

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

FORM 3

AMENDED REPORT

|   |                  |  |                |   |              |                 |
|---|------------------|--|----------------|---|--------------|-----------------|
| <b>APPLICATION FOR PERMIT TO DRILL</b>  |                  |  |                | <b>1. WELL NAME and NUMBER</b><br>NBU 921-25M2DS  |              |                 |
| <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 <input type="checkbox"/> Coalbed Methane Well: NO <input type="checkbox"/>   |                  |  |                | <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>720 929-6587  |              |                 |
| <b>8. ADDRESS OF OPERATOR</b><br>P.O. Box 173779, Denver, CO, 80217   |                  |  |                | <b>9. OPERATOR E-MAIL</b><br>mary.mondragon@anadarko.com  |              |                 |
| <b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b><br>UO 01194   |                  | <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>  | 1860 FSL 251 FWL | NWSW   | 25             | 9.0 S   | 21.0 E       | S               |
| <b>Top of Uppermost Producing Zone</b>  | 740 FSL 623 FWL  | SWSW   | 25             | 9.0 S   | 21.0 E       | S               |
| <b>At Total Depth</b>   | 740 FSL 623 FWL  | SWSW   | 25             | 9.0 S   | 21.0 E       | S               |
| <b>21. COUNTY</b><br>UINTAH   |                  | <b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b><br>623  |                | <b>23. NUMBER OF ACRES IN DRILLING UNIT</b><br>203  |              |                 |
|   |                  | <b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b><br>500  |                | <b>26. PROPOSED DEPTH</b><br>MD: 9861 TVD: 9600   |              |                 |
| <b>27. ELEVATION - GROUND LEVEL</b><br>5004   |                  | <b>28. BOND NUMBER</b><br>22013542   |                | <b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b><br>Permit #43-8496   |              |                 |

**ATTACHMENTS**

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

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

|  |   |   |
|--|---|---|
| <b>NAME</b> Kathy Schneebeck-Dulnoan         | <b>TITLE</b> Staff Regulatory Analyst   | <b>PHONE</b> 720 929-6007                         |
| <b>SIGNATURE</b>                             | <b>DATE</b> 05/02/2009  | <b>EMAIL</b> Kathy.SchneebeckDulnoan@anadarko.com |
| <b>API NUMBER ASSIGNED</b><br>43047503840000 | <b>APPROVAL</b><br><br><br>Permit Manager |   |

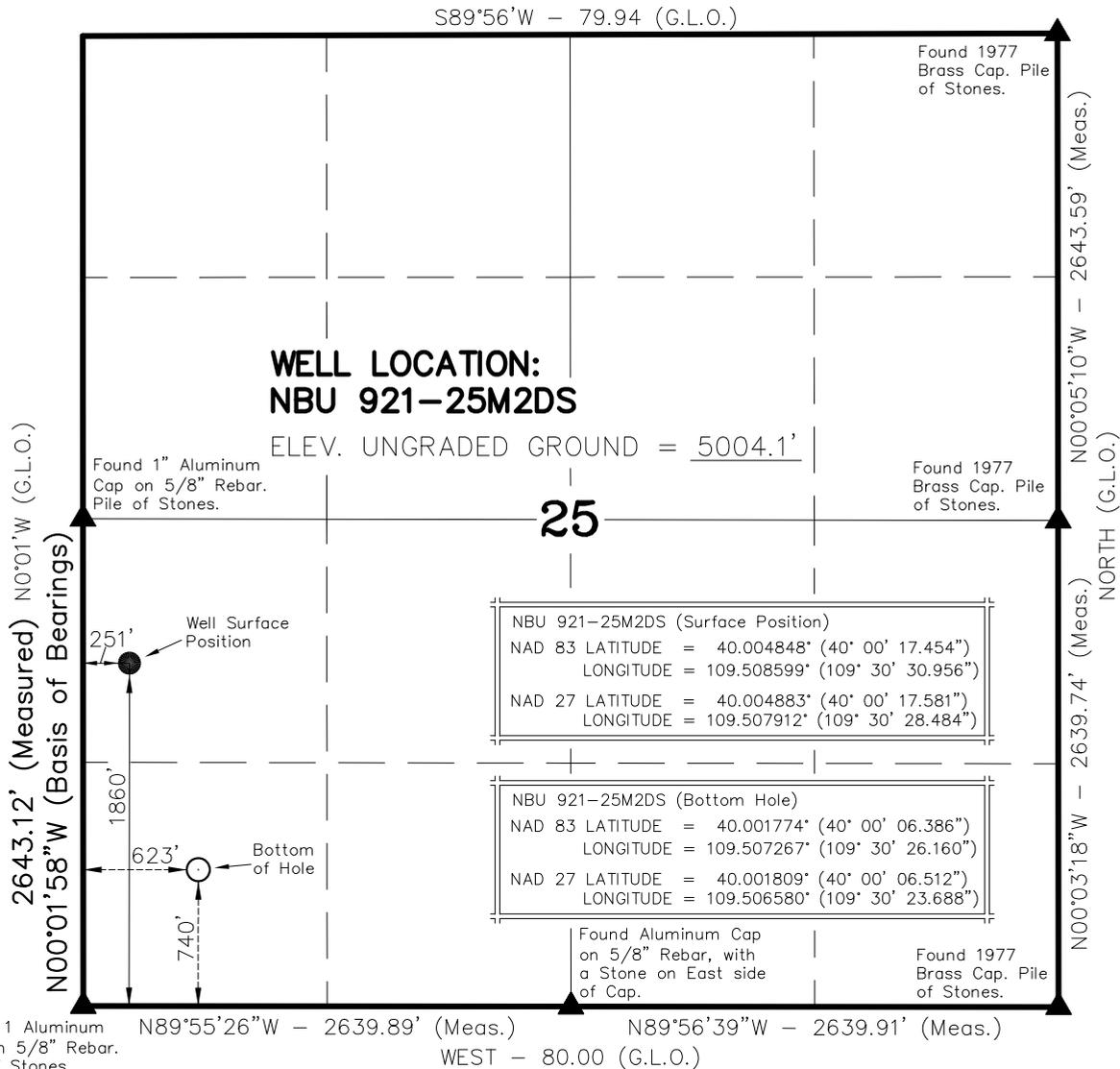
**Proposed Hole, Casing, and Cement**

| <b>String</b> | <b>Hole Size</b> | <b>Casing Size</b> | <b>Top (MD)</b> | <b>Bottom (MD)</b> |  |  |
|---------------|------------------|--------------------|-----------------|--------------------|--|--|
| Prod          | 7.875            | 4.5                | 0               | 9861               |  |  |
| <b>Pipe</b>   | <b>Grade</b>     | <b>Length</b>      | <b>Weight</b>   |                    |  |  |
|               | Grade I-80 LT&C  | 9861               | 11.6            |                    |  |  |
|               |                  |                    |                 |                    |  |  |

**Proposed Hole, Casing, and Cement**

| <b>String</b> | <b>Hole Size</b> | <b>Casing Size</b> | <b>Top (MD)</b> | <b>Bottom (MD)</b> |  |  |
|---------------|------------------|--------------------|-----------------|--------------------|--|--|
| Surf          | 12.25            | 9.625              | 0               | 2460               |  |  |
| <b>Pipe</b>   | <b>Grade</b>     | <b>Length</b>      | <b>Weight</b>   |                    |  |  |
|               | Grade J-55 LT&C  | 2460               | 36.0            |                    |  |  |
|               |                  |                    |                 |                    |  |  |

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



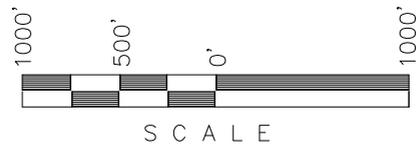
**NOTES:**

- ▲ = 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 S18°24'02"E 1180.89' 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'.

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

**NBU 921-25M2DS**  
**WELL PLAT**  
 740' FSL, 623' FWL (Bottom Hole)  
 SW 1/4 SW 1/4 OF SECTION 25, T9S, R21E,  
 S.L.B.&M. UINTAH COUNTY, UTAH.

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



**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.

No. 362251  
**KOLBY R. KAY**  
 REGISTERED LAND SURVEYOR  
 STATE OF UTAH

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

|                            |                     |  |
|----------------------------|---------------------|--|
| DATE SURVEYED:<br>09-12-08 | SURVEYED BY: M.S.B. | <b>SHEET</b><br><b>3</b><br><b>OF 13</b> |
| DATE DRAWN:<br>10-01-08    | DRAWN BY: M.W.W.    |  |
| SCALE: 1" = 1000'          |                     | Date Last Revised:<br>01-22-09           |



# **ANADARKO PETROLEUM CORP.**

**UINTAH COUNTY, UTAH (nad 27)**

**NBU 921-25L PAD**

**NBU 921-25M2DS**

**NBU 921-25M2DS**

**Plan: Design #1**

## **Standard Planning Report**

**13 March, 2009**



**Weatherford®**



| WELL DETAILS: NBU 921-25M2DS |       |             |               |            |           |                   |
|------------------------------|-------|-------------|---------------|------------|-----------|-------------------|
| +N/-S                        | +E/-W | Northing    | Ground Level: | 5003.00    |           |                   |
| 0.00                         | 0.00  | 14531320.51 | Easting       | 2058266.84 | Latitude  | 40° 0' 17.579 N   |
|                              |       |             |               |            | Longitude | 109° 30' 28.483 W |
|                              |       |             |               |            | Slot      |                   |

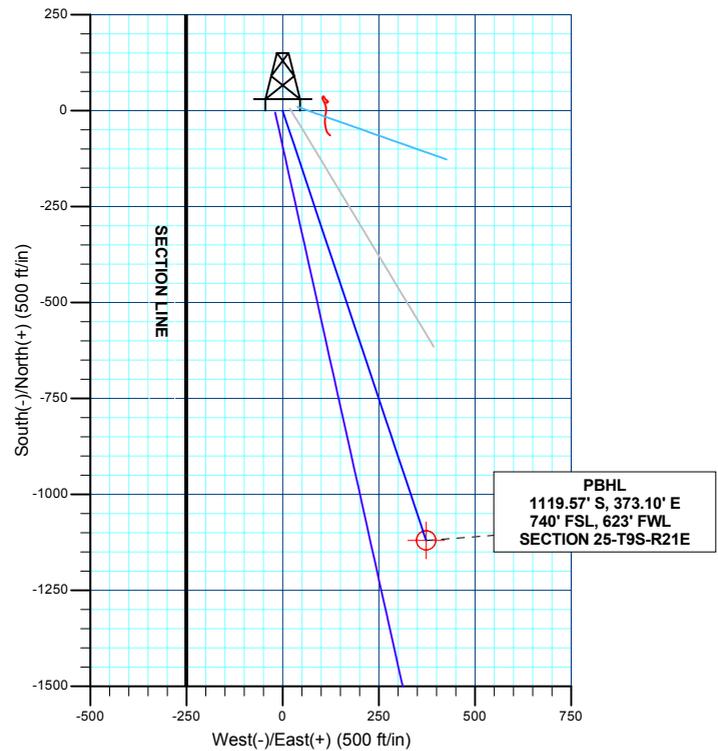
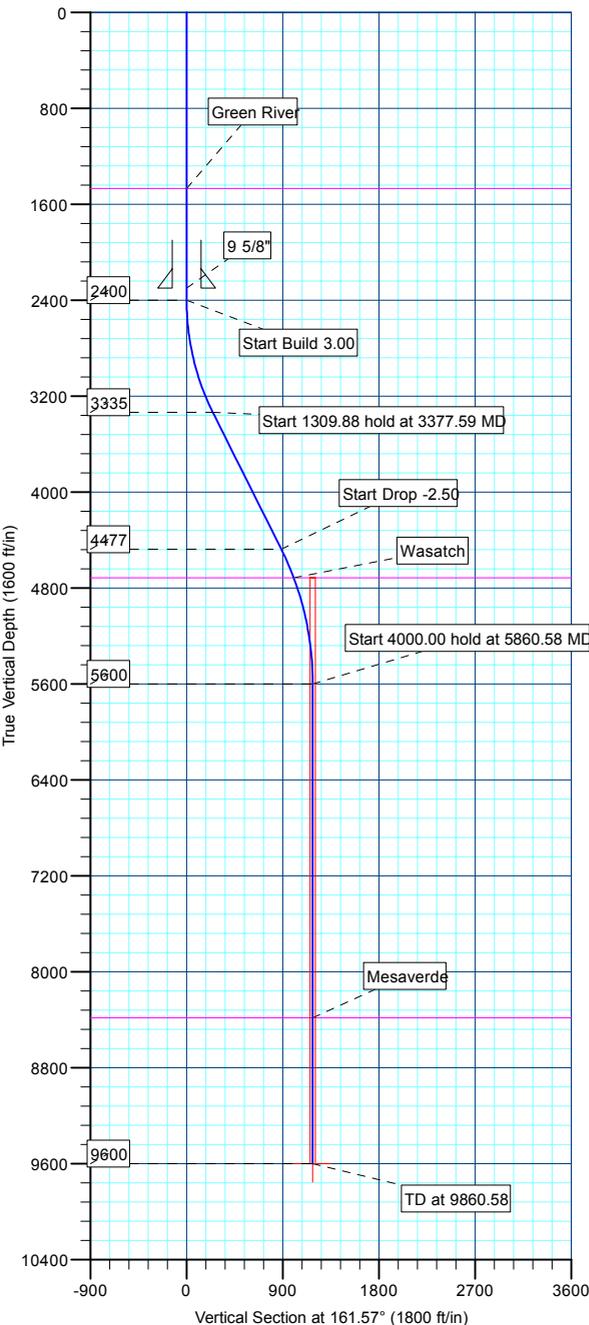
| MD      | Inc   | Azi    | TVD     | +N/-S    | +E/-W  | DLeg | TFace  | VSec    | Target              |
|---------|-------|--------|---------|----------|--------|------|--------|---------|---------------------|
| 0.00    | 0.00  | 0.00   | 0.00    | 0.00     | 0.00   | 0.00 | 0.00   | 0.00    |                     |
| 2400.00 | 0.00  | 0.00   | 2400.00 | 0.00     | 0.00   | 0.00 | 0.00   | 0.00    |                     |
| 3377.59 | 29.33 | 161.57 | 3335.46 | -232.23  | 77.39  | 3.00 | 161.57 | 244.78  |                     |
| 4687.47 | 29.33 | 161.57 | 4477.45 | -840.90  | 280.23 | 0.00 | 0.00   | 886.37  |                     |
| 5860.58 | 0.00  | 0.00   | 5600.00 | -1119.57 | 373.10 | 2.50 | 180.00 | 1180.10 |                     |
| 9860.58 | 0.00  | 0.00   | 9600.00 | -1119.57 | 373.10 | 0.00 | 0.00   | 1180.10 | PBHL_NBU 921-25M2DS |



| FORMATION TOP DETAILS |         |             |
|-----------------------|---------|-------------|
| TVDPath               | MDPath  | Formation   |
| 1469.00               | 1469.00 | Green River |
| 4716.00               | 4953.05 | Wasatch     |
| 8384.00               | 8644.58 | Mesaverde   |



WELL @ 5021.00ft (Original Well Elev)  
 GRD ELEV: 5003.00



| WELLBORE TARGET DETAILS (LAT/LONG) |         |          |        |                |                   |                        |
|------------------------------------|---------|----------|--------|----------------|-------------------|------------------------|
| Name                               | TVD     | +N/-S    | +E/-W  | Latitude       | Longitude         | Shape                  |
| PBHL S                             | 9600.00 | -1119.57 | 373.10 | 40° 0' 6.512 N | 109° 30' 23.688 W | Circle (Radius: 25.00) |

| CASING DETAILS |         |        |      |
|----------------|---------|--------|------|
| TVD            | MD      | Name   | Size |
| 2300.00        | 2300.00 | 9 5/8" | 9.62 |



|                  |                              |                                     |                                       |
|------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db   | <b>Local Co-ordinate Reference:</b> | Well NBU 921-25M2DS                   |
| <b>Company:</b>  | ANADARKO PETROLEUM CORP.     | <b>TVD Reference:</b>               | WELL @ 5021.00ft (Original Well Elev) |
| <b>Project:</b>  | UINTAH COUNTY, UTAH (nad 27) | <b>MD Reference:</b>                | WELL @ 5021.00ft (Original Well Elev) |
| <b>Site:</b>     | NBU 921-25L PAD              | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | NBU 921-25M2DS               | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | NBU 921-25M2DS               |                                     |                                       |
| <b>Design:</b>   | Design #1                    |                                     |                                       |

|                    |  |                      |                |
|--------------------|--|----------------------|----------------|
| <b>Project</b>     | UINTAH COUNTY, UTAH (nad 27),                |                      |                |
| <b>Map System:</b> | Universal Transverse Mercator (US Survey Fee | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 - Western US                        |                      |                |
| <b>Map Zone:</b>   | Zone 12N (114 W to 108 W)                    |                      |                |

|                              |                                      |                     |                  |                          |                   |
|------------------------------|--------------------------------------|---------------------|------------------|--------------------------|-------------------|
| <b>Site</b>                  | NBU 921-25L PAD, SECTION 25 T9S R21E |                     |                  |                          |                   |
| <b>Site Position:</b>        |                                      | <b>Northing:</b>    | 14,531,330.99 ft | <b>Latitude:</b>         | 40° 0' 17.676 N   |
| <b>From:</b>                 | Lat/Long                             | <b>Easting:</b>     | 2,058,305.60 ft  | <b>Longitude:</b>        | 109° 30' 27.983 W |
| <b>Position Uncertainty:</b> | 0.00 ft                              | <b>Slot Radius:</b> | in               | <b>Grid Convergence:</b> | 0.96 °            |

|                             |                |           |                            |                  |                      |                   |
|-----------------------------|----------------|-----------|----------------------------|------------------|----------------------|-------------------|
| <b>Well</b>                 | NBU 921-25M2DS |           |                            |                  |                      |                   |
| <b>Well Position</b>        | <b>+N/-S</b>   | -9.83 ft  | <b>Northing:</b>           | 14,531,320.51 ft | <b>Latitude:</b>     | 40° 0' 17.579 N   |
|                             | <b>+E/-W</b>   | -38.93 ft | <b>Easting:</b>            | 2,058,266.84 ft  | <b>Longitude:</b>    | 109° 30' 28.483 W |
| <b>Position Uncertainty</b> |                | 0.00 ft   | <b>Wellhead Elevation:</b> | ft               | <b>Ground Level:</b> | 5,003.00 ft       |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | NBU 921-25M2DS    |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | BGGM2008          | 3/13/2009          | 11.40                  | 65.96                | 52,569                     |

|                          |                              |                   |                      |                      |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| <b>Design</b>            | Design #1                    |                   |                      |                      |
| <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                 | 161.57               |

| <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    |                 |
| 2,400.00             | 0.00            | 0.00        | 2,400.00            | 0.00       | 0.00       | 0.00                  | 0.00                 | 0.00                | 0.00    |                 |
| 3,377.59             | 29.33           | 161.57      | 3,335.46            | -232.23    | 77.39      | 3.00                  | 3.00                 | 0.00                | 161.57  |                 |
| 4,687.47             | 29.33           | 161.57      | 4,477.45            | -840.90    | 280.23     | 0.00                  | 0.00                 | 0.00                | 0.00    |                 |
| 5,860.58             | 0.00            | 0.00        | 5,600.00            | -1,119.57  | 373.10     | 2.50                  | -2.50                | 0.00                | 180.00  |                 |
| 9,860.58             | 0.00            | 0.00        | 9,600.00            | -1,119.57  | 373.10     | 0.00                  | 0.00                 | 0.00                | 0.00    | PBHL_NBU 921-25 |



|                  |                              |                                     |                                       |
|------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db   | <b>Local Co-ordinate Reference:</b> | Well NBU 921-25M2DS                   |
| <b>Company:</b>  | ANADARKO PETROLEUM CORP.     | <b>TVD Reference:</b>               | WELL @ 5021.00ft (Original Well Elev) |
| <b>Project:</b>  | UINTAH COUNTY, UTAH (nad 27) | <b>MD Reference:</b>                | WELL @ 5021.00ft (Original Well Elev) |
| <b>Site:</b>     | NBU 921-25L PAD              | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | NBU 921-25M2DS               | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | NBU 921-25M2DS               |                                     |                                       |
| <b>Design:</b>   | Design #1                    |                                     |                                       |

**Planned Survey**

| Measured Depth (ft)                     | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| <b>Start Build 3.00</b>                 |                 |             |                     |            |            |                       |                       |                      |                     |
| 2,400.00                                | 0.00            | 0.00        | 2,400.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |
| 2,500.00                                | 3.00            | 161.57      | 2,499.95            | -2.48      | 0.83       | 2.62                  | 3.00                  | 3.00                 | 0.00                |
| 2,600.00                                | 6.00            | 161.57      | 2,599.63            | -9.93      | 3.31       | 10.46                 | 3.00                  | 3.00                 | 0.00                |
| 2,700.00                                | 9.00            | 161.57      | 2,698.77            | -22.31     | 7.43       | 23.51                 | 3.00                  | 3.00                 | 0.00                |
| 2,800.00                                | 12.00           | 161.57      | 2,797.08            | -39.59     | 13.19      | 41.74                 | 3.00                  | 3.00                 | 0.00                |
| 2,900.00                                | 15.00           | 161.57      | 2,894.31            | -61.74     | 20.57      | 65.08                 | 3.00                  | 3.00                 | 0.00                |
| 3,000.00                                | 18.00           | 161.57      | 2,990.18            | -88.68     | 29.55      | 93.48                 | 3.00                  | 3.00                 | 0.00                |
| 3,100.00                                | 21.00           | 161.57      | 3,084.43            | -120.35    | 40.11      | 126.85                | 3.00                  | 3.00                 | 0.00                |
| 3,200.00                                | 24.00           | 161.57      | 3,176.81            | -156.65    | 52.20      | 165.12                | 3.00                  | 3.00                 | 0.00                |
| 3,300.00                                | 27.00           | 161.57      | 3,267.06            | -197.48    | 65.81      | 208.16                | 3.00                  | 3.00                 | 0.00                |
| <b>Start 1309.88 hold at 3377.59 MD</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 3,377.59                                | 29.33           | 161.57      | 3,335.46            | -232.23    | 77.39      | 244.78                | 3.00                  | 3.00                 | 0.00                |
| 3,400.00                                | 29.33           | 161.57      | 3,354.99            | -242.64    | 80.86      | 255.76                | 0.00                  | 0.00                 | 0.00                |
| 3,500.00                                | 29.33           | 161.57      | 3,442.18            | -289.11    | 96.35      | 304.74                | 0.00                  | 0.00                 | 0.00                |
| 3,600.00                                | 29.33           | 161.57      | 3,529.36            | -335.58    | 111.83     | 353.72                | 0.00                  | 0.00                 | 0.00                |
| 3,700.00                                | 29.33           | 161.57      | 3,616.54            | -382.04    | 127.32     | 402.70                | 0.00                  | 0.00                 | 0.00                |
| 3,800.00                                | 29.33           | 161.57      | 3,703.73            | -428.51    | 142.80     | 451.68                | 0.00                  | 0.00                 | 0.00                |
| 3,900.00                                | 29.33           | 161.57      | 3,790.91            | -474.98    | 158.29     | 500.66                | 0.00                  | 0.00                 | 0.00                |
| 4,000.00                                | 29.33           | 161.57      | 3,878.09            | -521.45    | 173.77     | 549.64                | 0.00                  | 0.00                 | 0.00                |
| 4,100.00                                | 29.33           | 161.57      | 3,965.28            | -567.92    | 189.26     | 598.62                | 0.00                  | 0.00                 | 0.00                |
| 4,200.00                                | 29.33           | 161.57      | 4,052.46            | -614.38    | 204.75     | 647.60                | 0.00                  | 0.00                 | 0.00                |
| 4,300.00                                | 29.33           | 161.57      | 4,139.64            | -660.85    | 220.23     | 696.58                | 0.00                  | 0.00                 | 0.00                |
| 4,400.00                                | 29.33           | 161.57      | 4,226.83            | -707.32    | 235.72     | 745.56                | 0.00                  | 0.00                 | 0.00                |
| 4,500.00                                | 29.33           | 161.57      | 4,314.01            | -753.79    | 251.20     | 794.54                | 0.00                  | 0.00                 | 0.00                |
| 4,600.00                                | 29.33           | 161.57      | 4,401.19            | -800.26    | 266.69     | 843.52                | 0.00                  | 0.00                 | 0.00                |
| <b>Start Drop -2.50</b>                 |                 |             |                     |            |            |                       |                       |                      |                     |
| 4,687.47                                | 29.33           | 161.57      | 4,477.45            | -840.90    | 280.23     | 886.37                | 0.00                  | 0.00                 | 0.00                |
| 4,700.00                                | 29.01           | 161.57      | 4,488.39            | -846.70    | 282.16     | 892.47                | 2.50                  | -2.50                | 0.00                |
| 4,800.00                                | 26.51           | 161.57      | 4,576.87            | -890.89    | 296.89     | 939.05                | 2.50                  | -2.50                | 0.00                |
| 4,900.00                                | 24.01           | 161.57      | 4,667.30            | -931.37    | 310.38     | 981.73                | 2.50                  | -2.50                | 0.00                |
| <b>Wasatch</b>                          |                 |             |                     |            |            |                       |                       |                      |                     |
| 4,953.05                                | 22.69           | 161.57      | 4,716.00            | -951.32    | 317.03     | 1,002.76              | 2.50                  | -2.50                | 0.00                |
| 5,000.00                                | 21.51           | 161.57      | 4,759.50            | -968.08    | 322.62     | 1,020.42              | 2.50                  | -2.50                | 0.00                |
| 5,100.00                                | 19.01           | 161.57      | 4,853.31            | -1,000.94  | 333.57     | 1,055.05              | 2.50                  | -2.50                | 0.00                |
| 5,200.00                                | 16.51           | 161.57      | 4,948.53            | -1,029.88  | 343.21     | 1,085.56              | 2.50                  | -2.50                | 0.00                |
| 5,300.00                                | 14.01           | 161.57      | 5,045.00            | -1,054.85  | 351.53     | 1,111.89              | 2.50                  | -2.50                | 0.00                |
| 5,400.00                                | 11.51           | 161.57      | 5,142.52            | -1,075.81  | 358.52     | 1,133.98              | 2.50                  | -2.50                | 0.00                |
| 5,500.00                                | 9.01            | 161.57      | 5,240.91            | -1,092.72  | 364.15     | 1,151.80              | 2.50                  | -2.50                | 0.00                |
| 5,600.00                                | 6.51            | 161.57      | 5,339.98            | -1,105.53  | 368.42     | 1,165.31              | 2.50                  | -2.50                | 0.00                |
| 5,700.00                                | 4.01            | 161.57      | 5,439.55            | -1,114.24  | 371.32     | 1,174.48              | 2.50                  | -2.50                | 0.00                |
| 5,800.00                                | 1.51            | 161.57      | 5,539.43            | -1,118.81  | 372.85     | 1,179.30              | 2.50                  | -2.50                | 0.00                |
| <b>Start 4000.00 hold at 5860.58 MD</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 5,860.58                                | 0.00            | 0.00        | 5,600.00            | -1,119.57  | 373.10     | 1,180.10              | 2.50                  | -2.50                | -266.72             |
| 5,900.00                                | 0.00            | 0.00        | 5,639.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 6,000.00                                | 0.00            | 0.00        | 5,739.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 6,100.00                                | 0.00            | 0.00        | 5,839.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 6,200.00                                | 0.00            | 0.00        | 5,939.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 6,300.00                                | 0.00            | 0.00        | 6,039.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 6,400.00                                | 0.00            | 0.00        | 6,139.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 6,500.00                                | 0.00            | 0.00        | 6,239.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 6,600.00                                | 0.00            | 0.00        | 6,339.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 6,700.00                                | 0.00            | 0.00        | 6,439.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 6,800.00                                | 0.00            | 0.00        | 6,539.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |



|                  |                              |                                     |                                       |
|------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db   | <b>Local Co-ordinate Reference:</b> | Well NBU 921-25M2DS                   |
| <b>Company:</b>  | ANADARKO PETROLEUM CORP.     | <b>TVD Reference:</b>               | WELL @ 5021.00ft (Original Well Elev) |
| <b>Project:</b>  | UINTAH COUNTY, UTAH (nad 27) | <b>MD Reference:</b>                | WELL @ 5021.00ft (Original Well Elev) |
| <b>Site:</b>     | NBU 921-25L PAD              | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | NBU 921-25M2DS               | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | NBU 921-25M2DS               |                                     |                                       |
| <b>Design:</b>   | Design #1                    |                                     |                                       |

**Planned Survey**

| Measured Depth (ft)        | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|----------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 6,900.00                   | 0.00            | 0.00        | 6,639.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 7,000.00                   | 0.00            | 0.00        | 6,739.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 7,100.00                   | 0.00            | 0.00        | 6,839.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 7,200.00                   | 0.00            | 0.00        | 6,939.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 7,300.00                   | 0.00            | 0.00        | 7,039.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 7,400.00                   | 0.00            | 0.00        | 7,139.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 7,500.00                   | 0.00            | 0.00        | 7,239.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 7,600.00                   | 0.00            | 0.00        | 7,339.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 7,700.00                   | 0.00            | 0.00        | 7,439.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 7,800.00                   | 0.00            | 0.00        | 7,539.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 7,900.00                   | 0.00            | 0.00        | 7,639.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 8,000.00                   | 0.00            | 0.00        | 7,739.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 8,100.00                   | 0.00            | 0.00        | 7,839.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 8,200.00                   | 0.00            | 0.00        | 7,939.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 8,300.00                   | 0.00            | 0.00        | 8,039.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 8,400.00                   | 0.00            | 0.00        | 8,139.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 8,500.00                   | 0.00            | 0.00        | 8,239.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 8,600.00                   | 0.00            | 0.00        | 8,339.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| <b>Mesaverde</b>           |                 |             |                     |            |            |                       |                       |                      |                     |
| 8,644.58                   | 0.00            | 0.00        | 8,384.00            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 8,700.00                   | 0.00            | 0.00        | 8,439.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 8,800.00                   | 0.00            | 0.00        | 8,539.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 8,900.00                   | 0.00            | 0.00        | 8,639.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 9,000.00                   | 0.00            | 0.00        | 8,739.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 9,100.00                   | 0.00            | 0.00        | 8,839.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 9,200.00                   | 0.00            | 0.00        | 8,939.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 9,300.00                   | 0.00            | 0.00        | 9,039.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 9,400.00                   | 0.00            | 0.00        | 9,139.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 9,500.00                   | 0.00            | 0.00        | 9,239.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 9,600.00                   | 0.00            | 0.00        | 9,339.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 9,700.00                   | 0.00            | 0.00        | 9,439.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| 9,800.00                   | 0.00            | 0.00        | 9,539.42            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |
| <b>PBHL_NBU 921-25M2DS</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 9,860.58                   | 0.00            | 0.00        | 9,600.00            | -1,119.57  | 373.10     | 1,180.10              | 0.00                  | 0.00                 | 0.00                |

