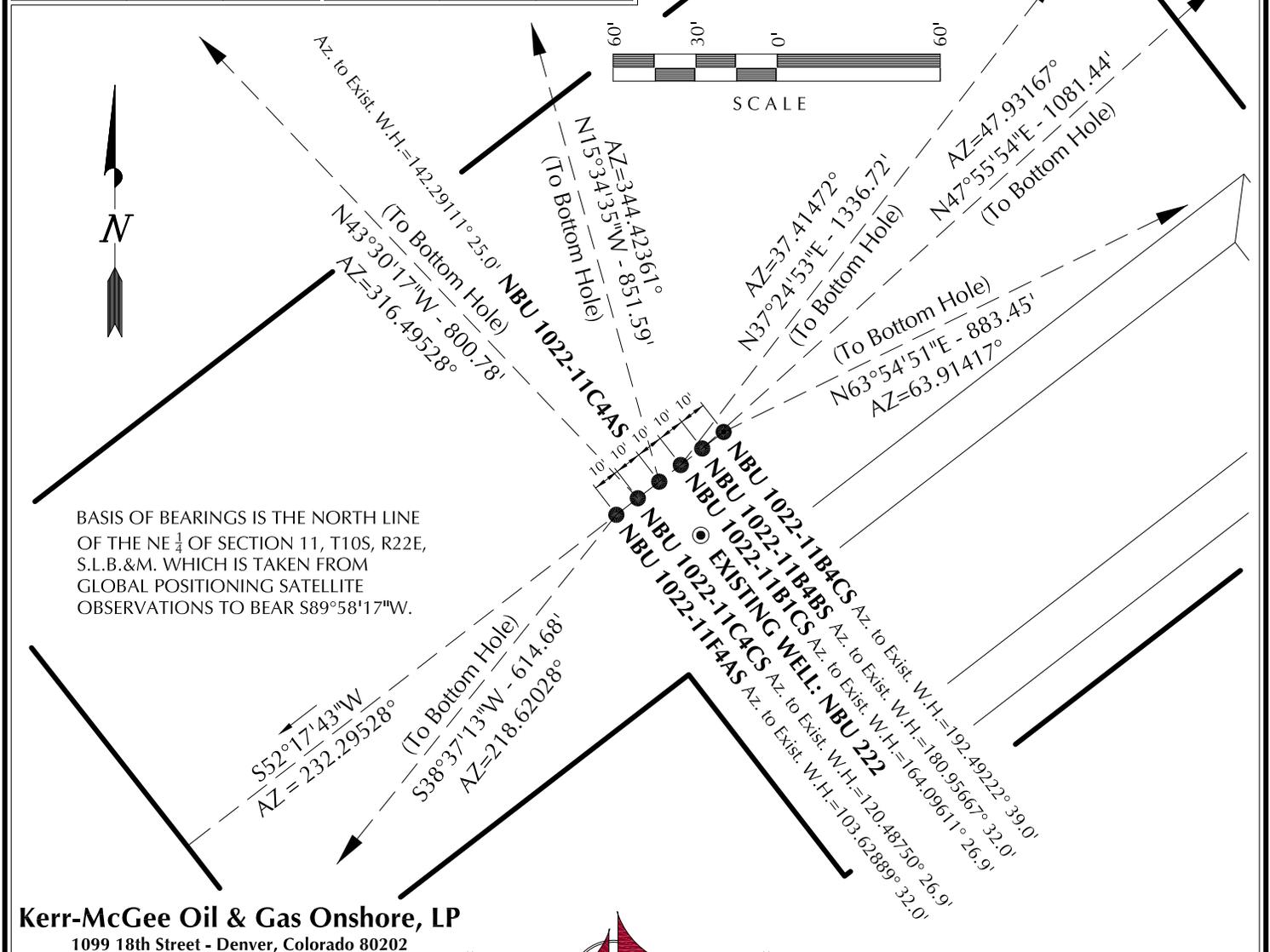
TIMBERLINE (435) 789-1365
 ENGINEERING & LAND SURVEYING, INC.
 209 NORTH 300 WEST - VERNAL, UTAH 84078

| | | |
|----------------------------|---------------------|-----------------------|
| DATE SURVEYED: 12-28-10 | SURVEYED BY: M.S.B. | SHEET NO: 5 |
| DATE DRAWN: 01-13-11 | DRAWN BY: E.M.S. | |
| SCALE: 1" = 1000' | | 5 OF 18 |

| WELL NAME | SURFACE POSITION | | | | | BOTTOM HOLE | | | | |
|-----------------|------------------|----------------|---------------|----------------|------------------------|---------------|----------------|---------------|----------------|------------------------|
| | NAD83 | | NAD27 | | FOOTAGES | NAD83 | | NAD27 | | FOOTAGES |
| | LATITUDE | LONGITUDE | LATITUDE | LONGITUDE | | LATITUDE | LONGITUDE | LATITUDE | LONGITUDE | |
| NBU 1022-11B4CS | 39°57'58.447" | 109°24'25.104" | 39°57'58.571" | 109°24'22.651" | 1627' FNL 2594' FEL | 39°58'02.280" | 109°24'14.913" | 39°58'02.404" | 109°24'12.460" | 1238' FNL 1803' FEL |
| NBU 1022-11B4BS | 39°57'58.387" | 109°24'25.206" | 39°57'58.510" | 109°24'22.753" | 1633' FNL 2601' FEL | 39°58'05.540" | 109°24'14.891" | 39°58'05.664" | 109°24'12.439" | 908' FNL 1804' FEL |
| NBU 1022-11B1CS | 39°57'58.326" | 109°24'25.307" | 39°57'58.450" | 109°24'22.854" | 1639' FNL 2609' FEL | 39°58'08.811" | 109°24'14.870" | 39°58'08.934" | 109°24'12.417" | 577' FNL 1805' FEL |
| NBU 1022-11C4AS | 39°57'58.266" | 109°24'25.409" | 39°57'58.390" | 109°24'22.956" | 1645' FNL 2617' FEL | 39°58'06.372" | 109°24'28.338" | 39°58'06.496" | 109°24'25.885" | 825' FNL 2462' FWL |
| NBU 1022-11C4CS | 39°57'58.206" | 109°24'25.510" | 39°57'58.329" | 109°24'23.058" | 1651' FNL 2625' FEL | 39°58'03.948" | 109°24'32.584" | 39°58'04.071" | 109°24'30.131" | 1071' FNL 2131' FWL |
| NBU 1022-11F4AS | 39°57'58.145" | 109°24'25.612" | 39°57'58.269" | 109°24'23.159" | 1657' FNL 2633' FEL | 39°57'53.403" | 109°24'30.542" | 39°57'53.526" | 109°24'28.089" | 2138' FNL 2288' FWL |
| NBU 222 | 39°57'58.071" | 109°24'25.213" | 39°57'58.194" | 109°24'22.760" | 1665' FNL 2602' FEL | 39°57'58.071" | 109°24'25.213" | 39°57'58.194" | 109°24'22.760" | |

RELATIVE COORDINATES - From Surface Position to Bottom Hole

| WELL NAME | NORTH | EAST | WELL NAME | NORTH | EAST | WELL NAME | NORTH | EAST | WELL NAME | NORTH | EAST |
|-----------------|--------|---------|-----------------|---------|---------|-----------------|----------|--------|-----------------|--------|---------|
| NBU 1022-11B4CS | 388.5' | 793.5' | NBU 1022-11B4BS | 724.6' | 802.8' | NBU 1022-11B1CS | 1,061.7' | 812.2' | NBU 1022-11C4AS | 820.3' | -228.7' |
| NBU 1022-11C4CS | 580.8' | -551.3' | NBU 1022-11F4AS | -480.2' | -383.7' | | | | | | |



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

WELL PAD - NBU 1022-11G2

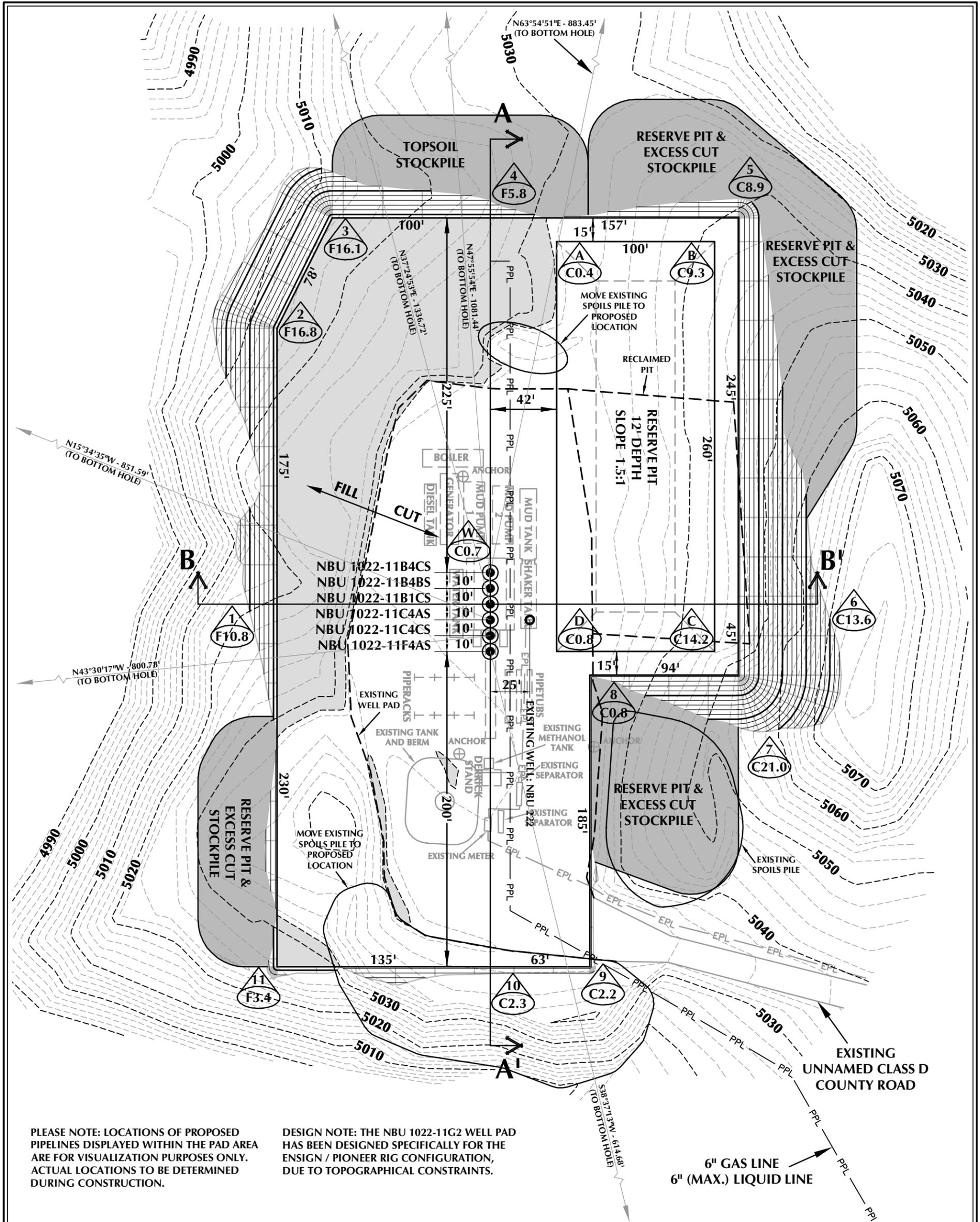
WELL PAD INTERFERENCE PLAT
WELLS - NBU 1022-11B4CS, NBU 1022-11B4BS, NBU 1022-11B1CS, NBU 1022-11C4AS, NBU 1022-11C4CS & NBU 1022-11F4AS LOCATED IN SECTION 11, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

609

CONSULTING, LLC
2155 North Main Street
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: 12-28-10 | SURVEYED BY: M.S.B. | SHEET NO: 7 |
| DATE DRAWN: 01-13-11 | DRAWN BY: E.M.S. | |
| SCALE: 1" = 60' | | 7 OF 18 |



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

DESIGN NOTE: THE NBU 1022-11G2 WELL PAD HAS BEEN DESIGNED SPECIFICALLY FOR THE ENSIGN / PIONEER RIG CONFIGURATION, DUE TO TOPOGRAPHICAL CONSTRAINTS.

WELL PAD - NBU 1022-11G2 DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5032.1'
 FINISHED GRADE ELEVATION = 5031.4'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.40 ACRES
 TOTAL DAMAGE AREA = 5.62 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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

WELL PAD - NBU 1022-11G2

WELL PAD - LOCATION LAYOUT
 NBU 1022-11B4CS, NBU 1022-11B4BS,
 NBU 1022-11B1CS, NBU 1022-11C4AS,
 NBU 1022-11C4CS & NBU 1022-11F4AS
 LOCATED IN SECTION 11, T10S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

WELL PAD QUANTITIES
 TOTAL CUT FOR WELL PAD = 13,013 C.Y.
 TOTAL FILL FOR WELL PAD = 10,794 C.Y.
 TOPSOIL @ 6" DEPTH = 1,850 C.Y.
 EXCESS MATERIAL = 2,219 C.Y.

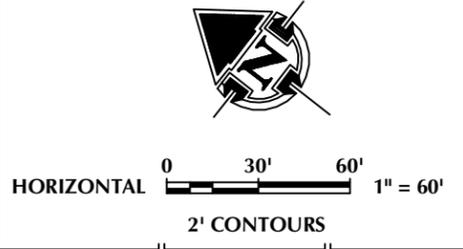
RESERVE PIT QUANTITIES
 TOTAL CUT FOR RESERVE PIT
 +/- 8,870 C.Y.
 RESERVE PIT CAPACITY (2' OF FREEBOARD)
 +/- 33,770 BARRELS



609 CONSULTING, LLC
 2155 North Main Street
 Sheridan, WY 82801
 Phone 307-674-0609
 Fax 307-674-0182

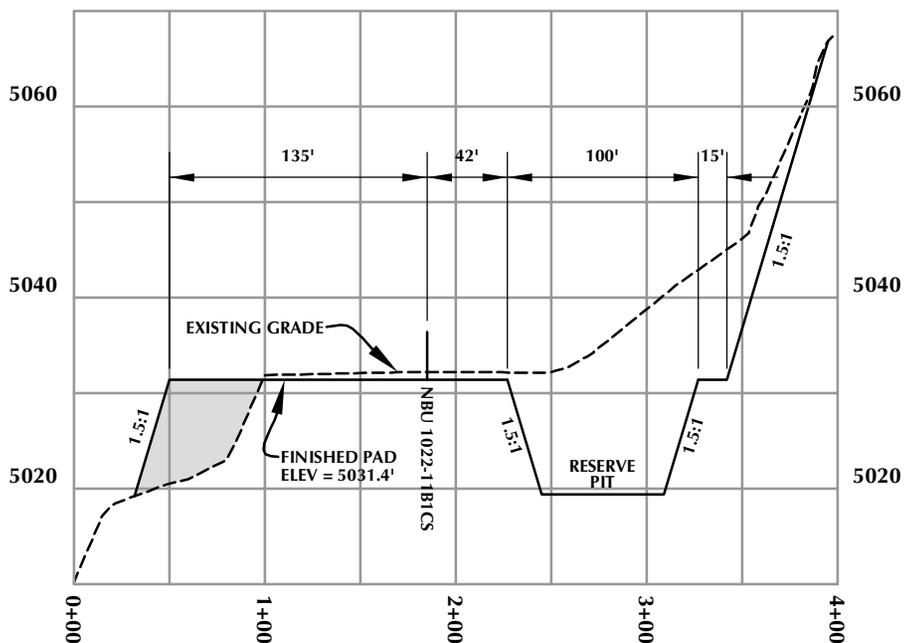
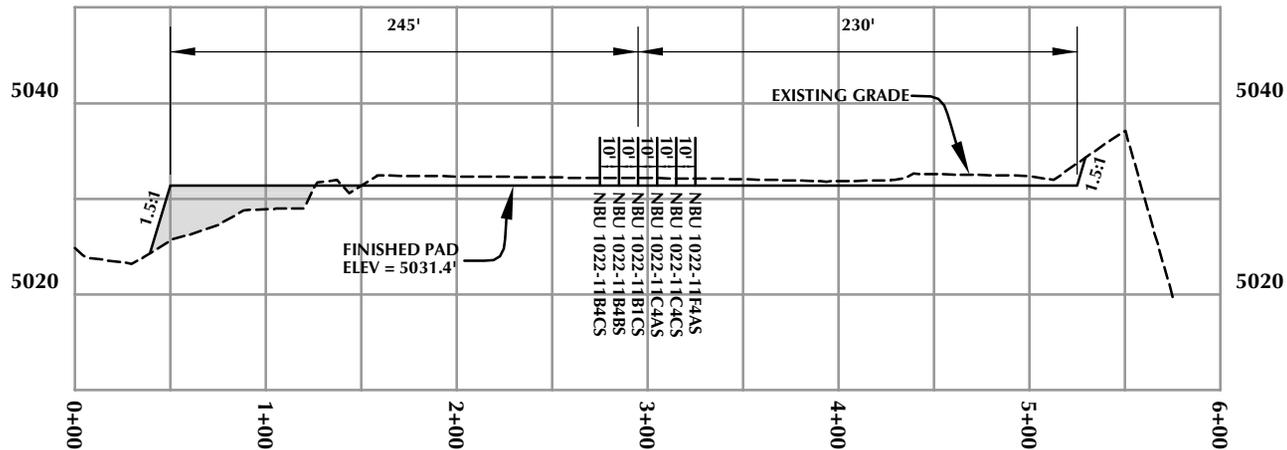
TIMBERLINE ENGINEERING & LAND SURVEYING, INC.
 209 NORTH 300 WEST - VERNAL, UTAH 84078
 (435) 789-1365

- WELL PAD LEGEND**
- EXISTING WELL LOCATION
 - PROPOSED WELL LOCATION
 - PROPOSED BOTTOM HOLE LOCATION
 - EXISTING CONTOURS (2' INTERVAL)
 - PROPOSED CONTOURS (2' INTERVAL)
 - PROPOSED PIPELINE
 - EXISTING PIPELINE



SCALE: 1"=60' DATE: 3/3/11 SHEET NO: **8** 8 OF 18

C:\ANADARKO\2010_62_NBU_FOCUS_1022-11_14\DWG\NBU_1022-11G2_PAD_11G2_PAD_20110105.dwg, 3/3/2011 4:40:17 PM



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

WELL PAD - NBU 1022-11G2

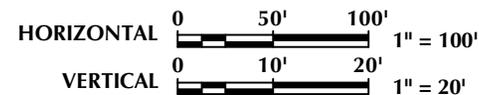
WELL PAD - CROSS SECTIONS
 NBU 1022-11B4CS, NBU 1022-11B4BS,
 NBU 1022-11B1CS, NBU 1022-11C4AS,
 NBU 1022-11C4CS & NBU 1022-11F4AS
 LOCATED IN SECTION 11, T10S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH



CONSULTING, LLC
 2155 North Main Street
 Sheridan, WY 82801
 Phone 307-674-0609
 Fax 307-674-0182

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

(435) 789-1365



Scale: 1"=100'

Date: 3/3/11

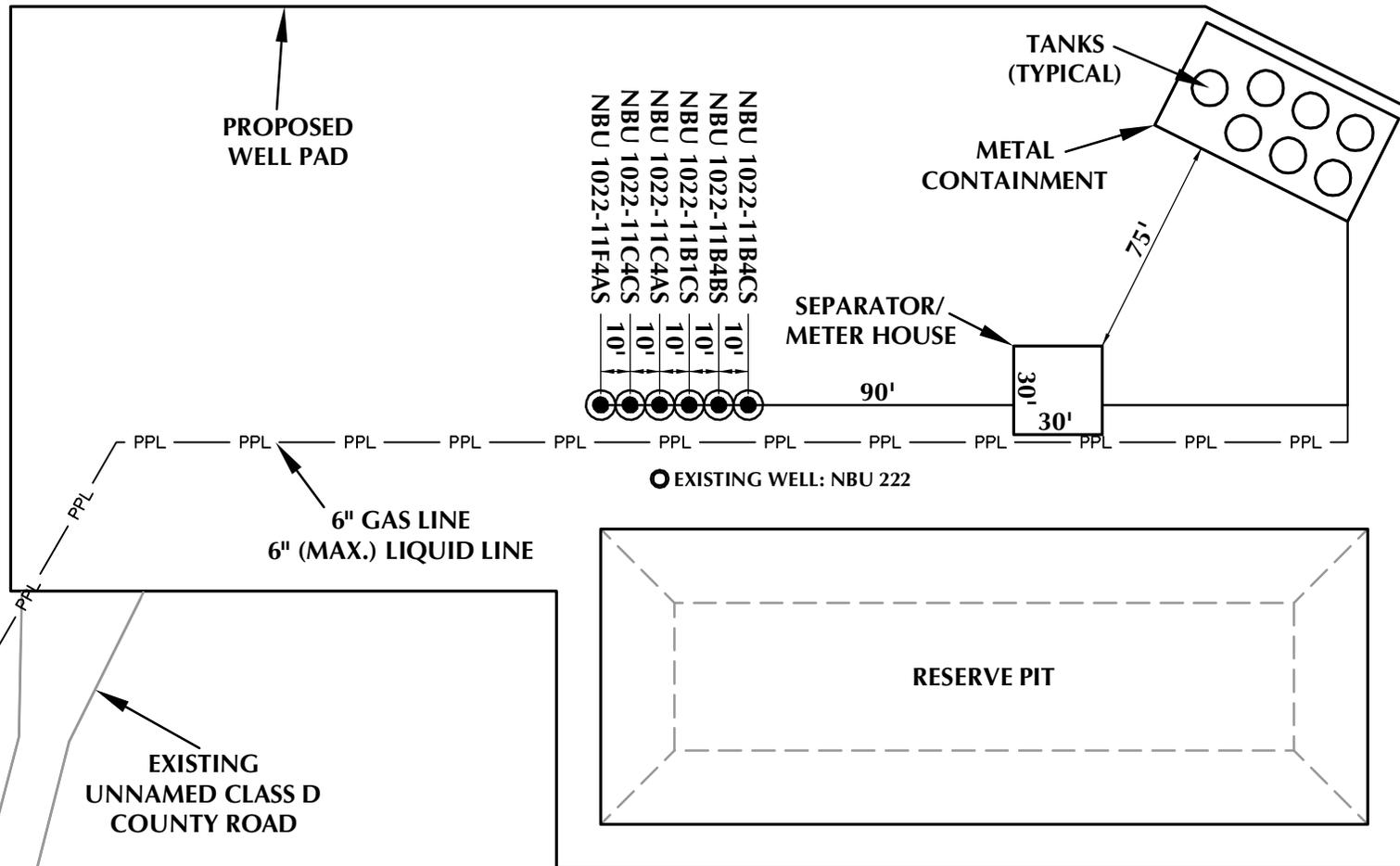
SHEET NO:

REVISED:

9

9 OF 18

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 - NBU 1022-11G2

WELL PAD - FACILITIES DIAGRAM
NBU 1022-11B4CS, NBU 1022-11B4BS,
NBU 1022-11B1CS, NBU 1022-11C4AS,
NBU 1022-11C4CS & NBU 1022-11F4AS
LOCATED IN SECTION 11, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH



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2155 North Main Street
Sheridan, WY 82801
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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: 3/3/11 | SHEET NO: |
| REVISED: | | 10 10 OF 18 |

RECEIVED: August 10, 2011

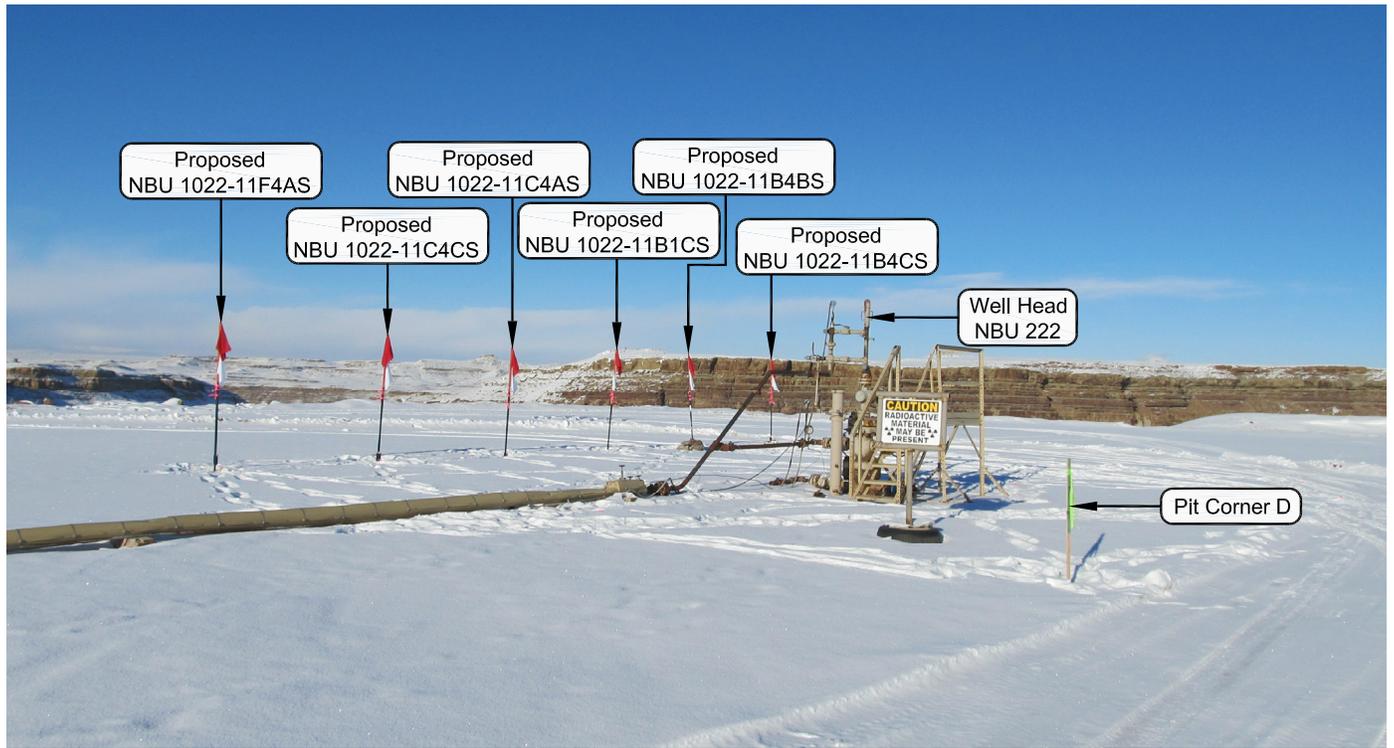


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: NORTHWESTERLY

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

WELL PAD - NBU 1022-11G2

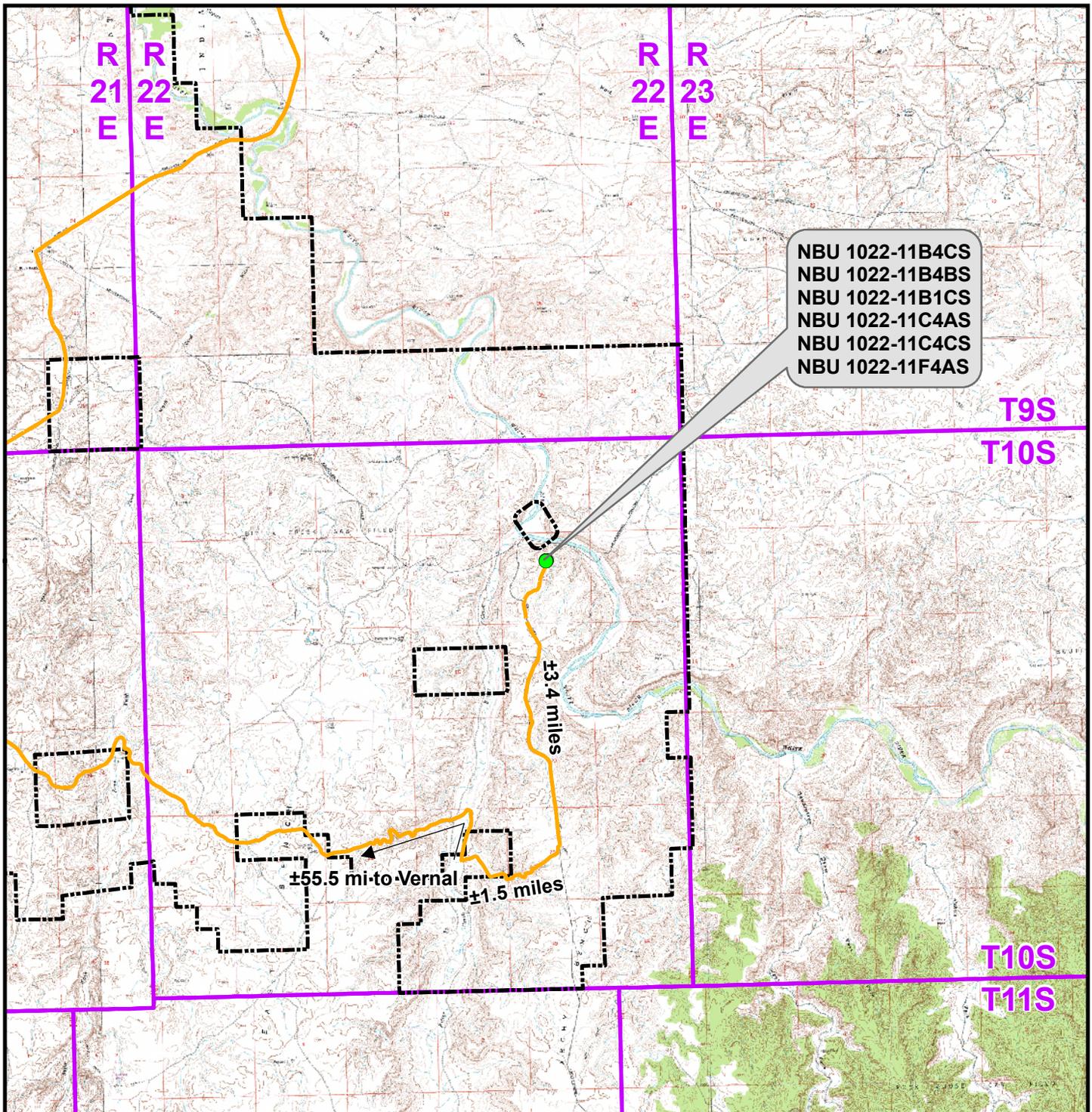
LOCATION PHOTOS
 NBU 1022-11B4CS, NBU 1022-11B4BS,
 NBU 1022-11B1CS, NBU 1022-11C4AS,
 NBU 1022-11C4CS & NBU 1022-11F4AS
 LOCATED IN SECTION 11, T10S, R22E,
 S.L.B.&M., Uintah County, Utah.



