

| STATE OF UTAH<br>DEPARTMENT OF NATURAL RESOURCES<br>DIVISION OF OIL, GAS AND MINING   |                   |  |  |   |              | FORM 3<br>AMENDED REPORT <input checked="" type="checkbox"/>  |
|---|-------------------|--|--|---|--------------|---|
| <b>APPLICATION FOR PERMIT TO DRILL</b>  |                   |  |  |   |              | <b>1. WELL NAME and NUMBER</b><br>NBU 921-35F4CS  |
| <b>2. TYPE OF WORK</b><br>DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/> |                   |  |  |   |              | <b>3. FIELD OR WILDCAT</b><br>NATURAL BUTTES  |
| <b>4. TYPE OF WELL</b><br>Gas Well Coalbed Methane Well: NO   |                   |  |  |   |              | <b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b><br>NATURAL BUTTES  |
| <b>6. NAME OF OPERATOR</b><br>KERR-MCGEE OIL & GAS ONSHORE, L.P.  |                   |  |  |   |              | <b>7. OPERATOR PHONE</b><br>720 929-6007  |
| <b>8. ADDRESS OF OPERATOR</b><br>P.O. Box 173779, Denver, CO, 80217   |                   |  |  |   |              | <b>9. OPERATOR E-MAIL</b><br>Kathy.SchneebeckDulnoan@anadarko.com   |
| <b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b><br>UO 01194 ST  |                   |  | <b>11. MINERAL OWNERSHIP</b><br>FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>    |   |              | <b>12. SURFACE OWNERSHIP</b><br>FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/> |
| <b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>  |                   |  |  |   |              | <b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>  |
| <b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>   |                   |  |  |   |              | <b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>   |
| <b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>   |                   |  | <b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b><br>YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/> |   |              | <b>19. SLANT</b><br>VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>                               |
| <b>20. LOCATION OF WELL</b>   | <b>FOOTAGES</b>   | <b>QTR-QTR</b>   | <b>SECTION</b>   | <b>TOWNSHIP</b>   | <b>RANGE</b> | <b>MERIDIAN</b>   |
| <b>LOCATION AT SURFACE</b>  | 2483 FNL 2358 FWL | SE   | 35   | 9.0 S   | 21.0 E       | S   |
| <b>Top of Uppermost Producing Zone</b>  | 2567 FNL 2159 FWL | SE   | 35   | 9.0 S   | 21.0 E       | S   |
| <b>At Total Depth</b>   | 2567 FNL 2159 FWL | SE   | 35   | 9.0 S   | 21.0 E       | S   |
| <b>21. COUNTY</b><br>UINTAH   |                   | <b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b><br>2159   |  | <b>23. NUMBER OF ACRES IN DRILLING UNIT</b><br>1083   |              |   |
|   |                   | <b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b><br>244            |  | <b>26. PROPOSED DEPTH</b><br>MD: 9761 TVD: 9752   |              |   |
| <b>27. ELEVATION - GROUND LEVEL</b><br>5122   |                   | <b>28. BOND NUMBER</b><br>22013542   |  | <b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b><br>Permit #43-8496 |              |   |
| <b>ATTACHMENTS</b>  |                   |  |  |   |              |   |
| <b>VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES</b>   |                   |  |  |   |              |   |
| <input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER  |                   |  | <input checked="" type="checkbox"/> COMPLETE DRILLING PLAN   |   |              |   |
| <input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)  |                   |  | <input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER   |   |              |   |
| <input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)  |                   |  | <input checked="" type="checkbox"/> TOPOGRAPHICAL MAP  |   |              |   |
| <b>NAME</b> Danielle Piernot  |                   | <b>TITLE</b> Regulatory Analyst  |  | <b>PHONE</b> 720 929-6156   |              |   |
| <b>SIGNATURE</b>  |                   | <b>DATE</b> 11/23/2010   |  | <b>EMAIL</b> gnbregulatory@anadarko.com   |              |   |
| <b>API NUMBER ASSIGNED</b><br>43047513570000  |                   | <br>Permit Manager |  |   |              |   |

| <b>Proposed Hole, Casing, and Cement</b> |                     |                    |                 |                    |  |  |
|--|---------------------|--------------------|-----------------|--------------------|--|--|
| <b>String</b>                            | <b>Hole Size</b>    | <b>Casing Size</b> | <b>Top (MD)</b> | <b>Bottom (MD)</b> |  |  |
| Prod                                     | 7.875               | 4.5                | 0               | 9761               |  |  |
| <b>Pipe</b>                              | <b>Grade</b>        | <b>Length</b>      | <b>Weight</b>   |                    |  |  |
|  | Grade I-80 Buttress | 9761               | 11.6            |                    |  |  |
|  |                     |                    |                 |                    |  |  |

| <b>Proposed Hole, Casing, and Cement</b> |                  |                    |                 |                    |  |  |
|--|------------------|--------------------|-----------------|--------------------|--|--|
| <b>String</b>                            | <b>Hole Size</b> | <b>Casing Size</b> | <b>Top (MD)</b> | <b>Bottom (MD)</b> |  |  |
| Surf                                     | 11               | 8.625              | 0               | 2620               |  |  |
| <b>Pipe</b>                              | <b>Grade</b>     | <b>Length</b>      | <b>Weight</b>   |                    |  |  |
|  | Grade J-55 LT&C  | 2620               | 28.0            |                    |  |  |
|  |                  |                    |                 |                    |  |  |

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

### NBU 921-35F4CS

|          |                     |      |
|----------|---------------------|------|
| Surface: | 2483 FNL / 2358 FWL | SENW |
| BHL:     | 2567 FNL / 2159 FWL | SENW |

Section 35 T9S R21E

Unitah County, Utah  
Mineral Lease: ST UT UO 01194 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      | 1490         |                 |
| Birds Nest       | 1791         | Water           |
| Mahogany         | 2172         | Water           |
| Wasatch          | 4768         | Gas             |
| Mesaverde        | 7529         | Gas             |
| MVU2             | 8410         | Gas             |
| MVL1             | 8970         | Gas             |
| TVD              | 9752         |                 |
| TD               | 9761         |                 |

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 9,752' TVD, approximately equals 5,974 psi (calculated at 0.61 psi/foot).

Maximum anticipated surface pressure equals approximately 3,829 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. **Anticipated Starting Dates:**

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 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 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. 8 of 16*

***Conclusion***

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

**10. Other Information:**

*Please refer to the attached Drilling Program.*





## KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

### CASING PROGRAM

|            | SIZE   | INTERVAL       | WT.   | GR.     | CPLG. | DESIGN FACTORS |          |         |
|------------|--------|----------------|-------|---------|-------|----------------|----------|---------|
|            |        |                |       |         |       | BURST          | COLLAPSE | TENSION |
| CONDUCTOR  | 14"    | 0-40'          |       |         |       | 3,390          | 1,880    | 348,000 |
| SURFACE    | 8-5/8" | 0 to 2,620     | 28.00 | IJ-55   | LTC   | 0.86           | 1.53     | 4.70    |
| PRODUCTION | 4-1/2" | 0 to 9,659     | 11.60 | I-80    | BTC   | 1.99           | 1.05     | 2.81    |
|            | 4-1/2" | 9,659 to 9,761 | 11.60 | HCP-110 | BTC   | 2.71           | 1.42     | 7.08    |

\*Burst on surface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 2.05

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

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.0 ppg)

0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MASP 3,829 psi**

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

(Burst Assumptions: TD = 12.0 ppg)

0.61 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MABHP 5,974 psi**

### CEMENT PROGRAM

|                 |                      | FT. OF FILL | DESCRIPTION  | SACKS   | EXCESS | WEIGHT | YIELD |
|-----------------|----------------------|-------------|--|---------|--------|--------|-------|
| SURFACE         | LEAD                 | 500'        | Premium cmt + 2% CaCl<br>+ 0.25 pps flocele  | 180     | 60%    | 15.80  | 1.15  |
| <b>Option 1</b> |                      |             |  |         |        |        |       |
|                 | TOP OUT CMT (6 jobs) | 1,200'      | 20 gals sodium silicate + Premium cmt<br>+ 2% CaCl + 0.25 pps flocele                  | 270     | 0%     | 15.80  | 1.15  |
| SURFACE         |                      |             | <b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>        |         |        |        |       |
| <b>Option 2</b> | LEAD                 | 2,120'      | 65/35 Poz + 6% Gel + 10 pps gilsonite<br>+ 0.25 pps Flocele + 3% salt BWOW             | 200     | 35%    | 11.00  | 3.82  |
|                 | TAIL                 | 500'        | Premium cmt + 2% CaCl<br>+ 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                 | 4,261'      | Premium Lite II +0.25 pps<br>celloflake + 5 pps gilsonite + 10% gel<br>+ 0.5% extender | 310     | 10%    | 11.00  | 3.38  |
|                 | TAIL                 | 5,500'      | 50/50 Poz/G + 10% salt + 2% gel<br>+ 0.1% R-3  | 1,060   | 10%    | 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: \_\_\_\_\_  
John Huycke / Emile Goodwin

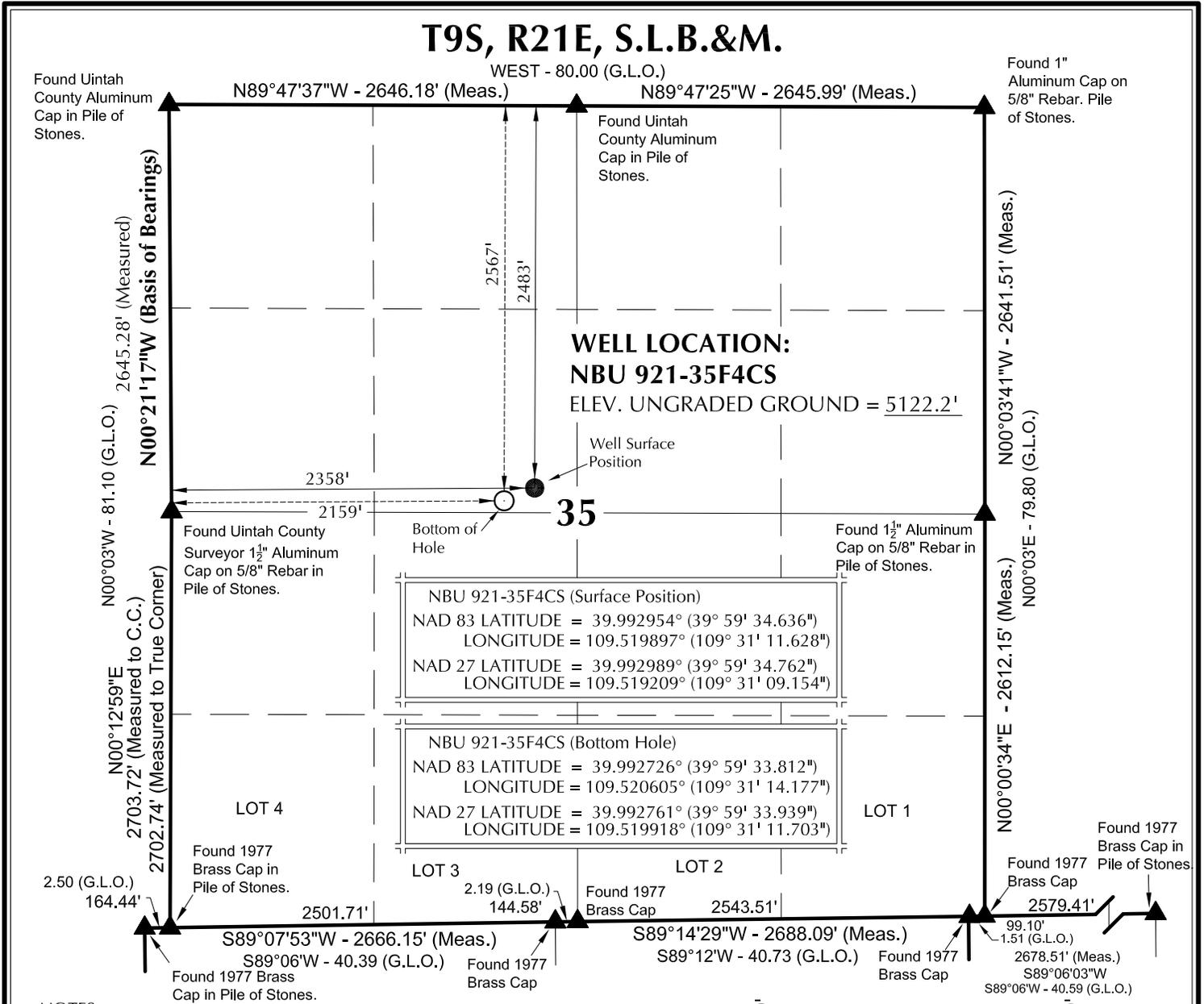
DATE: \_\_\_\_\_

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

DATE: \_\_\_\_\_

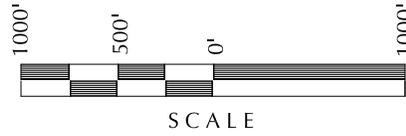


# T9S, R21E, S.L.B.&M.



**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 S67°15'18"W 215.24' 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 1/4 of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.



**SURVEYOR'S CERTIFICATE**

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

*John R. Lauch*  
 PROFESSIONAL LAND SURVEYOR  
 REGISTRATION No. 6028691  
 STATE OF UTAH

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

**WELL PAD: NBU 921-35F4**

**NBU 921-35F4CS**  
**WELL PLAT**

**2567' FNL, 2159' FWL (Bottom Hole)**  
**SE 1/4 NW 1/4 OF SECTION 35, T9S, R21E, 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

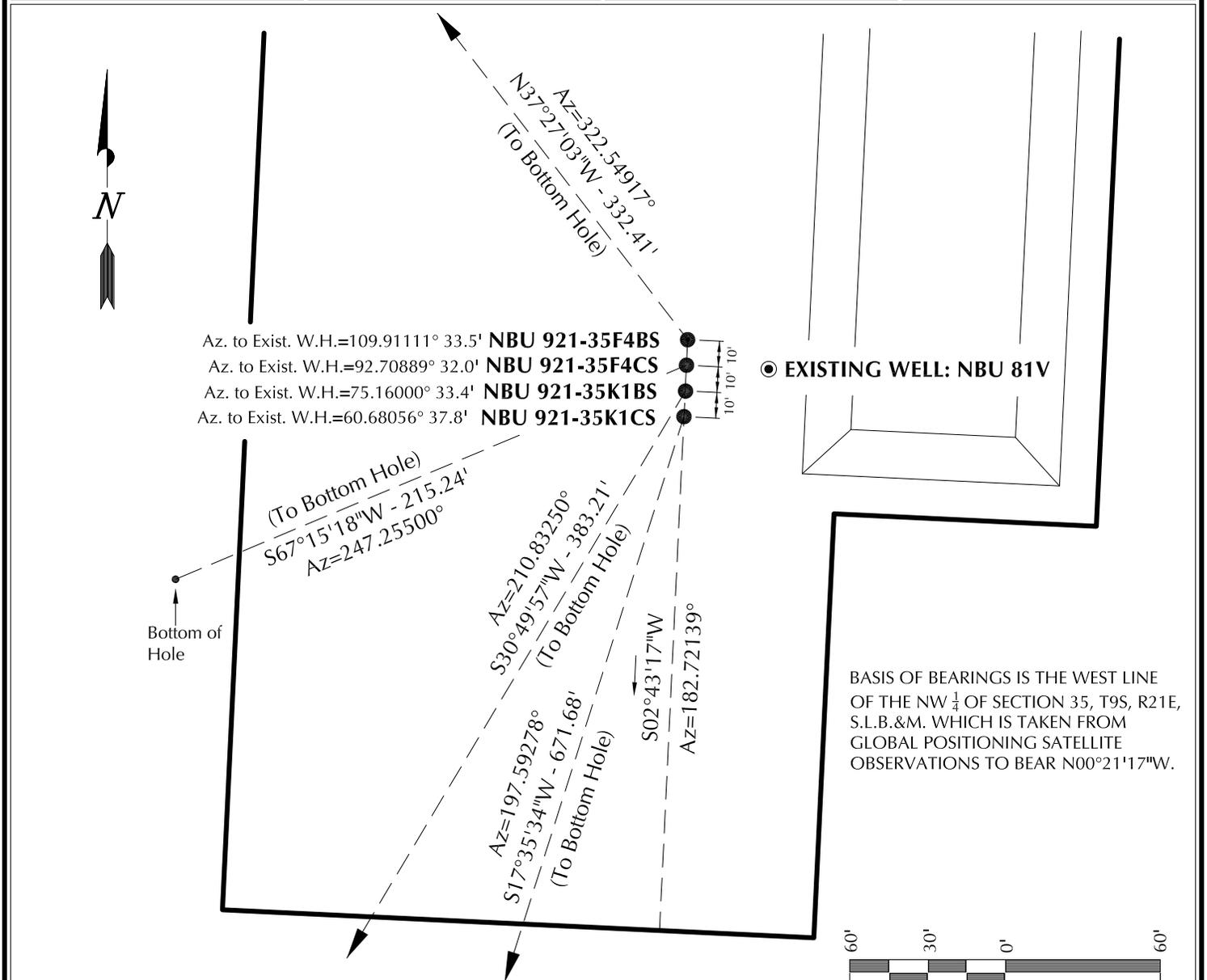
**TIMBERLINE** (435) 789-1365  
 ENGINEERING & LAND SURVEYING, INC.  
 209 NORTH 300 WEST - VERNAL, UTAH 84078

|                            |                     |                       |
|----------------------------|---------------------|-----------------------|
| DATE SURVEYED:<br>10-01-10 | SURVEYED BY: M.S.B. | SHEET NO:<br><b>3</b> |
| DATE DRAWN:<br>10-07-10    | DRAWN BY: E.M.S.    |                       |
| SCALE: 1" = 1000'          |                     | 3 OF 16               |

| WELL NAME      | SURFACE POSITION |                |               |                |                        | BOTTOM HOLE   |                |               |                |                        |
|----------------|------------------|----------------|---------------|----------------|------------------------|---------------|----------------|---------------|----------------|------------------------|
|                | NAD83            |                | NAD27         |                | FOOTAGES               | NAD83         |                | NAD27         |                | FOOTAGES               |
|                | LATITUDE         | LONGITUDE      | LATITUDE      | LONGITUDE      |                        | LATITUDE      | LONGITUDE      | LATITUDE      | LONGITUDE      |                        |
| NBU 921-35K1CS | 39°59'34.438"    | 109°31'11.640" | 39°59'34.564" | 109°31'09.167" | 2503' FNL<br>2357' FWL | 39°59'28.111" | 109°31'14.243" | 39°59'28.237" | 109°31'11.769" | 2163' FSL<br>2155' FWL |
| NBU 921-35K1BS | 39°59'34.536"    | 109°31'11.633" | 39°59'34.663" | 109°31'09.159" | 2493' FNL<br>2358' FWL | 39°59'31.284" | 109°31'14.153" | 39°59'31.410" | 109°31'11.679" | 2484' FSL<br>2161' FWL |
| NBU 921-35F4CS | 39°59'34.636"    | 109°31'11.628" | 39°59'34.762" | 109°31'09.154" | 2483' FNL<br>2358' FWL | 39°59'33.812" | 109°31'14.177" | 39°59'33.939" | 109°31'11.703" | 2567' FNL<br>2159' FWL |
| NBU 921-35F4BS | 39°59'34.734"    | 109°31'11.622" | 39°59'34.860" | 109°31'09.149" | 2473' FNL<br>2358' FWL | 39°59'37.340" | 109°31'14.221" | 39°59'37.466" | 109°31'11.747" | 2210' FNL<br>2158' FWL |
| NBU 81V        | 39°59'34.621"    | 109°31'11.218" | 39°59'34.747" | 109°31'08.744" | 2484' FNL<br>2390' FWL |               |                |               |                |                        |

RELATIVE COORDINATES - From Surface Position to Bottom Hole

| WELL NAME      | NORTH   | EAST    | WELL NAME      | NORTH   | EAST    | WELL NAME      | NORTH  | EAST    | WELL NAME      | NORTH  | EAST    |
|----------------|---------|---------|----------------|---------|---------|----------------|--------|---------|----------------|--------|---------|
| NBU 921-35K1CS | -640.3' | -203.0' | NBU 921-35K1BS | -329.1' | -196.4' | NBU 921-35F4CS | -83.2' | -198.5' | NBU 921-35F4BS | 263.9' | -202.1' |



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

**WELL PAD - NBU 921-35F4**

**WELL PAD INTERFERENCE PLAT**  
WELLS - NBU 921-35K1CS, NBU 921-35K1BS,  
NBU 921-35F4CS & NBU 921-35F4BS  
LOCATED IN SECTION 35, T9S, R21E,  
S.L.B.&M., UINTAH COUNTY, UTAH.



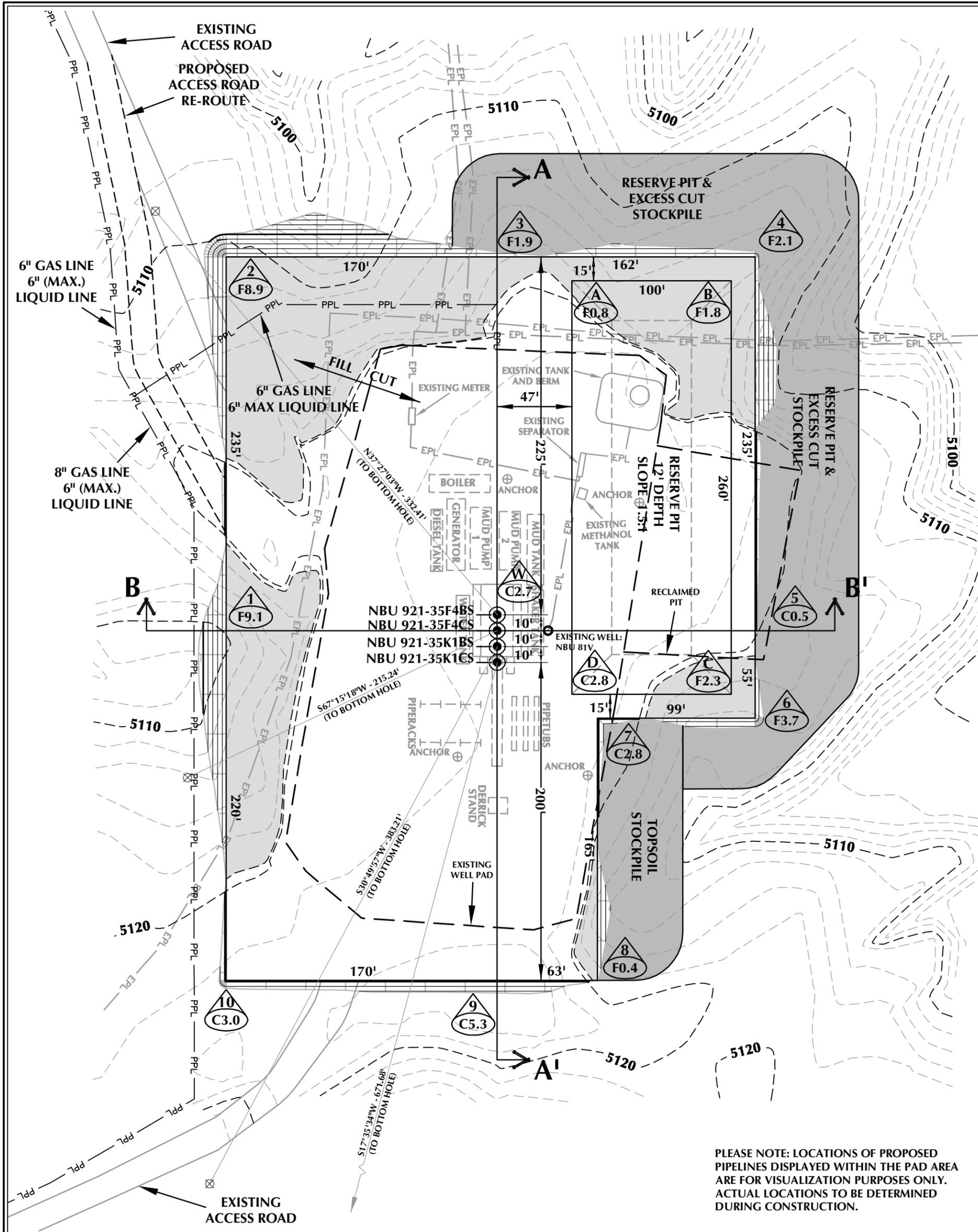
**CONSULTING, LLC**  
2155 North Main Street  
Sheridan WY 82801  
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**TIMBERLINE**

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

(435) 789-1365

|                            |                                       |                       |
|----------------------------|---------------------------------------|-----------------------|
| DATE SURVEYED:<br>10-01-10 | SURVEYED BY: M.S.B.                   | SHEET NO:<br><b>5</b> |
| DATE DRAWN:<br>10-07-10    | DRAWN BY: E.M.S.                      |                       |
| SCALE: 1" = 60'            | Date Last Revised:<br>12-03-10 M.W.W. | 5 OF 16               |



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

**WELL PAD - NBU 921-35F4 DESIGN SUMMARY**

EXISTING GRADE @ CENTER OF WELL PAD = 5122.2'  
 FINISHED GRADE ELEVATION = 5119.5'  
 CUT SLOPES = 1.5:1  
 FILL SLOPES = 1.5:1  
 TOTAL WELL PAD AREA = 3.34 ACRES  
 TOTAL DAMAGE AREA = 6.00 ACRES  
 SHRINKAGE FACTOR = 1.10  
 SWELL FACTOR = 1.00

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

WELL PAD - NBU 921-35F4

WELL PAD - LOCATION LAYOUT  
 NBU 921-35K1CS, NBU 921-35K1BS,  
 NBU 921-35F4CS & NBU 921-35F4BS  
 LOCATED IN SECTION 35, T9S, R21E,  
 S.L.B.&M., UTAH COUNTY, UTAH

**WELL PAD QUANTITIES**  
 TOTAL CUT FOR WELL PAD = 8,631 C.Y.  
 TOTAL FILL FOR WELL PAD = 6,601 C.Y.  
 TOPSOIL @ 6" DEPTH = 1,445 C.Y.  
 EXCESS MATERIAL = 2,030 C.Y.

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



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

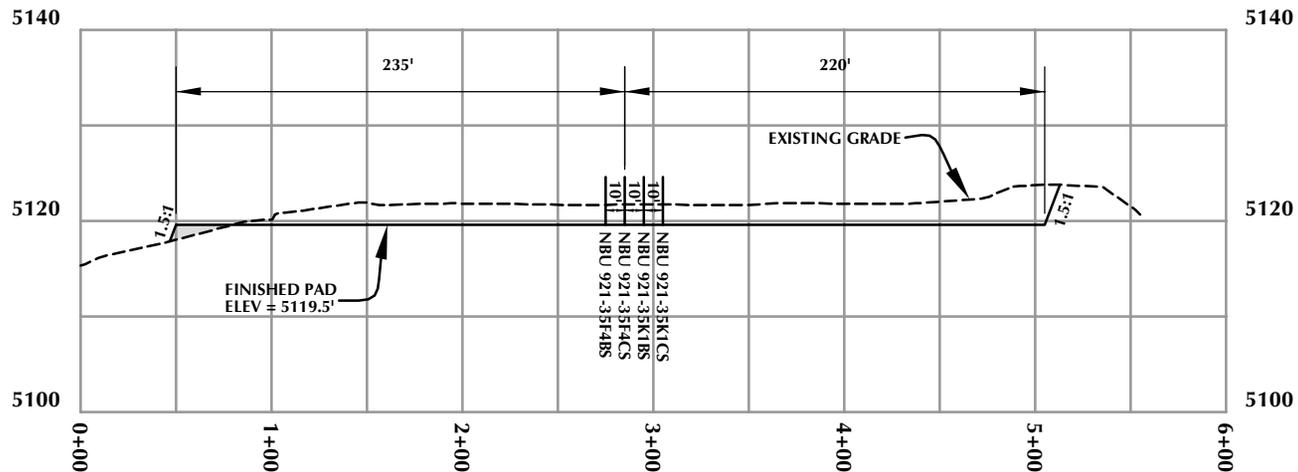
**WELL PAD LEGEND**

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

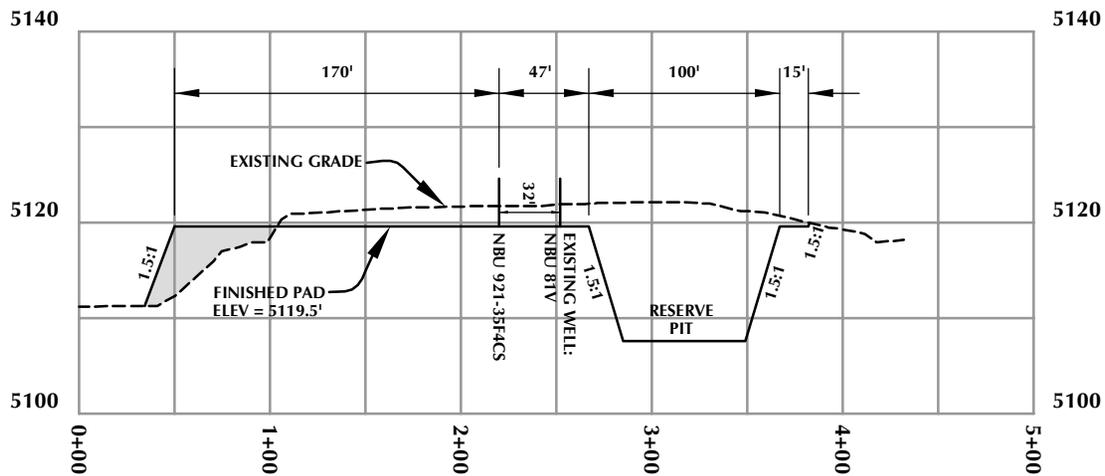


HORIZONTAL 0 30 60 1" = 60'  
 2' CONTOURS

Scale: 1"=60' Date: 10/19/10 SHEET NO:  
 REVISED: JFE 12/9/10 **6** 6 OF 16



**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

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

**WELL PAD - NBU 921-35F4**

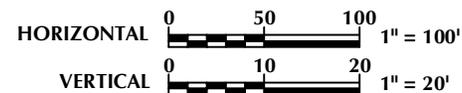
**WELL PAD - CROSS SECTIONS**  
NBU 921-35K1CS, NBU 921-35K1BS,  
NBU 921-35F4CS & NBU 921-35F4BS  
LOCATED IN SECTION 35, T9S, R21E,  
S.L.B.&M., Uintah County, Utah



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

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

(435) 789-1365



Scale: 1"=100'

Date: 10/15/10

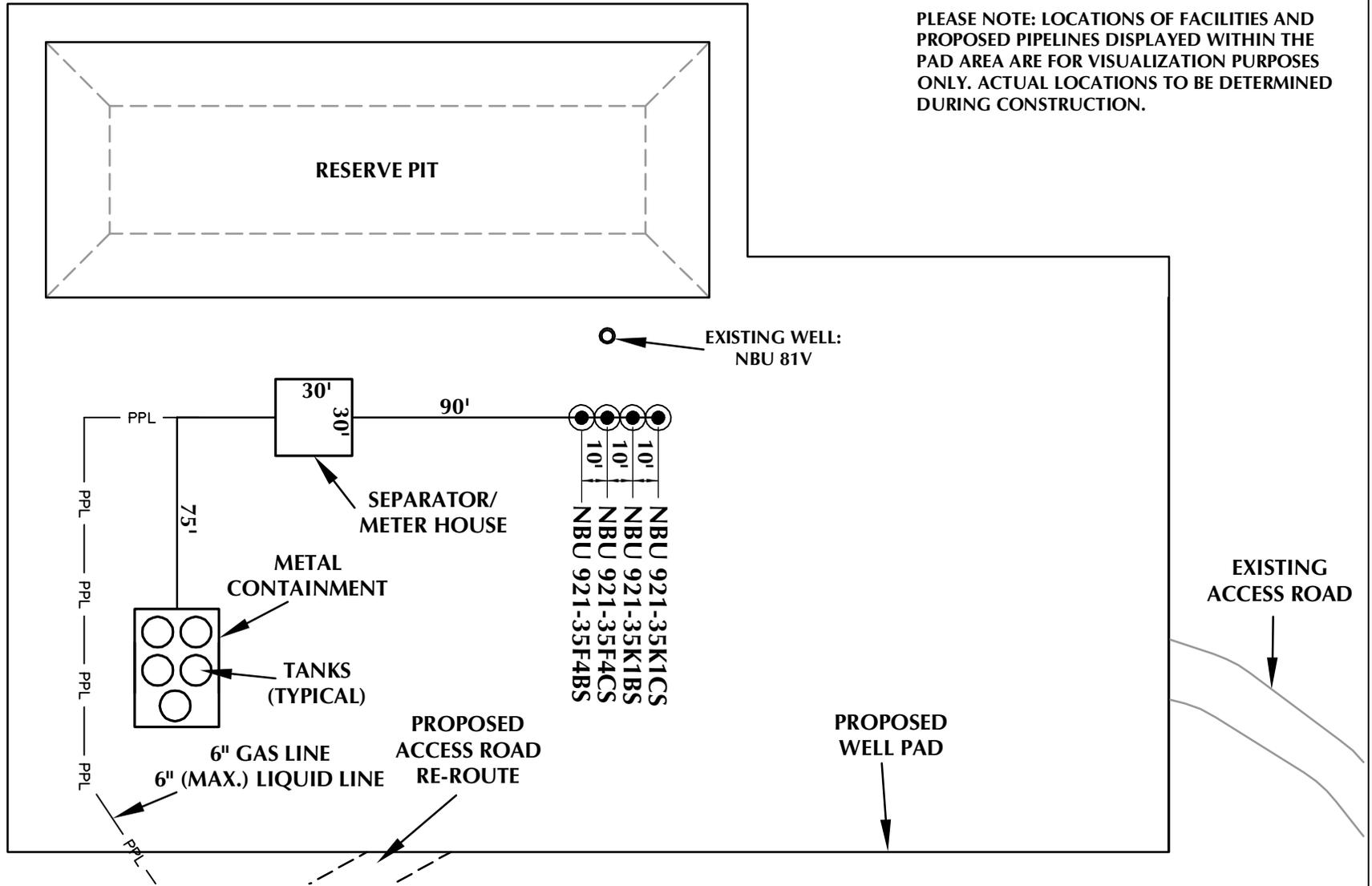
SHEET NO:

REVISED:

**7**

7 OF 16

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 921-35F4

WELL PAD - FACILITIES DIAGRAM  
NBU 921-35K1CS, NBU 921-35K1BS,  
NBU 921-35F4CS & NBU 921-35F4BS  
LOCATED IN SECTION 35, T9S, R21E,  
S.L.B.&M., Uintah County, Utah



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Sheridan, WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

**WELL PAD LEGEND**

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



HORIZONTAL 0 30' 60' 1" = 60'

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

Scale: 1"=60' Date: 10/19/10  
REVISED: JFE 12/9/10

SHEET NO:  
**8** 8 OF 16

APIWellNo:43047513570000  
K:\ANADARKO\2010\_S3\_NBU\_FOCUS\_SEC\_921-35\DWG\NBU\_921-35F4\NBU\_921-35F4\_PAD\_20101209.dwg, 12/22/2010 9:10:01 AM, bsk

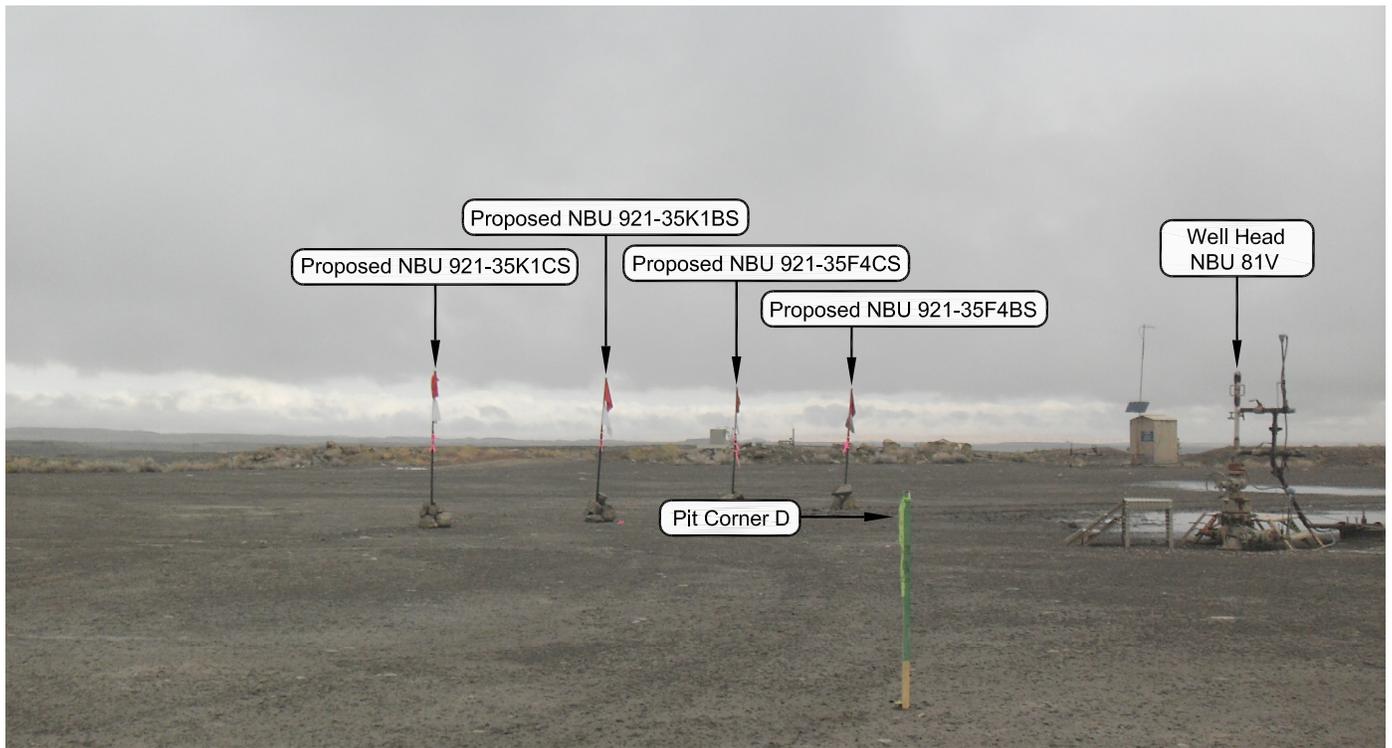


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: NORTHEASTERLY

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

**WELL PAD - NBU 921-35F4**

**LOCATION PHOTOS**

**NBU 921-35K1CS, NBU 921-35K1BS,  
 NBU 921-35F4CS & NBU 921-35F4BS  
 LOCATED IN SECTION 35, T9S, R21E,  
 S.L.B.&M., UINTAH COUNTY, UTAH.**