**Design Targets**

| Target Name  | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude       | Longitude         |
|--|---------------|--------------|----------|------------|------------|---------------|--------------|----------------|-------------------|
| PBHL_NBU 921-25M;<br>- hit/miss target<br>- Shape<br>- Circle (radius 25.00) | 0.00          | 0.00         | 9,600.00 | -1,119.57  | 373.10     | 14,530,207.34 | 2,058,658.63 | 40° 0' 6.512 N | 109° 30' 23.688 W |

**Casing Points**

| Measured Depth (ft) | Vertical Depth (ft) | Name   | Casing Diameter (in) | Hole Diameter (in) |
|---------------------|---------------------|--------|----------------------|--------------------|
| 2,300.00            | 2,300.00            | 9 5/8" | 9.62                 | 12.25              |



|                  |                              |                                     |                                       |
|------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db   | <b>Local Co-ordinate Reference:</b> | Well NBU 921-25M2DS                   |
| <b>Company:</b>  | ANADARKO PETROLEUM CORP.     | <b>TVD Reference:</b>               | WELL @ 5021.00ft (Original Well Elev) |
| <b>Project:</b>  | UINTAH COUNTY, UTAH (nad 27) | <b>MD Reference:</b>                | WELL @ 5021.00ft (Original Well Elev) |
| <b>Site:</b>     | NBU 921-25L PAD              | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | NBU 921-25M2DS               | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | NBU 921-25M2DS               |                                     |                                       |
| <b>Design:</b>   | Design #1                    |                                     |                                       |

| Formations          |                     |             |           |         |                   |
|---------------------|---------------------|-------------|-----------|---------|-------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Name        | Lithology | Dip (°) | Dip Direction (°) |
| 1,469.00            | 1,469.00            | Green River |           |         |                   |
| 4,953.05            | 4,716.00            | Wasatch     |           |         |                   |
| 8,644.58            | 8,384.00            | Mesaverde   |           |         |                   |

| Plan Annotations    |                     |                   |            |                                  |  |
|---------------------|---------------------|-------------------|------------|----------------------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates |            | Comment                          |  |
|                     |                     | +N/-S (ft)        | +E/-W (ft) |                                  |  |
| 2,400.00            | 2,400.00            | 0.00              | 0.00       | Start Build 3.00                 |  |
| 3,377.59            | 3,335.46            | -232.23           | 77.39      | Start 1309.88 hold at 3377.59 MD |  |
| 4,687.47            | 4,477.45            | -840.90           | 280.23     | Start Drop -2.50                 |  |
| 5,860.58            | 5,600.00            | -1,119.57         | 373.10     | Start 4000.00 hold at 5860.58 MD |  |
| 9,860.58            | 9,600.00            | -1,119.57         | 373.10     | TD at 9860.58                    |  |



# **ANADARKO PETROLEUM CORP.**

**UINTAH COUNTY, UTAH (nad 27)**

**NBU 921-25L PAD**

**NBU 921-25M2DS**

**NBU 921-25M2DS**

**Design #1**

## **Anticollision Report**

**13 March, 2009**



**Weatherford®**



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well NBU 921-25M2DS                   |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5021.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | NBU 921-25L PAD              | <b>MD Reference:</b>                | WELL @ 5021.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | NBU 921-25M2DS               | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | NBU 921-25M2DS               | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | Design #1                    | <b>Offset TVD Reference:</b>        | Offset Datum                          |

|                                     |   |                       |                     |
|-------------------------------------|---|-----------------------|---------------------|
| <b>Reference</b>                    | Design #1   |                       |                     |
| <b>Filter type:</b>                 | NO GLOBAL FILTER: Using user defined selection & filtering criteria |                       |                     |
| <b>Interpolation Method:</b>        | Stations  | <b>Error Model:</b>   | ISCWSA              |
| <b>Depth Range:</b>                 | 0.00 to 20,000.00ft   | <b>Scan Method:</b>   | Closest Approach 3D |
| <b>Results Limited by:</b>          | Maximum center-center distance of 10,000.00ft                       | <b>Error Surface:</b> | Elliptical Conic    |
| <b>Warning Levels Evaluated at:</b> | 2.00 Sigma  |                       |                     |

|                            |                |                            |                  |                    |
|----------------------------|----------------|----------------------------|------------------|--------------------|
| <b>Survey Tool Program</b> | Date 3/13/2009 |                            |                  |                    |
| <b>From (ft)</b>           | <b>To (ft)</b> | <b>Survey (Wellbore)</b>   | <b>Tool Name</b> | <b>Description</b> |
| 0.00                       | 9,860.58       | Design #1 (NBU 921-25M2DS) | MWD              | MWD - Standard     |

| Summary                                     |                               |                            |                               |                                |                   |         |
|---|-------------------------------|----------------------------|-------------------------------|--------------------------------|-------------------|---------|
| Site Name                                   | Reference Measured Depth (ft) | Offset Measured Depth (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Separation Factor | Warning |
| Offset Well - Wellbore - Design             |                               |                            |                               |                                |                   |         |
| NBU 921-25L PAD                             |                               |                            |                               |                                |                   |         |
| NBU 301 EXISTING - NBU 301 - NBU 301        | 2,564.86                      | 2,565.45                   | 108.46                        | 98.51                          | 10.903            | CC      |
| NBU 301 EXISTING - NBU 301 - NBU 301        | 2,600.00                      | 2,600.19                   | 108.55                        | 98.49                          | 10.784            | ES      |
| NBU 301 EXISTING - NBU 301 - NBU 301        | 2,800.00                      | 2,798.03                   | 113.71                        | 102.92                         | 10.536            | SF      |
| NBU 921-25L4BS - NBU 921-25L4BS - Design #1 | 2,400.00                      | 2,400.00                   | 40.16                         | 29.63                          | 3.816             | CC, ES  |
| NBU 921-25L4BS - NBU 921-25L4BS - Design #1 | 2,500.00                      | 2,498.82                   | 41.43                         | 30.51                          | 3.793             | SF      |
| NBU 921-25M2AS - NBU 921-25M2AS - Design #1 | 2,400.00                      | 2,400.00                   | 19.99                         | 9.46                           | 1.899             | CC, ES  |
| NBU 921-25M2AS - NBU 921-25M2AS - Design #1 | 2,500.00                      | 2,499.76                   | 20.44                         | 9.52                           | 1.872             | SF      |
| NBU 921-25M3DS - NBU 921-25M3DS - Design #1 | 2,400.00                      | 2,400.00                   | 19.90                         | 9.37                           | 1.891             | CC      |
| NBU 921-25M3DS - NBU 921-25M3DS - Design #1 | 2,500.00                      | 2,499.98                   | 20.17                         | 9.26                           | 1.848             | ES, SF  |

| <b>Offset Design</b>   | NBU 921-25L PAD - NBU 301 EXISTING - NBU 301 - NBU 301 |                     |                     |                |             |                       |                                   |                            |                      |                       |                         | <b>Offset Site Error:</b> | 0.00 ft |  |
|------------------------|--|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|----------------------------|----------------------|-----------------------|-------------------------|---------------------------|---------|--|
| <b>Survey Program:</b> | 100-NS-GYRO-MS   |                     |                     |                |             |                       |                                   |                            |                      |                       |                         | <b>Offset Well Error:</b> | 0.00 ft |  |
| Reference              | Offset   | Semi Major Axis     |                     |                | Distance    |                       |                                   |                            |                      |                       |                         |                           | Warning |  |
| Measured Depth (ft)    | Vertical Depth (ft)                                    | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Wellbore Centre +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor         | Warning |  |
| 0.00                   | 0.00   | 0.00                | 0.00                | 0.00           | 0.00        | 78.80                 | 22.68                             | 114.54                     | 116.77               |                       |                         |                           |         |  |
| 100.00                 | 100.00   | 99.73               | 99.73               | 0.09           | 0.11        | 78.89                 | 22.52                             | 114.69                     | 116.88               | 116.68                | 0.20                    | 582.102                   |         |  |
| 200.00                 | 200.00   | 199.78              | 199.78              | 0.32           | 0.37        | 79.08                 | 22.19                             | 114.97                     | 117.09               | 116.40                | 0.69                    | 169.597                   |         |  |
| 300.00                 | 300.00   | 300.00              | 300.00              | 0.54           | 0.52        | 79.17                 | 22.01                             | 115.10                     | 117.19               | 116.12                | 1.06                    | 110.052                   |         |  |
| 400.00                 | 400.00   | 400.33              | 400.33              | 0.77           | 0.65        | 79.26                 | 21.82                             | 114.99                     | 117.05               | 115.63                | 1.42                    | 82.476                    |         |  |
| 500.00                 | 500.00   | 500.23              | 500.23              | 0.99           | 0.86        | 79.43                 | 21.42                             | 114.83                     | 116.81               | 114.96                | 1.85                    | 63.067                    |         |  |
| 600.00                 | 600.00   | 600.17              | 600.17              | 1.22           | 1.10        | 79.63                 | 20.99                             | 114.74                     | 116.64               | 114.32                | 2.32                    | 50.340                    |         |  |
| 700.00                 | 700.00   | 700.00              | 700.00              | 1.44           | 1.25        | 79.73                 | 20.78                             | 114.70                     | 116.57               | 113.88                | 2.69                    | 43.283                    |         |  |
| 800.00                 | 800.00   | 800.00              | 800.00              | 1.67           | 1.41        | 79.82                 | 20.58                             | 114.62                     | 116.45               | 113.38                | 3.07                    | 37.911                    |         |  |
| 804.48                 | 804.48   | 804.73              | 804.73              | 1.68           | 1.42        | 79.83                 | 20.56                             | 114.61                     | 116.44               | 113.35                | 3.09                    | 37.663                    |         |  |
| 839.66                 | 839.66   | 839.65              | 839.64              | 1.75           | 1.49        | 79.89                 | 20.44                             | 114.60                     | 116.41               | 113.16                | 3.24                    | 35.889                    |         |  |
| 900.00                 | 900.00   | 899.54              | 899.54              | 1.89           | 1.61        | 79.96                 | 20.32                             | 114.74                     | 116.53               | 113.02                | 3.50                    | 33.257                    |         |  |
| 1,000.00               | 1,000.00   | 999.66              | 999.66              | 2.12           | 1.77        | 79.92                 | 20.45                             | 115.07                     | 116.87               | 112.99                | 3.88                    | 30.117                    |         |  |
| 1,100.00               | 1,100.00   | 1,100.17            | 1,100.16            | 2.34           | 1.88        | 79.74                 | 20.83                             | 115.08                     | 116.95               | 112.73                | 4.22                    | 27.694                    |         |  |
| 1,138.27               | 1,138.27   | 1,138.31            | 1,138.31            | 2.43           | 1.93        | 79.66                 | 20.98                             | 115.02                     | 116.92               | 112.56                | 4.36                    | 26.815                    |         |  |
| 1,200.00               | 1,200.00   | 1,200.00            | 1,199.99            | 2.56           | 2.02        | 79.54                 | 21.24                             | 115.01                     | 116.95               | 112.37                | 4.58                    | 25.527                    |         |  |
| 1,300.00               | 1,300.00   | 1,298.56            | 1,298.55            | 2.79           | 2.19        | 79.34                 | 21.76                             | 115.60                     | 117.64               | 112.66                | 4.98                    | 23.639                    |         |  |
| 1,400.00               | 1,400.00   | 1,398.47            | 1,398.46            | 3.01           | 2.39        | 79.21                 | 22.27                             | 116.80                     | 118.91               | 113.51                | 5.40                    | 22.013                    |         |  |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well NBU 921-25M2DS                   |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5021.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | NBU 921-25L PAD              | <b>MD Reference:</b>                | WELL @ 5021.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | NBU 921-25M2DS               | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | NBU 921-25M2DS               | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | Design #1                    | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design NBU 921-25L PAD - NBU 301 EXISTING - NBU 301 - NBU 301 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Site Error: | 0.00 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 100-NS-GYRO-MS                                       |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Well Error: | 0.00 ft |
| Reference  |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         |                   | Warning            |         |
| Measured Depth (ft)  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |         |
| 1,500.00   | 1,500.00            | 1,498.58            | 1,498.55            | 3.24            | 2.60        | 79.05                 | 22.82                             | 117.97     | 120.17               | 114.33                | 5.84                    | 20.582            |                    |         |
| 1,600.00   | 1,600.00            | 1,600.77            | 1,600.73            | 3.46            | 2.79        | 78.42                 | 24.19                             | 118.03     | 120.48               | 114.23                | 6.25                    | 19.269            |                    |         |
| 1,700.00   | 1,700.00            | 1,704.91            | 1,704.78            | 3.69            | 2.95        | 76.91                 | 26.70                             | 114.85     | 118.01               | 111.37                | 6.64                    | 17.778            |                    |         |
| 1,800.00   | 1,800.00            | 1,802.66            | 1,802.39            | 3.91            | 3.11        | 74.81                 | 30.12                             | 110.89     | 114.93               | 107.91                | 7.02                    | 16.365            |                    |         |
| 1,900.00   | 1,900.00            | 1,900.53            | 1,900.16            | 4.14            | 3.30        | 72.67                 | 33.91                             | 108.67     | 113.84               | 106.40                | 7.43                    | 15.314            |                    |         |
| 2,000.00   | 2,000.00            | 2,001.34            | 2,000.93            | 4.36            | 3.50        | 71.17                 | 36.59                             | 107.30     | 113.37               | 105.51                | 7.86                    | 14.427            |                    |         |
| 2,100.00   | 2,100.00            | 2,102.19            | 2,101.76            | 4.59            | 3.68        | 70.47                 | 37.48                             | 105.70     | 112.16               | 103.90                | 8.27                    | 13.567            |                    |         |
| 2,200.00   | 2,200.00            | 2,201.46            | 2,201.02            | 4.81            | 3.83        | 70.54                 | 36.95                             | 104.58     | 110.92               | 102.28                | 8.64                    | 12.836            |                    |         |
| 2,300.00   | 2,300.00            | 2,301.32            | 2,300.86            | 5.04            | 3.97        | 71.19                 | 35.49                             | 104.19     | 110.07               | 101.07                | 9.00                    | 12.225            |                    |         |
| 2,400.00   | 2,400.00            | 2,401.09            | 2,400.62            | 5.26            | 4.11        | 72.03                 | 33.76                             | 104.06     | 109.40               | 100.02                | 9.38                    | 11.669            |                    |         |
| 2,500.00   | 2,499.95            | 2,501.26            | 2,500.78            | 5.46            | 4.27        | -90.09                | 32.02                             | 103.92     | 108.72               | 98.99                 | 9.73                    | 11.174            |                    |         |
| 2,564.86   | 2,564.65            | 2,565.45            | 2,564.96            | 5.57            | 4.38        | -91.85                | 30.84                             | 103.99     | 108.46               | 98.51                 | 9.95                    | 10.903            | CC                 |         |
| 2,600.00   | 2,599.63            | 2,600.19            | 2,599.68            | 5.63            | 4.44        | -93.22                | 30.15                             | 104.19     | 108.55               | 98.49                 | 10.07                   | 10.784            | ES                 |         |
| 2,700.00   | 2,698.77            | 2,699.48            | 2,698.96            | 5.82            | 4.61        | -98.93                | 28.33                             | 104.89     | 109.82               | 99.40                 | 10.42                   | 10.539            |                    |         |
| 2,800.00   | 2,797.08            | 2,798.03            | 2,797.49            | 6.02            | 4.79        | -106.94               | 26.74                             | 105.55     | 113.71               | 102.92                | 10.79                   | 10.536            | SF                 |         |
| 2,900.00   | 2,894.31            | 2,895.09            | 2,894.54            | 6.26            | 4.98        | -116.20               | 25.31                             | 106.42     | 122.26               | 111.09                | 11.16                   | 10.952            |                    |         |
| 3,000.00   | 2,990.18            | 2,991.63            | 2,991.06            | 6.55            | 5.16        | -125.63               | 23.96                             | 107.43     | 136.95               | 125.44                | 11.51                   | 11.899            |                    |         |
| 3,100.00   | 3,084.43            | 3,086.93            | 3,086.35            | 6.91            | 5.36        | -134.26               | 22.45                             | 108.28     | 158.25               | 146.44                | 11.81                   | 13.396            |                    |         |
| 3,200.00   | 3,176.81            | 3,180.62            | 3,180.02            | 7.36            | 5.55        | -141.58               | 20.69                             | 108.98     | 186.23               | 174.17                | 12.07                   | 15.435            |                    |         |
| 3,300.00   | 3,267.06            | 3,272.12            | 3,271.50            | 7.90            | 5.74        | -147.49               | 18.74                             | 109.61     | 220.66               | 208.39                | 12.28                   | 17.971            |                    |         |
| 3,377.59   | 3,335.46            | 3,341.61            | 3,340.97            | 8.39            | 5.89        | -151.19               | 17.17                             | 110.19     | 251.60               | 239.18                | 12.42                   | 20.251            |                    |         |
| 3,400.00   | 3,354.99            | 3,361.49            | 3,360.84            | 8.54            | 5.94        | -152.27               | 16.70                             | 110.36     | 261.08               | 248.58                | 12.50                   | 20.880            |                    |         |
| 3,500.00   | 3,442.18            | 3,449.52            | 3,448.84            | 9.26            | 6.13        | -156.26               | 14.63                             | 111.19     | 304.17               | 291.29                | 12.88                   | 23.607            |                    |         |
| 3,600.00   | 3,529.36            | 3,536.70            | 3,536.00            | 10.02           | 6.32        | -159.29               | 12.82                             | 111.86     | 348.46               | 335.17                | 13.29                   | 26.212            |                    |         |
| 3,700.00   | 3,616.54            | 3,624.34            | 3,623.62            | 10.82           | 6.52        | -161.69               | 11.27                             | 112.36     | 393.66               | 379.94                | 13.72                   | 28.683            |                    |         |
| 3,800.00   | 3,703.73            | 3,714.20            | 3,713.47            | 11.65           | 6.72        | -163.68               | 9.48                              | 112.66     | 439.13               | 424.96                | 14.18                   | 30.979            |                    |         |
| 3,900.00   | 3,790.91            | 3,804.34            | 3,803.58            | 12.50           | 6.93        | -165.34               | 7.29                              | 112.74     | 484.59               | 469.95                | 14.64                   | 33.101            |                    |         |
| 4,000.00   | 3,878.09            | 3,893.79            | 3,893.00            | 13.37           | 7.13        | -166.71               | 4.86                              | 112.80     | 530.04               | 514.92                | 15.12                   | 35.056            |                    |         |
| 4,100.00   | 3,965.28            | 3,983.46            | 3,982.63            | 14.26           | 7.34        | -167.85               | 2.26                              | 113.01     | 575.51               | 559.90                | 15.61                   | 36.864            |                    |         |
| 4,200.00   | 4,052.46            | 4,071.97            | 4,071.10            | 15.16           | 7.55        | -168.81               | -0.42                             | 113.21     | 621.03               | 604.91                | 16.11                   | 38.543            |                    |         |
| 4,300.00   | 4,139.64            | 4,160.08            | 4,159.16            | 16.07           | 7.75        | -169.67               | -3.09                             | 113.10     | 666.72               | 650.10                | 16.62                   | 40.116            |                    |         |
| 4,400.00   | 4,226.83            | 4,248.34            | 4,247.39            | 16.98           | 7.96        | -170.44               | -5.75                             | 112.70     | 712.57               | 695.44                | 17.13                   | 41.589            |                    |         |
| 4,500.00   | 4,314.01            | 4,336.82            | 4,335.83            | 17.91           | 8.17        | -171.13               | -8.42                             | 112.27     | 758.52               | 740.87                | 17.65                   | 42.965            |                    |         |
| 4,600.00   | 4,401.19            | 4,425.26            | 4,424.23            | 18.84           | 8.38        | -171.74               | -11.08                            | 111.84     | 804.55               | 786.37                | 18.18                   | 44.250            |                    |         |
| 4,687.47   | 4,477.45            | 4,502.53            | 4,501.45            | 19.66           | 8.56        | -172.22               | -13.41                            | 111.45     | 844.87               | 826.22                | 18.65                   | 45.304            |                    |         |
| 4,700.00   | 4,488.39            | 4,513.61            | 4,512.53            | 19.77           | 8.59        | -172.31               | -13.74                            | 111.39     | 850.62               | 831.88                | 18.75                   | 45.376            |                    |         |
| 4,800.00   | 4,576.87            | 4,603.18            | 4,602.06            | 20.48           | 8.80        | -172.93               | -16.43                            | 110.89     | 894.37               | 874.86                | 19.51                   | 45.848            |                    |         |
| 4,900.00   | 4,667.30            | 4,695.25            | 4,694.09            | 21.16           | 9.02        | -173.45               | -19.20                            | 110.45     | 934.21               | 913.96                | 20.25                   | 46.140            |                    |         |
| 5,000.00   | 4,759.50            | 4,789.06            | 4,787.86            | 21.78           | 9.25        | -173.87               | -22.05                            | 110.16     | 970.01               | 949.05                | 20.96                   | 46.288            |                    |         |
| 5,100.00   | 4,853.31            | 4,884.00            | 4,882.75            | 22.36           | 9.48        | -174.21               | -24.94                            | 109.99     | 1,001.71             | 980.08                | 21.63                   | 46.311            |                    |         |
| 5,200.00   | 4,948.53            | 4,980.20            | 4,978.91            | 22.88           | 9.72        | -174.50               | -27.88                            | 109.87     | 1,029.26             | 1,007.00              | 22.26                   | 46.230            |                    |         |
| 5,300.00   | 5,045.00            | 5,079.60            | 5,078.25            | 23.35           | 9.97        | -174.73               | -30.98                            | 109.88     | 1,052.53             | 1,029.67              | 22.86                   | 46.042            |                    |         |
| 5,400.00   | 5,142.52            | 5,180.58            | 5,179.18            | 23.75           | 10.22       | -174.91               | -34.33                            | 110.16     | 1,071.32             | 1,047.91              | 23.41                   | 45.760            |                    |         |
| 5,500.00   | 5,240.91            | 5,280.14            | 5,278.68            | 24.10           | 10.47       | -175.04               | -37.75                            | 110.69     | 1,085.64             | 1,061.73              | 23.91                   | 45.407            |                    |         |
| 5,600.00   | 5,339.98            | 5,379.71            | 5,378.19            | 24.38           | 10.72       | -175.13               | -41.14                            | 111.43     | 1,095.65             | 1,071.29              | 24.35                   | 44.988            |                    |         |
| 5,700.00   | 5,439.55            | 5,481.51            | 5,479.92            | 24.61           | 10.97       | -175.18               | -44.65                            | 112.32     | 1,101.24             | 1,076.49              | 24.75                   | 44.495            |                    |         |
| 5,800.00   | 5,539.43            | 5,583.94            | 5,582.28            | 24.77           | 11.23       | -175.21               | -48.43                            | 113.15     | 1,102.27             | 1,077.18              | 25.09                   | 43.932            |                    |         |
| 5,860.58   | 5,600.00            | 5,642.66            | 5,640.96            | 24.84           | 11.38       | -13.64                | -50.64                            | 113.62     | 1,100.74             | 1,075.48              | 25.26                   | 43.584            |                    |         |
| 5,900.00   | 5,639.42            | 5,680.12            | 5,678.39            | 24.88           | 11.48       | -13.64                | -51.96                            | 113.98     | 1,099.30             | 1,073.89              | 25.42                   | 43.253            |                    |         |
| 6,000.00   | 5,739.42            | 5,775.14            | 5,773.36            | 24.98           | 11.71       | -13.62                | -54.94                            | 115.06     | 1,095.98             | 1,070.15              | 25.83                   | 42.429            |                    |         |
| 6,100.00   | 5,839.42            | 5,871.19            | 5,869.37            | 25.08           | 11.94       | -13.58                | -57.46                            | 116.49     | 1,093.08             | 1,066.84              | 26.24                   | 41.656            |                    |         |
| 6,200.00   | 5,939.42            | 5,967.60            | 5,965.73            | 25.18           | 12.17       | -13.51                | -59.55                            | 118.45     | 1,090.50             | 1,063.85              | 26.65                   | 40.919            |                    |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Weatherford International Ltd.**  
Anticollision Report



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well NBU 921-25M2DS                   |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5021.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | NBU 921-25L PAD              | <b>MD Reference:</b>                | WELL @ 5021.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | NBU 921-25M2DS               | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | NBU 921-25M2DS               | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | Design #1                    | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design NBU 921-25L PAD - NBU 301 EXISTING - NBU 301 - NBU 301 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Site Error: | 0.00 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 100-NS-GYRO-MS                                       |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Well Error: | 0.00 ft |
| Reference  |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         |                   | Warning            |         |
| Measured Depth (ft)  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |         |
| 6,300.00   | 6,039.42            | 6,067.59            | 6,065.68            | 25.29           | 12.40       | -13.41                | -61.39                            | 120.87     | 1,088.14             | 1,061.08              | 27.07                   | 40.201            |                    |         |
| 6,400.00   | 6,139.42            | 6,169.39            | 6,167.43            | 25.40           | 12.64       | -13.31                | -63.46                            | 123.17     | 1,085.65             | 1,058.16              | 27.49                   | 39.495            |                    |         |
| 6,458.52   | 6,197.94            | 6,200.00            | 6,198.03            | 25.46           | 12.71       | -13.29                | -64.12                            | 123.83     | 1,084.49             | 1,056.82              | 27.67                   | 39.198            |                    |         |
| 6,500.00   | 6,239.42            | 6,200.00            | 6,198.03            | 25.50           | 12.71       | -13.29                | -64.12                            | 123.83     | 1,085.28             | 1,057.54              | 27.74                   | 39.119            |                    |         |
| 6,600.00   | 6,339.42            | 6,200.00            | 6,198.03            | 25.61           | 12.71       | -13.29                | -64.12                            | 123.83     | 1,093.67             | 1,065.74              | 27.93                   | 39.162            |                    |         |
| 6,700.00   | 6,439.42            | 6,200.00            | 6,198.03            | 25.73           | 12.71       | -13.29                | -64.12                            | 123.83     | 1,111.03             | 1,082.92              | 28.11                   | 39.522            |                    |         |
| 6,800.00   | 6,539.42            | 6,200.00            | 6,198.03            | 25.84           | 12.71       | -13.29                | -64.12                            | 123.83     | 1,136.95             | 1,108.66              | 28.30                   | 40.178            |                    |         |
| 6,900.00   | 6,639.42            | 6,200.00            | 6,198.03            | 25.95           | 12.71       | -13.29                | -64.12                            | 123.83     | 1,170.87             | 1,142.39              | 28.49                   | 41.105            |                    |         |
| 7,000.00   | 6,739.42            | 6,200.00            | 6,198.03            | 26.07           | 12.71       | -13.29                | -64.12                            | 123.83     | 1,212.12             | 1,183.44              | 28.67                   | 42.273            |                    |         |
| 7,100.00   | 6,839.42            | 6,200.00            | 6,198.03            | 26.19           | 12.71       | -13.29                | -64.12                            | 123.83     | 1,259.96             | 1,231.10              | 28.86                   | 43.654            |                    |         |
| 7,200.00   | 6,939.42            | 6,200.00            | 6,198.03            | 26.31           | 12.71       | -13.29                | -64.12                            | 123.83     | 1,313.69             | 1,284.64              | 29.05                   | 45.218            |                    |         |
| 7,300.00   | 7,039.42            | 6,200.00            | 6,198.03            | 26.43           | 12.71       | -13.29                | -64.12                            | 123.83     | 1,372.61             | 1,343.37              | 29.24                   | 46.938            |                    |         |
| 7,400.00   | 7,139.42            | 6,200.00            | 6,198.03            | 26.55           | 12.71       | -13.29                | -64.12                            | 123.83     | 1,436.09             | 1,406.65              | 29.43                   | 48.789            |                    |         |
| 7,500.00   | 7,239.42            | 6,200.00            | 6,198.03            | 26.67           | 12.71       | -13.29                | -64.12                            | 123.83     | 1,503.54             | 1,473.91              | 29.63                   | 50.749            |                    |         |
| 7,600.00   | 7,339.42            | 6,200.00            | 6,198.03            | 26.79           | 12.71       | -13.29                | -64.12                            | 123.83     | 1,574.45             | 1,544.63              | 29.82                   | 52.798            |                    |         |
| 7,700.00   | 7,439.42            | 6,200.00            | 6,198.03            | 26.92           | 12.71       | -13.29                | -64.12                            | 123.83     | 1,648.39             | 1,618.37              | 30.01                   | 54.920            |                    |         |
| 7,800.00   | 7,539.42            | 6,200.00            | 6,198.03            | 27.05           | 12.71       | -13.29                | -64.12                            | 123.83     | 1,724.95             | 1,694.74              | 30.21                   | 57.100            |                    |         |
| 7,900.00   | 7,639.42            | 6,200.00            | 6,198.03            | 27.17           | 12.71       | -13.29                | -64.12                            | 123.83     | 1,803.81             | 1,773.41              | 30.40                   | 59.327            |                    |         |
| 8,000.00   | 7,739.42            | 6,200.00            | 6,198.03            | 27.30           | 12.71       | -13.29                | -64.12                            | 123.83     | 1,884.68             | 1,854.08              | 30.60                   | 61.589            |                    |         |
| 8,100.00   | 7,839.42            | 6,200.00            | 6,198.03            | 27.43           | 12.71       | -13.29                | -64.12                            | 123.83     | 1,967.31             | 1,936.51              | 30.80                   | 63.879            |                    |         |
| 8,200.00   | 7,939.42            | 6,200.00            | 6,198.03            | 27.57           | 12.71       | -13.29                | -64.12                            | 123.83     | 2,051.48             | 2,020.49              | 31.00                   | 66.187            |                    |         |
| 8,300.00   | 8,039.42            | 6,200.00            | 6,198.03            | 27.70           | 12.71       | -13.29                | -64.12                            | 123.83     | 2,137.02             | 2,105.83              | 31.19                   | 68.509            |                    |         |
| 8,400.00   | 8,139.42            | 6,200.00            | 6,198.03            | 27.83           | 12.71       | -13.29                | -64.12                            | 123.83     | 2,223.77             | 2,192.37              | 31.39                   | 70.839            |                    |         |
| 8,500.00   | 8,239.42            | 6,200.00            | 6,198.03            | 27.97           | 12.71       | -13.29                | -64.12                            | 123.83     | 2,311.58             | 2,279.99              | 31.59                   | 73.172            |                    |         |
| 8,600.00   | 8,339.42            | 6,200.00            | 6,198.03            | 28.10           | 12.71       | -13.29                | -64.12                            | 123.83     | 2,400.35             | 2,368.56              | 31.79                   | 75.504            |                    |         |
| 8,700.00   | 8,439.42            | 6,200.00            | 6,198.03            | 28.24           | 12.71       | -13.29                | -64.12                            | 123.83     | 2,489.97             | 2,457.98              | 31.99                   | 77.833            |                    |         |
| 8,800.00   | 8,539.42            | 6,200.00            | 6,198.03            | 28.38           | 12.71       | -13.29                | -64.12                            | 123.83     | 2,580.36             | 2,548.17              | 32.19                   | 80.155            |                    |         |
| 8,900.00   | 8,639.42            | 6,200.00            | 6,198.03            | 28.52           | 12.71       | -13.29                | -64.12                            | 123.83     | 2,671.43             | 2,639.03              | 32.39                   | 82.468            |                    |         |
| 9,000.00   | 8,739.42            | 6,200.00            | 6,198.03            | 28.66           | 12.71       | -13.29                | -64.12                            | 123.83     | 2,763.12             | 2,730.52              | 32.60                   | 84.770            |                    |         |
| 9,100.00   | 8,839.42            | 6,200.00            | 6,198.03            | 28.80           | 12.71       | -13.29                | -64.12                            | 123.83     | 2,855.36             | 2,822.56              | 32.80                   | 87.059            |                    |         |
| 9,200.00   | 8,939.42            | 6,200.00            | 6,198.03            | 28.95           | 12.71       | -13.29                | -64.12                            | 123.83     | 2,948.11             | 2,915.11              | 33.00                   | 89.334            |                    |         |
| 9,300.00   | 9,039.42            | 6,200.00            | 6,198.03            | 29.09           | 12.71       | -13.29                | -64.12                            | 123.83     | 3,041.32             | 3,008.12              | 33.20                   | 91.595            |                    |         |
| 9,400.00   | 9,139.42            | 6,200.00            | 6,198.03            | 29.23           | 12.71       | -13.29                | -64.12                            | 123.83     | 3,134.95             | 3,101.54              | 33.41                   | 93.838            |                    |         |
| 9,500.00   | 9,239.42            | 6,200.00            | 6,198.03            | 29.38           | 12.71       | -13.29                | -64.12                            | 123.83     | 3,228.96             | 3,195.35              | 33.61                   | 96.065            |                    |         |
| 9,600.00   | 9,339.42            | 6,200.00            | 6,198.03            | 29.53           | 12.71       | -13.29                | -64.12                            | 123.83     | 3,323.32             | 3,289.51              | 33.82                   | 98.274            |                    |         |
| 9,700.00   | 9,439.42            | 6,200.00            | 6,198.03            | 29.67           | 12.71       | -13.29                | -64.12                            | 123.83     | 3,418.01             | 3,383.98              | 34.02                   | 100.465           |                    |         |
| 9,800.00   | 9,539.42            | 6,200.00            | 6,198.03            | 29.82           | 12.71       | -13.29                | -64.12                            | 123.83     | 3,512.98             | 3,478.75              | 34.23                   | 102.637           |                    |         |
| 9,860.58   | 9,600.00            | 6,200.00            | 6,198.03            | 29.91           | 12.71       | -13.29                | -64.12                            | 123.83     | 3,570.65             | 3,536.30              | 34.35                   | 103.943           |                    |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Weatherford International Ltd.**  
Anticollision Report