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 Sheridan WY 82801
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TIMBERLINE (435) 789-1365
 ENGINEERING & LAND SURVEYING, INC.
 209 NORTH 300 WEST - VERNAL, UTAH 84078

| | | |
|--------------------------------|-------------------------|------------------------|
| DATE PHOTOS TAKEN: 01-10-11 | PHOTOS TAKEN BY: M.S.B. | SHEET NO: 11 |
| DATE DRAWN: 01-13-11 | DRAWN BY: E.M.S. | |
| Date Last Revised: | | 11 OF 18 |



Legend

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

Distance From Well Pad - NBU 1022-11G2 To Unit Boundary: ±1,361ft

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

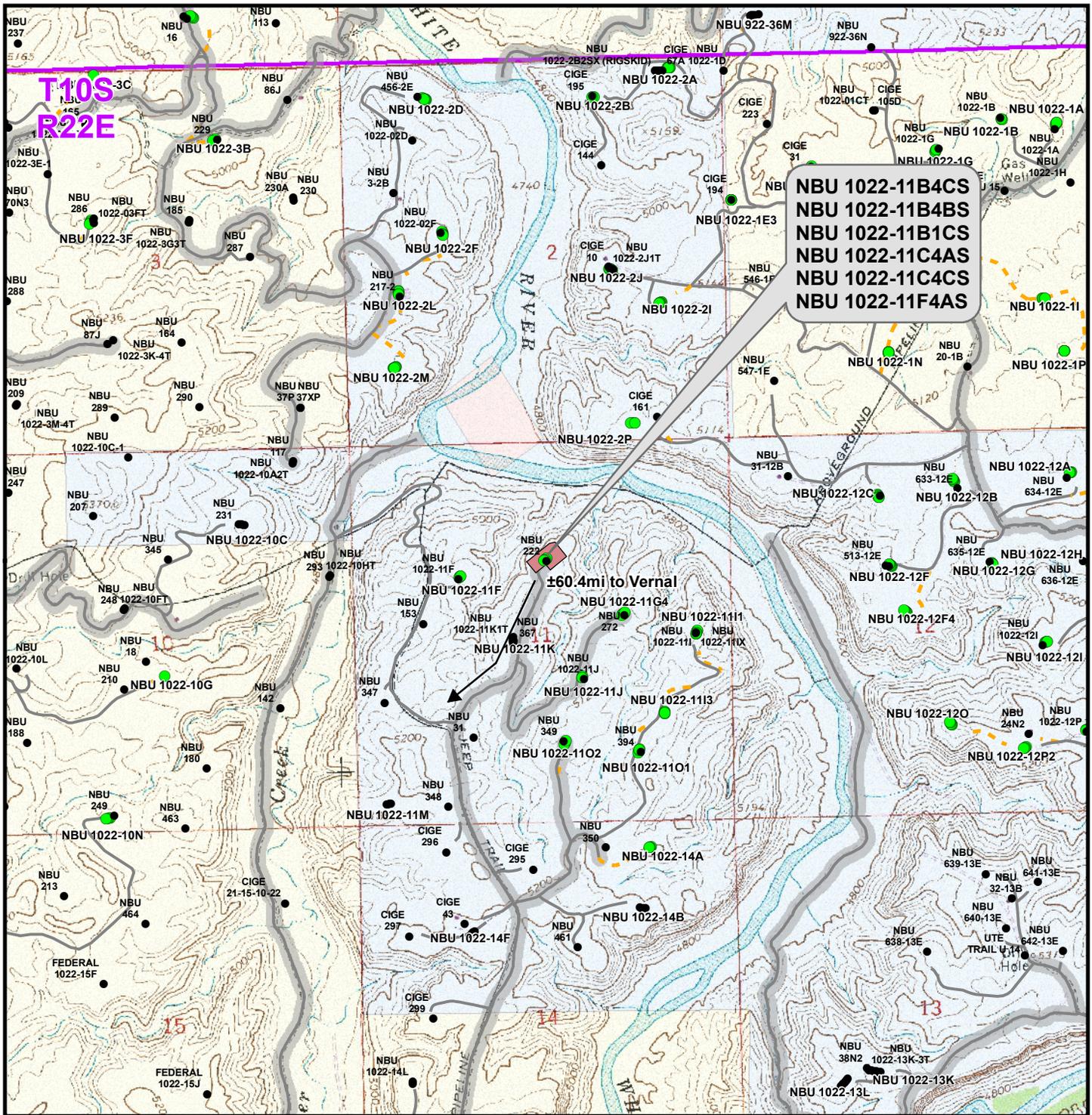
WELL PAD - NBU 1022-11G2

TOPO A

NBU 1022-11B4CS, NBU 1022-11B4BS,
NBU 1022-11B1CS, NBU 1022-11C4AS,
NBU 1022-11C4CS & NBU 1022-11F4AS
LOCATED IN SECTION 11, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH



| | | |
|------------------|-------------------|-----------|
| Scale: 1:100,000 | NAD83 USP Central | Sheet No: |
| Drawn: TL | Date: 3 Mar 2011 | 12 |
| Revised: | Date: | |



**NBU 1022-11B4CS
 NBU 1022-11B4BS
 NBU 1022-11B1CS
 NBU 1022-11C4AS
 NBU 1022-11C4CS
 NBU 1022-11F4AS**

±60.4mi to Vernal

Legend

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

Total Proposed Road Length: ±0ft

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

WELL PAD - NBU 1022-11G2

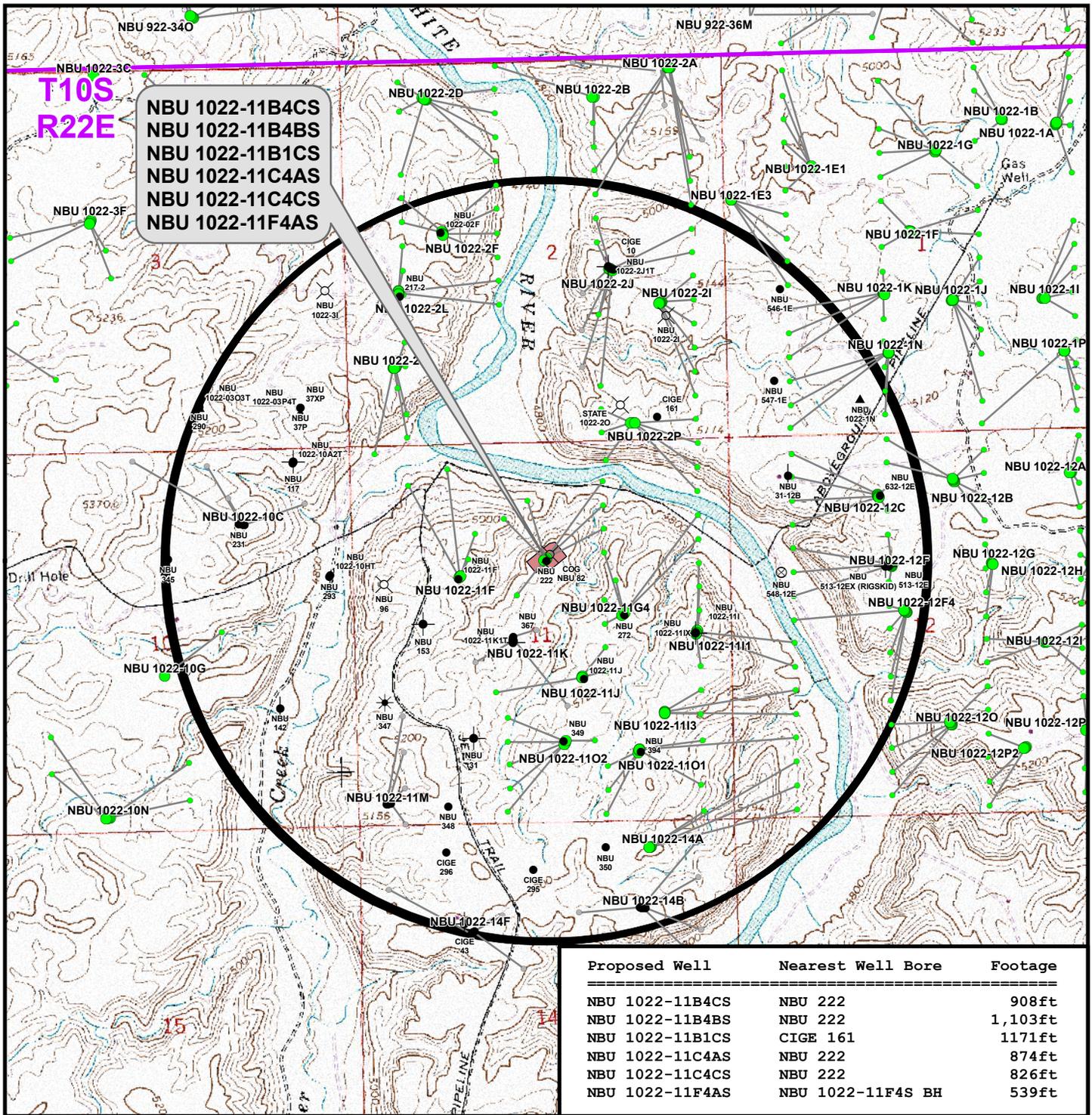
TOPO B
 NBU 1022-11B4CS, NBU 1022-11B4BS,
 NBU 1022-11B1CS, NBU 1022-11C4AS,
 NBU 1022-11C4CS & NBU 1022-11F4AS
 LOCATED IN SECTION 11, T10S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH



CONSULTING, LLC
 2155 North Main Street
 Sheridan, WY 82801
 Phone (307) 674-0609
 Fax (307) 674-0182



| | | | |
|---------------------|-------------------|-----------|-----------|
| Scale: 1" = 2,000ft | NAD83 USP Central | Sheet No: | 13 |
| Drawn: TL | Date: 3 Mar 2011 | 13 of 18 | |
| Revised: | Date: | | |



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

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Well Pad
- Well Path
- Bottom Hole - Existing
- 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 - NBU 1022-11G2

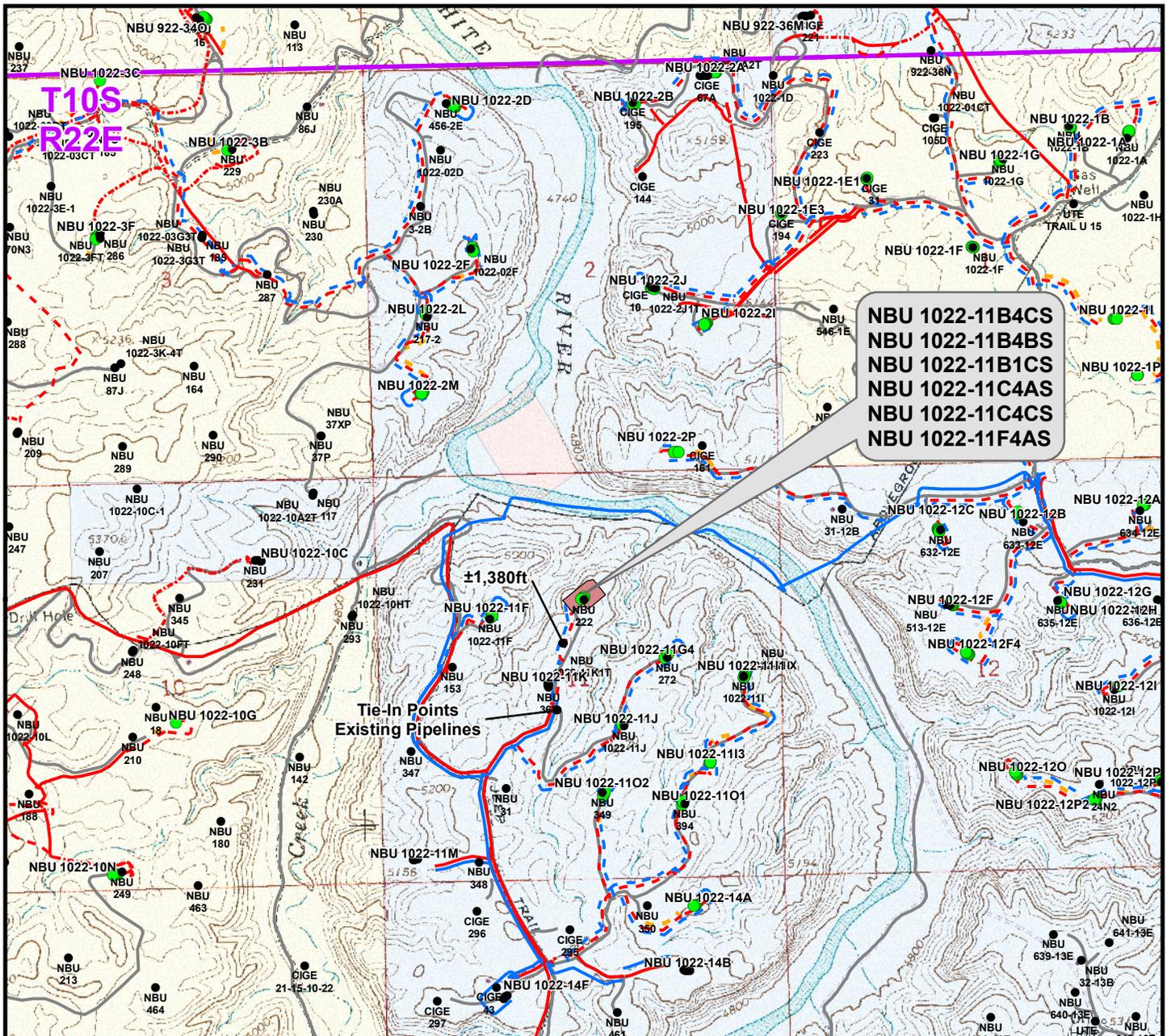
TOPO C
NBU 1022-11B4CS, NBU 1022-11B4BS,
NBU 1022-11B1CS, NBU 1022-11C4AS,
NBU 1022-11C4CS & NBU 1022-11F4AS
LOCATED IN SECTION 11, T10S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH

609

CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

Scale: 1" = 2,000ft | NAD83 USP Central | Sheet No: **14** 14 of 18

Drawn: TL | Date: 3 Mar 2011
Revised: | Date:



NBU 1022-11B4CS
 NBU 1022-11B4BS
 NBU 1022-11B1CS
 NBU 1022-11C4AS
 NBU 1022-11C4CS
 NBU 1022-11F4AS

Tie-In Points
 Existing Pipelines

| Proposed Liquid Pipeline | Length | Proposed Gas Pipeline | Length |
|--|-----------------|---|-----------------|
| Proposed 6" (Max.) (Meter House to Edge of Pad) | ±575ft | Proposed 6" (Meter House to Edge of Pad) | ±575ft |
| Proposed 6" (Max.) (Edge of Pad to Existing Liquid Pipeline) | ±1,380ft | Proposed 6" (Edge of Pad to Existing 8" Gas Pipeline) | ±1,380ft |
| TOTAL PROPOSED LIQUID PIPELINE = | ±1,955ft | TOTAL PROPOSED GAS PIPELINE = | ±1,955ft |

Legend

- Well - Proposed
- Well - Existing
- Well Pad
- - - Gas Pipeline - Proposed
- - - Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- - - Liquid Pipeline - Proposed
- 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

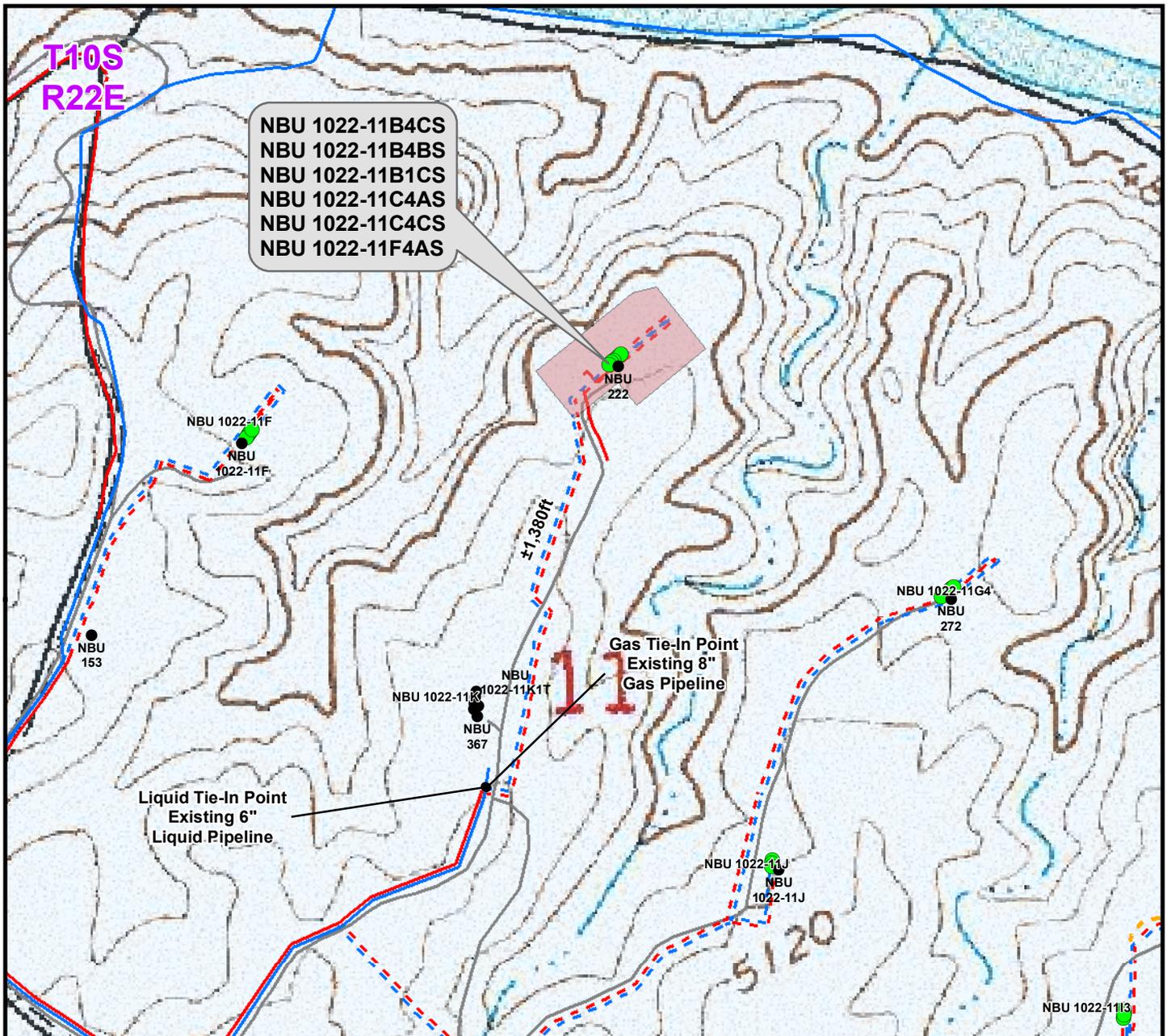
WELL PAD - NBU 1022-11G2

TOPO D
 NBU 1022-11B4CS, NBU 1022-11B4BS,
 NBU 1022-11B1CS, NBU 1022-11C4AS,
 NBU 1022-11C4CS & NBU 1022-11F4AS
 LOCATED IN SECTION 11, T10S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

CONSULTING, LLC
 2155 North Main Street
 Sheridan, WY 82801
 Phone (307) 674-0609
 Fax (307) 674-0182

| | | |
|---------------------|-------------------|-----------|
| Scale: 1" = 2,000ft | NAD83 USP Central | Sheet No: |
| Drawn: JFE | Date: 8 Feb 2011 | 15 |
| Revised: | Date: | |

15 of 18



| Proposed Liquid Pipeline | Length | Proposed Gas Pipeline | Length |
|--|-----------------|---|-----------------|
| Proposed 6" (Max.) (Meter House to Edge of Pad) | ±575ft | Proposed 6" (Meter House to Edge of Pad) | ±575ft |
| Proposed 6" (Max.) (Edge of Pad to Existing Liquid Pipeline) | ±1,380ft | Proposed 6" (Edge of Pad to Existing 8" Gas Pipeline) | ±1,380ft |
| TOTAL PROPOSED LIQUID PIPELINE = | ±1,955ft | TOTAL PROPOSED GAS PIPELINE = | ±1,955ft |

Legend

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

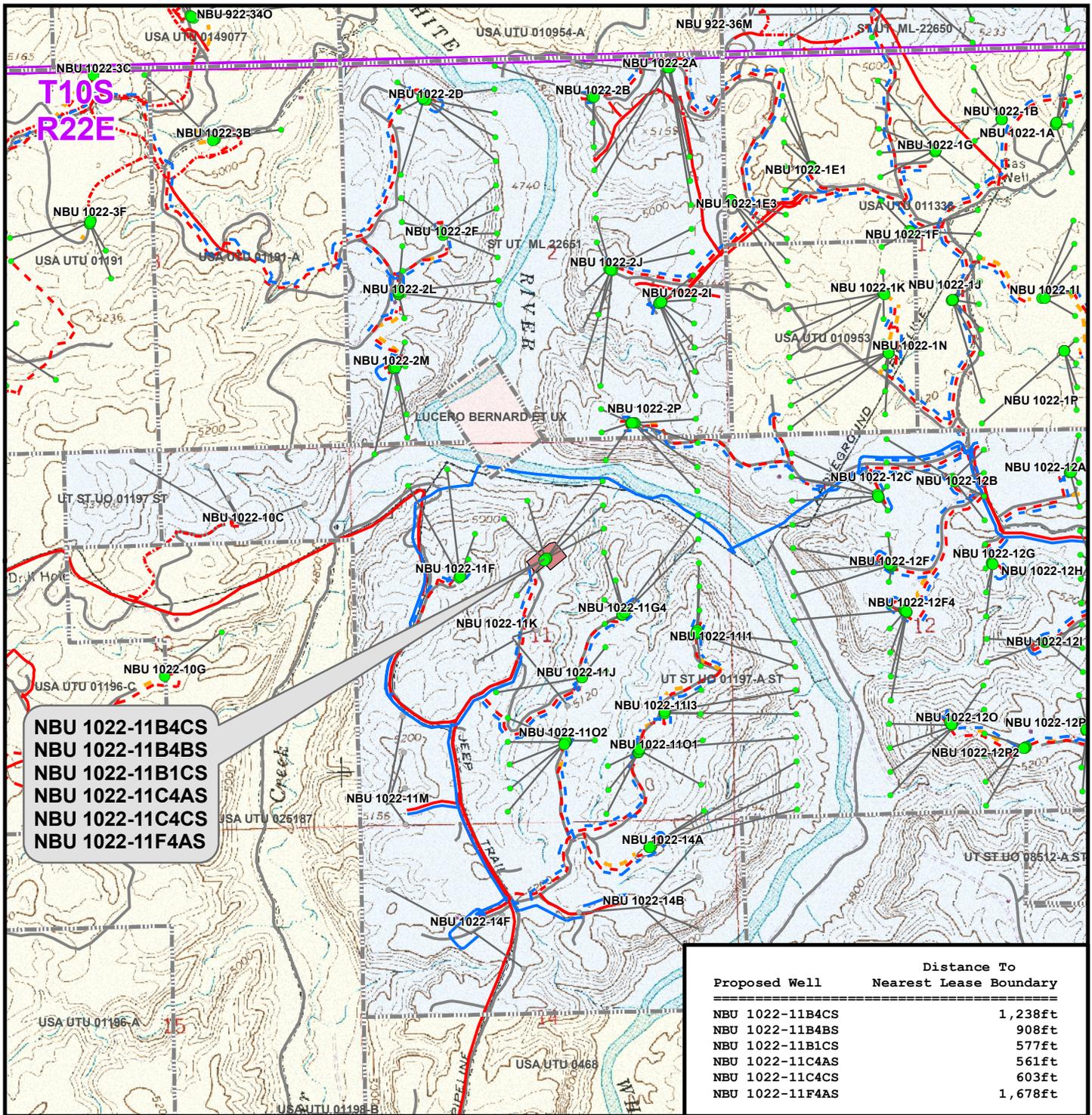
Kerr-McGee Oil & Gas Onshore, LP
 1099 18th Street, Denver, Colorado 80202

WELL PAD - NBU 1022-11G2

TOPO D2 (PAD & PIPELINE DETAIL)
 NBU 1022-11B4CS, NBU 1022-11B4BS,
 NBU 1022-11B1CS, NBU 1022-11C4AS,
 NBU 1022-11C4CS & NBU 1022-11F4AS
 LOCATED IN SECTION 11, T10S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH

CONSULTING, LLC
 2155 North Main Street
 Sheridan, WY 82801
 Phone (307) 674-0609
 Fax (307) 674-0182

| | | |
|-------------------|-------------------|--------------------|
| Scale: 1" = 500ft | NAD83 USP Central | Sheet No: |
| Drawn: JFE | Date: 8 Feb 2011 | 16 16 of 18 |
| Revised: | Date: | |



| Proposed Well | Distance To Nearest Lease Boundary |
|-----------------|------------------------------------|
| NBU 1022-11B4CS | 1,238ft |
| NBU 1022-11B4BS | 908ft |
| NBU 1022-11B1CS | 577ft |
| NBU 1022-11C4AS | 561ft |
| NBU 1022-11C4CS | 603ft |
| NBU 1022-11F4AS | 1,678ft |

Legend

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

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

WELL PAD - NBU 1022-11G2

TOPO E
 NBU 1022-11B4CS, NBU 1022-11B4BS,
 NBU 1022-11B1CS, NBU 1022-11C4AS,
 NBU 1022-11C4CS & NBU 1022-11F4AS
 LOCATED IN SECTION 11, T10S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

CONSULTING, LLC
 2155 North Main Street
 Sheridan, WY 82801
 Phone (307) 674-0609
 Fax (307) 674-0182



| | | |
|---------------------|-------------------|------------------------|
| Scale: 1" = 2,000ft | NAD83 USP Central | Sheet No: 17 |
| Drawn: TL | Date: 8 Feb 2011 | 17 of 18 |
| Revised: | Date: | |

**Kerr-McGee Oil & Gas Onshore, LP
WELL PAD - NBU 1022-11G2
WELLS – NBU 1022-11B4CS, NBU 1022-11B4BS,
NBU 1022-11B1CS, NBU 1022-11C4AS,
NBU 1022-11C4CS & NBU 1022-11F4AS
Section 11, T10S, R22E, S.L.B.&M.**

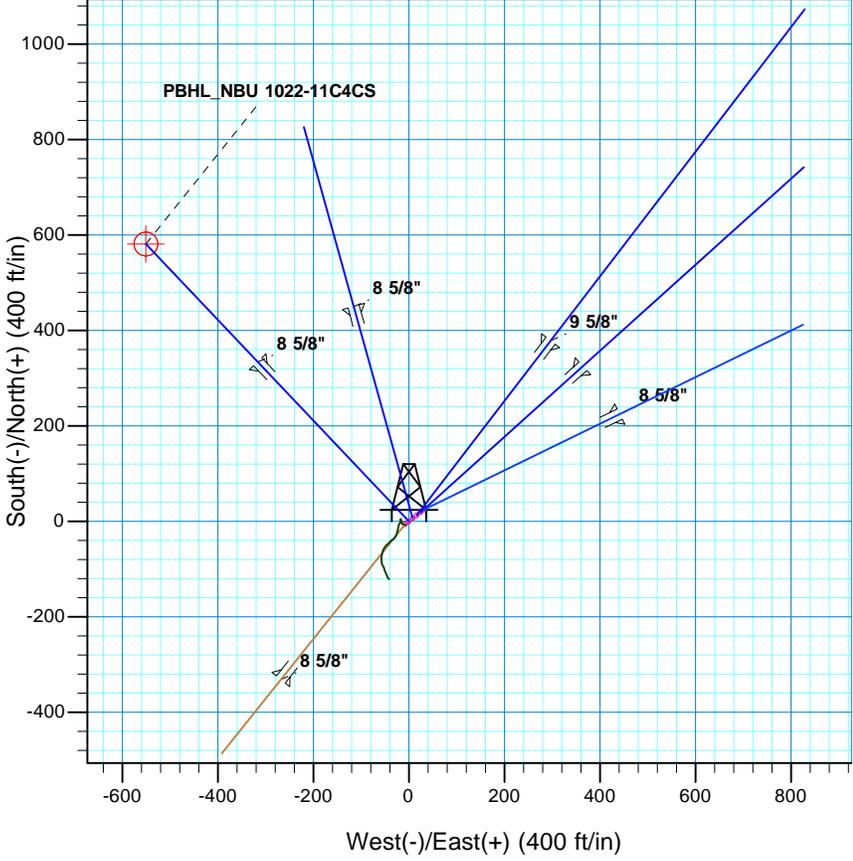
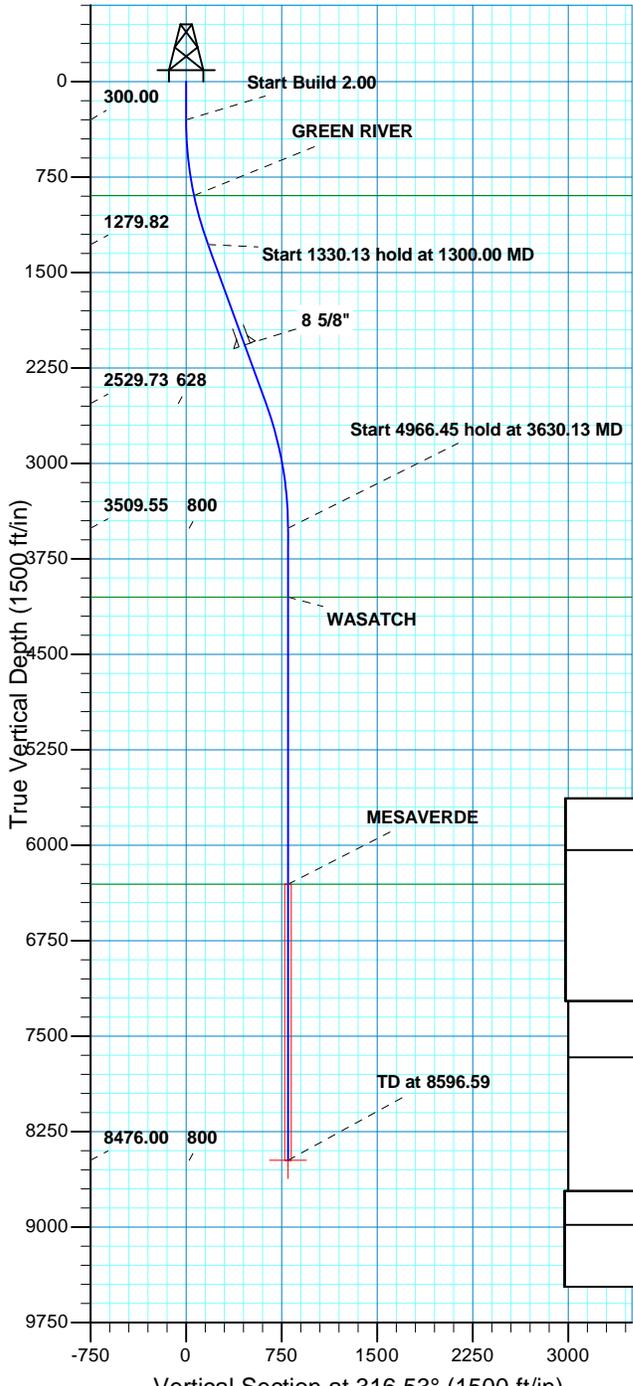
From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles 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 23.8 miles to the intersection of the Bitter Creek Road (County B Road 4120). Exit left and proceed in a southeasterly direction along the Bitter Creek Road approximately 8.2 miles to the junction of the Bitter Creek Cut Off Road (County B Road 4140). Exit left and proceed in an easterly direction along the Bitter Creek Cut Off Road approximately 1.5 miles to the junction of the Archy Bench Road (County D Road 4150). Exit left and proceed in a northerly direction along the Archy Bench Road, then an existing Class D County Road, approximately 3.4 miles to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 60.4 miles in a southerly direction.



| WELL DETAILS: NBU 1022-11C4CS | | | | | | |
|---------------------------------------|---------|-------------|------------|------------------|-------------------|------------------------|
| GL 5031 & KB 14 @ 5045.00ft (ASSUMED) | | | | | | |
| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | |
| 0.00 | 0.00 | 14517727.10 | 2086946.31 | 39° 57' 58.331 N | 109° 24' 23.058 W | |
| DESIGN TARGET DETAILS | | | | | | |
| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude |
| PBHL | 8476.00 | 580.93 | -550.70 | 14518298.09 | 2086385.32 | 39° 58' 4.073 N |
| - plan hits target center | | | | | | |
| | | | | | | Longitude |
| | | | | | | Shape |
| | | | | | | Circle (Radius: 25.00) |

T
M Azimuths to True North
 Magnetic North: 11.04°
 Magnetic Field
 Strength: 52332.4snT
 Dip Angle: 65.86°
 Date: 05/12/2011
 Model: IGRF2010



| SECTION DETAILS | | | | | | | | | |
|-----------------|-------|--------|---------|--------|---------|------|--------|--------|----------------------|
| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
| 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 | |
| 1300.00 | 20.00 | 316.53 | 1279.82 | 125.38 | -118.86 | 2.00 | 316.53 | 172.77 | |
| 2630.13 | 20.00 | 316.53 | 2529.73 | 455.55 | -431.84 | 0.00 | 0.00 | 627.70 | |
| 3630.13 | 0.00 | 0.00 | 3509.55 | 580.93 | -550.70 | 2.00 | 180.00 | 800.47 | |
| 8596.59 | 0.00 | 0.00 | 8476.00 | 580.93 | -550.70 | 0.00 | 0.00 | 800.47 | PBHL_NBU 1022-11C4CS |

| 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: SECTION 11 T10S R22E | | |
| System Datum: Mean Sea Level | | |

| FORMATION TOP DETAILS | | |
|-----------------------|---------|-------------|
| TVDPath | MDPath | Formation |
| 896.00 | 900.39 | GREEN RIVER |
| 4050.00 | 4170.59 | WASATCH |
| 6306.00 | 6426.59 | MESAVERDE |

| CASING DETAILS | | | |
|----------------|---------|--------|-------|
| TVD | MD | Name | Size |
| 2069.00 | 2139.83 | 8 5/8" | 8.625 |