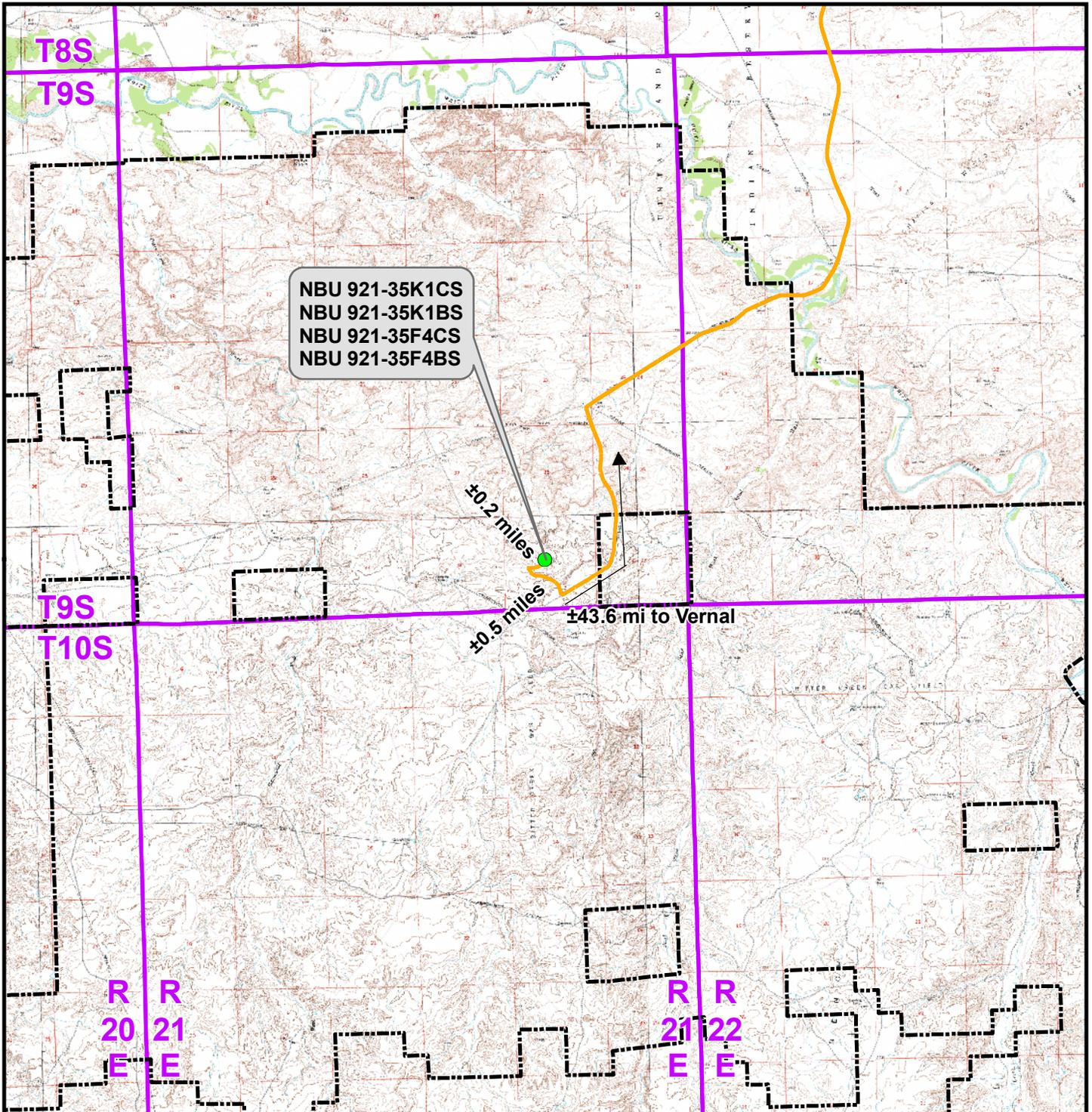
**CONSULTING, LLC**  
 2155 North Main Street  
 Sheridan WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

**TIMBERLINE**

(435) 789-1365

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

|                                |                         |                       |
|--------------------------------|-------------------------|-----------------------|
| DATE PHOTOS TAKEN:<br>10-01-10 | PHOTOS TAKEN BY: M.S.B. | SHEET NO:<br><b>9</b> |
| DATE DRAWN:<br>10-07-10        | DRAWN BY: B.M.          |                       |
| Date Last Revised:             |                         | 9 OF 16               |



**Legend**

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

Distance From Well Pad - NBU 921-35F4 To Unit Boundary: ±2,921ft

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

**WELL PAD - NBU 921-35F4**

**TOPO A**

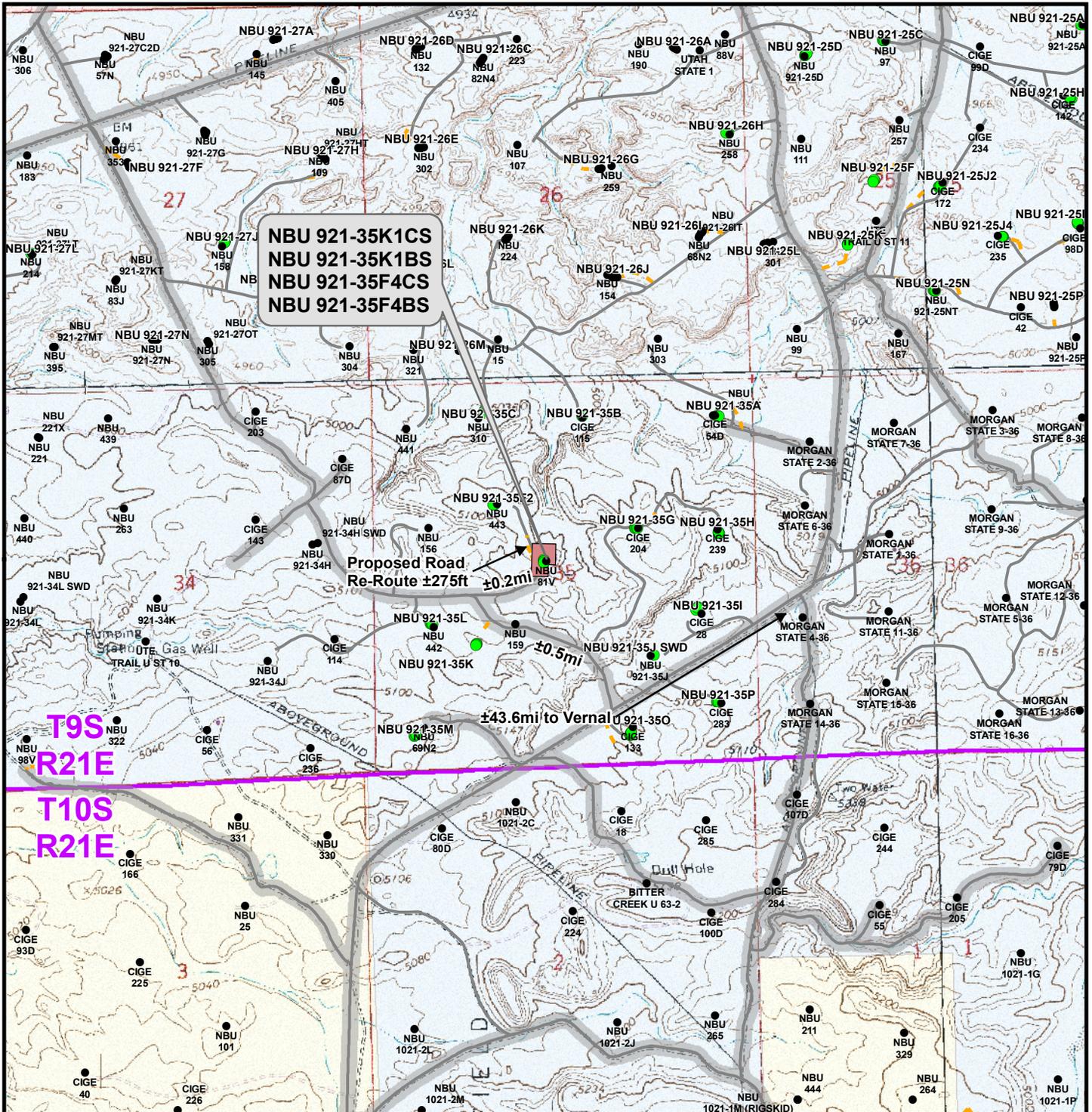
NBU 921-35K1CS, NBU 921-35K1BS,  
 NBU 921-35F4CS & NBU 921-35F4BS  
 LOCATED IN SECTION 35, T9S, R21E,  
 S.L.B.&M., UINTAH COUNTY, UTAH



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



|                  |                   |           |
|------------------|-------------------|-----------|
| Scale: 1:100,000 | NAD83 USP Central | Sheet No: |
| Drawn: TL        | Date: 19 Oct 2010 | 10        |
| Revised:         | Date:             |           |



**Legend**

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

Total Proposed Road Re-Route Length: ±275ft

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

**WELL PAD - NBU 921-35F4**

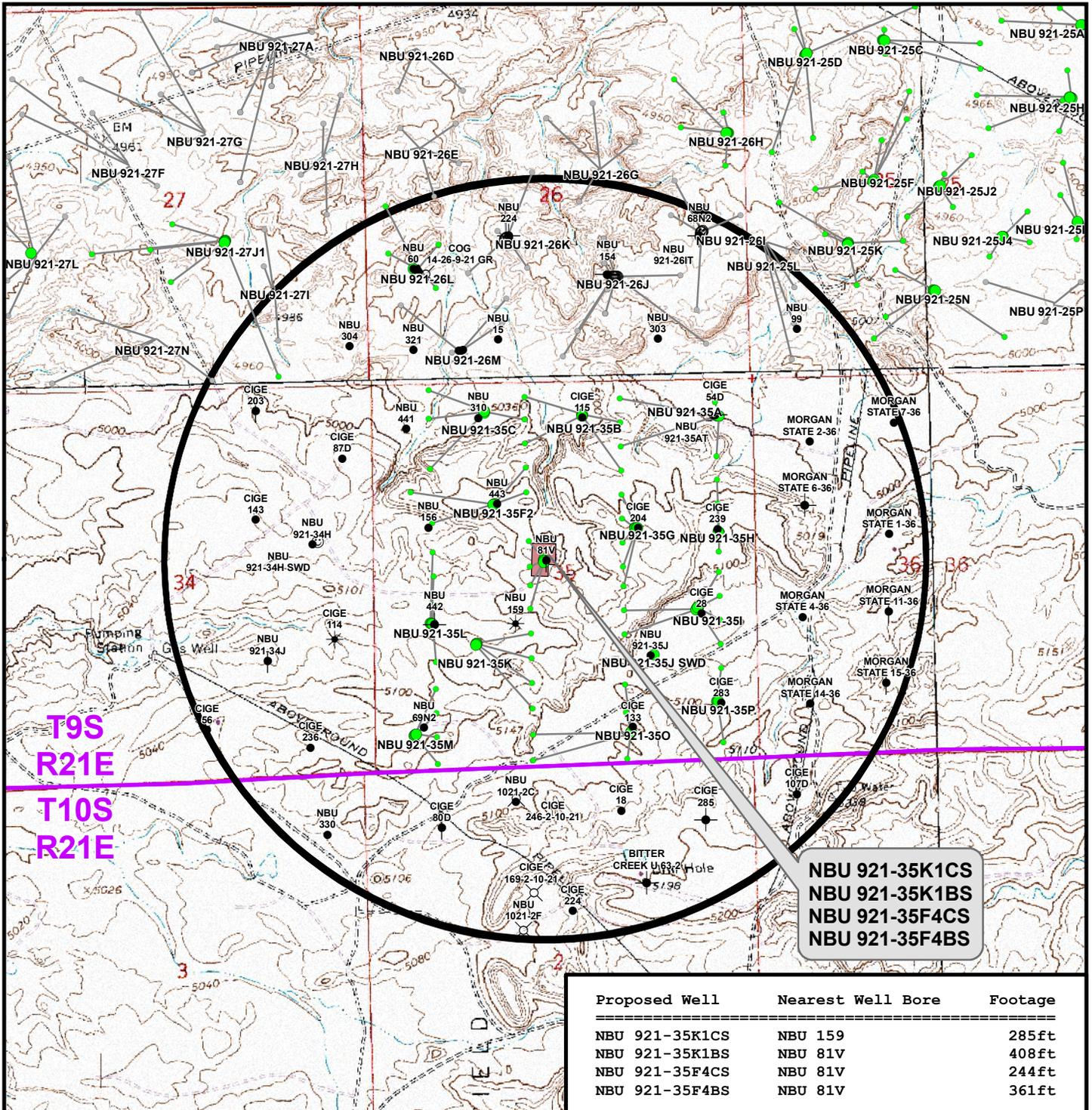
**TOPO B**  
NBU 921-35K1CS, NBU 921-35K1BS,  
NBU 921-35F4CS & NBU 921-35F4BS  
LOCATED IN SECTION 35, T9S, R21E,  
S.L.B.&M., UTAH COUNTY, UTAH

**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:<br><b>11</b> |
| Drawn: TL           | Date: 19 Oct 2010 | <b>11</b> of 16        |
| Revised: TL         | Date: 9 Dec 2010  |                        |



| Proposed Well  | Nearest Well Bore | Footage |
|----------------|-------------------|---------|
| NBU 921-35K1CS | NBU 159           | 285ft   |
| NBU 921-35K1BS | NBU 81V           | 408ft   |
| NBU 921-35F4CS | NBU 81V           | 244ft   |
| NBU 921-35F4BS | NBU 81V           | 361ft   |

**Legend**

- Well - Proposed
- Bottom Hole - Proposed
- Well Pad
- Well Path
- Bottom Hole - Existing
- Well - 1 Mile Radius
- Producing
- Temporarily-Abandoned
- ★ Active
- Shut-In
- ⊙ Spudded (Drilling commenced; Not yet completed)
- ▲ Approved permit (APD); not yet spudded
- New Permit (Not yet approved or drilled)
- ⊕ Inactive
- ⊗ Location Abandoned
- ⊗ Dry hole marker, buried
- ⊗ Drilling Operations Suspended
- ⊗ Returned APD (Unapproved)

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

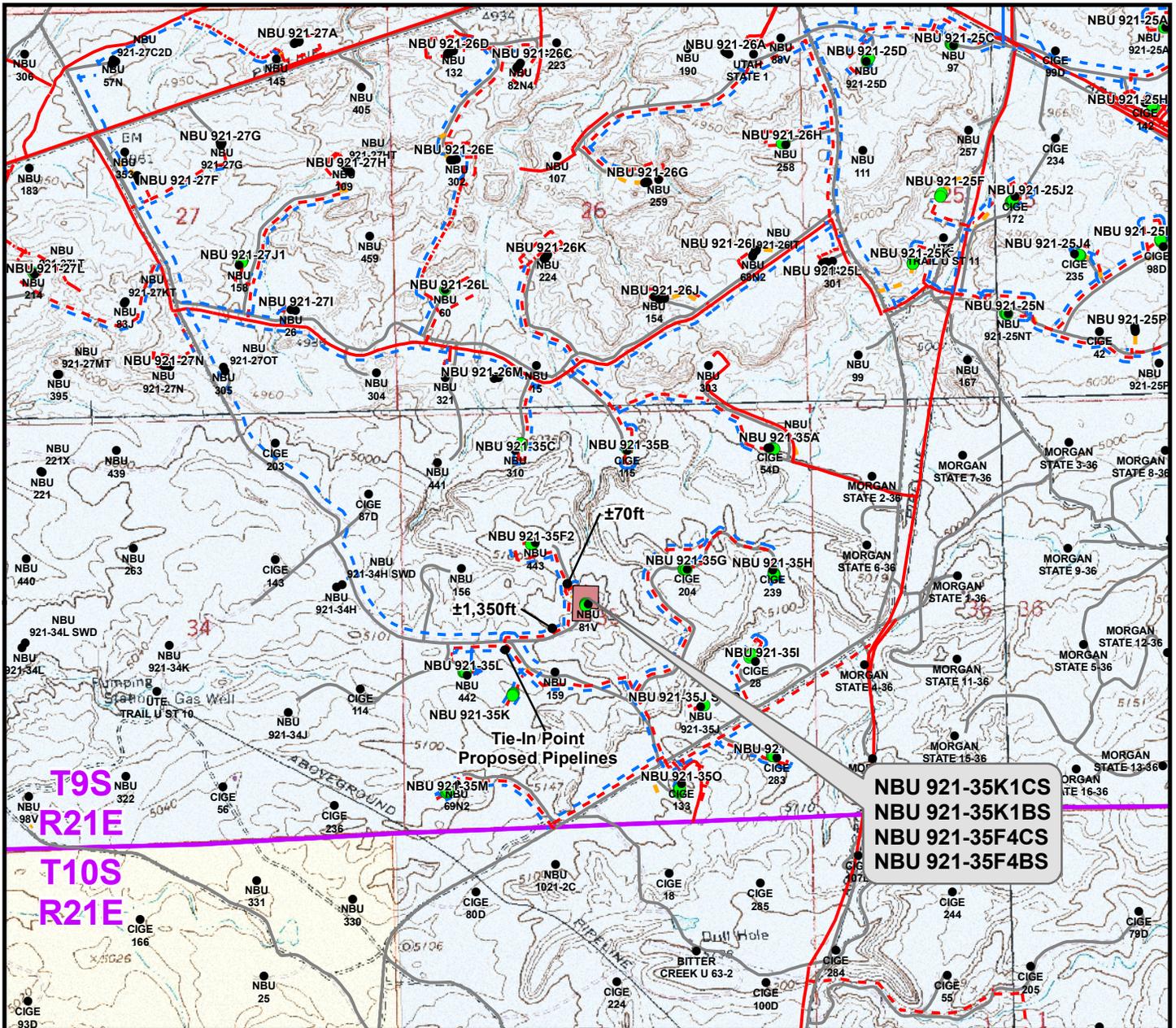
**WELL PAD - NBU 921-35F4**

**TOPO C**  
NBU 921-35K1CS, NBU 921-35K1BS,  
NBU 921-35F4CS & NBU 921-35F4BS  
LOCATED IN SECTION 35, T9S, R21E,  
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: |
| Drawn: TL           | Date: 19 Oct 2010 | 12        |
| Revised: TL         | Date: 9 Dec 2010  |           |



| Proposed Liquid Pipeline                                   | Length          |
|--|-----------------|
| Proposed 6" (Max.) (Meter House to Edge of Pad)            | ±270ft          |
| Proposed 6" (Max.) (Edge of Pad to 35F2 Intersection)      | ±70ft           |
| Proposed 6" (Max.) (35F2 Intersection to 35L Intersection) | ±1,350ft        |
| <b>TOTAL PROPOSED LIQUID PIPELINE =</b>                    | <b>±1,690ft</b> |

| Proposed Gas Pipeline                               | Length          |
|---|-----------------|
| Proposed 6" (Meter House to Edge of Pad)            | ±270ft          |
| Proposed 6" (Edge of Pad to 35F2 Intersection)      | ±70ft           |
| Proposed 8" (35F2 Intersection to 35L Intersection) | ±1,350ft        |
| <b>TOTAL PROPOSED GAS PIPELINE =</b>                | <b>±1,690ft</b> |

**Legend**

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

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

**WELL PAD - NBU 921-35F4**

**TOPO D**  
NBU 921-35K1CS, NBU 921-35K1BS,  
NBU 921-35F4CS & NBU 921-35F4BS  
LOCATED IN SECTION 35, T9S, R21E,  
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

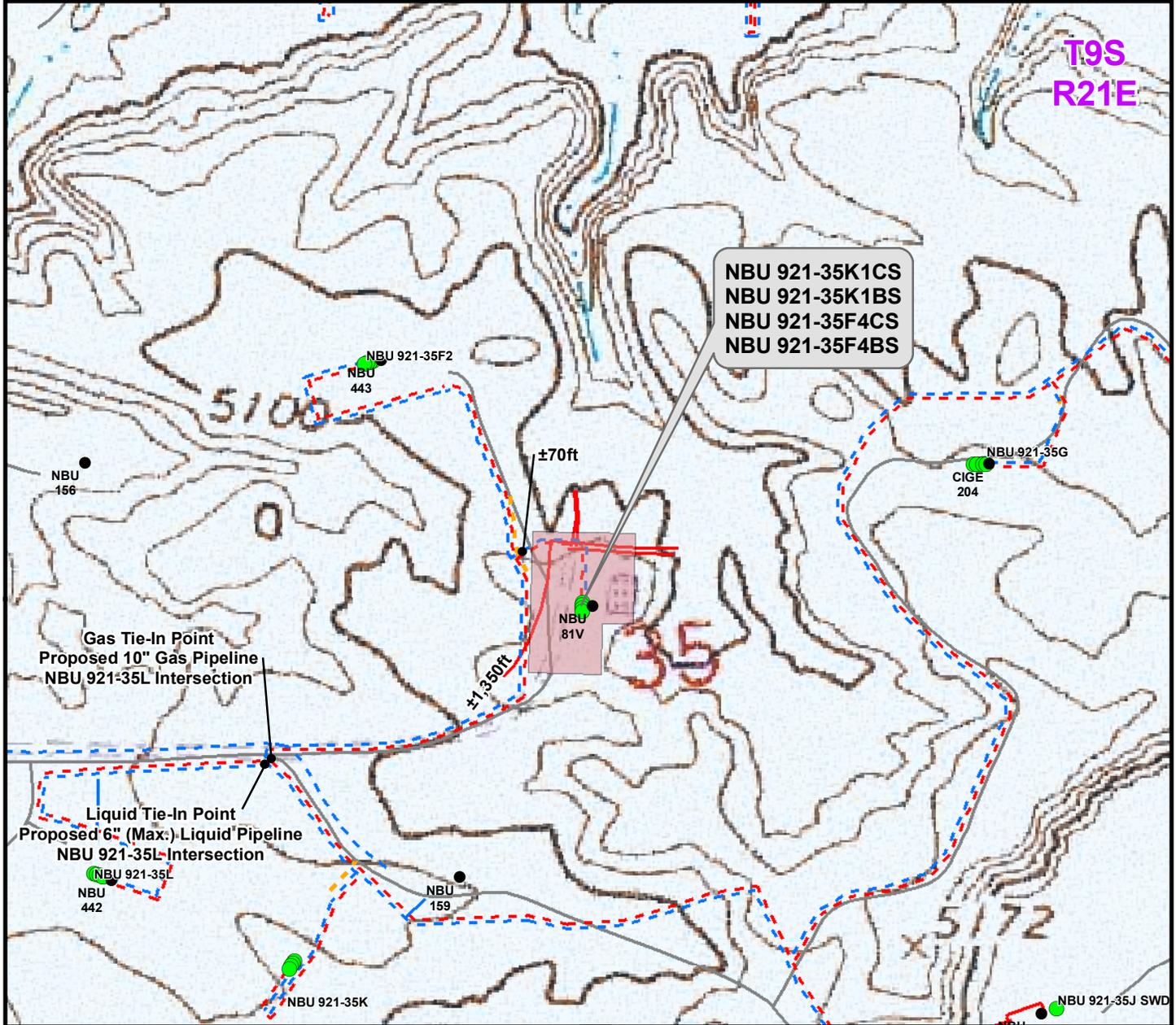


|                     |                   |           |
|---------------------|-------------------|-----------|
| Scale: 1" = 2,000ft | NAD83 USP Central | Sheet No: |
| Drawn: TL           | Date: 19 Oct 2010 | <b>13</b> |
| Revised: TL         | Date: 9 Dec 2010  |           |

13 of 16

T9S  
R21E

NBU 921-35K1CS  
NBU 921-35K1BS  
NBU 921-35F4CS  
NBU 921-35F4BS



| Proposed Liquid Pipeline                                   | Length          |
|--|-----------------|
| Proposed 6" (Max.) (Meter House to Edge of Pad)            | ±270ft          |
| Proposed 6" (Max.) (Edge of Pad to 35F2 Intersection)      | ±70ft           |
| Proposed 6" (Max.) (35F2 Intersection to 35L Intersection) | ±1,350ft        |
| <b>TOTAL PROPOSED LIQUID PIPELINE =</b>                    | <b>±1,690ft</b> |

| Proposed Gas Pipeline                               | Length          |
|---|-----------------|
| Proposed 6" (Meter House to Edge of Pad)            | ±270ft          |
| Proposed 6" (Edge of Pad to 35F2 Intersection)      | ±70ft           |
| Proposed 8" (35F2 Intersection to 35L Intersection) | ±1,350ft        |
| <b>TOTAL PROPOSED GAS PIPELINE =</b>                | <b>±1,690ft</b> |

**Legend**

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

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

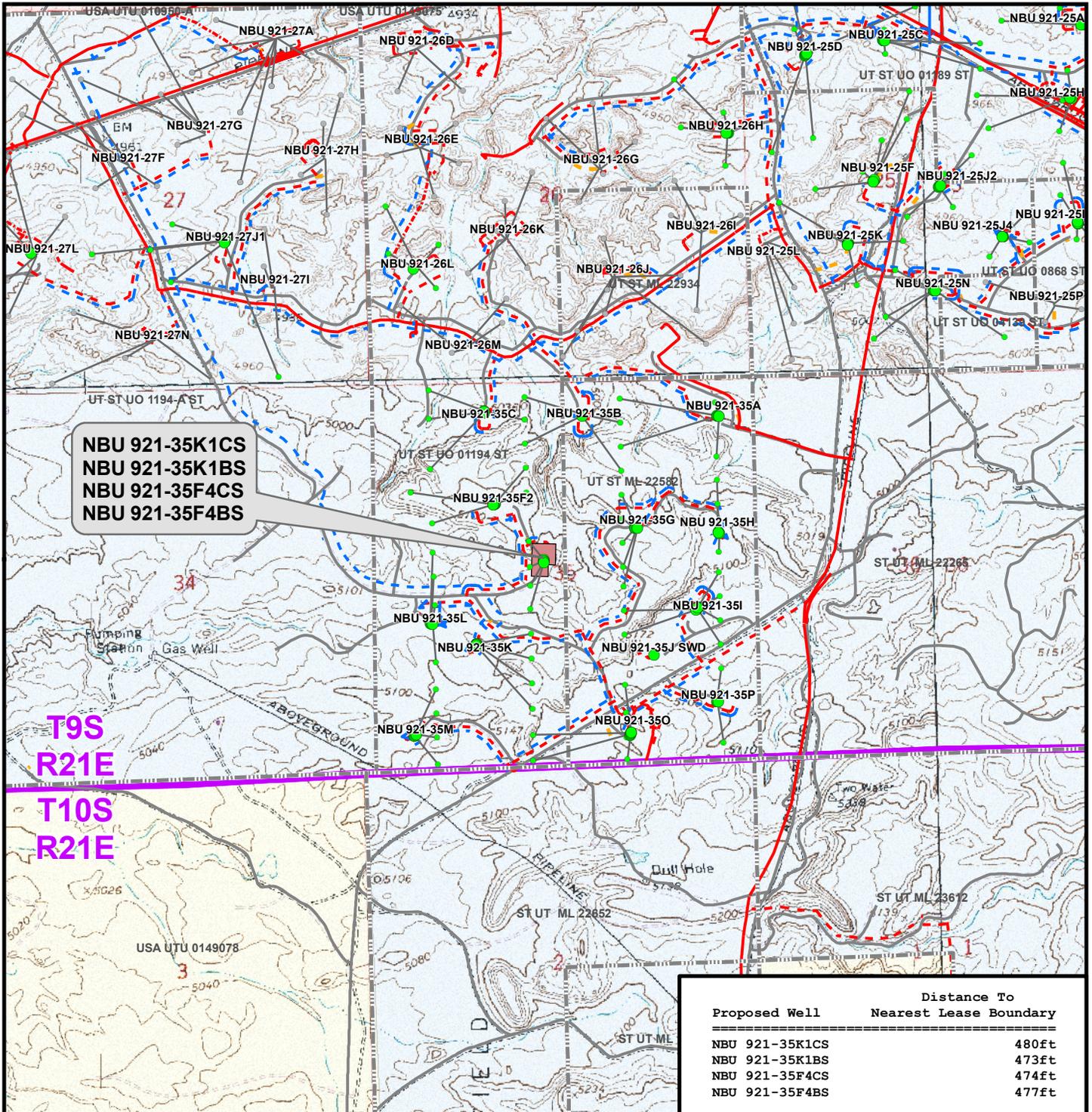
**WELL PAD - NBU 921-35F4**

**TOPO D2 (PAD & PIPELINE DETAIL)**  
NBU 921-35K1CS, NBU 921-35K1BS,  
NBU 921-35F4CS & NBU 921-35F4BS  
LOCATED IN SECTION 35, T9S, R21E,  
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



|                   |                   |           |
|-------------------|-------------------|-----------|
| Scale: 1" = 500ft | NAD83 USP Central | Sheet No: |
| Drawn: TL         | Date: 19 Oct 2010 | <b>14</b> |
| Revised: TL       | Date: 9 Dec 2010  |           |



**Legend**

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

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

**WELL PAD - NBU 921-35F4**

**TOPO E**  
NBU 921-35K1CS, NBU 921-35K1BS,  
NBU 921-35F4CS & NBU 921-35F4BS  
LOCATED IN SECTION 35, T9S, R21E,  
S.L.B.&M., UINTAH COUNTY, UTAH



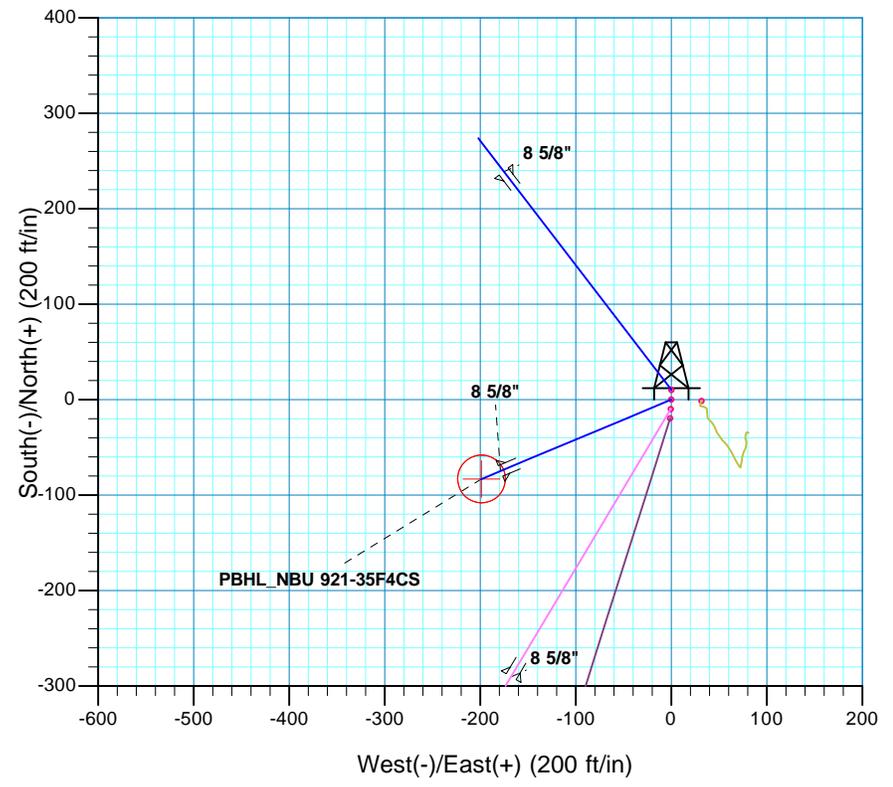
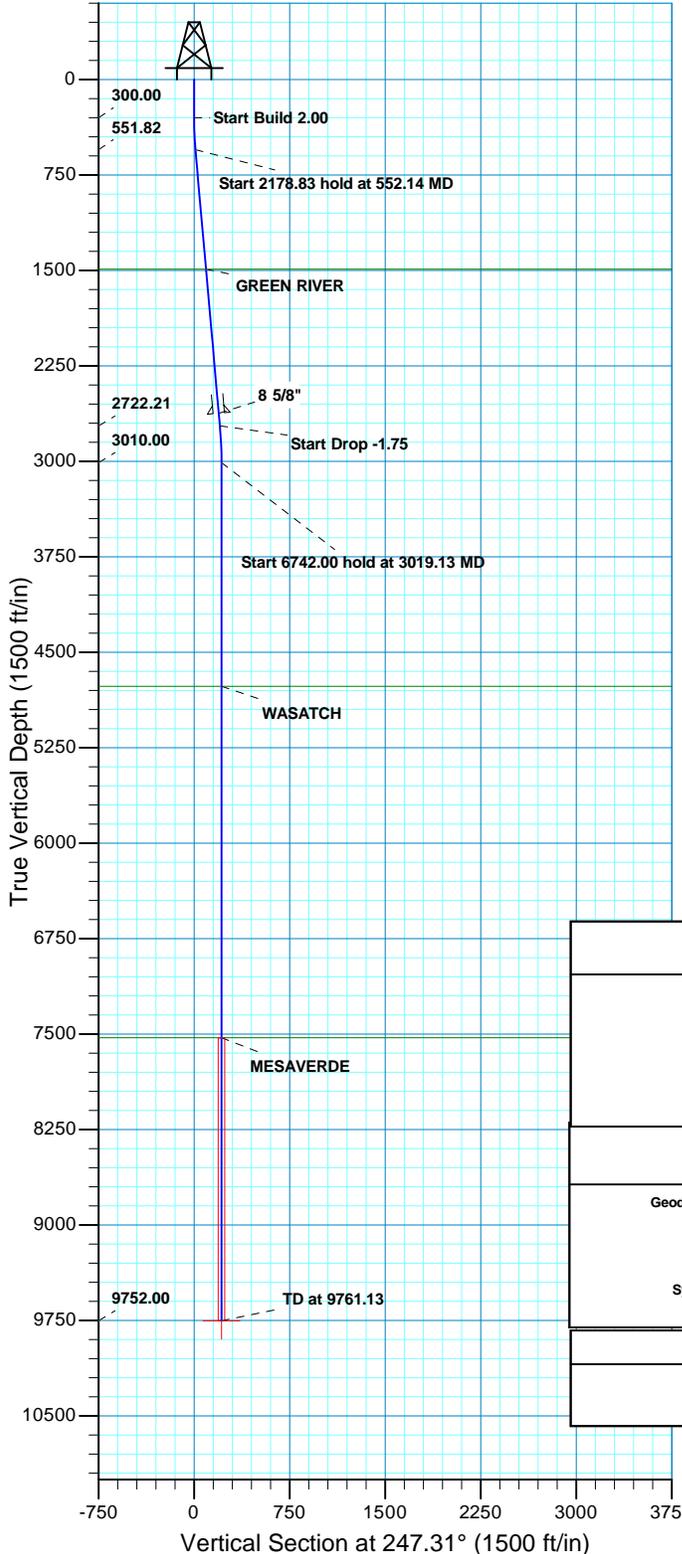
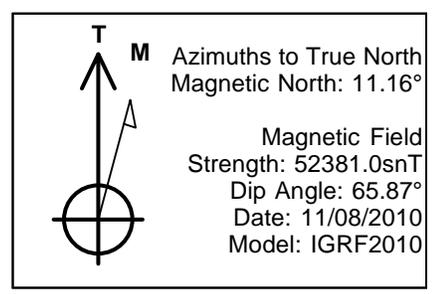
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|---------------------|-------------------|-----------|
| Scale: 1" = 2,000ft | NAD83 USP Central | Sheet No: |
| Drawn: TL           | Date: 19 Oct 2010 | 15        |
| Revised: TL         | Date: 9 Dec 2010  |           |

**Kerr-McGee Oil & Gas Onshore, LP  
WELL PAD – NBU 921-35F4  
WELLS – NBU 921-35K1CS, NBU 921-35K1BS,  
NBU 921-35F4CS & NBU 921-35F4BS  
Section 35, T9S, R21E, 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 20.1 miles to a Class D County Road to the northwest. Exit right and proceed in a northwesterly direction along the Class D County Road approximately 0.5 miles to a second Class D County Road to the east. Exit right and proceed in an easterly then northeasterly direction along the second Class D County Road approximately 0.2 miles to the proposed well pad.