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well NBU 921-25M2DS                   |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5021.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | NBU 921-25L PAD              | <b>MD Reference:</b>                | WELL @ 5021.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | NBU 921-25M2DS               | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | NBU 921-25M2DS               | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | Design #1                    | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design         |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Site Error: | 0.00 ft |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 0-MWD |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Well Error: | 0.00 ft |
| Reference             |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         |                   | Warning            |         |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |         |
| 0.00                  | 0.00                | 0.00                | 0.00                | 0.00            | 0.00        | 75.82                 | 9.83                              | 38.93      | 40.16                |                       |                         |                   |                    |         |
| 100.00                | 100.00              | 100.00              | 100.00              | 0.09            | 0.09        | 75.82                 | 9.83                              | 38.93      | 40.16                | 39.97                 | 0.18                    | 217.873           |                    |         |
| 200.00                | 200.00              | 200.00              | 200.00              | 0.32            | 0.32        | 75.82                 | 9.83                              | 38.93      | 40.16                | 39.52                 | 0.63                    | 63.353            |                    |         |
| 300.00                | 300.00              | 300.00              | 300.00              | 0.54            | 0.54        | 75.82                 | 9.83                              | 38.93      | 40.16                | 39.07                 | 1.08                    | 37.066            |                    |         |
| 400.00                | 400.00              | 400.00              | 400.00              | 0.77            | 0.77        | 75.82                 | 9.83                              | 38.93      | 40.16                | 38.62                 | 1.53                    | 26.196            |                    |         |
| 500.00                | 500.00              | 500.00              | 500.00              | 0.99            | 0.99        | 75.82                 | 9.83                              | 38.93      | 40.16                | 38.17                 | 1.98                    | 20.256            |                    |         |
| 600.00                | 600.00              | 600.00              | 600.00              | 1.22            | 1.22        | 75.82                 | 9.83                              | 38.93      | 40.16                | 37.72                 | 2.43                    | 16.512            |                    |         |
| 700.00                | 700.00              | 700.00              | 700.00              | 1.44            | 1.44        | 75.82                 | 9.83                              | 38.93      | 40.16                | 37.27                 | 2.88                    | 13.936            |                    |         |
| 800.00                | 800.00              | 800.00              | 800.00              | 1.67            | 1.67        | 75.82                 | 9.83                              | 38.93      | 40.16                | 36.82                 | 3.33                    | 12.055            |                    |         |
| 900.00                | 900.00              | 900.00              | 900.00              | 1.89            | 1.89        | 75.82                 | 9.83                              | 38.93      | 40.16                | 36.38                 | 3.78                    | 10.622            |                    |         |
| 1,000.00              | 1,000.00            | 1,000.00            | 1,000.00            | 2.12            | 2.12        | 75.82                 | 9.83                              | 38.93      | 40.16                | 35.93                 | 4.23                    | 9.493             |                    |         |
| 1,100.00              | 1,100.00            | 1,100.00            | 1,100.00            | 2.34            | 2.34        | 75.82                 | 9.83                              | 38.93      | 40.16                | 35.48                 | 4.68                    | 8.581             |                    |         |
| 1,200.00              | 1,200.00            | 1,200.00            | 1,200.00            | 2.56            | 2.56        | 75.82                 | 9.83                              | 38.93      | 40.16                | 35.03                 | 5.13                    | 7.829             |                    |         |
| 1,300.00              | 1,300.00            | 1,300.00            | 1,300.00            | 2.79            | 2.79        | 75.82                 | 9.83                              | 38.93      | 40.16                | 34.58                 | 5.58                    | 7.198             |                    |         |
| 1,400.00              | 1,400.00            | 1,400.00            | 1,400.00            | 3.01            | 3.01        | 75.82                 | 9.83                              | 38.93      | 40.16                | 34.13                 | 6.03                    | 6.661             |                    |         |
| 1,500.00              | 1,500.00            | 1,500.00            | 1,500.00            | 3.24            | 3.24        | 75.82                 | 9.83                              | 38.93      | 40.16                | 33.68                 | 6.48                    | 6.199             |                    |         |
| 1,600.00              | 1,600.00            | 1,600.00            | 1,600.00            | 3.46            | 3.46        | 75.82                 | 9.83                              | 38.93      | 40.16                | 33.23                 | 6.93                    | 5.797             |                    |         |
| 1,700.00              | 1,700.00            | 1,700.00            | 1,700.00            | 3.69            | 3.69        | 75.82                 | 9.83                              | 38.93      | 40.16                | 32.78                 | 7.38                    | 5.444             |                    |         |
| 1,800.00              | 1,800.00            | 1,800.00            | 1,800.00            | 3.91            | 3.91        | 75.82                 | 9.83                              | 38.93      | 40.16                | 32.33                 | 7.83                    | 5.131             |                    |         |
| 1,900.00              | 1,900.00            | 1,900.00            | 1,900.00            | 4.14            | 4.14        | 75.82                 | 9.83                              | 38.93      | 40.16                | 31.88                 | 8.28                    | 4.852             |                    |         |
| 2,000.00              | 2,000.00            | 2,000.00            | 2,000.00            | 4.36            | 4.36        | 75.82                 | 9.83                              | 38.93      | 40.16                | 31.43                 | 8.73                    | 4.602             |                    |         |
| 2,100.00              | 2,100.00            | 2,100.00            | 2,100.00            | 4.59            | 4.59        | 75.82                 | 9.83                              | 38.93      | 40.16                | 30.98                 | 9.17                    | 4.377             |                    |         |
| 2,200.00              | 2,200.00            | 2,200.00            | 2,200.00            | 4.81            | 4.81        | 75.82                 | 9.83                              | 38.93      | 40.16                | 30.53                 | 9.62                    | 4.172             |                    |         |
| 2,300.00              | 2,300.00            | 2,300.00            | 2,300.00            | 5.04            | 5.04        | 75.82                 | 9.83                              | 38.93      | 40.16                | 30.08                 | 10.07                   | 3.986             |                    |         |
| 2,400.00              | 2,400.00            | 2,400.00            | 2,400.00            | 5.26            | 5.26        | 75.82                 | 9.83                              | 38.93      | 40.16                | 29.63                 | 10.52                   | 3.816 CC, ES      |                    |         |
| 2,500.00              | 2,499.95            | 2,498.82            | 2,498.80            | 5.46            | 5.47        | -87.97                | 9.27                              | 40.54      | 41.43                | 30.51                 | 10.92                   | 3.793 SF          |                    |         |
| 2,600.00              | 2,599.63            | 2,597.46            | 2,597.30            | 5.63            | 5.66        | -93.83                | 7.56                              | 45.35      | 45.59                | 34.31                 | 11.28                   | 4.041             |                    |         |
| 2,700.00              | 2,698.77            | 2,695.75            | 2,695.22            | 5.82            | 5.85        | -101.37               | 4.75                              | 53.31      | 53.38                | 41.72                 | 11.65                   | 4.580             |                    |         |
| 2,800.00              | 2,797.08            | 2,793.51            | 2,792.28            | 6.02            | 6.06        | -108.64               | 0.83                              | 64.37      | 65.40                | 53.35                 | 12.05                   | 5.429             |                    |         |
| 2,900.00              | 2,894.31            | 2,890.59            | 2,888.20            | 6.26            | 6.28        | -114.64               | -4.14                             | 78.44      | 81.87                | 69.41                 | 12.46                   | 6.569             |                    |         |
| 3,000.00              | 2,990.18            | 2,987.32            | 2,983.26            | 6.55            | 6.53        | -119.35               | -10.09                            | 95.24      | 102.66               | 89.75                 | 12.91                   | 7.952             |                    |         |
| 3,100.00              | 3,084.43            | 3,083.75            | 3,077.94            | 6.91            | 6.79        | -124.00               | -16.20                            | 112.52     | 127.01               | 113.64                | 13.38                   | 9.495             |                    |         |
| 3,200.00              | 3,176.81            | 3,178.91            | 3,171.37            | 7.36            | 7.06        | -128.42               | -22.23                            | 129.58     | 155.19               | 141.34                | 13.85                   | 11.203            |                    |         |
| 3,300.00              | 3,267.06            | 3,272.54            | 3,263.29            | 7.90            | 7.34        | -132.42               | -28.17                            | 146.36     | 187.53               | 173.21                | 14.33                   | 13.090            |                    |         |
| 3,377.59              | 3,335.46            | 3,343.97            | 3,333.42            | 8.39            | 7.57        | -135.17               | -32.70                            | 159.16     | 215.64               | 200.95                | 14.69                   | 14.678            |                    |         |
| 3,400.00              | 3,354.99            | 3,364.44            | 3,353.51            | 8.54            | 7.63        | -136.08               | -33.99                            | 162.82     | 224.17               | 209.35                | 14.82                   | 15.126            |                    |         |
| 3,500.00              | 3,442.18            | 3,455.75            | 3,443.16            | 9.26            | 7.92        | -139.43               | -39.78                            | 179.19     | 262.73               | 247.30                | 15.42                   | 17.033            |                    |         |
| 3,600.00              | 3,529.36            | 3,547.06            | 3,532.81            | 10.02           | 8.22        | -141.93               | -45.57                            | 195.55     | 301.87               | 285.80                | 16.06                   | 18.792            |                    |         |
| 3,700.00              | 3,616.54            | 3,638.38            | 3,622.46            | 10.82           | 8.53        | -143.86               | -51.36                            | 211.92     | 341.38               | 324.65                | 16.73                   | 20.405            |                    |         |
| 3,800.00              | 3,703.73            | 3,729.69            | 3,712.11            | 11.65           | 8.85        | -145.40               | -57.15                            | 228.28     | 381.16               | 363.74                | 17.42                   | 21.880            |                    |         |
| 3,900.00              | 3,790.91            | 3,821.01            | 3,801.75            | 12.50           | 9.17        | -146.64               | -62.94                            | 244.65     | 421.13               | 403.00                | 18.13                   | 23.229            |                    |         |
| 4,000.00              | 3,878.09            | 3,912.32            | 3,891.40            | 13.37           | 9.50        | -147.67               | -68.73                            | 261.01     | 461.24               | 442.38                | 18.85                   | 24.462            |                    |         |
| 4,100.00              | 3,965.28            | 4,003.64            | 3,981.05            | 14.26           | 9.83        | -148.54               | -74.52                            | 277.37     | 501.45               | 481.86                | 19.59                   | 25.592            |                    |         |
| 4,200.00              | 4,052.46            | 4,094.95            | 4,070.70            | 15.16           | 10.16       | -149.27               | -80.31                            | 293.74     | 541.75               | 521.40                | 20.35                   | 26.627            |                    |         |
| 4,300.00              | 4,139.64            | 4,186.27            | 4,160.35            | 16.07           | 10.50       | -149.91               | -86.10                            | 310.10     | 582.11               | 561.00                | 21.11                   | 27.579            |                    |         |
| 4,400.00              | 4,226.83            | 4,277.58            | 4,250.00            | 16.98           | 10.84       | -150.46               | -91.89                            | 326.47     | 622.52               | 600.64                | 21.88                   | 28.454            |                    |         |
| 4,500.00              | 4,314.01            | 4,366.93            | 4,337.83            | 17.91           | 11.12       | -151.00               | -97.35                            | 341.92     | 663.10               | 640.51                | 22.59                   | 29.350            |                    |         |
| 4,600.00              | 4,401.19            | 4,455.71            | 4,425.35            | 18.84           | 11.39       | -151.59               | -102.33                           | 355.99     | 704.03               | 680.75                | 23.28                   | 30.242            |                    |         |
| 4,687.47              | 4,477.45            | 4,532.99            | 4,501.71            | 19.66           | 11.61       | -152.14               | -106.30                           | 367.20     | 740.13               | 716.27                | 23.86                   | 31.017            |                    |         |
| 4,700.00              | 4,488.39            | 4,544.04            | 4,512.64            | 19.77           | 11.64       | -152.29               | -106.83                           | 368.72     | 745.30               | 721.35                | 23.96                   | 31.111            |                    |         |
| 4,800.00              | 4,576.87            | 4,632.91            | 4,600.66            | 20.48           | 11.89       | -153.36               | -110.91                           | 380.25     | 784.78               | 760.11                | 24.67                   | 31.811            |                    |         |
| 4,900.00              | 4,667.30            | 4,722.87            | 4,689.95            | 21.16           | 12.13       | -154.27               | -114.58                           | 390.61     | 821.04               | 795.68                | 25.36                   | 32.376            |                    |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Weatherford International Ltd.**  
Anticollision Report



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well NBU 921-25M2DS                   |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5021.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | NBU 921-25L PAD              | <b>MD Reference:</b>                | WELL @ 5021.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | NBU 921-25M2DS               | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | NBU 921-25M2DS               | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | Design #1                    | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design         |                     |                     |                     |                 |             |                       |                                   |                                   |                      |                       |                         |                   | Offset Site Error: | 0.00 ft |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|-----------------------------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 0-MWD |                     |                     |                     |                 |             |                       |                                   |                                   |                      |                       |                         |                   | Offset Well Error: | 0.00 ft |
| Reference             |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |                                   |                      |                       |                         |                   | Warning            |         |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |         |
| 5,000.00              | 4,759.50            | 4,813.82            | 4,780.39            | 21.78           | 12.36       | -155.06               | -117.81                           | 399.74                            | 854.02               | 828.00                | 26.02                   | 32.826            |                    |         |
| 5,100.00              | 4,853.31            | 4,905.67            | 4,871.85            | 22.36           | 12.58       | -155.74               | -120.58                           | 407.58                            | 883.66               | 857.03                | 26.63                   | 33.181            |                    |         |
| 5,200.00              | 4,948.53            | 5,000.00            | 4,965.92            | 22.88           | 12.80       | -156.35               | -122.92                           | 414.19                            | 909.90               | 882.70                | 27.20                   | 33.452            |                    |         |
| 5,300.00              | 5,045.00            | 5,091.62            | 5,057.38            | 23.35           | 13.00       | -156.86               | -124.70                           | 419.22                            | 932.70               | 904.99                | 27.71                   | 33.660            |                    |         |
| 5,400.00              | 5,142.52            | 5,185.50            | 5,151.18            | 23.75           | 13.19       | -157.32               | -126.01                           | 422.93                            | 952.02               | 923.86                | 28.16                   | 33.802            |                    |         |
| 5,500.00              | 5,240.91            | 5,279.85            | 5,245.50            | 24.10           | 13.37       | -157.72               | -126.82                           | 425.21                            | 967.84               | 939.28                | 28.56                   | 33.889            |                    |         |
| 5,600.00              | 5,339.98            | 5,374.57            | 5,340.21            | 24.38           | 13.53       | -158.07               | -127.11                           | 426.02                            | 980.12               | 951.23                | 28.89                   | 33.929            |                    |         |
| 5,700.00              | 5,439.55            | 5,473.91            | 5,439.55            | 24.61           | 13.71       | -158.35               | -127.11                           | 426.03                            | 988.65               | 959.46                | 29.18                   | 33.877            |                    |         |
| 5,800.00              | 5,539.43            | 5,573.79            | 5,539.43            | 24.77           | 13.90       | -158.49               | -127.11                           | 426.03                            | 993.13               | 963.68                | 29.45                   | 33.724            |                    |         |
| 5,860.58              | 5,600.00            | 5,634.36            | 5,600.00            | 24.84           | 14.01       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 964.29                | 29.59                   | 33.591            |                    |         |
| 5,900.00              | 5,639.42            | 5,673.78            | 5,639.42            | 24.88           | 14.08       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 964.16                | 29.72                   | 33.440            |                    |         |
| 6,000.00              | 5,739.42            | 5,773.78            | 5,739.42            | 24.98           | 14.27       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 963.81                | 30.07                   | 33.054            |                    |         |
| 6,100.00              | 5,839.42            | 5,873.78            | 5,839.42            | 25.08           | 14.46       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 963.46                | 30.42                   | 32.674            |                    |         |
| 6,200.00              | 5,939.42            | 5,973.78            | 5,939.42            | 25.18           | 14.65       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 963.11                | 30.77                   | 32.300            |                    |         |
| 6,300.00              | 6,039.42            | 6,073.78            | 6,039.42            | 25.29           | 14.84       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 962.75                | 31.13                   | 31.931            |                    |         |
| 6,400.00              | 6,139.42            | 6,173.78            | 6,139.42            | 25.40           | 15.03       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 962.39                | 31.48                   | 31.569            |                    |         |
| 6,500.00              | 6,239.42            | 6,273.78            | 6,239.42            | 25.50           | 15.22       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 962.03                | 31.84                   | 31.213            |                    |         |
| 6,600.00              | 6,339.42            | 6,373.78            | 6,339.42            | 25.61           | 15.42       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 961.67                | 32.20                   | 30.862            |                    |         |
| 6,700.00              | 6,439.42            | 6,473.78            | 6,439.42            | 25.73           | 15.61       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 961.31                | 32.57                   | 30.517            |                    |         |
| 6,800.00              | 6,539.42            | 6,573.78            | 6,539.42            | 25.84           | 15.81       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 960.94                | 32.93                   | 30.178            |                    |         |
| 6,900.00              | 6,639.42            | 6,673.78            | 6,639.42            | 25.95           | 16.00       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 960.58                | 33.30                   | 29.845            |                    |         |
| 7,000.00              | 6,739.42            | 6,773.78            | 6,739.42            | 26.07           | 16.20       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 960.21                | 33.67                   | 29.517            |                    |         |
| 7,100.00              | 6,839.42            | 6,873.78            | 6,839.42            | 26.19           | 16.39       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 959.83                | 34.04                   | 29.195            |                    |         |
| 7,200.00              | 6,939.42            | 6,973.78            | 6,939.42            | 26.31           | 16.59       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 959.46                | 34.42                   | 28.878            |                    |         |
| 7,300.00              | 7,039.42            | 7,073.78            | 7,039.42            | 26.43           | 16.79       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 959.08                | 34.79                   | 28.567            |                    |         |
| 7,400.00              | 7,139.42            | 7,173.78            | 7,139.42            | 26.55           | 16.99       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 958.71                | 35.17                   | 28.260            |                    |         |
| 7,500.00              | 7,239.42            | 7,273.78            | 7,239.42            | 26.67           | 17.19       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 958.33                | 35.55                   | 27.959            |                    |         |
| 7,600.00              | 7,339.42            | 7,373.78            | 7,339.42            | 26.79           | 17.39       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 957.95                | 35.93                   | 27.664            |                    |         |
| 7,700.00              | 7,439.42            | 7,473.78            | 7,439.42            | 26.92           | 17.59       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 957.57                | 36.31                   | 27.373            |                    |         |
| 7,800.00              | 7,539.42            | 7,573.78            | 7,539.42            | 27.05           | 17.79       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 957.18                | 36.69                   | 27.087            |                    |         |
| 7,900.00              | 7,639.42            | 7,673.78            | 7,639.42            | 27.17           | 17.99       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 956.80                | 37.08                   | 26.806            |                    |         |
| 8,000.00              | 7,739.42            | 7,773.78            | 7,739.42            | 27.30           | 18.20       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 956.41                | 37.46                   | 26.529            |                    |         |
| 8,100.00              | 7,839.42            | 7,873.78            | 7,839.42            | 27.43           | 18.40       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 956.03                | 37.85                   | 26.258            |                    |         |
| 8,200.00              | 7,939.42            | 7,973.78            | 7,939.42            | 27.57           | 18.60       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 955.64                | 38.24                   | 25.991            |                    |         |
| 8,300.00              | 8,039.42            | 8,073.78            | 8,039.42            | 27.70           | 18.81       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 955.25                | 38.63                   | 25.728            |                    |         |
| 8,400.00              | 8,139.42            | 8,173.78            | 8,139.42            | 27.83           | 19.01       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 954.86                | 39.02                   | 25.470            |                    |         |
| 8,500.00              | 8,239.42            | 8,273.78            | 8,239.42            | 27.97           | 19.22       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 954.46                | 39.41                   | 25.216            |                    |         |
| 8,600.00              | 8,339.42            | 8,373.78            | 8,339.42            | 28.10           | 19.42       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 954.07                | 39.81                   | 24.967            |                    |         |
| 8,700.00              | 8,439.42            | 8,473.78            | 8,439.42            | 28.24           | 19.63       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 953.67                | 40.20                   | 24.722            |                    |         |
| 8,800.00              | 8,539.42            | 8,573.78            | 8,539.42            | 28.38           | 19.84       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 953.28                | 40.60                   | 24.480            |                    |         |
| 8,900.00              | 8,639.42            | 8,673.78            | 8,639.42            | 28.52           | 20.04       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 952.88                | 41.00                   | 24.243            |                    |         |
| 9,000.00              | 8,739.42            | 8,773.78            | 8,739.42            | 28.66           | 20.25       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 952.48                | 41.39                   | 24.010            |                    |         |
| 9,100.00              | 8,839.42            | 8,873.78            | 8,839.42            | 28.80           | 20.46       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 952.08                | 41.79                   | 23.781            |                    |         |
| 9,200.00              | 8,939.42            | 8,973.78            | 8,939.42            | 28.95           | 20.67       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 951.68                | 42.19                   | 23.555            |                    |         |
| 9,300.00              | 9,039.42            | 9,073.78            | 9,039.42            | 29.09           | 20.87       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 951.28                | 42.59                   | 23.333            |                    |         |
| 9,400.00              | 9,139.42            | 9,173.78            | 9,139.42            | 29.23           | 21.08       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 950.88                | 43.00                   | 23.115            |                    |         |
| 9,500.00              | 9,239.42            | 9,273.78            | 9,239.42            | 29.38           | 21.29       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 950.48                | 43.40                   | 22.900            |                    |         |
| 9,600.00              | 9,339.42            | 9,373.78            | 9,339.42            | 29.53           | 21.50       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 950.07                | 43.80                   | 22.689            |                    |         |
| 9,700.00              | 9,439.42            | 9,473.78            | 9,439.42            | 29.67           | 21.71       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 949.67                | 44.21                   | 22.481            |                    |         |
| 9,800.00              | 9,539.42            | 9,573.78            | 9,539.42            | 29.82           | 21.92       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 949.26                | 44.61                   | 22.277            |                    |         |
| 9,860.58              | 9,600.00            | 9,634.36            | 9,600.00            | 29.91           | 22.05       | 3.05                  | -127.11                           | 426.03                            | 993.88               | 949.02                | 44.86                   | 22.155            |                    |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well NBU 921-25M2DS                   |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5021.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | NBU 921-25L PAD              | <b>MD Reference:</b>                | WELL @ 5021.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | NBU 921-25M2DS               | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | NBU 921-25M2DS               | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | Design #1                    | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design         |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Site Error: | 0.00 ft |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 0-MWD |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Well Error: | 0.00 ft |
| Reference             |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         |                   | Warning            |         |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |         |
| 0.00                  | 0.00                | 0.00                | 0.00                | 0.00            | 0.00        | 75.22                 | 5.10                              | 19.33      | 19.99                |                       |                         |                   |                    |         |
| 100.00                | 100.00              | 100.00              | 100.00              | 0.09            | 0.09        | 75.22                 | 5.10                              | 19.33      | 19.99                | 19.80                 | 0.18                    | 108.448           |                    |         |
| 200.00                | 200.00              | 200.00              | 200.00              | 0.32            | 0.32        | 75.22                 | 5.10                              | 19.33      | 19.99                | 19.35                 | 0.63                    | 31.535            |                    |         |
| 300.00                | 300.00              | 300.00              | 300.00              | 0.54            | 0.54        | 75.22                 | 5.10                              | 19.33      | 19.99                | 18.90                 | 1.08                    | 18.450            |                    |         |
| 400.00                | 400.00              | 400.00              | 400.00              | 0.77            | 0.77        | 75.22                 | 5.10                              | 19.33      | 19.99                | 18.45                 | 1.53                    | 13.039            |                    |         |
| 500.00                | 500.00              | 500.00              | 500.00              | 0.99            | 0.99        | 75.22                 | 5.10                              | 19.33      | 19.99                | 18.01                 | 1.98                    | 10.082            |                    |         |
| 600.00                | 600.00              | 600.00              | 600.00              | 1.22            | 1.22        | 75.22                 | 5.10                              | 19.33      | 19.99                | 17.56                 | 2.43                    | 8.219             |                    |         |
| 700.00                | 700.00              | 700.00              | 700.00              | 1.44            | 1.44        | 75.22                 | 5.10                              | 19.33      | 19.99                | 17.11                 | 2.88                    | 6.937             |                    |         |
| 800.00                | 800.00              | 800.00              | 800.00              | 1.67            | 1.67        | 75.22                 | 5.10                              | 19.33      | 19.99                | 16.66                 | 3.33                    | 6.000             |                    |         |
| 900.00                | 900.00              | 900.00              | 900.00              | 1.89            | 1.89        | 75.22                 | 5.10                              | 19.33      | 19.99                | 16.21                 | 3.78                    | 5.287             |                    |         |
| 1,000.00              | 1,000.00            | 1,000.00            | 1,000.00            | 2.12            | 2.12        | 75.22                 | 5.10                              | 19.33      | 19.99                | 15.76                 | 4.23                    | 4.725             |                    |         |
| 1,100.00              | 1,100.00            | 1,100.00            | 1,100.00            | 2.34            | 2.34        | 75.22                 | 5.10                              | 19.33      | 19.99                | 15.31                 | 4.68                    | 4.271             |                    |         |
| 1,200.00              | 1,200.00            | 1,200.00            | 1,200.00            | 2.56            | 2.56        | 75.22                 | 5.10                              | 19.33      | 19.99                | 14.86                 | 5.13                    | 3.897             |                    |         |
| 1,300.00              | 1,300.00            | 1,300.00            | 1,300.00            | 2.79            | 2.79        | 75.22                 | 5.10                              | 19.33      | 19.99                | 14.41                 | 5.58                    | 3.583             |                    |         |
| 1,400.00              | 1,400.00            | 1,400.00            | 1,400.00            | 3.01            | 3.01        | 75.22                 | 5.10                              | 19.33      | 19.99                | 13.96                 | 6.03                    | 3.316             |                    |         |
| 1,500.00              | 1,500.00            | 1,500.00            | 1,500.00            | 3.24            | 3.24        | 75.22                 | 5.10                              | 19.33      | 19.99                | 13.51                 | 6.48                    | 3.086             |                    |         |
| 1,600.00              | 1,600.00            | 1,600.00            | 1,600.00            | 3.46            | 3.46        | 75.22                 | 5.10                              | 19.33      | 19.99                | 13.06                 | 6.93                    | 2.885             |                    |         |
| 1,700.00              | 1,700.00            | 1,700.00            | 1,700.00            | 3.69            | 3.69        | 75.22                 | 5.10                              | 19.33      | 19.99                | 12.61                 | 7.38                    | 2.710             |                    |         |
| 1,800.00              | 1,800.00            | 1,800.00            | 1,800.00            | 3.91            | 3.91        | 75.22                 | 5.10                              | 19.33      | 19.99                | 12.16                 | 7.83                    | 2.554             |                    |         |
| 1,900.00              | 1,900.00            | 1,900.00            | 1,900.00            | 4.14            | 4.14        | 75.22                 | 5.10                              | 19.33      | 19.99                | 11.71                 | 8.28                    | 2.415             |                    |         |
| 2,000.00              | 2,000.00            | 2,000.00            | 2,000.00            | 4.36            | 4.36        | 75.22                 | 5.10                              | 19.33      | 19.99                | 11.26                 | 8.73                    | 2.291             |                    |         |
| 2,100.00              | 2,100.00            | 2,100.00            | 2,100.00            | 4.59            | 4.59        | 75.22                 | 5.10                              | 19.33      | 19.99                | 10.81                 | 9.17                    | 2.179             |                    |         |
| 2,200.00              | 2,200.00            | 2,200.00            | 2,200.00            | 4.81            | 4.81        | 75.22                 | 5.10                              | 19.33      | 19.99                | 10.36                 | 9.62                    | 2.077             |                    |         |
| 2,300.00              | 2,300.00            | 2,300.00            | 2,300.00            | 5.04            | 5.04        | 75.22                 | 5.10                              | 19.33      | 19.99                | 9.91                  | 10.07                   | 1.984             |                    |         |
| 2,400.00              | 2,400.00            | 2,400.00            | 2,400.00            | 5.26            | 5.26        | 75.22                 | 5.10                              | 19.33      | 19.99                | 9.46                  | 10.52                   | 1.899 CC, ES      |                    |         |
| 2,500.00              | 2,499.95            | 2,499.76            | 2,499.73            | 5.46            | 5.46        | -87.80                | 3.24                              | 20.45      | 20.44                | 9.52                  | 10.92                   | 1.872 SF          |                    |         |
| 2,600.00              | 2,599.63            | 2,599.53            | 2,599.28            | 5.63            | 5.64        | -91.78                | -2.34                             | 23.81      | 21.86                | 10.60                 | 11.26                   | 1.941             |                    |         |
| 2,700.00              | 2,698.77            | 2,699.33            | 2,698.48            | 5.82            | 5.82        | -97.32                | -11.62                            | 29.40      | 24.43                | 12.80                 | 11.63                   | 2.101             |                    |         |
| 2,800.00              | 2,797.08            | 2,799.18            | 2,797.16            | 6.02            | 6.02        | -103.28               | -24.60                            | 37.22      | 28.32                | 16.29                 | 12.02                   | 2.355             |                    |         |
| 2,900.00              | 2,894.31            | 2,899.08            | 2,895.14            | 6.26            | 6.25        | -108.82               | -41.27                            | 47.25      | 33.64                | 21.17                 | 12.47                   | 2.698             |                    |         |
| 3,000.00              | 2,990.18            | 2,999.05            | 2,992.26            | 6.55            | 6.51        | -113.51               | -61.59                            | 59.49      | 40.43                | 27.47                 | 12.97                   | 3.118             |                    |         |
| 3,100.00              | 3,084.43            | 3,099.12            | 3,088.33            | 6.91            | 6.83        | -117.31               | -85.54                            | 73.92      | 48.68                | 35.15                 | 13.54                   | 3.597             |                    |         |
| 3,200.00              | 3,176.81            | 3,199.29            | 3,183.19            | 7.36            | 7.21        | -120.29               | -113.09                           | 90.52      | 58.36                | 44.16                 | 14.19                   | 4.111             |                    |         |
| 3,300.00              | 3,267.06            | 3,299.07            | 3,276.36            | 7.90            | 7.66        | -122.98               | -143.65                           | 108.92     | 69.60                | 54.66                 | 14.94                   | 4.658             |                    |         |
| 3,377.59              | 3,335.46            | 3,375.77            | 3,347.83            | 8.39            | 8.04        | -126.25               | -167.51                           | 123.29     | 80.30                | 64.81                 | 15.50                   | 5.182             |                    |         |
| 3,400.00              | 3,354.99            | 3,397.87            | 3,368.42            | 8.54            | 8.15        | -127.35               | -174.38                           | 127.43     | 83.72                | 68.05                 | 15.66                   | 5.344             |                    |         |
| 3,500.00              | 3,442.18            | 3,496.45            | 3,460.27            | 9.26            | 8.68        | -131.33               | -205.05                           | 145.91     | 99.24                | 82.79                 | 16.46                   | 6.031             |                    |         |
| 3,600.00              | 3,529.36            | 3,595.04            | 3,552.13            | 10.02           | 9.24        | -134.23               | -235.72                           | 164.38     | 115.11               | 97.82                 | 17.29                   | 6.657             |                    |         |
| 3,700.00              | 3,616.54            | 3,693.63            | 3,643.99            | 10.82           | 9.82        | -136.42               | -266.39                           | 182.86     | 131.20               | 113.03                | 18.17                   | 7.222             |                    |         |
| 3,800.00              | 3,703.73            | 3,792.22            | 3,735.85            | 11.65           | 10.42       | -138.13               | -297.06                           | 201.33     | 147.43               | 128.36                | 19.07                   | 7.732             |                    |         |
| 3,900.00              | 3,790.91            | 3,890.81            | 3,827.70            | 12.50           | 11.04       | -139.50               | -327.73                           | 219.80     | 163.77               | 143.77                | 20.00                   | 8.190             |                    |         |
| 4,000.00              | 3,878.09            | 3,989.40            | 3,919.56            | 13.37           | 11.67       | -140.63               | -358.40                           | 238.28     | 180.18               | 159.23                | 20.94                   | 8.603             |                    |         |
| 4,100.00              | 3,965.28            | 4,087.98            | 4,011.42            | 14.26           | 12.32       | -141.56               | -389.07                           | 256.75     | 196.64               | 174.73                | 21.91                   | 8.975             |                    |         |
| 4,200.00              | 4,052.46            | 4,186.57            | 4,103.27            | 15.16           | 12.97       | -142.35               | -419.74                           | 275.22     | 213.15               | 190.26                | 22.89                   | 9.311             |                    |         |
| 4,300.00              | 4,139.64            | 4,284.64            | 4,194.66            | 16.07           | 13.63       | -143.03               | -450.24                           | 293.59     | 229.71               | 205.83                | 23.88                   | 9.620             |                    |         |
| 4,400.00              | 4,226.83            | 4,377.76            | 4,282.06            | 16.98           | 14.13       | -143.91               | -477.74                           | 310.16     | 247.59               | 222.87                | 24.71                   | 10.019            |                    |         |
| 4,500.00              | 4,314.01            | 4,469.87            | 4,369.50            | 17.91           | 14.59       | -145.13               | -502.54                           | 325.09     | 267.71               | 242.28                | 25.42                   | 10.530            |                    |         |
| 4,600.00              | 4,401.19            | 4,560.81            | 4,456.69            | 18.84           | 15.02       | -146.60               | -524.64                           | 338.41     | 290.15               | 264.12                | 26.03                   | 11.148            |                    |         |
| 4,687.47              | 4,477.45            | 4,639.27            | 4,532.55            | 19.66           | 15.37       | -148.01               | -541.80                           | 348.74     | 311.75               | 285.28                | 26.48                   | 11.774            |                    |         |
| 4,700.00              | 4,488.39            | 4,650.43            | 4,543.39            | 19.77           | 15.42       | -148.26               | -544.10                           | 350.13     | 314.97               | 288.43                | 26.54                   | 11.867            |                    |         |
| 4,800.00              | 4,576.87            | 4,739.29            | 4,630.00            | 20.48           | 15.78       | -150.07               | -561.09                           | 360.36     | 340.03               | 313.01                | 27.02                   | 12.586            |                    |         |
| 4,900.00              | 4,667.30            | 4,827.80            | 4,716.85            | 21.16           | 16.11       | -151.62               | -575.71                           | 369.17     | 363.88               | 336.40                | 27.48                   | 13.242            |                    |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Weatherford International Ltd.**  
Anticollision Report