RECEIVED



Kerr McGee Oil and Gas Onshore LP

**Uintah County, UT UTM12
NBU 1022-11G2 PAD
NBU 1022-11C4CS**

OH

Plan: PLAN #1 5-12-11 RHS

Standard Planning Report

12 May, 2011





SDI
Planning Report



| | | | |
|------------------|-----------------------------------|-------------------------------------|---------------------------------------|
| Database: | EDM5000-RobertS-Local | Local Co-ordinate Reference: | Well NBU 1022-11C4CS |
| Company: | Kerr McGee Oil and Gas Onshore LP | TVD Reference: | GL 5031 & KB 14 @ 5045.00ft (ASSUMED) |
| Project: | Uintah County, UT UTM12 | MD Reference: | GL 5031 & KB 14 @ 5045.00ft (ASSUMED) |
| Site: | NBU 1022-11G2 PAD | North Reference: | True |
| Well: | NBU 1022-11C4CS | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | PLAN #1 5-12-11 RHS | | |

| | | | |
|--------------------|--|----------------------|----------------|
| Project | Uintah County, UT UTM12 | | |
| Map System: | Universal Transverse Mercator (US Survey Feet) | System Datum: | Mean Sea Level |
| Geo Datum: | NAD 1927 - Western US | | |
| Map Zone: | Zone 12N (114 W to 108 W) | | |

| | | | | | |
|------------------------------|---|---------------------|-------------------|--------------------------|--------|
| Site | NBU 1022-11G2 PAD, SECTION 11 T10S R22E | | | | |
| Site Position: | Northing: | 14,517,745.73 usft | Latitude: | 39° 57' 58.511 N | |
| From: Lat/Long | Easting: | 2,086,969.80 usft | Longitude: | 109° 24' 22.752 W | |
| Position Uncertainty: | 0.00 ft | Slot Radius: | 13.200 in | Grid Convergence: | 1.02 ° |

| | | | | | | |
|-----------------------------|------------------------------------|-----------|----------------------------|--------------------|----------------------|-------------------|
| Well | NBU 1022-11C4CS, 1651 FNL 2625 FEL | | | | | |
| Well Position | +N/-S | -18.21 ft | Northing: | 14,517,727.10 usft | Latitude: | 39° 57' 58.331 N |
| | +E/-W | -23.82 ft | Easting: | 2,086,946.31 usft | Longitude: | 109° 24' 23.058 W |
| Position Uncertainty | | 0.00 ft | Wellhead Elevation: | | Ground Level: | 5,031.00 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | OH | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 05/12/2011 | 11.04 | 65.86 | 52,332 |

| | | | | |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| Design | PLAN #1 5-12-11 RHS | | | |
| 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 | 316.53 |

| 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 | |
| 1,300.00 | 20.00 | 316.53 | 1,279.82 | 125.38 | -118.86 | 2.00 | 2.00 | 0.00 | 316.53 | |
| 2,630.13 | 20.00 | 316.53 | 2,529.73 | 455.55 | -431.84 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3,630.13 | 0.00 | 0.00 | 3,509.55 | 580.93 | -550.70 | 2.00 | -2.00 | 0.00 | 180.00 | |
| 8,596.59 | 0.00 | 0.00 | 8,476.00 | 580.93 | -550.70 | 0.00 | 0.00 | 0.00 | 0.00 | PBHL_NBU 1022-11C |



| | | | |
|------------------|-----------------------------------|-------------------------------------|---------------------------------------|
| Database: | EDM5000-RobertS-Local | Local Co-ordinate Reference: | Well NBU 1022-11C4CS |
| Company: | Kerr McGee Oil and Gas Onshore LP | TVD Reference: | GL 5031 & KB 14 @ 5045.00ft (ASSUMED) |
| Project: | Uintah County, UT UTM12 | MD Reference: | GL 5031 & KB 14 @ 5045.00ft (ASSUMED) |
| Site: | NBU 1022-11G2 PAD | North Reference: | True |
| Well: | NBU 1022-11C4CS | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | PLAN #1 5-12-11 RHS | | |

| 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 | 316.53 | 399.98 | 1.27 | -1.20 | 1.75 | 2.00 | 2.00 | 0.00 | |
| 500.00 | 4.00 | 316.53 | 499.84 | 5.06 | -4.80 | 6.98 | 2.00 | 2.00 | 0.00 | |
| 600.00 | 6.00 | 316.53 | 599.45 | 11.39 | -10.80 | 15.69 | 2.00 | 2.00 | 0.00 | |
| 700.00 | 8.00 | 316.53 | 698.70 | 20.23 | -19.18 | 27.88 | 2.00 | 2.00 | 0.00 | |
| 800.00 | 10.00 | 316.53 | 797.47 | 31.59 | -29.94 | 43.52 | 2.00 | 2.00 | 0.00 | |
| 900.00 | 12.00 | 316.53 | 895.62 | 45.43 | -43.07 | 62.60 | 2.00 | 2.00 | 0.00 | |
| 900.39 | 12.01 | 316.53 | 896.00 | 45.49 | -43.12 | 62.68 | 2.00 | 2.00 | 0.00 | |
| GREEN RIVER | | | | | | | | | | |
| 1,000.00 | 14.00 | 316.53 | 993.06 | 61.76 | -58.54 | 85.10 | 2.00 | 2.00 | 0.00 | |
| 1,100.00 | 16.00 | 316.53 | 1,089.64 | 80.54 | -76.35 | 110.98 | 2.00 | 2.00 | 0.00 | |
| 1,200.00 | 18.00 | 316.53 | 1,185.27 | 101.76 | -96.46 | 140.21 | 2.00 | 2.00 | 0.00 | |
| 1,300.00 | 20.00 | 316.53 | 1,279.82 | 125.38 | -118.86 | 172.77 | 2.00 | 2.00 | 0.00 | |
| Start 1330.13 hold at 1300.00 MD | | | | | | | | | | |
| 1,400.00 | 20.00 | 316.53 | 1,373.78 | 150.21 | -142.39 | 206.97 | 0.00 | 0.00 | 0.00 | |
| 1,500.00 | 20.00 | 316.53 | 1,467.75 | 175.03 | -165.92 | 241.17 | 0.00 | 0.00 | 0.00 | |
| 1,600.00 | 20.00 | 316.53 | 1,561.72 | 199.85 | -189.45 | 275.37 | 0.00 | 0.00 | 0.00 | |
| 1,700.00 | 20.00 | 316.53 | 1,655.69 | 224.67 | -212.98 | 309.58 | 0.00 | 0.00 | 0.00 | |
| 1,800.00 | 20.00 | 316.53 | 1,749.66 | 249.49 | -236.51 | 343.78 | 0.00 | 0.00 | 0.00 | |
| 1,900.00 | 20.00 | 316.53 | 1,843.63 | 274.31 | -260.04 | 377.98 | 0.00 | 0.00 | 0.00 | |
| 2,000.00 | 20.00 | 316.53 | 1,937.60 | 299.14 | -283.57 | 412.18 | 0.00 | 0.00 | 0.00 | |
| 2,100.00 | 20.00 | 316.53 | 2,031.57 | 323.96 | -307.10 | 446.38 | 0.00 | 0.00 | 0.00 | |
| 2,139.83 | 20.00 | 316.53 | 2,069.00 | 333.85 | -316.47 | 460.01 | 0.00 | 0.00 | 0.00 | |
| 8 5/8" | | | | | | | | | | |
| 2,200.00 | 20.00 | 316.53 | 2,125.54 | 348.78 | -330.63 | 480.59 | 0.00 | 0.00 | 0.00 | |
| 2,300.00 | 20.00 | 316.53 | 2,219.51 | 373.60 | -354.16 | 514.79 | 0.00 | 0.00 | 0.00 | |
| 2,400.00 | 20.00 | 316.53 | 2,313.48 | 398.42 | -377.69 | 548.99 | 0.00 | 0.00 | 0.00 | |
| 2,500.00 | 20.00 | 316.53 | 2,407.45 | 423.24 | -401.22 | 583.19 | 0.00 | 0.00 | 0.00 | |
| 2,600.00 | 20.00 | 316.53 | 2,501.42 | 448.07 | -424.75 | 617.39 | 0.00 | 0.00 | 0.00 | |
| 2,630.13 | 20.00 | 316.53 | 2,529.73 | 455.55 | -431.84 | 627.70 | 0.00 | 0.00 | 0.00 | |
| Start Drop -2.00 | | | | | | | | | | |
| 2,700.00 | 18.60 | 316.53 | 2,595.67 | 472.31 | -447.73 | 650.79 | 2.00 | -2.00 | 0.00 | |
| 2,800.00 | 16.60 | 316.53 | 2,690.98 | 494.25 | -468.53 | 681.03 | 2.00 | -2.00 | 0.00 | |
| 2,900.00 | 14.60 | 316.53 | 2,787.29 | 513.77 | -487.03 | 707.93 | 2.00 | -2.00 | 0.00 | |
| 3,000.00 | 12.60 | 316.53 | 2,884.48 | 530.84 | -503.21 | 731.45 | 2.00 | -2.00 | 0.00 | |
| 3,100.00 | 10.60 | 316.53 | 2,982.43 | 545.43 | -517.05 | 751.56 | 2.00 | -2.00 | 0.00 | |
| 3,200.00 | 8.60 | 316.53 | 3,081.03 | 557.54 | -528.53 | 768.24 | 2.00 | -2.00 | 0.00 | |
| 3,300.00 | 6.60 | 316.53 | 3,180.14 | 567.14 | -537.63 | 781.47 | 2.00 | -2.00 | 0.00 | |
| 3,400.00 | 4.60 | 316.53 | 3,279.66 | 574.23 | -544.34 | 791.23 | 2.00 | -2.00 | 0.00 | |
| 3,500.00 | 2.60 | 316.53 | 3,379.46 | 578.79 | -548.67 | 797.51 | 2.00 | -2.00 | 0.00 | |
| 3,600.00 | 0.60 | 316.53 | 3,479.41 | 580.82 | -550.59 | 800.31 | 2.00 | -2.00 | 0.00 | |
| 3,630.13 | 0.00 | 0.00 | 3,509.55 | 580.93 | -550.70 | 800.47 | 2.00 | -2.00 | 0.00 | |
| Start 4966.45 hold at 3630.13 MD | | | | | | | | | | |
| 3,700.00 | 0.00 | 0.00 | 3,579.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 3,800.00 | 0.00 | 0.00 | 3,679.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 3,900.00 | 0.00 | 0.00 | 3,779.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 4,000.00 | 0.00 | 0.00 | 3,879.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 4,100.00 | 0.00 | 0.00 | 3,979.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 4,170.59 | 0.00 | 0.00 | 4,050.00 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |



| | | | |
|------------------|-----------------------------------|-------------------------------------|---------------------------------------|
| Database: | EDM5000-RobertS-Local | Local Co-ordinate Reference: | Well NBU 1022-11C4CS |
| Company: | Kerr McGee Oil and Gas Onshore LP | TVD Reference: | GL 5031 & KB 14 @ 5045.00ft (ASSUMED) |
| Project: | Uintah County, UT UTM12 | MD Reference: | GL 5031 & KB 14 @ 5045.00ft (ASSUMED) |
| Site: | NBU 1022-11G2 PAD | North Reference: | True |
| Well: | NBU 1022-11C4CS | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | PLAN #1 5-12-11 RHS | | |

| 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) | |
| WASATCH | | | | | | | | | | |
| 4,200.00 | 0.00 | 0.00 | 4,079.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 4,300.00 | 0.00 | 0.00 | 4,179.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 4,400.00 | 0.00 | 0.00 | 4,279.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 4,500.00 | 0.00 | 0.00 | 4,379.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 4,600.00 | 0.00 | 0.00 | 4,479.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 4,700.00 | 0.00 | 0.00 | 4,579.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 4,800.00 | 0.00 | 0.00 | 4,679.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 4,900.00 | 0.00 | 0.00 | 4,779.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 5,000.00 | 0.00 | 0.00 | 4,879.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 5,100.00 | 0.00 | 0.00 | 4,979.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 5,200.00 | 0.00 | 0.00 | 5,079.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 5,300.00 | 0.00 | 0.00 | 5,179.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 5,400.00 | 0.00 | 0.00 | 5,279.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 5,500.00 | 0.00 | 0.00 | 5,379.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 5,600.00 | 0.00 | 0.00 | 5,479.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 5,700.00 | 0.00 | 0.00 | 5,579.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 5,800.00 | 0.00 | 0.00 | 5,679.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 5,900.00 | 0.00 | 0.00 | 5,779.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 6,000.00 | 0.00 | 0.00 | 5,879.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 6,100.00 | 0.00 | 0.00 | 5,979.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 6,200.00 | 0.00 | 0.00 | 6,079.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 6,300.00 | 0.00 | 0.00 | 6,179.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 6,400.00 | 0.00 | 0.00 | 6,279.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 6,426.59 | 0.00 | 0.00 | 6,306.00 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| MESAVERDE | | | | | | | | | | |
| 6,500.00 | 0.00 | 0.00 | 6,379.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 6,600.00 | 0.00 | 0.00 | 6,479.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 6,700.00 | 0.00 | 0.00 | 6,579.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 6,800.00 | 0.00 | 0.00 | 6,679.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 6,900.00 | 0.00 | 0.00 | 6,779.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 7,000.00 | 0.00 | 0.00 | 6,879.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 7,100.00 | 0.00 | 0.00 | 6,979.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 7,200.00 | 0.00 | 0.00 | 7,079.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 7,300.00 | 0.00 | 0.00 | 7,179.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 7,400.00 | 0.00 | 0.00 | 7,279.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 7,500.00 | 0.00 | 0.00 | 7,379.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 7,600.00 | 0.00 | 0.00 | 7,479.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 7,700.00 | 0.00 | 0.00 | 7,579.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 7,800.00 | 0.00 | 0.00 | 7,679.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 7,900.00 | 0.00 | 0.00 | 7,779.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 8,000.00 | 0.00 | 0.00 | 7,879.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 8,100.00 | 0.00 | 0.00 | 7,979.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 8,200.00 | 0.00 | 0.00 | 8,079.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 8,300.00 | 0.00 | 0.00 | 8,179.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 8,400.00 | 0.00 | 0.00 | 8,279.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 8,500.00 | 0.00 | 0.00 | 8,379.41 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| 8,596.59 | 0.00 | 0.00 | 8,476.00 | 580.93 | -550.70 | 800.47 | 0.00 | 0.00 | 0.00 | |
| TD at 8596.59 - PBHL_NBU 1022-11C4CS | | | | | | | | | | |



| | | | |
|------------------|-----------------------------------|-------------------------------------|---------------------------------------|
| Database: | EDM5000-RobertS-Local | Local Co-ordinate Reference: | Well NBU 1022-11C4CS |
| Company: | Kerr McGee Oil and Gas Onshore LP | TVD Reference: | GL 5031 & KB 14 @ 5045.00ft (ASSUMED) |
| Project: | Uintah County, UT UTM12 | MD Reference: | GL 5031 & KB 14 @ 5045.00ft (ASSUMED) |
| Site: | NBU 1022-11G2 PAD | North Reference: | True |
| Well: | NBU 1022-11C4CS | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | PLAN #1 5-12-11 RHS | | |

| Design Targets | | | | | | | | | |
|---|---------------|--------------|----------|------------|------------|-----------------|----------------|-----------------|-------------------|
| Target Name | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
| PBHL_NBU 1022-11C4C - hit/miss target - Shape - plan hits target center - Circle (radius 25.00) | 0.00 | 0.00 | 8,476.00 | 580.93 | -550.70 | 14,518,298.10 | 2,086,385.32 | 39° 58' 4.073 N | 109° 24' 30.132 W |

| Casing Points | | | | | |
|---------------------|---------------------|--------|----------------------|--------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Casing Diameter (in) | Hole Diameter (in) | |
| 2,139.83 | 2,069.00 | 8 5/8" | 8.625 | 11.000 | |

| Formations | | | | | |
|---------------------|---------------------|-------------|-----------|---------|-------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) |
| 900.39 | 896.00 | GREEN RIVER | | | |
| 4,170.59 | 4,050.00 | WASATCH | | | |
| 6,426.59 | 6,306.00 | MESAVERDE | | | |

| Plan Annotations | | | | | |
|---------------------|---------------------|-------------------|------------|----------------------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment | |
| | | +N/-S (ft) | +E/-W (ft) | | |
| 300.00 | 300.00 | 0.00 | 0.00 | Start Build 2.00 | |
| 1,300.00 | 1,279.82 | 125.38 | -118.86 | Start 1330.13 hold at 1300.00 MD | |
| 2,630.13 | 2,529.73 | 455.55 | -431.84 | Start Drop -2.00 | |
| 3,630.13 | 3,509.55 | 580.93 | -550.70 | Start 4966.45 hold at 3630.13 MD | |
| 8,596.59 | 8,476.00 | 580.93 | -550.70 | TD at 8596.59 | |

| NBU 1022-11B1CS | | | |
|------------------------|---------------------|------|-------|
| Surface: | 1639 FNL / 2609 FEL | SWNE | Lot |
| BHL: | 577 FNL / 1805 FEL | NWNE | Lot |
| NBU 1022-11B4BS | | | |
| Surface: | 1633 FNL / 2601 FEL | SWNE | Lot |
| BHL: | 908 FNL / 1804 FEL | NWNE | Lot |
| NBU 1022-11B4CS | | | |
| Surface: | 1627 FNL / 2594 FEL | SWNE | Lot |
| BHL: | 1238 FNL / 1803 FEL | NWNE | Lot |
| NBU 1022-11C4AS | | | |
| Surface: | 1645 FNL / 2617 FEL | SWNE | Lot |
| BHL: | 825 FNL / 2462 FWL | NENW | Lot 1 |
| NBU 1022-11C4CS | | | |
| Surface: | 1651 FNL / 2625 FEL | SWNE | Lot |
| BHL: | 1071 FNL / 2131 FWL | NENW | Lot 1 |
| NBU 1022-11F4AS | | | |
| Surface: | 1657 FNL / 2633 FEL | SWNE | Lot |
| BHL: | 2138 FNL / 2288 FWL | SENE | Lot |

Pad: 1022-11G2 PAD
Section 11 T10S R22E
Mineral Lease: UO1197A-ST

Uintah County, Utah
Operator: Kerr-McGee Oil & Gas Onshore LP

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to APC/KMG (including but not limited to, APDs/SULAs/ROEs/ROWs and/or easements.)

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

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.

A. Existing Roads:

Existing roads consist of county and improved/unimproved lease roads. KMG will maintain existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

B. Planned Access Roads:

No new access road is proposed.

If there are roads that are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

During the onsite, turnouts, major cut and fills, culverts, bridges, gates, cattle guards, low water crossings, or modifications needed to existing infrastructure/facilities were determined, as applicable, are typically shown on attached Exhibits and Topo maps.

C. Location of Existing and Proposed Facilities:

This pad will expand the existing pad for the NBU 222. The NBU 222 well location is a vertical producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of August 5, 2011.

Production facilities (see Well Pad Design Summary and Facilities Diagram):

Production facilities will be installed on the disturbed portion of the well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) above ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

Gathering Facilities:

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is $\pm 1,955'$ and the individual segments are broken up as follows:

$\pm 575'$ (0.11 miles) –New 6" buried gas pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

$\pm 1,380'$ (0.26 miles) –New 6" buried gas pipeline from the edge of pad to the tie-in at the existing 8" gas pipeline. Please refer to Topo D2 - Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is $\pm 1,955'$ and the individual segments are broken up as follows:

$\pm 575'$ (0.11 miles) –New 6" (max) buried liquid pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

$\pm 1,380'$ (0.26 miles) –New 6" (max) buried liquid pipeline from the edge of pad to the tie-in at the existing 6" liquid pipeline. refer to Topo D2 - Pad and Pipeline Detail.

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.

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. 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. KMG requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, KMG requests a temporary 45' construction right-of-way 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.

Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity and ownership, as well as to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

D. Location and Type of Water Supply:

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

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.

E. Source of Construction Materials:

Construction operations will typically be completed with native materials found on location. If needed, 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 and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

F. Methods for Handling Waste Materials:

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

RNI in Sec. 5 T9S R22E
 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
 Ouray #1 SWD in Sec. 1 T9S R21E
 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. 33 T9S R21E
 NBU 921-34L SWD in Sec. 34 T9S R21E

Drill cuttings and/or fluids will be contained in the reserve/frac pit. Cuttings will be buried in pit(s) upon closure. Unless otherwise approved, 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 runoff. Should fluid hydrocarbons be encountered during drilling, completions or well testing, product 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 SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods (e.g. solidification.)

The reserve and/or fracture stimulation pit will be lined with a synthetic material 20 mil or thicker. 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. 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.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered 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.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after after six (6) months 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. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

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 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.

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.

Any undesirable event, including accidental release of fluids, or release in excess of reportable quantities, will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule. Where State wells are participatory to a Federal agreement, according to NTL-3A, the appropriate Federal agencies will be notified.

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.

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 and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

G. Ancillary Facilities:

None are anticipated.

H. Well Site Layout (see Well Pad Design Summary):

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; 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 and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1927 (NAD27) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

I. Plans for Reclamation of the Surface :

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. This 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 includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

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.

Final Reclamation

Final reclamation will be performed for newly drilled unproductive wells and/or at 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 KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. 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, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

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.

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

Seeding and Measures Common to Interim and Final Reclamation

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope 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 and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. 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 site specific seed mix will be provided by SITLA.

J. Surface/Mineral Ownership:

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

L. Other Information:

None

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

Andy Lytle
Regulatory Analyst I
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6100

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 for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, 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.



Andy Lytle

August 5, 2011

Date



JOSEPH D. JOHNSON
LANDMAN

Joseph D. Johnson
1099 18TH STREET STE. 1800 • DENVER, CO 80202
720-929-6708 • FAX 720-929-7708
E-MAIL: JOE.JOHNSON@ANADARKO.COM

August 5, 2011

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

Re: Directional Drilling R649-3-11
NBU 1022-11C4CS
T10S-R22E
Section 11: SWNE
Surface: 1651' FNL, 2625' FEL
T10S-R22E
Section 11: NENW
Bottom Hole: 1071' FNL, 2131' FWL
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 R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Kerr-McGee's NBU 1022-11C4CS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

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

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink, appearing to read 'Joe D. Johnson', with a horizontal line underneath.

Joseph D. Johnson
Landman

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:

3160

(UT-922)

August 19, 2011

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2011 Plan of Development Natural Buttes Unit
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2011 within the Natural Buttes Unit, Uintah County, Utah.

| API # | WELL NAME | LOCATION |
|-------|-----------|----------|
|-------|-----------|----------|

(Proposed PZ WASATCH-MESA VERDE)

NBU 1022-11F PAD

| | | |
|--------------|-----------------|------------------------------------|
| 43-047-51797 | NBU 1022-11C2CS | Sec 11 T10S R22E 1860 FNL 1499 FWL |
| | BHL | Sec 11 T10S R22E 0370 FNL 1365 FWL |

| | | |
|--------------|-----------------|------------------------------------|
| 43-047-51799 | NBU 1022-11C3DS | Sec 11 T10S R22E 1852 FNL 1505 FWL |
| | BHL | Sec 11 T10S R22E 1268 FNL 1726 FWL |

| | | |
|--------------|-----------------|------------------------------------|
| 43-047-51800 | NBU 1022-11D1CS | Sec 11 T10S R22E 1868 FNL 1493 FWL |
| | BHL | Sec 11 T10S R22E 0576 FNL 0818 FWL |

| | | |
|--------------|-----------------|------------------------------------|
| 43-047-51801 | NBU 1022-11F2DS | Sec 11 T10S R22E 1844 FNL 1512 FWL |
| | BHL | Sec 11 T10S R22E 1622 FNL 1625 FWL |

NBU 1022-11G2 PAD

| | | |
|--------------|-----------------|------------------------------------|
| 43-047-51802 | NBU 1022-11B4CS | Sec 11 T10S R22E 1627 FNL 2594 FEL |
| | BHL | Sec 11 T10S R22E 1238 FNL 1803 FEL |

| | | |
|--------------|-----------------|------------------------------------|
| 43-047-51813 | NBU 1022-11B4BS | Sec 11 T10S R22E 1633 FNL 2601 FEL |
| | BHL | Sec 11 T10S R22E 0908 FNL 1804 FEL |

| | | |
|--------------|-----------------|------------------------------------|
| 43-047-51815 | NBU 1022-11B1CS | Sec 11 T10S R22E 1639 FNL 2609 FEL |
| | BHL | Sec 11 T10S R22E 0577 FNL 1805 FEL |

| | | |
|--------------|---------------|------------------------------------|
| 43-047-51817 | NBU 1022-C4AS | Sec 11 T10S R22E 1645 FNL 2617 FEL |
| | BHL | Sec 11 T10S R22E 0825 FNL 2462 FWL |

| | | |
|--------------|-----------------|------------------------------------|
| 43-047-51818 | NBU 1022-11C4CS | Sec 11 T10S R22E 1651 FNL 2625 FEL |
| | BHL | Sec 11 T10S R22E 1071 FNL 2131 FWL |

RECEIVED: August 22, 2011

| API # | WELL NAME | LOCATION | | | | | | |
|----------------------------------|-----------------|----------|------|------|------|-----|------|-----|
| (Proposed PZ WASATCH-MESA VERDE) | | | | | | | | |
| 43-047-51855 | NBU 1022-11F4AS | Sec 11 | T10S | R22E | 1657 | FNL | 2633 | FEL |
| | BHL | Sec 11 | T10S | R22E | 2138 | FNL | 2288 | FWL |
| NBU 1022-2A PAD | | | | | | | | |
| 43-047-51803 | NBU 1022-2G1CS | Sec 02 | T10S | R22E | 0165 | FNL | 0760 | FEL |
| | BHL | Sec 02 | T10S | R22E | 1905 | FNL | 1814 | FEL |
| 43-047-51807 | NBU 1022-2G1BS | Sec 02 | T10S | R22E | 0164 | FNL | 0770 | FEL |
| | BHL | Sec 02 | T10S | R22E | 1573 | FNL | 1815 | FEL |
| 43-047-51808 | NBU 1022-2H1BS | Sec 02 | T10S | R22E | 0167 | FNL | 0730 | FEL |
| | BHL | Sec 02 | T10S | R22E | 1410 | FNL | 0494 | FEL |
| 43-047-51812 | NBU 1022-2H1CS | Sec 02 | T10S | R22E | 0166 | FNL | 0740 | FEL |
| | BHL | Sec 02 | T10S | R22E | 1743 | FNL | 0494 | FEL |
| 43-047-51825 | NBU 1022-2H4BS | Sec 02 | T10S | R22E | 0165 | FNL | 0750 | FEL |
| | BHL | Sec 02 | T10S | R22E | 2074 | FNL | 0493 | FEL |
| NBU 1022-11G4 PAD | | | | | | | | |
| 43-047-51805 | NBU 1022-11A4CS | Sec 11 | T10S | R22E | 2411 | FNL | 1535 | FEL |
| | BHL | Sec 11 | T10S | R22E | 1075 | FNL | 0490 | FEL |
| 43-047-51814 | NBU 1022-11H1BS | Sec 11 | T10S | R22E | 2405 | FNL | 1526 | FEL |
| | BHL | Sec 11 | T10S | R22E | 1406 | FNL | 0490 | FEL |
| 43-047-51822 | NBU 1022-11G4CS | Sec 11 | T10S | R22E | 2435 | FNL | 1566 | FEL |
| | BHL | Sec 11 | T10S | R22E | 2559 | FNL | 1799 | FEL |
| 43-047-51823 | NBU 1022-11G1BS | Sec 11 | T10S | R22E | 2423 | FNL | 1550 | FEL |
| | BHL | Sec 11 | T10S | R22E | 1568 | FNL | 1802 | FEL |
| 43-047-51837 | NBU 1022-11G1CS | Sec 11 | T10S | R22E | 2417 | FNL | 1542 | FEL |
| | BHL | Sec 11 | T10S | R22E | 1954 | FNL | 1646 | FEL |
| 43-047-51853 | NBU 1022-11G4BS | Sec 11 | T10S | R22E | 2429 | FNL | 1558 | FEL |
| | BHL | Sec 11 | T10S | R22E | 2229 | FNL | 1800 | FEL |
| NBU 1022-2I PAD | | | | | | | | |
| 43-047-51809 | NBU 1022-2I4CS | Sec 02 | T10S | R22E | 1886 | FSL | 0949 | FEL |
| | BHL | Sec 02 | T10S | R22E | 1576 | FSL | 0492 | FEL |
| 43-047-51810 | NBU 1022-2P1BS | Sec 02 | T10S | R22E | 1881 | FSL | 0957 | FEL |
| | BHL | Sec 02 | T10S | R22E | 1245 | FSL | 0492 | FEL |
| 43-047-51824 | NBU 1022-2I1CS | Sec 02 | T10S | R22E | 1895 | FSL | 0931 | FEL |
| | BHL | Sec 02 | T10S | R22E | 2240 | FSL | 0493 | FEL |
| 43-047-51829 | NBU 1022-2I4BS | Sec 02 | T10S | R22E | 1890 | FSL | 0940 | FEL |
| | BHL | Sec 02 | T10S | R22E | 1909 | FSL | 0492 | FEL |
| 43-047-51838 | NBU 1022-2P4BS | Sec 02 | T10S | R22E | 1872 | FSL | 0975 | FEL |
| | BHL | Sec 02 | T10S | R22E | 0581 | FSL | 0492 | FEL |
| 43-047-51852 | NBU 1022-2P1CS | Sec 02 | T10S | R22E | 1877 | FSL | 0966 | FEL |
| | BHL | Sec 02 | T10S | R22E | 0913 | FSL | 0492 | FEL |
| NBU 1022-2B PAD | | | | | | | | |
| 43-047-51811 | NBU 1022-2B1CS | Sec 02 | T10S | R22E | 0544 | FNL | 1813 | FEL |
| | BHL | Sec 02 | T10S | R22E | 0579 | FNL | 1818 | FEL |

| API # | WELL NAME | LOCATION | | | | | | |
|----------------------------------|-----------------|------------|------|------|------|-----|------|-----|
| (Proposed PZ WASATCH-MESA VERDE) | | | | | | | | |
| 43-047-51827 | NBU 1022-2B4CS | Sec 02 | T10S | R22E | 0543 | FNL | 1793 | FEL |
| | | BHL Sec 02 | T10S | R22E | 1242 | FNL | 1816 | FEL |
| 43-047-51828 | NBU 1022-2B4BS | Sec 02 | T10S | R22E | 0543 | FNL | 1803 | FEL |
| | | BHL Sec 02 | T10S | R22E | 0910 | FNL | 1817 | FEL |
| 43-047-51830 | NBU 1022-2C1BS | Sec 02 | T10S | R22E | 0544 | FNL | 1823 | FEL |
| | | BHL Sec 02 | T10S | R22E | 0090 | FNL | 2158 | FWL |
| NBU 1022-11J PAD | | | | | | | | |
| 43-047-51816 | NBU 1022-11K4BS | Sec 11 | T10S | R22E | 1980 | FSL | 2131 | FEL |
| | | BHL Sec 11 | T10S | R22E | 1804 | FSL | 1963 | FWL |
| 43-047-51843 | NBU 1022-11J1CS | Sec 11 | T10S | R22E | 1990 | FSL | 2130 | FEL |
| | | BHL Sec 11 | T10S | R22E | 2065 | FSL | 1797 | FEL |
| 43-047-51851 | NBU 1022-11J1BS | Sec 11 | T10S | R22E | 2000 | FSL | 2129 | FEL |
| | | BHL Sec 11 | T10S | R22E | 2395 | FSL | 1798 | FEL |
| NBU 1022-2J PAD | | | | | | | | |
| 43-047-51819 | NBU 1022-2G4CS | Sec 02 | T10S | R22E | 2375 | FSL | 1639 | FEL |
| | | BHL Sec 02 | T10S | R22E | 2568 | FNL | 1813 | FEL |
| 43-047-51820 | NBU 1022-2H4CS | Sec 02 | T10S | R22E | 2351 | FSL | 1584 | FEL |
| | | BHL Sec 02 | T10S | R22E | 2406 | FNL | 0493 | FEL |
| 43-047-51844 | NBU 1022-2J4BS | Sec 02 | T10S | R22E | 2367 | FSL | 1621 | FEL |
| | | BHL Sec 02 | T10S | R22E | 1741 | FSL | 1811 | FEL |
| 43-047-51845 | NBU 1022-2O1CS | Sec 02 | T10S | R22E | 2343 | FSL | 1566 | FEL |
| | | BHL Sec 02 | T10S | R22E | 0747 | FSL | 1808 | FEL |
| 43-047-51847 | NBU 1022-2I1BS | Sec 02 | T10S | R22E | 2347 | FSL | 1575 | FEL |
| | | BHL Sec 02 | T10S | R22E | 2572 | FSL | 0493 | FEL |
| 43-047-51854 | NBU 1022-2G4BS | Sec 02 | T10S | R22E | 2359 | FSL | 1602 | FEL |
| | | BHL Sec 02 | T10S | R22E | 2237 | FNL | 1814 | FEL |
| NBU 1022-O1 PAD | | | | | | | | |
| 43-047-51821 | NBU 1022-11O1CS | Sec 11 | T10S | R22E | 0944 | FSL | 1360 | FEL |
| | | BHL Sec 11 | T10S | R22E | 0744 | FSL | 1793 | FEL |
| 43-047-51831 | NBU 1022-11O4CS | Sec 11 | T10S | R22E | 0925 | FSL | 1366 | FEL |
| | | BHL Sec 11 | T10S | R22E | 0079 | FSL | 1824 | FEL |
| 43-047-51832 | NBU 1022-11P1BS | Sec 11 | T10S | R22E | 0973 | FSL | 1351 | FEL |
| | | BHL Sec 11 | T10S | R22E | 1068 | FSL | 0474 | FEL |
| 43-047-51833 | NBU 1022-11P4BS | Sec 11 | T10S | R22E | 0954 | FSL | 1357 | FEL |
| | | BHL Sec 11 | T10S | R22E | 0456 | FSL | 0504 | FEL |
| 43-047-51836 | NBU 1022-12M1BS | Sec 11 | T10S | R22E | 0963 | FSL | 1354 | FEL |
| | | BHL Sec 12 | T10S | R22E | 1077 | FSL | 0824 | FWL |
| 43-047-51856 | NBU 1022-11O4BS | Sec 11 | T10S | R22E | 0935 | FSL | 1363 | FEL |
| | | BHL Sec 11 | T10S | R22E | 0413 | FSL | 1792 | FEL |