Total distance from Vernal, Utah to the proposed well location is approximately 44.3 miles in a southerly direction.

| WELL DETAILS: P_NBU 921-35F4CS         |         |             |            |                  |                  |                  |                   |                        |
|--|---------|-------------|------------|------------------|------------------|------------------|-------------------|------------------------|
| GL 5120 & KB 14' @ 5134.00ft (ASSUMED) |         |             |            |                  |                  |                  |                   |                        |
| +N/-S                                  | +E/-W   | Northing    | Easting    | Latitude         | Longitude        |                  |                   |                        |
| 0.00                                   | 0.00    | 14526936.47 | 2055175.02 | 39° 59' 34.760 N | 109° 31' 9.152 W |                  |                   |                        |
| DESIGN TARGET DETAILS                  |         |             |            |                  |                  |                  |                   |                        |
| Name                                   | TVD     | +N/-S       | +E/-W      | Northing         | Easting          | Latitude         | Longitude         | Shape                  |
| PBHL                                   | 9752.00 | -83.04      | -198.62    | 14526850.14      | 2054977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W | Circle (Radius: 25.00) |
| - plan hits target center              |         |             |            |                  |                  |                  |                   |                        |



| 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                       |             |
| 552.14  | 5.04 | 247.31 | 551.82  | -4.28   | -10.23  | 2.00  | 247.31                | 11.09                      |             |
| 2730.97   | 5.04 | 247.31 | 2722.21 | -78.15  | -186.93 | 0.00  | 0.00                  | 202.61                     |             |
| 3019.13   | 0.00 | 0.00   | 3010.00 | -83.04  | -198.62 | 1.75  | 180.00                | 215.28                     |             |
| 9761.13   | 0.00 | 0.00   | 9752.00 | -83.04  | -198.62 | 0.00  | 0.00                  | 215.28 PBHL_NBU 921-35F4CS |             |
| PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N   |      |        |         |         |         |       | FORMATION TOP DETAILS |                            |             |
| Geodetic System: Universal Transverse Mercator (US Survey Feet)<br>Datum: NAD 1927 (NADCON CONUS)<br>Ellipsoid: Clarke 1866<br>Zone: Zone 12N (114 W to 108 W)<br>Location: SECTION 35 T9S R21E<br>System Datum: Mean Sea Level |      |        |         |         |         |       | TVDPath               | MDPath                     | Formation   |
|   |      |        |         |         |         |       | 1490.00               | 1493.97                    | GREEN RIVER |
|   |      |        |         |         |         |       | 4768.00               | 4777.13                    | WASATCH     |
|   |      |        |         |         |         |       | 7529.00               | 7538.13                    | MESAVERDE   |
| CASING DETAILS  |      |        |         |         |         |       |                       |                            |             |
|   |      |        | TVD     | MD      | Name    | Size  |                       |                            |             |
|   |      |        | 2622.00 | 2630.37 | 8 5/8"  | 8.625 |                       |                            |             |



**Scientific Drilling**  
Rocky Mountain Operations

# **US ROCKIES REGION PLANNING**

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

**NBU 921-35F4 PAD**

**P\_NBU 921-35F4CS**

**P\_NBU 921-35F4CS**

**Plan: PLAN #1 11-8-10 RHS**

## **Standard Planning Report**

**08 November, 2010**



|                  |                                    |                                     |  |
|------------------|------------------------------------|-------------------------------------|--|
| <b>Database:</b> | EDM5000-RobertS-Local              | <b>Local Co-ordinate Reference:</b> | Well P_NBU 921-35F4CS                  |
| <b>Company:</b>  | US ROCKIES REGION PLANNING         | <b>TVD Reference:</b>               | GL 5120 & KB 14' @ 5134.00ft (ASSUMED) |
| <b>Project:</b>  | UTAH - UTM (feet), NAD27, Zone 12N | <b>MD Reference:</b>                | GL 5120 & KB 14' @ 5134.00ft (ASSUMED) |
| <b>Site:</b>     | NBU 921-35F4 PAD                   | <b>North Reference:</b>             | True                                   |
| <b>Well:</b>     | P_NBU 921-35F4CS                   | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Wellbore:</b> | P_NBU 921-35F4CS                   |                                     |  |
| <b>Design:</b>   | PLAN #1 11-8-10 RHS                |                                     |  |

|                    |  |                      |                |
|--------------------|--|----------------------|----------------|
| <b>Project</b>     | UTAH - UTM (feet), NAD27, Zone 12N             |                      |                |
| <b>Map System:</b> | Universal Transverse Mercator (US Survey Feet) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)                        |                      |                |
| <b>Map Zone:</b>   | Zone 12N (114 W to 108 W)                      |                      |                |

|                              |                                       |                     |                   |                          |        |
|------------------------------|---------------------------------------|---------------------|-------------------|--------------------------|--------|
| <b>Site</b>                  | NBU 921-35F4 PAD, SECTION 35 T9S R21E |                     |                   |                          |        |
| <b>Site Position:</b>        | <b>Northing:</b>                      | 14,526,946.67 usft  | <b>Latitude:</b>  | 39° 59' 34.861 N         |        |
| <b>From:</b> Lat/Long        | <b>Easting:</b>                       | 2,055,175.13 usft   | <b>Longitude:</b> | 109° 31' 9.149 W         |        |
| <b>Position Uncertainty:</b> | 0.00 ft                               | <b>Slot Radius:</b> | 13.200 in         | <b>Grid Convergence:</b> | 0.95 ° |

|                             |                                       |           |                            |                    |                      |                  |
|-----------------------------|---------------------------------------|-----------|----------------------------|--------------------|----------------------|------------------|
| <b>Well</b>                 | P_NBU 921-35F4CS, 2483' FNL 2358' FWL |           |                            |                    |                      |                  |
| <b>Well Position</b>        | <b>+N/-S</b>                          | -10.20 ft | <b>Northing:</b>           | 14,526,936.47 usft | <b>Latitude:</b>     | 39° 59' 34.760 N |
|                             | <b>+E/-W</b>                          | -0.28 ft  | <b>Easting:</b>            | 2,055,175.02 usft  | <b>Longitude:</b>    | 109° 31' 9.152 W |
| <b>Position Uncertainty</b> |                                       | 0.00 ft   | <b>Wellhead Elevation:</b> |                    | <b>Ground Level:</b> | 5,120.00 ft      |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | P_NBU 921-35F4CS  |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2010          | 11/08/2010         | 11.16                  | 65.87                | 52,381                     |

|                          |                              |                   |                      |                      |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| <b>Design</b>            | PLAN #1 11-8-10 RHS          |                   |                      |                      |
| <b>Audit Notes:</b>      |                              |                   |                      |                      |
| <b>Version:</b>          | <b>Phase:</b>                | PLAN              | <b>Tie On Depth:</b> | 0.00                 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b>    | <b>Direction (°)</b> |
|                          | 0.00                         | 0.00              | 0.00                 | 247.31               |

| <b>Plan Sections</b> |                 |             |                     |            |            |                       |                      |                     |         |                   |
|----------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|----------------------|---------------------|---------|-------------------|
| Measured Depth (ft)  | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target            |
| 0.00                 | 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    |                   |
| 552.14               | 5.04            | 247.31      | 551.82              | -4.28      | -10.23     | 2.00                  | 2.00                 | 0.00                | 247.31  |                   |
| 2,730.97             | 5.04            | 247.31      | 2,722.21            | -78.15     | -186.93    | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 3,019.13             | 0.00            | 0.00        | 3,010.00            | -83.04     | -198.62    | 1.75                  | -1.75                | 0.00                | 180.00  |                   |
| 9,761.13             | 0.00            | 0.00        | 9,752.00            | -83.04     | -198.62    | 0.00                  | 0.00                 | 0.00                | 0.00    | PBHL_NBU 921-35F4 |

|                  |                                    |                                     |  |
|------------------|------------------------------------|-------------------------------------|--|
| <b>Database:</b> | EDM5000-RobertS-Local              | <b>Local Co-ordinate Reference:</b> | Well P_NBU 921-35F4CS                  |
| <b>Company:</b>  | US ROCKIES REGION PLANNING         | <b>TVD Reference:</b>               | GL 5120 & KB 14' @ 5134.00ft (ASSUMED) |
| <b>Project:</b>  | UTAH - UTM (feet), NAD27, Zone 12N | <b>MD Reference:</b>                | GL 5120 & KB 14' @ 5134.00ft (ASSUMED) |
| <b>Site:</b>     | NBU 921-35F4 PAD                   | <b>North Reference:</b>             | True                                   |
| <b>Well:</b>     | P_NBU 921-35F4CS                   | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Wellbore:</b> | P_NBU 921-35F4CS                   |                                     |  |
| <b>Design:</b>   | PLAN #1 11-8-10 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                | 0.00 |
| 100.00                                  | 0.00            | 0.00        | 100.00              | 0.00       | 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                | 0.00 |
| 300.00                                  | 0.00            | 0.00        | 300.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00 |
| <b>Start Build 2.00</b>                 |                 |             |                     |            |            |                       |                       |                      |                     |      |
| 400.00                                  | 2.00            | 247.31      | 399.98              | -0.67      | -1.61      | 1.75                  | 2.00                  | 2.00                 | 2.00                | 0.00 |
| 500.00                                  | 4.00            | 247.31      | 499.84              | -2.69      | -6.44      | 6.98                  | 2.00                  | 2.00                 | 2.00                | 0.00 |
| 552.14                                  | 5.04            | 247.31      | 551.82              | -4.28      | -10.23     | 11.09                 | 2.00                  | 2.00                 | 2.00                | 0.00 |
| <b>Start 2178.83 hold at 552.14 MD</b>  |                 |             |                     |            |            |                       |                       |                      |                     |      |
| 600.00                                  | 5.04            | 247.31      | 599.49              | -5.90      | -14.11     | 15.30                 | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 700.00                                  | 5.04            | 247.31      | 699.10              | -9.29      | -22.22     | 24.09                 | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 800.00                                  | 5.04            | 247.31      | 798.72              | -12.68     | -30.33     | 32.88                 | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 900.00                                  | 5.04            | 247.31      | 898.33              | -16.07     | -38.44     | 41.67                 | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 1,000.00                                | 5.04            | 247.31      | 997.94              | -19.46     | -46.55     | 50.46                 | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 1,100.00                                | 5.04            | 247.31      | 1,097.55            | -22.85     | -54.66     | 59.25                 | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 1,200.00                                | 5.04            | 247.31      | 1,197.17            | -26.24     | -62.77     | 68.04                 | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 1,300.00                                | 5.04            | 247.31      | 1,296.78            | -29.63     | -70.88     | 76.83                 | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 1,400.00                                | 5.04            | 247.31      | 1,396.39            | -33.02     | -78.99     | 85.62                 | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 1,493.97                                | 5.04            | 247.31      | 1,490.00            | -36.21     | -86.61     | 93.88                 | 0.00                  | 0.00                 | 0.00                | 0.00 |
| <b>GREEN RIVER</b>                      |                 |             |                     |            |            |                       |                       |                      |                     |      |
| 1,500.00                                | 5.04            | 247.31      | 1,496.01            | -36.41     | -87.10     | 94.41                 | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 1,600.00                                | 5.04            | 247.31      | 1,595.62            | -39.80     | -95.21     | 103.20                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 1,700.00                                | 5.04            | 247.31      | 1,695.23            | -43.20     | -103.32    | 111.99                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 1,800.00                                | 5.04            | 247.31      | 1,794.84            | -46.59     | -111.43    | 120.78                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 1,900.00                                | 5.04            | 247.31      | 1,894.46            | -49.98     | -119.54    | 129.57                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 2,000.00                                | 5.04            | 247.31      | 1,994.07            | -53.37     | -127.65    | 138.36                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 2,100.00                                | 5.04            | 247.31      | 2,093.68            | -56.76     | -135.76    | 147.15                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 2,200.00                                | 5.04            | 247.31      | 2,193.30            | -60.15     | -143.87    | 155.94                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 2,300.00                                | 5.04            | 247.31      | 2,292.91            | -63.54     | -151.98    | 164.73                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 2,400.00                                | 5.04            | 247.31      | 2,392.52            | -66.93     | -160.09    | 173.52                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 2,500.00                                | 5.04            | 247.31      | 2,492.14            | -70.32     | -168.20    | 182.31                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 2,600.00                                | 5.04            | 247.31      | 2,591.75            | -73.71     | -176.31    | 191.10                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 2,630.37                                | 5.04            | 247.31      | 2,622.00            | -74.74     | -178.77    | 193.77                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| <b>8 5/8"</b>                           |                 |             |                     |            |            |                       |                       |                      |                     |      |
| 2,700.00                                | 5.04            | 247.31      | 2,691.36            | -77.10     | -184.42    | 199.89                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 2,730.97                                | 5.04            | 247.31      | 2,722.21            | -78.15     | -186.93    | 202.61                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| <b>Start Drop -1.75</b>                 |                 |             |                     |            |            |                       |                       |                      |                     |      |
| 2,800.00                                | 3.83            | 247.31      | 2,791.03            | -80.21     | -191.86    | 207.95                | 1.75                  | -1.75                | 0.00                | 0.00 |
| 2,900.00                                | 2.08            | 247.31      | 2,890.90            | -82.20     | -196.62    | 213.11                | 1.75                  | -1.75                | 0.00                | 0.00 |
| 3,000.00                                | 0.33            | 247.31      | 2,990.87            | -83.02     | -198.57    | 215.23                | 1.75                  | -1.75                | 0.00                | 0.00 |
| 3,019.13                                | 0.00            | 0.00        | 3,010.00            | -83.04     | -198.62    | 215.28                | 1.75                  | -1.75                | 0.00                | 0.00 |
| <b>Start 6742.00 hold at 3019.13 MD</b> |                 |             |                     |            |            |                       |                       |                      |                     |      |
| 3,100.00                                | 0.00            | 0.00        | 3,090.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 3,200.00                                | 0.00            | 0.00        | 3,190.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 3,300.00                                | 0.00            | 0.00        | 3,290.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 3,400.00                                | 0.00            | 0.00        | 3,390.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 3,500.00                                | 0.00            | 0.00        | 3,490.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 3,600.00                                | 0.00            | 0.00        | 3,590.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 3,700.00                                | 0.00            | 0.00        | 3,690.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 3,800.00                                | 0.00            | 0.00        | 3,790.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 3,900.00                                | 0.00            | 0.00        | 3,890.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 4,000.00                                | 0.00            | 0.00        | 3,990.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                | 0.00 |
| 4,100.00                                | 0.00            | 0.00        | 4,090.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                | 0.00 |

|                  |                                    |                                     |  |
|------------------|------------------------------------|-------------------------------------|--|
| <b>Database:</b> | EDM5000-RobertS-Local              | <b>Local Co-ordinate Reference:</b> | Well P_NBU 921-35F4CS                  |
| <b>Company:</b>  | US ROCKIES REGION PLANNING         | <b>TVD Reference:</b>               | GL 5120 & KB 14' @ 5134.00ft (ASSUMED) |
| <b>Project:</b>  | UTAH - UTM (feet), NAD27, Zone 12N | <b>MD Reference:</b>                | GL 5120 & KB 14' @ 5134.00ft (ASSUMED) |
| <b>Site:</b>     | NBU 921-35F4 PAD                   | <b>North Reference:</b>             | True                                   |
| <b>Well:</b>     | P_NBU 921-35F4CS                   | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Wellbore:</b> | P_NBU 921-35F4CS                   |                                     |  |
| <b>Design:</b>   | PLAN #1 11-8-10 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) |
| 4,200.00            | 0.00            | 0.00        | 4,190.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 4,300.00            | 0.00            | 0.00        | 4,290.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 4,400.00            | 0.00            | 0.00        | 4,390.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 4,500.00            | 0.00            | 0.00        | 4,490.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 4,600.00            | 0.00            | 0.00        | 4,590.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 4,700.00            | 0.00            | 0.00        | 4,690.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 4,777.13            | 0.00            | 0.00        | 4,768.00            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| <b>WASATCH</b>      |                 |             |                     |            |            |                       |                       |                      |                     |
| 4,800.00            | 0.00            | 0.00        | 4,790.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 4,900.00            | 0.00            | 0.00        | 4,890.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 5,000.00            | 0.00            | 0.00        | 4,990.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 5,100.00            | 0.00            | 0.00        | 5,090.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 5,200.00            | 0.00            | 0.00        | 5,190.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 5,300.00            | 0.00            | 0.00        | 5,290.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 5,400.00            | 0.00            | 0.00        | 5,390.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 5,500.00            | 0.00            | 0.00        | 5,490.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 5,600.00            | 0.00            | 0.00        | 5,590.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 5,700.00            | 0.00            | 0.00        | 5,690.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 5,800.00            | 0.00            | 0.00        | 5,790.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 5,900.00            | 0.00            | 0.00        | 5,890.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 6,000.00            | 0.00            | 0.00        | 5,990.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 6,100.00            | 0.00            | 0.00        | 6,090.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 6,200.00            | 0.00            | 0.00        | 6,190.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 6,300.00            | 0.00            | 0.00        | 6,290.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 6,400.00            | 0.00            | 0.00        | 6,390.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 6,500.00            | 0.00            | 0.00        | 6,490.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 6,600.00            | 0.00            | 0.00        | 6,590.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 6,700.00            | 0.00            | 0.00        | 6,690.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 6,800.00            | 0.00            | 0.00        | 6,790.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 6,900.00            | 0.00            | 0.00        | 6,890.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 7,000.00            | 0.00            | 0.00        | 6,990.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 7,100.00            | 0.00            | 0.00        | 7,090.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 7,200.00            | 0.00            | 0.00        | 7,190.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 7,300.00            | 0.00            | 0.00        | 7,290.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 7,400.00            | 0.00            | 0.00        | 7,390.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 7,500.00            | 0.00            | 0.00        | 7,490.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 7,538.13            | 0.00            | 0.00        | 7,529.00            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| <b>MESAVERDE</b>    |                 |             |                     |            |            |                       |                       |                      |                     |
| 7,600.00            | 0.00            | 0.00        | 7,590.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 7,700.00            | 0.00            | 0.00        | 7,690.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 7,800.00            | 0.00            | 0.00        | 7,790.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 7,900.00            | 0.00            | 0.00        | 7,890.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 8,000.00            | 0.00            | 0.00        | 7,990.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 8,100.00            | 0.00            | 0.00        | 8,090.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 8,200.00            | 0.00            | 0.00        | 8,190.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 8,300.00            | 0.00            | 0.00        | 8,290.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 8,400.00            | 0.00            | 0.00        | 8,390.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 8,500.00            | 0.00            | 0.00        | 8,490.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 8,600.00            | 0.00            | 0.00        | 8,590.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 8,700.00            | 0.00            | 0.00        | 8,690.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 8,800.00            | 0.00            | 0.00        | 8,790.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 8,900.00            | 0.00            | 0.00        | 8,890.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 9,000.00            | 0.00            | 0.00        | 8,990.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 9,100.00            | 0.00            | 0.00        | 9,090.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |



**Scientific Drilling**  
Rocky Mountain Operations

# **US ROCKIES REGION PLANNING**

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

**NBU 921-35F4 PAD**

**P\_NBU 921-35F4CS**

**P\_NBU 921-35F4CS**

**Plan: PLAN #1 11-8-10 RHS**

## **Standard Planning Report - Geographic**

**08 November, 2010**



|                  |                                    |                                     |  |
|------------------|------------------------------------|-------------------------------------|--|
| <b>Database:</b> | EDM5000-RobertS-Local              | <b>Local Co-ordinate Reference:</b> | Well P_NBU 921-35F4CS                  |
| <b>Company:</b>  | US ROCKIES REGION PLANNING         | <b>TVD Reference:</b>               | GL 5120 & KB 14' @ 5134.00ft (ASSUMED) |
| <b>Project:</b>  | UTAH - UTM (feet), NAD27, Zone 12N | <b>MD Reference:</b>                | GL 5120 & KB 14' @ 5134.00ft (ASSUMED) |
| <b>Site:</b>     | NBU 921-35F4 PAD                   | <b>North Reference:</b>             | True                                   |
| <b>Well:</b>     | P_NBU 921-35F4CS                   | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Wellbore:</b> | P_NBU 921-35F4CS                   |                                     |  |
| <b>Design:</b>   | PLAN #1 11-8-10 RHS                |                                     |  |

|                    |  |                      |                |
|--------------------|--|----------------------|----------------|
| <b>Project</b>     | UTAH - UTM (feet), NAD27, Zone 12N             |                      |                |
| <b>Map System:</b> | Universal Transverse Mercator (US Survey Feet) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)                        |                      |                |
| <b>Map Zone:</b>   | Zone 12N (114 W to 108 W)                      |                      |                |

|                              |                                       |                     |                   |                          |        |
|------------------------------|---------------------------------------|---------------------|-------------------|--------------------------|--------|
| <b>Site</b>                  | NBU 921-35F4 PAD, SECTION 35 T9S R21E |                     |                   |                          |        |
| <b>Site Position:</b>        | <b>Northing:</b>                      | 14,526,946.67 usft  | <b>Latitude:</b>  | 39° 59' 34.861 N         |        |
| <b>From:</b> Lat/Long        | <b>Easting:</b>                       | 2,055,175.13 usft   | <b>Longitude:</b> | 109° 31' 9.149 W         |        |
| <b>Position Uncertainty:</b> | 0.00 ft                               | <b>Slot Radius:</b> | 13.200 in         | <b>Grid Convergence:</b> | 0.95 ° |

|                             |                                       |         |                            |                    |                      |                  |
|-----------------------------|---------------------------------------|---------|----------------------------|--------------------|----------------------|------------------|
| <b>Well</b>                 | P_NBU 921-35F4CS, 2483' FNL 2358' FWL |         |                            |                    |                      |                  |
| <b>Well Position</b>        | <b>+N/-S</b>                          | 0.00 ft | <b>Northing:</b>           | 14,526,936.47 usft | <b>Latitude:</b>     | 39° 59' 34.760 N |
|                             | <b>+E/-W</b>                          | 0.00 ft | <b>Easting:</b>            | 2,055,175.02 usft  | <b>Longitude:</b>    | 109° 31' 9.152 W |
| <b>Position Uncertainty</b> |                                       | 0.00 ft | <b>Wellhead Elevation:</b> |                    | <b>Ground Level:</b> | 5,120.00 ft      |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | P_NBU 921-35F4CS  |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2010          | 11/08/2010         | 11.16                  | 65.87                | 52,381                     |

|                          |                              |                   |                      |                      |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| <b>Design</b>            | PLAN #1 11-8-10 RHS          |                   |                      |                      |
| <b>Audit Notes:</b>      |                              |                   |                      |                      |
| <b>Version:</b>          | <b>Phase:</b>                | PLAN              | <b>Tie On Depth:</b> | 0.00                 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b>    | <b>Direction (°)</b> |
|                          | 0.00                         | 0.00              | 0.00                 | 247.31               |

| <b>Plan Sections</b> |                 |             |                     |            |            |                       |                      |                     |         |                   |
|----------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|----------------------|---------------------|---------|-------------------|
| Measured Depth (ft)  | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target            |
| 0.00                 | 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    |                   |
| 552.14               | 5.04            | 247.31      | 551.82              | -4.28      | -10.23     | 2.00                  | 2.00                 | 0.00                | 247.31  |                   |
| 2,730.97             | 5.04            | 247.31      | 2,722.21            | -78.15     | -186.93    | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 3,019.13             | 0.00            | 0.00        | 3,010.00            | -83.04     | -198.62    | 1.75                  | -1.75                | 0.00                | 180.00  |                   |
| 9,761.13             | 0.00            | 0.00        | 9,752.00            | -83.04     | -198.62    | 0.00                  | 0.00                 | 0.00                | 0.00    | PBHL_NBU 921-35F4 |

|                  |                                    |                                     |  |
|------------------|------------------------------------|-------------------------------------|--|
| <b>Database:</b> | EDM5000-RobertS-Local              | <b>Local Co-ordinate Reference:</b> | Well P_NBU 921-35F4CS                  |
| <b>Company:</b>  | US ROCKIES REGION PLANNING         | <b>TVD Reference:</b>               | GL 5120 & KB 14' @ 5134.00ft (ASSUMED) |
| <b>Project:</b>  | UTAH - UTM (feet), NAD27, Zone 12N | <b>MD Reference:</b>                | GL 5120 & KB 14' @ 5134.00ft (ASSUMED) |
| <b>Site:</b>     | NBU 921-35F4 PAD                   | <b>North Reference:</b>             | True                                   |
| <b>Well:</b>     | P_NBU 921-35F4CS                   | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Wellbore:</b> | P_NBU 921-35F4CS                   |                                     |  |
| <b>Design:</b>   | PLAN #1 11-8-10 RHS                |                                     |  |

| Planned Survey                          |                 |             |                     |            |            |                     |                    |                  |                   |  |
|---|-----------------|-------------|---------------------|------------|------------|---------------------|--------------------|------------------|-------------------|--|
| Measured Depth (ft)                     | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (usft) | Map Easting (usft) | Latitude         | Longitude         |  |
| 0.00                                    | 0.00            | 0.00        | 0.00                | 0.00       | 0.00       | 14,526,936.47       | 2,055,175.02       | 39° 59' 34.760 N | 109° 31' 9.152 W  |  |
| 100.00                                  | 0.00            | 0.00        | 100.00              | 0.00       | 0.00       | 14,526,936.47       | 2,055,175.02       | 39° 59' 34.760 N | 109° 31' 9.152 W  |  |
| 200.00                                  | 0.00            | 0.00        | 200.00              | 0.00       | 0.00       | 14,526,936.47       | 2,055,175.02       | 39° 59' 34.760 N | 109° 31' 9.152 W  |  |
| 300.00                                  | 0.00            | 0.00        | 300.00              | 0.00       | 0.00       | 14,526,936.47       | 2,055,175.02       | 39° 59' 34.760 N | 109° 31' 9.152 W  |  |
| <b>Start Build 2.00</b>                 |                 |             |                     |            |            |                     |                    |                  |                   |  |
| 400.00                                  | 2.00            | 247.31      | 399.98              | -0.67      | -1.61      | 14,526,935.77       | 2,055,173.42       | 39° 59' 34.754 N | 109° 31' 9.173 W  |  |
| 500.00                                  | 4.00            | 247.31      | 499.84              | -2.69      | -6.44      | 14,526,933.67       | 2,055,168.63       | 39° 59' 34.734 N | 109° 31' 9.235 W  |  |
| 552.14                                  | 5.04            | 247.31      | 551.82              | -4.28      | -10.23     | 14,526,932.02       | 2,055,164.86       | 39° 59' 34.718 N | 109° 31' 9.284 W  |  |
| <b>Start 2178.83 hold at 552.14 MD</b>  |                 |             |                     |            |            |                     |                    |                  |                   |  |
| 600.00                                  | 5.04            | 247.31      | 599.49              | -5.90      | -14.11     | 14,526,930.34       | 2,055,161.01       | 39° 59' 34.702 N | 109° 31' 9.334 W  |  |
| 700.00                                  | 5.04            | 247.31      | 699.10              | -9.29      | -22.22     | 14,526,926.81       | 2,055,152.96       | 39° 59' 34.669 N | 109° 31' 9.438 W  |  |
| 800.00                                  | 5.04            | 247.31      | 798.72              | -12.68     | -30.33     | 14,526,923.29       | 2,055,144.90       | 39° 59' 34.635 N | 109° 31' 9.542 W  |  |
| 900.00                                  | 5.04            | 247.31      | 898.33              | -16.07     | -38.44     | 14,526,919.76       | 2,055,136.85       | 39° 59' 34.602 N | 109° 31' 9.646 W  |  |
| 1,000.00                                | 5.04            | 247.31      | 997.94              | -19.46     | -46.55     | 14,526,916.24       | 2,055,128.80       | 39° 59' 34.568 N | 109° 31' 9.751 W  |  |
| 1,100.00                                | 5.04            | 247.31      | 1,097.55            | -22.85     | -54.66     | 14,526,912.71       | 2,055,120.75       | 39° 59' 34.535 N | 109° 31' 9.855 W  |  |
| 1,200.00                                | 5.04            | 247.31      | 1,197.17            | -26.24     | -62.77     | 14,526,909.19       | 2,055,112.69       | 39° 59' 34.501 N | 109° 31' 9.959 W  |  |
| 1,300.00                                | 5.04            | 247.31      | 1,296.78            | -29.63     | -70.88     | 14,526,905.66       | 2,055,104.64       | 39° 59' 34.467 N | 109° 31' 10.063 W |  |
| 1,400.00                                | 5.04            | 247.31      | 1,396.39            | -33.02     | -78.99     | 14,526,902.14       | 2,055,096.59       | 39° 59' 34.434 N | 109° 31' 10.167 W |  |
| 1,493.97                                | 5.04            | 247.31      | 1,490.00            | -36.21     | -86.61     | 14,526,898.83       | 2,055,089.02       | 39° 59' 34.402 N | 109° 31' 10.265 W |  |
| <b>GREEN RIVER</b>                      |                 |             |                     |            |            |                     |                    |                  |                   |  |
| 1,500.00                                | 5.04            | 247.31      | 1,496.01            | -36.41     | -87.10     | 14,526,898.61       | 2,055,088.54       | 39° 59' 34.400 N | 109° 31' 10.272 W |  |
| 1,600.00                                | 5.04            | 247.31      | 1,595.62            | -39.80     | -95.21     | 14,526,895.09       | 2,055,080.48       | 39° 59' 34.367 N | 109° 31' 10.376 W |  |
| 1,700.00                                | 5.04            | 247.31      | 1,695.23            | -43.20     | -103.32    | 14,526,891.57       | 2,055,072.43       | 39° 59' 34.333 N | 109° 31' 10.480 W |  |
| 1,800.00                                | 5.04            | 247.31      | 1,794.84            | -46.59     | -111.43    | 14,526,888.04       | 2,055,064.38       | 39° 59' 34.300 N | 109° 31' 10.584 W |  |
| 1,900.00                                | 5.04            | 247.31      | 1,894.46            | -49.98     | -119.54    | 14,526,884.52       | 2,055,056.33       | 39° 59' 34.266 N | 109° 31' 10.689 W |  |
| 2,000.00                                | 5.04            | 247.31      | 1,994.07            | -53.37     | -127.65    | 14,526,880.99       | 2,055,048.27       | 39° 59' 34.233 N | 109° 31' 10.793 W |  |
| 2,100.00                                | 5.04            | 247.31      | 2,093.68            | -56.76     | -135.76    | 14,526,877.47       | 2,055,040.22       | 39° 59' 34.199 N | 109° 31' 10.897 W |  |
| 2,200.00                                | 5.04            | 247.31      | 2,193.30            | -60.15     | -143.87    | 14,526,873.94       | 2,055,032.17       | 39° 59' 34.166 N | 109° 31' 11.001 W |  |
| 2,300.00                                | 5.04            | 247.31      | 2,292.91            | -63.54     | -151.98    | 14,526,870.42       | 2,055,024.12       | 39° 59' 34.132 N | 109° 31' 11.105 W |  |
| 2,400.00                                | 5.04            | 247.31      | 2,392.52            | -66.93     | -160.09    | 14,526,866.89       | 2,055,016.07       | 39° 59' 34.099 N | 109° 31' 11.210 W |  |
| 2,500.00                                | 5.04            | 247.31      | 2,492.14            | -70.32     | -168.20    | 14,526,863.37       | 2,055,008.01       | 39° 59' 34.065 N | 109° 31' 11.314 W |  |
| 2,600.00                                | 5.04            | 247.31      | 2,591.75            | -73.71     | -176.31    | 14,526,859.84       | 2,054,999.96       | 39° 59' 34.032 N | 109° 31' 11.418 W |  |
| 2,630.37                                | 5.04            | 247.31      | 2,622.00            | -74.74     | -178.77    | 14,526,858.77       | 2,054,997.52       | 39° 59' 34.022 N | 109° 31' 11.450 W |  |
| <b>8 5/8"</b>                           |                 |             |                     |            |            |                     |                    |                  |                   |  |
| 2,700.00                                | 5.04            | 247.31      | 2,691.36            | -77.10     | -184.42    | 14,526,856.32       | 2,054,991.91       | 39° 59' 33.998 N | 109° 31' 11.522 W |  |
| 2,730.97                                | 5.04            | 247.31      | 2,722.21            | -78.15     | -186.93    | 14,526,855.23       | 2,054,989.41       | 39° 59' 33.988 N | 109° 31' 11.555 W |  |
| <b>Start Drop -1.75</b>                 |                 |             |                     |            |            |                     |                    |                  |                   |  |
| 2,800.00                                | 3.83            | 247.31      | 2,791.03            | -80.21     | -191.86    | 14,526,853.08       | 2,054,984.52       | 39° 59' 33.968 N | 109° 31' 11.618 W |  |
| 2,900.00                                | 2.08            | 247.31      | 2,890.90            | -82.20     | -196.62    | 14,526,851.01       | 2,054,979.79       | 39° 59' 33.948 N | 109° 31' 11.679 W |  |
| 3,000.00                                | 0.33            | 247.31      | 2,990.87            | -83.02     | -198.57    | 14,526,850.17       | 2,054,977.86       | 39° 59' 33.940 N | 109° 31' 11.704 W |  |
| 3,019.13                                | 0.00            | 0.00        | 3,010.00            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| <b>Start 6742.00 hold at 3019.13 MD</b> |                 |             |                     |            |            |                     |                    |                  |                   |  |
| 3,100.00                                | 0.00            | 0.00        | 3,090.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 3,200.00                                | 0.00            | 0.00        | 3,190.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 3,300.00                                | 0.00            | 0.00        | 3,290.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 3,400.00                                | 0.00            | 0.00        | 3,390.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 3,500.00                                | 0.00            | 0.00        | 3,490.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 3,600.00                                | 0.00            | 0.00        | 3,590.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 3,700.00                                | 0.00            | 0.00        | 3,690.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 3,800.00                                | 0.00            | 0.00        | 3,790.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 3,900.00                                | 0.00            | 0.00        | 3,890.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 4,000.00                                | 0.00            | 0.00        | 3,990.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 4,100.00                                | 0.00            | 0.00        | 4,090.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 4,200.00                                | 0.00            | 0.00        | 4,190.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |

|                  |                                    |                                     |  |
|------------------|------------------------------------|-------------------------------------|--|
| <b>Database:</b> | EDM5000-RobertS-Local              | <b>Local Co-ordinate Reference:</b> | Well P_NBU 921-35F4CS                  |
| <b>Company:</b>  | US ROCKIES REGION PLANNING         | <b>TVD Reference:</b>               | GL 5120 & KB 14' @ 5134.00ft (ASSUMED) |
| <b>Project:</b>  | UTAH - UTM (feet), NAD27, Zone 12N | <b>MD Reference:</b>                | GL 5120 & KB 14' @ 5134.00ft (ASSUMED) |
| <b>Site:</b>     | NBU 921-35F4 PAD                   | <b>North Reference:</b>             | True                                   |
| <b>Well:</b>     | P_NBU 921-35F4CS                   | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Wellbore:</b> | P_NBU 921-35F4CS                   |                                     |  |
| <b>Design:</b>   | PLAN #1 11-8-10 RHS                |                                     |  |

| Planned Survey      |                 |             |                     |            |            |                     |                    |                  |                   |  |
|---------------------|-----------------|-------------|---------------------|------------|------------|---------------------|--------------------|------------------|-------------------|--|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (usft) | Map Easting (usft) | Latitude         | Longitude         |  |
| 4,300.00            | 0.00            | 0.00        | 4,290.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 4,400.00            | 0.00            | 0.00        | 4,390.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 4,500.00            | 0.00            | 0.00        | 4,490.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 4,600.00            | 0.00            | 0.00        | 4,590.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 4,700.00            | 0.00            | 0.00        | 4,690.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 4,777.13            | 0.00            | 0.00        | 4,768.00            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| <b>WASATCH</b>      |                 |             |                     |            |            |                     |                    |                  |                   |  |
| 4,800.00            | 0.00            | 0.00        | 4,790.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 4,900.00            | 0.00            | 0.00        | 4,890.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 5,000.00            | 0.00            | 0.00        | 4,990.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 5,100.00            | 0.00            | 0.00        | 5,090.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 5,200.00            | 0.00            | 0.00        | 5,190.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 5,300.00            | 0.00            | 0.00        | 5,290.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 5,400.00            | 0.00            | 0.00        | 5,390.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 5,500.00            | 0.00            | 0.00        | 5,490.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 5,600.00            | 0.00            | 0.00        | 5,590.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 5,700.00            | 0.00            | 0.00        | 5,690.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 5,800.00            | 0.00            | 0.00        | 5,790.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 5,900.00            | 0.00            | 0.00        | 5,890.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 6,000.00            | 0.00            | 0.00        | 5,990.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 6,100.00            | 0.00            | 0.00        | 6,090.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 6,200.00            | 0.00            | 0.00        | 6,190.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 6,300.00            | 0.00            | 0.00        | 6,290.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 6,400.00            | 0.00            | 0.00        | 6,390.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 6,500.00            | 0.00            | 0.00        | 6,490.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 6,600.00            | 0.00            | 0.00        | 6,590.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 6,700.00            | 0.00            | 0.00        | 6,690.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 6,800.00            | 0.00            | 0.00        | 6,790.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 6,900.00            | 0.00            | 0.00        | 6,890.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 7,000.00            | 0.00            | 0.00        | 6,990.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 7,100.00            | 0.00            | 0.00        | 7,090.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 7,200.00            | 0.00            | 0.00        | 7,190.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 7,300.00            | 0.00            | 0.00        | 7,290.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 7,400.00            | 0.00            | 0.00        | 7,390.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 7,500.00            | 0.00            | 0.00        | 7,490.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 7,538.13            | 0.00            | 0.00        | 7,529.00            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| <b>MESAVERDE</b>    |                 |             |                     |            |            |                     |                    |                  |                   |  |
| 7,600.00            | 0.00            | 0.00        | 7,590.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 7,700.00            | 0.00            | 0.00        | 7,690.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 7,800.00            | 0.00            | 0.00        | 7,790.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 7,900.00            | 0.00            | 0.00        | 7,890.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 8,000.00            | 0.00            | 0.00        | 7,990.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 8,100.00            | 0.00            | 0.00        | 8,090.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 8,200.00            | 0.00            | 0.00        | 8,190.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 8,300.00            | 0.00            | 0.00        | 8,290.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 8,400.00            | 0.00            | 0.00        | 8,390.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 8,500.00            | 0.00            | 0.00        | 8,490.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 8,600.00            | 0.00            | 0.00        | 8,590.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 8,700.00            | 0.00            | 0.00        | 8,690.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 8,800.00            | 0.00            | 0.00        | 8,790.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 8,900.00            | 0.00            | 0.00        | 8,890.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 9,000.00            | 0.00            | 0.00        | 8,990.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 9,100.00            | 0.00            | 0.00        | 9,090.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 9,200.00            | 0.00            | 0.00        | 9,190.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |