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well NBU 921-25M2DS                   |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5021.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | NBU 921-25L PAD              | <b>MD Reference:</b>                | WELL @ 5021.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | NBU 921-25M2DS               | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | NBU 921-25M2DS               | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | Design #1                    | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design NBU 921-25L PAD - NBU 921-25M2AS - NBU 921-25M2AS - Design #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Site Error: | 0.00 ft |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 0-MWD   |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Well Error: | 0.00 ft |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         |                   | Warning            |         |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |         |
| 5,000.00  | 4,759.50            | 4,916.00            | 4,803.86            | 21.78           | 16.40       | -152.97               | -587.99                           | 376.57     | 386.45               | 358.54                | 27.92                   | 13.844            |                    |         |
| 5,100.00  | 4,853.31            | 5,000.00            | 4,887.12            | 22.36           | 16.66       | -154.12               | -597.55                           | 382.32     | 407.73               | 379.41                | 28.32                   | 14.399            |                    |         |
| 5,200.00  | 4,948.53            | 5,091.49            | 4,978.13            | 22.88           | 16.89       | -155.23               | -605.58                           | 387.16     | 427.60               | 398.93                | 28.67                   | 14.916            |                    |         |
| 5,300.00  | 5,045.00            | 5,178.83            | 5,065.24            | 23.35           | 17.08       | -156.19               | -610.91                           | 390.37     | 446.10               | 417.13                | 28.97                   | 15.401            |                    |         |
| 5,400.00  | 5,142.52            | 5,265.92            | 5,152.26            | 23.75           | 17.24       | -157.08               | -613.97                           | 392.21     | 463.18               | 433.97                | 29.21                   | 15.857            |                    |         |
| 5,500.00  | 5,240.91            | 5,354.58            | 5,240.91            | 24.10           | 17.37       | -157.90               | -614.78                           | 392.70     | 478.79               | 449.40                | 29.39                   | 16.289            |                    |         |
| 5,600.00  | 5,339.98            | 5,453.66            | 5,339.98            | 24.38           | 17.50       | -158.61               | -614.78                           | 392.70     | 491.35               | 461.79                | 29.56                   | 16.622            |                    |         |
| 5,700.00  | 5,439.55            | 5,553.23            | 5,439.55            | 24.61           | 17.64       | -159.07               | -614.78                           | 392.70     | 499.91               | 470.18                | 29.74                   | 16.811            |                    |         |
| 5,800.00  | 5,539.43            | 5,653.10            | 5,539.43            | 24.77           | 17.78       | -159.31               | -614.78                           | 392.70     | 504.42               | 474.51                | 29.91                   | 16.863            |                    |         |
| 5,860.58  | 5,600.00            | 5,713.67            | 5,600.00            | 24.84           | 17.87       | 2.22                  | -614.78                           | 392.70     | 505.17               | 475.16                | 30.01                   | 16.831            |                    |         |
| 5,900.00  | 5,639.42            | 5,753.10            | 5,639.42            | 24.88           | 17.92       | 2.22                  | -614.78                           | 392.70     | 505.17               | 475.03                | 30.14                   | 16.759            |                    |         |
| 6,000.00  | 5,739.42            | 5,853.10            | 5,739.42            | 24.98           | 18.07       | 2.22                  | -614.78                           | 392.70     | 505.17               | 474.69                | 30.48                   | 16.573            |                    |         |
| 6,100.00  | 5,839.42            | 5,953.10            | 5,839.42            | 25.08           | 18.21       | 2.22                  | -614.78                           | 392.70     | 505.17               | 474.35                | 30.82                   | 16.390            |                    |         |
| 6,200.00  | 5,939.42            | 6,053.10            | 5,939.42            | 25.18           | 18.36       | 2.22                  | -614.78                           | 392.70     | 505.17               | 474.01                | 31.16                   | 16.210            |                    |         |
| 6,300.00  | 6,039.42            | 6,153.10            | 6,039.42            | 25.29           | 18.51       | 2.22                  | -614.78                           | 392.70     | 505.17               | 473.66                | 31.51                   | 16.032            |                    |         |
| 6,400.00  | 6,139.42            | 6,253.10            | 6,139.42            | 25.40           | 18.66       | 2.22                  | -614.78                           | 392.70     | 505.17               | 473.31                | 31.86                   | 15.857            |                    |         |
| 6,500.00  | 6,239.42            | 6,353.10            | 6,239.42            | 25.50           | 18.81       | 2.22                  | -614.78                           | 392.70     | 505.17               | 472.96                | 32.21                   | 15.684            |                    |         |
| 6,600.00  | 6,339.42            | 6,453.10            | 6,339.42            | 25.61           | 18.97       | 2.22                  | -614.78                           | 392.70     | 505.17               | 472.61                | 32.56                   | 15.514            |                    |         |
| 6,700.00  | 6,439.42            | 6,553.10            | 6,439.42            | 25.73           | 19.12       | 2.22                  | -614.78                           | 392.70     | 505.17               | 472.26                | 32.92                   | 15.347            |                    |         |
| 6,800.00  | 6,539.42            | 6,653.10            | 6,539.42            | 25.84           | 19.28       | 2.22                  | -614.78                           | 392.70     | 505.17               | 471.90                | 33.27                   | 15.182            |                    |         |
| 6,900.00  | 6,639.42            | 6,753.10            | 6,639.42            | 25.95           | 19.44       | 2.22                  | -614.78                           | 392.70     | 505.17               | 471.54                | 33.63                   | 15.020            |                    |         |
| 7,000.00  | 6,739.42            | 6,853.10            | 6,739.42            | 26.07           | 19.60       | 2.22                  | -614.78                           | 392.70     | 505.17               | 471.18                | 34.00                   | 14.860            |                    |         |
| 7,100.00  | 6,839.42            | 6,953.10            | 6,839.42            | 26.19           | 19.76       | 2.22                  | -614.78                           | 392.70     | 505.17               | 470.81                | 34.36                   | 14.702            |                    |         |
| 7,200.00  | 6,939.42            | 7,053.10            | 6,939.42            | 26.31           | 19.92       | 2.22                  | -614.78                           | 392.70     | 505.17               | 470.45                | 34.73                   | 14.547            |                    |         |
| 7,300.00  | 7,039.42            | 7,153.10            | 7,039.42            | 26.43           | 20.08       | 2.22                  | -614.78                           | 392.70     | 505.17               | 470.08                | 35.09                   | 14.395            |                    |         |
| 7,400.00  | 7,139.42            | 7,253.10            | 7,139.42            | 26.55           | 20.24       | 2.22                  | -614.78                           | 392.70     | 505.17               | 469.71                | 35.46                   | 14.245            |                    |         |
| 7,500.00  | 7,239.42            | 7,353.10            | 7,239.42            | 26.67           | 20.41       | 2.22                  | -614.78                           | 392.70     | 505.17               | 469.34                | 35.84                   | 14.097            |                    |         |
| 7,600.00  | 7,339.42            | 7,453.10            | 7,339.42            | 26.79           | 20.57       | 2.22                  | -614.78                           | 392.70     | 505.17               | 468.96                | 36.21                   | 13.952            |                    |         |
| 7,700.00  | 7,439.42            | 7,553.10            | 7,439.42            | 26.92           | 20.74       | 2.22                  | -614.78                           | 392.70     | 505.17               | 468.59                | 36.58                   | 13.808            |                    |         |
| 7,800.00  | 7,539.42            | 7,653.10            | 7,539.42            | 27.05           | 20.91       | 2.22                  | -614.78                           | 392.70     | 505.17               | 468.21                | 36.96                   | 13.668            |                    |         |
| 7,900.00  | 7,639.42            | 7,753.10            | 7,639.42            | 27.17           | 21.08       | 2.22                  | -614.78                           | 392.70     | 505.17               | 467.83                | 37.34                   | 13.529            |                    |         |
| 8,000.00  | 7,739.42            | 7,853.10            | 7,739.42            | 27.30           | 21.25       | 2.22                  | -614.78                           | 392.70     | 505.17               | 467.45                | 37.72                   | 13.393            |                    |         |
| 8,100.00  | 7,839.42            | 7,953.10            | 7,839.42            | 27.43           | 21.42       | 2.22                  | -614.78                           | 392.70     | 505.17               | 467.07                | 38.10                   | 13.259            |                    |         |
| 8,200.00  | 7,939.42            | 8,053.10            | 7,939.42            | 27.57           | 21.59       | 2.22                  | -614.78                           | 392.70     | 505.17               | 466.69                | 38.48                   | 13.127            |                    |         |
| 8,300.00  | 8,039.42            | 8,153.10            | 8,039.42            | 27.70           | 21.77       | 2.22                  | -614.78                           | 392.70     | 505.17               | 466.30                | 38.87                   | 12.997            |                    |         |
| 8,400.00  | 8,139.42            | 8,253.10            | 8,139.42            | 27.83           | 21.94       | 2.22                  | -614.78                           | 392.70     | 505.17               | 465.92                | 39.25                   | 12.870            |                    |         |
| 8,500.00  | 8,239.42            | 8,353.10            | 8,239.42            | 27.97           | 22.12       | 2.22                  | -614.78                           | 392.70     | 505.17               | 465.53                | 39.64                   | 12.744            |                    |         |
| 8,600.00  | 8,339.42            | 8,453.10            | 8,339.42            | 28.10           | 22.29       | 2.22                  | -614.78                           | 392.70     | 505.17               | 465.14                | 40.03                   | 12.620            |                    |         |
| 8,700.00  | 8,439.42            | 8,553.10            | 8,439.42            | 28.24           | 22.47       | 2.22                  | -614.78                           | 392.70     | 505.17               | 464.75                | 40.42                   | 12.499            |                    |         |
| 8,800.00  | 8,539.42            | 8,653.10            | 8,539.42            | 28.38           | 22.65       | 2.22                  | -614.78                           | 392.70     | 505.17               | 464.36                | 40.81                   | 12.379            |                    |         |
| 8,900.00  | 8,639.42            | 8,753.10            | 8,639.42            | 28.52           | 22.83       | 2.22                  | -614.78                           | 392.70     | 505.17               | 463.97                | 41.20                   | 12.261            |                    |         |
| 9,000.00  | 8,739.42            | 8,853.10            | 8,739.42            | 28.66           | 23.01       | 2.22                  | -614.78                           | 392.70     | 505.17               | 463.58                | 41.59                   | 12.145            |                    |         |
| 9,100.00  | 8,839.42            | 8,953.10            | 8,839.42            | 28.80           | 23.19       | 2.22                  | -614.78                           | 392.70     | 505.17               | 463.18                | 41.99                   | 12.031            |                    |         |
| 9,200.00  | 8,939.42            | 9,053.10            | 8,939.42            | 28.95           | 23.37       | 2.22                  | -614.78                           | 392.70     | 505.17               | 462.79                | 42.38                   | 11.919            |                    |         |
| 9,300.00  | 9,039.42            | 9,153.10            | 9,039.42            | 29.09           | 23.55       | 2.22                  | -614.78                           | 392.70     | 505.17               | 462.39                | 42.78                   | 11.809            |                    |         |
| 9,400.00  | 9,139.42            | 9,253.10            | 9,139.42            | 29.23           | 23.73       | 2.22                  | -614.78                           | 392.70     | 505.17               | 462.00                | 43.18                   | 11.700            |                    |         |
| 9,500.00  | 9,239.42            | 9,353.10            | 9,239.42            | 29.38           | 23.91       | 2.22                  | -614.78                           | 392.70     | 505.17               | 461.60                | 43.58                   | 11.593            |                    |         |
| 9,600.00  | 9,339.42            | 9,453.10            | 9,339.42            | 29.53           | 24.10       | 2.22                  | -614.78                           | 392.70     | 505.17               | 461.20                | 43.98                   | 11.488            |                    |         |
| 9,700.00  | 9,439.42            | 9,553.10            | 9,439.42            | 29.67           | 24.28       | 2.22                  | -614.78                           | 392.70     | 505.17               | 460.80                | 44.38                   | 11.384            |                    |         |
| 9,800.00  | 9,539.42            | 9,653.10            | 9,539.42            | 29.82           | 24.47       | 2.22                  | -614.78                           | 392.70     | 505.17               | 460.40                | 44.78                   | 11.282            |                    |         |
| 9,860.58  | 9,600.00            | 9,713.67            | 9,600.00            | 29.91           | 24.58       | 2.22                  | -614.78                           | 392.70     | 505.17               | 460.15                | 45.02                   | 11.221            |                    |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Weatherford International Ltd.**  
Anticollision Report



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well NBU 921-25M2DS                   |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5021.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | NBU 921-25L PAD              | <b>MD Reference:</b>                | WELL @ 5021.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | NBU 921-25M2DS               | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | NBU 921-25M2DS               | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | Design #1                    | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design         |                     |                     |                     |                 |             |                       |                                   |                                   |                      |                       |                         |                   | Offset Site Error: | 0.00 ft |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|-----------------------------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 0-MWD |                     |                     |                     |                 |             |                       |                                   |                                   |                      |                       |                         |                   | Offset Well Error: | 0.00 ft |
| Reference             |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |                                   |                      |                       |                         |                   | Warning            |         |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |         |
| 0.00                  | 0.00                | 0.00                | 0.00                | 0.00            | 0.00        | -103.77               | -4.73                             | -19.33                            | 19.90                |                       |                         |                   |                    |         |
| 100.00                | 100.00              | 100.00              | 100.00              | 0.09            | 0.09        | -103.77               | -4.73                             | -19.33                            | 19.90                | 19.71                 | 0.18                    | 107.961           |                    |         |
| 200.00                | 200.00              | 200.00              | 200.00              | 0.32            | 0.32        | -103.77               | -4.73                             | -19.33                            | 19.90                | 19.26                 | 0.63                    | 31.393            |                    |         |
| 300.00                | 300.00              | 300.00              | 300.00              | 0.54            | 0.54        | -103.77               | -4.73                             | -19.33                            | 19.90                | 18.81                 | 1.08                    | 18.367            |                    |         |
| 400.00                | 400.00              | 400.00              | 400.00              | 0.77            | 0.77        | -103.77               | -4.73                             | -19.33                            | 19.90                | 18.37                 | 1.53                    | 12.981            |                    |         |
| 500.00                | 500.00              | 500.00              | 500.00              | 0.99            | 0.99        | -103.77               | -4.73                             | -19.33                            | 19.90                | 17.92                 | 1.98                    | 10.037            |                    |         |
| 600.00                | 600.00              | 600.00              | 600.00              | 1.22            | 1.22        | -103.77               | -4.73                             | -19.33                            | 19.90                | 17.47                 | 2.43                    | 8.182             |                    |         |
| 700.00                | 700.00              | 700.00              | 700.00              | 1.44            | 1.44        | -103.77               | -4.73                             | -19.33                            | 19.90                | 17.02                 | 2.88                    | 6.905             |                    |         |
| 800.00                | 800.00              | 800.00              | 800.00              | 1.67            | 1.67        | -103.77               | -4.73                             | -19.33                            | 19.90                | 16.57                 | 3.33                    | 5.974             |                    |         |
| 900.00                | 900.00              | 900.00              | 900.00              | 1.89            | 1.89        | -103.77               | -4.73                             | -19.33                            | 19.90                | 16.12                 | 3.78                    | 5.263             |                    |         |
| 1,000.00              | 1,000.00            | 1,000.00            | 1,000.00            | 2.12            | 2.12        | -103.77               | -4.73                             | -19.33                            | 19.90                | 15.67                 | 4.23                    | 4.704             |                    |         |
| 1,100.00              | 1,100.00            | 1,100.00            | 1,100.00            | 2.34            | 2.34        | -103.77               | -4.73                             | -19.33                            | 19.90                | 15.22                 | 4.68                    | 4.252             |                    |         |
| 1,200.00              | 1,200.00            | 1,200.00            | 1,200.00            | 2.56            | 2.56        | -103.77               | -4.73                             | -19.33                            | 19.90                | 14.77                 | 5.13                    | 3.879             |                    |         |
| 1,300.00              | 1,300.00            | 1,300.00            | 1,300.00            | 2.79            | 2.79        | -103.77               | -4.73                             | -19.33                            | 19.90                | 14.32                 | 5.58                    | 3.567             |                    |         |
| 1,400.00              | 1,400.00            | 1,400.00            | 1,400.00            | 3.01            | 3.01        | -103.77               | -4.73                             | -19.33                            | 19.90                | 13.87                 | 6.03                    | 3.301             |                    |         |
| 1,500.00              | 1,500.00            | 1,500.00            | 1,500.00            | 3.24            | 3.24        | -103.77               | -4.73                             | -19.33                            | 19.90                | 13.42                 | 6.48                    | 3.072             |                    |         |
| 1,600.00              | 1,600.00            | 1,600.00            | 1,600.00            | 3.46            | 3.46        | -103.77               | -4.73                             | -19.33                            | 19.90                | 12.97                 | 6.93                    | 2.872             |                    |         |
| 1,700.00              | 1,700.00            | 1,700.00            | 1,700.00            | 3.69            | 3.69        | -103.77               | -4.73                             | -19.33                            | 19.90                | 12.52                 | 7.38                    | 2.697             |                    |         |
| 1,800.00              | 1,800.00            | 1,800.00            | 1,800.00            | 3.91            | 3.91        | -103.77               | -4.73                             | -19.33                            | 19.90                | 12.07                 | 7.83                    | 2.542             |                    |         |
| 1,900.00              | 1,900.00            | 1,900.00            | 1,900.00            | 4.14            | 4.14        | -103.77               | -4.73                             | -19.33                            | 19.90                | 11.62                 | 8.28                    | 2.404             |                    |         |
| 2,000.00              | 2,000.00            | 2,000.00            | 2,000.00            | 4.36            | 4.36        | -103.77               | -4.73                             | -19.33                            | 19.90                | 11.17                 | 8.73                    | 2.280             |                    |         |
| 2,100.00              | 2,100.00            | 2,100.00            | 2,100.00            | 4.59            | 4.59        | -103.77               | -4.73                             | -19.33                            | 19.90                | 10.72                 | 9.17                    | 2.169             |                    |         |
| 2,200.00              | 2,200.00            | 2,200.00            | 2,200.00            | 4.81            | 4.81        | -103.77               | -4.73                             | -19.33                            | 19.90                | 10.27                 | 9.62                    | 2.067             |                    |         |
| 2,300.00              | 2,300.00            | 2,300.00            | 2,300.00            | 5.04            | 5.04        | -103.77               | -4.73                             | -19.33                            | 19.90                | 9.82                  | 10.07                   | 1.975             |                    |         |
| 2,400.00              | 2,400.00            | 2,400.00            | 2,400.00            | 5.26            | 5.26        | -103.77               | -4.73                             | -19.33                            | 19.90                | 9.37                  | 10.52                   | 1.891CC           |                    |         |
| 2,500.00              | 2,499.95            | 2,499.98            | 2,499.93            | 5.46            | 5.46        | 94.64                 | -7.29                             | -18.76                            | 20.17                | 9.26                  | 10.91                   | 1.848 ES, SF      |                    |         |
| 2,600.00              | 2,599.63            | 2,599.95            | 2,599.58            | 5.63            | 5.63        | 94.55                 | -14.94                            | -17.06                            | 20.98                | 9.73                  | 11.25                   | 1.864             |                    |         |
| 2,700.00              | 2,698.77            | 2,699.91            | 2,698.68            | 5.82            | 5.81        | 94.43                 | -27.68                            | -14.24                            | 22.33                | 10.72                 | 11.62                   | 1.923             |                    |         |
| 2,800.00              | 2,797.08            | 2,799.86            | 2,796.95            | 6.02            | 6.01        | 94.27                 | -45.45                            | -10.30                            | 24.22                | 12.20                 | 12.02                   | 2.015             |                    |         |
| 2,900.00              | 2,894.31            | 2,899.80            | 2,894.11            | 6.26            | 6.25        | 94.09                 | -68.22                            | -5.26                             | 26.64                | 14.13                 | 12.50                   | 2.131             |                    |         |
| 3,000.00              | 2,990.18            | 2,999.71            | 2,989.90            | 6.55            | 6.54        | 93.91                 | -95.91                            | 0.88                              | 29.58                | 16.49                 | 13.08                   | 2.261             |                    |         |
| 3,100.00              | 3,084.43            | 3,099.60            | 3,084.06            | 6.91            | 6.89        | 93.73                 | -128.44                           | 8.08                              | 33.03                | 19.23                 | 13.80                   | 2.394             |                    |         |
| 3,200.00              | 3,176.81            | 3,199.46            | 3,176.32            | 7.36            | 7.33        | 93.55                 | -165.73                           | 16.35                             | 36.99                | 22.31                 | 14.68                   | 2.520             |                    |         |
| 3,300.00              | 3,267.06            | 3,299.29            | 3,266.43            | 7.90            | 7.86        | 93.37                 | -207.65                           | 25.64                             | 41.45                | 25.70                 | 15.75                   | 2.632             |                    |         |
| 3,377.59              | 3,335.46            | 3,376.73            | 3,334.71            | 8.39            | 8.35        | 93.24                 | -243.31                           | 33.54                             | 45.24                | 28.51                 | 16.72                   | 2.705             |                    |         |
| 3,400.00              | 3,354.99            | 3,399.10            | 3,354.15            | 8.54            | 8.49        | 93.09                 | -254.10                           | 35.93                             | 46.38                | 29.36                 | 17.02                   | 2.725             |                    |         |
| 3,500.00              | 3,442.18            | 3,498.97            | 3,440.83            | 9.26            | 9.20        | 92.16                 | -302.52                           | 46.66                             | 51.49                | 33.04                 | 18.45                   | 2.791             |                    |         |
| 3,600.00              | 3,529.36            | 3,598.83            | 3,527.51            | 10.02           | 9.96        | 91.41                 | -350.95                           | 57.39                             | 56.60                | 36.64                 | 19.97                   | 2.835             |                    |         |
| 3,700.00              | 3,616.54            | 3,698.70            | 3,614.19            | 10.82           | 10.75       | 90.78                 | -399.37                           | 68.12                             | 61.73                | 40.17                 | 21.55                   | 2.864             |                    |         |
| 3,800.00              | 3,703.73            | 3,798.56            | 3,700.87            | 11.65           | 11.58       | 90.24                 | -447.79                           | 78.85                             | 66.86                | 43.66                 | 23.20                   | 2.882             |                    |         |
| 3,900.00              | 3,790.91            | 3,898.43            | 3,787.55            | 12.50           | 12.43       | 89.78                 | -496.22                           | 89.58                             | 72.00                | 47.11                 | 24.89                   | 2.892             |                    |         |
| 4,000.00              | 3,878.09            | 3,998.30            | 3,874.23            | 13.37           | 13.29       | 89.39                 | -544.64                           | 100.31                            | 77.14                | 50.52                 | 26.62                   | 2.898             |                    |         |
| 4,100.00              | 3,965.28            | 4,098.16            | 3,960.91            | 14.26           | 14.18       | 89.04                 | -593.07                           | 111.04                            | 82.28                | 53.90                 | 28.38                   | 2.900             |                    |         |
| 4,200.00              | 4,052.46            | 4,198.03            | 4,047.59            | 15.16           | 15.07       | 88.73                 | -641.49                           | 121.77                            | 87.43                | 57.27                 | 30.16                   | 2.899             |                    |         |
| 4,300.00              | 4,139.64            | 4,297.90            | 4,134.27            | 16.07           | 15.98       | 88.46                 | -689.91                           | 132.50                            | 92.58                | 60.62                 | 31.96                   | 2.896             |                    |         |
| 4,400.00              | 4,226.83            | 4,397.76            | 4,220.95            | 16.98           | 16.90       | 88.22                 | -738.34                           | 143.23                            | 97.73                | 63.95                 | 33.78                   | 2.893             |                    |         |
| 4,500.00              | 4,314.01            | 4,497.63            | 4,307.63            | 17.91           | 17.82       | 88.00                 | -786.76                           | 153.96                            | 102.88               | 67.27                 | 35.62                   | 2.889             |                    |         |
| 4,600.00              | 4,401.19            | 4,597.50            | 4,394.31            | 18.84           | 18.75       | 87.80                 | -835.18                           | 164.69                            | 108.04               | 70.57                 | 37.46                   | 2.884             |                    |         |
| 4,687.47              | 4,477.45            | 4,684.85            | 4,470.12            | 19.66           | 19.57       | 87.64                 | -877.54                           | 174.07                            | 112.55               | 73.46                 | 39.09                   | 2.879             |                    |         |
| 4,700.00              | 4,488.39            | 4,697.36            | 4,480.99            | 19.77           | 19.68       | 87.62                 | -883.61                           | 175.41                            | 113.19               | 73.89                 | 39.31                   | 2.880             |                    |         |
| 4,800.00              | 4,576.87            | 4,797.17            | 4,567.61            | 20.48           | 20.62       | 86.27                 | -932.00                           | 186.14                            | 118.50               | 77.62                 | 40.88                   | 2.898             |                    |         |
| 4,900.00              | 4,667.30            | 4,896.74            | 4,654.03            | 21.16           | 21.57       | 83.06                 | -980.28                           | 196.84                            | 124.34               | 82.09                 | 42.25                   | 2.943             |                    |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