| API # | WELL NAME | | | LOCATION | | | | | | |
|----------------------------------|-----------------|-----|----|----------|------|------|------|------|-----|--|
| (Proposed PZ WASATCH-MESA VERDE) | | | | | | | | | | |
| NBU 1022-11I1 PAD | | | | | | | | | | |
| 43-047-51834 | NBU 1022-11I1CS | Sec | 11 | T10S | R22E | 2545 | FSL | 0532 | FEL | |
| | BHL | Sec | 11 | T10S | R22E | 2112 | FSL | 0481 | FEL | |
| 43-047-51835 | NBU 1022-12L1CS | Sec | 11 | T10S | R22E | 2554 | FSL | 0528 | FEL | |
| | BHL | Sec | 12 | T10S | R22E | 2070 | 0FSL | 823 | FWL | |
| 43-047-51857 | NBU 1022-11H4BS | Sec | 11 | T10S | R22E | 2582 | FSL | 0518 | FEL | |
| | BHL | Sec | 11 | T10S | R22E | 2067 | FNL | 0489 | FEL | |
| 43-047-51858 | NBU 1022-11H4CS | Sec | 11 | T10S | R22E | 2592 | FSL | 0514 | FEL | |
| | BHL | Sec | 11 | T10S | R22E | 2398 | FNL | 0489 | FEL | |
| 43-047-51861 | NBU 1022-12L1BS | Sec | 11 | T10S | R22E | 2564 | FSL | 0525 | FEL | |
| | BHL | Sec | 12 | T10S | R22E | 2401 | FSL | 0822 | FWL | |
| 43-047-51863 | NBU 1022-11H1CS | Sec | 11 | T10S | R22E | 2573 | FSL | 0521 | FEL | |
| | BHL | Sec | 11 | T10S | R22E | 1737 | FNL | 0490 | FEL | |
| NBU 1022-2P PAD | | | | | | | | | | |
| 43-047-51839 | NBU 1022-2P4CS | Sec | 02 | T10S | R22E | 0221 | FSL | 1342 | FEL | |
| | BHL | Sec | 02 | T10S | R22E | 0255 | FSL | 0496 | FEL | |
| 43-047-51841 | NBU 1022-11B1BS | Sec | 02 | T10S | R22E | 0221 | FSL | 1382 | FEL | |
| | BHL | Sec | 11 | T10S | R22E | 0280 | FNL | 1755 | FEL | |
| 43-047-51842 | NBU 1022-11A1BS | Sec | 02 | T10S | R22E | 0221 | FSL | 1352 | FEL | |
| | BHL | Sec | 11 | T10S | R22E | 0080 | FNL | 0473 | FEL | |
| 43-047-51846 | NBU 1022-2O4CS | Sec | 02 | T10S | R22E | 0220 | FSL | 1402 | FEL | |
| | BHL | Sec | 02 | T10S | R22E | 0095 | FSL | 1804 | FEL | |
| 43-047-51848 | NBU 1022-11A4BS | Sec | 02 | T10S | R22E | 0221 | FSL | 1372 | FEL | |
| | BHL | Sec | 11 | T10S | R22E | 0744 | FNL | 0490 | FEL | |
| 43-047-51849 | NBU 1022-2O4BS | Sec | 02 | T10S | R22E | 0221 | FSL | 1392 | FEL | |
| | BHL | Sec | 02 | T10S | R22E | 0415 | FSL | 1807 | FEL | |
| 43-047-51850 | NBU 1022-11A1CS | Sec | 02 | T10S | R22E | 0221 | FSL | 1362 | FEL | |
| | BHL | Sec | 11 | T10S | R22E | 0413 | FNL | 0491 | FEL | |
| NBU 1022-14A PAD | | | | | | | | | | |
| 43-047-51840 | NBU 1022-11P4CS | Sec | 14 | T10S | R22E | 0379 | FNL | 1228 | FEL | |
| | BHL | Sec | 11 | T10S | R22E | 0088 | FSL | 0466 | FEL | |
| 43-047-51860 | NBU 1022-12M1CS | Sec | 14 | T10S | R22E | 0385 | FNL | 1236 | FEL | |
| | BHL | Sec | 12 | T10S | R22E | 0746 | FSL | 0825 | FWL | |
| 43-047-51868 | NBU 1022-12M4BS | Sec | 14 | T10S | R22E | 0391 | FNL | 1244 | FEL | |
| | BHL | Sec | 12 | T10S | R22E | 0415 | FSL | 0825 | FWL | |
| 43-047-51870 | NBU 1022-12M4CS | Sec | 14 | T10S | R22E | 0397 | FNL | 1252 | FEL | |
| | BHL | Sec | 12 | T10S | R22E | 0086 | FSL | 0819 | FWL | |
| NBU 1022-11O2 PAD | | | | | | | | | | |
| 43-047-51859 | NBU 1022-11K4CS | Sec | 11 | T10S | R22E | 1103 | FSL | 2372 | FEL | |
| | BHL | Sec | 11 | T10S | R22E | 1442 | FSL | 2113 | FWL | |

| API # | WELL NAME | LOCATION |
|----------------------------------|-----------------|------------------------------------|
| (Proposed PZ WASATCH-MESA VERDE) | | |
| 43-047-51862 | NBU 1022-11N1BS | Sec 11 T10S R22E 1094 FSL 2377 FEL |
| | BHL | Sec 11 T10S R22E 1111 FSL 2105 FWL |
| 43-047-51864 | NBU 1022-11N1CS | Sec 11 T10S R22E 1085 FSL 2382 FEL |
| | BHL | Sec 11 T10S R22E 0801 FSL 2127 FWL |
| 43-047-51865 | NBU 1022-11N4BS | Sec 11 T10S R22E 1077 FSL 2387 FEL |
| | BHL | Sec 11 T10S R22E 0462 FSL 2127 FWL |
| 43-047-51867 | NBU 1022-11N4CS | Sec 11 T10S R22E 1068 FSL 2392 FEL |
| | BHL | Sec 11 T10S R22E 0146 FSL 2084 FWL |
| 43-047-51869 | NBU 1022-11O2AS | Sec 11 T10S R22E 1111 FSL 2367 FEL |
| | BHL | Sec 11 T10S R22E 1102 FSL 1964 FEL |
| NBU 1022-11I3 PAD | | |
| 43-047-51866 | NBU 1022-11I4BS | Sec 11 T10S R22E 1489 FSL 0996 FEL |
| | BHL | Sec 11 T10S R22E 1774 FSL 0485 FEL |
| 43-047-51871 | NBU 1022-11I4CS | Sec 11 T10S R22E 1459 FSL 0997 FEL |
| | BHL | Sec 11 T10S R22E 1443 FSL 0497 FEL |
| 43-047-51872 | NBU 1022-12L4BS | Sec 11 T10S R22E 1479 FSL 0996 FEL |
| | BHL | Sec 12 T10S R22E 1739 FSL 0823 FWL |
| 43-047-51873 | NBU 1022-12L4CS | Sec 11 T10S R22E 1469 FSL 0996 FEL |
| | BHL | Sec 12 T10S R22E 1408 FSL 0824 FWL |

This office has no objection to permitting the wells at this time.

Michael L. Coulthard  Digitally signed by Michael L. Coulthard
 DN: cn=Michael L. Coulthard, o=Bureau of Land Management,
 ou=Branch of Minerals, email=Michael_Coulthard@blm.gov, c=US
 Date: 2011.08.19 08:43:17 -06'00'

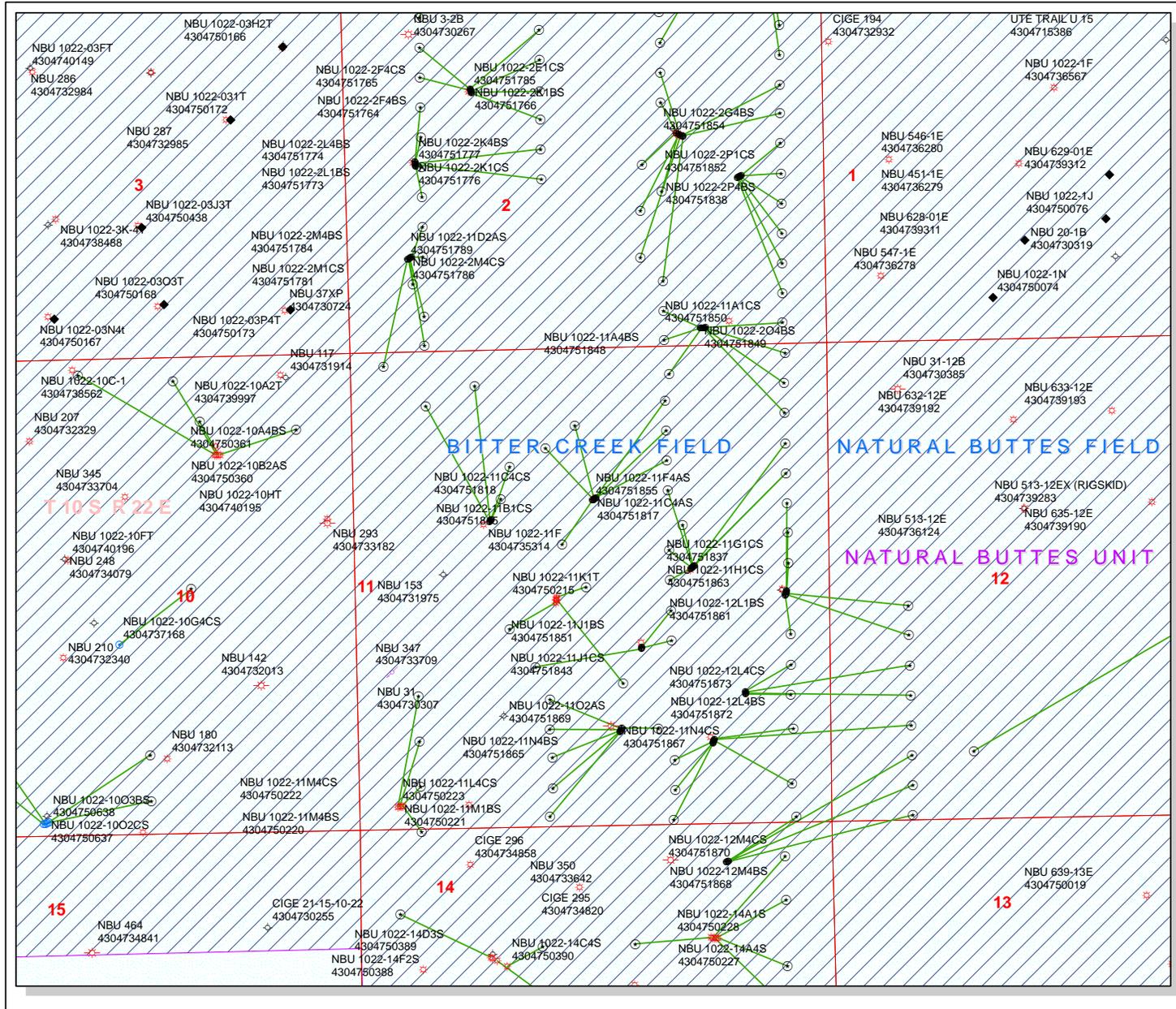
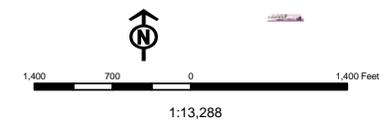
bcc: File - Natural Buttes Unit
 Division of Oil Gas and Mining
 Central Files
 Agr. Sec. Chron
 Fluid Chron

MCoulthard:mc:8-19-11

API Number: 4304751818
Well Name: NBU 1022-11C4CS
 Township T10. Range R22. Section 11
 Meridian: SLBM
 Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
 Map Produced by Diana Mason

| | |
|----------------------|------------------------------------|
| Units STATUS | Wells Query Status |
| ACTIVE | APD - Approved Permit |
| EXPLORATORY | DRL - Spudded (Drilling Commenced) |
| GAS STORAGE | GIW - Gas Injection |
| NF PP OIL | GS - Gas Storage |
| NF SECONDARY | LA - Location Abandoned |
| PI OIL | LOC - New Location |
| PP GAS | OPS - Operation Suspended |
| PP GEOTHERM | PA - Plugged Abandoned |
| PP OIL | PGW - Producing Gas Well |
| SECONDARY | POW - Producing Oil Well |
| TERMINATED | 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 |
| Fields STATUS | |
| Unknown | |
| ABANDONED | |
| ACTIVE | |
| COMBINED | |
| INACTIVE | |
| STORAGE | |
| TERMINATED | |
| Sections | |
| Township | |



From: Jim Davis
To: Hill, Brad; Mason, Diana
CC: Bonner, Ed; Garrison, LaVonne; Lytle, Andy
Date: 9/26/2011 5:08 PM
Subject: Anadarko APD approvals 10S 22E Sec 2, 11 and 14
Attachments: Anadarko Approvals from SITLA 9.26.11.xls

The following APDs have been approved by SITLA including arch clearance and paleo clearance:

4304751840 NBU 1022-11P4CS
4304751860 NBU 1022-12M1CS
4304751868 NBU 1022-12M4BS
4304751870 NBU 1022-12M4CS
4304751803 NBU 1022-2G1CS
4304751807 NBU 1022-2G1BS
4304751808 NBU 1022-2H1BS
4304751812 NBU 1022-2H1CS
4304751825 NBU 1022-2H4BS
4304751811 NBU 1022-2B1CS
4304751827 NBU 1022-2B4CS
4304751828 NBU 1022-2B4BS
4304751830 NBU 1022-2C1BS
4304751809 NBU 1022-2I4CS
4304751810 NBU 1022-2P1BS
4304751824 NBU 1022-2I1CS
4304751829 NBU 1022-2I4BS
4304751838 NBU 1022-2P4BS
4304751852 NBU 1022-2P1CS
4304751839 NBU 1022-2P4CS
4304751841 NBU 1022-11B1BS
4304751842 NBU 1022-11A1BS
4304751846 NBU 1022-2O4CS
4304751848 NBU 1022-11A4BS
4304751849 NBU 1022-2O4BS
4304751850 NBU 1022-11A1CS

These APDS are approved including arch clearance but will require **spot paleo monitoring** as recommended in the applicable paleo reports:

4304751758 NBU 1022-2C1CS
4304751767 NBU 1022-2C4BS
4304751768 NBU 1022-2C4CS
4304751779 NBU 1022-2D1BS
4304751780 NBU 1022-2D4BS
4304751782 NBU 1022-2E1BS
4304751783 NBU 1022-2F1BS
4304751760 NBU 1022-2E4BS
4304751761 NBU 1022-2F1CS
4304751764 NBU 1022-2F4BS
4304751765 NBU 1022-2F4CS
4304751766 NBU 1022-2K1BS
4304751785 NBU 1022-2E1CS
4304751775 NBU 1022-2L4CS
4304751778 NBU 1022-2M1BS
4304751781 NBU 1022-2M1CS
4304751784 NBU 1022-2M4BS
4304751786 NBU 1022-2M4CS
4304751789 NBU 1022-11D2AS

4304751802 NBU 1022-11B4CS
4304751813 NBU 1022-11B4BS
4304751815 NBU 1022-11B1CS
4304751817 NBU 1022-11C4AS
4304751818 NBU 1022-11C4CS
4304751855 NBU 1022-11F4AS
4304751805 NBU 1022-11A4CS
4304751814 NBU 1022-11H1BS
4304751822 NBU 1022-11G4CS
4304751823 NBU 1022-11G1BS
4304751837 NBU 1022-11G1CS
4304751853 NBU 1022-11G4BS
4304751834 NBU 1022-11I1CS
4304751835 NBU 1022-12L1CS
4304751857 NBU 1022-11H4BS
4304751858 NBU 1022-11H4CS
4304751861 NBU 1022-12L1BS
4304751863 NBU 1022-11H1CS
4304751866 NBU 1022-11I4BS
4304751871 NBU 1022-11I4CS
4304751872 NBU 1022-12L4BS
4304751873 NBU 1022-12L4CS
4304751816 NBU 1022-11K4BS
4304751843 NBU 1022-11J1CS
4304751851 NBU 1022-11J1BS
4304751859 NBU 1022-11K4CS
4304751862 NBU 1022-11N1BS
4304751864 NBU 1022-11N1CS
4304751865 NBU 1022-11N4BS
4304751867 NBU 1022-11N4CS
4304751869 NBU 1022-11O2AS

These APDS are approved including arch clearance but will require **full paleo monitoring** as recommended in the applicable paleo reports:

4304751771 NBU 1022-2E4CS
4304751772 NBU 1022-2L1CS
4304751773 NBU 1022-2L1BS
4304751774 NBU 1022-2L4BS
4304751776 NBU 1022-2K1CS
4304751777 NBU 1022-2K4BS
4304751819 NBU 1022-2G4CS
4304751820 NBU 1022-2H4CS
4304751844 NBU 1022-2J4BS
4304751845 NBU 1022-2O1CS
4304751847 NBU 1022-2I1BS
4304751854 NBU 1022-2G4BS
4304751797 NBU 1022-11C2CS
4304751799 NBU 1022-11C3DS
4304751800 NBU 1022-11D1CS
4304751801 NBU 1022-11F2DS
4304751821 NBU 1022-11O1CS
4304751831 NBU 1022-11O4CS
4304751832 NBU 1022-11P1BS
4304751833 NBU 1022-11P4BS
4304751836 NBU 1022-12M1BS
4304751856 NBU 1022-11O4BS

That's a big enough list that I'm including a simple spreadsheet that has this same information, but organized in such a way as may be more useful to some of you.

Thanks.

-Jim

Jim Davis
Utah Trust Lands Administration
jimdavis1@utah.gov
Phone: (801) 538-5156

| | | | | |
|--|---|-------|--|--|
| Well Name | KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 1022-11C4C | | | |
| String | SURF | PROD | | |
| Casing Size(") | 8.625 | 4.500 | | |
| Setting Depth (TVD) | 2003 | 8476 | | |
| Previous Shoe Setting Depth (TVD) | 40 | 2003 | | |
| Max Mud Weight (ppg) | 8.3 | 12.5 | | |
| BOPE Proposed (psi) | 500 | 5000 | | |
| Casing Internal Yield (psi) | 3390 | 7780 | | |
| Operators Max Anticipated Pressure (psi) | 5425 | 12.3 | | |

| | | | |
|---|--|--------------|--|
| Calculations | SURF String | 8.625 | " |
| Max BHP (psi) | .052*Setting Depth*MW= | 864 | |
| | | | BOPE Adequate For Drilling And Setting Casing at Depth? |
| MASP (Gas) (psi) | Max BHP-(0.12*Setting Depth)= | 624 | NO <input type="checkbox"/> air drill |
| MASP (Gas/Mud) (psi) | Max BHP-(0.22*Setting Depth)= | 423 | YES <input type="checkbox"/> OK |
| | | | *Can Full Expected Pressure Be Held At Previous Shoe? |
| Pressure At Previous Shoe | Max BHP-.22*(Setting Depth - Previous Shoe Depth)= | 432 | NO <input type="checkbox"/> Reasonable depth in area |
| Required Casing/BOPE Test Pressure= | | 2003 | psi |
| *Max Pressure Allowed @ Previous Casing Shoe= | | 40 | psi *Assumes 1psi/ft frac gradient |

| | | | |
|---|--|--------------|--|
| Calculations | PROD String | 4.500 | " |
| Max BHP (psi) | .052*Setting Depth*MW= | 5509 | |
| | | | BOPE Adequate For Drilling And Setting Casing at Depth? |
| MASP (Gas) (psi) | Max BHP-(0.12*Setting Depth)= | 4492 | YES <input type="checkbox"/> |
| MASP (Gas/Mud) (psi) | Max BHP-(0.22*Setting Depth)= | 3644 | YES <input type="checkbox"/> OK |
| | | | *Can Full Expected Pressure Be Held At Previous Shoe? |
| Pressure At Previous Shoe | Max BHP-.22*(Setting Depth - Previous Shoe Depth)= | 4085 | NO <input type="checkbox"/> Reasonable |
| Required Casing/BOPE Test Pressure= | | 5000 | psi |
| *Max Pressure Allowed @ Previous Casing Shoe= | | 2003 | psi *Assumes 1psi/ft frac gradient |

| | | | |
|---|--|--|--|
| Calculations | String | | " |
| Max BHP (psi) | .052*Setting Depth*MW= | | |
| | | | BOPE Adequate For Drilling And Setting Casing at Depth? |
| MASP (Gas) (psi) | Max BHP-(0.12*Setting Depth)= | | NO <input type="checkbox"/> |
| MASP (Gas/Mud) (psi) | Max BHP-(0.22*Setting Depth)= | | NO <input type="checkbox"/> |
| | | | *Can Full Expected Pressure Be Held At Previous Shoe? |
| Pressure At Previous Shoe | Max BHP-.22*(Setting Depth - Previous Shoe Depth)= | | NO <input type="checkbox"/> |
| Required Casing/BOPE Test Pressure= | | | psi |
| *Max Pressure Allowed @ Previous Casing Shoe= | | | psi *Assumes 1psi/ft frac gradient |

| | | | |
|-------------------------------------|--|--|--|
| Calculations | String | | " |
| Max BHP (psi) | .052*Setting Depth*MW= | | |
| | | | BOPE Adequate For Drilling And Setting Casing at Depth? |
| MASP (Gas) (psi) | Max BHP-(0.12*Setting Depth)= | | NO <input type="checkbox"/> |
| MASP (Gas/Mud) (psi) | Max BHP-(0.22*Setting Depth)= | | NO <input type="checkbox"/> |
| | | | *Can Full Expected Pressure Be Held At Previous Shoe? |
| Pressure At Previous Shoe | Max BHP-.22*(Setting Depth - Previous Shoe Depth)= | | NO <input type="checkbox"/> |
| Required Casing/BOPE Test Pressure= | | | psi |

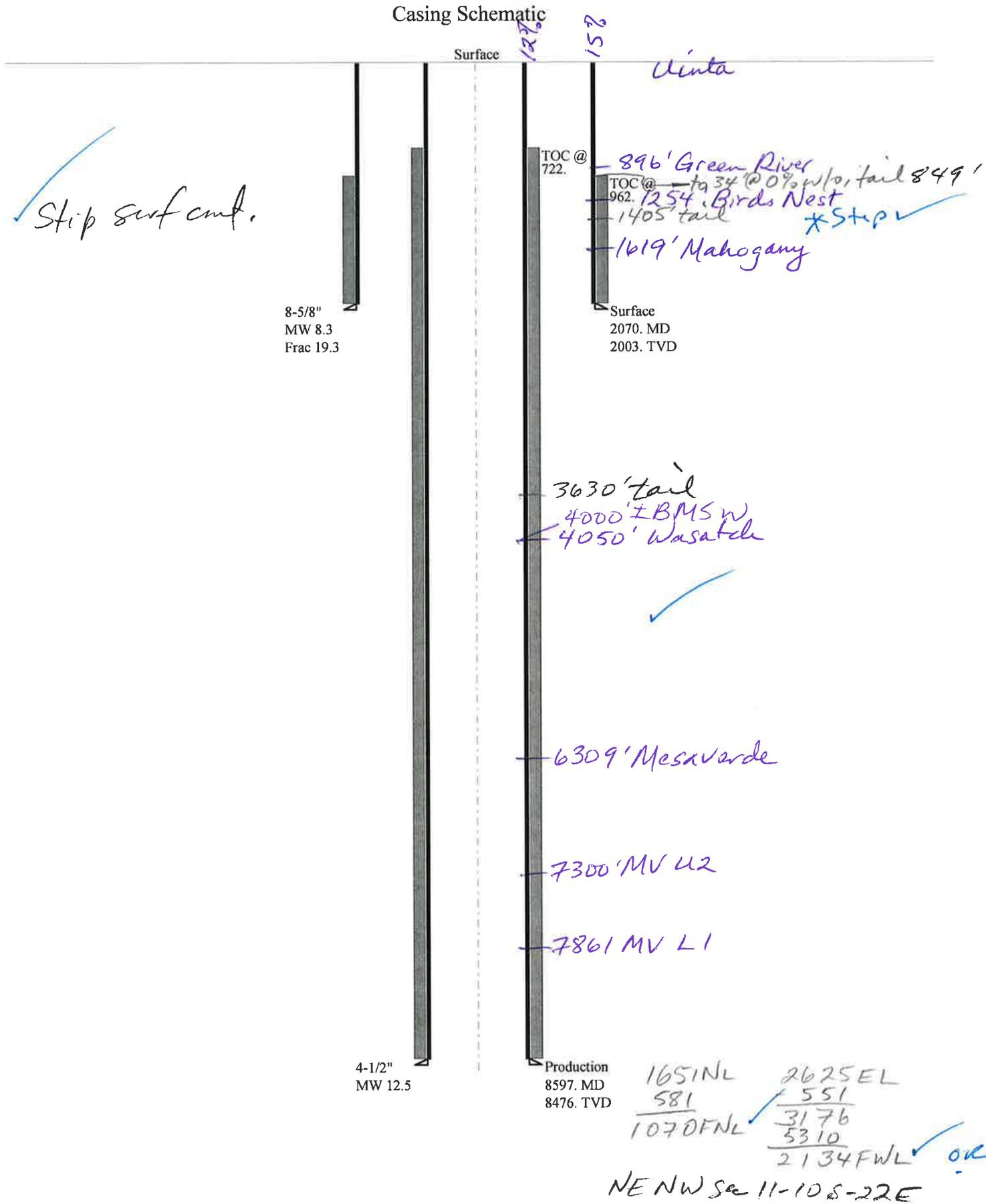
API Well Number: 43047518180000

*Max Pressure Allowed @ Previous Casing Shoe=

psi *Assumes 1psi/ft frac gradient

43047518180000 NBU 1022-11C4CS

Casing Schematic



| | | | |
|--------------|---|-------------|--------------|
| Well name: | 43047518180000 NBU 1022-11C4CS | | |
| Operator: | KERR-MCGEE OIL & GAS ONSHORE, L.P. | | |
| String type: | Surface | Project ID: | 43-047-51818 |
| Location: | UINTAH COUNTY | | |

Design parameters:

Collapse

Mud weight: 8.330 ppg
 Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
 Surface temperature: 74 °F
 Bottom hole temperature: 102 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 100 ft

Cement top: 962 ft

Burst

Max anticipated surface pressure: 1,763 psi
 Internal gradient: 0.120 psi/ft
 Calculated BHP 2,003 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
 8 Round LTC: 1.70 (J)
 Buttress: 1.60 (J)
 Premium: 1.50 (J)
 Body yield: 1.50 (B)

Tension is based on air weight.
 Neutral point: 1,808 ft

Directional Info - Build & Drop

Kick-off point 300 ft
 Departure at shoe: 436 ft
 Maximum dogleg: 2 °/100ft
 Inclination at shoe: 20 °

Re subsequent strings:

Next setting depth: 8,476 ft
 Next mud weight: 12.500 ppg
 Next setting BHP: 5,504 psi
 Fracture mud wt: 19.250 ppg
 Fracture depth: 2,003 ft
 Injection pressure: 2,003 psi

| Run Seq | Segment Length (ft) | Size (in) | Nominal Weight (lbs/ft) | Grade | End Finish | True Vert Depth (ft) | Measured Depth (ft) | Drift Diameter (in) | Est. Cost (\$) |
|---------|---------------------|-------------------------|-------------------------|------------------|----------------------|----------------------|---------------------|-------------------------|-----------------------|
| 1 | 2070 | 8.625 | 28.00 | I-55 | LT&C | 2003 | 2070 | 7.892 | 81972 |
| Run Seq | Collapse Load (psi) | Collapse Strength (psi) | Collapse Design Factor | Burst Load (psi) | Burst Strength (psi) | Burst Design Factor | Tension Load (kips) | Tension Strength (kips) | Tension Design Factor |
| 1 | 867 | 1880 | 2.169 | 2003 | 3390 | 1.69 | 56.1 | 348 | 6.20 J |

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

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

Date: August 29, 2011
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2003 ft, a mud weight of 8.33 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

| | | | |
|--------------|---|-------------|--------------|
| Well name: | 43047518180000 NBU 1022-11C4CS | | |
| Operator: | KERR-MCGEE OIL & GAS ONSHORE, L.P. | | |
| String type: | Production | Project ID: | 43-047-51818 |
| Location: | UINTAH COUNTY | | |

Design parameters:

Collapse

Mud weight: 12.500 ppg
 Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
 Surface temperature: 74 °F
 Bottom hole temperature: 193 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 100 ft
 Cement top: 722 ft

Burst

Max anticipated surface pressure: 3,639 psi
 Internal gradient: 0.220 psi/ft
 Calculated BHP 5,504 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
 8 Round LTC: 1.80 (J)
 Buttress: 1.60 (J)
 Premium: 1.50 (J)
 Body yield: 1.60 (B)

Directional Info - Build & Drop

Kick-off point 300 ft
 Departure at shoe: 801 ft
 Maximum dogleg: 2 °/100ft
 Inclination at shoe: 0 °

Tension is based on air weight.
 Neutral point: 7,013 ft

| Run Seq | Segment Length (ft) | Size (in) | Nominal Weight (lbs/ft) | Grade | End Finish | True Vert Depth (ft) | Measured Depth (ft) | Drift Diameter (in) | Est. Cost (\$) |
|---------|---------------------|-----------|-------------------------|-------|------------|----------------------|---------------------|---------------------|----------------|
| 1 | 8597 | 4.5 | 11.60 | I-80 | LT&C | 8476 | 8597 | 3.875 | 113479 |

| Run Seq | Collapse Load (psi) | Collapse Strength (psi) | Collapse Design Factor | Burst Load (psi) | Burst Strength (psi) | Burst Design Factor | Tension Load (kips) | Tension Strength (kips) | Tension Design Factor |
|---------|---------------------|-------------------------|------------------------|------------------|----------------------|---------------------|---------------------|-------------------------|-----------------------|
| 1 | 5504 | 6360 | 1.156 | 5504 | 7780 | 1.41 | 98.3 | 212 | 2.16 J |

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

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

Date: August 29, 2011
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 8476 ft, a mud weight of 12.5 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.
Well Name NBU 1022-11C4CS
API Number 43047518180000 **APD No** 4378 **Field/Unit** NATURAL BUTTES
Location: 1/4,1/4 SWNE **Sec** 11 **Tw** 10.0S **Rng** 22.0E 1651 FNL 2625 FEL
GPS Coord (UTM) 636107 4425017 **Surface Owner**

Participants

Andy Lytle, Sheila Wopsock, Charles Chase, Grizz Oleen, Mark Kuehn, Doyle Holmes, (Kerr McGee). John Slaugh, Mitch Batty, (Timberline). Jim Davis (SITLA). David Hackford, (DOGMA).

Regional/Local Setting & Topography

The general area is in the southeast portion of the Natural Buttes Unit on the northeast end of a major drainage divide called Archy Bench. Within this area is the White River and rugged drainages that drain into it. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River varies from ¼ mile to 2 miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 41 air miles to the northwest. Access from Vernal is approximately 60.4 road miles following Utah State, Uintah County and oilfield development roads. Five wells, in addition to this one will be directionally drilled from this pad. (For a total of six new wells). There is one existing well on this pad. (The NBU 222). At this time, the decision rather to PA or TA this well has not been made. This proposed location takes in an existing location, and very little new construction will be necessary except for digging the reserve pit. The existing access road will be adequate and will be used. The location runs in a northeast-southwest direction along the top of a flat topped ridge. This ridge breaks off sharply into rugged secondary canyons on the north, west and east sides. New construction will consist of approx. 50 feet on all sides of the existing pad, and an additional 50 feet on the east side for reserve pit and excess cut stockpile. No drainage concerns exist, and no diversions will be needed. The pad as modified should be stable and should be a suitable location for seven wells, and is on the best site available in the immediate area.

Surface Use Plan

Current Surface Use

Wildlife Habitat
Existing Well Pad

| New Road Miles | Well Pad | Src Const Material | Surface Formation |
|-----------------------|------------------------------------|---------------------------|--------------------------|
| 0 | Width 292 Length 425 | Onsite | UNTA |

Ancillary Facilities N

Waste Management Plan Adequate? Y

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Prickly pear, wild onion, shadscale, mat saltbrush, Indian ricegrass, halogeton, pepper grass, annuals and curly Vegetation is a salt desert shrub type. Principal species present are cheatgrass, black sagebrush, stipa, mesquite grass.

Sheep, antelope, raptors and small mammals and birds.

Soil Type and Characteristics

Shallow rocky sandy loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diverson Required? N

Berm Required? N

Erosion Sedimentation Control Required? N

Paleo Survey Run? Y **Paleo Potential Observed?** N **Cultural Survey Run?** Y **Cultural Resources?** N

Reserve Pit

| Site-Specific Factors | | Site Ranking | |
|--|--------------------|--------------|---------------------|
| Distance to Groundwater (feet) | 100 to 200 | 5 | |
| Distance to Surface Water (feet) | >1000 | 0 | |
| Dist. Nearest Municipal Well (ft) | >5280 | 0 | |
| Distance to Other Wells (feet) | | 20 | |
| Native Soil Type | Mod permeability | 10 | |
| Fluid Type | Fresh Water | 5 | |
| Drill Cuttings | Normal Rock | 0 | |
| Annual Precipitation (inches) | | 0 | |
| Affected Populations | | | |
| Presence Nearby Utility Conduits | Not Present | 0 | |
| | Final Score | 40 | 1 Sensitivity Level |

Characteristics / Requirements

The reserve pit is planned in an area of cut on the east side of the location. Dimensions are 100' x 260' x 12' deep with 2' of freeboard. Kerr McGee agreed to line the pit with a 30-mil liner and 2 layers of felt.

Closed Loop Mud Required? N **Liner Required?** Y **Liner Thickness** 30 **Pit Underlayment Required?** Y

Other Observations / Comments

David Hackford
Evaluator

8/18/2011
Date / Time

Application for Permit to Drill Statement of Basis

10/12/2011

Utah Division of Oil, Gas and Mining

Page 1

| | | | | | |
|------------------|--|---------------------|--------------------------|-------------------|------------|
| APD No | API WellNo | Status | Well Type | Surf Owner | CBM |
| 4378 | 43047518180000 | SITLA | GW | S | No |
| Operator | KERR-MCGEE OIL & GAS ONSHORE, L.P. | | Surface Owner-APD | | |
| Well Name | NBU 1022-11C4CS | Unit | | NATURAL BUTTES | |
| Field | NATURAL BUTTES | Type of Work | | DRILL | |
| Location | SWNE 11 10S 22E S 1651 FNL 2625 FEL GPS Coord (UTM) 636094E 4425008N | | | | |

Geologic Statement of Basis

Kerr McGee proposes to set 2,070' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 4,000'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 11. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Production casing cement should be brought up above the base of the moderately saline ground water to isolate it from fresher waters uphole.