|                  |                                    |                                     |  |
|------------------|------------------------------------|-------------------------------------|--|
| <b>Database:</b> | EDM5000-RobertS-Local              | <b>Local Co-ordinate Reference:</b> | Well P_NBU 921-35F4CS                  |
| <b>Company:</b>  | US ROCKIES REGION PLANNING         | <b>TVD Reference:</b>               | GL 5120 & KB 14' @ 5134.00ft (ASSUMED) |
| <b>Project:</b>  | UTAH - UTM (feet), NAD27, Zone 12N | <b>MD Reference:</b>                | GL 5120 & KB 14' @ 5134.00ft (ASSUMED) |
| <b>Site:</b>     | NBU 921-35F4 PAD                   | <b>North Reference:</b>             | True                                   |
| <b>Well:</b>     | P_NBU 921-35F4CS                   | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Wellbore:</b> | P_NBU 921-35F4CS                   |                                     |  |
| <b>Design:</b>   | PLAN #1 11-8-10 RHS                |                                     |  |

| Planned Survey             |                 |             |                     |            |            |                     |                    |                  |                   |  |
|----------------------------|-----------------|-------------|---------------------|------------|------------|---------------------|--------------------|------------------|-------------------|--|
| Measured Depth (ft)        | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (usft) | Map Easting (usft) | Latitude         | Longitude         |  |
| 9,300.00                   | 0.00            | 0.00        | 9,290.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 9,400.00                   | 0.00            | 0.00        | 9,390.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 9,500.00                   | 0.00            | 0.00        | 9,490.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 9,600.00                   | 0.00            | 0.00        | 9,590.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 9,700.00                   | 0.00            | 0.00        | 9,690.87            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| 9,761.13                   | 0.00            | 0.00        | 9,752.00            | -83.04     | -198.62    | 14,526,850.14       | 2,054,977.81       | 39° 59' 33.940 N | 109° 31' 11.705 W |  |
| <b>PBHL_NBU 921-35F4CS</b> |                 |             |                     |            |            |                     |                    |                  |                   |  |

| Design Targets   |               |              |          |            |            |                 |                |                  |                   |  |
|--|---------------|--------------|----------|------------|------------|-----------------|----------------|------------------|-------------------|--|
| Target Name  | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (usft) | Easting (usft) | Latitude         | Longitude         |  |
| PBHL_NBU 921-35F4CS<br>- hit/miss target<br>- Shape<br>- Circle (radius 25.00) | 0.00          | 0.00         | 9,752.00 | -83.04     | -198.62    | 14,526,850.14   | 2,054,977.81   | 39° 59' 33.940 N | 109° 31' 11.705 W |  |

| Casing Points       |                     |        |                      |                    |  |  |
|---------------------|---------------------|--------|----------------------|--------------------|--|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name   | Casing Diameter (in) | Hole Diameter (in) |  |  |
| 2,630.37            | 2,622.00            | 8 5/8" | 8.625                | 11.000             |  |  |

| Formations          |                     |             |           |         |                   |  |
|---------------------|---------------------|-------------|-----------|---------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name        | Lithology | Dip (°) | Dip Direction (°) |  |
| 1,493.97            | 1,490.00            | GREEN RIVER |           |         |                   |  |
| 4,777.13            | 4,768.00            | WASATCH     |           |         |                   |  |
| 7,538.13            | 7,529.00            | 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                 |  |
| 552.14              | 551.82              | -4.28             | -10.23     | Start 2178.83 hold at 552.14 MD  |  |
| 2,730.97            | 2,722.21            | -78.15            | -186.93    | Start Drop -1.75                 |  |
| 3,019.13            | 3,010.00            | -83.04            | -198.62    | Start 6742.00 hold at 3019.13 MD |  |
| 9,761.13            | 9,752.00            | -83.04            | -198.62    | TD at 9761.13                    |  |

|                  |                                    |                                     |  |
|------------------|------------------------------------|-------------------------------------|--|
| <b>Database:</b> | EDM5000-RobertS-Local              | <b>Local Co-ordinate Reference:</b> | Well P_NBU 921-35F4CS                  |
| <b>Company:</b>  | US ROCKIES REGION PLANNING         | <b>TVD Reference:</b>               | GL 5120 & KB 14' @ 5134.00ft (ASSUMED) |
| <b>Project:</b>  | UTAH - UTM (feet), NAD27, Zone 12N | <b>MD Reference:</b>                | GL 5120 & KB 14' @ 5134.00ft (ASSUMED) |
| <b>Site:</b>     | NBU 921-35F4 PAD                   | <b>North Reference:</b>             | True                                   |
| <b>Well:</b>     | P_NBU 921-35F4CS                   | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Wellbore:</b> | P_NBU 921-35F4CS                   |                                     |  |
| <b>Design:</b>   | PLAN #1 11-8-10 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) |
| 9,200.00                   | 0.00            | 0.00        | 9,190.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 9,300.00                   | 0.00            | 0.00        | 9,290.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 9,400.00                   | 0.00            | 0.00        | 9,390.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 9,500.00                   | 0.00            | 0.00        | 9,490.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 9,600.00                   | 0.00            | 0.00        | 9,590.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 9,700.00                   | 0.00            | 0.00        | 9,690.87            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| 9,761.13                   | 0.00            | 0.00        | 9,752.00            | -83.04     | -198.62    | 215.28                | 0.00                  | 0.00                 | 0.00                |
| <b>PBHL_NBU 921-35F4CS</b> |                 |             |                     |            |            |                       |                       |                      |                     |

| Design Targets  |               |              |          |            |            |                 |                |                  |                   |
|---|---------------|--------------|----------|------------|------------|-----------------|----------------|------------------|-------------------|
| Target Name   | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (usft) | Easting (usft) | Latitude         | Longitude         |
| PBHL_NBU 921-35F4CS<br>- hit/miss target<br>- Shape<br>- plan hits target center<br>- Circle (radius 25.00) | 0.00          | 0.00         | 9,752.00 | -83.04     | -198.62    | 14,526,850.14   | 2,054,977.81   | 39° 59' 33.940 N | 109° 31' 11.705 W |

| Casing Points       |                     |        |                      |                    |  |  |
|---------------------|---------------------|--------|----------------------|--------------------|--|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name   | Casing Diameter (in) | Hole Diameter (in) |  |  |
| 2,630.37            | 2,622.00            | 8 5/8" | 8.625                | 11.000             |  |  |

| Formations          |                     |             |           |         |                   |
|---------------------|---------------------|-------------|-----------|---------|-------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Name        | Lithology | Dip (°) | Dip Direction (°) |
| 1,493.97            | 1,490.00            | GREEN RIVER |           |         |                   |
| 4,777.13            | 4,768.00            | WASATCH     |           |         |                   |
| 7,538.13            | 7,529.00            | MESAVERDE   |           |         |                   |

| Plan Annotations    |                     |            |            |                                  |  |
|---------------------|---------------------|------------|------------|----------------------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Comment                          |  |
| 300.00              | 300.00              | 0.00       | 0.00       | Start Build 2.00                 |  |
| 552.14              | 551.82              | -4.28      | -10.23     | Start 2178.83 hold at 552.14 MD  |  |
| 2,730.97            | 2,722.21            | -78.15     | -186.93    | Start Drop -1.75                 |  |
| 3,019.13            | 3,010.00            | -83.04     | -198.62    | Start 6742.00 hold at 3019.13 MD |  |
| 9,761.13            | 9,752.00            | -83.04     | -198.62    | TD at 9761.13                    |  |

**NBU 921-35F4BS**

Surface: 2,473' FNL 2,358' FWL (SE/4NW/4)  
BHL: 2,210' FNL 2,158' FWL (SE/4NW/4)

**NBU 921-35F4CS**

Surface: 2,483' FNL 2,358' FWL (SE/4NW/4)  
BHL: 2,567' FNL 2,159' FWL (SE/4NW/4)

**NBU 921-35K1BS**

Surface: 2,493' FNL 2,358' FWL (SE/4NW/4)  
BHL: 2,484' FSL 2,161' FWL (NE/4SW/4)

**NBU 921-35K1CS**

Surface: 2,503' FNL 2,357' FWL (SE/4NW/4)  
BHL: 2,163' FSL 2,155' FWL (NE/4SW/4)

Pad: NBU 921-35F4  
Section 35 T9S R21E  
Mineral Lease: UO 01194 ST

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

***MULTI-POINT SURFACE USE PLAN of OPERATIONS (SUPO)***

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 roads and improved/unimproved lease roads. APC/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:**

Approximately  $\pm 275'$  (0.05 miles) of road re-route is proposed (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

Where roads 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.

Turnouts; major cut and fills; culverts; bridges; gates; cattle guards; low water crossings; or modifications needed to existing infrastructure/facilities were determined at the on-site and, 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 81V. This well location is a vertical producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of November 11, 2010.

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

Production facilities will be installed on the disturbed portion of each 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) aboveground 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.

Production tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks are not to be used for disposal of liquids from additional sources without prior approval of UDOGM.

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  $\pm 1,690'$  and the individual segments are broken up as follows:

- $\pm 270'$  (0.1 miles) –New 6" buried gas pipeline from the meter to the edge of the pad.
- $\pm 70'$  (0.01 miles) –New 6" buried gas pipeline from the edge of pad to the NBU 921-35F2 pad intersection.
- $\pm 1,350'$  (0.3 miles) –New 8" buried gas pipeline from the NBU 921-35F2 pad intersection to the NBU 921-35L pad intersection.

The total liquid gathering pipeline distance from the separator to the tie in point is  $\pm 1,690'$  and the individual segments are broken up as follows:

- $\pm 270'$  (0.1 miles) –New 6” buried liquid pipeline from the separator to the edge of the pad.
- $\pm 70'$  (0.01 miles) –New 6” buried liquid pipeline from the edge of pad to the NBU 921-35F2 pad intersection.
- $\pm 1,350'$  (0.3 miles) –New 6” buried liquid pipeline from the NBU 921-35F2 pad intersection to the NBU 921-35L pad intersection.

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. Kerr-McGee 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, Kerr-McGee requests a temporary 45' construction right-of-way and 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, ownership, and 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 of 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 to 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 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, accidental release, or in excess of reportable quantities will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule, and, where State wells are participatory to a Federal agreement, according to NTL-3A.

### **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, 1983 (NAD83) 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 are not limited to: 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 APC/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

**K. Other Information:**

None

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

Danielle Piernot  
Regulatory Analyst I  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6156

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.

  
Danielle Piernot

November 19, 2010  
Date



Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
DENVER, CO 80217-3779

October 25, 2010

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 921-35F4CS  
T9S-R21E  
Section 35: SENW (Surf), SENW (Bottom)  
Surface: 2483' FNL, 2358' FWL  
Bottom Hole: 2567' FNL, 2159' 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 Directional Drilling.

- Kerr-McGee's NBU 921-35F4CS 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 that reads 'Joe Matney'.

Joe Matney  
Sr. Staff Landman



Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
DENVER, CO 80217-3779

October 25, 2010

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

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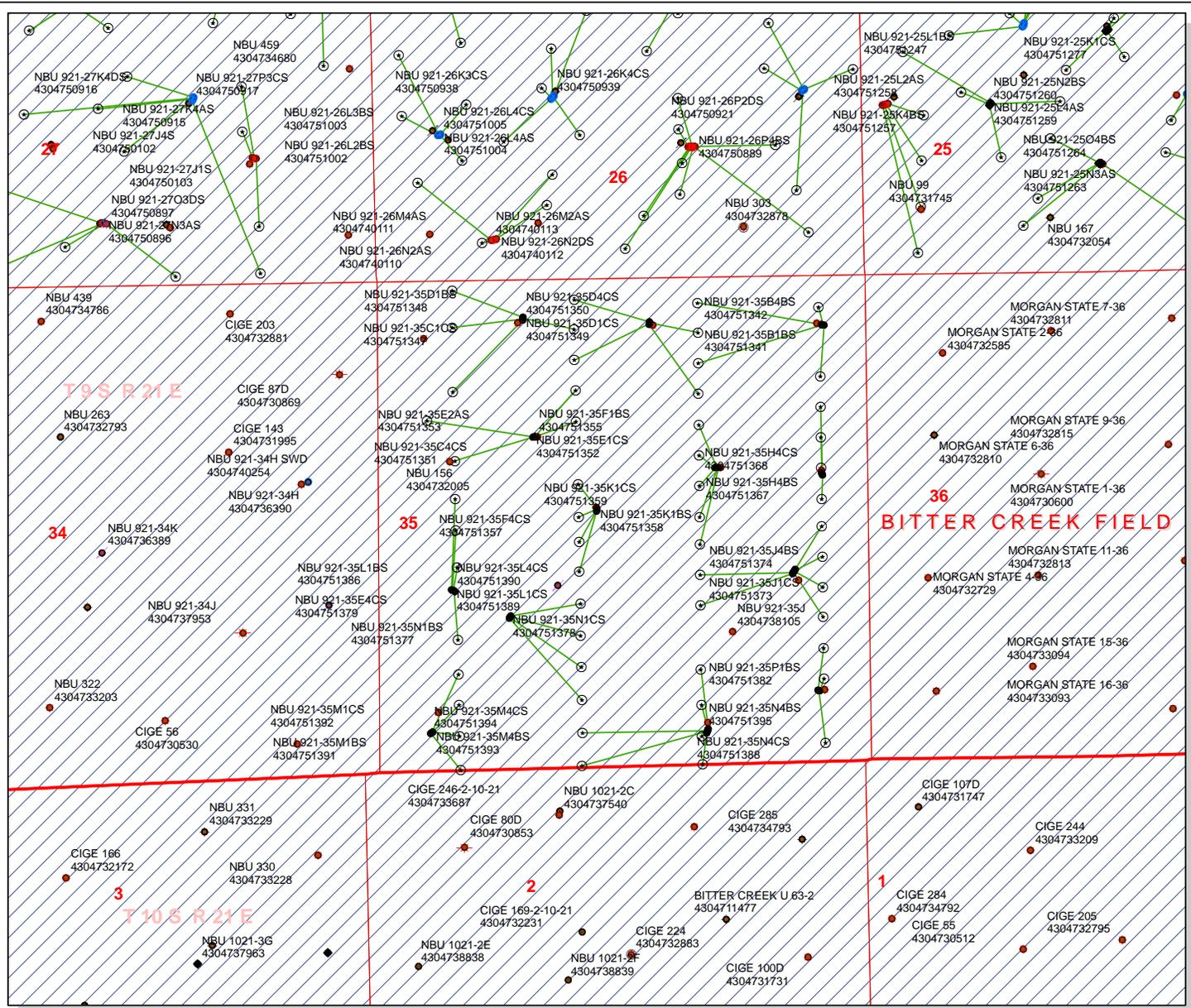
KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink that reads 'Joe Matney'.

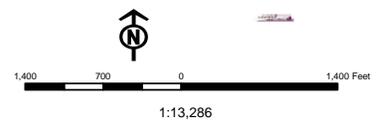
Joe Matney  
Sr. Staff Landman

**API Number: 4304751357**  
**Well Name: NBU 921-35F4CS**  
**Township 09.0 S Range 21.0 E Section 35**  
**Meridian: SLBM**  
**Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.**

Map Prepared:  
 Map Produced by Diana Mason



- |                             |                                    |
|-----------------------------|------------------------------------|
| <b>Units</b>                | <b>Wells Query</b>                 |
| <b>STATUS</b>               | <call other values>                |
| 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 GEOTHERML                | PA - Plugged Abandoned             |
| PP OIL                      | PGW - Producing Gas Well           |
| SECONDARY                   | POW - Producing Oil Well           |
| TERMINATED                  | RET - Returned APD                 |
| <b>Fields</b>               | SGW - Shut-in Gas Well             |
| Sections                    | TA - Temp. Abandoned               |
| Township                    | TW - Test Well                     |
| Bottom Hole Location - AGRC | WDW - Water Disposal               |
|                             | WW - Water Injection Well          |
|                             | WSW - Water Supply Well            |



# 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)

December 1, 2010

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2010 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 2010 within the Natural Buttes Unit, Uintah County, Utah.

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

(Proposed PZ WASATCH-MESA VERDE)

### **NBU 921-35F2 Pad**

|              |                |                                    |
|--------------|----------------|------------------------------------|
| 43-047-51355 | NBU 921-35F1BS | Sec 35 T09S R21E 1684 FNL 1709 FWL |
|              | BHL            | Sec 35 T09S R21E 1531 FNL 2146 FWL |

### **NBU 921-35F4 PAD**

|              |                |                                    |
|--------------|----------------|------------------------------------|
| 43-047-51356 | NBU 921-35F4BS | Sec 35 T09S R21E 2473 FNL 2358 FWL |
|              | BHL            | Sec 35 T09S R21E 2210 FNL 2158 FWL |

|              |                |                                    |
|--------------|----------------|------------------------------------|
| 43-047-51357 | NBU 921-35F4CS | Sec 35 T09S R21E 2483 FNL 2358 FWL |
|              | BHL            | Sec 35 T09S R21E 2567 FNL 2159 FWL |

|              |                |                                    |
|--------------|----------------|------------------------------------|
| 43-047-51358 | NBU 921-35K1BS | Sec 35 T09S R21E 2493 FNL 2358 FWL |
|              | BHL            | Sec 35 T09S R21E 2484 FSL 2161 FWL |

|              |                |                                    |
|--------------|----------------|------------------------------------|
| 43-047-51359 | NBU 921-35K1CS | Sec 35 T09S R21E 2503 FNL 2357 FWL |
|              | BHL            | Sec 35 T09S R21E 2163 FSL 2155 FWL |

### **NBU 921-35G Pad**

|              |                |                                    |
|--------------|----------------|------------------------------------|
| 43-047-51360 | NBU 921-35G1BS | Sec 35 T09S R21E 2053 FNL 1633 FEL |
|              | BHL            | Sec 35 T09S R21E 1583 FNL 1819 FEL |

|              |                |                                    |
|--------------|----------------|------------------------------------|
| 43-047-51361 | NBU 921-35G1CS | Sec 35 T09S R21E 2053 FNL 1653 FEL |
|              | BHL            | Sec 35 T09S R21E 1916 FNL 1820 FEL |

|              |                |                                    |
|--------------|----------------|------------------------------------|
| 43-047-51362 | NBU 921-35G4BS | Sec 35 T09S R21E 2053 FNL 1643 FEL |
|              | BHL            | Sec 35 T09S R21E 2250 FNL 1822 FEL |

| API #                            | WELL NAME      | LOCATION |      |      |      |     |      |     |
|----------------------------------|----------------|----------|------|------|------|-----|------|-----|
| (Proposed PZ WASATCH-MESA VERDE) |                |          |      |      |      |     |      |     |
| 43-047-51363                     | NBU 921-35G4CS | Sec 35   | T09S | R21E | 2053 | FNL | 1623 | FEL |
|                                  | BHL            | Sec 35   | T09S | R21E | 2583 | FNL | 1823 | FEL |
| 43-047-51364                     | NBU 921-35J1BS | Sec 35   | T09S | R21E | 2053 | FNL | 1613 | FEL |
|                                  | BHL            | Sec 35   | T09S | R21E | 2419 | FSL | 1824 | FEL |
| <b>NBU 921-35H PAD</b>           |                |          |      |      |      |     |      |     |
| 43-047-51365                     | NBU 921-35H1BS | Sec 35   | T09S | R21E | 2143 | FNL | 0486 | FEL |
|                                  | BHL            | Sec 35   | T09S | R21E | 1411 | FNL | 0494 | FEL |
| 43-047-51366                     | NBU 921-35H1CS | Sec 35   | T09S | R21E | 2133 | FNL | 0490 | FEL |
|                                  | BHL            | Sec 35   | T09S | R21E | 1743 | FNL | 0495 | FEL |
| 43-047-51367                     | NBU 921-35H4BS | Sec 35   | T09S | R21E | 2124 | FNL | 0493 | FEL |
|                                  | BHL            | Sec 35   | T09S | R21E | 2075 | FNL | 0495 | FEL |
| 43-047-51368                     | NBU 921-35H4CS | Sec 35   | T09S | R21E | 2152 | FNL | 0483 | FEL |
|                                  | BHL            | Sec 35   | T09S | R21E | 2407 | FNL | 0495 | FEL |
| <b>NBU 921-35I PAD</b>           |                |          |      |      |      |     |      |     |
| 43-047-51369                     | NBU 921-35I1BS | Sec 35   | T09S | R21E | 2106 | FSL | 0794 | FEL |
|                                  | BHL            | Sec 35   | T09S | R21E | 2572 | FSL | 0496 | FEL |
| 43-047-51370                     | NBU 921-35I1CS | Sec 35   | T09S | R21E | 2098 | FSL | 0800 | FEL |
|                                  | BHL            | Sec 35   | T09S | R21E | 2240 | FSL | 0496 | FEL |
| 43-047-51371                     | NBU 921-35I4BS | Sec 35   | T09S | R21E | 2090 | FSL | 0806 | FEL |
|                                  | BHL            | Sec 35   | T09S | R21E | 1908 | FSL | 0496 | FEL |
| 43-047-51372                     | NBU 921-35I4CS | Sec 35   | T09S | R21E | 2082 | FSL | 0811 | FEL |
|                                  | BHL            | Sec 35   | T09S | R21E | 1577 | FSL | 0497 | FEL |
| 43-047-51373                     | NBU 921-35J1CS | Sec 35   | T09S | R21E | 2074 | FSL | 0817 | FEL |
|                                  | BHL            | Sec 35   | T09S | R21E | 2086 | FSL | 1825 | FEL |
| 43-047-51374                     | NBU 921-35J4BS | Sec 35   | T09S | R21E | 2066 | FSL | 0823 | FEL |
|                                  | BHL            | Sec 35   | T09S | R21E | 1752 | FSL | 1826 | FEL |
| <b>NBU 921-35K PAD</b>           |                |          |      |      |      |     |      |     |
| 43-047-51375                     | NBU 921-35K4BS | Sec 35   | T09S | R21E | 1710 | FSL | 1409 | FWL |
|                                  | BHL            | Sec 35   | T09S | R21E | 1814 | FSL | 2165 | FWL |
| 43-047-51376                     | NBU 921-35K4CS | Sec 35   | T09S | R21E | 1702 | FSL | 1403 | FWL |
|                                  | BHL            | Sec 35   | T09S | R21E | 1469 | FSL | 2163 | FWL |
| 43-047-51377                     | NBU 921-35N1BS | Sec 35   | T09S | R21E | 1694 | FSL | 1397 | FWL |
|                                  | BHL            | Sec 35   | T09S | R21E | 1124 | FSL | 2161 | FWL |
| 43-047-51378                     | NBU 921-35N1CS | Sec 35   | T09S | R21E | 1686 | FSL | 1392 | FWL |
|                                  | BHL            | Sec 35   | T09S | R21E | 0771 | FSL | 2162 | FWL |

| API #                  | WELL NAME      | LOCATION |      |      |      |     |      |     |  |
|------------------------|----------------|----------|------|------|------|-----|------|-----|--|
| <b>NBU 921-35L PAD</b> |                |          |      |      |      |     |      |     |  |
| 43-047-51379           | NBU 921-35E4CS | Sec 35   | T09S | R21E | 2016 | FSL | 0768 | FWL |  |
|                        | BHL            | Sec 35   | T09S | R21E | 2343 | FNL | 0823 | FWL |  |
| 43-047-51386           | NBU 921-35L1BS | Sec 35   | T09S | R21E | 2013 | FSL | 0778 | FWL |  |
|                        | BHL            | Sec 35   | T09S | R21E | 2658 | FSL | 0826 | FWL |  |
| 43-047-51389           | NBU 921-35L1CS | Sec 35   | T09S | R21E | 2009 | FSL | 0787 | FWL |  |
|                        | BHL            | Sec 35   | T09S | R21E | 2255 | FSL | 0835 | FWL |  |
| 43-047-51390           | NBU 921-35L4CS | Sec 35   | T09S | R21E | 2005 | FSL | 0796 | FWL |  |
|                        | BHL            | Sec 35   | T09S | R21E | 1470 | FSL | 0832 | FWL |  |
| <b>NBU 921-35P PAD</b> |                |          |      |      |      |     |      |     |  |
| 43-047-51380           | NBU 921-35P4CS | Sec 35   | T09S | R21E | 0781 | FSL | 0557 | FEL |  |
|                        | BHL            | Sec 35   | T09S | R21E | 0208 | FSL | 0489 | FEL |  |
| 43-047-51381           | NBU 921-35P1CS | Sec 35   | T09S | R21E | 0778 | FSL | 0547 | FEL |  |
|                        | BHL            | Sec 35   | T09S | R21E | 0913 | FSL | 0497 | FEL |  |
| 43-047-51382           | NBU 921-35P1BS | Sec 35   | T09S | R21E | 0785 | FSL | 0566 | FEL |  |
|                        | BHL            | Sec 35   | T09S | R21E | 1245 | FSL | 0497 | FEL |  |
| <b>NBU 921-35O PAD</b> |                |          |      |      |      |     |      |     |  |
| 43-047-51383           | NBU 921-35O4CS | Sec 35   | T09S | R21E | 0360 | FSL | 1780 | FEL |  |
|                        | BHL            | Sec 35   | T09S | R21E | 0026 | FSL | 1826 | FEL |  |
| 43-047-51384           | NBU 921-35O4BS | Sec 35   | T09S | R21E | 0370 | FSL | 1777 | FEL |  |
|                        | BHL            | Sec 35   | T09S | R21E | 0336 | FSL | 1833 | FEL |  |
| 43-047-51385           | NBU 921-35O1CS | Sec 35   | T09S | R21E | 0398 | FSL | 1766 | FEL |  |
|                        | BHL            | Sec 35   | T09S | R21E | 0674 | FSL | 1828 | FEL |  |
| 43-047-51387           | NBU 921-35O1BS | Sec 35   | T09S | R21E | 0407 | FSL | 1763 | FEL |  |
|                        | BHL            | Sec 35   | T09S | R21E | 1059 | FSL | 1833 | FEL |  |
| 43-047-51388           | NBU 921-35N4CS | Sec 35   | T09S | R21E | 0379 | FSL | 1773 | FEL |  |
|                        | BHL            | Sec 35   | T09S | R21E | 0051 | FSL | 2153 | FWL |  |
| 43-047-51395           | NBU 921-35N4BS | Sec 35   | T09S | R21E | 0388 | FSL | 1770 | FEL |  |
|                        | BHL            | Sec 35   | T09S | R21E | 0410 | FSL | 2164 | FWL |  |
| <b>NBU 921-35M PAD</b> |                |          |      |      |      |     |      |     |  |
| 43-047-51391           | NBU 921-35M1BS | Sec 35   | T09S | R21E | 0469 | FSL | 0526 | FWL |  |
|                        | BHL            | Sec 35   | T09S | R21E | 1096 | FSL | 0830 | FWL |  |
| 43-047-51392           | NBU 921-35M1CS | Sec 35   | T09S | R21E | 0474 | FSL | 0534 | FWL |  |
|                        | BHL            | Sec 35   | T09S | R21E | 0760 | FSL | 0830 | FWL |  |

| API #        | WELL NAME      | LOCATION   |
|--------------|----------------|--|
| 43-047-51393 | NBU 921-35M4BS | Sec 35 T09S R21E 0478 FSL 0543 FWL<br>BHL Sec 35 T09S R21E 0423 FSL 0831 FWL |
| 43-047-51394 | NBU 921-35M4CS | Sec 35 T09S R21E 0464 FSL 0517 FWL<br>BHL Sec 35 T09S R21E 0055 FSL 0834 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: 2010.12.01 10:03:00 -07'00'

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

MCoulthard:mc:12-1-10

|  |  |       |  |  |
|--|--|-------|--|--|
| Well Name                                | KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 921-35F4CS 4304751357 |       |  |  |
| String                                   | Surf   | Prod  |  |  |
| Casing Size(")                           | 8.625  | 4.500 |  |  |
| Setting Depth (TVD)                      | 2612   | 9752  |  |  |
| Previous Shoe Setting Depth (TVD)        | 40   | 2612  |  |  |
| Max Mud Weight (ppg)                     | 8.3  | 12.0  |  |  |
| BOPE Proposed (psi)                      | 500  | 5000  |  |  |
| Casing Internal Yield (psi)              | 3390   | 7780  |  |  |
| Operators Max Anticipated Pressure (psi) | 5949   | 11.7  |  |  |

|   |  |       |  |
|---|--|-------|--|
| Calculations                                  | Surf String  | 8.625 | "  |
| Max BHP (psi)                                 | .052*Setting Depth*MW=                             | 1131  |  |
|   |  |       | <b>BOPE Adequate For Drilling And Setting Casing at Depth?</b> |
| MASP (Gas) (psi)                              | Max BHP-(0.12*Setting Depth)=                      | 818   | NO <input type="text" value="air drill"/>                      |
| MASP (Gas/Mud) (psi)                          | Max BHP-(0.22*Setting Depth)=                      | 556   | NO <input type="text" value="OK"/>                             |
|   |  |       | <b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>   |
| Pressure At Previous Shoe                     | Max BHP-.22*(Setting Depth - Previous Shoe Depth)= | 565   | NO <input type="text" value="Reasonable depth in area"/>       |
| Required Casing/BOPE Test Pressure=           |  | 2373  | 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=                             | 6085  |  |
|   |  |       | <b>BOPE Adequate For Drilling And Setting Casing at Depth?</b> |
| MASP (Gas) (psi)                              | Max BHP-(0.12*Setting Depth)=                      | 4915  | YES <input type="text"/>                                       |
| MASP (Gas/Mud) (psi)                          | Max BHP-(0.22*Setting Depth)=                      | 3940  | YES <input type="text" value="OK"/>                            |
|   |  |       | <b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>   |
| Pressure At Previous Shoe                     | Max BHP-.22*(Setting Depth - Previous Shoe Depth)= | 4514  | NO <input type="text" value="Reasonable"/>                     |
| Required Casing/BOPE Test Pressure=           |  | 5000  | psi  |
| *Max Pressure Allowed @ Previous Casing Shoe= |  | 2612  | psi *Assumes 1psi/ft frac gradient                             |

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

# 43047513570000 NBU 921-35F4CS

## Casing Schematic

Surface

12%

15%

Uenta

✓ Stop surf cont.

8-5/8"  
MW 8.3  
Frac 19.3

4-1/2"  
MW 12.

Production  
9761. MD  
9752. TVD

to 584' @ 0% w/o tail 1399'  
1490' Green River  
TOC @ 1512. 1791' Birds Nest  
1955 tail  
2172' Mahogany

Surface  
2620. MD  
2612. TVD  
to surf @ 3% w/o tail 4171

4768' Wasatch

5337' tail

7529' Mesaverde

8410' MV U2

8970' MV L1

|                 |                 |
|-----------------|-----------------|
| 2483 NL         | 2358 WL         |
| 83              | 199             |
| <u>2566 FNL</u> | <u>2159 FWL</u> |

SE NW Sec 35-9S-21E

|              |   |             |              |
|--------------|---|-------------|--------------|
| Well name:   | <b>43047513570000 NBU 921-35F4CS</b>          |             |              |
| Operator:    | <b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b> |             |              |
| String type: | Surface                                       | Project ID: | 43-047-51357 |
| 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: 111 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 100 ft

Cement top: 1,512 ft

**Burst**

Max anticipated surface pressure: 2,306 psi  
 Internal gradient: 0.120 psi/ft  
 Calculated BHP 2,619 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: 2,298 ft

**Directional Info - Build & Drop**

Kick-off point 300 ft  
 Departure at shoe: 191 ft  
 Maximum dogleg: 2 °/100ft  
 Inclination at shoe: 4.99 °

**Re subsequent strings:**

Next setting depth: 9,650 ft  
 Next mud weight: 12.000 ppg  
 Next setting BHP: 6,016 psi  
 Fracture mud wt: 19.250 ppg  
 Fracture depth: 2,620 ft  
 Injection pressure: 2,620 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       | 2620                | 8.625                   | 28.00                   | I-55             | LT&C                 | 2612                 | 2620                | 7.892                   | 103752                |
| 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       | 1130                | 1880                    | 1.663                   | 2619             | 3390                 | 1.29                 | 73.1                | 348                     | 4.76 J                |

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

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

Date: December 9, 2010  
 Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 2612 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

*Engineering responsibility for use of this design will be that of the purchaser.*

|              |   |             |              |
|--------------|---|-------------|--------------|
| Well name:   | <b>43047513570000 NBU 921-35F4CS</b>          |             |              |
| Operator:    | <b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b> |             |              |
| String type: | Production                                    | Project ID: | 43-047-51357 |
| Location:    | UINTAH  | COUNTY      |              |

**Design parameters:**

**Collapse**

Mud weight: 12.000 ppg  
 Internal fluid density: 1.000 ppg

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
 Surface temperature: 74 °F  
 Bottom hole temperature: 211 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 100 ft

Cement top: 1,998 ft

**Burst**

Max anticipated surface pressure: 3,934 psi  
 Internal gradient: 0.220 psi/ft  
 Calculated BHP 6,079 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: 215 ft  
 Maximum dogleg: 2 °/100ft  
 Inclination at shoe: 0 °

Tension is based on air weight.  
 Neutral point: 8,012 ft

Estimated cost: 127,550 (\$)

| 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 (\$) |
|---------|---------------------|-----------|-------------------------|---------|------------|----------------------|---------------------|---------------------|----------------|
| 2       | 9600                | 4.5       | 11.60                   | I-80    | LT&C       | 9591                 | 9600                | 3.875               | 126720         |
| 1       | 161                 | 4.5       | 11.60                   | HCP-110 | Buttress   | 9752                 | 9761                | 3.875               | 830            |

| 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 |
|---------|---------------------|-------------------------|------------------------|------------------|----------------------|---------------------|---------------------|-------------------------|-----------------------|
| 2       | 5481                | 6348                    | 1.158                  | 6044             | 7780                 | 1.29                | 113.1               | 212                     | 1.87 J                |
| 1       | 5573                | 8650                    | 1.552                  | 6079             | 10690                | 1.76                | 1.9                 | 367.2                   | 99.99 B               |

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

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

Date: December 9, 2010  
 Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 9752 ft, a mud weight of 12 ppg. An internal gradient of .052 psi/ft was used for collapse from TD to TD. 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

*Engineering responsibility for use of this design will be that of the purchaser.*

**From:** Jim Davis  
**To:** Bonner, Ed; Hill, Brad; Mason, Diana  
**CC:** Curry, Kristine; Danielle Piernot; Garrison, LaVonne; Hayden, Martha;...  
**Date:** 12/22/2010 5:49 AM  
**Subject:** Kerr McGee APD approvals in 9S 21E Sec 35  
**Attachments:** KMG approvals 921-35 on 12.22.2010.xls

The following wells have been approved by SITLA under the following arch and paleo stipulations. This is a long list, so I'm attaching a spreadsheet with the same information.

A note on arch and paleo stipulations: Wells that have an arch note "non-significant site" do not need to be avoided or mitigated. Only those that say "needs to be avoided".

The paleo reports make recommendations for "spot paleo monitoring" or "full paleo monitoring". It is my understanding that Kerr McGee is taking these stipulations and doing full monitoring in either case, in an abundance of caution.