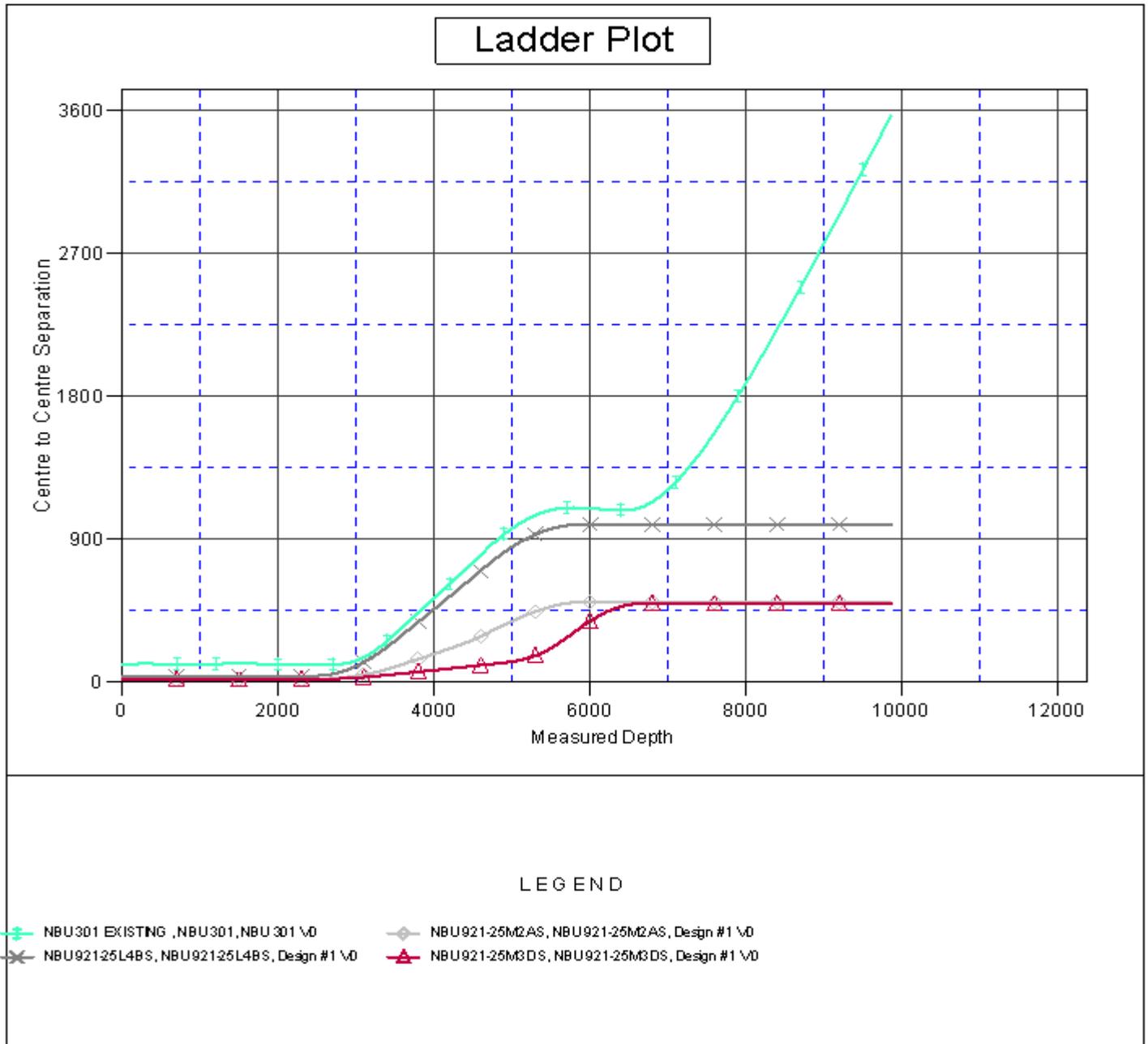


|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well NBU 921-25M2DS                   |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5021.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | NBU 921-25L PAD              | <b>MD Reference:</b>                | WELL @ 5021.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | NBU 921-25M2DS               | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | NBU 921-25M2DS               | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | Design #1                    | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design NBU 921-25L PAD - NBU 921-25M3DS - NBU 921-25M3DS - Design #1 |                     |                     |                     |                 |             |                       |                                   |                                   |                      |                       |                         |                   | Offset Site Error: | 0.00 ft |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|-----------------------------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 0-MWD   |                     |                     |                     |                 |             |                       |                                   |                                   |                      |                       |                         |                   | Offset Well Error: | 0.00 ft |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |                                   |                      |                       |                         |                   | Warning            |         |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |         |
| 5,000.00  | 4,759.50            | 4,995.88            | 4,740.08            | 21.78           | 22.51       | 78.35                 | -1,028.35                         | 207.49                            | 131.39               | 88.13                 | 43.26                   | 3.037             |                    |         |
| 5,100.00  | 4,853.31            | 5,094.40            | 4,825.60            | 22.36           | 23.45       | 72.54                 | -1,076.13                         | 218.07                            | 140.57               | 96.81                 | 43.76                   | 3.212             |                    |         |
| 5,200.00  | 4,948.53            | 5,192.12            | 4,910.41            | 22.88           | 24.38       | 66.12                 | -1,123.51                         | 228.57                            | 152.84               | 109.18                | 43.67                   | 3.500             |                    |         |
| 5,300.00  | 5,045.00            | 5,288.85            | 4,994.37            | 23.35           | 25.31       | 59.60                 | -1,170.41                         | 238.97                            | 169.08               | 126.05                | 43.03                   | 3.929             |                    |         |
| 5,400.00  | 5,142.52            | 5,384.41            | 5,077.31            | 23.75           | 26.22       | 53.38                 | -1,216.75                         | 249.23                            | 189.89               | 147.89                | 42.00                   | 4.521             |                    |         |
| 5,500.00  | 5,240.91            | 5,478.61            | 5,159.07            | 24.10           | 27.13       | 47.74                 | -1,262.42                         | 259.35                            | 215.59               | 174.82                | 40.77                   | 5.288             |                    |         |
| 5,600.00  | 5,339.98            | 5,571.28            | 5,239.50            | 24.38           | 28.02       | 42.79                 | -1,307.36                         | 269.31                            | 246.28               | 206.77                | 39.51                   | 6.234             |                    |         |
| 5,700.00  | 5,439.55            | 5,669.98            | 5,325.74            | 24.61           | 28.80       | 38.29                 | -1,354.22                         | 279.69                            | 280.97               | 242.81                | 38.16                   | 7.363             |                    |         |
| 5,800.00  | 5,539.43            | 5,773.25            | 5,418.02            | 24.77           | 29.51       | 34.58                 | -1,399.46                         | 289.72                            | 316.88               | 279.89                | 36.99                   | 8.567             |                    |         |
| 5,860.58  | 5,600.00            | 5,836.87            | 5,475.88            | 24.84           | 29.92       | -165.75               | -1,425.29                         | 295.44                            | 338.97               | 302.60                | 36.37                   | 9.320             |                    |         |
| 5,900.00  | 5,639.42            | 5,878.88            | 5,514.47            | 24.88           | 30.18       | -167.04               | -1,441.49                         | 299.03                            | 353.17               | 317.16                | 36.01                   | 9.808             |                    |         |
| 6,000.00  | 5,739.42            | 5,988.33            | 5,616.40            | 24.98           | 30.82       | -169.72               | -1,480.41                         | 307.65                            | 386.81               | 351.43                | 35.38                   | 10.933            |                    |         |
| 6,100.00  | 5,839.42            | 6,101.72            | 5,723.87            | 25.08           | 31.41       | -171.72               | -1,515.67                         | 315.47                            | 416.61               | 381.56                | 35.06                   | 11.884            |                    |         |
| 6,200.00  | 5,939.42            | 6,218.68            | 5,836.46            | 25.18           | 31.94       | -173.22               | -1,546.56                         | 322.31                            | 442.15               | 407.21                | 34.94                   | 12.653            |                    |         |
| 6,300.00  | 6,039.42            | 6,338.75            | 5,953.56            | 25.29           | 32.40       | -174.32               | -1,572.40                         | 328.04                            | 463.09               | 428.10                | 34.99                   | 13.236            |                    |         |
| 6,400.00  | 6,139.42            | 6,461.37            | 6,074.41            | 25.40           | 32.79       | -175.09               | -1,592.56                         | 332.51                            | 479.16               | 444.02                | 35.14                   | 13.635            |                    |         |
| 6,500.00  | 6,239.42            | 6,585.89            | 6,198.09            | 25.50           | 33.09       | -175.60               | -1,606.56                         | 335.61                            | 490.17               | 454.80                | 35.38                   | 13.856            |                    |         |
| 6,600.00  | 6,339.42            | 6,711.63            | 6,323.57            | 25.61           | 33.30       | -175.85               | -1,614.01                         | 337.26                            | 495.99               | 460.32                | 35.67                   | 13.904            |                    |         |
| 6,700.00  | 6,439.42            | 6,827.49            | 6,439.42            | 25.73           | 33.41       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 460.96                | 36.00                   | 13.806            |                    |         |
| 6,800.00  | 6,539.42            | 6,927.49            | 6,539.42            | 25.84           | 33.49       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 460.65                | 36.31                   | 13.686            |                    |         |
| 6,900.00  | 6,639.42            | 7,027.49            | 6,639.42            | 25.95           | 33.58       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 460.33                | 36.63                   | 13.568            |                    |         |
| 7,000.00  | 6,739.42            | 7,127.49            | 6,739.42            | 26.07           | 33.66       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 460.01                | 36.95                   | 13.450            |                    |         |
| 7,100.00  | 6,839.42            | 7,227.49            | 6,839.42            | 26.19           | 33.75       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 459.69                | 37.27                   | 13.334            |                    |         |
| 7,200.00  | 6,939.42            | 7,327.49            | 6,939.42            | 26.31           | 33.84       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 459.37                | 37.60                   | 13.219            |                    |         |
| 7,300.00  | 7,039.42            | 7,427.49            | 7,039.42            | 26.43           | 33.92       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 459.04                | 37.92                   | 13.104            |                    |         |
| 7,400.00  | 7,139.42            | 7,527.49            | 7,139.42            | 26.55           | 34.01       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 458.71                | 38.25                   | 12.991            |                    |         |
| 7,500.00  | 7,239.42            | 7,627.49            | 7,239.42            | 26.67           | 34.10       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 458.37                | 38.59                   | 12.879            |                    |         |
| 7,600.00  | 7,339.42            | 7,727.49            | 7,339.42            | 26.79           | 34.20       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 458.04                | 38.92                   | 12.768            |                    |         |
| 7,700.00  | 7,439.42            | 7,827.49            | 7,439.42            | 26.92           | 34.29       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 457.70                | 39.26                   | 12.659            |                    |         |
| 7,800.00  | 7,539.42            | 7,927.49            | 7,539.42            | 27.05           | 34.38       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 457.36                | 39.60                   | 12.550            |                    |         |
| 7,900.00  | 7,639.42            | 8,027.49            | 7,639.42            | 27.17           | 34.48       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 457.02                | 39.94                   | 12.443            |                    |         |
| 8,000.00  | 7,739.42            | 8,127.49            | 7,739.42            | 27.30           | 34.58       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 456.68                | 40.28                   | 12.337            |                    |         |
| 8,100.00  | 7,839.42            | 8,227.49            | 7,839.42            | 27.43           | 34.68       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 456.33                | 40.63                   | 12.232            |                    |         |
| 8,200.00  | 7,939.42            | 8,327.49            | 7,939.42            | 27.57           | 34.77       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 455.98                | 40.98                   | 12.128            |                    |         |
| 8,300.00  | 8,039.42            | 8,427.49            | 8,039.42            | 27.70           | 34.88       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 455.63                | 41.33                   | 12.025            |                    |         |
| 8,400.00  | 8,139.42            | 8,527.49            | 8,139.42            | 27.83           | 34.98       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 455.28                | 41.68                   | 11.924            |                    |         |
| 8,500.00  | 8,239.42            | 8,627.49            | 8,239.42            | 27.97           | 35.08       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 454.93                | 42.03                   | 11.824            |                    |         |
| 8,600.00  | 8,339.42            | 8,727.49            | 8,339.42            | 28.10           | 35.18       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 454.57                | 42.39                   | 11.724            |                    |         |
| 8,700.00  | 8,439.42            | 8,827.49            | 8,439.42            | 28.24           | 35.29       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 454.22                | 42.74                   | 11.626            |                    |         |
| 8,800.00  | 8,539.42            | 8,927.49            | 8,539.42            | 28.38           | 35.40       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 453.86                | 43.10                   | 11.530            |                    |         |
| 8,900.00  | 8,639.42            | 9,027.49            | 8,639.42            | 28.52           | 35.50       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 453.50                | 43.46                   | 11.434            |                    |         |
| 9,000.00  | 8,739.42            | 9,127.49            | 8,739.42            | 28.66           | 35.61       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 453.14                | 43.83                   | 11.340            |                    |         |
| 9,100.00  | 8,839.42            | 9,227.49            | 8,839.42            | 28.80           | 35.72       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 452.77                | 44.19                   | 11.246            |                    |         |
| 9,200.00  | 8,939.42            | 9,327.49            | 8,939.42            | 28.95           | 35.83       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 452.41                | 44.55                   | 11.154            |                    |         |
| 9,300.00  | 9,039.42            | 9,427.49            | 9,039.42            | 29.09           | 35.94       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 452.04                | 44.92                   | 11.063            |                    |         |
| 9,400.00  | 9,139.42            | 9,527.49            | 9,139.42            | 29.23           | 36.06       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 451.67                | 45.29                   | 10.973            |                    |         |
| 9,500.00  | 9,239.42            | 9,627.49            | 9,239.42            | 29.38           | 36.17       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 451.30                | 45.66                   | 10.884            |                    |         |
| 9,600.00  | 9,339.42            | 9,727.49            | 9,339.42            | 29.53           | 36.28       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 450.93                | 46.03                   | 10.797            |                    |         |
| 9,700.00  | 9,439.42            | 9,827.49            | 9,439.42            | 29.67           | 36.40       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 450.56                | 46.40                   | 10.710            |                    |         |
| 9,800.00  | 9,539.42            | 9,927.49            | 9,539.42            | 29.82           | 36.52       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 450.19                | 46.78                   | 10.624            |                    |         |
| 9,860.58  | 9,600.00            | 9,988.07            | 9,600.00            | 29.91           | 36.59       | -175.90               | -1,615.26                         | 337.53                            | 496.96               | 449.96                | 47.00                   | 10.573            |                    |         |

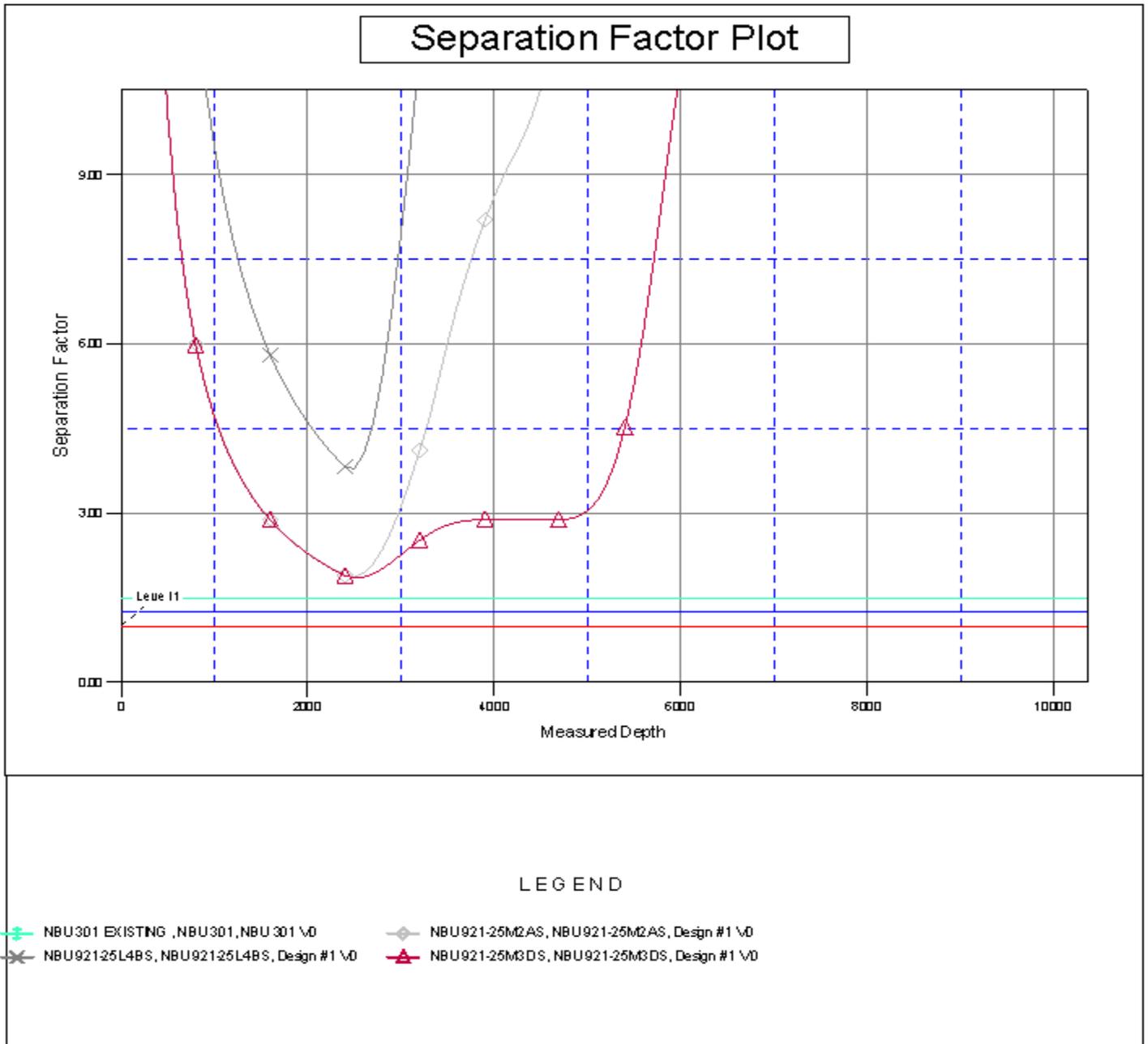
|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well NBU 921-25M2DS                   |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5021.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | NBU 921-25L PAD              | <b>MD Reference:</b>                | WELL @ 5021.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | NBU 921-25M2DS               | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | NBU 921-25M2DS               | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | Design #1                    | <b>Offset TVD Reference:</b>        | Offset Datum                          |

Reference Depths are relative to WELL @ 5021.00ft (Original Well Elev) Coordinates are relative to: NBU 921-25M2DS  
 Offset Depths are relative to Offset Datum Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N  
 Central Meridian is 111° 0' 0.000 W ° Grid Convergence at Surface is: 0.96°



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well NBU 921-25M2DS                   |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5021.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | NBU 921-25L PAD              | <b>MD Reference:</b>                | WELL @ 5021.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | NBU 921-25M2DS               | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | NBU 921-25M2DS               | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | Design #1                    | <b>Offset TVD Reference:</b>        | Offset Datum                          |

Reference Depths are relative to WELL @ 5021.00ft (Original Well Elev) Coordinates are relative to: NBU 921-25M2DS  
 Offset Depths are relative to Offset Datum Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N  
 Central Meridian is 111° 0' 0.000 W ° Grid Convergence at Surface is: 0.96°





# Weatherford®

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## **Contact Information**

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### **Well Planning Denver Office:**

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#### **Robert Scott**

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**NBU 921-25M2DS**

Pad: NBU 921-25L

Surface: 1,860' FSL, 251' FWL (NW/4SW/4)

BHL: 740' FSL 623' FWL (SW/4SW/4)

Sec. 25 T9S R21E

Uintah, Utah

Mineral Lease: UO 01194

**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      | 1,469'       |                 |
| Birds Nest       | 1,763'       | Water           |
| Mahogany         | 2,256'       | Water           |
| Wasatch          | 4,716'       | Gas             |
| Mesaverde        | 7,427'       | Gas             |
| MVU2             | 8,384'       | Gas             |
| MVL1             | 8,986'       | Gas             |
| TVD              | 9,600'       |                 |
| TD               | 9,861'       |                 |

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

*Please refer to the attached Drilling Program.*

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

*Please refer to the attached Drilling Program.*

5. **Drilling Fluids Program:**

*Please refer to the attached Drilling Program.*

6. **Evaluation Program:**

*Please refer to the attached Drilling Program.*

7. **Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 9,861' TD, approximately equals 5,888 psi (calculated at 0.60 psi/foot).

Maximum anticipated surface pressure equals approximately 3,620 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

**8. Anticipated Starting Dates:**

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

**9. Variations:**

*Please refer to the attached Drilling Program.*

*Onshore Order #2 – Air Drilling Variance*

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

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

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

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

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

***Background***

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

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

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

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

***Variance for BOPE Requirements***

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

***Variance for Mud Material Requirements***

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

***Variance for Special Drilling Operation (surface equipment placement) Requirements***

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

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

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

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

***Conclusion***

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

**10. Other Information:**

*Please refer to the attached Drilling Program.*





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

**CASING PROGRAM**

|            | SIZE   | INTERVAL   | WT.   | GR.  | CPLG. | DESIGN FACTORS |          |         |
|------------|--------|------------|-------|------|-------|----------------|----------|---------|
|            |        |            |       |      |       | BURST          | COLLAPSE | TENSION |
| CONDUCTOR  | 14"    | 0-40'      |       |      |       | 3,520          | 2,020    | 453,000 |
| SURFACE    | 9-5/8" | 0 to 2,460 | 36.00 | J-55 | LTC   | 0.92           | 1.75     | 6.51    |
| PRODUCTION | 4-1/2" | 0 to 9,861 | 11.60 | I-80 | LTC   | 2.09           | 1.09     | 2.01    |

- 1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))
- 2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)  
 (Burst Assumptions: TD = 11.7 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 3,620 psi**
- 3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD  
 (Burst Assumptions: TD = 11.7 ppg) 0.60 psi/ft = bottomhole gradient  
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)  
**MABHP 5,888 psi**

**CEMENT PROGRAM**

|                 |                      | FT. OF FILL   | DESCRIPTION  | SACKS   | EXCESS | WEIGHT | YIELD |
|-----------------|----------------------|---|--|---------|--------|--------|-------|
| SURFACE         | LEAD                 | 500'  | Premium cmt + 2% CaCl<br>+ 0.25 pps flocele  | 215     | 60%    | 15.60  | 1.18  |
| <b>Option 1</b> | TOP OUT CMT (6 jobs) | 1,200'  | 20 gals sodium silicate + Premium cmt<br>+ 2% CaCl + 0.25 pps flocele<br>Premium cmt + 2% CaCl   | 380     | 0%     | 15.60  | 1.18  |
| SURFACE         |                      | <b>NOTE: If well will circulate water to surface, option 2 will be utilized</b> |  |         |        |        |       |
| <b>Option 2</b> | LEAD                 | 1,960'  | 65/35 Poz + 6% Gel + 10 pps gilsonite<br>+ 0.25 pps Flocele + 3% salt BWOW                       | 460     | 35%    | 12.60  | 1.81  |
|                 | TAIL                 | 500'  | Premium cmt + 2% CaCl<br>+ 0.25 pps flocele  | 180     | 35%    | 15.60  | 1.18  |
|                 | TOP OUT CMT          | as required   | Premium cmt + 2% CaCl  | as req. |        | 15.60  | 1.18  |
| PRODUCTION      | LEAD                 | 4,211'  | Premium Lite II + 3% KCl + 0.25 pps<br>celloflake + 5 pps gilsonite + 10% gel<br>+ 0.5% extender | 400     | 40%    | 11.00  | 3.38  |
|                 | TAIL                 | 5,650'  | 50/50 Poz/G + 10% salt + 2% gel<br>+ 0.1% R-3  | 1,380   | 40%    | 14.30  | 1.31  |

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

**FLOAT EQUIPMENT & CENTRALIZERS**

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

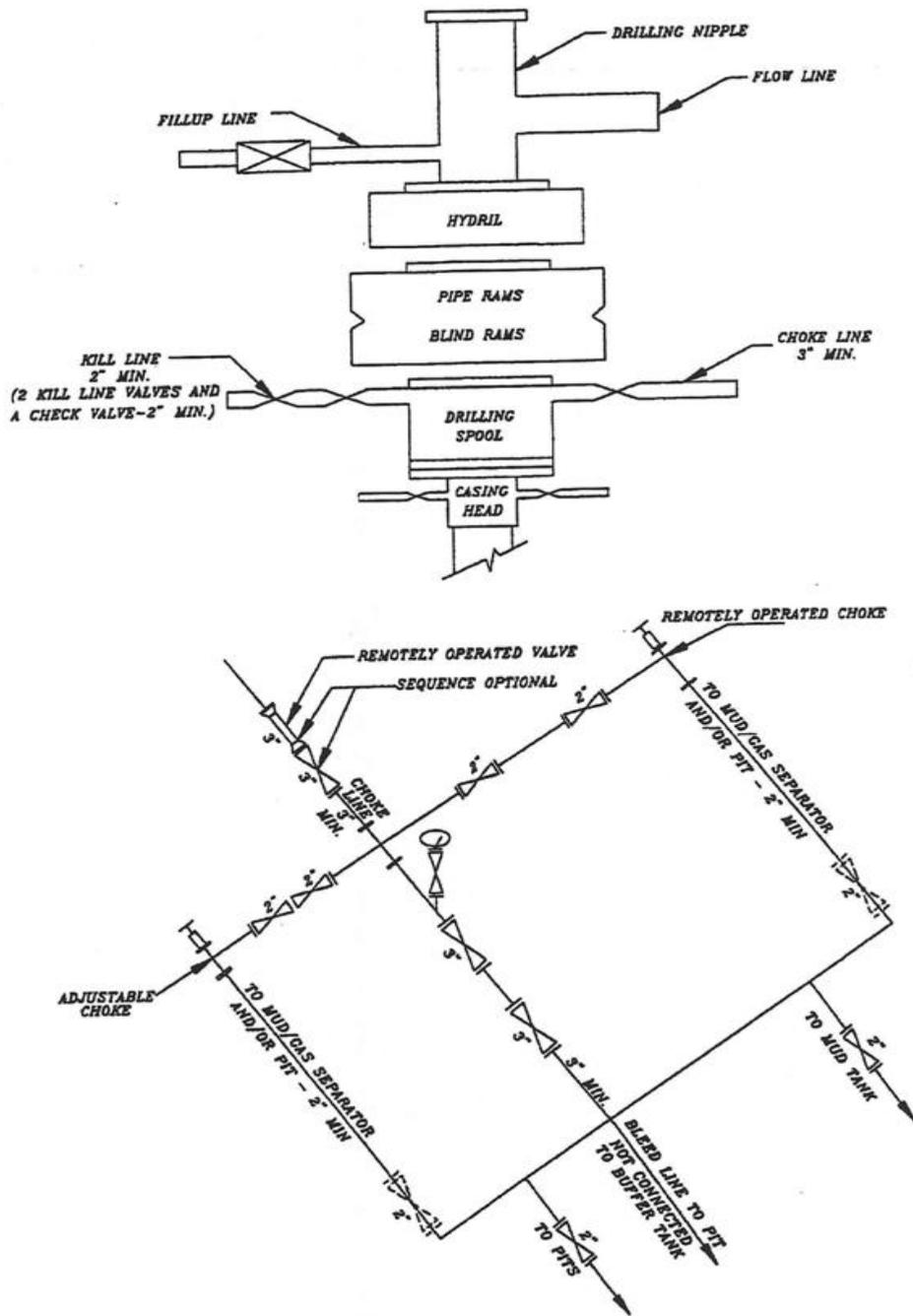
**ADDITIONAL INFORMATION**

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

**DRILLING ENGINEER:** \_\_\_\_\_ **DATE:** \_\_\_\_\_  
 John Huycke / Emile Goodwin

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

### EXHIBIT A NBU 921-25L4BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

# WELL PAD INTERFERENCE PLAT

## SURFACE POSITION FOOTAGES:

NBU 921-25L4BS  
1870' FSL & 290' FWL

NBU 921-25M2AS  
1865' FSL & 270' FWL

NBU 921-25M2DS  
1860' FSL & 251' FWL

NBU 921-25M3DS  
1855' FSL & 231' FWL

NBU 301 (Existing Well Head)  
1883' FSL & 366' FWL

## DIRECTIONAL PAD - NBU 301

| LATITUDE & LONGITUDE        |                             |                               |
|-----------------------------|-----------------------------|-------------------------------|
| Surface Position - (NAD 83) |                             |                               |
| WELL                        | N. LATITUDE                 | W. LONGITUDE                  |
| 921-25L4BS                  | 40°00'17.550"<br>40.004875° | 109°30'30.457"<br>109.508460° |
| 921-25M2AS                  | 40°00'17.502"<br>40.004862° | 109°30'30.707"<br>109.508530° |
| 921-25M2DS                  | 40°00'17.454"<br>40.004848° | 109°30'30.956"<br>109.508599° |
| 921-25M3DS                  | 40°00'17.406"<br>40.004835° | 109°30'31.206"<br>109.508668° |
| Existing Well<br>NBU 301    | 40°00'17.677"<br>40.004910° | 109°30'29.483"<br>109.508190° |

| LATITUDE & LONGITUDE        |                             |                               |
|-----------------------------|-----------------------------|-------------------------------|
| Surface Position - (NAD 27) |                             |                               |
| WELL                        | N. LATITUDE                 | W. LONGITUDE                  |
| 921-25L4BS                  | 40°00'17.677"<br>40.004910° | 109°30'27.984"<br>109.507773° |
| 921-25M2AS                  | 40°00'17.628"<br>40.004897° | 109°30'28.234"<br>109.507843° |
| 921-25M2DS                  | 40°00'17.581"<br>40.004883° | 109°30'28.484"<br>109.507912° |
| 921-25M3DS                  | 40°00'17.532"<br>40.004870° | 109°30'28.733"<br>109.507981° |
| Existing Well<br>NBU 301    | 40°00'17.803"<br>40.004945° | 109°30'27.011"<br>109.507503° |

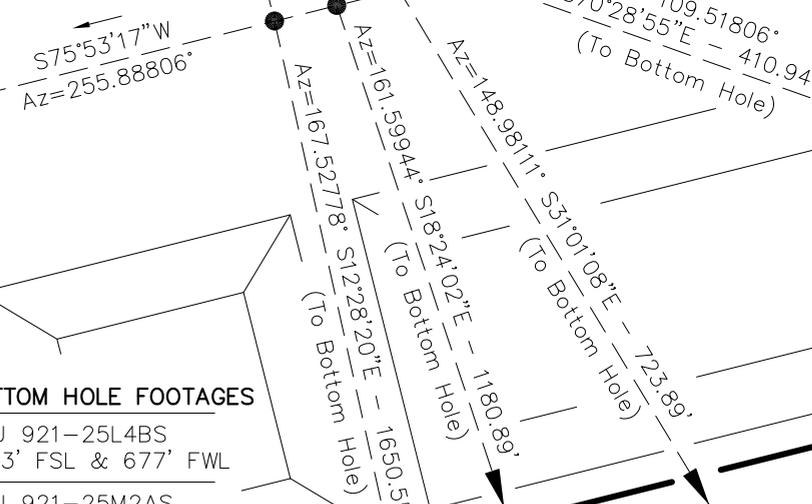
BASIS OF BEARINGS IS THE WEST LINE OF THE SW 1/4 OF SECTION 25, T9S, R21E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°01'58"W.