Brad Hill
APD Evaluator

8/30/2011
Date / Time

Surface Statement of Basis

The general area is in the southeast portion of the Natural Buttes Unit on the northeast end of a major drainage divide called Archy Bench. Within this area is the White River and rugged drainages that drain into it. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River varies from ¼ mile to 2 miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 41 air miles to the northwest. Access from Vernal is approximately 60.4 road miles following Utah State, Uintah County and oilfield development roads. The existing access road will be adequate and will be used.

Six wells will be directionally drilled from this location. They are the NBU 1022-11B4CS, NBU 1022-11B4BS, NBU 1022-11B1CS, NBU 1022-11C4AS, NBU 1022-11C4CS and the NBU 1022-11F4AS. The existing location has one existing well. This well is the NBU 222, and at this time the decision rather to PA or TA this well has not been made. The location is on a flat topped ridge that runs in a northeast-southwest direction. This ridge breaks off sharply into rugged secondary canyons on the north, west and east sides. No drainage concerns exist, and no diversions will be needed. The pad as modified should be stable and sufficient for seven wells, and is the best site for a location in the immediate area.

Excess material will be stockpiled on the east and south sides of the location. Approx. 50' of additional construction will be necessary on all sides of the original location.

Both the surface and minerals are owned by SITLA. Jim Davis of SITLA and Ben Williams with DWR were invited by email to the pre-site evaluation. Jim Davis was present. Kerr McGee was told to consult with SITLA for reclamation standards including seeding mixes to be used.

David Hackford
Onsite Evaluator

8/18/2011
Date / Time

Conditions of Approval / Application for Permit to Drill

RECEIVED: October 12, 2011

Application for Permit to Drill Statement of Basis

10/12/2011

Utah Division of Oil, Gas and Mining

Page 2

| Category | Condition |
|-----------------|---|
| Pits | A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the reserve pit. |
| Pits | The reserve pit should be located on the east side of the location. |

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 8/10/2011**API NO. ASSIGNED:** 43047518180000**WELL NAME:** NBU 1022-11C4CS**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)**PHONE NUMBER:** 720 929-6100**CONTACT:** Andy Lytle**PROPOSED LOCATION:** SWNE 11 100S 220E**Permit Tech Review:** **SURFACE:** 1651 FNL 2625 FEL**Engineering Review:** **BOTTOM:** 1071 FNL 2131 FWL**Geology Review:** **COUNTY:** UINTAH**LATITUDE:** 39.96616**LONGITUDE:** -109.40651**UTM SURF EASTINGS:** 636094.00**NORTHINGS:** 4425008.00**FIELD NAME:** NATURAL BUTTES**LEASE TYPE:** 3 - State**LEASE NUMBER:** UO1197A-ST**PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE**SURFACE OWNER:** 3 - State**COALBED METHANE:** NO**RECEIVED AND/OR REVIEWED:**

- PLAT
- Bond: STATE - 22013542
- 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

Commingle Approved**LOCATION AND SITING:**

- R649-2-3.
- Unit:** NATURAL BUTTES
- R649-3-2. General
- R649-3-3. Exception
- Drilling Unit
- Board Cause No:** Cause 173-14
- Effective Date:** 12/2/1999
- Siting:** 460' Fr U Bdry & Uncommitted Tracts
- R649-3-11. Directional Drill

Comments: Presite Completed

Stipulations:

- 3 - Commingle - ddoucet
- 5 - Statement of Basis - bhill
- 15 - Directional - dmason
- 17 - Oil Shale 190-5(b) - dmason
- 25 - Surface Casing - hmadonald



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: NBU 1022-11C4CS
API Well Number: 43047518180000
Lease Number: UO1197A-ST
Surface Owner: STATE
Approval Date: 10/12/2011

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 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingle:

In accordance with Board Cause No. 173-14, 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:

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.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Surface casing shall be cemented to the surface.

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

Additional Approvals:

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

- Any changes to the approved drilling plan – contact Dustin Doucet
- Significant plug back of the well – contact Dustin Doucet
- Plug and abandonment of the well – contact Dustin Doucet

Notification Requirements:

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
OR
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <http://oilgas.ogm.utah.gov>
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing – contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program – contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well – contact Dan Jarvis

Contact Information:

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

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office
801-231-8956 - after office hours

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

| STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING | | FORM 9 |
|---|---|---|
| SUNDRY NOTICES AND REPORTS ON WELLS | | 5. LEASE DESIGNATION AND SERIAL NUMBER: UO1197A-ST |
| 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: NATURAL BUTTES |
| 1. TYPE OF WELL Gas Well | 8. WELL NAME and NUMBER: NBU 1022-11C4CS | |
| 2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. | 9. API NUMBER: 43047518180000 | |
| 3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 | PHONE NUMBER: 720 929-6511 | 9. FIELD and POOL or WILDCAT: NATURAL BUTTES |
| 4. LOCATION OF WELL FOOTAGES AT SURFACE: 1651 FNL 2625 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNE Section: 11 Township: 10.0S Range: 22.0E 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 | |
| <input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 1/14/2012 <input type="checkbox"/> DRILLING REPORT Report Date: | <input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION | |
| | <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER | <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/> |
| 12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. | | |
| MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL ON 01/14/2012 AT 0730 HRS. | | |
| Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 20, 2012 | | |
| NAME (PLEASE PRINT) Sheila Wopsock | PHONE NUMBER 435 781-7024 | TITLE Regulatory Analyst |
| SIGNATURE N/A | DATE 1/18/2012 | |

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# CAPSTAR #310
 Submitted By GINA BECKER Phone Number 720.929.6086
 Well Name/Number NBU 1022-11C4CS
 Qtr/Qtr SWNE Section 11 Township 10S Range 22E
 Lease Serial Number UO 01197A ST
 API Number 4304751818

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

Date/Time 01/13/2012 07:00 HRS AM PM

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

- Surface Casing
 Intermediate Casing
 Production Casing
 Liner
 Other

RECEIVED

JAN 11 2012

DIV. OF OIL, GAS & MINING

Date/Time 01/30/2012 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 6

ENTITY ACTION FORM

Operator: KERR MCGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995
 Address: 1368 SOUTH 1200 EAST
city VERNAL
state UT zip 84078 Phone Number: (435) 781-7024

Well 1

| API Number | Well Name | | QQ | Sec | Twp | Rng | County |
|---|-----------------------|-------------------|-----------|-----|----------------------------------|-----|--------|
| 4304751817 | NBU 1022-11C4AS | | SWNE | 11 | 10S | 22E | UINTAH |
| Action Code | Current Entity Number | New Entity Number | Spud Date | | Entity Assignment Effective Date | | |
| B | 99999 | 2900 | 1/13/2012 | | 1/18/2012 | | |
| Comments: MIRU PETE MARTIN BUCKET RIG. <i>WSTMVD</i> SPUD WELL ON 01/13/2012 AT 0730 HRS <i>BHL = NENW</i> | | | | | | | |

Well 2

| API Number | Well Name | | QQ | Sec | Twp | Rng | County |
|---|-----------------------|-------------------|-----------|-----|----------------------------------|-----|--------|
| 4304751818 | NBU 1022-11C4CS | | SWNE | 11 | 10S | 22E | UINTAH |
| Action Code | Current Entity Number | New Entity Number | Spud Date | | Entity Assignment Effective Date | | |
| B | 99999 | 2900 | 1/14/2012 | | 1/18/2012 | | |
| Comments: MIRU PETE MARTIN BUCKET RIG. <i>WSTMVD</i> SPUD WELL ON 01/14/2012 AT 0730 HRS <i>BHL = NENW</i> | | | | | | | |

Well 3

| API Number | Well Name | | QQ | Sec | Twp | Rng | County |
|--|-----------------------|-------------------|-----------|-----|----------------------------------|-----|--------|
| 4304751855 | NBU 1022-11F4AS | | SWNE | 11 | 10S | 22E | UINTAH |
| Action Code | Current Entity Number | New Entity Number | Spud Date | | Entity Assignment Effective Date | | |
| B | 99999 | 2900 | 1/13/2012 | | 1/18/2012 | | |
| Comments: MIRU PETE MARTIN BUCKET RIG. <i>WSTMVD</i> SPUD WELL ON 01/13/2012 AT 1100 HRS. <i>BHL = SENW</i> | | | | | | | |

ACTION CODES:

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

SHEILA WOPSOCK

Name (Please Print)

Signature

REGULATORY ANALYST

Title

1/16/2012

Date

RECEIVED

JAN 17 2012

DIV. OF OIL, GAS & MINING

| | | |
|--|--|--|
| STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING | | FORM 9 |
| 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. | | 5. LEASE DESIGNATION AND SERIAL NUMBER: UO1197A-ST |
| | | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: |
| 1. TYPE OF WELL Gas Well | | 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES |
| 2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. | | 8. WELL NAME and NUMBER: NBU 1022-11C4CS |
| 3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 | | 9. API NUMBER: 43047518180000 |
| 4. LOCATION OF WELL FOOTAGES AT SURFACE: 1651 FNL 2625 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNE Section: 11 Township: 10.0S Range: 22.0E Meridian: S | | 9. FIELD and POOL or WILDCAT: NATURAL BUTTES |
| | | COUNTY: UINTAH |
| | | STATE: UTAH |

11.

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|--|---|---|
| <input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: | <input type="checkbox"/> ACIDIZE | <input type="checkbox"/> ALTER CASING | <input type="checkbox"/> CASING REPAIR |
| <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: | <input type="checkbox"/> CHANGE TO PREVIOUS PLANS | <input type="checkbox"/> CHANGE TUBING | <input type="checkbox"/> CHANGE WELL NAME |
| <input type="checkbox"/> SPUD REPORT Date of Spud: | <input type="checkbox"/> CHANGE WELL STATUS | <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS | <input type="checkbox"/> CONVERT WELL TYPE |
| <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 2/3/2012 | <input type="checkbox"/> DEEPEN | <input type="checkbox"/> FRACTURE TREAT | <input type="checkbox"/> NEW CONSTRUCTION |
| | <input type="checkbox"/> OPERATOR CHANGE | <input type="checkbox"/> PLUG AND ABANDON | <input type="checkbox"/> PLUG BACK |
| | <input type="checkbox"/> PRODUCTION START OR RESUME | <input type="checkbox"/> RECLAMATION OF WELL SITE | <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION |
| | <input type="checkbox"/> REPERFORATE CURRENT FORMATION | <input type="checkbox"/> SIDETRACK TO REPAIR WELL | <input type="checkbox"/> TEMPORARY ABANDON |
| | <input type="checkbox"/> TUBING REPAIR | <input type="checkbox"/> VENT OR FLARE | <input type="checkbox"/> WATER DISPOSAL |
| | <input type="checkbox"/> WATER SHUTOFF | <input type="checkbox"/> SI TA STATUS EXTENSION | <input type="checkbox"/> APD EXTENSION |
| | <input type="checkbox"/> WILDCAT WELL DETERMINATION | <input type="checkbox"/> OTHER | OTHER: <input style="width: 100px;" type="text"/> |

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

MIRU AIR RIG ON FEBRUARY 1, 2012. DRILLED SURFACE HOLE TO 2235'.
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
February 07, 2012**

| | | |
|---|-------------------------------------|------------------------------------|
| NAME (PLEASE PRINT) Jaime Scharnowske | PHONE NUMBER 720 929-6304 | TITLE Regulatory Analyst |
| SIGNATURE N/A | DATE 2/6/2012 | |

| | |
|---|---------------|
| STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING | FORM 9 |
| 5. LEASE DESIGNATION AND SERIAL NUMBER: UO1197A-ST | |
| 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: | |
| 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES | |
| 8. WELL NAME and NUMBER: NBU 1022-11C4CS | |
| 9. API NUMBER: 43047518180000 | |
| 9. FIELD and POOL or WILDCAT: NATURAL BUTTES | |
| COUNTY: UINTAH | |
| STATE: UTAH | |

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

| | |
|---|--------------------------------------|
| 1. TYPE OF WELL Gas Well | |
| 2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. | |
| 3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 | PHONE NUMBER: 720 929-6511 |
| 4. LOCATION OF WELL FOOTAGES AT SURFACE: 1651 FNL 2625 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNE Section: 11 Township: 10.0S Range: 22.0E Meridian: S | |

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|--|---|---|
| <input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 1/17/2012 | <input type="checkbox"/> ACIDIZE | <input type="checkbox"/> ALTER CASING | <input type="checkbox"/> CASING REPAIR |
| <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: | <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS | <input type="checkbox"/> CHANGE TUBING | <input type="checkbox"/> CHANGE WELL NAME |
| <input type="checkbox"/> SPUD REPORT Date of Spud: | <input type="checkbox"/> CHANGE WELL STATUS | <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS | <input type="checkbox"/> CONVERT WELL TYPE |
| <input type="checkbox"/> DRILLING REPORT Report Date: | <input type="checkbox"/> DEEPEN | <input type="checkbox"/> FRACTURE TREAT | <input type="checkbox"/> NEW CONSTRUCTION |
| | <input type="checkbox"/> OPERATOR CHANGE | <input type="checkbox"/> PLUG AND ABANDON | <input type="checkbox"/> PLUG BACK |
| | <input type="checkbox"/> PRODUCTION START OR RESUME | <input type="checkbox"/> RECLAMATION OF WELL SITE | <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION |
| | <input type="checkbox"/> REPERFORATE CURRENT FORMATION | <input type="checkbox"/> SIDETRACK TO REPAIR WELL | <input type="checkbox"/> TEMPORARY ABANDON |
| | <input type="checkbox"/> TUBING REPAIR | <input type="checkbox"/> VENT OR FLARE | <input type="checkbox"/> WATER DISPOSAL |
| | <input type="checkbox"/> WATER SHUTOFF | <input type="checkbox"/> SI TA STATUS EXTENSION | <input type="checkbox"/> APD EXTENSION |
| | <input type="checkbox"/> WILDCAT WELL DETERMINATION | <input type="checkbox"/> OTHER | OTHER: <input style="width: 100px;" type="text"/> |

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

The Operator requests approval for changes in the drilling plan. Specifically, the Operator requests approval for a FIT wavier, closed loop drilling options, and a production casing change. All other aspects of the previously approved drilling plan will not change. Please see the attachment. Thank you.

Approved by the Utah Division of Oil, Gas and Mining
Date: February 13, 2012
By: *Derek Duff*

| | | |
|---|-------------------------------------|--------------------------------------|
| NAME (PLEASE PRINT) Jaime Scharnowske | PHONE NUMBER 720 929-6304 | TITLE Regularatory Analyst |
| SIGNATURE N/A | DATE 1/17/2012 | |

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 1022-11C4CS**

Surface: 1651 FNL / 2625 FEL SWNE
 BHL: 1071 FNL / 2131 FWL NENW

Section 11 T10S R22E

Uintah County, Utah
 Mineral Lease: UO1197A-ST

ONSHORE ORDER NO. 1**DRILLING PROGRAM**

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

| <u>Formation</u> | <u>Depth</u> | <u>Resource</u> |
|------------------|--------------|-----------------|
| Uinta | 0 - Surface | |
| Green River | 896' | |
| Birds Nest | 1,254' | Water |
| Mahogany | 1,619' | Water |
| Wasatch | 4,050' | Gas |
| Mesaverde | 6,306' | Gas |
| MVU2 | 7,300' | Gas |
| MVL1 | 7,861' | Gas |
| TVD | 8,476' | |
| TD | 8,597' | |

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

Please refer to the attached Drilling Program

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

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 8476' TVD, approximately equals
5,425 psi (0.64 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 3,548 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.

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 11 inch 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

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.



KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

CASING PROGRAM

| | SIZE | INTERVAL | WT. | GR. | CPLG. | DESIGN FACTORS | | | |
|------------|--------|------------|-------|-------|-------|----------------|----------|---------|-------------|
| | | | | | | BURST | COLLAPSE | LTC | DQX TENSION |
| CONDUCTOR | 14" | 0-40' | | | | | | | |
| SURFACE | 8-5/8" | 0 to 2,235 | 28.00 | IJ-55 | LTC | 3,390 | 1,880 | 348,000 | N/A |
| | | | | | | 7,780 | 6,350 | 223,000 | 267,000 |
| PRODUCTION | 4-1/2" | 0 to 5,000 | 11.60 | I-80 | DQX | 1.11 | 1.15 | | 3.31 |
| | | | | | | 1.11 | 1.15 | 6.61 | |

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 Option 1 | LEAD 500' | Premium cmt + 2% CaCl + 0.25 pps flocele | 180 | 60% | 15.80 | 1.15 |
| | TOP OUT CMT (6 jobs) 1,200' | 20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele | 270 | 0% | 15.80 | 1.15 |
| NOTE: If well will circulate water to surface, option 2 will be utilized | | | | | | |
| SURFACE Option 2 | LEAD 1,735' | 65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW | 160 | 35% | 11.00 | 3.82 |
| | TAIL 500' | Premium cmt + 2% CaCl + 0.25 pps flocele | 150 | 35% | 15.80 | 1.15 |
| | TOP OUT CMT as required | Premium cmt + 2% CaCl | as req. | | 15.80 | 1.15 |
| PRODUCTION | LEAD 3,547' | Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender | 280 | 35% | 12.00 | 3.38 |
| | TAIL 5,050' | 50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3 | 1,190 | 35% | 14.30 | 1.31 |

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained
 *Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

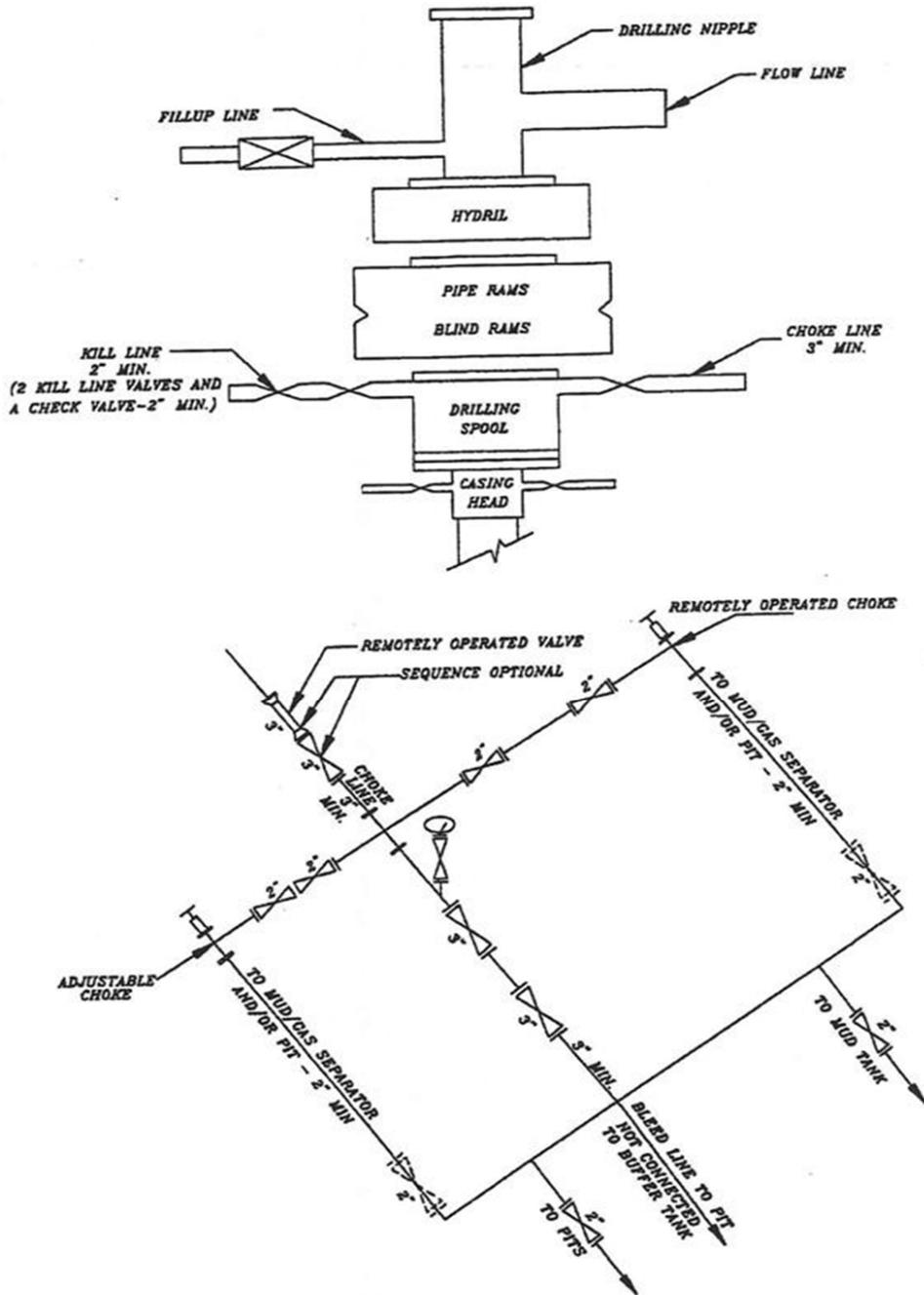
| | |
|------------|--|
| SURFACE | Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe |
| PRODUCTION | Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter. |

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.
 BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.
 Surveys will be taken at 1,000' minimum intervals.
 Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER: _____ **DATE:** _____
 Nick Spence / Danny Showers / Chad Loesel
DRILLING SUPERINTENDENT: _____ **DATE:** _____
 Kenny Gathings / Lovel Young

EXHIBIT A
NBU 1022-11C4CS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

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.

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 1022-11C4CS**

Surface: 1651 FNL / 2625 FEL SWNE
 BHL: 1071 FNL / 2131 FWL NENW

Section 11 T10S R22E

Unitah County, Utah
 Mineral Lease: UO1197A-ST

ONSHORE ORDER NO. 1**DRILLING PROGRAM**

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

| <u>Formation</u> | <u>Depth</u> | <u>Resource</u> |
|------------------|--------------|-----------------|
| Uinta | 0 - Surface | |
| Green River | 859' | |
| Birds Nest | 1,225' | Water |
| Mahogany | 1,791' | Water |
| Wasatch | 4,051' | Gas |
| Mesaverde | 6,308' | Gas |
| MVU2 | 0,000' | Gas |
| MVL1 | 0,000' | Gas |
| Sego | 8,469' | Gas |
| Castlegate | 8,610' | Gas |
| Blackhawk | 9,056' | Gas |
| TVD | 9,656' | |
| TD | 9,778' | |

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

Please refer to the attached Drilling Program

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

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. Evaluation Program:

Please refer to the attached Drilling Program

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 9656' TVD, approximately equals
6,373 psi (0.66 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,293 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

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

Background

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

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may

be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11 inch 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.

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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.

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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.

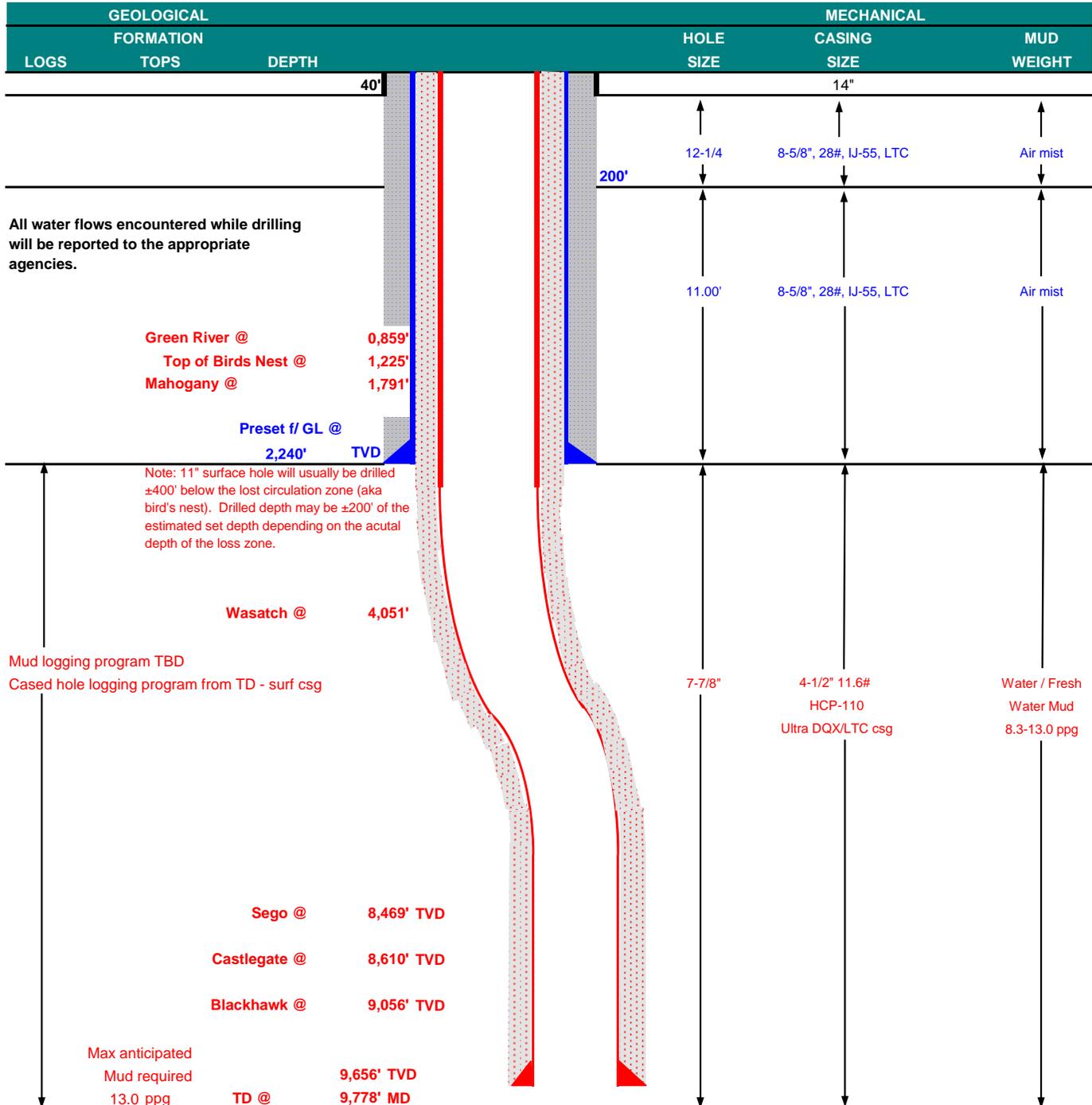
10. Other Information:

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

| | | | | | | | |
|-------------------|---|-----------|------------|------------------|-------|--------------------|--------|
| COMPANY NAME | KERR-McGEE OIL & GAS ONSHORE LP | | DATE | January 17, 2012 | | | |
| WELL NAME | NBU 1022-11C4CS | | TD | 9,656' | TVD | 9,778' MD | |
| FIELD | Natural Buttes | COUNTY | Uintah | STATE | Utah | FINISHED ELEVATION | 5,031' |
| SURFACE LOCATION | SWNE | 1651 FNL | 2625 FEL | Sec 11 | T 10S | R 22E | |
| | Latitude: | 39.966203 | Longitude: | -109.406405 | | | NAD 27 |
| BTM HOLE LOCATION | NENW | 1071 FNL | 2131 FWL | Sec 11 | T 10S | R 22E | |
| | Latitude: | 39.967798 | Longitude: | -109.408370 | | | NAD 27 |
| OBJECTIVE ZONE(S) | BLACKHAWK | | | | | | |
| ADDITIONAL INFO | Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept. | | | | | | |





KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

CASING PROGRAM

| | SIZE | INTERVAL | WT. | GR. | CPLG. | DESIGN FACTORS | | | |
|------------|--------|-----------------|-------|---------|-------|----------------|----------|---------|---------|
| | | | | | | BURST | COLLAPSE | LTC | DQX |
| | | | | | | | | TENSION | |
| CONDUCTOR | 14" | 0-40' | | | | | | | |
| | | | | | | 3,390 | 1,880 | 348,000 | N/A |
| SURFACE | 8-5/8" | 0 to 2,240 | 28.00 | IJ-55 | LTC | 2.40 | 1.79 | 6.34 | N/A |
| | | | | | | 10,690 | 8,650 | 279,000 | 367,174 |
| PRODUCTION | 4-1/2" | 0 to 5,000 | 11.60 | HCP-110 | DQX | 1.19 | 1.33 | | 4.04 |
| | 4-1/2" | 5,000 to 9,778' | 11.60 | HCP-110 | LTC | 1.19 | 1.33 | 6.28 | |

Surface Casing:

(Burst Assumptions: TD = 13.0 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 @ 9000 psi) 0.66 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 | | | | |
| NOTE: If well will circulate water to surface, option 2 will be utilized | | | | | | | |
| SURFACE | LEAD | 1,740' | 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 | 3,548' | Premium Lite II +0.25 pps | 280 | 35% | 12.00 | 3.38 |
| | | | celloflake + 5 pps gilsonite + 10% gel | | | | |
| | | | + 0.5% extender | | | | |
| | TAIL | 6,230' | 50/50 Poz/G + 10% salt + 2% gel | 1,470 | 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. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter. |

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.

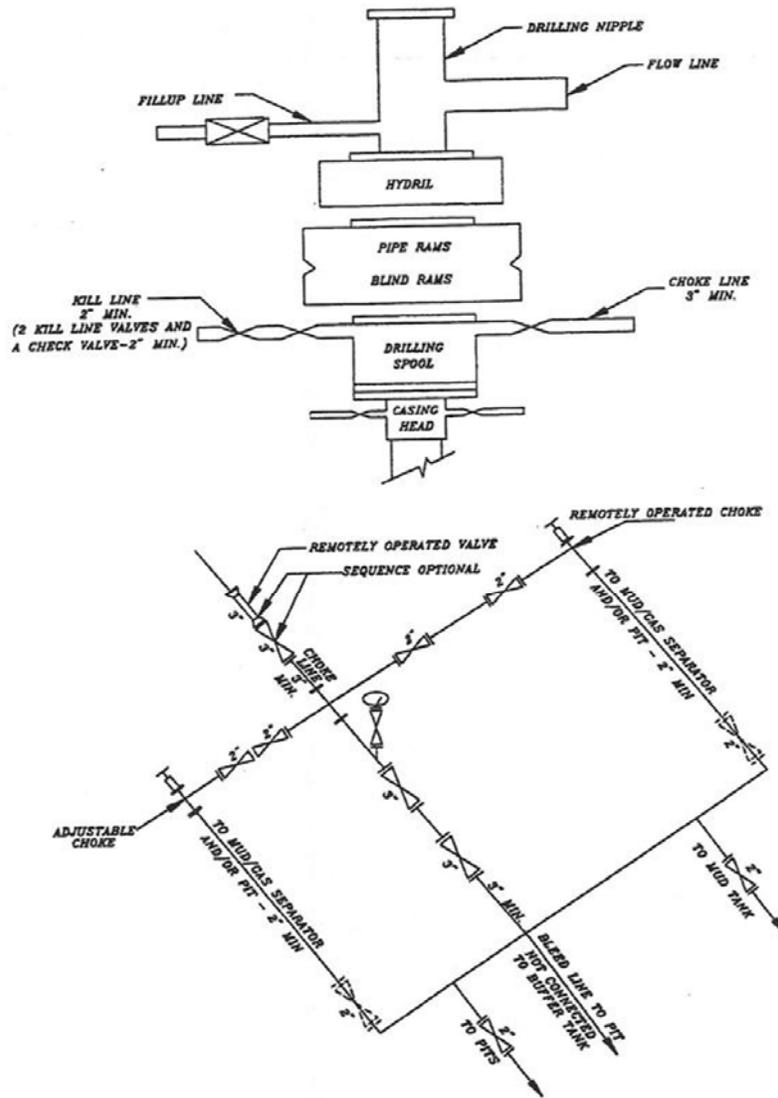
DRILLING ENGINEER: _____
Nick Spence / Danny Showers / Chad Loesel

DATE: _____

DRILLING SUPERINTENDENT: _____
Kenny Gathings / Lovel Young

DATE: _____

EXHIBIT A
NBU 1022-11C4CS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

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.

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# Ensign 146
Submitted By KENT MOORE Phone Number 435- 828-0987
Well Name/Number NBU 1022-11C4CS
Qtr/Qtr SW/NE Section 11 Township 10S Range 22E
Lease Serial Number UO1197A-ST
API Number 4304751818

Casing – Time casing run starts, not cementing times.

- Production Casing
- Other

Date/Time _____ AM PM

RECEIVED

FEB 10 2012

BOPE

- Initial BOPE test at surface casing point
- Other

OFFICE OF OIL, GAS & MINERAL

Date/Time 2/12/12 02:00 AM PM

Rig Move

Location To: _____

Date/Time _____ AM PM

Remarks _____

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# Ensign 146
Submitted By KENT MOORE Phone Number 435- 828-0987
Well Name/Number NBU 1022-11C4CS
Qtr/Qtr SW/NE Section 11 Township 10S Range 22E
Lease Serial Number UO1197A-ST
API Number 4304751818

Casing – Time casing run starts, not cementing times.