-Jim Davis

| Well Name   | API | Paleo Stipulations | Arch Stipulations                                     |
|---|-----|--------------------|---|
| Kerr-McGee's NBU 921-35A1BS<br>(U-07-MQ-1437b,i,p,s)  |     | API #4304751339    | IPC 10-98 Spot Paleo Monitoring                       |
| Kerr-McGee's NBU 921-35A4CS<br>(U-07-MQ-1437b,i,p,s)  |     | API #4304751340    | IPC 10-98 Spot Paleo Monitoring                       |
| Kerr-McGee's NBU 921-35B1BS<br>(U-07-MQ-1437b,i,p,s)  |     | API #4304751341    | IPC 10-98 Spot Paleo Monitoring                       |
| Kerr-McGee's NBU 921-35B4BS<br>(U-07-MQ-1437b,i,p,s)  |     | API #4304751342    | IPC 10-98 Spot Paleo Monitoring                       |
| Kerr-McGee's NBU 921-35B1CS<br>(U-07-MQ-1437b,i,p,s; eligible site 42Un6461, just south of proposed pipeline needs to be avoided) |     | API #4304751343    | IPC 10-98 Spot Paleo Monitoring                       |
| Kerr-McGee's NBU 921-35B4CS<br>(U-07-MQ-1437b,i,p,s; eligible site 42Un6461, just south of proposed pipeline needs to be avoided) |     | API #4304751344    | IPC 10-98 Spot Paleo Monitoring                       |
| Kerr-McGee's NBU 921-35C1BS<br>(U-07-MQ-1437b,i,p,s; eligible site 42Un6461, just south of proposed pipeline needs to be avoided) |     | API #4304751345    | IPC 10-98 Spot Paleo Monitoring                       |
| Kerr-McGee's NBU 921-35C4BS<br>(U-07-MQ-1437b,i,p,s; eligible site 42Un6461, just south of proposed pipeline needs to be avoided) |     | API #4304751346    | IPC 10-98 Spot Paleo Monitoring                       |
| Kerr-McGee's NBU 921-35C1CS<br>(U-07-MQ-1437b,i,p,s)  |     | API #4304751347    | IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s) |
| Kerr-McGee's NBU 921-35D1BS<br>(U-07-MQ-1437b,i,p,s)  |     | API #4304751348    | IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s) |
| Kerr-McGee's NBU 921-35D1CS<br>(U-07-MQ-1437b,i,p,s)  |     | API #4304751349    | IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s) |
| Kerr-McGee's NBU 921-35D4CS<br>(U-07-MQ-1437b,i,p,s)  |     | API #4304751350    | IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s) |
| Kerr-McGee's NBU 921-35C4CS<br>(U-07-MQ-1437b,i,p,s)  |     | API #4304751351    | IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s) |
| Kerr-McGee's NBU 921-35E1CS<br>(U-07-MQ-1437b,i,p,s)  |     | API #4304751352    | IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s) |
| Kerr-McGee's NBU 921-35E2AS<br>(U-07-MQ-1437b,i,p,s)  |     | API #4304751353    | IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s) |
| Kerr-McGee's NBU 921-35F1BS<br>(U-07-MQ-1437b,i,p,s)  |     | API #4304751355    | IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s) |
| Kerr-McGee's NBU 921-35F4BS<br>(U-07-MQ-1437b,i,p,s)  |     | API #4304751356    | IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s) |
| Kerr-McGee's NBU 921-35F4CS<br>(U-07-MQ-1437b,i,p,s)  |     | API #4304751357    | IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s) |
| Kerr-McGee's NBU 921-35K1BS   |     | API #4304751358    | IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s) |

|                             |                 |                                  |   |
|-----------------------------|-----------------|----------------------------------|---|
| MQ-1437b,i,p,s)             |                 |                                  |   |
| Kerr-McGee's NBU 921-35K1CS | API #4304751359 | IPC 10-97 Full Paleo Monitoring  | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35G1BS | API #4304751360 | IPC 10-98 Spot Paleo Monitoring  | (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road) |
| Kerr-McGee's NBU 921-35G1CS | API #4304751361 | IPC 10-98 Spot Paleo Monitoring  | (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road) |
| Kerr-McGee's NBU 921-35G4BS | API #4304751362 | IPC 10-98 Spot Paleo Monitoring  | (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road) |
| Kerr-McGee's NBU 921-35G4CS | API #4304751363 | IPC 10-98 Spot Paleo Monitoring  | (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road) |
| Kerr-McGee's NBU 921-35J1S  | API #4304751364 | IPC 10-98 Spot Paleo Monitoring  | (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road) |
| Kerr-McGee's NBU 921-35H1BS | API #4304751365 | IPC 10-98 Spot Paleo Monitoring  | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35H1CS | API #4304751366 | IPC 10-98 Spot Paleo Monitoring  | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35H4BS | API #4304751367 | IPC 10-98 Spot Paleo Monitoring  | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35H4CS | API #4304751368 | IPC 10-98 Spot Paleo Monitoring  | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35I1BS | API #4304751369 | IPC 10-100 Full Paleo Monitoring | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35I1CS | API #4304751370 | IPC 10-100 Full Paleo Monitoring | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35I4BS | API #4304751371 | IPC 10-100 Full Paleo Monitoring | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35I4CS | API #4304751372 | IPC 10-100 Full Paleo Monitoring | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35J1CS | API #4304751373 | IPC 10-98 Spot Paleo Monitoring  | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35J4BS | API #4304751374 | IPC 10-100 Full Paleo Monitoring | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35K4BS | API #4304751375 | IPC 10-99 Spot Paleo Monitoring  | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35K4CS | API #4304751376 | IPC 10-99 Spot Paleo Monitoring  | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35N1BS | API #4304751377 | IPC 10-99 Spot Paleo Monitoring  | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35N1CS | API #4304751378 | IPC 10-99 Spot Paleo Monitoring  | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35E4CS | API #4304751379 | IPC 10-99 Spot Paleo Monitoring  | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35P4CS | API #4304751380 | IPC 10-100 Full Paleo Monitoring | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35P1CS | API #4304751381 | IPC 10-100 Full Paleo Monitoring | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35P1BS | API #4304751382 | IPC 10-100 Full Paleo Monitoring | (U-07-MQ-1437b,i,p,s)   |
| Kerr-McGee's NBU 921-35O4CS | API #4304751383 | IPC 10-100 Full Paleo Monitoring | (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline) |
| Kerr-McGee's NBU 921-35O4BS | API #4304751384 | IPC 10-100 Full Paleo Monitoring | (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline) |
| Kerr-McGee's NBU 921-35O1CS | API #4304751385 | IPC 10-100 Full Paleo Monitoring | (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline) |
| Kerr-McGee's NBU 921-35L1BS | API #4304751386 | IPC 10-99 Spot Paleo Monitoring  |   |

|   |                 |                                  |
|---|-----------------|----------------------------------|
| (U-07-MQ-1437b,i,p,s)   |                 |                                  |
| Kerr-McGee's NBU 921-35O1BS   | API #4304751387 | IPC 10-100 Spot Paleo Monitoring |
| (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline) |                 |                                  |
| Kerr-McGee's NBU 921-35N4CS   | API #4304751388 | IPC 10-100 Spot Paleo Monitoring |
| (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline) |                 |                                  |
| Kerr-McGee's NBU 921-35L1CS   | API #4304751389 | IPC 10-99 Spot Paleo Monitoring  |
| (U-07-MQ-1437b,i,p,s)   |                 |                                  |
| Kerr-McGee's NBU 921-35L4CS   | API #4304751390 | IPC 10-99 Spot Paleo Monitoring  |
| (U-07-MQ-1437b,i,p,s)   |                 |                                  |
| Kerr-McGee's NBU 921-35M1BS   | API #4304751391 | IPC 10-99 Spot Paleo Monitoring  |
| (U-07-MQ-1437b,i,p,s)   |                 |                                  |
| Kerr-McGee's NBU 921-35M1CS   | API #4304751392 | IPC 10-99 Spot Paleo Monitoring  |
| (U-07-MQ-1437b,i,p,s)   |                 |                                  |
| Kerr-McGee's NBU 921-35M4BS   | API #4304751393 | IPC 10-99 Spot Paleo Monitoring  |
| (U-07-MQ-1437b,i,p,s)   |                 |                                  |
| Kerr-McGee's NBU 921-35M4CS   | API #4304751394 | IPC 10-99 Spot Paleo Monitoring  |
| (U-07-MQ-1437b,i,p,s)   |                 |                                  |
| Kerr-McGee's NBU 921-35N4BS   | API #4304751395 | IPC 10-100 Spot Paleo Monitoring |
| (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline) |                 |                                  |

# ON-SITE PREDRILL EVALUATION

## Utah Division of Oil, Gas and Mining

**Operator** KERR-MCGEE OIL & GAS ONSHORE, L.P.  
**Well Name** NBU 921-35F4CS  
**API Number** 43047513570000      **APD No** 3190      **Field/Unit** NATURAL BUTTES  
**Location: 1/4,1/4** SENW      **Sec** 35      **Tw** 9.0S      **Rng** 21.0E      2483      **FNL** 2358      **FWL**  
**GPS Coord (UTM)** 626424 4427819      **Surface Owner**

**Participants**

See other comments:

**Regional/Local Setting & Topography**

The general area is within the Natural Buttes Unit in the lower portion of the Sand Wash Drainage of Uintah, County, approximately 37 air miles and 44.3 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Topography of the Sand Wash area is characterized by broad open flats dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs, furnishing water for antelope or livestock.

The NBU 921-35F4 pad will be enlarged to include four gas wells to be directionally drilled. They are the NBU 921-35F4BS, NBU 921-35F4CS, NBU 921-35K1BS and NBU 921-35K1CS. The pad extends a small existing pad containing the NBU 81V producing gas well. The pad will be enlarged on all sides. Significant off location draws exists to the north and the east. Small swales or draws leave the pad and pit area running to the north. Reserve pit Corners B and C are in a small amount of fill. A 15-foot outer bench and 2 feet of free board are provided. The reserve pit stockpile will be extended to the north to add additional support for the pit at Corner B. The well pad will be extended from 47 feet to 60 feet between the well heads and the pit to provide for the rig planned to drill the wells. A major tributary of Sand Wash is about one mile to the east of the site and the White River about 3 miles down drainage. The selected site appears to be suitable for enlarging a pad, drilling and operating the proposed wells and is the only site in the immediate area.

Both the surface and minerals are owned by SITLA.

**Surface Use Plan**

**Current Surface Use**

- Grazing
- Wildlfe Habitat
- Existing Well Pad

|                       |                                    |                           |                          |
|-----------------------|------------------------------------|---------------------------|--------------------------|
| <b>New Road Miles</b> | <b>Well Pad</b>                    | <b>Src Const Material</b> | <b>Surface Formation</b> |
| 0                     | <b>Width</b> 335 <b>Length</b> 455 | Onsite                    | UNTA                     |

**Ancillary Facilities** N

**Waste Management Plan Adequate?**

**Environmental Parameters**

**Affected Floodplains and/or Wetlands** N

**Flora / Fauna**

Vegetation is a poor desert shrub type, which includes rabbit brush, Indian ricegrass, horsebrush, stipa commata, greasewood, broom snakeweed, shadscale and halogeton.

Antelope, sheep during the winter, rabbits, coyotes, and small mammals, birds and raptors.

**Soil Type and Characteristics**

Surface soils are a rocky sandy loam.

**Erosion Issues** N

**Sedimentation Issues** N

**Site Stability Issues** N

**Drainage Diversion Required?** N

**Berm Required?** N

**Erosion Sedimentation Control Required?** N

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

**Reserve Pit**

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

**Characteristics / Requirements**

The proposed reserve pit is 100' x 260' x 12' deep located in a cut on the northeast corner of the location. Kerr McGee plans a 30-mil liner with a double felt sub-liner. Reserve pit Corners B and C are in a small amount of fill. A 15-foot outer bench and 2 feet of free board are provided. The reserve pit stockpile will be extended to the north to add additional support for the pit at Corner B.

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

**Other Observations / Comments**

Floyd Bartlett (DOGM), Sheila Wopsock, Clay Einerson, Lovell Young, Grizz Oleen, Charles Chase, Colby Sutton, Doyle Holmes, Claudia Sass, (Kerr McGee), Mitch Batty, John Slaugh, (Timberline Engineering and Land Surveying), Jim Davis (SITLA) and Ben Williams, (UDWR).

Floyd Bartlett  
**Evaluator**

11/30/2010  
**Date / Time**

# Application for Permit to Drill

## Statement of Basis

12/27/2010

### Utah Division of Oil, Gas and Mining

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|                  |   |               |                          |                   |            |
|------------------|---|---------------|--------------------------|-------------------|------------|
| <b>APD No</b>    | <b>API WellNo</b>                                 | <b>Status</b> | <b>Well Type</b>         | <b>Surf Owner</b> | <b>CBM</b> |
| 3190             | 43047513570000                                    | LOCKED        | GW                       | S                 | No         |
| <b>Operator</b>  | KERR-MCGEE OIL & GAS ONSHORE, L.P.                |               | <b>Surface Owner-APD</b> |                   |            |
| <b>Well Name</b> | NBU 921-35F4CS                                    |               | <b>Unit</b>              | NATURAL BUTTES    |            |
| <b>Field</b>     | NATURAL BUTTES                                    |               | <b>Type of Work</b>      | DRILL             |            |
| <b>Location</b>  | SEW 35 9S 21E S 2483 FNL 2358 FWL GPS Coord (UTM) |               |                          | 626418E           | 4427812N   |

#### Geologic Statement of Basis

Kerr McGee proposes to set 2,620' 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 2,100'. A search of Division of Water Rights records shows one water well within a 10,000 foot radius of the center of Section 35. The well is listed as 2,640 feet deep and used for drilling water. 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. The proposed casing and cement should adequately protect. Any usable ground water.

Brad Hill  
APD Evaluator

12/20/2010  
Date / Time

#### Surface Statement of Basis

The general area is within the Natural Buttes Unit in the lower portion of the Sand Wash Drainage of Uintah, County, approximately 37 air miles and 44.3 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Topography of the Sand Wash area is characterized by broad open flats dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs, furnishing water for antelope or livestock.

The NBU 921-35F4 pad will be enlarged to include four gas wells to be directionally drilled. They are the NBU 921-35F4BS, NBU 921-35F4CS, NBU 921-35K1BS and NBU 921-35K1CS. The pad extends a small existing pad containing the NBU 81V producing gas well. The pad will be enlarged on all sides. Significant off location draws exists to the north and the east. Small swales or draws leave the pad and pit area running to the north. Reserve pit Corners B and C are in a small amount of fill. A 15-foot outer bench and 2 feet of free board are provided. The reserve pit stockpile will be extended to the north to add additional support for the pit at Corner B. The well pad will be extended from 47 feet to 60 feet between the well heads and the pit to provide for the rig planned to drill the wells. A major tributary of Sand Wash is about one mile to the east of the site and the White River about 3 miles down drainage. The selected site appears to be suitable for enlarging a pad, drilling and operating the proposed wells and is the only site in the immediate area.

Both the surface and minerals are owned by SITLA. Jim Davis represented SITLA at the pre-site investigation. Mr. Davis had no concerns pertaining to this location excepted as covered above. SITLA provided a seed mix to be used when reclaiming the site.

Ben Williams represented the Utah Division of Wildlife Resources. Mr. Williams stated the area is classified as crucial yearlong antelope habitat but recommended no restrictions for this species. No other wildlife will be significantly affected.

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# Application for Permit to Drill Statement of Basis

12/27/2010

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

Page 2

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Floyd Bartlett  
**Onsite Evaluator**

11/30/2010  
**Date / Time**

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

| <b>Category</b> | <b>Condition</b>   |
|-----------------|--|
| Pits            | A synthetic liner with a minimum thickness of 30 mils with a double felt subliner shall be properly installed and maintained in the reserve pit. |
| Surface         | The reserve pit shall be fenced upon completion of drilling operations.  |

# WORKSHEET APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 11/23/2010

**WELL NAME:** NBU 921-35F4CS

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

**CONTACT:** Danielle Piernot

**API NO. ASSIGNED:** 43047513570000

**PHONE NUMBER:** 720 929-6156

**PROPOSED LOCATION:** SENW 35 090S 210E

**SURFACE:** 2483 FNL 2358 FWL

**BOTTOM:** 2567 FNL 2159 FWL

**COUNTY:** UINTAH

**LATITUDE:** 39.99293

**UTM SURF EASTINGS:** 626418.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 3 - State

**LEASE NUMBER:** UO 01194 ST

**SURFACE OWNER:** 3 - State

**Permit Tech Review:**

**Engineering Review:**

**Geology Review:**

**LONGITUDE:** -109.51921

**NORTHINGS:** 4427812.00

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

**COALBED METHANE:** NO

## RECEIVED AND/OR REVIEWED:

- PLAT
- Bond: STATE/FEE - 22013542
- Potash
- Oil Shale 190-5
- Oil Shale 190-3
- Oil Shale 190-13
- Water Permit: Permit #43-8496
- RDCC Review:
- Fee Surface Agreement
- Intent to Commingle

**Commingling 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:** Suspends General Siting
- R649-3-11. Directional Drill

**Comments:** Presite Completed

**Stipulations:**  
3 - Commingling - 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 921-35F4CS  
**API Well Number:** 43047513570000  
**Lease Number:** UO 01194 ST  
**Surface Owner:** STATE  
**Approval Date:** 12/27/2010

**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

**Commingling:**

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 <https://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

|   |  |   |
|---|--|---|
| <b>STATE OF UTAH</b><br>DEPARTMENT OF NATURAL RESOURCES<br>DIVISION OF OIL, GAS, AND MINING   |  | <b>FORM 9</b>   |
|   |  | <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b><br>UO 01194 ST |
| <b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  |  | <b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>                  |
| Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.  |  | <b>7. UNIT or CA AGREEMENT NAME:</b><br>NATURAL BUTTES        |
| <b>1. TYPE OF WELL</b><br>Gas Well  |  | <b>8. WELL NAME and NUMBER:</b><br>NBU 921-35F4CS             |
| <b>2. NAME OF OPERATOR:</b><br>KERR-MCGEE OIL & GAS ONSHORE, L.P.   |  | <b>9. API NUMBER:</b><br>43047513570000                       |
| <b>3. ADDRESS OF OPERATOR:</b><br>P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779   | <b>PHONE NUMBER:</b><br>720 929-6515 Ext   | <b>9. FIELD and POOL or WILDCAT:</b><br>NATURAL BUTTES        |
| <b>4. LOCATION OF WELL</b><br><b>FOOTAGES AT SURFACE:</b><br>2483 FNL 2358 FWL<br><b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b><br>Qtr/Qtr: SENW Section: 35 Township: 09.0S Range: 21.0E Meridian: S   |  | <b>COUNTY:</b><br>UINTAH                                      |
|   |  | <b>STATE:</b><br>UTAH   |
| 11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA   |  |   |
| <b>TYPE OF SUBMISSION</b>   | <b>TYPE OF ACTION</b>  |   |
| <input type="checkbox"/> NOTICE OF INTENT<br>Approximate date work will start:<br><br><input type="checkbox"/> SUBSEQUENT REPORT<br>Date of Work Completion:<br><br><input checked="" type="checkbox"/> SPUD REPORT<br>Date of Spud:<br>5/31/2011<br><br><input type="checkbox"/> DRILLING REPORT<br>Report Date: | <input type="checkbox"/> ACIDIZE<br><input type="checkbox"/> ALTER CASING<br><input type="checkbox"/> CHANGE TO PREVIOUS PLANS<br><input type="checkbox"/> CHANGE TUBING<br><input type="checkbox"/> CHANGE WELL STATUS<br><input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS<br><input type="checkbox"/> DEEPEN<br><input type="checkbox"/> FRACTURE TREAT<br><input type="checkbox"/> OPERATOR CHANGE<br><input type="checkbox"/> PLUG AND ABANDON<br><input type="checkbox"/> PRODUCTION START OR RESUME<br><input type="checkbox"/> RECLAMATION OF WELL SITE<br><input type="checkbox"/> REPERFORATE CURRENT FORMATION<br><input type="checkbox"/> SIDETRACK TO REPAIR WELL<br><input type="checkbox"/> TUBING REPAIR<br><input type="checkbox"/> VENT OR FLARE<br><input type="checkbox"/> WATER SHUTOFF<br><input type="checkbox"/> SI TA STATUS EXTENSION<br><input type="checkbox"/> WILDCAT WELL DETERMINATION<br><input type="checkbox"/> OTHER |   |
|   | <input type="checkbox"/> CASING REPAIR<br><input type="checkbox"/> CHANGE WELL NAME<br><input type="checkbox"/> CONVERT WELL TYPE<br><input type="checkbox"/> NEW CONSTRUCTION<br><input type="checkbox"/> PLUG BACK<br><input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION<br><input type="checkbox"/> TEMPORARY ABANDON<br><input type="checkbox"/> WATER DISPOSAL<br><input type="checkbox"/> APD EXTENSION<br>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'.<br>RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL ON<br>05/31/2011 AT 1030 HRS.   |  |   |
| <b>Accepted by the<br/>Utah Division of<br/>Oil, Gas and Mining<br/>FOR RECORD ONLY</b>   |  |   |
| <b>NAME (PLEASE PRINT)</b><br>Sheila Wopsock  | <b>PHONE NUMBER</b><br>435 781-7024  | <b>TITLE</b><br>Regulatory Analyst                            |
| <b>SIGNATURE</b><br>N/A   |  | <b>DATE</b><br>6/3/2011                                       |

## BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG  
 Submitted By SHEILA WOPSOCK Phone Number 435.781.7024  
 Well Name/Number NBU 921-35F4CS  
 Qtr/Qtr SEnw Section 35 Township 9S Range 21E  
 Lease Serial Number UO-01194-ST  
 API Number 4304751357

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

Date/Time 05/31/2011 1030 HRS AM  PM

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

- Surface Casing  
 Intermediate Casing  
 Production Casing  
 Liner  
 Other

RECEIVED

MAY 26 2011

DIV. OF OIL, GAS &amp; MINING

Date/Time 06/15/2011 0800 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 435.781.7048 FOR MORE

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 |
|---|-----------------------|-------------------|-----------|-----|----------------------------------|-----|--------|
| 4304751356  | NBU 921-35F4BS        |                   | SEnw      | 35  | 9S                               | 21E | UINTAH |
| Action Code   | Current Entity Number | New Entity Number | Spud Date |     | Entity Assignment Effective Date |     |        |
| B   | 99999                 | 2900              | 5/31/2011 |     | 6/2/11                           |     |        |
| <b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <i>WSTMVD</i><br>SPUD WELL ON 05/31/2011 AT 0930 HRS. <i>BHL=SEnw</i> |                       |                   |           |     |                                  |     |        |

Well 2

| API Number  | Well Name             |                   | QQ        | Sec | Twp                              | Rng | County |
|---|-----------------------|-------------------|-----------|-----|----------------------------------|-----|--------|
| 4304751357  | NBU 921-35F4CS        |                   | SEnw      | 35  | 9S                               | 21E | UINTAH |
| Action Code   | Current Entity Number | New Entity Number | Spud Date |     | Entity Assignment Effective Date |     |        |
| B   | 99999                 | 2900              | 5/31/2011 |     | 6/2/11                           |     |        |
| <b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <i>WSTMVD</i><br>SPUD WELL ON 05/31/2011 AT 1030 HRS. <i>BHL=SEnw</i> |                       |                   |           |     |                                  |     |        |

Well 3

| API Number  | Well Name             |                   | QQ        | Sec | Twp                              | Rng | County |
|---|-----------------------|-------------------|-----------|-----|----------------------------------|-----|--------|
| 4304751358  | NBU 921-35K1BS        |                   | SEnw      | 35  | 9S                               | 21E | UINTAH |
| Action Code   | Current Entity Number | New Entity Number | Spud Date |     | Entity Assignment Effective Date |     |        |
| B   | 99999                 | 2900              | 5/31/2011 |     | 6/2/11                           |     |        |
| <b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <i>WSTMVD</i><br>SPUD WELL ON 05/31/2011 AT 1245 HRS. <i>BHL=NEsw</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

6/2/2011

Date

**RECEIVED**

**JUN 02 2011**

DIV. OF OIL, GAS & MINING

|  |  |   |
|--|--|---|
| <b>STATE OF UTAH</b><br>DEPARTMENT OF NATURAL RESOURCES<br>DIVISION OF OIL, GAS, AND MINING  |  | <b>FORM 9</b>   |
| <b>SUNDRY NOTICES AND REPORTS ON WELLS</b>   |  | <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b><br>UO 01194 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.   |  | <b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>                  |
|  |  | <b>7. UNIT or CA AGREEMENT NAME:</b><br>NATURAL BUTTES        |
| <b>1. TYPE OF WELL</b><br>Gas Well   | <b>8. WELL NAME and NUMBER:</b><br>NBU 921-35F4CS  |   |
| <b>2. NAME OF OPERATOR:</b><br>KERR-MCGEE OIL & GAS ONSHORE, L.P.  | <b>9. API NUMBER:</b><br>43047513570000  |   |
| <b>3. ADDRESS OF OPERATOR:</b><br>P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779  | <b>PHONE NUMBER:</b><br>720 929-6515 Ext   | <b>9. FIELD and POOL or WILDCAT:</b><br>NATURAL BUTTES        |
| <b>4. LOCATION OF WELL</b><br><b>FOOTAGES AT SURFACE:</b><br>2483 FNL 2358 FWL<br><b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b><br>Qtr/Qtr: SENW Section: 35 Township: 09.0S Range: 21.0E Meridian: S  | <b>COUNTY:</b><br>UINTAH   |   |
|  |  | <b>STATE:</b><br>UTAH   |
| 11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA  |  |   |
| <b>TYPE OF SUBMISSION</b>  | <b>TYPE OF ACTION</b>  |   |
| <input type="checkbox"/> NOTICE OF INTENT<br>Approximate date work will start:<br><br><input type="checkbox"/> SUBSEQUENT REPORT<br>Date of Work Completion:<br><br><input type="checkbox"/> SPUD REPORT<br>Date of Spud:<br><br><input checked="" type="checkbox"/> DRILLING REPORT<br>Report Date:<br>6/10/2011  | <input type="checkbox"/> ACIDIZE<br><input type="checkbox"/> ALTER CASING<br><input type="checkbox"/> CHANGE TO PREVIOUS PLANS<br><input type="checkbox"/> CHANGE TUBING<br><input type="checkbox"/> CHANGE WELL STATUS<br><input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS<br><input type="checkbox"/> DEEPEN<br><input type="checkbox"/> FRACTURE TREAT<br><input type="checkbox"/> OPERATOR CHANGE<br><input type="checkbox"/> PLUG AND ABANDON<br><input type="checkbox"/> PRODUCTION START OR RESUME<br><input type="checkbox"/> RECLAMATION OF WELL SITE<br><input type="checkbox"/> REPERFORATE CURRENT FORMATION<br><input type="checkbox"/> SIDETRACK TO REPAIR WELL<br><input type="checkbox"/> TUBING REPAIR<br><input type="checkbox"/> VENT OR FLARE<br><input type="checkbox"/> WATER SHUTOFF<br><input type="checkbox"/> SI TA STATUS EXTENSION<br><input type="checkbox"/> WILDCAT WELL DETERMINATION<br><input type="checkbox"/> OTHER |   |
| <input type="checkbox"/> CASING REPAIR<br><input type="checkbox"/> CHANGE WELL NAME<br><input type="checkbox"/> CONVERT WELL TYPE<br><input type="checkbox"/> NEW CONSTRUCTION<br><input type="checkbox"/> PLUG BACK<br><input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION<br><input type="checkbox"/> TEMPORARY ABANDON<br><input type="checkbox"/> WATER DISPOSAL<br><input type="checkbox"/> APD EXTENSION<br>OTHER: <input style="width: 50px;" type="text"/> |  |   |
| 12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.   |  |   |
| MIRU AIR RIG ON JUNE 8, 2011. DRILLED SURFACE HOLE TO 2645'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.   |  |   |
| <b>Accepted by the<br/>Utah Division of<br/>Oil, Gas and Mining<br/>FOR RECORD ONLY</b>  |  |   |
| <b>NAME (PLEASE PRINT)</b><br>Andy Lytle   | <b>PHONE NUMBER</b><br>720 929-6100  | <b>TITLE</b><br>Regulatory Analyst                            |
| <b>SIGNATURE</b><br>N/A  | <b>DATE</b><br>6/13/2011   |   |

**Carol Daniels - PRODUCTION CASING & CEMENTING NBU 921-35K1BS**

---

**From:** "Anadarko - H&P 298"  
**To:**  
**Date:** 8/11/2011 9:16 AM  
**Subject:** PRODUCTION CASING & CEMENTING NBU 921-35K1BS

---

HI,  
WE WILL BE RUNNUNG 41/2 ,11.6# P-110 & 1-80 BTC CASING TO 9800'& CEMENTING FRIDAY  
AFTERNOON 2-4 PM (8/12/2011)ON NBU 921-35K1BS / THEN SATURDAY MORNING 8-12-2011 WE WILL  
SKID RIG TO NBU-921-35F4CS / NIPPLE UP & DO THE INITIAL BOP TEST, THANKS

JIM MURRAY  
H&P 298  
435 828-0957

*43-049-51357 S-35 TORS R21E*

**RECEIVED**

**AUG 11 2011**

**DIV. OF OIL, GAS & MINING**

**Carol Daniels - PRODUCTION CASING & CEMENT NBU 921-35F4CS**

*T09S R21E S-35 43-047-51357*

**From:** "Anadarko - H&P 298"

**To:**

**Date:** 8/17/2011 8:42 AM

**Subject:** PRODUCTION CASING & CEMENT NBU 921-35F4CS

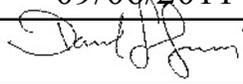
HI, WE WILL BE RUNNING 41/2, 11.6# P-110 & I-80 BT&C CASING TO 9785' ON NBU 921-35F4CS, (H&P 298) THURSDAY 8/18/2011 8-10 AM  
ANY QUESTIONS PLEASE LET ME KNOW, THANKS JIM

JIM MURRAY  
H&P 298  
435 828-0957

**RECEIVED**

**AUG 17 2011**

**DIV. OF OIL, GAS & MINING**

| STATE OF UTAH<br>DEPARTMENT OF NATURAL RESOURCES<br>DIVISION OF OIL, GAS, AND MINING  |   | FORM 9  |
|---|---|---|
| <b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  |   | <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b><br>UO 01194 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.  |   | <b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  |
|   |   | <b>7. UNIT or CA AGREEMENT NAME:</b><br>NATURAL BUTTES  |
| <b>1. TYPE OF WELL</b><br>Gas Well  | <b>8. WELL NAME and NUMBER:</b><br>NBU 921-35F4CS   |   |
| <b>2. NAME OF OPERATOR:</b><br>KERR-MCGEE OIL & GAS ONSHORE, L.P.   | <b>9. API NUMBER:</b><br>43047513570000   |   |
| <b>3. ADDRESS OF OPERATOR:</b><br>P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779   | <b>PHONE NUMBER:</b><br>720 929-6515 Ext  | <b>9. FIELD and POOL or WILDCAT:</b><br>NATURAL BUTTES  |
| <b>4. LOCATION OF WELL</b><br><b>FOOTAGES AT SURFACE:</b><br>2483 FNL 2358 FWL<br><b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b><br>Qtr/Qtr: SENW Section: 35 Township: 09.0S Range: 21.0E Meridian: S   | <b>COUNTY:</b><br>UINTAH  |   |
|   |   | <b>STATE:</b><br>UTAH   |
| 11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA   |   |   |
| <b>TYPE OF SUBMISSION</b>   | <b>TYPE OF ACTION</b>   |   |
| <input type="checkbox"/> NOTICE OF INTENT<br>Approximate date work will start:<br><br><input checked="" type="checkbox"/> SUBSEQUENT REPORT<br>Date of Work Completion:<br>8/18/2011<br><br><input type="checkbox"/> SPUD REPORT<br>Date of Spud:<br><br><input type="checkbox"/> DRILLING REPORT<br>Report Date:   | <input type="checkbox"/> ACIDIZE<br><input type="checkbox"/> CHANGE TO PREVIOUS PLANS<br><input type="checkbox"/> CHANGE WELL STATUS<br><input type="checkbox"/> DEEPEN<br><input type="checkbox"/> OPERATOR CHANGE<br><input type="checkbox"/> PRODUCTION START OR RESUME<br><input type="checkbox"/> REPERFORATE CURRENT FORMATION<br><input type="checkbox"/> TUBING REPAIR<br><input type="checkbox"/> WATER SHUTOFF<br><input type="checkbox"/> WILDCAT WELL DETERMINATION<br><input type="checkbox"/> ALTER CASING<br><input type="checkbox"/> CHANGE TUBING<br><input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS<br><input type="checkbox"/> FRACTURE TREAT<br><input type="checkbox"/> PLUG AND ABANDON<br><input type="checkbox"/> RECLAMATION OF WELL SITE<br><input type="checkbox"/> SIDETRACK TO REPAIR WELL<br><input type="checkbox"/> VENT OR FLARE<br><input type="checkbox"/> SI TA STATUS EXTENSION<br><input checked="" type="checkbox"/> OTHER |   |
|   | <input type="checkbox"/> CASING REPAIR<br><input type="checkbox"/> CHANGE WELL NAME<br><input type="checkbox"/> CONVERT WELL TYPE<br><input type="checkbox"/> NEW CONSTRUCTION<br><input type="checkbox"/> PLUG BACK<br><input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION<br><input type="checkbox"/> TEMPORARY ABANDON<br><input type="checkbox"/> WATER DISPOSAL<br><input type="checkbox"/> APD EXTENSION<br>OTHER: <span style="border: 1px solid black; padding: 2px;">RIG REL - ACTS PIT</span>   |   |
| 12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  |   |   |
| <p>MIRU ROTARY RIG. FINISHED DRILLING FROM 2645' TO 9794' ON AUGUST 17, 2011. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING TO 9444'. RAN 4 1/2" 11.6# P110 CSG FROM 9444' TO 9781'. CEMENTED PRODUCTION CASING. RELEASED H&amp;P RIG 298 ON AUGUST 18, 2011 @ 21:00 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES. THE PIT ON THIS LOCATION WILL BE REFURBISHED AND UTILIZED AS PART OF THE ACTS SYSTEM.</p> |   |   |
|   |   | <p><b>Accepted by the<br/>Utah Division of<br/>Oil, Gas and Mining</b></p> <p>Date: <u>09/06/2011</u></p> <p>By: <u></u></p> |
| <b>NAME (PLEASE PRINT)</b><br>Andy Lytle  | <b>PHONE NUMBER</b><br>720 929-6100   | <b>TITLE</b><br>Regulatory Analyst  |
| <b>SIGNATURE</b><br>N/A   | <b>DATE</b><br>8/19/2011  |   |

|   |  |   |
|---|--|---|
| <b>STATE OF UTAH</b><br>DEPARTMENT OF NATURAL RESOURCES<br>DIVISION OF OIL, GAS, AND MINING   |  | <b>FORM 9</b>   |
|   |  | <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b><br>UO 01194 ST |
| <b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  |  | <b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>                  |
| Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.                                  |  | <b>7. UNIT or CA AGREEMENT NAME:</b><br>NATURAL BUTTES        |
| <b>1. TYPE OF WELL</b><br>Gas Well  |  | <b>8. WELL NAME and NUMBER:</b><br>NBU 921-35F4CS             |
| <b>2. NAME OF OPERATOR:</b><br>KERR-MCGEE OIL & GAS ONSHORE, L.P.   |  | <b>9. API NUMBER:</b><br>43047513570000                       |
| <b>3. ADDRESS OF OPERATOR:</b><br>P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779   | <b>PHONE NUMBER:</b><br>720 929-6515 Ext                       | <b>9. FIELD and POOL or WILDCAT:</b><br>NATURAL BUTTES        |
| <b>4. LOCATION OF WELL</b><br><b>FOOTAGES AT SURFACE:</b><br>2483 FNL 2358 FWL<br><b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b><br>Qtr/Qtr: SENW Section: 35 Township: 09.0S Range: 21.0E Meridian: S   |  | <b>COUNTY:</b><br>UINTAH                                      |
|   |  | <b>STATE:</b><br>UTAH   |
| 11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA   |  |   |
| <b>TYPE OF SUBMISSION</b>   | <b>TYPE OF ACTION</b>  |   |
| <input type="checkbox"/> NOTICE OF INTENT<br>Approximate date work will start:  | <input type="checkbox"/> ACIDIZE                               | <input type="checkbox"/> ALTER CASING                         |
| <input type="checkbox"/> SUBSEQUENT REPORT<br>Date of Work Completion:  | <input type="checkbox"/> CHANGE TO PREVIOUS PLANS              | <input type="checkbox"/> CHANGE TUBING                        |
| <input type="checkbox"/> SPUD REPORT<br>Date of Spud:   | <input type="checkbox"/> CHANGE WELL STATUS                    | <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS       |
| <input checked="" type="checkbox"/> DRILLING REPORT<br>Report Date:<br>10/3/2011  | <input type="checkbox"/> DEEPEN                                | <input type="checkbox"/> FRACTURE TREAT                       |
|   | <input type="checkbox"/> OPERATOR CHANGE                       | <input type="checkbox"/> PLUG AND ABANDON                     |
|   | <input checked="" 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                                |
|   |  | OTHER: <input type="text"/>                                   |
| 12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.<br>THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 10/03/2011 AT 3:00 PM. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT. |  |   |
| <b>Accepted by the<br/>Utah Division of<br/>Oil, Gas and Mining<br/>FOR RECORD ONLY</b>   |  |   |
| <b>NAME (PLEASE PRINT)</b><br>Sheila Wopsock  | <b>PHONE NUMBER</b><br>435 781-7024                            | <b>TITLE</b><br>Regulatory Analyst                            |
| <b>SIGNATURE</b><br>N/A   |  | <b>DATE</b><br>10/6/2011                                      |

**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**

5. LEASE DESIGNATION AND SERIAL NUMBER:  
**UO 01194 ST**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT or CA AGREEMENT NAME  
**UTU63047A**

8. WELL NAME and NUMBER:  
**NBU 921-35F4CS**

9. API NUMBER:  
**4304751357**

10. FIELD AND POOL, OR WILDCAT  
**NATURAL BUTTES**

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:  
**SENW 35 9S 21E S**

12. COUNTY  
**UINTAH**

13. STATE  
**UTAH**

14. DATE SPUDED: **5/31/2011**

15. DATE T.D. REACHED: **8/17/2011**

16. DATE COMPLETED: **10/3/2011**

17. ELEVATIONS (DF, RKB, RT, GL):  
**5120 GL**

18. TOTAL DEPTH: MD **9,794** TVD **9,782**

19. PLUG BACK T.D.: MD **9,760** TVD **9,748**

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/RSL/SM/GR/CCL-SYNTHETIC TRIPLE COMBO**

23. **BHL by HSM**

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        | 2,634       |                      | 700                        |                     | 0             |               |
| 7 7/8"    | 4 1/2" I-80  | 11.6#          | 0        | 9,444       |                      | 1,542                      |                     | 2190          |               |
| 7 7/8"    | 4 1/2" P-110 | 11.6           | 9,444    | 9,781       |                      |                            |                     |               |               |

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" | 8,926          |                 |      |                |                 |      |                |                 |

26. PRODUCING INTERVALS

| FORMATION NAME   | TOP (MD) | BOTTOM (MD) | TOP (TVD) | BOTTOM (TVD) | INTERVAL (Top/Bot - MD) | SIZE | NO. HOLES | PERFORATION STATUS   |
|------------------|----------|-------------|-----------|--------------|-------------------------|------|-----------|--|
| (A) MESAVERDE    | 7,652    | 9,587       |           |              | 7,652 9,587             | 0.36 | 142       | Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/> |
| (B) <i>WSMVD</i> |          |             |           |              |                         |      |           | 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   |
|----------------|---|
| 7652 - 9587    | PUMP 8,323 BBLs SLICK H2O & 168,890 LBS 30/50 OTTAWA SAND<br>6 STAGES |

29. ENCLOSED ATTACHMENTS:

ELECTRICAL/MECHANICAL LOGS     GEOLOGIC REPORT     DST REPORT     DIRECTIONAL SURVEY

SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION     CORE ANALYSIS     OTHER: \_\_\_\_\_