**NBU 921-25M3DS**  
 Az. to exist. W.H.=78.48639° 136.8'  
**NBU 921-25M2DS**  
 Az. to exist. W.H.=78.92444° 116.8'  
**NBU 921-25M2AS**  
 Az. to exist. W.H.=  
**NBU 921-25L4BS**  
 Az. to exist. W.H.=79.51917° 96.8'

Vertical Well

**EXISTING WELL HEAD NBU 301**



### BOTTOM HOLE FOOTAGES

NBU 921-25L4BS  
1733' FSL & 677' FWL

NBU 921-25M2AS  
1245' FSL & 643' FWL

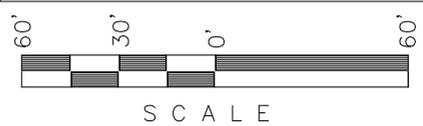
NBU 921-25M2DS  
740' FSL & 623' FWL

NBU 921-25M3DS  
244' FSL & 587' FWL

| LATITUDE & LONGITUDE   |                             |                               |
|------------------------|-----------------------------|-------------------------------|
| Bottom Hole - (NAD 83) |                             |                               |
| WELL                   | N. LATITUDE                 | W. LONGITUDE                  |
| 921-25L4BS             | 40°00'16.196"<br>40.004499° | 109°30'25.480"<br>109.507078° |
| 921-25M2AS             | 40°00'11.375"<br>40.003160° | 109°30'25.910"<br>109.507197° |
| 921-25M2DS             | 40°00'06.386"<br>40.001774° | 109°30'26.160"<br>109.507267° |
| 921-25M3DS             | 40°00'01.485"<br>40.000413° | 109°30'26.616"<br>109.507393° |

| LATITUDE & LONGITUDE   |                             |                               |
|------------------------|-----------------------------|-------------------------------|
| Bottom Hole - (NAD 27) |                             |                               |
| WELL                   | N. LATITUDE                 | W. LONGITUDE                  |
| 921-25L4BS             | 40°00'16.322"<br>40.004534° | 109°30'23.008"<br>109.506391° |
| 921-25M2AS             | 40°00'11.501"<br>40.003195° | 109°30'23.438"<br>109.506510° |
| 921-25M2DS             | 40°00'06.512"<br>40.001809° | 109°30'23.688"<br>109.506580° |
| 921-25M3DS             | 40°00'01.612"<br>40.000448° | 109°30'24.144"<br>109.506707° |

| RELATIVE COORDINATES                 |        |      |
|--------------------------------------|--------|------|
| From Surface Position to Bottom Hole |        |      |
| WELL                                 | NORTH  | EAST |
| 921-25L4BS                           | -137'  | 387' |
| 921-25M2AS                           | -620'  | 373' |
| 921-25M2DS                           | -1121' | 373' |
| 921-25M3DS                           | -1612' | 356' |



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

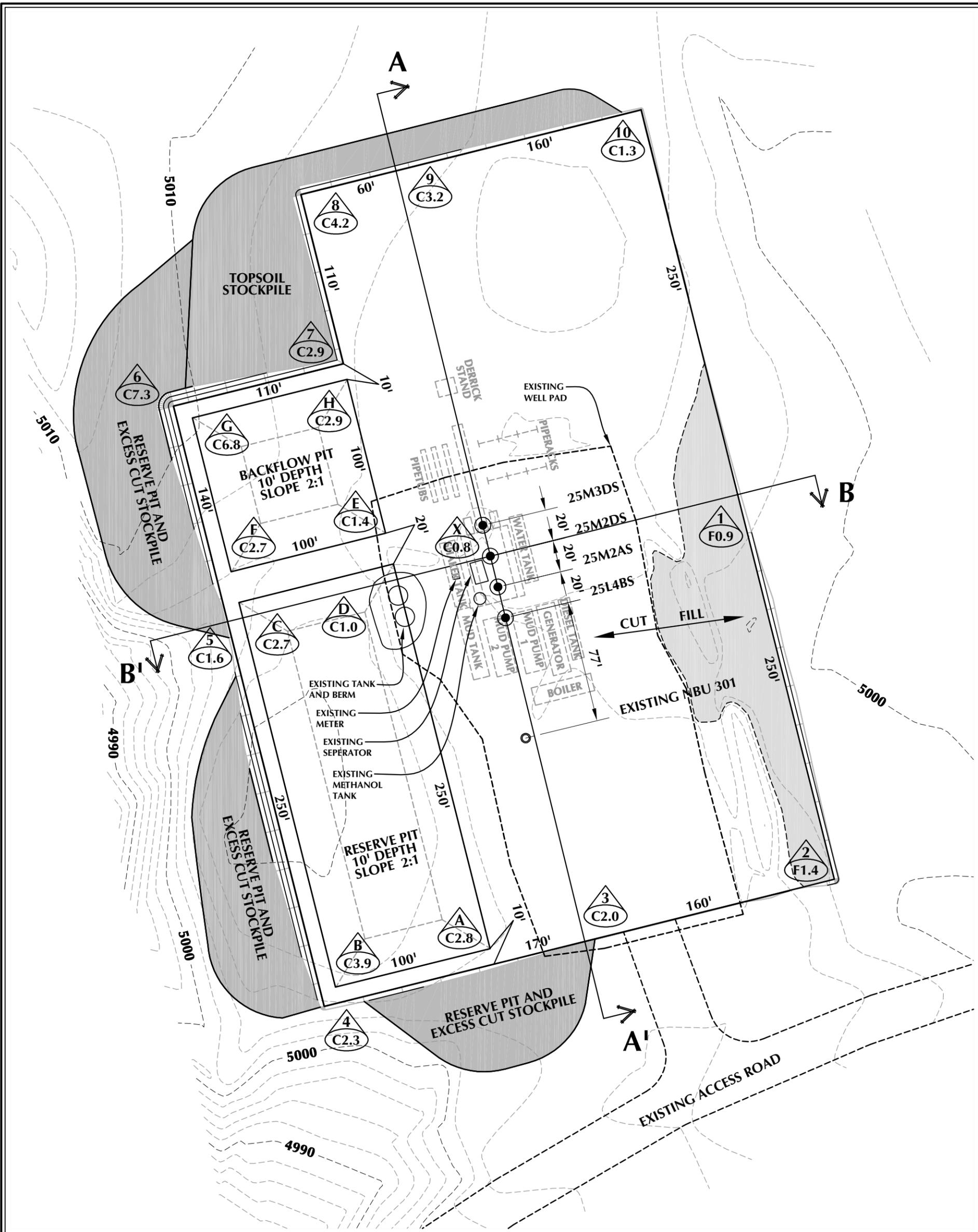
NBU 921-25L4BS, NBU 921-25M2AS,  
NBU 921-25M2DS & NBU 921-25M3DS  
LOCATED IN SECTION 25, T9S, R21E,  
S.L.B.&M. UINTAH COUNTY, UTAH.

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

|                         |                     |
|-------------------------|---------------------|
| DATE SURVEYED: 09-12-08 | SURVEYED BY: M.S.B. |
| DATE DRAWN: 10-01-08    | DRAWN BY: M.W.W     |
|                         | REVISED: 01-27-09   |

**Timberline** (435) 789-1365  
Engineering & Land Surveying, Inc.  
209 NORTH 300 WEST VERNAL, UTAH 84078

SHEET  
**5**  
OF 13



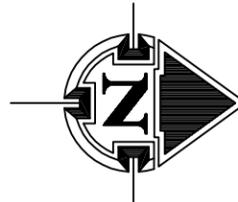
**WELL PAD NBU 301 QUANTITIES**

EXISTING GRADE @ CENTER OF PAD = 5,004.1'  
 FINISHED GRADE ELEVATION = 5,003.3'  
 CUT SLOPES = 1.5:1  
 FILL SLOPES = 1.5:1

TOTAL CUT FOR WELL PAD = 8,141 C.Y.  
 TOTAL FILL FOR WELL PAD = 1,090 C.Y.  
 TOPSOIL @ 6" DEPTH = 2,136 C.Y.  
 EXCESS MATERIAL = 7,051 C.Y.  
 TOTAL DISTURBANCE = 3.66 ACRES  
 SHRINKAGE FACTOR = 1.10  
 SWELL FACTOR = 1.00  
 RESERVE PIT CAPACITY (2' OF FREEBOARD)  
 +/- 25,880 BARRELS  
 RESERVE PIT VOLUME  
 +/- 7,185 CY  
 BACKFLOW PIT CAPACITY (2' OF FREEBOARD)  
 +/- 8,780 BARRELS  
 BACKFLOW PIT VOLUME  
 +/- 2,520 CY

**WELL PAD LEGEND**

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)



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

**Timberline** (435) 789-1365  
 Engineering & Land Surveying, Inc.  
 38 WEST 100 NORTH VERNAL, UTAH 84078

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

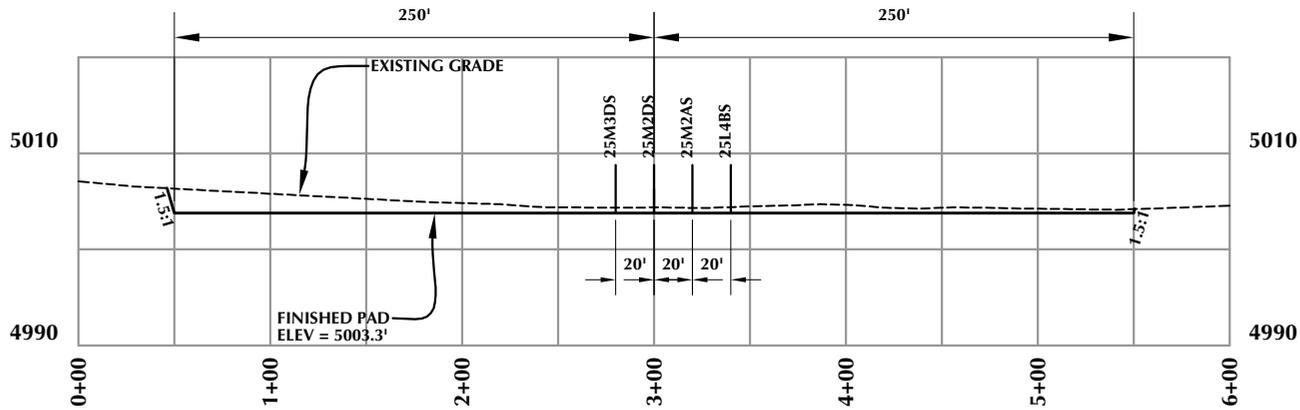
1099 18th Street - Denver, Colorado 80202



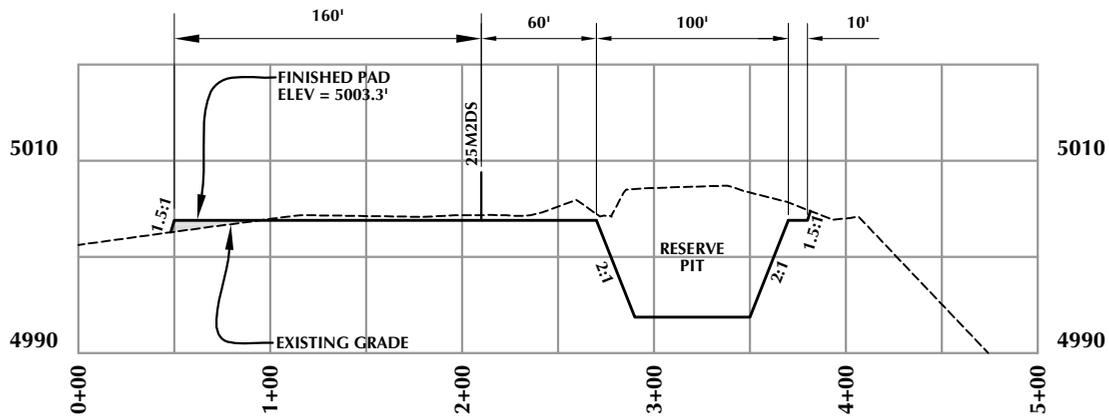
**CONSULTING, LLC**  
 371 Coffeen Avenue  
 Sheridan WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

**WELL PAD - LOCATION LAYOUT**  
 NBU 921-25L4BS, NBU 921-25M2AS,  
 NBU 921-25M2DS, NBU 921-25M3DS  
 LOCATED IN SECTION 25, T.9S., R.21E.  
 S.L.B.&M., UINTAH COUNTY, UTAH

|               |               |                  |
|---------------|---------------|------------------|
| Scale: 1"=60' | Date: 1/29/09 | SHEET NO:        |
| REVISED:      | BY DATE       | <b>6</b> 6 OF 13 |



**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

NOTE: CROSS SECTION B-B' DEPICTS  
MAXIMUM RESERVE PIT DEPTH.

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

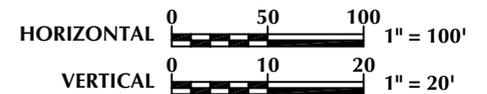
1099 18th Street - Denver, Colorado 80202



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

**WELL PAD - CROSS SECTIONS**  
NBU 921-25L4BS, NBU 921-25M2AS,  
NBU 921-25M2DS, NBU 921-25M3DS  
LOCATED IN SECTION 25, T.9S., R.21E.  
S.L.B.&M., Uintah County, Utah

|                |               |                  |
|----------------|---------------|------------------|
| Scale: 1"=100' | Date: 1/29/09 | SHEET NO:        |
| REVISED:       | BY DATE       | <b>7</b> 7 OF 13 |



**Timberline** (435) 789-1365  
Engineering & Land Surveying, Inc.  
38 WEST 100 NORTH VERNAL, UTAH 84078



PHOTO VIEW: FROM LOCATION STAKES TO EXISTING WELL HEAD

CAMERA ANGLE: EASTERLY

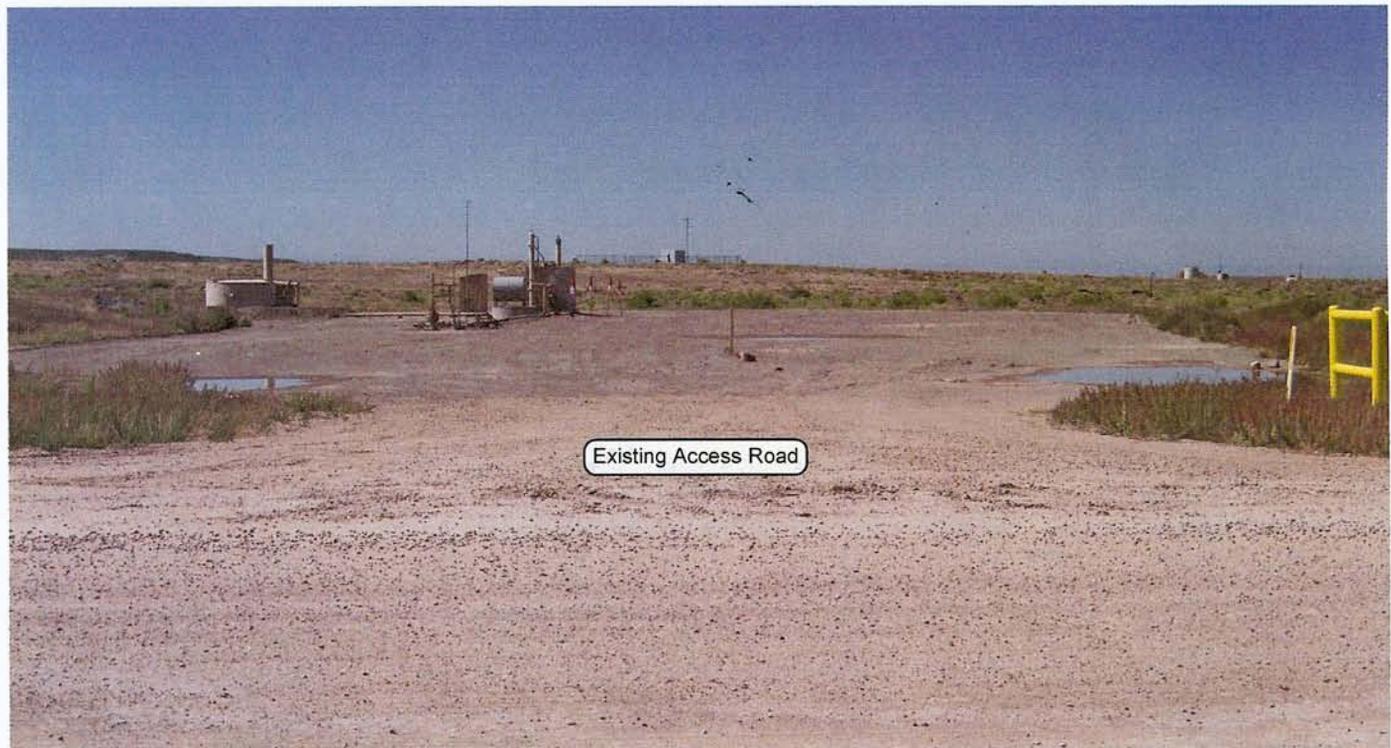


PHOTO VIEW: FROM EXISTING ROAD

CAMERA ANGLE: WESTERLY

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



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

NBU 921-25L4BS, NBU 921-25M2AS,  
 NBU 921-25M2DS & NBU 921-25M3DS  
 LOCATED IN SECTION 25, T9S, R21E,  
 S.L.B.&M. UINTAH COUNTY, UTAH.

**LOCATION PHOTOS**

TAKEN BY: M.S.B.

DRAWN BY: M.W.W.

DATE TAKEN: 09-12-08

DATE DRAWN: 10-01-08

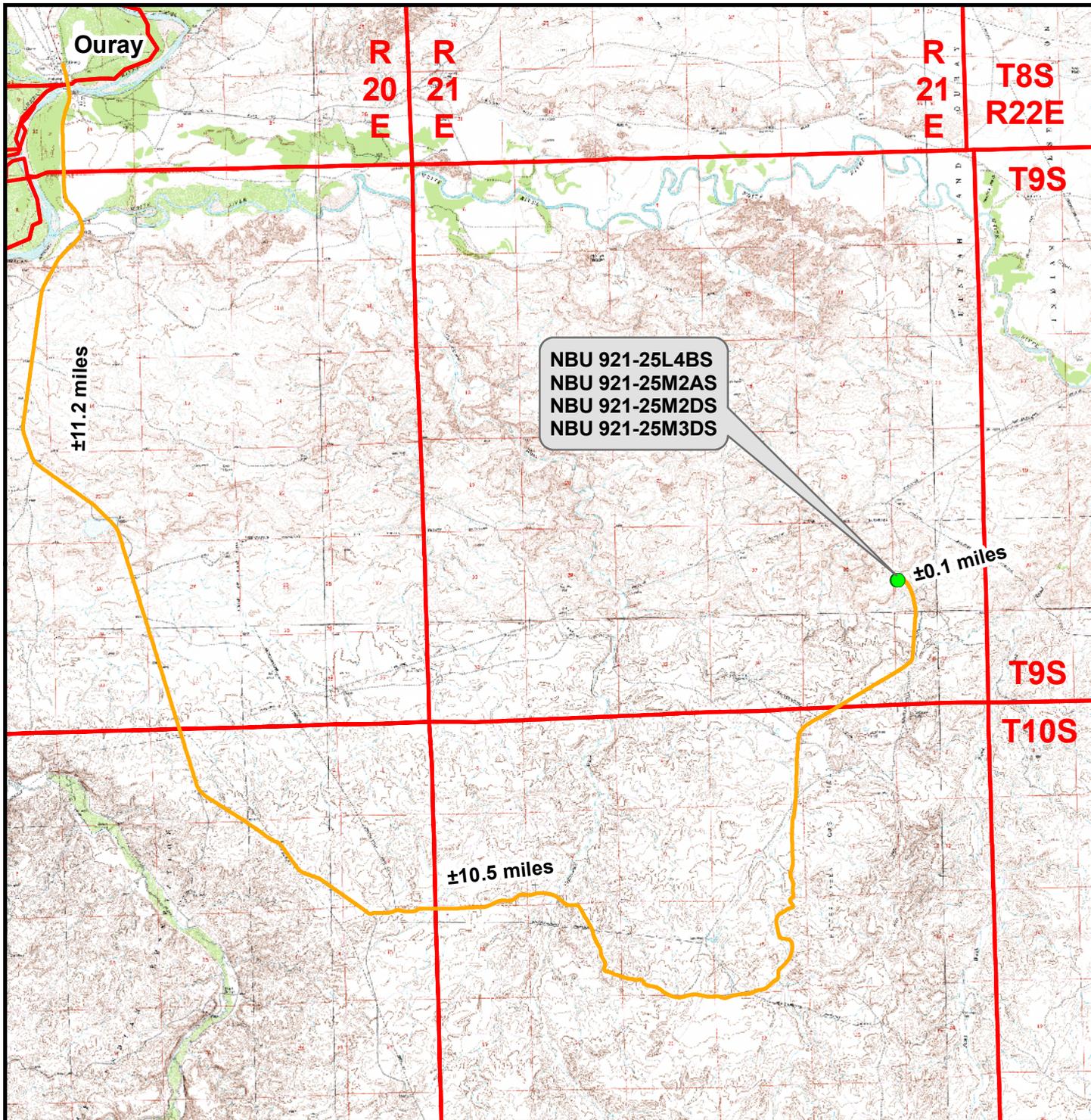
REVISED: 01-27-09

**Timberline**

Engineering & Land Surveying, Inc.  
 209 NORTH 300 WEST VERNAL, UTAH 84078

(435) 789-1365

SHEET  
**8**  
 OF 13



**Legend**

- Proposed Well Location
- Access Route - Proposed

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

**NBU 921-25L4BS, NBU 921-25M2AS,  
 NBU 921-25M2DS & NBU 921-25M3DS**

**Topo A**  
**Located In Section 25, T9S, R21E**  
**S.L.B.&M., Uintah County, Utah**

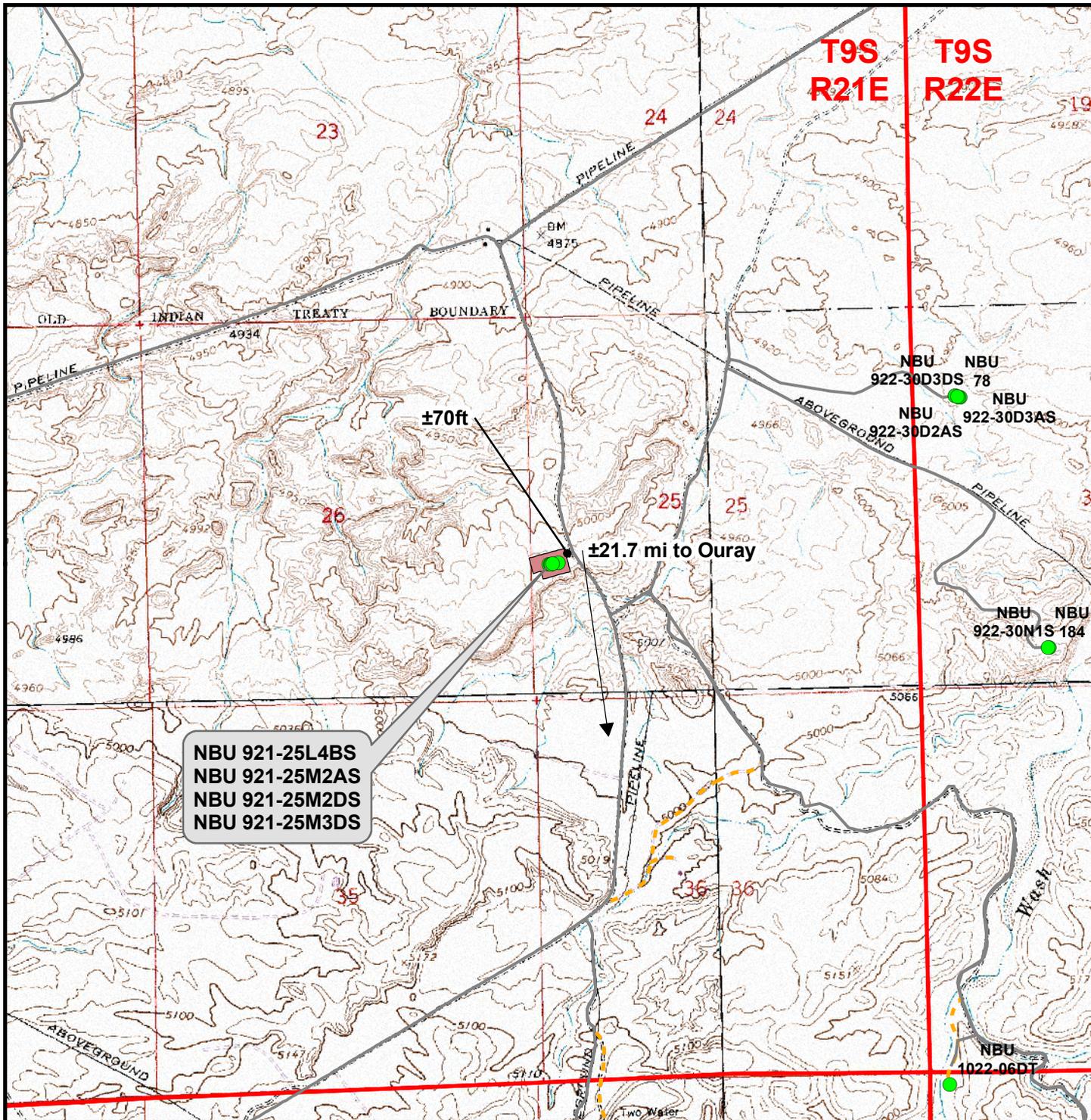


**CONSULTING, LLC**  
 371 Coffeen Avenue  
 Sheridan, WY 82801  
 Phone (307) 674-0609  
 Fax (307) 674-0182



|                  |                   |
|------------------|-------------------|
| Scale: 1:100,000 | NAD83 USP Central |
| Drawn: JELO      | Date: 28 Jan 2009 |
| Revised:         | Date:             |

|           |
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| Sheet No: |
| <b>9</b>  |
| 9 of 13   |



**Legend**

- Well - Proposed
- Well Pad
- Road - Proposed
- Road - Existing

Total Proposed Road Length: ±0ft

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

**NBU 921-25L4BS, NBU 921-25M2AS,  
 NBU 921-25M2DS & NBU 921-25M3DS**  
**Topo B**  
**Located In Section 25, T9S, R21E**  
**S.L.B.&M., Uintah County, Utah**

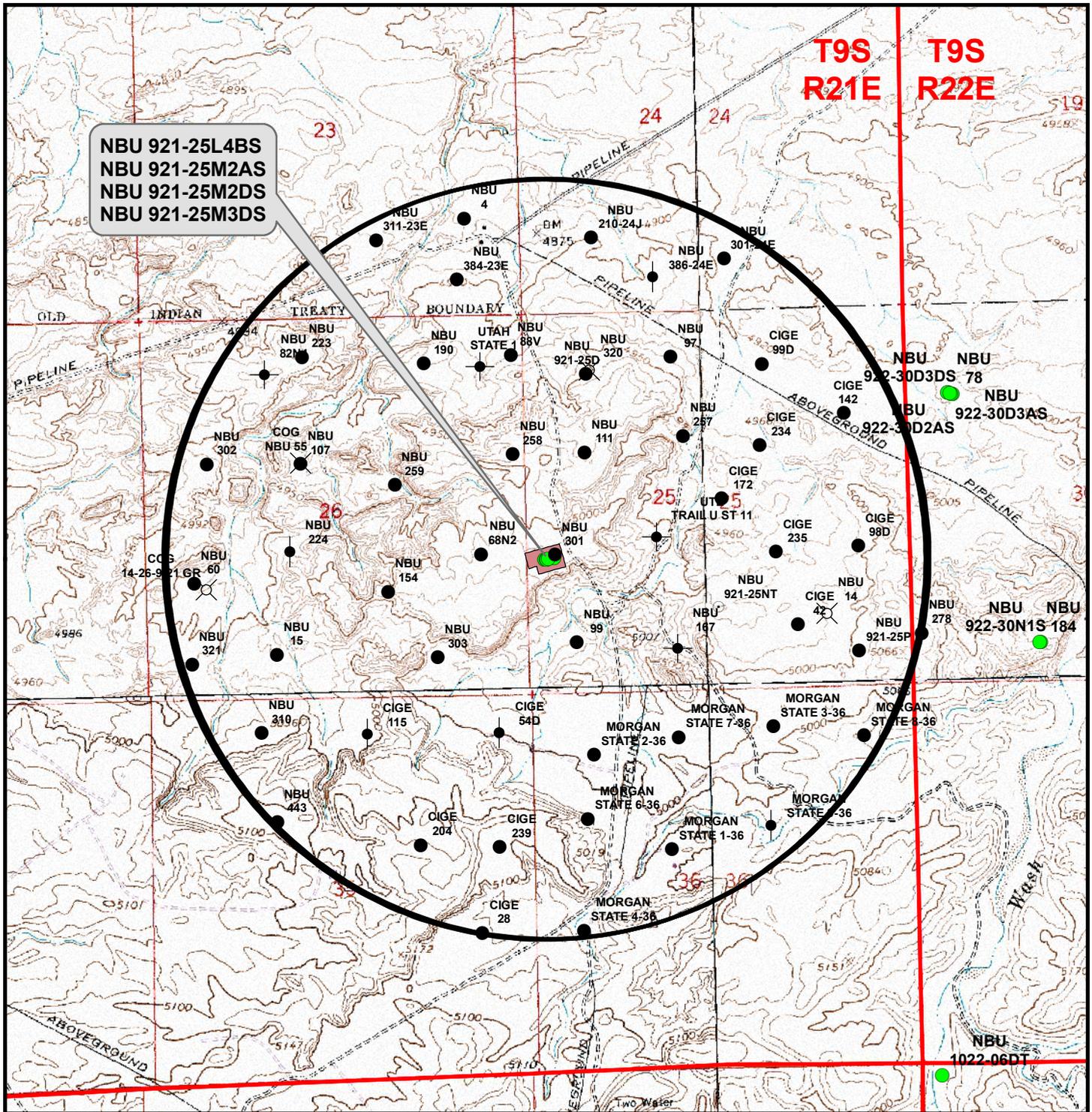


**609 CONSULTING, LLC**  
 371 Coffeen Avenue  
 Sheridan, WY 82801  
 Phone (307) 674-0609  
 Fax (307) 674-0182



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| Scale: 1" = 2000ft | NAD83 USP Central |
| Drawn: JELO        | Date: 28 Jan 2009 |
| Revised:           | Date:             |

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| Sheet No:<br><b>10</b> 10 of 13 |
|---------------------------------|