- Production Casing
- Other

Date/Time 2/16/12 10:00 AM PM

BOPE

- Initial BOPE test at surface casing point
- Other

Date/Time _____ AM PM

RECEIVED

FEB 15 2012

DIV. OF OIL, GAS & MINING

Rig Move

Location To: _____

Date/Time _____ AM PM

Remarks _____

| STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING | | FORM 9 |
|---|--|--|
| | | 5. LEASE DESIGNATION AND SERIAL NUMBER: UO1197A-ST |
| SUNDRY NOTICES AND REPORTS ON WELLS | | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: |
| Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals. | | 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES |
| 1. TYPE OF WELL Gas Well | | 8. WELL NAME and NUMBER: NBU 1022-11C4CS |
| 2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. | | 9. API NUMBER: 43047518180000 |
| 3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 | PHONE NUMBER: 720 929-6511 | 9. FIELD and POOL or WILDCAT: NATURAL BUTTES |
| 4. LOCATION OF WELL FOOTAGES AT SURFACE: 1651 FNL 2625 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNE Section: 11 Township: 10.0S Range: 22.0E 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 | |
| <input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 2/17/2012 | <input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER | |
| | <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/> | |
| 12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. | | |
| MIRU ROTARY RIG. FINISHED DRILLING FROM 2,235' TO 8,631' ON FEBRUARY 15, 2012. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED ENSIGN 146 RIG ON FEBRUARY 17, 2012 @ 04:00 HRS. 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 February 29, 2012 |
| NAME (PLEASE PRINT) Jaime Scharnowske | PHONE NUMBER 720 929-6304 | TITLE Regulatory Analyst |
| SIGNATURE N/A | | DATE 2/19/2012 |

| | | |
|---|--|--|
| STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING | | FORM 9 |
| 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. | | 5. LEASE DESIGNATION AND SERIAL NUMBER: UO1197A-ST |
| 1. TYPE OF WELL Gas Well | | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: |
| 2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. | | 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES |
| 3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 | | 8. WELL NAME and NUMBER: NBU 1022-11C4CS |
| 4. LOCATION OF WELL FOOTAGES AT SURFACE: 1651 FNL 2625 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNE Section: 11 Township: 10.0S Range: 22.0E Meridian: S | | 9. API NUMBER: 43047518180000 |
| PHONE NUMBER: 720 929-6511 | | 9. FIELD and POOL or WILDCAT: NATURAL BUTTES |
| COUNTY: UINTAH | | STATE: UTAH |
| 11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA | | |
| TYPE OF SUBMISSION | TYPE OF ACTION | |
| <input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: | <input type="checkbox"/> ACIDIZE | |
| <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: | <input type="checkbox"/> ALTER CASING | |
| <input type="checkbox"/> SPUD REPORT Date of Spud: | <input type="checkbox"/> CASING REPAIR | |
| <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 7/6/2012 | <input type="checkbox"/> CHANGE TO PREVIOUS PLANS | |
| | <input type="checkbox"/> CHANGE TUBING | |
| | <input type="checkbox"/> CHANGE WELL STATUS | |
| | <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS | |
| | <input type="checkbox"/> CHANGE WELL NAME | |
| | <input type="checkbox"/> DEEPEN | |
| | <input type="checkbox"/> FRACTURE TREAT | |
| | <input type="checkbox"/> OPERATOR CHANGE | |
| | <input type="checkbox"/> PLUG AND ABANDON | |
| | <input type="checkbox"/> PRODUCTION START OR RESUME | |
| | <input type="checkbox"/> RECLAMATION OF WELL SITE | |
| | <input type="checkbox"/> REPERFORATE CURRENT FORMATION | |
| | <input type="checkbox"/> SIDETRACK TO REPAIR WELL | |
| | <input type="checkbox"/> TUBING REPAIR | |
| | <input type="checkbox"/> VENT OR FLARE | |
| | <input type="checkbox"/> WATER SHUTOFF | |
| | <input type="checkbox"/> SI TA STATUS EXTENSION | |
| | <input type="checkbox"/> WILDCAT WELL DETERMINATION | |
| | <input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/> | |
| 12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. <p style="text-align: center;">No activity for the month of June 2012. Well TD at 8,630'.</p> <div style="text-align: right; margin-top: 20px;"> <p>Accepted by the Utah Division of Oil, Gas and Mining</p> <p>FOR RECORD ONLY</p> <p>July 09, 2012</p> </div> | | |
| NAME (PLEASE PRINT) Jaime Scharnowske | PHONE NUMBER 720 929-6304 | TITLE Regularatory Analyst |
| SIGNATURE N/A | DATE 7/6/2012 | |

| | |
|--|--|
| STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING | FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UO1197A-ST |
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| 2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. | 9. API NUMBER: 43047518180000 |
| 3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 | PHONE NUMBER: 720 929-6511 9. FIELD and POOL or WILDCAT: NATURAL BUTTES |
| 4. LOCATION OF WELL FOOTAGES AT SURFACE: 1651 FNL 2625 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNE Section: 11 Township: 10.0S Range: 22.0E 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 | | |
|---|--|---|---|
| <input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: | <input type="checkbox"/> ACIDIZE | <input type="checkbox"/> ALTER CASING | <input type="checkbox"/> CASING REPAIR |
| <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: | <input type="checkbox"/> CHANGE TO PREVIOUS PLANS | <input type="checkbox"/> CHANGE TUBING | <input type="checkbox"/> CHANGE WELL NAME |
| <input type="checkbox"/> SPUD REPORT Date of Spud: | <input type="checkbox"/> CHANGE WELL STATUS | <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS | <input type="checkbox"/> CONVERT WELL TYPE |
| <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 8/3/2012 | <input type="checkbox"/> DEEPEN | <input type="checkbox"/> FRACTURE TREAT | <input type="checkbox"/> NEW CONSTRUCTION |
| | <input type="checkbox"/> OPERATOR CHANGE | <input type="checkbox"/> PLUG AND ABANDON | <input type="checkbox"/> PLUG BACK |
| | <input type="checkbox"/> PRODUCTION START OR RESUME | <input type="checkbox"/> RECLAMATION OF WELL SITE | <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION |
| | <input type="checkbox"/> REPERFORATE CURRENT FORMATION | <input type="checkbox"/> SIDETRACK TO REPAIR WELL | <input type="checkbox"/> TEMPORARY ABANDON |
| | <input type="checkbox"/> TUBING REPAIR | <input type="checkbox"/> VENT OR FLARE | <input type="checkbox"/> WATER DISPOSAL |
| | <input type="checkbox"/> WATER SHUTOFF | <input type="checkbox"/> SI TA STATUS EXTENSION | <input type="checkbox"/> APD EXTENSION |
| | <input type="checkbox"/> WILDCAT WELL DETERMINATION | <input type="checkbox"/> OTHER | OTHER: <input style="width: 100px;" type="text"/> |

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

Well was completed, finishing well completion report.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 August 07, 2012**

| | | |
|--|------------------------------|-------------------------------|
| NAME (PLEASE PRINT) Jaime Scharnowske | PHONE NUMBER 720 929-6304 | TITLE Regularatory Analyst |
| SIGNATURE N/A | DATE 8/3/2012 | |

| | |
|--|--|
| STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING | FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UO1197A-ST |
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| 4. LOCATION OF WELL FOOTAGES AT SURFACE: 1651 FNL 2625 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNE Section: 11 Township: 10.0S Range: 22.0E 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 | | |
|---|--|---|---|
| <input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: | <input type="checkbox"/> ACIDIZE | <input type="checkbox"/> ALTER CASING | <input type="checkbox"/> CASING REPAIR |
| <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: | <input type="checkbox"/> CHANGE TO PREVIOUS PLANS | <input type="checkbox"/> CHANGE TUBING | <input type="checkbox"/> CHANGE WELL NAME |
| <input type="checkbox"/> SPUD REPORT Date of Spud: | <input type="checkbox"/> CHANGE WELL STATUS | <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS | <input type="checkbox"/> CONVERT WELL TYPE |
| <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 5/3/2012 | <input type="checkbox"/> DEEPEN | <input type="checkbox"/> FRACTURE TREAT | <input type="checkbox"/> NEW CONSTRUCTION |
| | <input type="checkbox"/> OPERATOR CHANGE | <input type="checkbox"/> PLUG AND ABANDON | <input type="checkbox"/> PLUG BACK |
| | <input checked="" type="checkbox"/> PRODUCTION START OR RESUME | <input type="checkbox"/> RECLAMATION OF WELL SITE | <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION |
| | <input type="checkbox"/> REPERFORATE CURRENT FORMATION | <input type="checkbox"/> SIDETRACK TO REPAIR WELL | <input type="checkbox"/> TEMPORARY ABANDON |
| | <input type="checkbox"/> TUBING REPAIR | <input type="checkbox"/> VENT OR FLARE | <input type="checkbox"/> WATER DISPOSAL |
| | <input type="checkbox"/> WATER SHUTOFF | <input type="checkbox"/> SI TA STATUS EXTENSION | <input type="checkbox"/> APD EXTENSION |
| | <input type="checkbox"/> WILDCAT WELL DETERMINATION | <input type="checkbox"/> OTHER | OTHER: <input style="width: 100px;" type="text"/> |

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

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 5/3/2012. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 August 07, 2012

| | | |
|------------------------------------|------------------------------|-------------------------------|
| NAME (PLEASE PRINT) Cara Mahler | PHONE NUMBER 720 929-6029 | TITLE Regulatory Analyst I |
| SIGNATURE N/A | DATE 8/6/2012 | |

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

AMENDED REPORT FORM 8
(highlight changes)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL GAS WELL DRY OTHER _____

b. TYPE OF WORK: NEW WELL HORIZ. LATS. DEEP-EN RE-ENTRY DIFF. RESVR. OTHER _____

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

3. ADDRESS OF OPERATOR: P.O. BOX 173779 CITY DENVER STATE CO ZIP 80217 PHONE NUMBER: (720) 929-6000

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: SWNE 1651 FNL 2625 FEL S11,T10S,R22E
AT TOP PRODUCING INTERVAL REPORTED BELOW: NENW 1059 FNL 2130 FWL S11,T10S,R22E
AT TOTAL DEPTH: NENW 1088 FNL 2159 FWL S11,T10S,R22E *BHL by HSM*

14. DATE SPUDDED: 1/14/2012 15. DATE T.D. REACHED: 2/15/2012 16. DATE COMPLETED: 5/3/2012 ABANDONED READY TO PRODUCE 17. ELEVATIONS (DF, RKB, RT, GL): 5031 GL

18. TOTAL DEPTH: MD 8,631 TVD 8,505 19. PLUG BACK T.D.: MD 8,571 TVD 8,445 20. IF MULTIPLE COMPLETIONS, HOW MANY? * 21. DEPTH BRIDGE MD PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
CBL/CM/GR/CCL

23. WAS WELL CORED? NO YES (Submit analysis)
WAS DST RUN? NO YES (Submit report)
DIRECTIONAL SURVEY? NO YES (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

| HOLE SIZE | SIZE/GRADE | WEIGHT (#/ft.) | TOP (MD) | BOTTOM (MD) | STAGE CEMENTER DEPTH | CEMENT TYPE & NO. OF SACKS | SLURRY VOLUME (BBL) | CEMENT TOP ** | AMOUNT PULLED |
|-----------|--------------|----------------|----------|-------------|----------------------|----------------------------|---------------------|---------------|---------------|
| 20" | 14" STL | 36.7# | 0 | 40 | | 28 | | | |
| 11" | 8 5/8" IJ-55 | 28# | 0 | 2,219 | | 600 | | 0 | |
| 7 7/8" | 4 1/2" I-80 | 11.6# | 0 | 8,615 | | 1,450 | | 1084 | |
| | | | | | | | | | |
| | | | | | | | | | |

25. TUBING RECORD

| SIZE | DEPTH SET (MD) | PACKER SET (MD) | SIZE | DEPTH SET (MD) | PACKER SET (MD) | SIZE | DEPTH SET (MD) | PACKER SET (MD) |
|--------|----------------|-----------------|------|----------------|-----------------|------|----------------|-----------------|
| 2 3/8" | 7,976 | | | | | | | |

26. PRODUCING INTERVALS

| FORMATION NAME | TOP (MD) | BOTTOM (MD) | TOP (TVD) | BOTTOM (TVD) | INTERVAL (Top/Bot - MD) | SIZE | NO. HOLES | PERFORATION STATUS |
|----------------|----------|-------------|-----------|--------------|-------------------------|------|-----------|--|
| (A) MESAVERDE | 6,422 | 8,228 | | | 6,422 8,228 | 0.36 | 163 | Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/> |
| (B) | | | | | | | | Open <input type="checkbox"/> Squeezed <input type="checkbox"/> |
| (C) | | | | | | | | Open <input type="checkbox"/> Squeezed <input type="checkbox"/> |
| (D) | | | | | | | | Open <input type="checkbox"/> Squeezed <input type="checkbox"/> |

27. PERFORATION RECORD

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

| DEPTH INTERVAL | AMOUNT AND TYPE OF MATERIAL |
|----------------|--|
| 6422-8228 | PUMP 8618 BBLs SLICK H2O & 177,192 LBS 30/50 OTTAWA SAND |
| | 7 STAGES |

29. ENCLOSED ATTACHMENTS: 30. WELL STATUS:

ELECTRICAL/MECHANICAL LOGS GEOLOGIC REPORT DST REPORT DIRECTIONAL SURVEY
 SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION CORE ANALYSIS OTHER: _____

PROD

RECEIVED

31. INITIAL PRODUCTION

INTERVAL A (As shown in Item #26)

| | | | | | | | | | | |
|----------------------------------|----------------------|-------------------------|-------------|---------------------|---------------|---------------------------|-----------------|---------------------|-------------------|--------------------------|
| DATE FIRST PRODUCED: 5/3/2012 | | TEST DATE: 5/14/2012 | | HOURS TESTED: 24 | | TEST PRODUCTION RATES: → | OIL - BBL: 0 | GAS - MCF: 2,943 | WATER - BBL: 0 | PROD. METHOD: FLOWING |
| CHOKE SIZE: 18/64 | TBG. PRESS. 1,462 | CSG. PRESS. 1,832 | API GRAVITY | BTU - GAS | GAS/OIL RATIO | 24 HR PRODUCTION RATES: → | OIL - BBL: 0 | GAS - MCF: 2,943 | WATER - BBL: 0 | INTERVAL STATUS: PROD |

INTERVAL B (As shown in Item #26)

| | | | | | | | | | | |
|----------------------|-------------|-------------|-------------|---------------|---------------|---------------------------|------------|------------|--------------|------------------|
| DATE FIRST PRODUCED: | | TEST DATE: | | HOURS TESTED: | | TEST PRODUCTION RATES: → | OIL - BBL: | GAS - MCF: | WATER - BBL: | PROD. METHOD: |
| CHOKE SIZE: | TBG. PRESS. | CSG. PRESS. | API GRAVITY | BTU - GAS | GAS/OIL RATIO | 24 HR PRODUCTION RATES: → | OIL - BBL: | GAS - MCF: | WATER - BBL: | INTERVAL STATUS: |

INTERVAL C (As shown in Item #26)

| | | | | | | | | | | |
|----------------------|-------------|-------------|-------------|---------------|---------------|---------------------------|------------|------------|--------------|------------------|
| DATE FIRST PRODUCED: | | TEST DATE: | | HOURS TESTED: | | TEST PRODUCTION RATES: → | OIL - BBL: | GAS - MCF: | WATER - BBL: | PROD. METHOD: |
| CHOKE SIZE: | TBG. PRESS. | CSG. PRESS. | API GRAVITY | BTU - GAS | GAS/OIL RATIO | 24 HR PRODUCTION RATES: → | OIL - BBL: | GAS - MCF: | WATER - BBL: | INTERVAL STATUS: |

INTERVAL D (As shown in Item #26)

| | | | | | | | | | | |
|----------------------|-------------|-------------|-------------|---------------|---------------|---------------------------|------------|------------|--------------|------------------|
| DATE FIRST PRODUCED: | | TEST DATE: | | HOURS TESTED: | | TEST PRODUCTION RATES: → | OIL - BBL: | GAS - MCF: | WATER - BBL: | PROD. METHOD: |
| CHOKE SIZE: | TBG. PRESS. | CSG. PRESS. | API GRAVITY | BTU - GAS | GAS/OIL RATIO | 24 HR PRODUCTION RATES: → | OIL - BBL: | GAS - MCF: | WATER - BBL: | INTERVAL STATUS: |

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

33. 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.

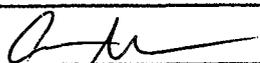
34. FORMATION (Log) MARKERS:

| Formation | Top (MD) | Bottom (MD) | Descriptions, Contents, etc. | Name | Top (Measured Depth) |
|-----------|----------|-------------|------------------------------|-------------|----------------------|
| | | | | GREEN RIVER | 896 |
| | | | | BIRD'S NEST | 1,256 |
| | | | | MAHOGANY | 1,644 |
| | | | | WASATCH | 4,188 |
| | | | | MESAVERDE | 6,402 |

35. ADDITIONAL REMARKS (Include plugging procedure)

The first 160' of the surface hole was drilled with a 12 1/4" bit. The remainder of surface hole was drilled with an 11" bit. DQX csg was run from surface to 5051'; LTC csg was run from 5051' to 8615'. Attached is the chronological well history, perforation report & final survey.

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

NAME (PLEASE PRINT) CARA MAHLER TITLE REGULATORY ANALYST
 SIGNATURE  DATE 8/10/2012

This report must be submitted within 30 days of

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

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

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

Send to: Utah Division of Oil, Gas and Mining
 1594 West North Temple, Suite 1210
 Box 145801
 Salt Lake City, Utah 84114-5801

Phone: 801-538-5340
 Fax: 801-359-3940

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-11C4CS ORANGE

Spud Date: 2/1/2012

Project: UTAH-UINTAH

Site: NBU 1022-11G2 PAD

Rig Name No: ENSIGN 146/146, CAPSTAR 310/310

Event: DRILLING

Start Date: 11/22/2011

End Date: 2/17/2012

Active Datum: RKB @5,045.00usft (above Mean Sea Level)

UWI: SW/NE/0/10/S/22/E/11/0/0/26/PM/N/1651/E/0/2625/0/0

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|-----------|----------------|---------------|--------|------|----------|-----|----------------|---|
| 2/1/2012 | 15:00 - 17:00 | 2.00 | DRLSUR | 01 | C | P | | CONDUCT PJSM SKID RIG TO WELL # 5/6 |
| | 17:00 - 18:00 | 1.00 | DRLSUR | 14 | A | P | | WELD ON CONDUCTOR AND RIG UP FLOW LINE PREPARE TO SPUD |
| | 18:00 - 22:30 | 4.50 | DRLSUR | 08 | A | Z | | CHANGE OUT DRIVE LINE ON RIG |
| | 22:30 - 23:00 | 0.50 | DRLSUR | 06 | A | P | | PICK UP MUD MOTOR M/U BIT AND SHOCK SUB |
| | 23:00 - 0:00 | 1.00 | DRLSUR | 02 | C | P | | SPUD 12.25" HOLE DRILL F/ 40' - 160' WOB 8-20 ROT 45-55 GPM 340-680 DHR 122 NO LOSSES |
| 2/2/2012 | 0:00 - 2:30 | 2.50 | DRLSUR | 06 | A | P | | TOOH P/U DIRECTIONAL TOOLS AND 11" BIT INSTALL MWD TOOL AND ORIENT TO MUD MOTOR SLIP AND CUT 32' OF DRILL LINE |
| | 2:30 - 3:00 | 0.50 | DRLSUR | 07 | C | P | | |
| | 3:00 - 13:30 | 10.50 | DRLSUR | 02 | C | P | | DRILL 11" HOLE F/ 160' - 1501' WOB 22-28 ROT 45-55 DHR 122 GPM 680 AIR ON AT 1150 AT 950 CFM AVE ROP 127 FT HR |
| | 13:30 - 14:00 | 0.50 | DRLSUR | 07 | A | P | | DAILY RIG SERVICE |
| | 14:00 - 21:00 | 7.00 | DRLSUR | 02 | C | P | | DRILL 11" HOLE F/ 1501' 2230' T.D. WOB 22-28 ROT 45-55 DHR 122 GPM 680 AIR ON AT 1150 AT 950 CFM AVE ROP 118 FT HR LAST SURVEY 19.26 DEG 314.97 AZI 5' LEFT 3' HIGH SLIDE 30% |
| | 21:00 - 21:30 | 0.50 | DRLSUR | 05 | C | P | | CIRCULATE AND CONDITION MUD PRIOR TO LLDS |
| | 21:30 - 0:00 | 2.50 | DRLSUR | 06 | A | P | | TOOH LAYING DOWN DRILL STRING BREAK BIT AND MUD MOTOR L/D MWD TOOL AND DIRECTIONAL TOOLS |
| 2/3/2012 | 0:00 - 1:30 | 1.50 | DRLSUR | 12 | C | P | | RIG UP AND RUN 50JOINTS OF 8.625" 28# J55 SURFACE CASING SHOE AT 2215' BAFFLE AT 2171' |
| | 1:30 - 2:30 | 1.00 | DRLSUR | 05 | D | P | | CIRCULATE AND CONDITION MUD RIG UP CEMENTERS |
| | 2:30 - 3:30 | 1.00 | DRLSUR | 12 | E | P | | PRESSURE TEST LINES TO 1500 PSI. PUMP 20 BBLs OF WATER AHEAD. PUMP 20 BBLs OF 8.3# GEL WATER AHEAD. PUMP (300 SX) 61.4 BBLs OF 15.8# 1.15 YD 5 GAL/SK PREMIUM CEMENT. DROP PLUG ON FLY. DISPLACE W/ 138 BBLs OF H2O. FINAL LIFT OF 250 PSI AT 4 BBL/MIN. BUMP PLUG W/550 PSI HELD FOR 1 MIN. FLOAT DID HOLD. |
| | 3:30 - 4:00 | 0.50 | DRLSUR | 14 | A | P | | CUT CONDUCTOR AND HANG OFF CASING ENSURING CASING IS CENTERED IN MIDDLE OF CONDUCTOR |
| | 4:00 - 4:30 | 0.50 | DRLSUR | 12 | E | P | | PUMP (300 SX) 26 BBLs OF SAME TAIL CEMENT W/ 4% CALC. (2 TOPOUTS)DOWN BACKSIDE. WAIT 1 HOURS, IN BETWEEN EACH TOPOUT, SHUT DOWN AND CLEAN TRUCK. NO CEMENT TO SURFACE. WILL TOP OUT ON NEXT JOB RELEASE RIG @ 0430 |
| 2/12/2012 | 9:00 - 10:00 | 1.00 | RDMO | 01 | C | P | | RDRT, SKID RIG, RURT |
| | 10:00 - 11:00 | 1.00 | DRLPRO | 14 | A | P | | N/UP BOPE |
| | 11:00 - 14:30 | 3.50 | DRLPRO | 15 | A | P | | TEST BOPE, RAMS, CHOKE, CHOKE LINE, MANUAL VALVES, FLOOR VALVES, HCR & IBOP 250 LOW 5000 HIGH, ANNULAR 250 LOW 2500 HIGH (NO TEST), CASING 1500 (ANNULAR WOULD NOT CLOSE OR OPEN) |

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-11C4CS ORANGE

Spud Date: 2/1/2012

Project: UTAH-UINTAH

Site: NBU 1022-11G2 PAD

Rig Name No: ENSIGN 146/146, CAPSTAR 310/310

Event: DRILLING

Start Date: 11/22/2011

End Date: 2/17/2012

Active Datum: RKB @5,045.00usft (above Mean Sea Level)

UWI: SW/NE/010/S/22/E/11/0/0/26/PM/N/1651/E/0/2625/0/0

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|-----------|----------------|---------------|--------|------|----------|-----|----------------|--|
| | 14:30 - 16:00 | 1.50 | DRLPRO | 08 | C | Z | | RESET PRESSURE ON ANNULAR - PRESSURE SET TO LOW TO OPEN OR CLOSE ANNULAR |
| | 16:00 - 16:30 | 0.50 | DRLPRO | 15 | A | P | | RE-TEST ANNULAR 250 LOW 2500 HIGH |
| | 16:30 - 17:00 | 0.50 | DRLPRO | 14 | B | P | | SET WEARBUSHING |
| | 17:00 - 17:30 | 0.50 | DRLPRO | 08 | B | Z | | CHANGE OUT SAVER SUB |
| | 17:30 - 20:00 | 2.50 | DRLPRO | 06 | A | P | | P/UP SMITH BIT MDI616, HUNTING MM 1.50 deg .21 RPG, RITH DIRECTIONAL BHA SCRIBE & ORIENT, RIH TAG CEMENT @ 2100' |
| | 20:00 - 20:30 | 0.50 | DRLPRO | 07 | B | P | | LEVEL DERRICK - INSTALL ROTATING HEAD |
| | 20:30 - 21:30 | 1.00 | DRLPRO | 02 | F | P | | DRILL CEMENT, FE & RATHOLE F/2100' TO 2235' |
| | 21:30 - 0:00 | 2.50 | DRLPRO | 02 | D | P | | DRILL/SLIDE F/2235' TO 2580' (345' @ 138fph) MW 8.4, VIS 28, WOB 20, RPM 45, MM RPM 115, TQ 5/6, SPM 112, GPM 550, PSI OFF/ON 1500/1850, PU 130, SO 100, ROT 111, SLIDE 2272 2282, 2317, 2327, 2363 2371, 2408 2423, 2453 2461, 2499 2515, 2544 2556 (SLIDE 79'1 hr 40% - ROT 266'1.5 hrs 60%) |
| 2/13/2012 | 0:00 - 13:30 | 13.50 | DRLPRO | 02 | D | P | | DRILL/SLIDE F/2580' TO 4674' (2094' @ 155fph) MW 8.4, VIS 28, WOB 20, RPM 45, MM RPM 115, TQ 8/10, SPM 112, GPM 550, PSI OFF/ON 1700/2150, PU 162, SO 112, ROT 135, SLIDE 2589 2597, 2634 2642, 2680 2691, 3042 3050, 3224 3234, 3315 3325, 3405 3415, 3496 3506, 3587 3597, 3677 3689, 3858 3870, 4402 4417 (SLIDE 203'3 hrs 22% - ROT 1891'10.52 hrs 78%) |
| | 13:30 - 14:00 | 0.50 | DRLPRO | 07 | A | P | | RIH SER |
| | 14:00 - 0:00 | 10.00 | DRLPRO | 02 | D | P | | DRILL/SLIDE F/4674' TO 6200' (1526' @ 152fph) MW 8.4, VIS 28, WOB 20, RPM, 45, MM RPM 115, TQ 8/10, SPM 112, GPM 550, PSI OFF/ON 1525/1975, PU 240, SO 140, ROT 169, SLIDE 5128 5143, 5582 5602, 6035 6055 (55'1 hr 10% - ROT 1471'9 hrs 90%) |
| 2/14/2012 | 0:00 - 16:30 | 16.50 | DRLPRO | 02 | D | P | | DRILL/SLIDE F/6200' TO 7531' (1333' @ 80fph) MW 8.4, 11.0, VIS 28/36, RPM 35/45, MM RPM 105/115, TQ 9/12, SPM 102/112, PSI OFF/ON 1600/1925, PU 215, SO 153, ROT 175 (ROT 100%) MUD UP SYSTEM @ 7450' |
| | 16:30 - 18:00 | 1.50 | DRLPRO | 05 | A | P | | INSPECT SURFACE EQUIPMENT & LINES FOR PSI LOSS, RAISE MW F/10.7 TO 11.0 PREPARE TO TRIP OUT FOR PSI LOSS |
| | 18:00 - 21:30 | 3.50 | DRLPRO | 06 | G | Z | | POOH FOR PSI LOSS - BACKREAM F/7531' TO 5650' - CONTINUE POOH TO 4267' - FOUND WASH IN DRILL PIPE SLIP AREA - L/OUT WASHED JOINT #72 - CIRC THRU STRING VERIFY PRESSURE |
| | 21:30 - 23:30 | 2.00 | DRLPRO | 06 | G | Z | | RIH F/4267' TO 7500' - WASH F/7500' TO 7531' |
| | 23:30 - 0:00 | 0.50 | DRLPRO | 02 | D | P | | DRILL F/7531' TO 7585' (54') MW 11.0, VIS 36, WOB 20, RPM 35, MM RPM 105, TQ 8/12, SPM 102, GPM 500, PSI OFF/ON 2300/2650, PU 223, SO 159, ROT 186 (ROT 100%) |

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-11C4CS ORANGE

Spud Date: 2/1/2012

Project: UTAH-UINTAH

Site: NBU 1022-11G2 PAD

Rig Name No: ENSIGN 146/146, CAPSTAR 310/310

Event: DRILLING

Start Date: 11/22/2011

End Date: 2/17/2012

Active Datum: RKB @5,045.00usft (above Mean Sea Level)

UWI: SW/NE/0/10/S/22/E/11/0/0/26/PM/N/1651/E/0/2625/0/0

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|-----------|----------------|---------------|--------|------|----------|-----|----------------|--|
| 2/15/2012 | 0:00 - 13:30 | 13.50 | DRLPRO | | | | | DRILL 7585' TO 8631' FOR A TOTAL OF (1045')@ 77 FEET PER HR. MW 12.1, VIS 37, WOB 20, RPM 35, MM RPM 105, TQ 8/12, SPM 102, GPM 500, PSI OFF/ON 2500/2750 PU 235, SO 180, ROT 192 (ROT 100%) |
| | 13:30 - 15:30 | 2.00 | DRLPRO | 05 | A | P | | CIRC BTM UP 5-8' FLAIR RAISED MW FROM 11.8 TO 12.1 MW. |
| | 15:30 - 16:00 | 0.50 | DRLPRO | 07 | A | P | | SERVICE RIG TOP DRIVE BLOCKS CROWN. INSPECT BREAKS. |
| | 16:00 - 21:00 | 5.00 | DRLPRO | 06 | E | P | | WIPER TRIP TO SHOE (PUMPED OUT F/ 8630 TO 6100' PUMP PILL TRIP OUT TO 4140' |
| | 21:00 - 23:30 | 2.50 | DRLPRO | 06 | E | P | | T.I.H ON WIPER TRIP WASH OUT TIGHT SPOTS @ 5831 & 6370 CONT T.I.H & WASH 10' TO BTM |
| | 23:30 - 0:00 | 0.50 | DRLPRO | 05 | B | P | | CIRC BOT UP GAS 30' + FLAIR / RAISE MUD WT FROM 12.2 TO 12.3 |
| 2/16/2012 | 0:00 - 2:00 | 2.00 | DRLPRO | 05 | B | P | | CIRC BOT UP GAS 30' + FLAIR / RAISE MUD WT FROM 12.2 TO 12.3 |
| | 2:00 - 9:30 | 7.50 | DRLPRO | 06 | E | P | | TRIP OUT FOR CASING (PUMPED OUT F/ 8630 TO 6590' PUMP PILL TRIP OUT HPJSM WITH DIR HANDS LAY DOWN DIR TOOLS M.M & BIT. PULL WEAR BUSHING |
| | 9:30 - 10:00 | 0.50 | DRLPRO | 14 | B | P | | |
| | 10:00 - 21:30 | 11.50 | DRLPRO | 12 | C | P | | HPJSM R/U CASERS AND RUN 4.5 CASING RUN 204 JTS PLUS TWO MARKERS & SHOE SET @ 8615.33 & F/C @8572.04 |
| | 21:30 - 23:00 | 1.50 | DRLPRO | 05 | D | P | | CIRC BTM UP W/ 45+ FLARE CIRC THROUGH GAS BUSTER |
| | 23:00 - 0:00 | 1.00 | DRLPRO | 12 | E | P | | HPJSM, R/UP BJ & CEMENT 4.5" PROD CASING, TEST LINES 4300 PSI, PUMP 25 BBLs FRESH WATER, 500 SKS LEAD 13 PPG 1.77 YIELD, TAIL 950 SKS 14.3 PPG, 1.31 YIELD, DROPPED PLUG & DISPLACED W/ 134 BBLs FRESH WATER W/0.1 gal/bbl CLAYFIX II & 0.01 gal/bbl ALDACIDE G BUMPED PLUG @ 2000 PSI - FLOATS HELD, GOOD RETURNS DURING CMT JOB // NO CMT TO SURFACE DISP./DIFF PSI WAS 2400. / H2O SPACER TO TO THE PIT WITH CELLO FLAKE. WITH 1.5 bbls BACK. |
| 2/17/2012 | 0:00 - 1:30 | 1.50 | DRLPRO | 12 | E | P | | FINISHED CEMENT JOB 4.5" PROD CASING, TEST LINES 4300 PSI, PUMP 25 BBLs FRESH WATER, 500 SKS LEAD 13 PPG 1.77 YIELD, TAIL 950 SKS 14.3 PPG, 1.31 YIELD, DROPPED PLUG & DISPLACED W/ 134 BBLs FRESH WATER W/0.1 gal/bbl CLAYFIX II & 0.01 gal/bbl ALDACIDE G BUMPED PLUG @ 2000 PSI - FLOATS HELD, GOOD RETURNS DURING CMT JOB // NO CMT TO SURFACE DISP./DIFF PSI WAS 2400. / H2O SPACER TO TO THE PIT WITH CELLO FLAKE. WITH 1.5 bbls BACK. |

US ROCKIES REGION
Operation Summary Report

| | | | |
|--|--|---|--|
| Well: NBU 1022-11C4CS ORANGE | | Spud Date: 2/1/2012 | |
| Project: UTAH-UINTAH | | Site: NBU 1022-11G2 PAD | Rig Name No: ENSIGN 146/146, CAPSTAR 310/310 |
| Event: DRILLING | | Start Date: 11/22/2011 | End Date: 2/17/2012 |
| Active Datum: RKB @5,045.00usft (above Mean Sea Level) | | UWI: SW/NE/0/10/S/22/E/11/0/0/26/PM/N/1651/E/0/2625/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|------|----------------|---------------|--------|------|----------|-----|----------------|---|
| | 1:30 - 4:00 | 2.50 | DRLPRO | 14 | A | P | | WASH OUT STACK & N/D SET C-22 SLIPS @ 90 K - ROUGH CUT 4.5 CASING - TRANS MUD TO UPRIGHT TANKS & RELEASED RIG @ 04:00 HRS ON 2/17/2012 |