30. WELL STATUS:  
**RECEIVED PROD NOV 15 2011**

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

|                                   |                      |                         |             |                     |               |                           |                 |                     |                     |                          |                          |
|-----------------------------------|----------------------|-------------------------|-------------|---------------------|---------------|---------------------------|-----------------|---------------------|---------------------|--------------------------|--------------------------|
| DATE FIRST PRODUCED:<br>10/3/2011 |                      | TEST DATE:<br>10/7/2011 |             | HOURS TESTED:<br>24 |               | TEST PRODUCTION RATES: →  |                 | OIL - BBL:<br>0     | GAS - MCF:<br>1,689 | WATER - BBL:<br>480      | PROD. METHOD:<br>FLOWING |
| CHOKE SIZE:<br>20/64              | TBG. PRESS.<br>2,546 | CSG. PRESS.<br>1,967    | API GRAVITY | BTU - GAS           | GAS/OIL RATIO | 24 HR PRODUCTION RATES: → | OIL - BBL:<br>0 | GAS - MCF:<br>1,689 | WATER - BBL:<br>480 | INTERVAL STATUS:<br>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 | 1,520                |
|           |          |             |                              | BIRD'S NEST | 1,820                |
|           |          |             |                              | MAHOGANY    | 2,202                |
|           |          |             |                              | WASATCH     | 4,809                |
|           |          |             |                              | MESAVERDE   | 7,525                |

35. ADDITIONAL REMARKS (Include plugging procedure)

The first 228' of the surface hole was drilled with a 12 1/4" bit. The remainder of surface hole was drilled with an 11" bit. 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) JAIME SCHARNOWSKE

TITLE REGULATORY ANALYST

SIGNATURE *Jaime Scharnowske*

DATE 11/2/2011

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 921-35F4CS BLUE                              |  | Spud Conductor: 5/31/2011 |  | Spud Date: 6/8/2011                       |  |
| Project: UTAH-UINTAH                                   |  | Site: NBU 921-35F4 PAD    |  | Rig Name No: H&P 298/298, CAPSTAR 310/310 |  |
| Event: DRILLING  |  | Start Date: 5/22/2011     |  | End Date: 8/18/2011                       |  |
| Active Datum: RKB @5,146.00usft (above Mean Sea Level) |  |                           | UWI: SE/NW/0/9/S/21/E/35/0/0/26/PM/N/2483/W/0/2358/0/0 |   |  |

| Date     | Time Start-End | Duration (hr) | Phase  | Code | Sub Code | P/U | MD From (usft) | Operation   |
|----------|----------------|---------------|--------|------|----------|-----|----------------|---|
| 6/8/2011 | 19:00 - 21:00  | 2.00          | MIRU   | 01   | C        | P   |                | SKID RIG & RIG UP /// 2 HOWCROFT TRUCKS   |
|          | 21:00 - 23:00  | 2.00          | PRPSPD | 14   | A        | P   |                | WELD ON CONDUCTOR & RIG UP FLOWLINE   |
|          | 23:00 - 23:30  | 0.50          | PRPSPD | 06   | A        | P   |                | PU 12.25" BIT ( SN 7017970 ) & 8" MM ( SN 77211)  |
|          | 23:30 - 0:00   | 0.50          | DRLSUR | 02   | B        | P   |                | SPUD 12.25" SURFACE HOLE F/ 40'-T/ 90' /// ROP= 100 FPH /// WOB= 14-18K /// RPM= 50/90 /// SPP=850/700 /// GPM=595  |
| 6/9/2011 | 0:00 - 1:30    | 1.50          | DRLSUR | 02   | B        | P   |                | DRLG 12.25" SURFACE HOLE F/ 90'- 228' /// ROP= 138' @ 92 FPH /// WOB= 14-18K /// RPM= 50/90 /// SPP=850/700 /// GPM=595   |
|          | 1:30 - 4:00    | 2.50          | DRLSUR | 06   | A        | P   |                | TOOH & LD 12.25" BIT, PU 11" BIT (SN 7023207) & DIR TOOLS & TIH   |
|          | 4:00 - 6:00    | 2.00          | DRLSUR | 02   | D        | P   |                | DIR DRLG 11" SURFACE HOLE F/ 228'- T/ 449' /// ROP=221' @ 110 FPH /// WOB= 18-20K /// RPM= 55/100 /// SPP= 900/ 750 /// GPM= 595 /// NO LOSSES  |
|          | 6:00 - 12:00   | 6.00          | DRLSUR | 02   | D        | P   |                | DIR DRLG 11" SURFACE HOLE F/ 449'- T/ 1308' /// ROP= 859' @ 143 FPH /// WOB= 18-20K /// RPM= 55/100 /// SPP= 1100/ 850 /// GPM= 595 /// NO LOSSES                                     |
|          | 12:00 - 12:30  | 0.50          | DRLSUR | 07   | A        | P   |                | SERVICE RIG & EQUIPMENT   |
|          | 12:30 - 18:00  | 5.50          | DRLSUR | 02   | D        | P   |                | DIR DRLG 11" SURFACE HOLE F/ 1308'- T/ 1910' /// ROP= 602' @ 109 FPH /// WOB= 18-20K /// RPM= 55/100 /// SPP= 1200/ 850 /// GPM= 595 /// NO LOSSES                                    |
|          | 18:00 - 20:00  | 2.00          | DRLSUR | 02   | D        | P   |                | DIR DRLG 11" SURFACE HOLE F/ 1910'- T/ 2100' /// ROP= 190' @ 95 FPH /// WOB= 18-20K /// RPM= 55/100 /// SPP= 1200/ 950 /// GPM= 595 /// PARTIAL RETURNS- 40% LOSSES AIR ON @ 800 CFM  |
|          | 20:00 - 21:00  | 1.00          | DRLSUR | 08   | A        | Z   |                | REPLACE V- BELTS ON LIGHT PLANT ENGINE  |
|          | 21:00 - 0:00   | 3.00          | DRLSUR | 02   | D        | P   |                | DIR DRLG 11" SURFACE HOLE F/ 2100'- T/ 2322' /// ROP= 190' @ 95 FPH /// WOB= 18-20K /// RPM= 55/100 /// SPP= 1200/ 950 /// GPM= 595 /// PARTIAL RETURNS- 50% LOSSES AIR ON @ 1000 CFM |

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

|  |  |  |   |
|--|--|--|---|
| Well: NBU 921-35F4CS BLUE                              |  | Spud Conductor: 5/31/2011                              | Spud Date: 6/8/2011                       |
| Project: UTAH-UINTAH                                   |  | Site: NBU 921-35F4 PAD                                 | Rig Name No: H&P 298/298, CAPSTAR 310/310 |
| Event: DRILLING  |  | Start Date: 5/22/2011                                  | End Date: 8/18/2011                       |
| Active Datum: RKB @5,146.00usft (above Mean Sea Level) |  | UWI: SE/NW/0/9/S/21/E/35/0/0/26/PM/N/2483/W/0/2358/0/0 |   |

| Date      | Time Start-End | Duration (hr) | Phase  | Code | Sub Code | P/U | MD From (usft) | Operation   |
|-----------|----------------|---------------|--------|------|----------|-----|----------------|---|
| 6/10/2011 | -              |               | RDMO   |      |          |     |                | <p>CONDUCTOR CASING:<br/>Cond. Depth set:40<br/>Cement sx used:28</p> <p>SPUD DATE/TIME:6/8/2011 23:30</p> <p>SURFACE HOLE:<br/>Surface From depth:40<br/>Surface To depth:2,645<br/>Total SURFACE hours:24.50<br/>Surface Casing size:8.625"<br/># of casing joints ran:59 JT'S<br/>Casing set MD:2,616.0<br/># sx of cement:200/225/275<br/>Cement blend (ppg):11/15.8/15/8<br/>Cement yield (ft3/sk):3.82/1.15/1.15<br/># of bbls to surface:0<br/>Describe cement issues:NO RETURNS<br/>Describe hole issues:LOST 50% RETURNS @ 1850'<br/>DIR DRLG 11" SURFACE HOLE F/ 2322'-T/ 2645' ///<br/>ROP= 323' @ 81 FPH ///<br/>WOB= 18-20K ///<br/>RPM= 55/100 ///<br/>SPP= 1200/ 950 ///<br/>GPM= 595 ///<br/>PARTIAL RETURNS- 50% LOSSES AIR ON @ 1000 CFM ///<br/>LAST SURVEY @ 2587' = 5.5 DEG &amp; 258.54 AZ ///<br/>3' LEFT &amp; 12' HIGH<br/>CIRC &amp; COND HOLE FOR 8-5/8" SURFACE CSG<br/>LDDS &amp; DIR TOOLS<br/>PJSM ///<br/>RUN 59 JT'S, 8-5/8", 28#, J-55, LT&amp;C CSG<br/>///<br/>FLOAT SHOE SET @ 2617', FIBER BAFFLE @ 2571'<br/>CIRC 8-5/8" SURFACE CSG @ 2617'<br/>PJSM W/ SUPERIOR CMT CREW ///<br/>TEST LINES TO 2500 PSI ///<br/>PUMP 25 BBL SPACER ///<br/>LEAD =200sx CLASS G CMT @ 3.82 YIELD &amp; 11.0 WT ///<br/>TAIL= 225sx CLASS G @ 1.15 YIELD &amp; 15.8 WT ///<br/>DROP PLUG &amp; DISPLACE W/ 152 BBLs WATER ///<br/>PLUG DN @ 13:20 6/10/2011 ///<br/>BUMP PLUG @ 900 PSI ///<br/>FINAL LIFT = 390 PSI ///<br/>CHECK FLOATS- HELD W/ 1.5 BBL'S BACK ///<br/>NO RETURNS &amp; NO CMT TO SURFACE<br/>CUT OFF CONDUCTOR &amp; HANG 8-5/8" SURFACE CSG<br/>RUN 200' OF 1" DN BACK SIDE &amp; TOP OUT W/ 275 sx CMT @ 1.15 YIELD &amp; 15.8 WT IN STAGES ///<br/>NO CMT TO SURFACE ///<br/>WILL TOP OUT AGAIN ON NEXT JOB<br/>RIG DN CUT ///<br/>DRLGLINE ///<br/>RELEASE RIG @ 16:00 6/10/2011 TO THE NBU 921-35K1BS<br/>SKID RIG 10' TO NBU 921-35F4CS<br/>NIPPLE UP AFTER SKID</p> |
|           | 0:00 - 4:00    | 4.00          | DRLSUR | 02   | D        | P   |                |   |
|           | 4:00 - 4:30    | 0.50          | DRLSUR | 05   | A        | P   |                |   |
|           | 4:30 - 7:30    | 3.00          | DRLSUR | 06   | A        | P   |                |   |
|           | 7:30 - 11:30   | 4.00          | CSG    | 12   | C        | P   |                |   |
|           | 11:30 - 12:00  | 0.50          | CSG    | 05   | A        | P   |                |   |
|           | 12:00 - 13:30  | 1.50          | CSG    | 12   | E        | P   |                |   |
|           | 13:30 - 14:00  | 0.50          | CSG    | 14   | A        | P   |                |   |
|           | 14:00 - 15:30  | 1.50          | CSG    | 12   | E        | P   |                |   |
|           | 15:30 - 16:00  | 0.50          | RDMO   | 01   | E        | P   |                |   |
| 8/13/2011 | 0:00 - 0:30    | 0.50          | MIRU   | 01   | C        | P   |                |   |
|           | 0:30 - 1:30    | 1.00          | PRSPD  | 14   | A        | P   |                |   |

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

|  |  |   |   |
|--|--|---|---|
| Well: NBU 921-35F4CS BLUE                              |  | Spud Conductor: 5/31/2011                             | Spud Date: 6/8/2011                       |
| Project: UTAH-UINTAH                                   |  | Site: NBU 921-35F4 PAD                                | Rig Name No: H&P 298/298, CAPSTAR 310/310 |
| Event: DRILLING  |  | Start Date: 5/22/2011                                 | End Date: 8/18/2011                       |
| Active Datum: RKB @5,146.00usft (above Mean Sea Level) |  | UWI: SE/NW0/9/S/21/E/35/0/0/26/PM/N/2483/W/0/2358/0/0 |   |

| Date      | Time Start-End | Duration (hr) | Phase  | Code | Sub Code | P/U | MD From (usft) | Operation   |
|-----------|----------------|---------------|--------|------|----------|-----|----------------|---|
|           | 1:30 - 5:30    | 4.00          | PRPSD  | 15   | A        | P   |                | PRESSURE TEST PIPE RAMS, BLIND RAMS, IBOP, FLOOR VALVE, KILL LINES & KILL LINE VALVES, BOP WING VALVES, HCR VALVE + CHOKE LINE; INNER AND OUTER CHOKE VALVES & MANIFOLD TO 250 PSI LOW @ 5 MINUTES + 5000 PSI HIGH @ 10 MINUTES / TEST ANNULAR TO 250 PSI LOW @ 5 MINUTES + 2500 PSI HIGH @ 10 MINUTES / TEST SUPER CHOKE + SURFACE CASING TO 1500 PSI @ 30 MINUTES - |
|           | 5:30 - 6:00    | 0.50          | PRPSD  | 14   | B        | P   |                | INSTALL WEAR BUSHING  |
|           | 6:00 - 6:30    | 0.50          | PRPSD  | 23   |          | P   |                | PRE SPUD INSPECTION   |
|           | 6:30 - 7:30    | 1.00          | PRPSD  | 09   | A        | P   |                | CUT & SLIP 90' DRILL LINE   |
|           | 7:30 - 9:00    | 1.50          | PRPSD  | 06   | A        | P   |                | PU DIRECTIONAL TOOLS,HUNTING .16 RPG M MTR,HUGHES Q506F PDC BIT,SCRIBE & SURFACE TEST TOOLS   |
|           | 9:00 - 10:30   | 1.50          | PRPSD  | 06   | A        | P   |                | TIH, CHECK DERRICK FOR LEVEL,INSTALL ROTATING RUBBER,TAG @ 2560   |
|           | 10:30 - 11:30  | 1.00          | DRLPRO | 02   | F        | P   |                | DRILL FLOAT TRAC F/2560-2662 / BAFFLE @ 2588 SHOE @2634 /OPEN HOLE TO 2662'   |
|           | 11:30 - 15:30  | 4.00          | DRLPRO | 02   | D        | P   |                | DRILL/SURVEY (ROTATE & SLIDE) F/2662 TO 3181 =519 @ 129.7 FPH // WOB 15K-24K / TOP DRIVE RPM 45/70 / PUMP 124 SPM = 558 GPM / PUMP PRESSURE ON/OFF BOTTOM 1730/1540 PSI / MUD MOTOR RPM 89 / PU/SO/ROT WT110/94/104/ TORQUE ON/OFF BOTTOM 7K/4K / SLIDE 67' IN .45 MIN 13% OF FOOTAGE DRILLED & 19% OF HRS DRILLED/ H2O + POLYMER W/ WEIGHTED SWEEPS +/- 2.0 PPG      |
|           | 15:30 - 16:00  | 0.50          | DRLPRO | 07   | A        | P   |                | RIG SERVICE BOP DRILL   |
|           | 16:00 - 0:00   | 8.00          | DRLPRO | 02   | D        | P   |                | DRILL/SURVEY (ROTATE & SLIDE) F/3181 TO 4515 =1334 @166.75 FPH // WOB 15K-24K / TOP DRIVE RPM 45/70 / PUMP 124 SPM = 558 GPM / PUMP PRESSURE ON/OFF BOTTOM 2335/2028 PSI / MUD MOTOR RPM 89 / PU/SO/ROT W149/121/136 TORQUE ON/OFF BOTTOM 8K/5K / SLIDE 77' IN .45 MIN 5% OF FOOTAGE DRILLED & 9% OF HRS DRILLED/ H2O + POLYMER W/ WEIGHTED SWEEPS +/- 2.0 PPG        |
| 8/14/2011 | 0:00 - 6:00    | 6.00          | DRLPRO | 02   | D        | P   |                | DRILL/SURVEY (ROTATE & SLIDE) F/4515 TO 5540 =1025 @170.8 FPH // WOB 15K-24K / TOP DRIVE RPM 45/70 / PUMP 124 SPM = 558 GPM / PUMP PRESSURE ON/OFF BOTTOM 2335/2028 PSI / MUD MOTOR RPM 89 / PU/SO/ROT W149/121/136 TORQUE ON/OFF BOTTOM 8K/5K / SLIDE 35' IN .20 MIN 3% OF FOOTAGE DRILLED & 5% OF HRS DRILLED/ H2O + POLYMER W/ WEIGHTED SWEEPS +/- 2.0 PPG         |

**US ROCKIES REGION  
Operation Summary Report**

|  |  |                           |   |   |  |
|--|--|---------------------------|---|---|--|
| Well: NBU 921-35F4CS BLUE                              |  | Spud Conductor: 5/31/2011 |   | Spud Date: 6/8/2011                       |  |
| Project: UTAH-UINTAH                                   |  | Site: NBU 921-35F4 PAD    |   | Rig Name No: H&P 298/298, CAPSTAR 310/310 |  |
| Event: DRILLING  |  | Start Date: 5/22/2011     |   | End Date: 8/18/2011                       |  |
| Active Datum: RKB @5,146.00usft (above Mean Sea Level) |  |                           | UWI: SE/NW0/9/S/21/E/35/0/0/26/PM/N/2483/W/0/2358/0/0 |   |  |

| Date      | Time Start-End | Duration (hr) | Phase  | Code | Sub Code | P/U | MD From (usft) | Operation   |
|-----------|----------------|---------------|--------|------|----------|-----|----------------|---|
|           | 8:00 - 16:00   | 10.00         | DRLPRO | 02   | D        | P   |                | DRILL/SURVEY (ROTATE & SLIDE) F/5540 TO 6679 =1139@113 FPH // WOB 15K-24K / TOP DRIVE RPM 45/70 / PUMP 120 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 2320/2180 PSI / MUD MOTOR RPM 88 / PU/SO/ROT W/185/133/155 TORQUE ON/OFF BOTTOM 10K/7K / SLIDE 40' IN .50 MIN 3% OF FOOTAGE DRILLED & 5% OF HRS DRILLED/ H2O + POLYMER W/ WEIGHTED SWEEPS +/- 2.0 PPG                        |
|           | 16:00 - 16:30  | 0.50          | DRLPRO | 07   | A        | P   |                | RIG SERVICE   |
|           | 16:30 - 0:00   | 7.50          | DRLPRO | 02   | D        | P   |                | DRILL/SURVEY (ROTATE & SLIDE) F/6679 TO 7255 =576@76.8 FPH // WOB 15K-24K / TOP DRIVE RPM 45/70 / PUMP 120 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 2335/2028 PSI / MUD MOTOR RPM 88 / PU/SO/ROT WT 191/134/161 TORQUE ON/OFF BOTTOM 9K/7K / SLIDE 38' IN .40 MIN 6% OF FOOTAGE DRILLED & 10% OF HRS DRILLED / DISPLACE HOLE W/ FRESH WATER / MUD UP @ 7000' MUD WT 9.7 VIS 32   |
| 8/15/2011 | 0:00 - 6:00    | 6.00          | DRLPRO | 02   | D        | P   |                | DRILL/SURVEY (ROTATE & SLIDE) F/7255 TO 7560 =305@50.8 FPH // WOB 15K-24K / TOP DRIVE RPM 45/70 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 1980/1840 PSI / MUD MOTOR RPM 79 / PU/SO/ROT WT 194/150/174 TORQUE ON/OFF BOTTOM 9K/7K / DISPLACE HOLE W/ FRESH WATER / MUD UP @ 7000' MUD WT 9.9 VIS 32 / MUD LOSS 30 BBLS  |
|           | 6:00 - 15:30   | 9.50          | DRLPRO | 02   | D        | P   |                | DRILL/SURVEY (ROTATE & SLIDE) F/7560 TO 8000 =440@46.3 FPH // WOB 15K-24K / TOP DRIVE RPM 45/70 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2450/2210 PSI / MUD MOTOR RPM 79 / PU/SO/ROT WT 192/161/173 TORQUE ON/OFF BOTTOM 9K/7K /SLIDE 15' IN 40 MIN 3% OF FOOTAGE DRILLED & 7% OF HRS DRILLED/ BY PASS SHAKERS @7800' / MUD WT 10.6 VIS 36 LCM 5% / 100 BBL MUD LOSS |
|           | 15:30 - 16:00  | 0.50          | DRLPRO | 07   | A        | P   |                | RIG SERVICE   |
|           | 16:00 - 0:00   | 8.00          | DRLPRO | 02   | D        | P   |                | DRILL/SURVEY (ROTATE & SLIDE) F/8000 TO 8355 =355@ 44.3 FPH // WOB 15K-24K / TOP DRIVE RPM 45/70 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2490/2340 PSI / MUD MOTOR RPM 79 / PU/SO/ROT WT 194/162/178 TORQUE ON/OFF BOTTOM 8K/7K /SLIDE 40' IN 50 MIN 11% OF FOOTAGE DRILLED & 10% OF HRS DRILLED/ / MUD WT 11.0 VIS 36 LCM 8%L MUD LOSS 25 BBLS                      |
| 8/16/2011 | 0:00 - 6:00    | 6.00          | DRLPRO | 02   | D        | P   |                | DRILL/SURVEY (ROTATE & SLIDE) F/8355 TO 8580 =225@ 37.5 FPH / WOB 15K-24K / TOP DRIVE RPM 45/70 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2610/2480 PSI / MUD MOTOR RPM 79 / PU/SO/ROT WT 195/163/181 TORQUE ON/OFF BOTTOM 8K/7K / MUD WT 11.2 VIS 37 LCM 10% MUD LOSS 25 BBLS   |

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

|  |   |   |
|--|---|---|
| Well: NBU 921-35F4CS BLUE                              | Spud Conductor: 5/31/2011                             | Spud Date: 6/8/2011                       |
| Project: UTAH-UINTAH                                   | Site: NBU 921-35F4 PAD                                | Rig Name No: H&P 298/298, CAPSTAR 310/310 |
| Event: DRILLING  | Start Date: 5/22/2011                                 | End Date: 8/18/2011                       |
| Active Datum: RKB @5,146.00usft (above Mean Sea Level) | UWI: SE/NW0/9/S/21/E/35/0/0/26/PM/N/2483/W/0/2358/0/0 |   |

| Date      | Time Start-End | Duration (hr) | Phase  | Code | Sub Code | P/U | MD From (usft) | Operation  |
|-----------|----------------|---------------|--------|------|----------|-----|----------------|--|
|           | 6:00 - 14:30   | 8.50          | DRLPRO | 02   | D        | P   |                | DRILL/SURVEY (ROTATE & SLIDE) F/8580 TO 8940 =380@ 44.7 FPH / WOB 15K-24K / TOP DRIVE RPM 45/70 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2790/2550 PSI / MUD MOTOR RPM 79 / PU/SO/ROT WT 203/172/185 TORQUE ON/OFF BOTTOM 8K/7K / MUD WT 11.6 VIS 40 LCM 15% MUD LOSS 50 BBLS RIG SERVICE / BOP DRILL  |
|           | 14:30 - 15:00  | 0.50          | DRLPRO | 07   | A        | P   |                |  |
|           | 15:00 - 20:00  | 5.00          | DRLPRO | 02   | D        | P   |                | DRILL/SURVEY (ROTATE & SLIDE) F/ 8940 TO 9134 =194@ 38.8 FPH / WOB 15K-24K / TOP DRIVE RPM 45/70 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2790/2550 PSI / MUD MOTOR RPM 79 / PU/SO/ROT WT 203/172/185 TORQUE ON/OFF BOTTOM 8K/7K / MUD WT 11.6 VIS 40 LCM 20%/ NO MUD LOSS CCH F/ BIT TRIP,PUMP SLUG   |
|           | 20:00 - 21:00  | 1.00          | DRLPRO | 05   | C        | P   |                |  |
|           | 21:00 - 0:00   | 3.00          | DRLPRO | 06   | A        | P   |                | TOH, FLOW CHECK @ SHOE,PULL ROTA RUBBER/HOLE GOOD  |
| 8/17/2011 | 0:00 - 1:00    | 1.00          | DRLPRO | 06   | A        | P   |                | TOH W/ BHA ,PULL MWD,XO BIT & M MTR  |
|           | 1:00 - 4:30    | 3.50          | DRLPRO | 06   | A        | P   |                | TIH PU MWD, SCRIBE DIR TOOLS & SURFACE TEST, CIH, CHECK DERRICK FOR LEVEL,INSTALL ROTA RUBBER,BREAK CIRC @ SHOE,5500',7500',CIH TO 9040',/HOLE GOOD  |
|           | 4:30 - 5:00    | 0.50          | DRLPRO | 03   | D        | P   |                | WASH REAM 94' TO BTM 5' FILL   |
|           | 5:00 - 16:00   | 11.00         | DRLPRO | 02   | D        | P   |                | DRILL/SURVEY F/9134 TO 9794 TD=660'@ 60 FPH / WOB 15K-24K / TOP DRIVE RPM 45/70 / PUMP 105 SPM = 472GPM / PUMP PRESSURE ON/OFF BOTTOM 2800/2575 PSI / MUD MOTOR RPM 75 / PU/SO/ROT WT 216/179/195 TORQUE ON/OFF BOTTOM 8K/7K / MUD WT 12.3 VIS 44 LCM 20%/ NO MUD LOSS CCH /FOR CASING,PUMP SWEEP  |
|           | 16:00 - 17:00  | 1.00          | DRLPRO | 05   | C        | P   |                |  |
|           | 17:00 - 18:00  | 1.00          | DRLPRO | 06   | E        | P   |                | 10 STD WIPER TRIP TO 8800' / NO PROBLEMS   |
|           | 18:00 - 20:00  | 2.00          | DRLPRO | 05   | C        |     |                | CCH ,F/ CASING,PUMP SWEEP / MW 12.3  |
|           | 20:00 - 0:00   | 4.00          | DRLPRO | 06   | D        | P   |                | TOH/ PULL 8 TSTDS OFF BTM / PUMP SLUG LDDS .   |
| 8/18/2011 | 0:00 - 4:00    | 4.00          | CSG    | 06   | D        | P   |                | LDDP/RUN 8 STDS OUT OF DERRICK /LDDP, BHA DD TOOLS M MTR BIT   |
|           | 4:00 - 4:30    | 0.50          | CSG    | 14   | B        | P   |                | PULL WEAR BUSHING  |
|           | 4:30 - 5:00    | 0.50          | CSG    | 12   | A        | P   |                | X/O DRILLING BAILS TO CASING BAILS   |
|           | 5:00 - 6:00    | 1.00          | CSG    | 12   | A        |     |                | HSM,JSA RIG UP FRANKS WESTATES   |
|           | 6:00 - 13:30   | 7.50          | CSG    | 12   | C        | P   |                | M/U WEATHERFORD 4.5" P-110 FLOAT SHOE W/ THREAD LOCK ON 4.5" P-110 BTC SHOE JT. RUN WEATHERFORD 4.5" P-110 FLOAT COLLAR W/ THREAD LOCK. RUN 7 JTS OF 4.5" P-110 11.6# BTC CSG (314.56') RUN 223 JTS OF 4.5" I-80 11.6# BTC CSG. SET FLOAT SHOE @9781' KB, TOP OF FLOAT COLLAR @ 9758' KB. TOP OF P-110 CSG @ 9443' KB. TOP OF MESA VERDE MARKER @ 7482' KB. TOP OF WASATCH MARKER @ 4636' KB. FILL PIPE ON TRIP @ 1012', 2678', 6283'. NO TIGHT HOLE ON CSG RUN. GOOD DISPLACEMENT THROUGH OUT. INSTALL CIRC. RAN CENTRALIZER FIRST 3 JTS THEN EVERY 3 JTS FOR A TOTAL OF 15 JTS. (CEMENTERS ON LOC. @ 12:40). |

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

|  |  |  |   |
|--|--|--|---|
| Well: NBU 921-35F4CS BLUE                              |  | Spud Conductor: 5/31/2011                              | Spud Date: 6/8/2011                       |
| Project: UTAH-UINTAH                                   |  | Site: NBU 921-35F4 PAD                                 | Rig Name No: H&P 298/298, CAPSTAR 310/310 |
| Event: DRILLING  |  | Start Date: 5/22/2011                                  | End Date: 8/18/2011                       |
| Active Datum: RKB @5,146.00usft (above Mean Sea Level) |  | UWI: SE/NW/0/9/S/21/E/35/0/0/26/PM/N/2483/W/0/2358/0/0 |   |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation  |
|------|----------------|---------------|-------|------|----------|-----|----------------|--|
|      | 13:30 - 15:00  | 1.50          | CSG   | 05   | D        | P   |                | CIRC DOWN CSG @ 272 GPM. HOLD SAFETY MEETING AND RIG DOWN CSG CREW. NO FLARE ON BOTTOMS UP. MUD WT 12.3 VIS 43 LCM 20%. START SHAKING OUT LCM FOR STORAGE.   |
|      | 15:00 - 18:00  | 3.00          | CSG   | 12   | E        | P   |                | HOLD SAFETY MEETING. TEST PUMP KICK OUT TO 5500 PSI. TEST LINES TO 4500 PSI. PUMP 15 BBLS OF FRESH WATER AHEAD. PUMP 10 BBLS (20 SX) OF 11.3# 2.83 YD 16.74 GPS SCAVENGER CEMENT. PUMP 185 BBLS (491 SX) OF 12.3# 2.21 YD 11.38 GPS OF PREMIUM LIGHT II LEAD CEMENT. PUMP 245 BBLS (1051 SX) OF 14.3# 1.31 YD 5.90 GPS OF 50/50 POZ TAIL CEMENT. SHUT DOWN, CLEAN LINES AND DROP PLUG. PUMP 151 BBLS FRESH WATER W/ CLAYCARE AND MAGNACIDE FOR DISPLACEMENT. 20 BBLS OF LEAD CEMENT TO SURFACE. 2320 PSI @ 3 BPM. BUMP PLUG 3300 PSI. HOLD PSI FOR 5 MIN. RELEASE PSI AND FLOAT HELD. EST TAIL CEMENT @ 4300'. RIG DOWN CEMENTERS (STORED 800 BBLS OF 12.3 MUD.) PUMP THROUGH STACK AND MUD LINES. PUMP FRAC TANKS DRY FOR RIG MOVE. |
|      | 18:00 - 21:00  | 3.00          | RDMO  | 14   | A        | P   |                | NIPPLE DOWN STACK, AND P/U STACK. SET C-22 SLIPS UNDER STACK W/ 100 K. CUT OFF CSG. OPEN DOORS ON BOP'S AND WASH OUT ANY EXCESS CEMENT. CLEAN PITS. RELEASE RIG 8/18/2011 21:00.   |

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

|  |  |   |   |
|--|--|---|---|
| Well: NBU 921-35F4CS BLUE                              |  | Spud Conductor: 5/31/2011                             | Spud Date: 6/8/2011                       |
| Project: UTAH-UINTAH                                   |  | Site: NBU 921-35F4 PAD                                | Rig Name No: H&P 298/298, CAPSTAR 310/310 |
| Event: DRILLING  |  | Start Date: 5/22/2011                                 | End Date: 8/18/2011                       |
| Active Datum: RKB @5,146.00usft (above Mean Sea Level) |  | UWI: SE/NW0/9/S/21/E/35/0/0/26/PM/N/2483/W/0/2358/0/0 |   |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|------|----------------|---------------|-------|------|----------|-----|----------------|-----------|
|------|----------------|---------------|-------|------|----------|-----|----------------|-----------|

21:00 - 21:00 0.00 RDMO

**CONDUCTOR CASING:**

Cond. Depth set:40  
Cement sx used:28

SPUD DATE/TIME:6/8/2011 23:30

**SURFACE HOLE:**

Surface From depth:40  
Surface To depth:2,645  
Total SURFACE hours:24.50  
Surface Casing size:8.625"  
# of casing joints ran:59  
Casing set MD:2,616.0  
# sx of cement:20/491/1051  
Cement blend (ppg):11/15.8/15/8  
Cement yield (ft3/sk):3.82/1.15/1.15  
# of bbls to surface:0  
Describe cement issues:NO RETURNS  
Describe hole issues:LOST 50% RETURNS @ 1850'

**PRODUCTION:**

Rig Move/Skid start date/time:8/13/2011 0:00  
Rig Move/Skid finish date/time:8/13/2011 0:30  
Total MOVE hours:0.5  
Prod Rig Spud date/time:8/13/2011 10:30  
Rig Release date/time:8/18/2011 21:00  
Total SPUD to RR hours:130.5  
Planned depth MD9,789  
Planned depth TVD9,778  
Actual MD:9,794  
Actual TVD:9,782  
Open Wells \$:  
AFE \$:  
Open wells \$/ft:

**PRODUCTION HOLE:**

Prod. From depth:2,662  
Prod. To depth:9,794  
Total PROD hours: 89.5  
Log Depth:NO LOGS RAN  
Production Casing size:4 1/2  
# of casing joints ran:233  
Casing set MD:9,786.0  
# sx of cement:1,562  
Cement blend (ppg):11.3/12.3/14.3  
Cement yield (ft3/sk):2.3/2.12/1.31  
Est. TOC (Lead & Tail) or 2 Stage :4300  
Describe cement issues:20 BBLs CMT TO PIT  
Describe hole issues:GOOD

**DIRECTIONAL INFO:DIRECTIONAL**

KOP:238  
Max angle:6.54  
Departure:238.00  
Max dogleg MD:1.47 / 2,520

1 General

1.1 Customer Information

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

1.2 Well/Wellbore Information

|              |   |               |  |
|--------------|---|---------------|--|
| Well         | NBU 921-35F4CS BLUE                               | Wellbore No.  | OH                                       |
| Well Name    | NBU 921-35F4CS                                    | Wellbore Name | NBU 921-35F4CS                           |
| Report No.   | 1   | Report Date   | 9/23/2011                                |
| Project      | UTAH-UINTAH                                       | Site          | NBU 921-35F4 PAD                         |
| Rig Name/No. |   | Event         | COMPLETION                               |
| Start Date   | 9/29/2011   | End Date      | 10/3/2011                                |
| Spud Date    | 6/8/2011  | Active Datum  | RKB @5,146.00usft (above Mean Sea Level) |
| UWI          | SE/NW/0/9/S/21/E/35/0/0/26/PM/N/2483/W/0/2358/0/0 |               |  |

1.3 General

|                     |                      |                 |           |            |              |
|---------------------|----------------------|-----------------|-----------|------------|--------------|
| Contractor          | CASED HOLE SOLUTIONS | Job Method      | PERFORATE | Supervisor | DAVE DANIELS |
| Perforated Assembly | PRODUCTION CASING    | Conveyed Method | WIRELINE  |            |              |

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   | 7,652.0 (usft)-9,587.0 (usft) | Start Date/Time          | 9/26/2011 12:00AM |
| No. of Intervals | 24                            | End Date/Time            | 9/26/2011 12:00AM |
| Total Shots      | 0                             | Net Perforation Interval | 40.00 (usft)      |
| Avg Shot Density | 0.00 (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 /Carr Manuf | Carr Size (in) | Phasing (°) | Charge Desc /Charge Manufacturer | Charge Weight (gram) | Reason         | Misrun |
|-------------------|---------------------|-------------|----------------|---------------|----------------|------------------------|--------------------|---------------|-----------------------|----------------|-------------|----------------------------------|----------------------|----------------|--------|
| 9/26/2011 12:00AM | MESAVERDE/          |             |                | 7,652.0       | 7,653.0        |                        |                    | 0.360         | EXP/                  | 3.375          | 90.00       |                                  | 23.00                | PRODUCTIO<br>N |        |

2.1 Perforated Interval (Continued)

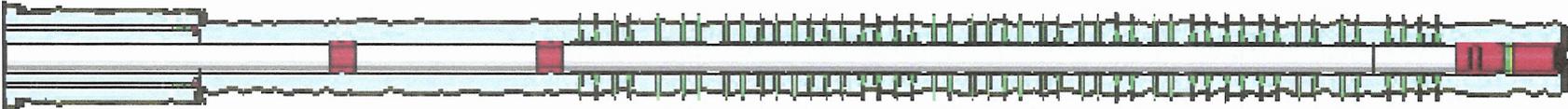
| Date                 | Formation/<br>Reservoir | CCL@<br>(usft) | CCL-T<br>S<br>(usft) | MD Top<br>(usft) | MD Base<br>(usft) | Shot<br>Density<br>(shot/ft) | Misfires/<br>Add. Shot | Diamete<br>r<br>(in) | Carr Type /Carr Manuf | Carr<br>Size<br>(in) | Phasing<br>(°) | Charge Desc /Charge<br>Manufacturer | Charge<br>Weight<br>(gram) | Reason         | Misrun |
|----------------------|-------------------------|----------------|----------------------|------------------|-------------------|------------------------------|------------------------|----------------------|-----------------------|----------------------|----------------|-------------------------------------|----------------------------|----------------|--------|
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 7,704.0          | 7,706.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 7,776.0          | 7,777.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 7,808.0          | 7,810.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 7,994.0          | 7,995.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 8,046.0          | 8,046.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 8,084.0          | 8,085.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 8,101.0          | 8,102.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 8,164.0          | 8,166.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 8,218.0          | 8,219.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 8,310.0          | 8,312.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 8,430.0          | 8,432.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 8,450.0          | 8,452.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 8,554.0          | 8,556.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 8,681.0          | 8,682.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 8,742.0          | 8,744.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 8,844.0          | 8,845.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 8,944.0          | 8,946.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 8,990.0          | 8,992.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 9,040.0          | 9,042.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 9,136.0          | 9,137.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 9,324.0          | 9,325.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |

2.1 Perforated Interval (Continued)

| Date                 | Formation/<br>Reservoir | CCL@<br>(usft) | CCL-T<br>S<br>(usft) | MD Top<br>(usft) | MD Base<br>(usft) | Shot<br>Density<br>(shot/ft) | Misfires/<br>Add. Shot | Diamete<br>r<br>(in) | Carr Type /Carr Manuf | Carr<br>Size<br>(in) | Phasing<br>(°) | Charge Desc /Charge<br>Manufacturer | Charge<br>Weight<br>(gram) | Reason         | Misrun |
|----------------------|-------------------------|----------------|----------------------|------------------|-------------------|------------------------------|------------------------|----------------------|-----------------------|----------------------|----------------|-------------------------------------|----------------------------|----------------|--------|
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 9,562.0          | 9,565.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/26/2011<br>12:00AM | MESAVERDE/              |                |                      | 9,584.0          | 9,587.0           |                              |                        | 0.360                | EXP/                  | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |

3 Plots

3.1 Wellbore Schematic



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

|  |  |                                     |
|--|--|-------------------------------------|
| Well: NBU 921-35F4CS BLUE                              | Spud Conductor: 5/31/2011                              | Spud Date: 6/8/2011                 |
| Project: UTAH-UINTAH                                   | Site: NBU 921-35F4 PAD                                 | Rig Name No: ROYAL WELL SERVICE 2/2 |
| Event: COMPLETION                                      | Start Date: 9/29/2011                                  | End Date: 10/3/2011                 |
| Active Datum: RKB @5,146.00usft (above Mean Sea Level) | UWI: SE/NW/0/9/S/21/E/35/0/0/26/PM/N/2483/W/0/2358/0/0 |                                     |

| Date      | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation  |
|-----------|----------------|---------------|-------|------|----------|-----|----------------|--|
| 9/14/2011 | 7:00 - 11:30   | 4.50          | COMP  | 33   |          | P   |                | FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 10 PSI.<br>PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 30 PSI.<br>1ST PSI TEST T/ 7000 PSI. HELD FOR 30 MIN LOST 48 PSI.<br>NO COMMUNICATION WITH SURFACE CSG BLEED OFF PSI. MOVE T/ NEXT WELL.<br>SWFW |
| 9/23/2011 | 7:00 - 11:00   | 4.00          | COMP  | 37   |          | P   |                | PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING.   |
| 9/26/2011 | 6:45 - 7:00    | 0.25          | COMP  | 48   |          | P   |                | RIH PERF AS PER PERF DESIGN. POOH. SWFW<br>RU SUPERIOR FRAC COMPANY HELD SAFETY MEETING<br>STAYING AWAY FROM WELL HEADS WHILE PUMPING  |

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

|  |  |   |                                     |
|--|--|---|-------------------------------------|
| Well: NBU 921-35F4CS BLUE                              |  | Spud Conductor: 5/31/2011                             | Spud Date: 6/8/2011                 |
| Project: UTAH-UINTAH                                   |  | Site: NBU 921-35F4 PAD                                | Rig Name No: ROYAL WELL SERVICE 2/2 |
| Event: COMPLETION                                      |  | Start Date: 9/29/2011                                 | End Date: 10/3/2011                 |
| Active Datum: RKB @5,146.00usft (above Mean Sea Level) |  | UWI: SE/NW0/9/S/21/E/35/0/0/26/PM/N/2483/W/0/2358/0/0 |                                     |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation   |
|------|----------------|---------------|-------|------|----------|-----|----------------|---|
|      | 7:00 - 17:30   | 10.50         | COMP  | 36   | B        | P   |                | <p>PERF &amp; FRAC FOLLOWING WELL AS PER DESIGN W/ 30/50 MESH SAND &amp; SLK WTR.<br/>ALL CBP'S ARE HALIBURTON 8K CBP'S.<br/>REFER TO STIM PJR FOR FLUID, SAND AND CHEMICAL VOLUME PUMP'D</p> <p>FRAC STG #1] WHP=1,910#, BRK DN<br/>PERFS=3,775#, @=4.7 BPM, INJ RT=50.4, INJ PSI=5,811#, INITIAL ISIP=2,829#, INITIAL FG=.74, FINAL ISIP=3,155#, FINAL FG=.77, AVERAGE RATE=49.3, AVERAGE PRESSURE=5,243#, MAX RATE=52.6, MAX PRESSURE=5,987#, NET PRESSURE INCREASE=306#, 24/22 100% CALC PERFS OPEN. X OVER TO WIRE LINE</p> <p>PERF STG #2] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @=9,167', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW</p> <p>FRAC STG #2] WHP=1,701#, BRK DN<br/>PERFS=2,957#, @=4.8 BPM, INJ RT=48.7, INJ PSI=5,594#, INITIAL ISIP=2,476#, INITIAL FG=.71, FINAL ISIP=3,122#, FINAL FG=.78, AVERAGE RATE=50.4, AVERAGE PRESSURE=5,368#, MAX RATE=51.9, MAX PRESSURE=6,293#, NET PRESSURE INCREASE=646#, 21/24 87% CALC PERFS OPEN. X OVER TO WIRE LINE</p> <p>PERF STG #3] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @=8,875', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW</p> <p>FRAC STG #3] WHP=1,623#, BRK DN<br/>PERFS=2,612#, @=4.9 BPM, INJ RT=48.9, INJ PSI=5,839#, INITIAL ISIP=1,969#, INITIAL FG=.67, FINAL ISIP=2,823#, FINAL FG=.76, AVERAGE RATE=49.3, AVERAGE PRESSURE=5,019#, MAX RATE=51.3, MAX PRESSURE=6,235#, NET PRESSURE INCREASE=854#, 17/24 71% CALC PERFS OPEN. X OVER TO WIRE LINE</p> <p>PERF STG #4] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @=8,482', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW</p> <p>FRAC STG #4] WHP=860#, BRK DN PERFS=3,522#, @=4.8 BPM, INJ RT=49.7, INJ PSI=5,102#, INITIAL ISIP=2,589#, INITIAL FG=.75, FINAL ISIP=2,741#, FINAL FG=.77, AVERAGE RATE=50.3, AVERAGE PRESSURE=4,865#, MAX RATE=51.2, MAX PRESSURE=5,849#, NET PRESSURE INCREASE=152#, 24/24 100% CALC PERFS OPEN. X OVER TO WIRE LINE</p> |

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

|  |                           |  |
|--|---------------------------|--|
| Well: NBU 921-35F4CS BLUE                              | Spud Conductor: 5/31/2011 | Spud Date: 6/8/2011                                    |
| Project: UTAH-UINTAH                                   | Site: NBU 921-35F4 PAD    | Rig Name No: ROYAL WELL SERVICE 2/2                    |
| Event: COMPLETION                                      | Start Date: 9/29/2011     | End Date: 10/3/2011                                    |
| Active Datum: RKB @5,146.00usft (above Mean Sea Level) |                           | UWI: SE/NW/0/9/S/21/E/35/0/0/26/PM/N/2483/W/0/2358/0/0 |

| Date      | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation  |
|-----------|----------------|---------------|-------|------|----------|-----|----------------|--|
| 9/27/2011 | 6:45 - 7:00    | 0.25          | COMP  | 48   |          | P   |                | PERF STG #5] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8,196', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW. SWM FN   |
|           | 7:00 - 15:00   | 8.00          | COMP  | 36   | B        | P   |                | HSM, REVIEW FRACING, R/D<br>FRAC STG #5] WHP=1,604#, BRK DN PERFS=2,740#, @=4.2 BPM, INJ RT=51.4, INJ PSI=4,178#, INITIAL ISIP=1,853#, INITIAL FG=.67, FINAL ISIP=2,396#, FINAL FG=.74, AVERAGE RATE=49.6, AVERAGE PRESSURE=4,208#, MAX RATE=51.5, MAX PRESSURE=4,718#, NET PRESSURE INCREASE=543#, 24/24 100% CALC PERFS OPEN. X OVER TO WIRE LINE  |
| 9/29/2011 | 14:00 - 14:15  | 0.25          | COMP  | 48   |          | P   |                | PERF STG #6] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=7,140', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW   |
|           | 14:15 - 18:00  | 3.75          | COMP  | 30   | A        | P   |                | FRAC STG #6] WHP=705#, BRK DN PERFS=2,995#, @=4.8 BPM, INJ RT=51.6, INJ PSI=4,086#, INITIAL ISIP=2,139#, INITIAL FG=.72, FINAL ISIP=2,572#, FINAL FG=.77, AVERAGE RATE=51.3, AVERAGE PRESSURE=4,107#, MAX RATE=52.4, MAX PRESSURE=5,157#, NET PRESSURE INCREASE=433#, 24/24 100% CALC PERFS OPEN. X OVER TO WIRE LINE  |
| 9/30/2011 | 6:45 - 7:00    | 0.25          | COMP  | 48   |          | P   |                | P/U RIH W/ HALIBURTON 8K CBP, SET FOR TOP KILL @=7,605'  |
|           | 7:00 - 13:00   | 6.00          | COMP  | 31   | I        | P   |                | TOTAL FLUID PUMP'D=8,323 BBLs<br>TOTAL SAND PUMP'D=168,890#<br>HSM & JSA W/ROYAL WELL SERVICE<br>MIRU - SPOT EQUIP. SICP 0 PSI. NEWH, NU BOPs. PREP & TALLY TBG. PU 3 7/8" BIT, POBS & XN NIPPLE. RIH ON 80 JTS TBG. EOT @ 2536'. SWI -SDFN. PREP TO CONT RIH WBHA & D/O CBPs. HSM & JSA W/ROYAL WELL SERVICE.   |
| 10/3/2011 | 6:45 - 7:00    | 0.25          | COMP  | 48   |          | P   |                | SICP 0 PSI. EOT @ 2536'. CONT TO PU TBG & RIH WBHA. TAG FILL @ 7585'. RD TBG EQUIP. RU PWR SWWL & PMP. EST CIRC. PT RAMS TO 3000 PSI & HOLD 15 MIN. (0 PSI LOSS) - (PWR SWWL DWN - WAIT 1.5 HRS ON NEW PWR SWWL). RU NEW PWR SWWL. JEFF CALLED, SD DRLG OUT CBPs TILL MONDAY. PROBLEMS W/COMPRESSOR STATIONS - CAN NOT TURN WELL ON TO SELL GAS. LD 2 JTS TBG ON FLOAT. EOT @ 7549'. SWI - SDFWE.<br>HSM & JSA W/ROYAL WELL SERVICE. |

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

|  |   |                                     |
|--|---|-------------------------------------|
| Well: NBU 921-35F4CS BLUE                              | Spud Conductor: 5/31/2011                             | Spud Date: 6/8/2011                 |
| Project: UTAH-UINTAH                                   | Site: NBU 921-35F4 PAD                                | Rig Name No: ROYAL WELL SERVICE 2/2 |
| Event: COMPLETION                                      | Start Date: 9/29/2011                                 | End Date: 10/3/2011                 |
| Active Datum: RKB @5,146.00usft (above Mean Sea Level) | UWI: SE/NW0/9/S/21/E/35/0/0/26/PM/N/2483/W/0/2358/0/0 |                                     |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation  |
|------|----------------|---------------|-------|------|----------|-----|----------------|--|
|      | 7:00 - 7:00    | 0.00          | COMP  | 44   | C        | P   |                | <p>SICP 0 PSI. EOT @ 7549'. RIH TAG FILL @ 7585'. C/O SND &amp; D/O CBPs</p> <p>HALCO CBP @ C/O FILL D/O CBP<br/>DIFF PSI FCP</p> <p>CBP #1 @ 7611' 20 FT 07 MIN<br/>900 PSI 200 PSI</p> <p>CBP #2 @ 7850' 46 FT 08 MIN<br/>600 PSI 250 PSI</p> <p>CBP #3 @ 8196' 33 FT 05 MIN<br/>500 PSI 300 PSI</p> <p>CBP #4 @ 8482' 26 FT 06 MIN<br/>800 PSI 300 PSI</p> <p>CBP #5 @ 8877' 29 FT 09 MIN<br/>700 PSI 250 PSI</p> <p>CBP #6 @ 9167' 33 FT 05 MIN<br/>400 PSI 500 PSI</p> <p>RIH &amp; TAG FILL @ 9683'. C/O TO 9754'. (PBSD @ 9758'). FCP = 500 PSI. PMP 20 BBLs TMAC &amp; CIRC WELL CLEAN.</p> <p>ND PWR SWVL, NU TBG EQUIP. LD 27 JTS ON FLOAT, (34 TOTAL ON FLOAT). LND TBG ON HNGR W/281 JTS NEW 2 3/8" 4.7# L80 TBG @ . RD FLOOR &amp; TBG EQUIP. ND BOP, DROP BALL, NUWH. PMP OFF BIT W/40 BBLs TMAC @ 1450 PSI. WAIT 30 MIN FOR BIT TO FALL TO BTM. TURN WELL TO F.B.C.</p> <p>KB 26'<br/>HANGER 0.83'<br/>XN NIPPLE 1.1'<br/>TBG 281 JTS = 8896.42'<br/>XN NIPPLE @ 8923.48'<br/>EOT @ 8925.63'<br/>(315 JTS DLVRD - 34 JTS RTND)</p> <p>TWTR = 8533 BBLs<br/>TWR = 1880 BBLs<br/>TWLTR = 6653 BBLs<br/>SICP = 1150 PSI, SITP = 0 PSI.</p> |
|      | 15:00 - 15:00  | 0.00          | PROD  | 50   |          |     |                | <p>WELL TURNED TO SALES @ 1500 HR ON 10/3/11 - 680 MCFD, 2040 BWPD, CP 1800#, FTP 1500#, CK 20/64"</p>   |

Project: UTAH - UTM (feet), NAD27, Zone 12N  
 Site: UINTAH\_NBU 921-35F4 PAD  
 Well: NBU 921-35F4CS  
 Wellbore: NBU 921-35F4CS  
 Section:  
 SHL:  
 Design: NBU 921-35F4CS (wp01)  
 Latitude: 39.992989  
 Longitude: -109.519209  
 GL: 5120.00  
 KB: 26' RKB + 5120' GL @ 5146.00ft (H&P 298)

FORMATION TOP DETAILS

| TVDPATH | MDPATH  | FORMATION                       |
|---------|---------|---------------------------------|
| 4794.00 | 4805.78 | Top Wasatch                     |
| 7555.00 | 7566.88 | Top Mesaverde (top of cylinder) |
| 8436.00 | 8447.92 | MVU21                           |
| 8996.00 | 9007.94 | MVL1                            |



**Weatherford**



Azimuths to True North  
 Magnetic North: 11.08°

Magnetic Field  
 Strength: 52317.5nT  
 Dip Angle: 65.86°  
 Date: 6/29/2011  
 Model: IGRF2010

WELL DETAILS: NBU 921-35F4CS

| +N-S | +E-W | Northing    | Ground Level:<br>Easting | 5120.00<br>Latitude | 39.992989 | Longitude   | Slot |
|------|------|-------------|--------------------------|---------------------|-----------|-------------|------|
| 0.00 | 0.00 | 14526936.47 | 2055175.02               |                     |           | -109.519209 |      |

CASING DETAILS

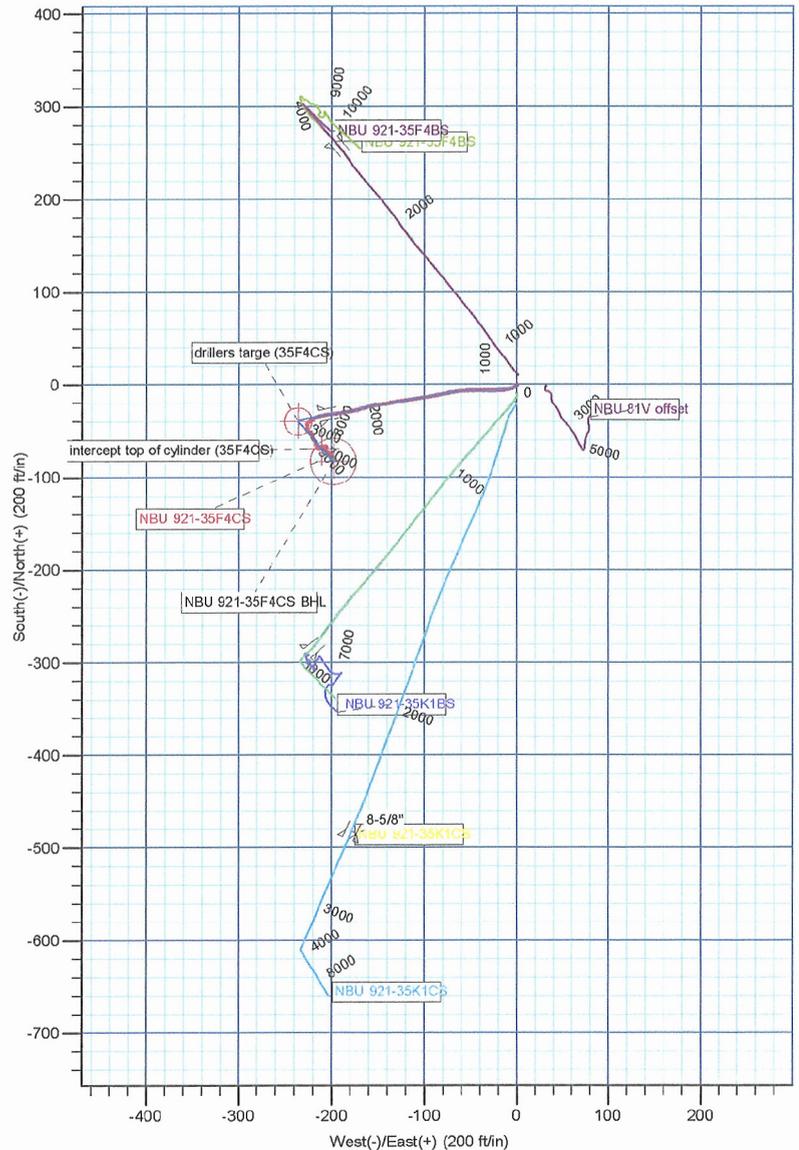
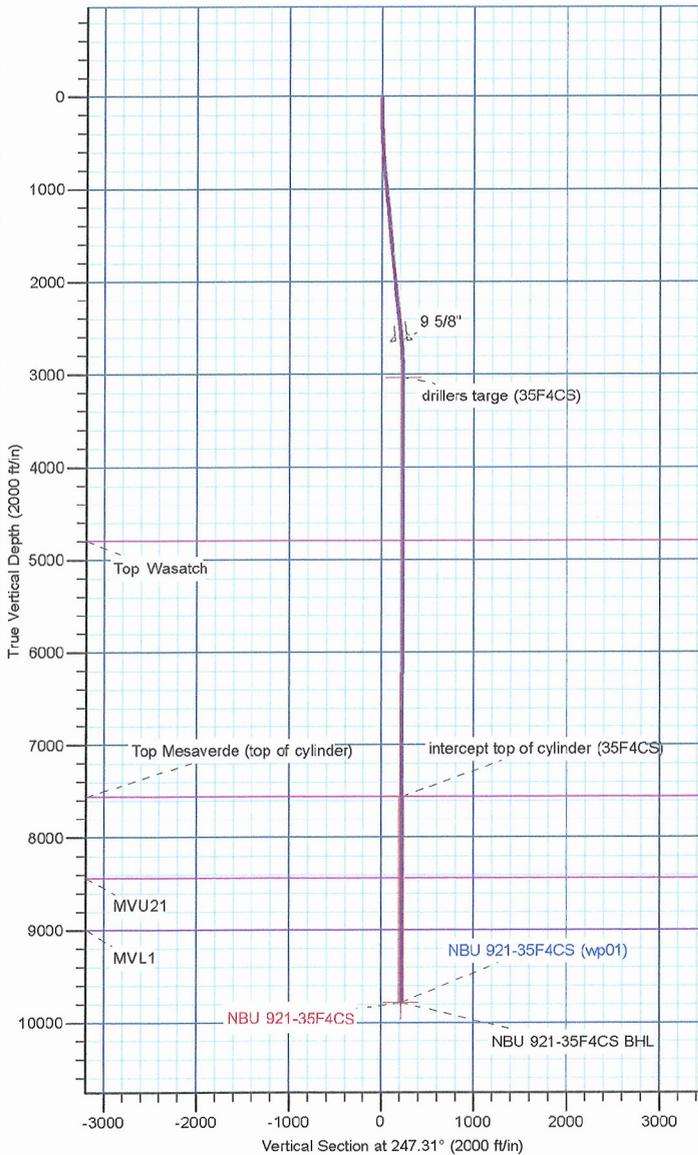
| TVD     | MD      | Name   | Size  |
|---------|---------|--------|-------|
| 2634.32 | 2645.11 | 9 5/8" | 9-5/8 |

DESIGN TARGET DETAILS

| Name                               | TVD     | +N-S   | +E-W    | Northing    | Easting    | Latitude  | Longitude   | Shape                  |
|------------------------------------|---------|--------|---------|-------------|------------|-----------|-------------|------------------------|
| drillers targe (35F4CS)            | 3030.24 | -39.78 | -236.59 | 14526892.76 | 2054939.13 | 39.992880 | -109.520054 | Circle (Radius: 15.00) |
| intercept top of cylinder (35F4CS) | 7555.00 | -69.15 | -210.82 | 14526863.82 | 2054965.39 | 39.992799 | -109.519962 | Point                  |
| NBU 921-35F4CS BHL                 | 9778.00 | -83.04 | -198.62 | 14526850.14 | 2054977.81 | 39.992761 | -109.519918 | Circle (Radius: 25.00) |

SECTION DETAILS

| MD      | Inc  | Azi    | TVD     | +N-S   | +E-W    | Dleg | TFace   | Vsect  |
|---------|------|--------|---------|--------|---------|------|---------|--------|
| 2604.00 | 5.50 | 258.54 | 2593.40 | -33.26 | -209.78 | 0.00 | 0.00    | 206.38 |
| 2754.00 | 5.50 | 258.54 | 2742.71 | -36.12 | -223.87 | 0.00 | 0.00    | 220.48 |
| 3042.10 | 0.49 | 138.71 | 3030.38 | -39.80 | -236.59 | 2.00 | -175.72 | 233.63 |
| 9625.07 | 0.49 | 138.71 | 9613.11 | -82.50 | -199.09 | 0.00 | 0.00    | 215.51 |
| 9789.96 | 0.00 | 0.00   | 9778.00 | -83.04 | -198.62 | 0.30 | 180.00  | 215.28 |





|                  |                                    |                                     |  |
|------------------|------------------------------------|-------------------------------------|--|
| <b>Company:</b>  | US ROCKIES REGION PLANNING         | <b>Local Co-ordinate Reference:</b> | Well NBU 921-35F4CS                      |
| <b>Project:</b>  | UTAH - UTM (feet), NAD27, Zone 12N | <b>TVD Reference:</b>               | 26' RKB + 5120' GL @ 5146.00ft (H&P 298) |
| <b>Site:</b>     | UINTAH_NBU 921-35F4 PAD            | <b>MD Reference:</b>                | 26' RKB + 5120' GL @ 5146.00ft (H&P 298) |
| <b>Well:</b>     | NBU 921-35F4CS                     | <b>North Reference:</b>             | True                                     |
| <b>Wellbore:</b> | NBU 921-35F4CS                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | NBU 921-35F4CS                     | <b>Database:</b>                    | edm5000p                                 |

|                    |  |                      |                |
|--------------------|--|----------------------|----------------|
| <b>Project:</b>    | UTAH - UTM (feet), NAD27, Zone 12N             |                      |                |
| <b>Map System:</b> | Universal Transverse Mercator (US Survey Feet) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)                        |                      |                |
| <b>Map Zone:</b>   | Zone 12N (114 W to 108 W)                      |                      |                |

|                              |                         |                     |                  |                          |             |
|------------------------------|-------------------------|---------------------|------------------|--------------------------|-------------|
| <b>Site:</b>                 | UINTAH_NBU 921-35F4 PAD |                     |                  |                          |             |
| <b>Site Position:</b>        |                         | <b>Northing:</b>    | 14,526,946.67 ft | <b>Latitude:</b>         | 39.993017   |
| <b>From:</b>                 | Lat/Long                | <b>Easting:</b>     | 2,055,175.13 ft  | <b>Longitude:</b>        | -109.519208 |
| <b>Position Uncertainty:</b> | 0.00 ft                 | <b>Slot Radius:</b> | 0 "              | <b>Grid Convergence:</b> | 0.95 °      |

|                             |                |         |                            |                  |                      |             |
|-----------------------------|----------------|---------|----------------------------|------------------|----------------------|-------------|
| <b>Well:</b>                | NBU 921-35F4CS |         |                            |                  |                      |             |
| <b>Well Position</b>        | <b>+N/-S</b>   | 0.00 ft | <b>Northing:</b>           | 14,526,936.47 ft | <b>Latitude:</b>     | 39.992989   |
|                             | <b>+E/-W</b>   | 0.00 ft | <b>Easting:</b>            | 2,055,175.02 ft  | <b>Longitude:</b>    | -109.519209 |
| <b>Position Uncertainty</b> |                | 0.00 ft | <b>Wellhead Elevation:</b> | ft               | <b>Ground Level:</b> | 5,120.00 ft |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore:</b> | NBU 921-35F4CS    |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2010          | 6/29/2011          | 11.08                  | 65.86                | 52,318                     |

|                          |                              |                   |                   |                      |       |
|--------------------------|------------------------------|-------------------|-------------------|----------------------|-------|
| <b>Design:</b>           | NBU 921-35F4CS               |                   |                   |                      |       |
| <b>Audit Notes:</b>      |                              |                   |                   |                      |       |
| <b>Version:</b>          | 1.0                          | <b>Phase:</b>     | ACTUAL            | <b>Tie On Depth:</b> | 17.00 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b> | <b>Direction (°)</b> |       |
|                          | 17.00                        | 0.00              | 0.00              | 260.99               |       |

|                       |                |                            |                  |                    |  |
|-----------------------|----------------|----------------------------|------------------|--------------------|--|
| <b>Survey Program</b> | <b>Date</b>    | 8/30/2011                  |                  |                    |  |
| <b>From (ft)</b>      | <b>To (ft)</b> | <b>Survey (Wellbore)</b>   | <b>Tool Name</b> | <b>Description</b> |  |
| 193.00                | 2,604.00       | Survey #1 (NBU 921-35F4CS) | MWD              | MWD - Standard     |  |
| 2,659.00              | 9,794.00       | Survey #2 (NBU 921-35F4CS) | MWD              | MWD - Standard     |  |

|               |                            |                        |                    |                            |                   |                   |                              |                              |                             |                            |
|---------------|----------------------------|------------------------|--------------------|----------------------------|-------------------|-------------------|------------------------------|------------------------------|-----------------------------|----------------------------|
| <b>Survey</b> | <b>Measured Depth (ft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b> | <b>Vertical Section (ft)</b> | <b>Dogleg Rate (°/100ft)</b> | <b>Build Rate (°/100ft)</b> | <b>Turn Rate (°/100ft)</b> |
|               | 17.00                      | 0.00                   | 0.00               | 17.00                      | 0.00              | 0.00              | 0.00                         | 0.00                         | 0.00                        | 0.00                       |
|               | 193.00                     | 0.44                   | 104.12             | 193.00                     | -0.16             | 0.66              | -0.62                        | 0.25                         | 0.25                        | 0.00                       |
|               | 286.00                     | 0.36                   | 215.98             | 286.00                     | -0.49             | 0.83              | -0.74                        | 0.71                         | -0.09                       | 120.28                     |
|               | 379.00                     | 1.69                   | 238.48             | 378.98                     | -1.44             | -0.51             | 0.73                         | 1.47                         | 1.43                        | 24.19                      |
|               | 443.00                     | 2.33                   | 239.92             | 442.94                     | -2.59             | -2.44             | 2.82                         | 1.00                         | 1.00                        | 2.25                       |
|               | 538.00                     | 3.22                   | 253.82             | 537.83                     | -4.30             | -6.67             | 7.27                         | 1.17                         | 0.94                        | 14.63                      |
|               | 633.00                     | 3.94                   | 280.53             | 632.64                     | -5.58             | -12.46            | 13.18                        | 0.88                         | 0.76                        | 7.06                       |
|               | 728.00                     | 4.56                   | 270.45             | 727.38                     | -6.09             | -19.45            | 20.17                        | 1.01                         | 0.65                        | 10.44                      |
|               | 823.00                     | 5.37                   | 269.04             | 822.03                     | -6.13             | -27.67            | 28.29                        | 0.86                         | 0.85                        | -1.48                      |
|               | 918.00                     | 5.68                   | 270.78             | 916.58                     | -6.14             | -36.82            | 37.33                        | 0.37                         | 0.33                        | 1.83                       |



|                  |                                    |                                     |  |
|------------------|------------------------------------|-------------------------------------|--|
| <b>Company:</b>  | US ROCKIES REGION PLANNING         | <b>Local Co-ordinate Reference:</b> | Well NBU 921-35F4CS                      |
| <b>Project:</b>  | UTAH - UTM (feet), NAD27, Zone 12N | <b>TVD Reference:</b>               | 26' RKB + 5120' GL @ 5146.00ft (H&P 298) |
| <b>Site:</b>     | UINTAH_NBU 921-35F4 PAD            | <b>MD Reference:</b>                | 26' RKB + 5120' GL @ 5146.00ft (H&P 298) |
| <b>Well:</b>     | NBU 921-35F4CS                     | <b>North Reference:</b>             | True                                     |
| <b>Wellbore:</b> | NBU 921-35F4CS                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | NBU 921-35F4CS                     | <b>Database:</b>                    | edm5000p                                 |

| Survey              |                 |             |                     |            |            |                       |                       |                      |                     |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 1,013.00            | 6.26            | 270.06      | 1,011.07            | -6.07      | -46.70     | 47.07                 | 0.62                  | 0.61                 | -0.76               |
| 1,108.00            | 5.97            | 267.06      | 1,105.53            | -6.32      | -56.81     | 57.10                 | 0.45                  | -0.31                | -3.16               |
| 1,204.00            | 5.72            | 260.93      | 1,201.03            | -7.33      | -66.52     | 66.85                 | 0.70                  | -0.26                | -6.39               |
| 1,298.00            | 5.64            | 256.53      | 1,294.57            | -9.15      | -75.64     | 76.14                 | 0.47                  | -0.09                | -4.68               |
| 1,394.00            | 5.62            | 260.33      | 1,390.11            | -11.03     | -84.86     | 85.54                 | 0.39                  | -0.02                | 3.96                |
| 1,490.00            | 5.29            | 260.41      | 1,485.67            | -12.56     | -93.86     | 94.67                 | 0.34                  | -0.34                | 0.08                |
| 1,585.00            | 5.57            | 262.09      | 1,580.25            | -13.92     | -102.74    | 103.66                | 0.34                  | 0.29                 | 1.77                |
| 1,680.00            | 5.66            | 258.78      | 1,674.79            | -15.47     | -111.91    | 112.95                | 0.35                  | 0.09                 | -3.48               |
| 1,774.00            | 5.95            | 263.25      | 1,768.31            | -16.94     | -121.29    | 122.45                | 0.57                  | 0.31                 | 4.76                |
| 1,869.00            | 6.17            | 259.27      | 1,862.78            | -18.47     | -131.20    | 132.47                | 0.50                  | 0.23                 | -4.19               |
| 1,963.00            | 6.11            | 260.11      | 1,956.24            | -20.27     | -141.09    | 142.52                | 0.11                  | -0.06                | 0.89                |
| 2,059.00            | 6.46            | 261.13      | 2,051.66            | -21.98     | -151.46    | 153.03                | 0.38                  | 0.36                 | 1.06                |
| 2,154.00            | 6.30            | 255.87      | 2,146.07            | -24.08     | -161.79    | 163.57                | 0.64                  | -0.17                | -5.54               |
| 2,253.00            | 6.54            | 254.08      | 2,244.45            | -26.95     | -172.48    | 174.57                | 0.32                  | 0.24                 | -1.81               |
| 2,344.00            | 6.41            | 260.99      | 2,334.87            | -29.17     | -182.48    | 184.80                | 0.87                  | -0.14                | 7.59                |
| 2,438.00            | 6.23            | 261.69      | 2,428.30            | -30.73     | -192.71    | 195.15                | 0.21                  | -0.19                | 0.74                |
| 2,533.00            | 6.02            | 262.68      | 2,522.76            | -32.11     | -202.75    | 205.28                | 0.25                  | -0.22                | 1.04                |
| 2,604.00            | 5.50            | 258.54      | 2,593.40            | -33.26     | -209.78    | 212.40                | 0.94                  | -0.73                | -5.83               |
| <b>TIE ON POINT</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 2,659.00            | 5.26            | 254.41      | 2,648.16            | -34.46     | -214.79    | 217.54                | 0.83                  | -0.44                | -7.51               |
| 2,753.00            | 3.57            | 233.48      | 2,741.88            | -37.36     | -221.30    | 224.42                | 2.46                  | -1.80                | -22.27              |
| 2,848.00            | 1.79            | 229.43      | 2,836.78            | -40.09     | -224.80    | 228.30                | 1.88                  | -1.87                | -4.26               |
| 2,942.00            | 0.65            | 215.11      | 2,930.75            | -41.48     | -226.22    | 229.93                | 1.25                  | -1.21                | -15.23              |
| 3,037.00            | 0.88            | 197.74      | 3,025.74            | -42.61     | -226.75    | 230.63                | 0.34                  | 0.24                 | -18.28              |
| 3,131.00            | 0.25            | 22.61       | 3,119.74            | -43.11     | -226.89    | 230.85                | 1.20                  | -0.67                | -186.31             |
| 3,225.00            | 0.31            | 13.11       | 3,213.74            | -42.67     | -226.76    | 230.64                | 0.08                  | 0.06                 | -10.11              |
| 3,320.00            | 0.13            | 109.86      | 3,308.74            | -42.46     | -226.60    | 230.45                | 0.37                  | -0.19                | 101.84              |
| 3,414.00            | 0.38            | 179.11      | 3,402.74            | -42.81     | -226.49    | 230.40                | 0.38                  | 0.27                 | 73.67               |
| 3,509.00            | 0.81            | 175.24      | 3,497.73            | -43.79     | -226.43    | 230.50                | 0.45                  | 0.45                 | -4.07               |
| 3,603.00            | 1.19            | 176.99      | 3,591.72            | -45.43     | -226.33    | 230.65                | 0.41                  | 0.40                 | 1.86                |
| 3,698.00            | 0.75            | 195.61      | 3,686.71            | -47.01     | -226.44    | 231.01                | 0.56                  | -0.46                | 19.60               |
| 3,792.00            | 0.06            | 212.11      | 3,780.70            | -47.65     | -226.63    | 231.30                | 0.74                  | -0.73                | 17.55               |
| 3,887.00            | 0.50            | 183.11      | 3,875.70            | -48.10     | -226.68    | 231.42                | 0.47                  | 0.46                 | -30.53              |
| 3,981.00            | 0.31            | 30.11       | 3,969.70            | -48.29     | -226.58    | 231.34                | 0.84                  | -0.20                | -162.77             |
| 4,076.00            | 0.44            | 134.49      | 4,064.70            | -48.33     | -226.19    | 230.97                | 0.63                  | 0.14                 | 109.87              |
| 4,170.00            | 1.06            | 145.99      | 4,158.69            | -49.30     | -225.44    | 230.38                | 0.68                  | 0.66                 | 12.23               |
| 4,265.00            | 2.63            | 131.99      | 4,253.64            | -51.49     | -223.33    | 228.64                | 1.71                  | 1.65                 | -14.74              |
| 4,359.00            | 0.75            | 141.74      | 4,347.59            | -53.41     | -221.35    | 226.98                | 2.02                  | -2.00                | 10.37               |
| 4,453.00            | 0.50            | 197.61      | 4,441.59            | -54.29     | -221.09    | 226.86                | 0.67                  | -0.27                | 59.44               |
| 4,548.00            | 0.81            | 192.11      | 4,536.58            | -55.34     | -221.36    | 227.29                | 0.33                  | 0.33                 | -5.79               |
| 4,642.00            | 0.19            | 141.49      | 4,630.58            | -56.11     | -221.40    | 227.46                | 0.75                  | -0.66                | -53.85              |
| 4,736.00            | 0.50            | 154.61      | 4,724.58            | -56.60     | -221.13    | 227.26                | 0.34                  | 0.33                 | 13.96               |
| 4,831.00            | 0.75            | 156.74      | 4,819.57            | -57.55     | -220.70    | 226.99                | 0.26                  | 0.26                 | 2.24                |

|                  |                                    |                                     |  |
|------------------|------------------------------------|-------------------------------------|--|
| <b>Company:</b>  | US ROCKIES REGION PLANNING         | <b>Local Co-ordinate Reference:</b> | Well NBU 921-35F4CS                      |
| <b>Project:</b>  | UTAH - UTM (feet), NAD27, Zone 12N | <b>TVD Reference:</b>               | 26' RKB + 5120' GL @ 5146.00ft (H&P 298) |
| <b>Site:</b>     | UINTAH_NBU 921-35F4 PAD            | <b>MD Reference:</b>                | 26' RKB + 5120' GL @ 5146.00ft (H&P 298) |
| <b>Well:</b>     | NBU 921-35F4CS                     | <b>North Reference:</b>             | True                                     |
| <b>Wellbore:</b> | NBU 921-35F4CS                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | NBU 921-35F4CS                     | <b>Database:</b>                    | edm5000p                                 |