NBU 921-25L4BS  
 NBU 921-25M2AS  
 NBU 921-25M2DS  
 NBU 921-25M3DS

**Legend**

- Well - Proposed
- Well - 1 Mile Radius
- Well Pad
- Producing
- ▲ Approved permit (APD); not yet spudded
- Spudded (Drilling commenced: Not yet complete)
- ⊗ Location Abandoned
- Temporarily-Abandoned
- ⊕ Plugged and Abandoned
- ⊙ Shut-In

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

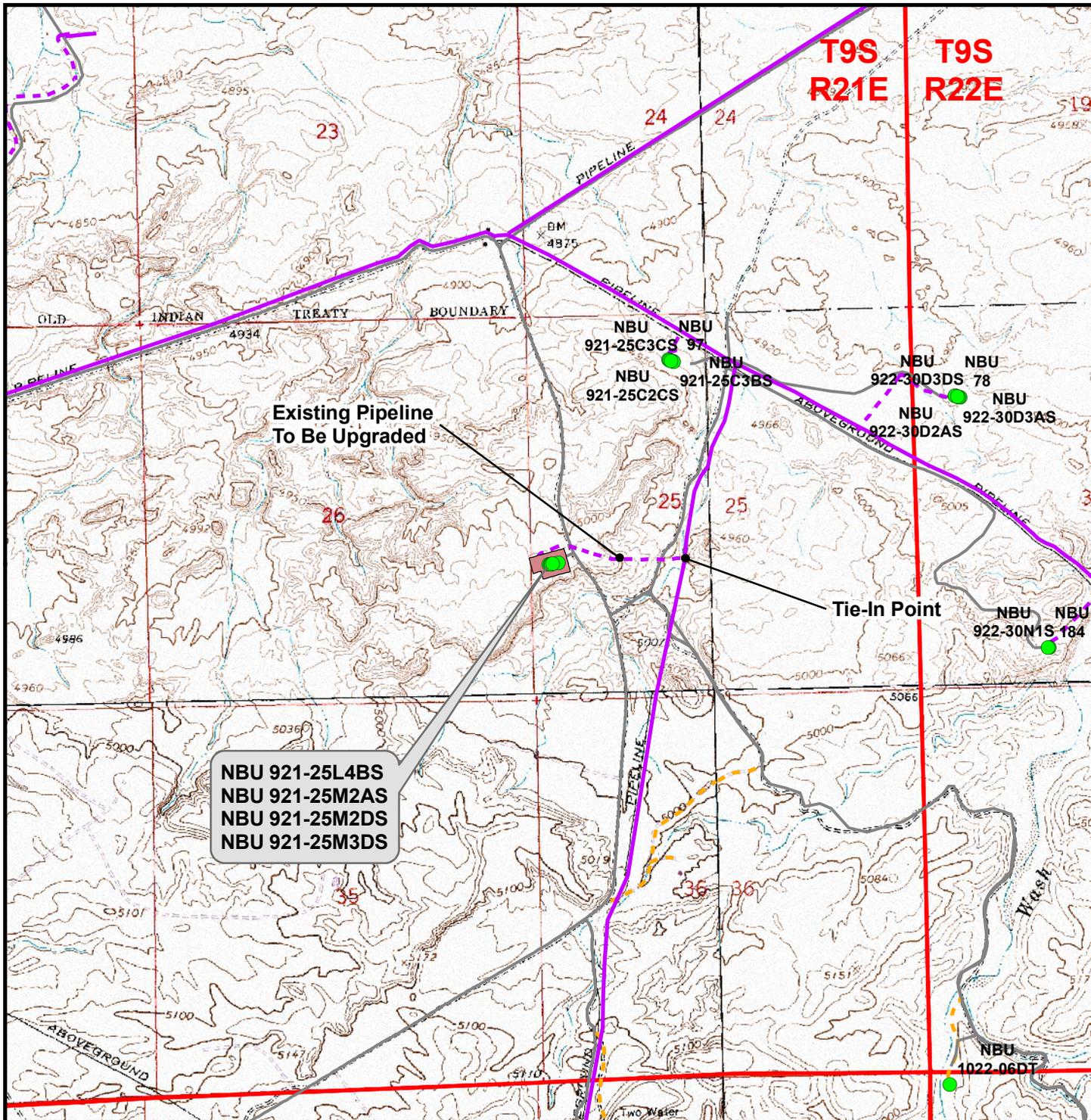
**NBU 921-25L4BS, NBU 921-25M2AS,  
 NBU 921-25M2DS & NBU 921-25M3DS**  
**Topo C**  
**Located In Section 25, T9S, R21E**  
**S.L.B.&M., Uintah County, Utah**

**609**

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



|                    |                   |                    |
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| Scale: 1" = 2000ft | NAD83 USP Central | Sheet No:          |
| Drawn: JELO        | Date: 28 Jan 2009 | <b>11</b> 11 of 13 |
| Revised:           | Date:             |                    |



NBU 921-25L4BS  
 NBU 921-25M2AS  
 NBU 921-25M2DS  
 NBU 921-25M3DS

**Legend**

- Well - Proposed
- Well Pad
- - - Pipeline - Proposed
- - - Road - Proposed
- Pipeline - Existing
- Road - Existing

Proposed Pipeline Length From Tie-In Point To Edge Of Pad: ±2,135ft  
 Proposed Pipeline Length Around Pad: ±660ft

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

**NBU 921-25L4BS, NBU 921-25M2AS,  
 NBU 921-25M2DS & NBU 921-25M3DS**  
**Topo D**  
**Located In Section 25, T9S, R21E**  
**S.L.B.&M., Uintah County, Utah**

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



|                    |                   |                    |
|--------------------|-------------------|--------------------|
| Scale: 1" = 2000ft | NAD83 USP Central | Sheet No:          |
| Drawn: JELO        | Date: 28 Jan 2009 | <b>12</b> 12 of 13 |
| Revised:           | Date:             |                    |

**Kerr-McGee Oil & Gas Onshore, LP  
NBU 921-25L4BS, NBU 921-25M2AS,  
NBU 921-25M2DS & NBU 921-25M3DS  
Section 25, T9S, R21E, S.L.B.&M.**

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 11.2 MILES TO THE INTERSECTION OF THE GLEN BENCH ROAD (COUNTY B ROAD 3260). EXIT LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY, THEN NORTHEASTERLY DIRECTION ALONG THE GLEN BENCH ROAD APPROXIMATELY 10.5 MILES TO THE EXISTING ACCESS ROAD WHICH RUNS TO THE NBU 301 WELL PAD. EXIT LEFT AND PROCEED IN A WESTERLY DIRECTION ALONG THE ACCESS ROAD APPROXIMATELY 70 FEET TO THE EXISTING NBU 301 WELL PAD.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 52.4 MILES IN A SOUTHERLY DIRECTION.

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

**NBU 921-25L4BS**

Surface: 1,870' FSL, 290' FWL (NW/4SW/4)  
BHL: 1,733' FSL 677' FWL (NW/4SW/4)

**NBU 921-25M2AS**

Surface: 1,865' FSL, 270' FWL (NW/4SW/4)  
BHL: 1,245' FSL 643' FWL (SW/4SW/4)

**NBU 921-25M2DS**

Surface: 1,860' FSL, 251' FWL (NW/4SW/4)  
BHL: 740' FSL 623' FWL (SW/4SW/4)

**NBU 921-25M3DS**

Surface: 1,855' FSL, 231' FWL (NW/4SW/4)  
BHL: 244' FSL 587' FWL (SW/4SW/4)

Section 25 Township 9 South Range 21 East

Pad: NBU 921-25L

Uintah, Utah

Minerals: State – UO 01194

Surface: State

**ONSHORE ORDER NO. 1**

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

**Directional Drilling:**

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

**1. Existing Roads:**

Refer to Topo Map A for directions to the location.

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

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

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

**2. Planned Access Roads:**

Approximately  $\pm 0.0$  mi. of new access road is proposed. Please refer to the attached Topo Map B.

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

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

The access road was centerline flagged during time of staking.

Surfacing material may be necessary, depending upon weather conditions.

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

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

Please refer to Topo Map C.

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

*The following guidelines will apply if the well is productive.*

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

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

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

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

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

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

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

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

No water well is to be drilled on this lease.

**6. Source of Construction Materials:**

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

Any gravel will be obtained from a commercial source.

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

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

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

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

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

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

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

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

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

**Kerr-McGee Oil & Gas Onshore LP**  
NBU 921-25L4BS/ 25M2AS/ 25M2DS/ 25M3DS

Page 4  
Surface Use and Operations Plan

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

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

**8. Ancillary Facilities:**

None are anticipated.

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

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

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

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

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

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

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

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

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

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

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

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

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

*Producing Location:*

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

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

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

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

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

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

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

*Dry Hole/Abandoned Location:*

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

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

**Kerr-McGee Oil & Gas Onshore LP**  
NBU 921-25L4BS/ 25M2AS/ 25M2DS/ 25M3DS

Page 6  
Surface Use and Operations Plan

**11. Surface/Mineral Ownership:**

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

**12. Other Information:**

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

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

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

**Kerr-McGee Oil & Gas Onshore LP**  
NBU 921-25L4BS/ 25M2AS/ 25M2DS/ 25M3DS

Page 7  
Surface Use and Operations Plan

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

Kathy Schneebeck Dulnoan  
Staff Regulatory Analyst  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6226

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

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

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

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

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

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

\_\_\_\_\_  
Kathy Schneebeck Dulnoan

April 20, 2009  
Date



# Kerr-McGee Oil & Gas Onshore LP

1099 18th Street, Suite 1800  
Denver, CO 80202-1918  
P.O. Box 173779  
Denver, CO 80217-3779  
720-929-6000

April 14, 2009

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 921-25M2DS  
T9S-R21E  
Section 25: NWSW (Surf), SWSW (Bottom)  
Surface: 1860' FSL, 251' FWL  
Bottom Hole: 740' FSL, 623' 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 921-25M2DS 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**

  
Lynn Padgett  
Staff Landman

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS  
ONSHORE LP'S 34 PROPOSED WELL LOCATIONS  
IN TOWNSHIP 9S, RANGE 21E,  
SECTIONS 11, 15, 18, 22, 25 AND 28  
UINTAH COUNTY, UTAH

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS  
ONSHORE LP'S 34 PROPOSED WELL LOCATIONS  
IN TOWNSHIP 9S, RANGE 21E,  
SECTIONS 11, 15, 18, 22, 25 AND 28  
UINTAH COUNTY, UTAH

By:

Patricia Stavish

Prepared For:  
Ute Tribal Land  
Uintah and Ouray Agency

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

Prepared Under Contract With:

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

Prepared By:

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

MOAC Report No. 08-319

February 19, 2009

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

Public Lands Policy Coordination Office  
Archaeological Survey Permit No. 117

Ute Tribal Permit No. A08-363

## INTRODUCTION

A Class I literature review was completed Montgomery Archaeological Consultants Inc. (MOAC) in February 2009 of Kerr-McGee Oil and Gas Onshore LP's 34 proposed well locations with associated access and pipeline corridors in Township 9S, Range 21E, Sections 11, 15, 18, 22, 25, and 28. The project area is situated south and west of the White River, south of the town of Vernal, Uintah County, Utah. The well pads are designated NBU 921-11B Directional Pad, NBU 921-11BT, NBU 298 (921-15C) Directional Pad, NBU 921-15C2S, NBU 921-15N Directional Pad, NBU 921-22C1CS, NBU 921-22C4BS, NBU 921-22D1BS, NBU 921-22D1CS, CIGE 129 (921-18D) Directional Pad, NBU 921-18D3DS, NBU 921-18E2AS, NBU 921-18F1CS, NBU 921-18F1BS, NBU 198 (921-22J) Directional Pad, NBU 921-22I3DS, NBU 921-22J2CS, NBU 921-22J3BS, NBU 921-22P2DS, NBU 97 (921-25C) Directional Pad, NBU 921-25C2BS, NBU 921-25C2CS, NBU 921-25C3BS, NBU 921-25C3CS, NBU 301 (921-25L) Directional Pad, NBU 921-25L4BS, NBU 921-25M2AS, NBU 921-25M2DS, NBU 921-25M3DS, NBU 435 (921-28D) Directional Pad, NBU 921-28D1BS, NBU 921-28C1CS, NBU 921-28C4BS, and NBU 921-28C4CS. This document was implemented at the request of Ms. Raleen White, Kerr-McGee Onshore LP, Denver, Colorado. Land status is public land administered by the Bureau of Land Management (BLM) Vernal Field Office, Ute Tribal lands (Uintah and Ouray Agency), and state lands administered by the State of Utah School & Institutional Trust Lands Administration (SITLA).

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

The project area, in which Kerr-McGee Onshore's 34 proposed well locations occur, was previously inventoried by MOAC in 2007 for the Class III inventory of Township 9 South, Range 21 East (Montgomery and Roberts 2008). A file search was completed by consulting MOAC's Class I existing data review of 459 square miles (293,805 acres) covering the Greater NBU study area between Bonanza and Ouray in Uintah County, northeastern Utah (Patterson et al. 2008). Kerr-McGee Oil & Gas Onshore LP proposes to explore and develop oil and natural gas resources throughout the area. Record searches were performed for this Class I project by Marty Thomas at the Utah State Historic Preservation Office (SHPO) on various dates between June 14, 2006 and January 27, 2007. The results of this Class I data review and Class III inventory indicated that two previous archaeological sites (42Un2397 and 42Un2445) occur in the current project area.

## DESCRIPTION OF THE PROJECT AREA

The project area is situated in and east of Cottonwood Wash and south and west of the White River in the Uinta Basin. The legal description is Township 9 South, Range 22 East, Sections 11, 15, 18, 22, 25, and 28 (Table 1; Figures 1 and 2).

Table 1. Kerr-McGee Onshore's 34 Proposed Well Locations.

| Well Designation   | Legal Description           | Access/Pipeline Corridor            | Cultural Resources |
|--|-----------------------------|-------------------------------------|--------------------|
| NBU 921-11B Directional Pad<br>NBU 921-11BT  | T9S, R21E,<br>NW/NE Sec. 11 | Access: 438 ft<br>Pipeline: 184 ft  | None               |
| NBU 298 (921-15C) Directional Pad<br>NBU 921-15C2S   | T9S, R21E,<br>NW/NE Sec. 15 | None                                | 42Un2445           |
| NBU 921-15N Directional Pad<br>NBU 921-22C1CS<br>NBU 921-22C4BS<br>NBU 921-22D1BS<br>NBU 921-22D1CS        | T9S, R21E,<br>SE/SW Sec. 15 | Pipeline: 1384 ft                   | None               |
| CIGE 129 (921-18D) Directional Pad<br>NBU 921-18D3DS<br>NBU 921-18E2AS<br>NBU 921-18F1CS<br>NBU 921-18F1BS | T9S, R21E,<br>NE/NW Sec. 18 | Access: 82 ft<br>Pipeline: 5989 ft  | None               |
| NBU 198 (921-22J) Directional Pad<br>NBU 921-22I3DS<br>NBU 921-22J2CS<br>NBU 921-22J3BS<br>NBU 921-22P2DS  | T9S, R21E,<br>NW/SE Sec. 22 | Pipeline: 2866 ft                   | None               |
| NBU 97 (921-25C) Directional Pad<br>NBU 921-25C2BS<br>NBU 921-25C2CS<br>NBU 921-25C3BS<br>NBU 921-25C3CS   | T9S, R21E,<br>NE/NW Sec. 25 | Pipeline: 290 ft                    | None               |
| NBU 301 (921-25L) Directional Pad<br>NBU 921-25L4BS<br>NBU 921-25M2AS<br>NBU 921-25M2DS<br>NBU 921-25M3DS  | T9S, R21E,<br>NW/SW Sec. 25 | Pipeline: 2221                      | 42Un2397           |
| NBU 435 (921-28D) Directional Pad<br>NBU 921-28D1BS<br>NBU 921-28C1CS<br>NBU 921-28C4BS<br>NBU 921-28C4CS  | T9S, R21E,<br>NW/NW Sec. 28 | Access: 184 ft<br>Pipeline: 7836 ft | None               |

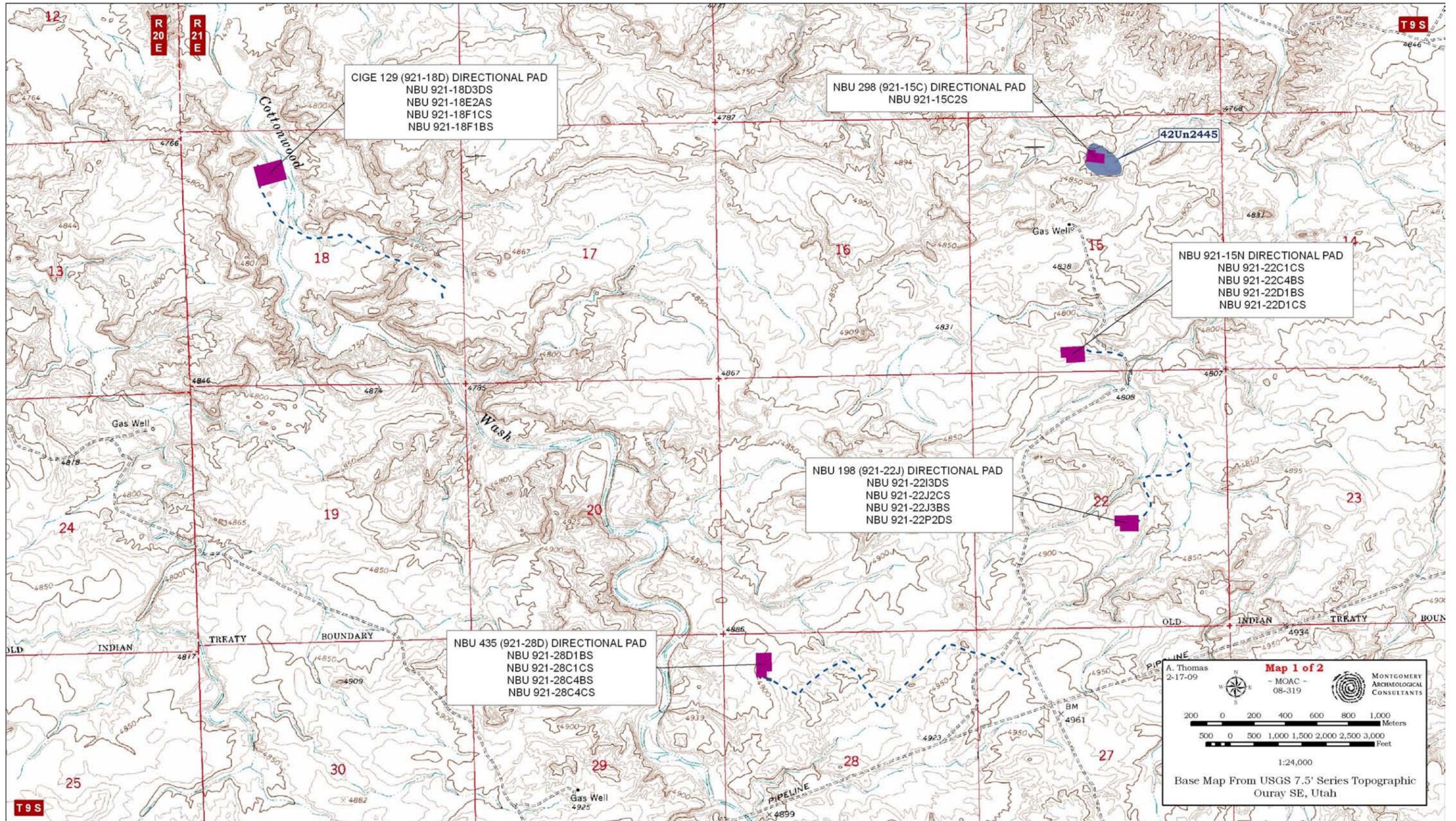


Figure 1. Kerr-McGee Oil & Gas Onshore LP's 34 Proposed Well Locations with Access and Pipeline Corridors, Uintah County, Utah.

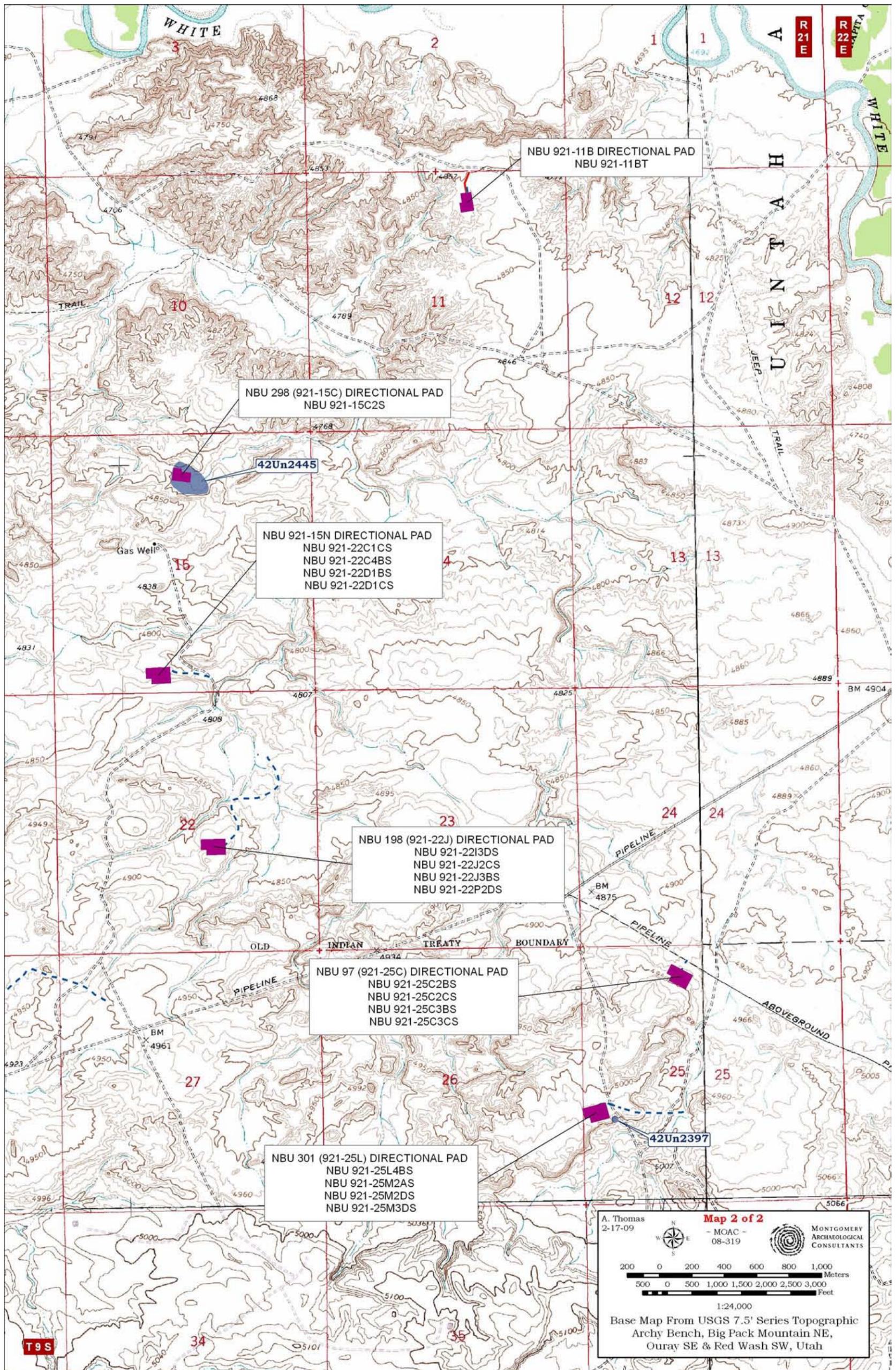


Figure 2. Kerr-McGee Oil & Gas Onshore LP's 34 Proposed Well Locations with Access and Pipeline Corridors, Uintah County, Utah.

The study area lies within the Uinta Basin physiographic unit, a distinctly bowl-shaped geologic structure (Stokes 1986:231). The Uinta Basin ecosystem is within the Green River drainage, considered to be the northernmost extension of the Colorado Plateau. The geology is comprised of Tertiary age deposits, which include Paleocene age deposits and Eocene age fluvial and lacustrine sedimentary rocks. The Uinta Formation, which is predominate in the project area, occurs as eroded outcrops (formed by fluvial deposited, stream laid interbedded sandstone and mudstone), and is known for its prolific paleontological localities. Specifically, the inventory area is situated adjacent to the White River and Bitter Creek. Elevation ranges from 4750 to 5000 ft asl. The project occurs within the Upper Sonoran Desert Shrub Association which includes; sagebrush, shadscale, greasewood, mat saltbush, snakeweed, rabbitbrush, and prickly pear cactus. Modern disturbances include livestock grazing, roads, and oil/gas development.

### CLASS I RESULTS AND RECOMMENDATIONS

The Class I literature review resulted in the location of two previously documented sites (42Un2397 and 42Un2445). Site 42Un2397 is a historic mine prospect that was documented by Metcalf Archaeological Consultants in 1997 (Späth 1997). The site consists of two-track roads, three cairns, and an area of heavy disturbance. 42Un2397 has been recommended as not eligible to the NRHP. Site 42Un2445 is a prehistoric lithic scatter that was also documented by Metcalf Archaeological Consultants in 1997 (Barclay and Scott 1997). The site is a broad sparse scatter of debitage and chipped stone tools. The site has been recommended as not eligible to the NRHP.

The Class I literature review of 34 proposed well locations with associated pipeline and access corridors in Township 9S, Range 21E, Sections 11, 15, 18, 22, 25 and 28 resulted in the location of two previously documented archaeological sites (42Un2397 and 42Un2445), which have been evaluated as not eligible to the NRHP. Site 42Un2245 has been destroyed by the construction of a previous well pad (NBU 298). Site 42Un2397 will be avoided by the undertakings in Section 25. Based on the adherence to this recommendation, a determination of "no adverse impact" is proposed pursuant to Section 106, CFR 800.

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1997 IMACS Site Forms: 42Un2445. Metcalf Archaeological Consultants, Eagle, Colorado. Report No. U-97-MM-0205i.

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2008 Cultural Resource Management Report for Kerr-McGee Oil and Gas Onshore LP's Greater NBU Blocks in Township 9 South, Range 21 East, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-07-MQ-1437b,i,p.

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

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

Späth, C.

1997

Coastal Oil and Gas Corporation's Proposed NBU #s 270, 301, and 306 Well Pads, Pipelines, and Access Section 13, T10S, R21E, and Sections 25 and 72, T9S, R21E, Uintah County, Utah Class III Cultural Resource Inventory. Metcalf Archaeological Consultants, Eagle, Colorado. Report No. U-97-MM-0083s.

Stokes, W.L.

1986

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**IPC #08-291**

# **Paleontological Reconnaissance Survey Report**

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**Survey of Kerr McGee's Proposed Directional Pad with Multi-  
Wells, Access Road, and Pipeline for "NBU #921-25L4BS,  
25M2AS, 25M2DS & 25M3DS" (Sec. 25 & 26, T 9 S, R 21 E)**

Ouray SE  
Topographic Quadrangle  
Uintah County, Utah

December 16, 2008

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

## INTRODUCTION

At the request of Raleen White of Kerr McGee Oil & Gas Onshore LP and authorized by James Kirkland of the Office of the State Paleontologist, a paleontological reconnaissance survey of Kerr McGee's proposed directional pad with multi-wells, access road and pipeline for "NBU #921-25L4BS, 25M2AS, 25M2DS & 25M3DS" (Sec. 25 & 26, T 9 S, R 21 E) was conducted by Stephen Sandau and Carisa Bomberger on October 29, 2008. The survey was conducted under Utah Paleontological Investigations Permit #07-356. This survey to collect any paleontological materials discovered during the construction processes in danger of damage or destruction was done to meet requirements of the National Environmental Policy Act of 1969, and other State and Federal laws and regulations that protect paleontological resources.

## FEDERAL AND STATE REQUIREMENTS

As mandated by the State of Utah, paleontologically-sensitive geologic formations on State lands that may be impacted due to ground disturbance require paleontological evaluation. This requirement complies with:

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

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

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

little information about the paleontological resources of the unit or the area is known.

- **Class 4 – High.** Geologic units containing a high occurrence of vertebrate fossils or scientifically significant invertebrate or plant fossils, but may vary in abundance and predictability.
  - **Class 4a** – Outcrop areas with high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
  - **Class 4b** – Areas underlain by geologic units with high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.
- **Class 5 – Very High.** Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils.
  - **Class 5a** - Outcrop areas with very high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
  - **Class 5b** - Areas underlain by geologic units with very high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.

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

## LOCATION

Kerr McGee's proposed directional pad with multi-wells, access road and pipeline for "NBU #921-25L4BS, 25M2AS, 25M2DS & 25M3DS" (Sec. 25 & 26, T 9 S, R 21 E) are located on lands managed by the State of Utah Trust Lands Administration (SITLA) in the Cottonwood and Sand Wash area, 4 miles south of the White River, and some 11 miles southeast of Ouray, Utah. The project area can be found on the Ouray SE 7.5 minute U. S. Geological Survey Quadrangle Map, Uintah County, Utah.

## PREVIOUS WORK

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

## GEOLOGICAL AND PALEONTOLOGICAL OVERVIEW

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

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

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

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

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

## **FIELD METHODS**

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

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

## **PROJECT AREA**

### **NBU #921-25L4BS, 25M2AS, 25M2DS & 25M3DS**

The project area is situated in the Wagonhound Member (Uinta A & B) of the Uinta Formation. The proposed wells are staked on an existing directional pad "NBU 301" located in the NW/SW quarter-quarter section of Sec. 25, T 9 S, R 21 E (Figure 1). The proposed pipeline upgrade and reroute begins along the northwest margin of the well pad and travels east about 0.5 miles to where it ties in to an existing pipeline in the NE/SW quarter-quarter section of Sec. 25. The other pipeline reroute ties in to the previously mentioned pipeline on the west side of the well pad. The proposed well pad expansion and shorter pipeline reroutes are situated on the top of a flat cliff with large outcrops of over five feet thick, coarse to medium-grained, tan sandstone capping the cliff under a thin layer of sandy colluvium and pebble to cobble sized clasts of fine to medium-grained, tan sandstone. The sandstone outcrops are exposed sporadically along the cliff top through the colluvium and along the margins of a large drainage basin just south of the existing well pad. The proposed pipeline reroute and upgrade begin on the same flat cliff as the

well pad, cross the Glen Bench Road, and continue over the flat colluvium and cobble covered surface before going down a gradual slope through outcrops of the tan sandstone and crossing another existing road before tie-in to the existing pipeline. No fossils were found.