1 General

1.1 Customer Information

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

1.2 Well/Wellbore Information

| | | | |
|--------------|---|---------------|--|
| Well | NBU 1022-11C4CS ORANGE | Wellbore No. | OH |
| Well Name | NBU 1022-11C4CS | Wellbore Name | NBU 1022-11C4CS |
| Report No. | 1 | Report Date | 4/5/2012 |
| Project | UTAH-UINTAH | Site | NBU 1022-11G2 PAD |
| Rig Name/No. | | Event | COMPLETION |
| Start Date | 4/5/2012 | End Date | 5/3/2012 |
| Spud Date | 2/1/2012 | Active Datum | RKB @5,045.00usft (above Mean Sea Level) |
| UWI | SW/NE/0/10/S/22/E/11/0/0/26/PM/N1651/E/0/2625/0/0 | | |

1.3 General

| | | | | | |
|---------------------|----------------------|-----------------|--|------------|--------------|
| Contractor | CASED HOLE SOLUTIONS | Job Method | | Supervisor | DAVE DANIELS |
| Perforated Assembly | PRODUCTION CASING | 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 | 6,422.0 (usft)-8,228.0 (usft) | Start Date/Time | 4/9/2012 12:00AM |
| No. of Intervals | 29 | End Date/Time | 4/9/2012 12:00AM |
| Total Shots | 163 | Net Perforation Interval | 51.00 (usft) |
| Avg Shot Density | 3.20 (shot/ft) | Final Surface Pressure | |
| | | Final Press Date | |

2 Intervals

2.1 Perforated Interval

| Date | Formation/Reservoir | CCL@ (usft) | CCL-T S (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 |
|------------------|---------------------|-------------|----------------|---------------|----------------|------------------------|--------------------|---------------|---------------------|----------------|-------------|----------------------------------|----------------------|-----------|--------|
| 4/9/2012 12:00AM | MESAVERDE/ | | | 6,422.0 | 6,424.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO | N |

2.1 Perforated Interval (Continued)

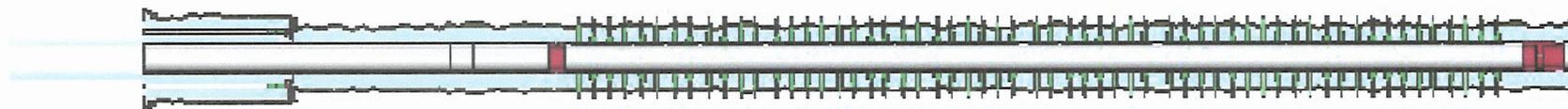
| Date | Formation/ Reservoir | CCL@ (usft) | CCL-T S (usft) | MD Top (usft) | MD Base (usft) | Shot Density (shot/ft) | Misfires/ Add. Shot | Diamete r (in) | Carr Type /Stage No | Carr Size (in) | Phasing (°) | Charge Desc /Charge Manufacturer | Charge Weight (gram) | Reason | Misrun |
|---------------------|-------------------------|----------------|----------------------|------------------|-------------------|------------------------------|------------------------|----------------------|---------------------|----------------------|----------------|-------------------------------------|----------------------------|----------------|--------|
| 4/9/2012 12:00AM | MESAVERDE/ | | | 6,459.0 | 6,461.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 6,526.0 | 6,528.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 6,612.0 | 6,614.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 6,711.0 | 6,713.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 6,760.0 | 6,762.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 6,890.0 | 6,892.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 6,920.0 | 6,922.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 6,988.0 | 6,989.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 7,026.0 | 7,027.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 7,097.0 | 7,098.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 7,189.0 | 7,190.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 7,230.0 | 7,231.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 7,254.0 | 7,255.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 7,430.0 | 7,432.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 7,510.0 | 7,512.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 7,536.0 | 7,538.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 7,576.0 | 7,578.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 7,765.0 | 7,766.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 7,812.0 | 7,813.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 7,864.0 | 7,865.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 7,900.0 | 7,901.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTIO N | |

2.1 Perforated Interval (Continued)

| Date | Formation/ Reservoir | CCL@ (usft) | CCL-T S (usft) | MD Top (usft) | MD Base (usft) | Shot Density (shot/ft) | Misfires/ Add. Shot | Diamete r (in) | Carr Type /Stage No | Carr Size (in) | Phasing (°) | Charge Desc /Charge Manufacturer | Charge Weight (gram) | Reason | Misrun |
|---------------------|-------------------------|----------------|----------------------|------------------|-------------------|------------------------------|------------------------|----------------------|---------------------|----------------------|----------------|-------------------------------------|----------------------------|----------------|--------|
| 4/9/2012 12:00AM | MESAVERDE/ | | | 7,949.0 | 7,951.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 8,002.0 | 8,004.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 8,048.0 | 8,050.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 8,080.0 | 8,082.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 8,119.0 | 8,121.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 8,176.0 | 8,179.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO N | |
| 4/9/2012 12:00AM | MESAVERDE/ | | | 8,224.0 | 8,228.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTIO N | |

3 Plots

3.1 Wellbore Schematic



**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-11C4CS ORANGE

Spud Date: 2/1/2012

Project: UTAH-UINTAH

Site: NBU 1022-11G2 PAD

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 4/5/2012

End Date: 5/3/2012

Active Datum: RKB @5,045.00usft (above Mean Sea Level)

UWI: SW/NE/0/10/S/22/E/11/0/0/26/PM/N/1651/E/0/2625/0/0

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|-----------|----------------|---------------|-------|------|----------|-----|----------------|---|
| 2/1/2012 | - | | | | | | | |
| 4/5/2012 | 9:00 - 11:00 | 2.00 | COMP | 33 | | P | | FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 06 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 25 PSI. 1ST PSI TEST T/ 7000 PSI. HELD FOR 30 MIN LOST 81 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. MOVE T/ NEXT WELL. SWIFW |
| 4/14/2012 | 7:00 - 10:00 | 3.00 | COMP | 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 |
| 4/16/2012 | 7:00 - 18:00 | 11.00 | COMP | 36 | B | P | | FRAC STG 1)WHP 554 PSI, BRK 3815 PSI @ 4.9 BPM. ISIP 2367 PSI, FG .73 CALC HOLES OPEN @ 38.2 BPM @ 5961 PSI = 61% HOLES OPEN. (13/24 HOLES OPEN) ISIP 2449 PSI, FG .74, NPI 82 PSI. MP 6299 PSI, MR 50.6 BPM, AP 5181 PSI, AR 49.6 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8151 P/U PERF AS PER PERF DESIGN. POOH. SWIFN |
| 4/17/2012 | 6:45 - 7:00 | 0.25 | COMP | 48 | | P | | HELD SAFETY MEETING: FRAC VALVES & PRESSURE |

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-11C4CS ORANGE

Spud Date: 2/1/2012

Project: UTAH-UINTAH

Site: NBU 1022-11G2 PAD

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 4/5/2012

End Date: 5/3/2012

Active Datum: RKB @5,045.00usft (above Mean Sea Level)

UWI: SW/NE/0/10/S/22/E/11/0/0/26/PM/N/1651/E/0/2625/0/0

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|------|----------------|---------------|-------|------|----------|-----|----------------|--|
| | 7:00 - 18:00 | 11.00 | COMP | 36 | B | P | | <p>FRAC STG 2)WHP 1732 PSI, BRK 3598 PSI @ 4.0 BPM. ISIP 2067 PSI, FG .70. CALC HOLES OPEN @ 50.2 BPM @ 4860 PSI = 96% HOLES OPEN. (23/24 HOLES OPEN) ISIP 2483 PSI, FG .75, NPI 416 PSI. MP 5855 PSI, MR 53.1 BPM, AP 4854 PSI, AR 50.3 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR WL</p> <p>PERF STG 3)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7981' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 3)WHP 1710 PSI, BRK 3019 PSI @ 4.7 BPM. ISIP 2120 PSI, FG .71. CALC HOLES OPEN @ 50.2 BPM @ 5156 PSI = 96% HOLES OPEN. (21/24 HOLES OPEN) ISIP 2688 PSI, FG .78, NPI 568 PSI. MP 5638 PSI, MR 50.6 BPM, AP 4792 PSI, AR 50.4 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR WL</p> <p>PERF STG 4)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7608' P/U PERF AS PER PERF DESIGN. POOH. SWIFN</p> |

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-11C4CS ORANGE

Spud Date: 2/1/2012

Project: UTAH-UINTAH

Site: NBU 1022-11G2 PAD

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 4/5/2012

End Date: 5/3/2012

Active Datum: RKB @5,045.00usft (above Mean Sea Level)

UWI: SW/NE/0/10/S/22/E/11/0/0/26/PM/N/1651/E/0/2625/0/0

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|-----------|-------------------|------------------|-------|------|-------------|-----|-------------------|---|
| 4/18/2012 | 7:00 - 18:00 | 11.00 | COMP | 36 | B | P | | <p>FRAC STG 4)WHP 1520 PSI, BRK 4592 PSI @ 4.8 BPM. ISIP 1761 PSI, FG .67. CALC HOLES OPEN @ 50.3 BPM @ 4460 PSI = 96% HOLES OPEN. (23/24 HOLES OPEN) ISIP 2182 PSI, FG .73, NPI 421 PSI. MP 5035 PSI, MR 50.7 BPM, AP 4137 PSI, AR 50.4 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 5)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7285' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 5)WHP 672 PSI, BRK 3300 PSI @ 4.7 BPM. ISIP 1610 PSI, FG .66 CALC HOLES OPEN @ 50.2 BPM @ 5714 PSI = 67% HOLES OPEN. (16/24 HOLES OPEN) ISIP 2247 PSI, FG .75 NPI 637 PSI. MP 6220 PSI, MR 50.7 BPM, AP 5318 PSI, AR 50.0 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 6)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 9552' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 6)WHP 1689 PSI, BRK 1867 PSI @ 3.0 BPM. ISIP 1687 PSI, FG .69. CALC HOLES OPEN @ 50.4 BPM @ 4555 PSI = 88% HOLES OPEN. (21/24 HOLES OPEN) ISIP 2114 PSI, FG .75, NPI 427 PSI. MP 4688 PSI, MR 51.0 BPM, AP 3910 PSI, AR 49.6 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 7)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 6644' P/U PERF AS PER PERF DESIGN. POOH. SWIFN</p> |

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-11C4CS ORANGE

Spud Date: 2/1/2012

Project: UTAH-UINTAH

Site: NBU 1022-11G2 PAD

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 4/5/2012

End Date: 5/3/2012

Active Datum: RKB @5,045.00usft (above Mean Sea Level)

UWI: SW/NE/0/10/S/22/E/11/0/0/26/PM/N/1651/E/0/2625/0/0

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|-----------|----------------|---------------|-------|------|----------|-----|----------------|---|
| 4/19/2012 | 7:00 - 15:00 | 8.00 | COMP | 36 | B | P | | <p>FRAC STG 7)WHP 700 PSI, BRK 2372 PSI @ 4.0 BPM. ISIP 1242 PSI, FG .62 CALC HOLES OPEN @ 50.0 BPM @ 4289 PSI = 82% HOLES OPEN. (20/24 HOLES OPEN) ISIP 2119 PSI, FG .76, NPI 877 PSI. MP 4702 PSI, MR 50.6 BPM, AP 3791 PSI, AR 50.3 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR WL</p> <p>RU WL PU & RIH W 4 1/2 CBP SET @ 6372' POOH RD FRAC & WL CREWS SWIFN</p> <p>TOTAL SAND= 177,192 # TOTAL CLFL= 8,618 BBLS</p> |
| 5/2/2012 | 11:30 - 12:30 | 1.00 | COMP | 30 | A | P | | <p>MOVE OVER FROM 11C4AS. RUSU. ND WH. NU BOP. RU FLOOR AND TBG EQUIP.</p> |
| | 12:30 - 17:30 | 5.00 | COMP | 31 | I | P | | <p>MU 3-7/8" BIT, POBS, AND 1.87" XN NIPPLE. RIH AS MEAS AND PU 2-3/8" L-80 TBG. TAG AT 6351' W/ 201-JTS IN. RU DRLG EQUIP. FILL TBG AND PRES TEST TO 3000#. SDFN W/ 200-JTS IN, EOT AT 6346'. JSA- MAKING CONNECTIONS.</p> |
| 5/3/2012 | 6:30 - 6:45 | 0.25 | COMP | 48 | | P | | |

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-11C4CS ORANGE

Spud Date: 2/1/2012

Project: UTAH-UINTAH

Site: NBU 1022-11G2 PAD

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 4/5/2012

End Date: 5/3/2012

Active Datum: RKB @5,045.00usft (above Mean Sea Level)

UWI: SWNE/0/10/S/22/E/11/0/0/26/PM/N/1651/E/0/2625/0/0

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|-----------|----------------|---------------|-------|------|----------|-----|----------------|--|
| | 6:45 - 11:00 | 4.25 | COMP | 44 | C | P | | EST CIRC AND D/O PLUGS. #1- C/O 20' SAND TO CBP AT 6372'. D/O IN 4 MIN. 200# INC. 0-200# FCP. RIH. #2- C/O 30' SAND TO CBP AT 6644'. D/O IN 7 MIN. 400# INC. 100-500# FCP. RIH. #3- C/O 25' SAND TO CBP AT 6952'. D/O IN 5 MIN. 500# INC. 400-600# FCP. RIH. #4- C/O 35' SAND TO CBP AT 7285'. D/O IN 5 MIN. 500# INC. 500-700# FCP. RIH. #5- C/O 30' SAND TO CBP AT 7608'. D/O IN 4 MIN. 400# INC. 500-1300# FCP. RIH. #6- C/O 30' SAND TO CBP AT 7981'. D/O IN 4 MIN. 300# INC. 600-800# FCP. RIH. #7- C/O 30' SAND TO CBP AT 8151'. D/O IN 4 MIN. 300# INC. 700-1000# FCP. RIH. PBTD AT 8571'. BTM PERF AT 8228'. C/O TO 8344' W/ 263-JTS IN (116' RATHOLE). CIRC CLEAN. RD PWR SWMVEL. POOH AS LD 12-JTS TBG. PU 4" 10K HANGER. LUB IN AND LAND 251-JTS 2-3/8" L-80 TBG W/ EOT AT 7976.23'. RD FLOOR. ND BOP. NU WH. HOOK UP FLOW LINES. POBS AT 1400#. PRES TEST FLOW LINES TO 3000#. SITP 450, SICP 2350. TURN OVER TO FBC AND SALES. RDSU. TBG DETAIL KB 14.00 4" 10K HANGER .83 251-JTS 2-3/8" L-80 7959.20 1.87" XN POBS 2.20 EOT 7976.23 34-JTS TRANSFERED FORM 11C4AS 283-JTS DELIVERED, 66-JTS RETURNED TLTR 8618, TLR 1200, LLTR 7418. WELL TURNED TO SALES@ 11:24 HR ON 5/3/2012-2160 MCFD, 2040 BWPD, FCP 2366#, FTP 2170#, 20/64" WELL IP'D ON 5/14/12 - 2943 MCFD, 0 BOPD, 0 BWPD, CP 1832#, FTP 1462#, CK 18/64, LP 323#, 24 HRS |
| | 11:00 - 11:24 | 0.40 | COMP | 50 | | | | |
| 5/4/2012 | - | | | | | | | |
| 5/14/2012 | 7:00 - | | | 50 | | | | |

Project: UTAH - UTM (feet), NAD27, Zone 12N
 Site: UINTAH_NBU 1022-11G2 Pad
 Well: NBU 1022-11C4CS
 Wellbore: NBU 1022-11C4CS
 Section:
 SHL:
 Design: NBU 1022-11C4CS (wp02)
 Latitude: 39.966203
 Longitude: -109.406405
 GL: 5031.00
 KB: 14' RKB + 5031' GL @ 5045.00ft

FORMATION TOP DETAILS

| TVDPath | MDPath | Formation |
|---------|---------|-----------------|
| 4051.00 | 4174.54 | Wasatch |
| 4651.00 | 4774.55 | top of cylinder |
| 6308.00 | 6431.57 | Mesaverde |
| 8469.00 | 8592.60 | Sego |

CASING DETAILS

| TVD | MD | Name | Size |
|---------|---------|--------|--------|
| 2140.34 | 2218.95 | 8-5/8" | 8-5/8" |

Azimuths to True North
 Magnetic North: 10.95°

Magnetic Field
 Strength: 52258.9snT
 Dip Angle: 65.84°
 Date: 2/6/2012
 Model: IGRF2010

WELL DETAILS: NBU 1022-11C4CS

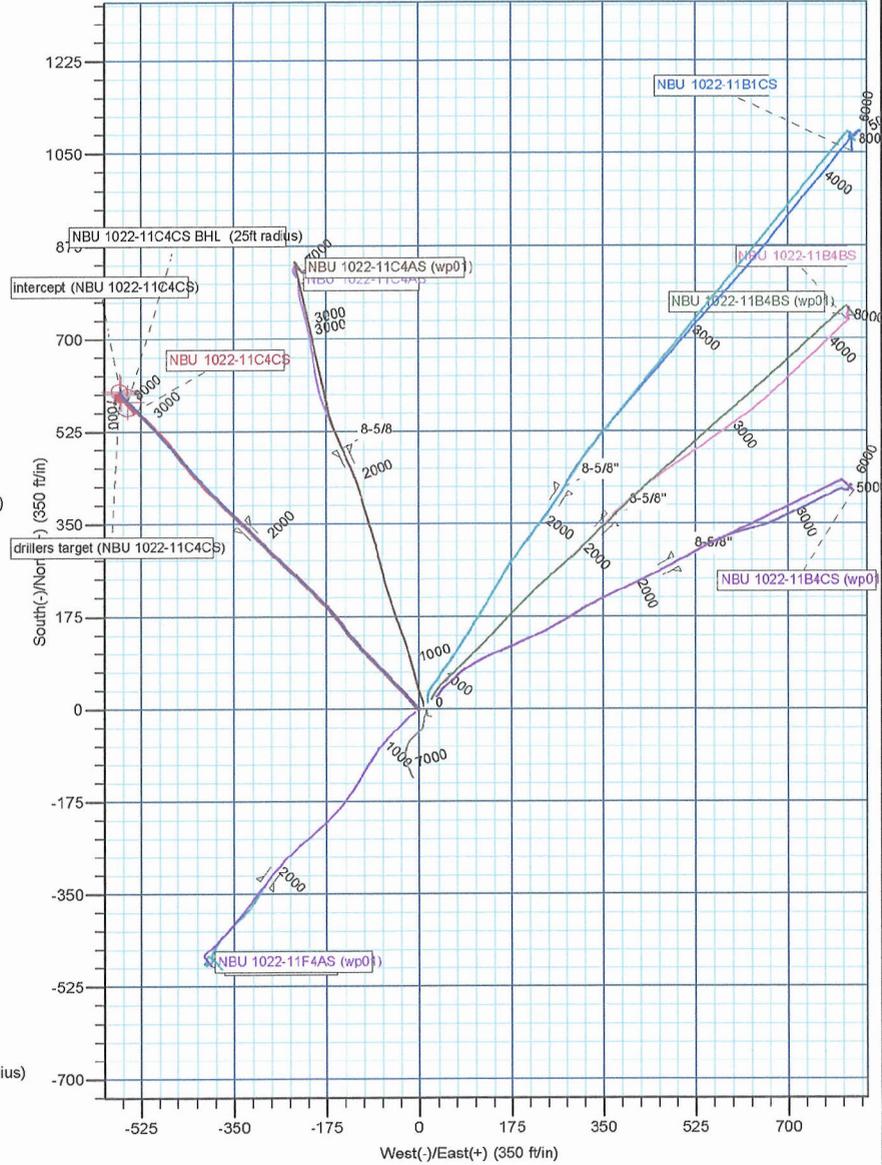
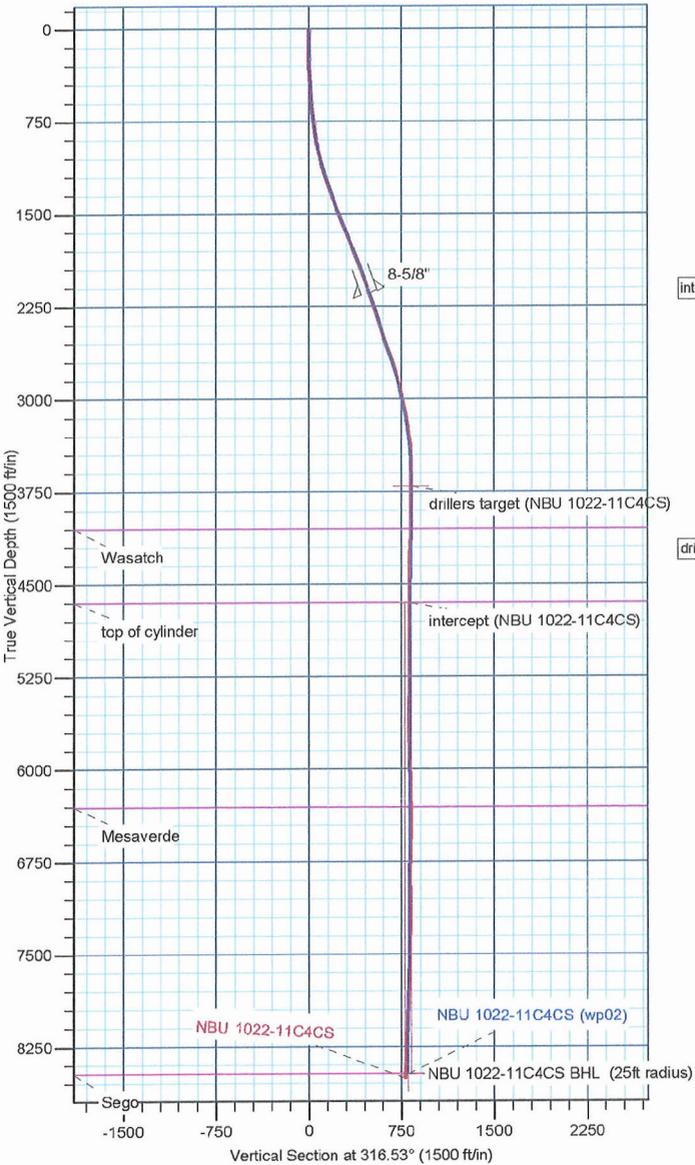
| +N/-S | +E/-W | Northing | Ground Level: Easting | 5031.00 Latitude | 39.966203 | Longitude | Slot |
|-------|-------|-------------|-----------------------|---------------------|-----------|-------------|------|
| 0.00 | 0.00 | 14517727.10 | 2086946.31 | | | -109.406405 | |

DESIGN TARGET DETAILS

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|-----------------------------------|---------|--------|---------|-------------|------------|-----------|-------------|------------------------|
| drillers target (NBU 1022-11C4CS) | 3706.00 | 600.93 | -565.70 | 14518317.82 | 2086369.97 | 39.967853 | -109.408424 | Circle (Radius: 15.00) |
| intercept (NBU 1022-11C4CS) | 4651.00 | 597.13 | -562.85 | 14518314.08 | 2086372.88 | 39.967842 | -109.408413 | Point |
| NBU 1022-11C4CS BHL (25ft radius) | 8469.00 | 580.93 | -550.70 | 14518298.09 | 2086385.32 | 39.967798 | -109.408370 | Circle (Radius: 25.00) |

SECTION DETAILS

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect |
|---------|-------|--------|---------|--------|---------|------|--------|--------|
| 2185.00 | 19.26 | 314.97 | 2108.29 | 344.03 | -328.26 | 0.00 | 0.00 | 475.51 |
| 2335.00 | 19.26 | 314.97 | 2249.90 | 378.99 | -363.27 | 0.00 | 0.00 | 524.97 |
| 2441.98 | 17.31 | 317.80 | 2351.47 | 403.26 | -386.45 | 2.00 | 156.85 | 558.52 |
| 2840.26 | 17.31 | 317.80 | 2731.70 | 491.05 | -466.06 | 0.00 | 0.00 | 677.01 |
| 3829.54 | 0.00 | 0.00 | 3706.00 | 600.93 | -565.70 | 1.75 | 180.00 | 825.30 |
| 3930.86 | 0.30 | 143.13 | 3807.32 | 600.71 | -565.54 | 0.30 | 143.13 | 825.04 |
| 8592.60 | 0.30 | 143.13 | 8469.00 | 580.93 | -550.70 | 0.00 | 0.00 | 800.47 |



US ROCKIES REGION PLANNING

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

UINTAH_NBU 1022-11G2 Pad

NBU 1022-11C4CS

NBU 1022-11C4CS

Design: NBU 1022-11C4CS

Standard Survey Report

10 August, 2012

Andarko Petroleum Corporation

Survey Report

| | |
|--|--|
| Company: US ROCKIES REGION PLANNING | Local Co-ordinate Reference: Well NBU 1022-11C4CS |
| Project: UTAH - UTM (feet), NAD27, Zone 12N | TVD Reference: 14' RKB + 5031' GL @ 5045.00ft |
| Site: UINTAH_NBU 1022-11G2 Pad | MD Reference: 14' RKB + 5031' GL @ 5045.00ft |
| Well: NBU 1022-11C4CS | North Reference: True |
| Wellbore: NBU 1022-11C4CS | Survey Calculation Method: Minimum Curvature |
| Design: NBU 1022-11C4CS | 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_NBU 1022-11G2 Pad | |
| Site Position: | Northing: 14,517,752.07 usft Latitude: 39.966270 |
| From: Lat/Long | Easting: 2,086,977.54 usft Longitude: -109.406292 |
| Position Uncertainty: 0.00 ft | Slot Radius: 13-3/16 " Grid Convergence: 1.02 ° |

| | |
|-----------------------------|--|
| Well NBU 1022-11C4CS | |
| Well Position | +N/-S 0.00 ft Northing: 14,517,727.10 usft Latitude: 39.966203 |
| | +E/-W 0.00 ft Easting: 2,086,946.31 usft Longitude: -109.406405 |
| Position Uncertainty | 0.00 ft Wellhead Elevation: ft Ground Level: 5,031.00 ft |

| | | | | | |
|---------------------------------|----------------------------|-----------------------------|------------------------------|----------------------------|-----------------------------------|
| Wellbore NBU 1022-11C4CS | | | | | |
| Magnetics | Model Name IGRF2010 | Sample Date 2/6/2012 | Declination (°) 10.95 | Dip Angle (°) 65.84 | Field Strength (nT) 52,259 |

| | | | | |
|-------------------------------|-----------------------------------|---------------------------|------------------------|-----------------------------|
| Design NBU 1022-11C4CS | | | | |
| Audit Notes: | | | | |
| Version: 1.0 | Phase: ACTUAL | Tie On Depth: 5.00 | | |
| Vertical Section: | Depth From (TVD) (ft) 5.00 | +N/-S (ft) 0.00 | +E/-W (ft) 0.00 | Direction (°) 316.27 |

| | | | | |
|-----------------------|----------------|-----------------------------|------------------|--------------------|
| Survey Program | | Date 8/10/2012 | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description |
| 242.00 | 2,185.00 | Survey #1 (NBU 1022-11C4CS) | MWD | MWD - STANDARD |
| 2,267.00 | 8,631.00 | Survey #2 (NBU 1022-11C4CS) | MWD | MWD - STANDARD |

| 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) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|
| 5.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 242.00 | 0.38 | 309.36 | 242.00 | 0.50 | -0.61 | 0.78 | 0.16 | 0.16 | 0.00 |
| 333.00 | 0.97 | 290.27 | 332.99 | 0.96 | -1.56 | 1.77 | 0.69 | 0.65 | -20.98 |
| 423.00 | 2.20 | 311.45 | 422.96 | 2.36 | -3.57 | 4.18 | 1.49 | 1.37 | 23.53 |
| 517.00 | 3.43 | 315.76 | 516.84 | 5.57 | -6.89 | 8.79 | 1.33 | 1.31 | 4.59 |
| 610.00 | 5.19 | 320.86 | 609.57 | 10.83 | -11.48 | 15.76 | 1.93 | 1.89 | 5.48 |
| 705.00 | 6.33 | 323.23 | 704.09 | 18.36 | -17.33 | 25.25 | 1.23 | 1.20 | 2.49 |
| 799.00 | 8.18 | 317.08 | 797.34 | 27.41 | -24.99 | 37.08 | 2.13 | 1.97 | -6.54 |
| 893.00 | 9.85 | 316.02 | 890.17 | 38.09 | -35.13 | 51.80 | 1.79 | 1.78 | -1.13 |
| 987.00 | 12.40 | 313.83 | 982.40 | 50.87 | -47.99 | 69.93 | 2.75 | 2.71 | -2.33 |

Andarko Petroleum Corporation

Survey Report

| | | | |
|------------------|------------------------------------|-------------------------------------|--------------------------------|
| Company: | US ROCKIES REGION PLANNING | Local Co-ordinate Reference: | Well NBU 1022-11C4CS |
| Project: | UTAH - UTM (feet), NAD27, Zone 12N | TVD Reference: | 14' RKB + 5031' GL @ 5045.00ft |
| Site: | UINTAH_NBU 1022-11G2 Pad | MD Reference: | 14' RKB + 5031' GL @ 5045.00ft |
| Well: | NBU 1022-11C4CS | North Reference: | True |
| Wellbore: | NBU 1022-11C4CS | Survey Calculation Method: | Minimum Curvature |
| Design: | NBU 1022-11C4CS | 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) |
|---------------------------|--------------------|----------------|---------------------------|---------------|---------------|-----------------------------|-------------------------------|------------------------------|-----------------------------|
| 1,080.00 | 15.21 | 315.50 | 1,072.71 | 66.49 | -63.75 | 92.11 | 3.05 | 3.02 | 1.80 |
| 1,172.00 | 18.29 | 317.08 | 1,160.79 | 85.67 | -82.04 | 118.62 | 3.38 | 3.35 | 1.72 |
| 1,267.00 | 19.26 | 314.62 | 1,250.74 | 107.59 | -103.35 | 149.19 | 1.32 | 1.02 | -2.59 |
| 1,361.00 | 18.55 | 319.89 | 1,339.67 | 129.92 | -124.02 | 179.61 | 1.97 | -0.76 | 5.61 |
| 1,456.00 | 20.50 | 324.69 | 1,429.21 | 155.06 | -143.37 | 211.15 | 2.66 | 2.05 | 5.05 |
| 1,551.00 | 22.95 | 320.42 | 1,517.46 | 182.91 | -164.79 | 246.09 | 3.07 | 2.58 | -4.49 |
| 1,646.00 | 22.16 | 315.14 | 1,605.20 | 209.89 | -189.23 | 282.48 | 2.29 | -0.83 | -5.56 |
| 1,742.00 | 22.30 | 313.22 | 1,694.07 | 235.20 | -215.28 | 318.77 | 0.77 | 0.15 | -2.00 |
| 1,838.00 | 21.54 | 312.86 | 1,783.13 | 259.66 | -241.47 | 354.55 | 0.80 | -0.79 | -0.38 |
| 1,930.00 | 21.40 | 313.91 | 1,868.75 | 282.79 | -265.94 | 388.18 | 0.44 | -0.15 | 1.14 |
| 2,025.00 | 20.14 | 314.27 | 1,957.57 | 306.22 | -290.14 | 421.84 | 1.33 | -1.33 | 0.38 |
| 2,120.00 | 19.43 | 314.97 | 2,046.96 | 328.81 | -313.03 | 453.98 | 0.79 | -0.75 | 0.74 |
| 2,185.00 | 19.26 | 314.97 | 2,108.29 | 344.03 | -328.26 | 475.51 | 0.26 | -0.26 | 0.00 |
| tie on | | | | | | | | | |
| 2,267.00 | 18.89 | 313.40 | 2,185.79 | 362.70 | -347.48 | 502.29 | 0.77 | -0.45 | -1.91 |
| 2,358.00 | 18.47 | 314.27 | 2,272.00 | 382.89 | -368.50 | 531.41 | 0.55 | -0.46 | 0.96 |
| 2,449.00 | 17.74 | 314.12 | 2,358.49 | 402.60 | -388.78 | 559.67 | 0.80 | -0.80 | -0.16 |
| 2,539.00 | 17.69 | 317.61 | 2,444.22 | 422.25 | -407.84 | 587.04 | 1.18 | -0.06 | 3.88 |
| 2,630.00 | 18.63 | 319.98 | 2,530.69 | 443.59 | -426.51 | 615.37 | 1.31 | 1.03 | 2.60 |
| 2,720.00 | 19.06 | 321.86 | 2,615.87 | 466.16 | -444.83 | 644.34 | 0.83 | 0.48 | 2.09 |
| 2,811.00 | 17.88 | 320.98 | 2,702.18 | 488.70 | -462.80 | 673.05 | 1.33 | -1.30 | -0.97 |
| 2,902.00 | 17.06 | 319.61 | 2,788.98 | 509.72 | -480.24 | 700.30 | 1.01 | -0.90 | -1.51 |
| 2,992.00 | 14.38 | 315.23 | 2,875.61 | 527.71 | -496.67 | 724.66 | 3.25 | -2.98 | -4.87 |
| 3,083.00 | 13.31 | 315.61 | 2,963.97 | 543.22 | -511.96 | 746.43 | 1.18 | -1.18 | 0.42 |
| 3,174.00 | 12.00 | 312.23 | 3,052.75 | 557.06 | -526.29 | 766.34 | 1.65 | -1.44 | -3.71 |
| 3,265.00 | 9.88 | 311.73 | 3,142.10 | 568.62 | -539.12 | 783.56 | 2.33 | -2.33 | -0.55 |
| 3,355.00 | 8.75 | 312.11 | 3,230.91 | 578.35 | -549.97 | 798.09 | 1.26 | -1.26 | 0.42 |
| 3,446.00 | 6.38 | 309.36 | 3,321.11 | 586.20 | -559.01 | 810.01 | 2.63 | -2.60 | -3.02 |
| 3,537.00 | 4.00 | 306.73 | 3,411.73 | 591.30 | -565.47 | 818.16 | 2.63 | -2.62 | -2.89 |
| 3,627.00 | 2.44 | 298.48 | 3,501.58 | 594.10 | -569.67 | 823.08 | 1.80 | -1.73 | -9.17 |
| 3,718.00 | 0.75 | 259.86 | 3,592.55 | 594.91 | -571.95 | 825.26 | 2.10 | -1.86 | -42.44 |
| 3,808.00 | 0.81 | 222.61 | 3,682.54 | 594.34 | -572.96 | 825.54 | 0.56 | 0.07 | -41.39 |
| 3,899.00 | 0.69 | 131.98 | 3,773.54 | 593.50 | -572.99 | 824.96 | 1.18 | -0.13 | -99.59 |
| 3,990.00 | 0.94 | 131.36 | 3,864.53 | 592.64 | -572.03 | 823.67 | 0.27 | 0.27 | -0.68 |
| 4,080.00 | 1.06 | 141.11 | 3,954.51 | 591.51 | -570.95 | 822.10 | 0.23 | 0.13 | 10.83 |
| 4,171.00 | 1.13 | 145.23 | 4,045.50 | 590.11 | -569.91 | 820.37 | 0.12 | 0.08 | 4.53 |
| 4,262.00 | 1.38 | 152.61 | 4,136.47 | 588.40 | -568.89 | 818.44 | 0.33 | 0.27 | 8.11 |
| 4,352.00 | 1.38 | 149.61 | 4,226.45 | 586.51 | -567.85 | 816.34 | 0.08 | 0.00 | -3.33 |
| 4,443.00 | 0.38 | 81.48 | 4,317.44 | 585.61 | -566.99 | 815.10 | 1.42 | -1.10 | -74.87 |
| 4,534.00 | 0.38 | 116.36 | 4,408.44 | 585.52 | -566.42 | 814.64 | 0.25 | 0.00 | 38.33 |
| 4,624.00 | 0.44 | 126.73 | 4,498.43 | 585.18 | -565.88 | 814.02 | 0.11 | 0.07 | 11.52 |
| 4,715.00 | 0.44 | 114.11 | 4,589.43 | 584.83 | -565.28 | 813.36 | 0.11 | 0.00 | -13.87 |
| 4,806.00 | 0.38 | 116.61 | 4,680.43 | 584.55 | -564.69 | 812.75 | 0.07 | -0.07 | 2.75 |