| Survey              |                 |             |                     |           |           |                       |                       |                      |                     |  |
|---------------------|-----------------|-------------|---------------------|-----------|-----------|-----------------------|-----------------------|----------------------|---------------------|--|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N-S (ft) | +E-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |  |
| 4,925.00            | 1.06            | 151.49      | 4,913.56            | -58.88    | -220.05   | 226.55                | 0.34                  | 0.33                 | -5.59               |  |
| 5,020.00            | 1.06            | 149.74      | 5,008.54            | -60.41    | -219.18   | 225.94                | 0.03                  | 0.00                 | -1.84               |  |
| 5,114.00            | 1.13            | 145.74      | 5,102.53            | -61.93    | -218.22   | 225.23                | 0.11                  | 0.07                 | -4.26               |  |
| 5,209.00            | 0.25            | 209.36      | 5,197.52            | -62.88    | -217.80   | 224.96                | 1.10                  | -0.93                | 66.97               |  |
| 5,304.00            | 0.31            | 183.61      | 5,292.52            | -63.32    | -217.92   | 225.14                | 0.15                  | 0.06                 | -27.11              |  |
| 5,398.00            | 0.44            | 169.49      | 5,386.52            | -63.93    | -217.87   | 225.19                | 0.17                  | 0.14                 | -15.02              |  |
| 5,493.00            | 0.50            | 168.11      | 5,481.51            | -64.69    | -217.71   | 225.16                | 0.06                  | 0.06                 | -1.45               |  |
| 5,587.00            | 0.50            | 166.49      | 5,575.51            | -65.49    | -217.53   | 225.11                | 0.02                  | 0.00                 | -1.72               |  |
| 5,682.00            | 0.63            | 155.24      | 5,670.50            | -66.37    | -217.22   | 224.93                | 0.18                  | 0.14                 | -11.84              |  |
| 5,776.00            | 0.75            | 144.36      | 5,764.50            | -67.34    | -216.64   | 224.52                | 0.19                  | 0.13                 | -11.57              |  |
| 5,871.00            | 0.88            | 132.61      | 5,859.49            | -68.34    | -215.74   | 223.78                | 0.22                  | 0.14                 | -12.37              |  |
| 5,965.00            | 0.75            | 131.11      | 5,953.48            | -69.23    | -214.75   | 222.94                | 0.14                  | -0.14                | -1.60               |  |
| 6,059.00            | 0.38            | 20.11       | 6,047.48            | -69.34    | -214.18   | 222.39                | 1.02                  | -0.39                | -118.09             |  |
| 6,154.00            | 0.44            | 23.86       | 6,142.47            | -68.71    | -213.92   | 222.04                | 0.07                  | 0.06                 | 3.95                |  |
| 6,248.00            | 0.44            | 51.11       | 6,236.47            | -68.16    | -213.50   | 221.53                | 0.22                  | 0.00                 | 28.99               |  |
| 6,343.00            | 0.56            | 91.99       | 6,331.47            | -67.94    | -212.75   | 220.76                | 0.39                  | 0.13                 | 43.03               |  |
| 6,437.00            | 0.81            | 106.49      | 6,425.46            | -68.15    | -211.65   | 219.71                | 0.32                  | 0.27                 | 15.43               |  |
| 6,532.00            | 0.94            | 122.24      | 6,520.45            | -68.75    | -210.35   | 218.52                | 0.29                  | 0.14                 | 16.58               |  |
| 6,626.00            | 0.25            | 338.24      | 6,614.45            | -68.97    | -209.77   | 217.99                | 1.23                  | -0.73                | -153.19             |  |
| 6,720.00            | 0.13            | 16.36       | 6,708.45            | -68.68    | -209.82   | 217.98                | 0.18                  | -0.13                | 40.55               |  |
| 6,815.00            | 0.31            | 123.99      | 6,803.45            | -68.72    | -209.58   | 217.75                | 0.39                  | 0.19                 | 113.29              |  |
| 6,909.00            | 0.44            | 127.99      | 6,897.44            | -69.09    | -209.08   | 217.32                | 0.14                  | 0.14                 | 4.26                |  |
| 7,004.00            | 0.38            | 24.36       | 6,992.44            | -69.02    | -208.66   | 216.90                | 0.68                  | -0.06                | -109.08             |  |
| 7,099.00            | 0.38            | 60.73       | 7,087.44            | -68.58    | -208.26   | 216.43                | 0.25                  | 0.00                 | 38.28               |  |
| 7,193.00            | 0.44            | 93.73       | 7,181.44            | -68.45    | -207.63   | 215.78                | 0.26                  | 0.06                 | 35.11               |  |
| 7,288.00            | 0.50            | 346.36      | 7,276.44            | -68.07    | -207.36   | 215.46                | 0.80                  | 0.06                 | -113.02             |  |
| 7,382.00            | 0.50            | 341.61      | 7,370.43            | -67.29    | -207.59   | 215.56                | 0.04                  | 0.00                 | -5.05               |  |
| 7,477.00            | 0.13            | 12.86       | 7,465.43            | -66.79    | -207.69   | 215.59                | 0.42                  | -0.39                | 32.89               |  |
| 7,571.00            | 0.00            | 109.86      | 7,559.43            | -66.68    | -207.67   | 215.55                | 0.14                  | -0.14                | 0.00                |  |
| 7,666.00            | 0.13            | 67.36       | 7,654.43            | -66.64    | -207.57   | 215.44                | 0.14                  | 0.14                 | 0.00                |  |
| 7,760.00            | 0.19            | 71.86       | 7,748.43            | -66.55    | -207.32   | 215.19                | 0.07                  | 0.06                 | 4.79                |  |
| 7,855.00            | 0.38            | 80.36       | 7,843.43            | -66.45    | -206.86   | 214.72                | 0.20                  | 0.20                 | 8.95                |  |
| 7,950.00            | 0.31            | 119.99      | 7,938.43            | -66.53    | -206.33   | 214.20                | 0.26                  | -0.07                | 41.72               |  |
| 8,044.00            | 0.38            | 110.11      | 8,032.43            | -66.76    | -205.82   | 213.73                | 0.10                  | 0.07                 | -10.51              |  |
| 8,139.00            | 0.25            | 201.86      | 8,127.42            | -67.06    | -205.60   | 213.56                | 0.49                  | -0.14                | 96.58               |  |
| 8,233.00            | 0.31            | 183.86      | 8,221.42            | -67.51    | -205.69   | 213.72                | 0.11                  | 0.06                 | -19.15              |  |
| 8,328.00            | 0.56            | 290.24      | 8,316.42            | -67.60    | -206.14   | 214.19                | 0.75                  | 0.26                 | 111.98              |  |
| 8,422.00            | 0.63            | 284.99      | 8,410.42            | -67.31    | -207.07   | 215.06                | 0.09                  | 0.07                 | -5.59               |  |
| 8,515.00            | 0.75            | 280.86      | 8,503.41            | -67.06    | -208.17   | 216.10                | 0.14                  | 0.13                 | -4.44               |  |
| 8,611.00            | 0.56            | 296.61      | 8,599.40            | -66.73    | -209.20   | 217.07                | 0.27                  | -0.20                | 16.41               |  |
| 8,706.00            | 0.25            | 301.11      | 8,694.40            | -66.42    | -209.79   | 217.61                | 0.33                  | -0.33                | 4.74                |  |
| 8,800.00            | 0.25            | 283.49      | 8,788.40            | -66.26    | -210.17   | 217.95                | 0.08                  | 0.00                 | -18.74              |  |
| 8,896.00            | 0.19            | 297.86      | 8,884.40            | -66.14    | -210.51   | 218.27                | 0.08                  | -0.06                | 14.97               |  |



|                  |                                    |                                     |  |
|------------------|------------------------------------|-------------------------------------|--|
| <b>Company:</b>  | US ROCKIES REGION PLANNING         | <b>Local Co-ordinate Reference:</b> | Well NBU 921-35F4CS                      |
| <b>Project:</b>  | UTAH - UTM (feet), NAD27, Zone 12N | <b>TVD Reference:</b>               | 26' RKB + 5120' GL @ 5146.00ft (H&P 298) |
| <b>Site:</b>     | UINTAH_NBU 921-35F4 PAD            | <b>MD Reference:</b>                | 26' RKB + 5120' GL @ 5146.00ft (H&P 298) |
| <b>Well:</b>     | NBU 921-35F4CS                     | <b>North Reference:</b>             | True                                     |
| <b>Wellbore:</b> | NBU 921-35F4CS                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | NBU 921-35F4CS                     | <b>Database:</b>                    | edm5000p                                 |

| 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) |  |
| 8,991.00               | 0.19            | 238.11      | 8,979.40            | -66.15     | -210.79    | 218.55                | 0.20                  | 0.00                 | -62.89              |  |
| 9,084.00               | 0.50            | 212.86      | 9,072.40            | -66.57     | -211.14    | 218.96                | 0.36                  | 0.33                 | -27.15              |  |
| 9,178.00               | 0.63            | 170.99      | 9,166.39            | -67.43     | -211.28    | 219.23                | 0.45                  | 0.14                 | -44.54              |  |
| 9,272.00               | 1.00            | 133.11      | 9,260.38            | -68.50     | -210.60    | 218.73                | 0.67                  | 0.39                 | -40.30              |  |
| 9,367.00               | 1.19            | 125.61      | 9,355.37            | -69.64     | -209.19    | 217.52                | 0.25                  | 0.20                 | -7.89               |  |
| 9,461.00               | 1.25            | 127.11      | 9,449.35            | -70.83     | -207.58    | 216.11                | 0.07                  | 0.06                 | 1.60                |  |
| 9,556.00               | 1.31            | 121.99      | 9,544.32            | -72.03     | -205.83    | 214.57                | 0.14                  | 0.06                 | -5.39               |  |
| 9,650.00               | 1.19            | 116.24      | 9,638.30            | -73.03     | -204.05    | 212.97                | 0.18                  | -0.13                | -6.12               |  |
| 9,744.00               | 2.13            | 142.86      | 9,732.26            | -74.85     | -202.12    | 211.34                | 1.27                  | 1.00                 | 28.32               |  |
| <b>LAST MWD SURVEY</b> |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 9,794.00               | 2.13            | 142.86      | 9,782.23            | -76.33     | -201.00    | 210.47                | 0.00                  | 0.00                 | 0.00                |  |
| <b>PROJECTION</b>      |                 |             |                     |            |            |                       |                       |                      |                     |  |

| Design Annotations  |                     |                   |            |                 |  |
|---------------------|---------------------|-------------------|------------|-----------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates |            | Comment         |  |
|                     |                     | +N/-S (ft)        | +E/-W (ft) |                 |  |
| 2,604.00            | 2,593.40            | -33.26            | -209.78    | TIE ON POINT    |  |
| 9,744.00            | 9,732.26            | -74.85            | -202.12    | LAST MWD SURVEY |  |
| 9,794.00            | 9,782.23            | -76.33            | -201.00    | PROJECTION      |  |

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

# **US ROCKIES REGION PLANNING**

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

**UINTAH\_NBU 921-35F4 PAD**

**NBU 921-35F4CS**

**NBU 921-35F4CS**

**Design: NBU 921-35F4CS**

## **Survey Report - Geographic**

**30 August, 2011**



**Weatherford®**



|                  |                                    |                                     |  |
|------------------|------------------------------------|-------------------------------------|--|
| <b>Company:</b>  | US ROCKIES REGION PLANNING         | <b>Local Co-ordinate Reference:</b> | Well NBU 921-35F4CS                      |
| <b>Project:</b>  | UTAH - UTM (feet), NAD27, Zone 12N | <b>TVD Reference:</b>               | 26' RKB + 5120' GL @ 5146.00ft (H&P 298) |
| <b>Site:</b>     | UINTAH_NBU 921-35F4 PAD            | <b>MD Reference:</b>                | 26' RKB + 5120' GL @ 5146.00ft (H&P 298) |
| <b>Well:</b>     | NBU 921-35F4CS                     | <b>North Reference:</b>             | True                                     |
| <b>Wellbore:</b> | NBU 921-35F4CS                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | NBU 921-35F4CS                     | <b>Database:</b>                    | edm5000p                                 |

|                    |  |                      |                |
|--------------------|--|----------------------|----------------|
| <b>Project</b>     | UTAH - UTM (feet), NAD27, Zone 12N             |                      |                |
| <b>Map System:</b> | Universal Transverse Mercator (US Survey Feet) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)                        |                      |                |
| <b>Map Zone:</b>   | Zone 12N (114 W to 108 W)                      |                      |                |

|                              |                         |                     |                  |                          |             |
|------------------------------|-------------------------|---------------------|------------------|--------------------------|-------------|
| <b>Site</b>                  | UINTAH_NBU 921-35F4 PAD |                     |                  |                          |             |
| <b>Site Position:</b>        |                         | <b>Northing:</b>    | 14,526,946.67 ft | <b>Latitude:</b>         | 39.993017   |
| <b>From:</b>                 | Lat/Long                | <b>Easting:</b>     | 2,055,175.13 ft  | <b>Longitude:</b>        | -109.519208 |
| <b>Position Uncertainty:</b> | 0.00 ft                 | <b>Slot Radius:</b> | 0 "              | <b>Grid Convergence:</b> | 0.95 °      |

|                             |                |         |                            |                  |                      |             |
|-----------------------------|----------------|---------|----------------------------|------------------|----------------------|-------------|
| <b>Well</b>                 | NBU 921-35F4CS |         |                            |                  |                      |             |
| <b>Well Position</b>        | <b>+N/-S</b>   | 0.00 ft | <b>Northing:</b>           | 14,526,936.47 ft | <b>Latitude:</b>     | 39.992989   |
|                             | <b>+E/-W</b>   | 0.00 ft | <b>Easting:</b>            | 2,055,175.02 ft  | <b>Longitude:</b>    | -109.519209 |
| <b>Position Uncertainty</b> |                | 0.00 ft | <b>Wellhead Elevation:</b> | ft               | <b>Ground Level:</b> | 5,120.00 ft |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | NBU 921-35F4CS    |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2010          | 6/29/2011          | 11.08                  | 65.86                | 52,318                     |

|                          |                              |                   |                   |                      |       |
|--------------------------|------------------------------|-------------------|-------------------|----------------------|-------|
| <b>Design</b>            | NBU 921-35F4CS               |                   |                   |                      |       |
| <b>Audit Notes:</b>      |                              |                   |                   |                      |       |
| <b>Version:</b>          | 1.0                          | <b>Phase:</b>     | ACTUAL            | <b>Tie On Depth:</b> | 17.00 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b> | <b>Direction (°)</b> |       |
|                          | 17.00                        | 0.00              | 0.00              | 260.99               |       |

|                       |                |                            |                  |                    |  |
|-----------------------|----------------|----------------------------|------------------|--------------------|--|
| <b>Survey Program</b> | <b>Date</b>    | 8/30/2011                  |                  |                    |  |
| <b>From (ft)</b>      | <b>To (ft)</b> | <b>Survey (Wellbore)</b>   | <b>Tool Name</b> | <b>Description</b> |  |
| 193.00                | 2,604.00       | Survey #1 (NBU 921-35F4CS) | MWD              | MWD - Standard     |  |
| 2,659.00              | 9,794.00       | Survey #2 (NBU 921-35F4CS) | MWD              | MWD - Standard     |  |

|                            |                        |                    |                            |                   |                   |                          |                         |                 |                  |  |
|----------------------------|------------------------|--------------------|----------------------------|-------------------|-------------------|--------------------------|-------------------------|-----------------|------------------|--|
| <b>Survey</b>              |                        |                    |                            |                   |                   |                          |                         |                 |                  |  |
| <b>Measured Depth (ft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b> | <b>Map Northing (ft)</b> | <b>Map Easting (ft)</b> | <b>Latitude</b> | <b>Longitude</b> |  |
| 17.00                      | 0.00                   | 0.00               | 17.00                      | 0.00              | 0.00              | 14,526,936.47            | 2,055,175.02            | 39.992989       | -109.519209      |  |
| 193.00                     | 0.44                   | 104.12             | 193.00                     | -0.16             | 0.66              | 14,526,936.32            | 2,055,175.68            | 39.992989       | -109.519207      |  |
| 286.00                     | 0.36                   | 215.98             | 286.00                     | -0.49             | 0.83              | 14,526,936.00            | 2,055,175.86            | 39.992988       | -109.519206      |  |
| 379.00                     | 1.69                   | 238.48             | 378.98                     | -1.44             | -0.51             | 14,526,935.02            | 2,055,174.53            | 39.992985       | -109.519211      |  |
| 443.00                     | 2.33                   | 239.92             | 442.94                     | -2.59             | -2.44             | 14,526,933.84            | 2,055,172.62            | 39.992982       | -109.519218      |  |
| 538.00                     | 3.22                   | 253.82             | 537.83                     | -4.30             | -6.67             | 14,526,932.06            | 2,055,168.42            | 39.992977       | -109.519233      |  |
| 633.00                     | 3.94                   | 260.53             | 632.64                     | -5.58             | -12.46            | 14,526,930.69            | 2,055,162.66            | 39.992974       | -109.519254      |  |
| 728.00                     | 4.56                   | 270.45             | 727.38                     | -6.09             | -19.45            | 14,526,930.06            | 2,055,155.67            | 39.992972       | -109.519279      |  |
| 823.00                     | 5.37                   | 269.04             | 822.03                     | -6.13             | -27.67            | 14,526,929.88            | 2,055,147.45            | 39.992972       | -109.519308      |  |
| 918.00                     | 5.68                   | 270.78             | 916.58                     | -6.14             | -36.82            | 14,526,929.72            | 2,055,138.31            | 39.992972       | -109.519341      |  |
| 1,013.00                   | 6.26                   | 270.06             | 1,011.07                   | -6.07             | -46.70            | 14,526,929.62            | 2,055,128.43            | 39.992972       | -109.519376      |  |

APC  
Survey Report - Geographic



**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-35F4 PAD  
**Well:** NBU 921-35F4CS  
**Wellbore:** NBU 921-35F4CS  
**Design:** NBU 921-35F4CS

**Local Co-ordinate Reference:** Well NBU 921-35F4CS  
**TVD Reference:** 26' RKB + 5120' GL @ 5146.00ft (H&P 298)  
**MD Reference:** 26' RKB + 5120' GL @ 5146.00ft (H&P 298)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** edm5000p

| Survey              |                 |             |                     |            |            |                   |                  |           |             |  |
|---------------------|-----------------|-------------|---------------------|------------|------------|-------------------|------------------|-----------|-------------|--|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (ft) | Map Easting (ft) | Latitude  | Longitude   |  |
| 1,108.00            | 5.97            | 267.06      | 1,105.53            | -6.32      | -56.81     | 14,526,929.21     | 2,055,118.32     | 39.992972 | -109.519412 |  |
| 1,204.00            | 5.72            | 260.93      | 1,201.03            | -7.33      | -66.52     | 14,526,928.04     | 2,055,108.63     | 39.992969 | -109.519447 |  |
| 1,298.00            | 5.64            | 256.53      | 1,294.57            | -9.15      | -75.64     | 14,526,926.07     | 2,055,099.54     | 39.992964 | -109.519479 |  |
| 1,394.00            | 5.62            | 260.33      | 1,390.11            | -11.03     | -84.86     | 14,526,924.03     | 2,055,090.35     | 39.992959 | -109.519512 |  |
| 1,490.00            | 5.29            | 260.41      | 1,485.67            | -12.56     | -93.86     | 14,526,922.35     | 2,055,081.38     | 39.992955 | -109.519544 |  |
| 1,585.00            | 5.57            | 262.09      | 1,580.25            | -13.92     | -102.74    | 14,526,920.84     | 2,055,072.52     | 39.992951 | -109.519576 |  |
| 1,680.00            | 5.66            | 258.78      | 1,674.79            | -15.47     | -111.91    | 14,526,919.14     | 2,055,063.39     | 39.992947 | -109.519609 |  |
| 1,774.00            | 5.95            | 263.25      | 1,768.31            | -16.94     | -121.29    | 14,526,917.51     | 2,055,054.03     | 39.992943 | -109.519642 |  |
| 1,869.00            | 6.17            | 259.27      | 1,862.78            | -18.47     | -131.20    | 14,526,915.82     | 2,055,044.15     | 39.992938 | -109.519678 |  |
| 1,963.00            | 6.11            | 260.11      | 1,956.24            | -20.27     | -141.09    | 14,526,913.86     | 2,055,034.29     | 39.992933 | -109.519713 |  |
| 2,059.00            | 6.46            | 261.13      | 2,051.66            | -21.98     | -151.46    | 14,526,911.97     | 2,055,023.95     | 39.992929 | -109.519750 |  |
| 2,154.00            | 6.30            | 255.87      | 2,146.07            | -24.08     | -161.79    | 14,526,909.71     | 2,055,013.65     | 39.992923 | -109.519787 |  |
| 2,253.00            | 6.54            | 254.08      | 2,244.45            | -26.95     | -172.48    | 14,526,906.66     | 2,055,003.01     | 39.992915 | -109.519825 |  |
| 2,344.00            | 6.41            | 260.99      | 2,334.87            | -29.17     | -182.48    | 14,526,904.27     | 2,054,993.05     | 39.992909 | -109.519861 |  |
| 2,438.00            | 6.23            | 261.69      | 2,428.30            | -30.73     | -192.71    | 14,526,902.54     | 2,054,982.85     | 39.992905 | -109.519897 |  |
| 2,533.00            | 6.02            | 262.68      | 2,522.76            | -32.11     | -202.75    | 14,526,901.00     | 2,054,972.83     | 39.992901 | -109.519933 |  |
| 2,604.00            | 5.50            | 258.54      | 2,593.40            | -33.26     | -209.78    | 14,526,899.73     | 2,054,965.82     | 39.992898 | -109.519958 |  |
| <b>TIE ON POINT</b> |                 |             |                     |            |            |                   |                  |           |             |  |
| 2,659.00            | 5.26            | 254.41      | 2,648.16            | -34.46     | -214.79    | 14,526,898.45     | 2,054,960.83     | 39.992894 | -109.519976 |  |
| 2,753.00            | 3.57            | 233.48      | 2,741.88            | -37.36     | -221.30    | 14,526,895.44     | 2,054,954.38     | 39.992887 | -109.519999 |  |
| 2,848.00            | 1.79            | 229.43      | 2,836.78            | -40.09     | -224.80    | 14,526,892.66     | 2,054,950.92     | 39.992879 | -109.520012 |  |
| 2,942.00            | 0.65            | 215.11      | 2,930.75            | -41.48     | -226.22    | 14,526,891.24     | 2,054,949.52     | 39.992875 | -109.520017 |  |
| 3,037.00            | 0.88            | 197.74      | 3,025.74            | -42.61     | -226.75    | 14,526,890.10     | 2,054,949.01     | 39.992872 | -109.520019 |  |
| 3,131.00            | 0.25            | 22.61       | 3,119.74            | -43.11     | -226.89    | 14,526,889.60     | 2,054,948.87     | 39.992871 | -109.520019 |  |
| 3,225.00            | 0.31            | 13.11       | 3,213.74            | -42.67     | -226.76    | 14,526,890.04     | 2,054,949.00     | 39.992872 | -109.520019 |  |
| 3,320.00            | 0.13            | 109.86      | 3,308.74            | -42.46     | -226.60    | 14,526,890.25     | 2,054,949.16     | 39.992873 | -109.520018 |  |
| 3,414.00            | 0.38            | 179.11      | 3,402.74            | -42.81     | -226.49    | 14,526,889.91     | 2,054,949.27     | 39.992872 | -109.520018 |  |
| 3,509.00            | 0.81            | 175.24      | 3,497.73            | -43.79     | -226.43    | 14,526,888.92     | 2,054,949.35     | 39.992869 | -109.520018 |  |
| 3,603.00            | 1.19            | 176.99      | 3,591.72            | -45.43     | -226.33    | 14,526,887.29     | 2,054,949.48     | 39.992864 | -109.520017 |  |
| 3,698.00            | 0.75            | 195.61      | 3,686.71            | -47.01     | -226.44    | 14,526,885.70     | 2,054,949.39     | 39.992860 | -109.520018 |  |
| 3,792.00            | 0.06            | 212.11      | 3,780.70            | -47.65     | -226.63    | 14,526,885.06     | 2,054,949.21     | 39.992858 | -109.520018 |  |
| 3,887.00            | 0.50            | 183.11      | 3,875.70            | -48.10     | -226.68    | 14,526,884.61     | 2,054,949.17     | 39.992857 | -109.520018 |  |
| 3,981.00            | 0.31            | 30.11       | 3,969.70            | -48.29     | -226.58    | 14,526,884.42     | 2,054,949.28     | 39.992856 | -109.520018 |  |
| 4,076.00            | 0.44            | 134.49      | 4,064.70            | -48.33     | -226.19    | 14,526,884.39     | 2,054,949.67     | 39.992856 | -109.520017 |  |
| 4,170.00            | 1.06            | 145.99      | 4,158.69            | -49.30     | -225.44    | 14,526,883.43     | 2,054,950.43     | 39.992854 | -109.520014 |  |
| 4,265.00            | 2.63            | 131.99      | 4,253.64            | -51.49     | -223.33    | 14,526,881.28     | 2,054,952.57     | 39.992848 | -109.520006 |  |
| 4,359.00            | 0.75            | 141.74      | 4,347.59            | -53.41     | -221.35    | 14,526,879.39     | 2,054,954.59     | 39.992842 | -109.519999 |  |
| 4,453.00            | 0.50            | 197.61      | 4,441.59            | -54.29     | -221.09    | 14,526,878.52     | 2,054,954.86     | 39.992840 | -109.519998 |  |
| 4,548.00            | 0.81            | 192.11      | 4,536.58            | -55.34     | -221.36    | 14,526,877.46     | 2,054,954.61     | 39.992837 | -109.519999 |  |
| 4,642.00            | 0.19            | 141.49      | 4,630.58            | -56.11     | -221.40    | 14,526,876.69     | 2,054,954.58     | 39.992835 | -109.520000 |  |
| 4,736.00            | 0.50            | 154.61      | 4,724.58            | -56.60     | -221.13    | 14,526,876.20     | 2,054,954.86     | 39.992834 | -109.519999 |  |
| 4,831.00            | 0.75            | 156.74      | 4,819.57            | -57.55     | -220.70    | 14,526,875.26     | 2,054,955.30     | 39.992831 | -109.519997 |  |
| 4,925.00            | 1.06            | 151.49      | 4,913.56            | -58.88     | -220.05    | 14,526,873.95     | 2,054,955.98     | 39.992827 | -109.519995 |  |
| 5,020.00            | 1.06            | 149.74      | 5,008.54            | -60.41     | -219.18    | 14,526,872.43     | 2,054,956.87     | 39.992823 | -109.519992 |  |
| 5,114.00            | 1.13            | 145.74      | 5,102.53            | -61.93     | -218.22    | 14,526,870.93     | 2,054,957.85     | 39.992819 | -109.519988 |  |
| 5,209.00            | 0.25            | 209.36      | 5,197.52            | -62.88     | -217.80    | 14,526,869.98     | 2,054,958.30     | 39.992816 | -109.519987 |  |
| 5,304.00            | 0.31            | 183.61      | 5,292.52            | -63.32     | -217.92    | 14,526,869.54     | 2,054,958.19     | 39.992815 | -109.519987 |  |
| 5,398.00            | 0.44            | 169.49      | 5,386.52            | -63.93     | -217.87    | 14,526,868.93     | 2,054,958.25     | 39.992814 | -109.519987 |  |
| 5,493.00            | 0.50            | 168.11      | 5,481.51            | -64.69     | -217.71    | 14,526,868.17     | 2,054,958.41     | 39.992811 | -109.519986 |  |
| 5,587.00            | 0.50            | 166.49      | 5,575.51            | -65.49     | -217.53    | 14,526,867.38     | 2,054,958.60     | 39.992809 | -109.519986 |  |
| 5,682.00            | 0.63            | 155.24      | 5,670.50            | -66.37     | -217.22    | 14,526,866.50     | 2,054,958.93     | 39.992807 | -109.519985 |  |
| 5,776.00            | 0.75            | 144.36      | 5,764.50            | -67.34     | -216.64    | 14,526,865.54     | 2,054,959.52     | 39.992804 | -109.519983 |  |
| 5,871.00            | 0.88            | 132.61      | 5,859.49            | -68.34     | -215.74    | 14,526,864.56     | 2,054,960.44     | 39.992801 | -109.519979 |  |
| 5,965.00            | 0.75            | 131.11      | 5,953.48            | -69.23     | -214.75    | 14,526,863.68     | 2,054,961.45     | 39.992799 | -109.519976 |  |
| 6,059.00            | 0.38            | 20.11       | 6,047.48            | -69.34     | -214.18    | 14,526,863.58     | 2,054,962.02     | 39.992799 | -109.519974 |  |

**APC**  
Survey Report - Geographic



**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-35F4 PAD  
**Well:** NBU 921-35F4CS  
**Wellbore:** NBU 921-35F4CS  
**Design:** NBU 921-35F4CS

**Local Co-ordinate Reference:** Well NBU 921-35F4CS  
**TVD Reference:** 26' RKB + 5120' GL @ 5146.00ft (H&P 298)  
**MD Reference:** 26' RKB + 5120' GL @ 5146.00ft (H&P 298)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** edm5000p

**Survey**

| Measured Depth (ft)    | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (ft) | Map Easting (ft) | Latitude  | Longitude   |
|------------------------|-----------------|-------------|---------------------|------------|------------|-------------------|------------------|-----------|-------------|
| 6,154.00               | 0.44            | 23.86       | 6,142.47            | -68.71     | -213.92    | 14,526,864.21     | 2,054,962.27     | 39.992800 | -109.519973 |
| 6,248.00               | 0.44            | 51.11       | 6,236.47            | -68.16     | -213.50    | 14,526,864.78     | 2,054,962.69     | 39.992802 | -109.519971 |
| 6,343.00               | 0.56            | 91.99       | 6,331.47            | -67.94     | -212.75    | 14,526,865.00     | 2,054,963.43     | 39.992803 | -109.519969 |
| 6,437.00               | 0.81            | 106.49      | 6,425.46            | -68.15     | -211.65    | 14,526,864.82     | 2,054,964.53     | 39.992802 | -109.519965 |
| 6,532.00               | 0.94            | 122.24      | 6,520.45            | -68.75     | -210.35    | 14,526,864.23     | 2,054,965.84     | 39.992800 | -109.519960 |
| 6,626.00               | 0.25            | 338.24      | 6,614.45            | -68.97     | -209.77    | 14,526,864.02     | 2,054,966.42     | 39.992800 | -109.519958 |
| 6,720.00               | 0.13            | 16.36       | 6,708.45            | -68.68     | -209.82    | 14,526,864.31     | 2,054,966.37     | 39.992801 | -109.519958 |
| 6,815.00               | 0.31            | 123.99      | 6,803.45            | -68.72     | -209.58    | 14,526,864.28     | 2,054,966.61     | 39.992800 | -109.519957 |
| 6,909.00               | 0.44            | 127.99      | 6,897.44            | -69.09     | -209.08    | 14,526,863.92     | 2,054,967.12     | 39.992799 | -109.519956 |
| 7,004.00               | 0.38            | 24.36       | 6,992.44            | -69.02     | -208.66    | 14,526,863.99     | 2,054,967.53     | 39.992800 | -109.519954 |
| 7,099.00               | 0.38            | 60.73       | 7,087.44            | -68.58     | -208.26    | 14,526,864.44     | 2,054,967.93     | 39.992801 | -109.519953 |
| 7,193.00               | 0.44            | 93.73       | 7,181.44            | -68.45     | -207.63    | 14,526,864.58     | 2,054,968.56     | 39.992801 | -109.519950 |
| 7,288.00               | 0.50            | 346.36      | 7,276.44            | -68.07     | -207.36    | 14,526,864.96     | 2,054,968.82     | 39.992802 | -109.519949 |
| 7,382.00               | 0.50            | 341.61      | 7,370.43            | -67.29     | -207.59    | 14,526,865.74     | 2,054,968.58     | 39.992804 | -109.519950 |
| 7,477.00               | 0.13            | 12.86       | 7,465.43            | -66.79     | -207.69    | 14,526,866.24     | 2,054,968.47     | 39.992806 | -109.519951 |
| 7,571.00               | 0.00            | 109.86      | 7,559.43            | -66.68     | -207.67    | 14,526,866.35     | 2,054,968.49     | 39.992806 | -109.519951 |
| 7,666.00               | 0.13            | 67.36       | 7,654.43            | -66.64     | -207.57    | 14,526,866.39     | 2,054,968.59     | 39.992806 | -109.519950 |
| 7,760.00               | 0.19            | 71.86       | 7,748.43            | -66.55     | -207.32    | 14,526,866.48     | 2,054,968.83     | 39.992806 | -109.519949 |
| 7,855.00               | 0.38            | 80.36       | 7,843.43            | -66.45     | -206.86    | 14,526,866.59     | 2,054,969.29     | 39.992807 | -109.519948 |
| 7,950.00               | 0.31            | 119.99      | 7,938.43            | -66.53     | -206.33    | 14,526,866.52     | 2,054,969.82     | 39.992806 | -109.519946 |
| 8,044.00               | 0.38            | 110.11      | 8,032.43            | -66.76     | -205.82    | 14,526,866.30     | 2,054,970.34     | 39.992806 | -109.519944 |
| 8,139.00               | 0.25            | 201.86      | 8,127.42            | -67.06     | -205.60    | 14,526,866.00     | 2,054,970.56     | 39.992805 | -109.519943 |
| 8,233.00               | 0.31            | 183.86      | 8,221.42            | -67.51     | -205.69    | 14,526,865.56     | 2,054,970.48     | 39.992804 | -109.519944 |
| 8,328.00               | 0.56            | 290.24      | 8,316.42            | -67.60     | -206.14    | 14,526,865.45     | 2,054,970.03     | 39.992803 | -109.519945 |
| 8,422.00               | 0.63            | 284.99      | 8,410.42            | -67.31     | -207.07    | 14,526,865.73     | 2,054,969.09     | 39.992804 | -109.519948 |
| 8,515.00               | 0.75            | 280.86      | 8,503.41            | -67.06     | -208.17    | 14,526,865.96     | 2,054,968.00     | 39.992805 | -109.519952 |
| 8,611.00               | 0.56            | 296.61      | 8,599.40            | -66.73     | -209.20    | 14,526,866.27     | 2,054,966.95     | 39.992806 | -109.519956 |
| 8,706.00               | 0.25            | 301.11      | 8,694.40            | -66.42     | -209.79    | 14,526,866.58     | 2,054,966.36     | 39.992807 | -109.519958 |
| 8,800.00               | 0.25            | 283.49      | 8,788.40            | -66.26     | -210.17    | 14,526,866.72     | 2,054,965.98     | 39.992807 | -109.519960 |
| 8,896.00               | 0.19            | 297.86      | 8,884.40            | -66.14     | -210.51    | 14,526,866.84     | 2,054,965.63     | 39.992807 | -109.519961 |
| 8,991.00               | 0.19            | 238.11      | 8,979.40            | -66.15     | -210.79    | 14,526,866.83     | 2,054,965.36     | 39.992807 | -109.519962 |
| 9,084.00               | 0.50            | 212.86      | 9,072.40            | -66.57     | -211.14    | 14,526,866.40     | 2,054,965.02     | 39.992806 | -109.519963 |
| 9,178.00               | 0.63            | 170.99      | 9,166.39            | -67.43     | -211.28    | 14,526,865.54     | 2,054,964.89     | 39.992804 | -109.519963 |
| 9,272.00               | 1.00            | 133.11      | 9,260.38            | -68.50     | -210.60    | 14,526,864.48     | 2,054,965.59     | 39.992801 | -109.519961 |
| 9,367.00               | 1.19            | 125.61      | 9,355.37            | -69.64     | -209.19    | 14,526,863.36     | 2,054,967.01     | 39.992798 | -109.519956 |
| 9,461.00               | 1.25            | 127.11      | 9,449.35            | -70.83     | -207.58    | 14,526,862.20     | 2,054,968.64     | 39.992795 | -109.519950 |
| 9,556.00               | 1.31            | 121.99      | 9,544.32            | -72.03     | -205.83    | 14,526,861.03     | 2,054,970.41     | 39.992791 | -109.519944 |
| 9,650.00               | 1.19            | 116.24      | 9,638.30            | -73.03     | -204.05    | 14,526,860.06     | 2,054,972.21     | 39.992789 | -109.519938 |
| 9,744.00               | 2.13            | 142.86      | 9,732.26            | -74.85     | -202.12    | 14,526,858.27     | 2,054,974.17     | 39.992784 | -109.519931 |
| <b>LAST MWD SURVEY</b> |                 |             |                     |            |            |                   |                  |           |             |
| 9,794.00               | 2.13            | 142.86      | 9,782.23            | -76.33     | -201.00    | 14,526,856.81     | 2,054,975.32     | 39.992780 | -109.519927 |
| <b>PROJECTION</b>      |                 |             |                     |            |            |                   |                  |           |             |

**Design Annotations**

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates |            | Comment         |
|---------------------|---------------------|-------------------|------------|-----------------|
|                     |                     | +N/-S (ft)        | +E/-W (ft) |                 |
| 2,604.00            | 2,593.40            | -33.26            | -209.78    | TIE ON POINT    |
| 9,744.00            | 9,732.26            | -74.85            | -202.12    | LAST MWD SURVEY |
| 9,794.00            | 9,782.23            | -76.33            | -201.00    | PROJECTION      |

APC  
Survey Report - Geographic



|                  |                                    |                                     |  |
|------------------|------------------------------------|-------------------------------------|--|
| <b>Company:</b>  | US ROCKIES REGION PLANNING         | <b>Local Co-ordinate Reference:</b> | Well NBU 921-35F4CS                      |
| <b>Project:</b>  | UTAH - UTM (feet), NAD27, Zone 12N | <b>TVD Reference:</b>               | 26' RKB + 5120' GL @ 5146.00ft (H&P 298) |
| <b>Site:</b>     | UINTAH_NBU 921-35F4 PAD            | <b>MD Reference:</b>                | 26' RKB + 5120' GL @ 5146.00ft (H&P 298) |
| <b>Well:</b>     | NBU 921-35F4CS                     | <b>North Reference:</b>             | True                                     |
| <b>Wellbore:</b> | NBU 921-35F4CS                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | NBU 921-35F4CS                     | <b>Database:</b>                    | edm5000p                                 |

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