Andarko Petroleum Corporation

Survey Report

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: UINTAH_NBU 1022-11G2 Pad
Well: NBU 1022-11C4CS
Wellbore: NBU 1022-11C4CS
Design: NBU 1022-11C4CS

Local Co-ordinate Reference: Well NBU 1022-11C4CS
TVD Reference: 14' RKB + 5031' GL @ 5045.00ft
MD Reference: 14' RKB + 5031' GL @ 5045.00ft
North Reference: True
Survey Calculation Method: Minimum Curvature
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) |
| 4,897.00 | 0.44 | 103.48 | 4,771.43 | 584.33 | -564.08 | 812.17 | 0.12 | 0.07 | -14.43 |
| 4,987.00 | 0.61 | 108.56 | 4,861.42 | 584.10 | -563.29 | 811.45 | 0.20 | 0.19 | 5.64 |
| 5,078.00 | 0.75 | 121.23 | 4,952.42 | 583.64 | -562.32 | 810.45 | 0.22 | 0.15 | 13.92 |
| 5,169.00 | 0.75 | 7.98 | 5,043.41 | 583.92 | -561.73 | 810.24 | 1.38 | 0.00 | -124.45 |
| 5,259.00 | 0.56 | 33.98 | 5,133.41 | 584.87 | -561.40 | 810.70 | 0.39 | -0.21 | 28.89 |
| 5,350.00 | 0.38 | 66.36 | 5,224.40 | 585.35 | -560.88 | 810.69 | 0.35 | -0.20 | 35.58 |
| 5,441.00 | 0.50 | 106.48 | 5,315.40 | 585.36 | -560.22 | 810.25 | 0.35 | 0.13 | 44.09 |
| 5,532.00 | 0.63 | 128.61 | 5,406.40 | 584.94 | -559.45 | 809.41 | 0.28 | 0.14 | 24.32 |
| 5,622.00 | 0.63 | 313.48 | 5,496.39 | 584.97 | -559.42 | 809.41 | 1.40 | 0.00 | -194.59 |
| 5,713.00 | 0.56 | 313.23 | 5,587.39 | 585.62 | -560.11 | 810.35 | 0.08 | -0.08 | -0.27 |
| 5,804.00 | 0.38 | 308.98 | 5,678.39 | 586.11 | -560.67 | 811.10 | 0.20 | -0.20 | -4.67 |
| 5,894.00 | 0.31 | 291.86 | 5,768.38 | 586.39 | -561.13 | 811.61 | 0.14 | -0.08 | -19.02 |
| 5,985.00 | 0.00 | 287.36 | 5,859.38 | 586.48 | -561.35 | 811.84 | 0.34 | -0.34 | 0.00 |
| 6,076.00 | 1.75 | 316.23 | 5,950.37 | 587.49 | -562.32 | 813.23 | 1.92 | 1.92 | 0.00 |
| 6,166.00 | 1.50 | 315.86 | 6,040.33 | 589.32 | -564.09 | 815.78 | 0.28 | -0.28 | -0.41 |
| 6,257.00 | 1.06 | 313.98 | 6,131.31 | 590.76 | -565.52 | 817.81 | 0.49 | -0.48 | -2.07 |
| 6,348.00 | 0.75 | 307.86 | 6,222.30 | 591.71 | -566.60 | 819.24 | 0.36 | -0.34 | -6.73 |
| 6,438.00 | 0.38 | 300.73 | 6,312.29 | 592.23 | -567.32 | 820.11 | 0.42 | -0.41 | -7.92 |
| 6,529.00 | 0.19 | 277.11 | 6,403.29 | 592.40 | -567.73 | 820.52 | 0.24 | -0.21 | -25.96 |
| 6,620.00 | 0.25 | 138.98 | 6,494.29 | 592.27 | -567.75 | 820.44 | 0.45 | 0.07 | -151.79 |
| 6,710.00 | 0.44 | 153.23 | 6,584.29 | 591.81 | -567.46 | 819.91 | 0.23 | 0.21 | 15.83 |
| 6,801.00 | 0.81 | 153.26 | 6,675.29 | 590.93 | -567.02 | 818.96 | 0.41 | 0.41 | 0.03 |
| 6,892.00 | 1.00 | 144.11 | 6,766.27 | 589.71 | -566.26 | 817.56 | 0.26 | 0.21 | -10.05 |
| 6,983.00 | 0.50 | 52.98 | 6,857.27 | 589.30 | -565.48 | 816.73 | 1.24 | -0.55 | -100.14 |
| 7,073.00 | 0.38 | 65.23 | 6,947.27 | 589.67 | -564.89 | 816.59 | 0.17 | -0.13 | 13.61 |
| 7,164.00 | 0.38 | 98.23 | 7,038.26 | 589.75 | -564.32 | 816.25 | 0.24 | 0.00 | 36.26 |
| 7,255.00 | 0.69 | 9.98 | 7,129.26 | 590.25 | -563.93 | 816.34 | 0.85 | 0.34 | -96.98 |
| 7,345.00 | 0.50 | 63.23 | 7,219.26 | 590.96 | -563.48 | 816.54 | 0.62 | -0.21 | 59.17 |
| 7,436.00 | 0.69 | 103.48 | 7,310.25 | 591.01 | -562.60 | 815.97 | 0.49 | 0.21 | 44.23 |
| 7,527.00 | 1.00 | 123.73 | 7,401.24 | 590.44 | -561.40 | 814.73 | 0.47 | 0.34 | 22.25 |
| 7,617.00 | 1.13 | 136.98 | 7,491.23 | 589.35 | -560.14 | 813.08 | 0.31 | 0.14 | 14.72 |
| 7,708.00 | 1.19 | 137.23 | 7,582.21 | 588.00 | -558.89 | 811.23 | 0.07 | 0.07 | 0.27 |
| 7,799.00 | 1.44 | 139.11 | 7,673.19 | 586.45 | -557.50 | 809.15 | 0.28 | 0.27 | 2.07 |
| 7,889.00 | 1.50 | 142.61 | 7,763.16 | 584.66 | -556.05 | 806.85 | 0.12 | 0.07 | 3.89 |
| 7,980.00 | 1.50 | 145.98 | 7,854.12 | 582.72 | -554.66 | 804.49 | 0.10 | 0.00 | 3.70 |
| 8,070.00 | 1.88 | 140.73 | 7,944.09 | 580.60 | -553.06 | 801.86 | 0.46 | 0.42 | -5.83 |
| 8,161.00 | 2.00 | 139.98 | 8,035.03 | 578.23 | -551.10 | 798.78 | 0.13 | 0.13 | -0.82 |
| 8,251.00 | 2.00 | 138.85 | 8,124.98 | 575.85 | -549.05 | 795.65 | 0.04 | 0.00 | -1.26 |
| 8,342.00 | 2.25 | 134.86 | 8,215.92 | 573.39 | -546.74 | 792.28 | 0.32 | 0.27 | -4.38 |
| 8,433.00 | 2.31 | 134.98 | 8,306.84 | 570.83 | -544.18 | 788.66 | 0.07 | 0.07 | 0.13 |
| 8,580.00 | 3.24 | 147.67 | 8,453.67 | 565.23 | -539.86 | 781.62 | 0.75 | 0.63 | 8.63 |
| LAST SVY | | | | | | | | | |
| 8,631.00 | 3.24 | 147.67 | 8,504.59 | 562.79 | -538.32 | 778.80 | 0.00 | 0.00 | 0.00 |
| PROJECTION | | | | | | | | | |

Andarko Petroleum Corporation

Survey Report

| | | |
|--|--|--|
| Company: US ROCKIES REGION PLANNING | Local Co-ordinate Reference: Well NBU 1022-11C4CS | |
| Project: UTAH - UTM (feet), NAD27, Zone 12N | TVD Reference: 14' RKB + 5031' GL @ 5045.00ft | |
| Site: UINTAH_NBU 1022-11G2 Pad | MD Reference: 14' RKB + 5031' GL @ 5045.00ft | |
| Well: NBU 1022-11C4CS | North Reference: True | |
| Wellbore: NBU 1022-11C4CS | Survey Calculation Method: Minimum Curvature | |
| Design: NBU 1022-11C4CS | Database: edmp | |

| 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) |
|---------------------------|--------------------|----------------|---------------------------|---------------|---------------|-----------------------------|-------------------------------|------------------------------|-----------------------------|
| | | | | | | | | | |

| Design Annotations | | | | |
|---------------------------|---------------------------|-------------------|---------------|------------|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment |
| | | +N/-S (ft) | +E/-W (ft) | |
| 2,185.00 | 2,108.29 | 344.03 | -328.26 | tie on |
| 8,580.00 | 8,453.67 | 565.23 | -539.86 | LAST SVY |
| 8,631.00 | 8,504.59 | 562.79 | -538.32 | PROJECTION |

| | | |
|-------------------|--------------------|-------------|
| Checked By: _____ | Approved By: _____ | Date: _____ |
|-------------------|--------------------|-------------|

US ROCKIES REGION PLANNING

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

UINTAH_NBU 1022-11G2 Pad

NBU 1022-11C4CS

NBU 1022-11C4CS

Design: NBU 1022-11C4CS

Survey Report - Geographic

10 August, 2012

Andarko Petroleum Corporation

Survey Report - Geographic

| | |
|--|--|
| Company: US ROCKIES REGION PLANNING | Local Co-ordinate Reference: Well NBU 1022-11C4CS |
| Project: UTAH - UTM (feet), NAD27, Zone 12N | TVD Reference: 14' RKB + 5031' GL @ 5045.00ft |
| Site: UINTAH_NBU 1022-11G2 Pad | MD Reference: 14' RKB + 5031' GL @ 5045.00ft |
| Well: NBU 1022-11C4CS | North Reference: True |
| Wellbore: NBU 1022-11C4CS | Survey Calculation Method: Minimum Curvature |
| Design: NBU 1022-11C4CS | 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_NBU 1022-11G2 Pad | | | | |
| Site Position: | | Northing: | 14,517,752.07 usft | Latitude: | 39.966270 |
| From: | Lat/Long | Easting: | 2,086,977.54 usft | Longitude: | -109.406292 |
| Position Uncertainty: | 0.00 ft | Slot Radius: | 13-3/16 " | Grid Convergence: | 1.02 ° |

| | | | | | | |
|-----------------------------|-----------------|---------|----------------------------|--------------------|----------------------|-------------|
| Well | NBU 1022-11C4CS | | | | | |
| Well Position | +N/-S | 0.00 ft | Northing: | 14,517,727.10 usft | Latitude: | 39.966203 |
| | +E/-W | 0.00 ft | Easting: | 2,086,946.31 usft | Longitude: | -109.406405 |
| Position Uncertainty | | 0.00 ft | Wellhead Elevation: | ft | Ground Level: | 5,031.00 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | NBU 1022-11C4CS | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 2/6/2012 | 10.95 | 65.84 | 52,259 |

| | | | | | |
|--------------------------|------------------------------|-------------------|-------------------|----------------------|------|
| Design | NBU 1022-11C4CS | | | | |
| Audit Notes: | | | | | |
| Version: | 1.0 | Phase: | ACTUAL | Tie On Depth: | 5.00 |
| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) | |
| | 5.00 | 0.00 | 0.00 | 316.27 | |

| | | | | | |
|-----------------------|----------------|-----------------------------|------------------|--------------------|--|
| Survey Program | Date | 8/10/2012 | | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description | |
| 242.00 | 2,185.00 | Survey #1 (NBU 1022-11C4CS) | MWD | MWD - STANDARD | |
| 2,267.00 | 8,631.00 | Survey #2 (NBU 1022-11C4CS) | MWD | MWD - STANDARD | |

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |
|---------------------|-----------------|-------------|---------------------|------------|------------|---------------------|--------------------|-----------|-------------|
| 5.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 14,517,727.10 | 2,086,946.31 | 39.966203 | -109.406405 |
| 242.00 | 0.38 | 309.36 | 242.00 | 0.50 | -0.61 | 14,517,727.59 | 2,086,945.70 | 39.966204 | -109.406407 |
| 333.00 | 0.97 | 290.27 | 332.99 | 0.96 | -1.56 | 14,517,728.03 | 2,086,944.73 | 39.966206 | -109.406411 |
| 423.00 | 2.20 | 311.45 | 422.96 | 2.36 | -3.57 | 14,517,729.40 | 2,086,942.70 | 39.966210 | -109.406418 |
| 517.00 | 3.43 | 315.76 | 516.84 | 5.57 | -6.89 | 14,517,732.55 | 2,086,939.33 | 39.966218 | -109.406430 |
| 610.00 | 5.19 | 320.86 | 609.57 | 10.83 | -11.48 | 14,517,737.72 | 2,086,934.64 | 39.966233 | -109.406446 |
| 705.00 | 6.33 | 323.23 | 704.09 | 18.36 | -17.33 | 14,517,745.15 | 2,086,928.66 | 39.966254 | -109.406467 |
| 799.00 | 8.18 | 317.08 | 797.34 | 27.41 | -24.99 | 14,517,754.06 | 2,086,920.84 | 39.966278 | -109.406494 |
| 893.00 | 9.85 | 316.02 | 890.17 | 38.09 | -35.13 | 14,517,764.56 | 2,086,910.51 | 39.966308 | -109.406531 |
| 987.00 | 12.40 | 313.83 | 982.40 | 50.87 | -47.99 | 14,517,777.10 | 2,086,897.42 | 39.966343 | -109.406577 |
| 1,080.00 | 15.21 | 315.50 | 1,072.71 | 66.49 | -63.75 | 14,517,792.44 | 2,086,881.38 | 39.966386 | -109.406633 |

Andarko Petroleum Corporation

Survey Report - Geographic

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: UINTAH_NBU 1022-11G2 Pad
Well: NBU 1022-11C4CS
Wellbore: NBU 1022-11C4CS
Design: NBU 1022-11C4CS

Local Co-ordinate Reference: Well NBU 1022-11C4CS
TVD Reference: 14' RKB + 5031' GL @ 5045.00ft
MD Reference: 14' RKB + 5031' GL @ 5045.00ft
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: edmp

Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |
|---------------------|-----------------|-------------|---------------------|------------|------------|---------------------|--------------------|-----------|-------------|
| 1,172.00 | 18.29 | 317.08 | 1,160.79 | 85.67 | -82.04 | 14,517,811.29 | 2,086,862.75 | 39.966438 | -109.406698 |
| 1,267.00 | 19.26 | 314.62 | 1,250.74 | 107.59 | -103.35 | 14,517,832.83 | 2,086,841.06 | 39.966499 | -109.406774 |
| 1,361.00 | 18.55 | 319.89 | 1,339.67 | 129.92 | -124.02 | 14,517,854.78 | 2,086,819.99 | 39.966560 | -109.406848 |
| 1,456.00 | 20.50 | 324.69 | 1,429.21 | 155.06 | -143.37 | 14,517,879.57 | 2,086,800.19 | 39.966629 | -109.406917 |
| 1,551.00 | 22.95 | 320.42 | 1,517.46 | 182.91 | -164.79 | 14,517,907.04 | 2,086,778.28 | 39.966705 | -109.406993 |
| 1,646.00 | 22.16 | 315.14 | 1,605.20 | 209.89 | -189.23 | 14,517,933.58 | 2,086,753.36 | 39.966779 | -109.407080 |
| 1,742.00 | 22.30 | 313.22 | 1,694.07 | 235.20 | -215.28 | 14,517,958.41 | 2,086,726.87 | 39.966849 | -109.407173 |
| 1,838.00 | 21.54 | 312.86 | 1,783.13 | 259.66 | -241.47 | 14,517,982.40 | 2,086,700.24 | 39.966916 | -109.407267 |
| 1,930.00 | 21.40 | 313.91 | 1,868.75 | 282.79 | -265.94 | 14,518,005.09 | 2,086,675.36 | 39.966980 | -109.407354 |
| 2,025.00 | 20.14 | 314.27 | 1,957.57 | 306.22 | -290.14 | 14,518,028.09 | 2,086,650.75 | 39.967044 | -109.407441 |
| 2,120.00 | 19.43 | 314.97 | 2,046.96 | 328.81 | -313.03 | 14,518,050.26 | 2,086,627.46 | 39.967106 | -109.407522 |
| 2,185.00 | 19.26 | 314.97 | 2,108.29 | 344.03 | -328.26 | 14,518,065.21 | 2,086,611.95 | 39.967148 | -109.407577 |
| tie on | | | | | | | | | |
| 2,267.00 | 18.89 | 313.40 | 2,185.79 | 362.70 | -347.48 | 14,518,083.54 | 2,086,592.41 | 39.967199 | -109.407645 |
| 2,358.00 | 18.47 | 314.27 | 2,272.00 | 382.89 | -368.50 | 14,518,103.34 | 2,086,571.03 | 39.967254 | -109.407720 |
| 2,449.00 | 17.74 | 314.12 | 2,358.49 | 402.60 | -388.78 | 14,518,122.69 | 2,086,550.41 | 39.967308 | -109.407792 |
| 2,539.00 | 17.69 | 317.61 | 2,444.22 | 422.25 | -407.84 | 14,518,141.99 | 2,086,530.99 | 39.967362 | -109.407861 |
| 2,630.00 | 18.63 | 319.98 | 2,530.69 | 443.59 | -426.51 | 14,518,163.00 | 2,086,511.95 | 39.967421 | -109.407927 |
| 2,720.00 | 19.06 | 321.86 | 2,615.87 | 466.16 | -444.83 | 14,518,185.23 | 2,086,493.23 | 39.967483 | -109.407992 |
| 2,811.00 | 17.88 | 320.98 | 2,702.18 | 488.70 | -462.80 | 14,518,207.45 | 2,086,474.86 | 39.967545 | -109.408057 |
| 2,902.00 | 17.06 | 319.61 | 2,788.98 | 509.72 | -480.24 | 14,518,228.16 | 2,086,457.04 | 39.967603 | -109.408119 |
| 2,992.00 | 14.38 | 315.23 | 2,875.61 | 527.71 | -496.67 | 14,518,245.85 | 2,086,440.29 | 39.967652 | -109.408177 |
| 3,083.00 | 13.31 | 315.61 | 2,963.97 | 543.22 | -511.96 | 14,518,261.08 | 2,086,424.73 | 39.967695 | -109.408232 |
| 3,174.00 | 12.00 | 312.23 | 3,052.75 | 557.06 | -526.29 | 14,518,274.67 | 2,086,410.15 | 39.967733 | -109.408283 |
| 3,265.00 | 9.88 | 311.73 | 3,142.10 | 568.62 | -539.12 | 14,518,286.00 | 2,086,397.11 | 39.967764 | -109.408329 |
| 3,355.00 | 8.75 | 312.11 | 3,230.91 | 578.35 | -549.97 | 14,518,295.53 | 2,086,386.10 | 39.967791 | -109.408368 |
| 3,446.00 | 6.38 | 309.36 | 3,321.11 | 586.20 | -559.01 | 14,518,303.22 | 2,086,376.92 | 39.967813 | -109.408400 |
| 3,537.00 | 4.00 | 306.73 | 3,411.73 | 591.30 | -565.47 | 14,518,308.21 | 2,086,370.37 | 39.967827 | -109.408423 |
| 3,627.00 | 2.44 | 298.48 | 3,501.58 | 594.10 | -569.67 | 14,518,310.92 | 2,086,366.12 | 39.967834 | -109.408438 |
| 3,718.00 | 0.75 | 259.86 | 3,592.55 | 594.91 | -571.95 | 14,518,311.70 | 2,086,363.82 | 39.967836 | -109.408446 |
| 3,808.00 | 0.81 | 222.61 | 3,682.54 | 594.34 | -572.96 | 14,518,311.11 | 2,086,362.82 | 39.967835 | -109.408450 |
| 3,899.00 | 0.69 | 131.98 | 3,773.54 | 593.50 | -572.99 | 14,518,310.27 | 2,086,362.81 | 39.967833 | -109.408450 |
| 3,990.00 | 0.94 | 131.36 | 3,864.53 | 592.64 | -572.03 | 14,518,309.43 | 2,086,363.79 | 39.967830 | -109.408446 |
| 4,080.00 | 1.06 | 141.11 | 3,954.51 | 591.51 | -570.95 | 14,518,308.31 | 2,086,364.89 | 39.967827 | -109.408443 |
| 4,171.00 | 1.13 | 145.23 | 4,045.50 | 590.11 | -569.91 | 14,518,306.94 | 2,086,365.95 | 39.967823 | -109.408439 |
| 4,262.00 | 1.38 | 152.61 | 4,136.47 | 588.40 | -568.89 | 14,518,305.25 | 2,086,367.00 | 39.967819 | -109.408435 |
| 4,352.00 | 1.38 | 149.61 | 4,226.45 | 586.51 | -567.85 | 14,518,303.37 | 2,086,368.08 | 39.967813 | -109.408431 |
| 4,443.00 | 0.38 | 81.48 | 4,317.44 | 585.61 | -566.99 | 14,518,302.48 | 2,086,368.95 | 39.967811 | -109.408428 |
| 4,534.00 | 0.38 | 116.36 | 4,408.44 | 585.52 | -566.42 | 14,518,302.40 | 2,086,369.52 | 39.967811 | -109.408426 |
| 4,624.00 | 0.44 | 126.73 | 4,498.43 | 585.18 | -565.88 | 14,518,302.07 | 2,086,370.07 | 39.967810 | -109.408424 |
| 4,715.00 | 0.44 | 114.11 | 4,589.43 | 584.83 | -565.28 | 14,518,301.73 | 2,086,370.67 | 39.967809 | -109.408422 |
| 4,806.00 | 0.38 | 116.61 | 4,680.43 | 584.55 | -564.69 | 14,518,301.47 | 2,086,371.27 | 39.967808 | -109.408420 |
| 4,897.00 | 0.44 | 103.48 | 4,771.43 | 584.33 | -564.08 | 14,518,301.26 | 2,086,371.88 | 39.967807 | -109.408418 |
| 4,987.00 | 0.61 | 108.56 | 4,861.42 | 584.10 | -563.29 | 14,518,301.04 | 2,086,372.67 | 39.967807 | -109.408415 |
| 5,078.00 | 0.75 | 121.23 | 4,952.42 | 583.64 | -562.32 | 14,518,300.60 | 2,086,373.65 | 39.967806 | -109.408412 |
| 5,169.00 | 0.75 | 7.98 | 5,043.41 | 583.92 | -561.73 | 14,518,300.89 | 2,086,374.24 | 39.967806 | -109.408410 |
| 5,259.00 | 0.56 | 33.98 | 5,133.41 | 584.87 | -561.40 | 14,518,301.84 | 2,086,374.55 | 39.967809 | -109.408408 |
| 5,350.00 | 0.38 | 66.36 | 5,224.40 | 585.35 | -560.88 | 14,518,302.34 | 2,086,375.06 | 39.967810 | -109.408407 |
| 5,441.00 | 0.50 | 106.48 | 5,315.40 | 585.36 | -560.22 | 14,518,302.36 | 2,086,375.72 | 39.967810 | -109.408404 |
| 5,532.00 | 0.63 | 128.61 | 5,406.40 | 584.94 | -559.45 | 14,518,301.95 | 2,086,376.50 | 39.967809 | -109.408402 |
| 5,622.00 | 0.63 | 313.48 | 5,496.39 | 584.97 | -559.42 | 14,518,301.98 | 2,086,376.53 | 39.967809 | -109.408401 |
| 5,713.00 | 0.56 | 313.23 | 5,587.39 | 585.62 | -560.11 | 14,518,302.62 | 2,086,375.83 | 39.967811 | -109.408404 |
| 5,804.00 | 0.38 | 308.98 | 5,678.39 | 586.11 | -560.67 | 14,518,303.10 | 2,086,375.26 | 39.967812 | -109.408406 |
| 5,894.00 | 0.31 | 291.86 | 5,768.38 | 586.39 | -561.13 | 14,518,303.37 | 2,086,374.80 | 39.967813 | -109.408407 |
| 5,985.00 | 0.00 | 287.36 | 5,859.38 | 586.48 | -561.35 | 14,518,303.46 | 2,086,374.57 | 39.967813 | -109.408408 |

Andarko Petroleum Corporation

Survey Report - Geographic

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: UINTAH_NBU 1022-11G2 Pad
Well: NBU 1022-11C4CS
Wellbore: NBU 1022-11C4CS
Design: NBU 1022-11C4CS

Local Co-ordinate Reference: Well NBU 1022-11C4CS
TVD Reference: 14' RKB + 5031' GL @ 5045.00ft
MD Reference: 14' RKB + 5031' GL @ 5045.00ft
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: edmp

Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |
|---------------------|-----------------|-------------|---------------------|------------|------------|---------------------|--------------------|-----------|-------------|
| 6,076.00 | 1.75 | 316.23 | 5,950.37 | 587.49 | -562.32 | 14,518,304.45 | 2,086,373.59 | 39.967816 | -109.408412 |
| 6,166.00 | 1.50 | 315.86 | 6,040.33 | 589.32 | -564.09 | 14,518,306.25 | 2,086,371.79 | 39.967821 | -109.408418 |
| 6,257.00 | 1.06 | 313.98 | 6,131.31 | 590.76 | -565.52 | 14,518,307.66 | 2,086,370.32 | 39.967825 | -109.408423 |
| 6,348.00 | 0.75 | 307.86 | 6,222.30 | 591.71 | -566.60 | 14,518,308.60 | 2,086,369.23 | 39.967828 | -109.408427 |
| 6,438.00 | 0.38 | 300.73 | 6,312.29 | 592.23 | -567.32 | 14,518,309.10 | 2,086,368.50 | 39.967829 | -109.408430 |
| 6,529.00 | 0.19 | 277.11 | 6,403.29 | 592.40 | -567.73 | 14,518,309.26 | 2,086,368.09 | 39.967830 | -109.408431 |
| 6,620.00 | 0.25 | 138.98 | 6,494.29 | 592.27 | -567.75 | 14,518,309.13 | 2,086,368.07 | 39.967829 | -109.408431 |
| 6,710.00 | 0.44 | 153.23 | 6,584.29 | 591.81 | -567.46 | 14,518,308.68 | 2,086,368.36 | 39.967828 | -109.408430 |
| 6,801.00 | 0.81 | 153.26 | 6,675.29 | 590.93 | -567.02 | 14,518,307.80 | 2,086,368.83 | 39.967826 | -109.408429 |
| 6,892.00 | 1.00 | 144.11 | 6,766.27 | 589.71 | -566.26 | 14,518,306.60 | 2,086,369.60 | 39.967822 | -109.408426 |
| 6,983.00 | 0.50 | 52.98 | 6,857.27 | 589.30 | -565.48 | 14,518,306.21 | 2,086,370.39 | 39.967821 | -109.408423 |
| 7,073.00 | 0.38 | 65.23 | 6,947.27 | 589.67 | -564.89 | 14,518,306.58 | 2,086,370.97 | 39.967822 | -109.408421 |
| 7,164.00 | 0.38 | 98.23 | 7,038.26 | 589.75 | -564.32 | 14,518,306.67 | 2,086,371.54 | 39.967822 | -109.408419 |
| 7,255.00 | 0.69 | 9.98 | 7,129.26 | 590.25 | -563.93 | 14,518,307.18 | 2,086,371.93 | 39.967824 | -109.408417 |
| 7,345.00 | 0.50 | 63.23 | 7,219.26 | 590.96 | -563.48 | 14,518,307.89 | 2,086,372.36 | 39.967826 | -109.408416 |
| 7,436.00 | 0.69 | 103.48 | 7,310.25 | 591.01 | -562.60 | 14,518,307.96 | 2,086,373.25 | 39.967826 | -109.408413 |
| 7,527.00 | 1.00 | 123.73 | 7,401.24 | 590.44 | -561.40 | 14,518,307.41 | 2,086,374.45 | 39.967824 | -109.408408 |
| 7,617.00 | 1.13 | 136.98 | 7,491.23 | 589.35 | -560.14 | 14,518,306.35 | 2,086,375.73 | 39.967821 | -109.408404 |
| 7,708.00 | 1.19 | 137.23 | 7,582.21 | 588.00 | -558.89 | 14,518,305.02 | 2,086,377.00 | 39.967818 | -109.408400 |
| 7,799.00 | 1.44 | 139.11 | 7,673.19 | 586.45 | -557.50 | 14,518,303.49 | 2,086,378.42 | 39.967813 | -109.408395 |
| 7,889.00 | 1.50 | 142.61 | 7,763.16 | 584.66 | -556.05 | 14,518,301.73 | 2,086,379.91 | 39.967808 | -109.408389 |
| 7,980.00 | 1.50 | 145.98 | 7,854.12 | 582.72 | -554.66 | 14,518,299.82 | 2,086,381.33 | 39.967803 | -109.408384 |
| 8,070.00 | 1.88 | 140.73 | 7,944.09 | 580.60 | -553.06 | 14,518,297.73 | 2,086,382.96 | 39.967797 | -109.408379 |
| 8,161.00 | 2.00 | 139.98 | 8,035.03 | 578.23 | -551.10 | 14,518,295.39 | 2,086,384.97 | 39.967791 | -109.408372 |
| 8,251.00 | 2.00 | 138.85 | 8,124.98 | 575.85 | -549.05 | 14,518,293.04 | 2,086,387.06 | 39.967784 | -109.408364 |
| 8,342.00 | 2.25 | 134.86 | 8,215.92 | 573.39 | -546.74 | 14,518,290.63 | 2,086,389.41 | 39.967777 | -109.408356 |
| 8,433.00 | 2.31 | 134.98 | 8,306.84 | 570.83 | -544.18 | 14,518,288.12 | 2,086,392.02 | 39.967770 | -109.408347 |
| 8,580.00 | 3.24 | 147.67 | 8,453.67 | 565.23 | -539.86 | 14,518,282.59 | 2,086,396.44 | 39.967755 | -109.408332 |
| LAST SVY | | | | | | | | | |
| 8,631.00 | 3.24 | 147.67 | 8,504.59 | 562.79 | -538.32 | 14,518,280.18 | 2,086,398.02 | 39.967748 | -109.408326 |
| PROJECTION | | | | | | | | | |

Design Annotations

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment |
|---------------------|---------------------|-------------------|------------|------------|
| | | +N/-S (ft) | +E/-W (ft) | |
| 2,185.00 | 2,108.29 | 344.03 | -328.26 | tie on |
| 8,580.00 | 8,453.67 | 565.23 | -539.86 | LAST SVY |
| 8,631.00 | 8,504.59 | 562.79 | -538.32 | PROJECTION |

Checked By: _____ Approved By: _____ Date: _____