**SURVEY RESULTS**

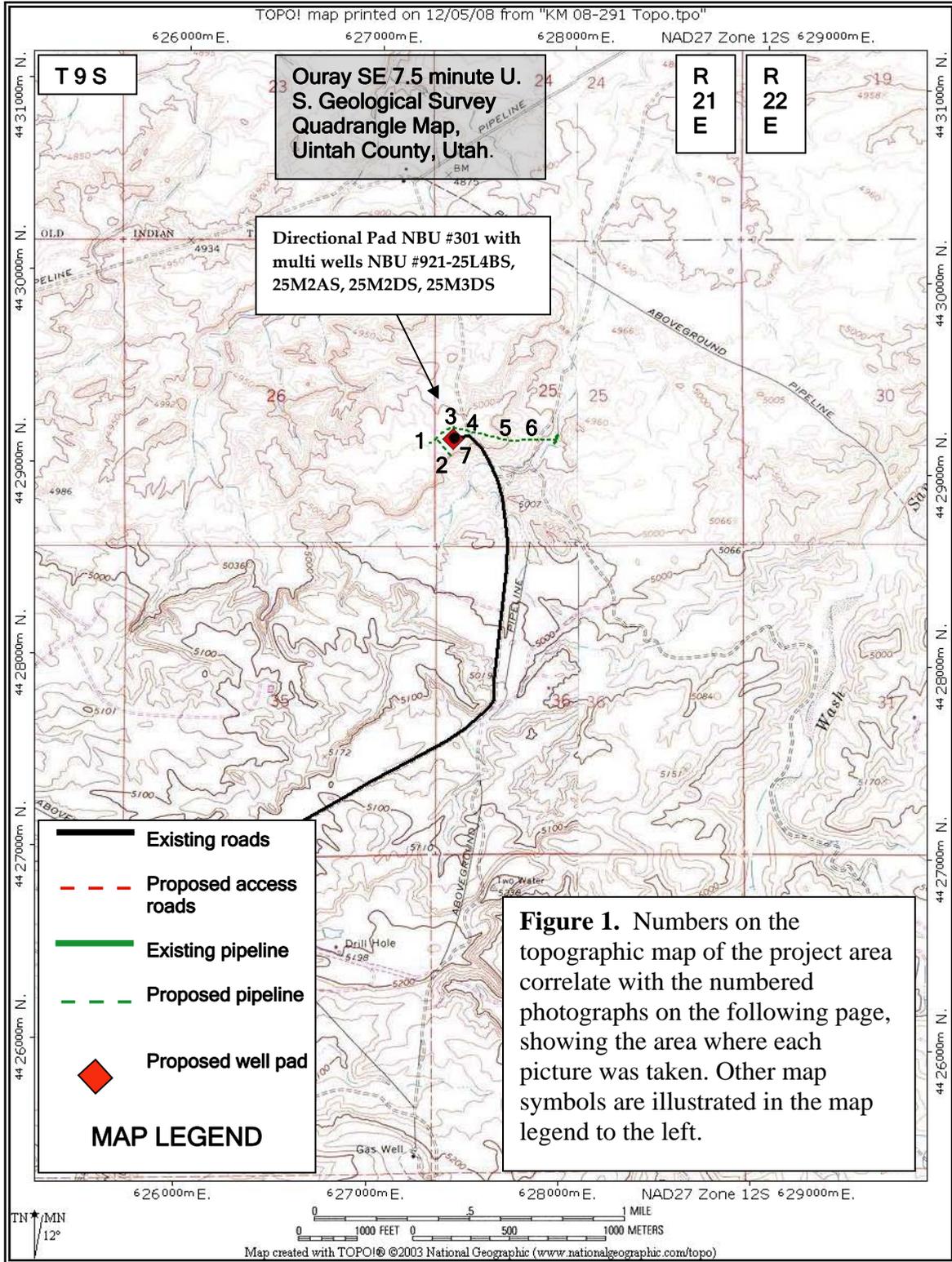
| <b>PROJECT</b>  | <b>GEOLOGY</b>   | <b>PALEONTOLOGY</b>                               |
|---|--|---|
| <p>“NBU #921-25L4BS, 25M2AS, 25M2DS &amp; 25M3DS”<br/>(Sec. 25 &amp; 26, T 9 S, R 21 E)</p> | <p>The proposed well pad expansion and shorter pipeline reroutes are situated on the top of a flat cliff with large outcrops of over five feet thick, coarse to medium-grained, tan sandstone capping the cliff under a thin layer of sandy colluvium and pebble to cobble sized clasts of fine to medium-grained, tan sandstone. The sandstone outcrops are exposed sporadically along the cliff top through the colluvium and along the margins of a large drainage basin just south of the existing well pad. The proposed pipeline reroute and upgrade begin on the same flat cliff as the well pad, cross the Glen Bench Road, and continue over the flat colluvium and cobble covered surface before going down a gradual slope through outcrops of the tan sandstone and crossing another existing road before tie-in to the existing pipeline.</p> | <p>No fossils were found.<br/><b>Class 3a</b></p> |

**RECOMMENDATIONS**

A reconnaissance survey was conducted for Kerr McGee’s proposed directional pad, multi-wells, access road and pipeline for “NBU #301, NBU #921-25L4BS, 25M2AS, 25M2DS & 25M3DS” (Sec. 25 & 26, T 9 S, R 21 E). The well pad, multi-wells, access road and pipeline covered in this report showed no signs of vertebrate fossils. Therefore, we recommend that no paleontological restrictions should be placed on the development of the projects included in this report.

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

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



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



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# 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)

May 8, 2009

### Memorandum

To: Assistant District Manager Minerals, Vernal District  
From: Michael Coulthard, Petroleum Engineer  
Subject: 2009 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 2009 within the Natural Buttes Unit, Uintah County, Utah.

| API #                            | WELL NAME             | LOCATION                    |
|----------------------------------|-----------------------|-----------------------------|
| (Proposed PZ WASATCH-MESA VERDE) |                       |                             |
| 43-047-50383                     | NBU 921-25M3DS Sec 25 | T09S R21E 1855 FSL 0231 FWL |
|                                  | BHL Sec 25            | T09S R21E 0244 FSL 0587 FWL |
| 43-047-50384                     | NBU 921-25M2DS Sec 25 | T09S R21E 1860 FSL 0251 FWL |
|                                  | BHL Sec 25            | T09S R21E 0740 FSL 0623 FWL |
| 43-047-50385                     | NBU 921-25M2AS Sec 25 | T09S R21E 1865 FSL 0270 FWL |
|                                  | BHL Sec 25            | T09S R21E 1245 FSL 0643 FWL |
| 43-047-50386                     | NBU 921-25L4BS Sec 25 | T09S R21E 1870 FSL 0290 FWL |
|                                  | BHL Sec 25            | T09S R21E 1733 FSL 0677 FWL |
| 43-047-50387                     | NBU 1022-14F4S Sec 14 | T10S R22E 1435 FNL 1470 FWL |
|                                  | BHL Sec 14            | T10S R22E 2035 FNL 2255 FWL |
| 43-047-50388                     | NBU 1022-14F2T Sec 14 | T10S R22E 1407 FNL 1417 FWL |
| 43-047-50389                     | NBU 1022-14D3S Sec 14 | T10S R22E 1397 FNL 1400 FWL |
|                                  | BHL Sec 14            | T10S R22E 0900 FNL 0410 FWL |
| 43-047-50390                     | NBU 1022-14C4S Sec 14 | T10S R22E 1426 FNL 1453 FWL |
|                                  | BHL Sec 14            | T10S R22E 1290 FNL 1975 FWL |

Page 2

43-047-50391 NBU 922-36H2DS Sec 36 T09S R22E 1846 FNL 1491 FEL  
BHL Sec 36 T09S R22E 1720 FNL 0795 FEL

43-047-50392 NBU 922-36H2AS Sec 36 T09S R22E 1829 FNL 1501 FEL  
BHL Sec 36 T09S R22E 1360 FNL 0700 FEL

43-047-50393 NBU 922-36G1T Sec 36 T09S R22E 1812 FNL 1512 FEL

43-047-50394 NBU 922-36A4BS Sec 36 T09S R22E 1795 FNL 1522 FEL  
BHL Sec 36 T09S R22E 0980 FNL 0630 FEL

43-047-50395 NBU 922-31O1AS Sec 31 T09S R22E 2314 FSL 0128 FEL  
BHL Sec 31 T09S R22E 1098 FSL 1494 FEL

43-047-50396 NBU 922-31J3AS Sec 31 T09S R22E 2313 FSL 0148 FEL  
BHL Sec 31 T09S R22E 1871 FSL 1973 FEL

43-047-50397 NBU 922-31I4AS Sec 31 T09S R22E 2315 FSL 0088 FEL  
BHL Sec 31 T09S R22E 1743 FSL 0153 FEL

43-047-50398 NBU 922-31I3CS Sec 31 T09S R22E 2314 FSL 0108 FEL  
BHL Sec 31 T09S R22E 1341 FSL 1125 FEL

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

/s/ Michael L. Coulthard

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

MCoulthard:mc:5-8-09

**From:** Jim Davis  
**To:** Bonner, Ed; Mason, Diana  
**Date:** 6/1/2009 2:12 PM  
**Subject:** Kerr McGee Approvals (16)

**CC:** Garrison, LaVonne

The following wells have been approved by SITLA including arch and paleo clearance.

NBU 922-36A4BS (4304750394)  
NBU 922-36G1T (4304750393)  
NBU 922-36H2AS (4304750392)  
NBU 922-36H2DS (4304750391)

NBU 921-25M3DS (4304750383)  
NBU 921-25M2DS (4304750384)  
NBU 921-25M2AS (4304750385)  
NBU 921-25L4BS (4304750386)

NBU 922-31O1AS (4304750395)  
NBU 922-31J3AS (4304750396)  
NBU 922-31I3CS (4304750398)  
NBU 922-31I4AS (4304750397)

NBU 1022-19P1AS (4304750418)  
NBU 1022-20M4CS (4304750422)  
NBU 1022-20M1DS (4304750421)  
NBU 1022-20M4DS (4304750423)

-Jim

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

|  |   |       |  |
|--|---|-------|--|
| Well Name                                | KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 921-25M2DS 430475038 |       |  |
| String                                   | Surf  | Prod  |  |
| Casing Size(")                           | 9.625   | 4.500 |  |
| Setting Depth (TVD)                      | 2460  | 9861  |  |
| Previous Shoe Setting Depth (TVD)        | 20  | 2460  |  |
| Max Mud Weight (ppg)                     | 8.4   | 11.7  |  |
| BOPE Proposed (psi)                      | 500   | 5000  |  |
| Casing Internal Yield (psi)              | 3520  | 7780  |  |
| Operators Max Anticipated Pressure (psi) | 5888  | 11.5  |  |

|   |  |       |  |
|---|--|-------|--|
| Calculations                                  | Surf String  | 9.625 | "  |
| Max BPH (psi)                                 | $.052 * \text{Setting Depth} * \text{MW} =$                                    | 1075  |  |
|   |  |       | <b>BOPE Adequate For Drilling And Setting Casing at Depth?</b> |
| MASP (Gas) (psi)                              | $\text{Max BHP} - (0.12 * \text{Setting Depth}) =$                             | 780   | NO   |
| MASP (Gas/Mud) (psi)                          | $\text{Max BHP} - (0.22 * \text{Setting Depth}) =$                             | 534   | NO OK  |
|   |  |       | <b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>   |
| Pressure At Previous Shoe                     | $\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$ | 538   | NO Reasonable depth in area                                    |
| Required Casing/BOPE Test Pressure=           |  | 2460  | psi  |
| *Max Pressure Allowed @ Previous Casing Shoe= |  | 20    | psi *Assumes 1psi/ft frac gradient                             |

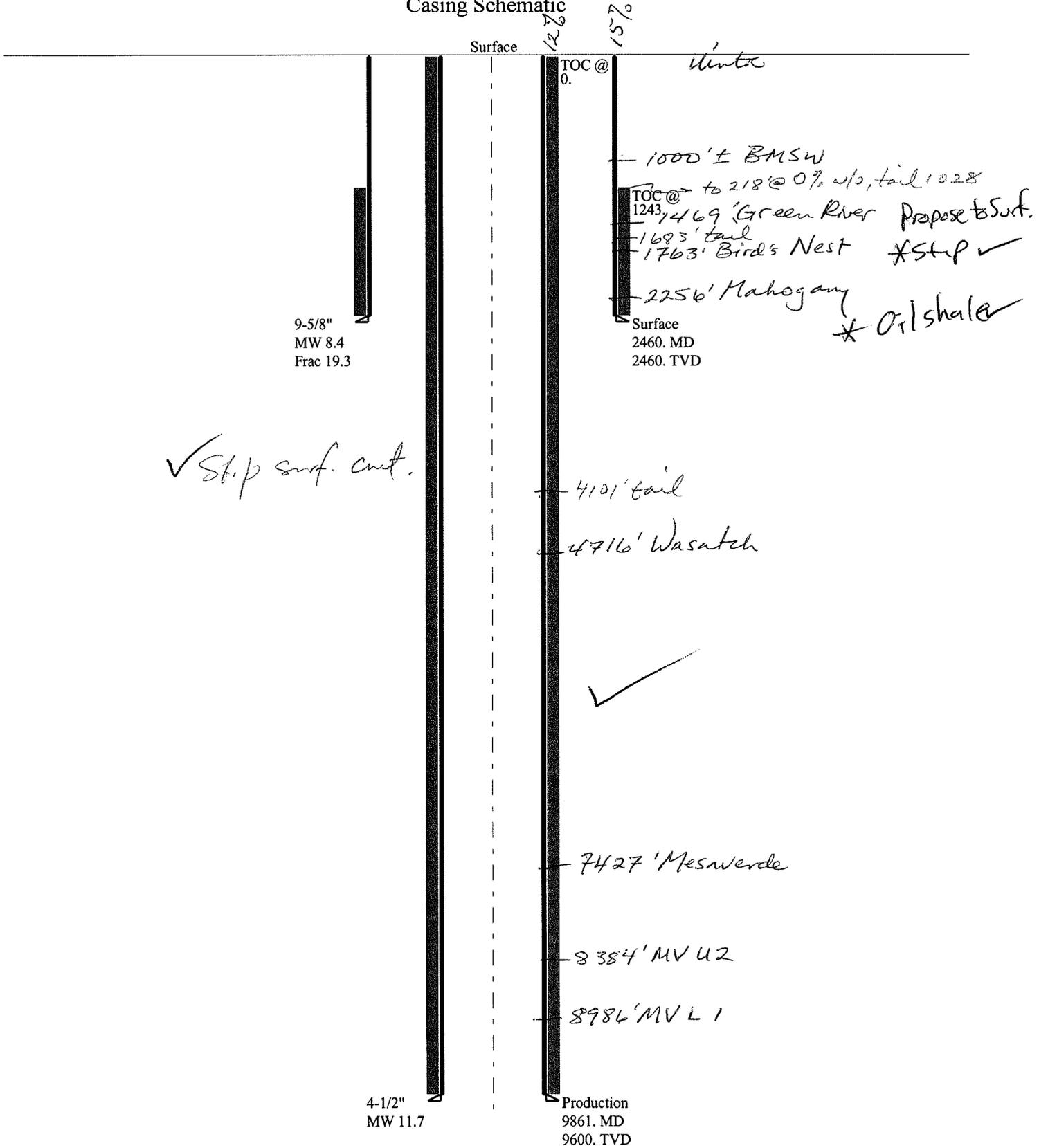
|   |  |       |  |
|---|--|-------|--|
| Calculations                                  | Prod String  | 4.500 | "  |
| Max BPH (psi)                                 | $.052 * \text{Setting Depth} * \text{MW} =$                                    | 5999  |  |
|   |  |       | <b>BOPE Adequate For Drilling And Setting Casing at Depth?</b> |
| MASP (Gas) (psi)                              | $\text{Max BHP} - (0.12 * \text{Setting Depth}) =$                             | 4816  | YES  |
| MASP (Gas/Mud) (psi)                          | $\text{Max BHP} - (0.22 * \text{Setting Depth}) =$                             | 3830  | YES OK   |
|   |  |       | <b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>   |
| Pressure At Previous Shoe                     | $\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$ | 4371  | NO Reasonable, note max allowed pressure                       |
| Required Casing/BOPE Test Pressure=           |  | 5000  | psi  |
| *Max Pressure Allowed @ Previous Casing Shoe= |  | 2460  | psi *Assumes 1psi/ft frac gradient                             |

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

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

# 43047503840000 NBU 921-25M2DS

## Casing Schematic



|              |   |             |              |
|--------------|---|-------------|--------------|
| Well name:   | <b>43047503840000 NBU 921-25M2DS</b>          |             |              |
| Operator:    | <b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b> |             |              |
| String type: | Surface                                       | Project ID: | 43-047-50384 |
| Location:    | UINTAH  | COUNTY      |              |

**Design parameters:**

**Collapse**

Mud weight: 8.400 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: 108 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft  
Cement top: 1,243 ft

**Burst**

Max anticipated surface pressure: 2,165 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 2,460 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: 2,154 ft

**Directional Info - Build & Drop**

Kick-off point 2400 ft  
Departure at shoe: 1 ft  
Maximum dogleg: 3 °/100ft  
Inclination at shoe: 1.8 °

**Re subsequent strings:**

Next setting depth: 9,600 ft  
Next mud weight: 11.700 ppg  
Next setting BHP: 5,835 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 2,460 ft  
Injection pressure: 2,460 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       | 2460                | 9.625                   | 36.00                   | J-55             | LT&C                 | 2460                 | 2460                | 8.796                   | 20116                 |
| 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       | 1073                | 1948                    | 1.814                   | 2460             | 3520                 | 1.43                 | 88.6                | 453                     | 5.12 J                |

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

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

Date: June 17, 2009  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 2460 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

|              |   |             |              |
|--------------|---|-------------|--------------|
| Well name:   | <b>43047503840000 NBU 921-25M2DS</b>          |             |              |
| Operator:    | <b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b> |             |              |
| String type: | Production                                    | Project ID: | 43-047-50384 |
| Location:    | UINTAH  | COUNTY      |              |

**Design parameters:**

**Collapse**

Mud weight: 11.700 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: 208 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 100 ft

Cement top: Surface

**Burst**

Max anticipated surface pressure: 3,723 psi  
 Internal gradient: 0.220 psi/ft  
 Calculated BHP 5,835 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)

Tension is based on air weight.  
 Neutral point: 8,182 ft

**Directional Info - Build & Drop**

Kick-off point 2400 ft  
 Departure at shoe: 1180 ft  
 Maximum dogleg: 3 °/100ft  
 Inclination at shoe: 0 °

| 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       | 9861                | 4.5                     | 11.60                   | I-80             | LT&C                 | 9600                 | 9861                | 3.875                   | 130165                |
| 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       | 5336                | 6360                    | 1.192                   | 5835             | 7780                 | 1.33                 | 111.4               | 212                     | 1.90 J                |

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

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

Date: June 17, 2009  
 Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 9600 ft, a mud weight of 11.7 ppg. An internal gradient of .052 psi/ft was used for collapse from 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

# ON-SITE PREDRILL EVALUATION

## Utah Division of Oil, Gas and Mining

**Operator** KERR-MCGEE OIL & GAS ONSHORE, L.P.  
**Well Name** NBU 921-25M2DS  
**API Number** 43047503840000      **APD No** 1485      **Field/Unit** NATURAL BUTTES  
**Location: 1/4,1/4** NWSW      **Sec** 25      **Tw** 9.0S      **Rng** 21.0E      1860 FSL 251 FWL  
**GPS Coord (UTM)**      **Surface Owner**

### Participants

Floyd Bartlett (DOGM), Jim Davis (SITLA), Raleen White, Griz Oleen, Clay Einerson, Charles Chase and Tony Kzneck (Kerr McGee), Ben Williams (UDWR) and Kolby Kay (Timberline Engineering and Land Surveying).

### Regional/Local Setting & Topography

The general area is the Natural Buttes Unit in an un-named drainage west of lower portion of the Sand Wash drainage of Uintah, County, approximately 32 air miles and 52 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Topography of the area is characterized by open flats bordered or 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 existing pad of the producing NBU 301 gas well will be enlarged to add four wells that will be directionally drilled. They are the NBU 921-25L4BS, 921-25M3DS, 921-25M2AS, 921-25M2DS. The location is on a flat-topped ridge in rolling topography. The existing pad will be significantly enlarged in all directions except on the east where an off-location draw exists. No diversions are needed around the pad. The White River is approximately 3 miles down drainage. A Backflow Pit is included on the Location Layout Sheet. If it is to be constructed, Kerr McGee will request it under a separate application.

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. The selected location appears to be a suitable site for drilling and operating additional wells.

Ben Williams of the Utah Division of Wildlife Resources also attended the pre-site. Mr. Williams stated no wildlife values would be significantly affected by drilling and operating the wells at this location.

The proposed reserve pit is 100' x 250' x 10' deep located in a cut on the southeast corner of the location. Kerr McGee plans a 30-mil liner with a double felt sub-liner. A Backflow Pit is included on the Location Layout Sheet. If it is to be constructed Kerr McGee will request it under a separate application.

Vegetation is a fair desert shrub type, which includes rabbitbrush, greasewood, curly mesquite grass, prickly pear, black sage brush, bud sage, horsebrush, cheatgrass, shadscale, halogeton, sitanion hystrix and spring annuals.

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

Shallow sandy loam.

### Surface Use Plan

**Current Surface Use**

Grazing  
 Recreational  
 Wildlife 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 330 Length 500</b> | Onsite                    | UNTA                     |

**Ancillary Facilities** N

**Waste Management Plan Adequate?**

**Environmental Parameters**

**Affected Floodplains and/or Wetlands** N

**Flora / Fauna**

Vegetation is a fair desert shrub type, which includes rabbitbrush, greasewood, curly mesquite grass, prickly pear, black sage brush, bud sage, horsebrush, cheatgrass, shadscale, halogeton, sitanion hystrix and spring annuals.

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

**Soil Type and Characteristics**

Shallow 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?** Y **Cultural Resources?**

**Reserve Pit**

| <b>Site-Specific Factors</b>             |                  | <b>Site Ranking</b> |
|--|------------------|---------------------|
| <b>Distance to Groundwater (feet)</b>    | >200             | 0                   |
| <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                   |

**Affected Populations**

**Presence Nearby Utility Conduits**

Not Present

0

**Final Score**

35

1 Sensitivity Level

**Characteristics / Requirements**

The proposed reserve pit is 100' x 250' x 10' deep located in a cut on the southeast corner of the location. Kerr McGee plans a 30-mil liner with a double felt sub-liner. A Backflow Pit is included on the Location Layout Sheet. If it is to be constructed Kerr McGee will request it under a separate application.

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

**Other Observations / Comments**

Floyd Bartlett  
**Evaluator**

5/20/2009  
**Date / Time**

# Application for Permit to Drill Statement of Basis

6/25/2009

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

Page 1

|                  |   |               |                          |                   |            |
|------------------|---|---------------|--------------------------|-------------------|------------|
| <b>APD No</b>    | <b>API WellNo</b>                                 | <b>Status</b> | <b>Well Type</b>         | <b>Surf Owner</b> | <b>CBM</b> |
| 1485             | 43047503840000                                    | LOCKED        | GW                       | S                 | No         |
| <b>Operator</b>  | KERR-MCGEE OIL & GAS ONSHORE, L.P.                |               | <b>Surface Owner-APD</b> |                   |            |
| <b>Well Name</b> | NBU 921-25M2DS                                    |               | <b>Unit</b>              | NATURAL BUTTES    |            |
| <b>Field</b>     | NATURAL BUTTES                                    |               | <b>Type of Work</b>      | DRILL             |            |
| <b>Location</b>  | NWSW 25 9S 21E S 1860 FSL 251 FWL GPS Coord (UTM) |               |                          | 627368E           | 4429150N   |

**Geologic Statement of Basis**

Kerr McGee proposes to set 2,460' 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 1,000'. A search of Division of Water Rights records shows one water well within a 10,000 foot radius of the center of section 25. The well is listed as 2,640 feet deep and is used for oil well 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 surface casing and cement should adequately protect ground water in this area.

Brad Hill  
**APD Evaluator**

6/3/2009  
**Date / Time**

**Surface Statement of Basis**

The general area is the Natural Buttes Unit in an un-named drainage west of lower portion of the Sand Wash drainage of Uintah, County, approximately 32 air miles and 52 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Topography of the area is characterized by open flats bordered or 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 existing pad of the producing NBU 301 gas well will be enlarged to add four wells that will be directionally drilled. They are the NBU 921-25L4BS, 921-25M3DS, 921-25M2AS, 921-25M2DS. The location is on a flat-topped ridge in rolling topography. The existing pad will be significantly enlarged in all directions except on the east where an off-location draw exists. No diversions are needed around the pad. The White River is approximately 3 miles down drainage. A Backflow Pit is included on the Location Layout Sheet. If it is to be constructed, Kerr McGee will request it under a separate application.

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. The selected location appears to be a suitable site for drilling and operating additional wells.

Ben Williams of the Utah Division of Wildlife Resources also attended the pre-site. Mr. Williams stated no wildlife values would be significantly affected by drilling and operating the wells at this location.

Floyd Bartlett  
**Onsite Evaluator**

5/20/2009  
**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 felt subliner shall be properly installed and maintained in the reserve pit. |

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

6/25/2009

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

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Surface

The reserve pit shall be fenced upon completion of drilling operations.

# WORKSHEET APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 5/2/2009

**API NO. ASSIGNED:** 43047503840000

**WELL NAME:** NBU 921-25M2DS

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

**PHONE NUMBER:** 720 929-6007

**CONTACT:** Kathy Schneebeck-Dulnoan

**PROPOSED LOCATION:** NWSW 25 090S 210E

**Permit Tech Review:**

**SURFACE:** 1860 FSL 0251 FWL

**Engineering Review:**

**BOTTOM:** 0740 FSL 0623 FWL

**Geology Review:**

**COUNTY:** UINTAH

**LATITUDE:** 40.00484

**LONGITUDE:** -109.50783

**UTM SURF EASTINGS:** 627368.00

**NORTHINGS:** 4429150.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 3 - State

**LEASE NUMBER:** UO 01194

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

**SURFACE OWNER:** 3 - State

**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

**Commingle Approved**

## LOCATION AND SITING:

- R649-2-3.  
**Unit:** NATURAL BUTTES
- R649-3-2. General
- R649-3-3. Exception
- Drilling Unit  
**Board Cause No:** Cause 173-14  
**Effective Date:** 12/2/1999  
**Siting:** 460' fr u bdry & uncomm. tract
- R649-3-11. Directional Drill

**Comments:** Presite Completed

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



JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

### Permit To Drill

\*\*\*\*\*

**Well Name:** NBU 921-25M2DS  
**API Well Number:** 43047503840000  
**Lease Number:** UO 01194  
**Surface Owner:** STATE  
**Approval Date:** 6/30/2009

**Issued to:**

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

**Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14 . The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

**Duration:**

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

**Commingle:**

In accordance with Board Cause No. 173-14, completion into and commingling of production from the Wasatch and Mesaverde formations is allowed.

**General:**

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

**Conditions of Approval:**

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.

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

Surface casing shall be cemented to the surface.

**Notification Requirements:**

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

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

Dustin Doucet

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

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

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

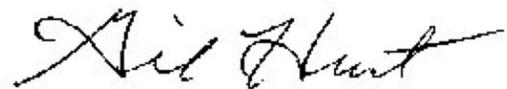
The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at: (801) 538-5338 office  
(801) 942-0871 home
- Carol Daniels at: (801) 538-5284 office
- Dustin Doucet at: (801) 538-5281 office  
(801) 733-0983 home

**Reporting Requirements:**

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

**Approved By:**



Gil Hunt  
Associate Director, Oil & Gas

|  |   |
|--|---|
| <b>STATE OF UTAH</b><br>DEPARTMENT OF NATURAL RESOURCES<br>DIVISION OF OIL, GAS, AND MINING  | <b>FORM 9</b><br><br><b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b><br>UO 01194                                     |
| <b>SUNDRY NOTICES AND REPORTS ON WELLS</b><br><br>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><br><br><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 921-25M2DS   |
| <b>2. NAME OF OPERATOR:</b><br>KERR-MCGEE OIL & GAS ONSHORE, L.P.  | <b>9. API NUMBER:</b><br>43047503840000   |
| <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>720 929-6007 Ext  |
| <b>4. LOCATION OF WELL</b><br><b>FOOTAGES AT SURFACE:</b><br>1860 FSL 0251 FWL<br><b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b><br>Qtr/Qtr: NWSW Section: 25 Township: 09.0S Range: 21.0E Meridian: S  | <b>9. FIELD and POOL or WILDCAT:</b><br>NATURAL BUTTES<br><br><b>COUNTY:</b><br>UINTAH<br><br><b>STATE:</b><br>UTAH |

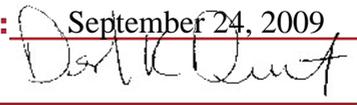
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION  | TYPE OF ACTION  |   |  |
|---|---|---|--|
| <input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b><br>Approximate date work will start:<br>9/27/2009<br><br><input type="checkbox"/> <b>SUBSEQUENT REPORT</b><br>Date of Work Completion:<br><br><input type="checkbox"/> <b>SPUD REPORT</b><br>Date of Spud:<br><br><input type="checkbox"/> <b>DRILLING REPORT</b><br>Report Date: | <input type="checkbox"/> ACIDIZE<br><input checked="" type="checkbox"/> <b>CHANGE TO PREVIOUS PLANS</b><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 | <input checked="" type="checkbox"/> <b>ALTER CASING</b><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 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: |

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

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests to change the surface casing size for this well. The surface casing size is changing FROM: 9-5/8" TO: 8-5/8". Please see the attached drilling diagram for additional details. All other information remains the same. If you have any questions, please contact the undersigned. Thank you.

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

**Date:** September 24, 2009  
**By:** 

|  |                                     |                                    |
|--|-------------------------------------|------------------------------------|
| <b>NAME (PLEASE PRINT)</b><br>Danielle Piernot | <b>PHONE NUMBER</b><br>720 929-6156 | <b>TITLE</b><br>Regulatory Analyst |
| <b>SIGNATURE</b><br>N/A                        | <b>DATE</b><br>9/23/2009            |                                    |

Well name:  
 Operator:  
 String type: Surface  
 AFE No.:  
 Location: Uintah County

**Kerr McGee - NBU**

**Design parameters:**

**Collapse**

Mud weight: 8.400 ppg  
 Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Environment:**

H2S considered? No  
 Surface temperature: 0 °F  
 Bottom hole temperature: °F  
 Temperature gradient: 0.00 °F/100ft

**Burst:**

Design factor 1.00

Cement top: Surface

**Burst**

Max anticipated surface pressure: 2,200 psi  
 Internal gradient: 0.120 psi/ft  
 Calculated BHP 2,500 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: 1.50 (B)

Tension is based on air weight.  
 Neutral point: 2,190 ft

**Non-directional string.**

**Re subsequent strings:**

Next setting depth: 9,600 ft  
 Next mud weight: 11.700 ppg  
 Next setting BHP: 5,835 psi  
 Fracture mud wt: 19.250 ppg  
 Fracture depth: 2,500 ft  
 Injection pressure: 2,500 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) | Internal Capacity (ft³) |
|---------|---------------------|-----------|-------------------------|-------|------------|----------------------|---------------------|---------------------|-------------------------|
| 1       | 2500                | 8.625     | 28.00                   | K-55  | ST&C       | 2500                 | 2500                | 7.892               | 876.4                   |

| 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       | 1091                | 1880                    | 1.723                  | 2500             | 3390                 | 1.36                | 70                  | 414                     | 5.91 J                |

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

**Date:** September 24, 2009  
**By:** Dustin K. Doucet

Prepared by: Dustin K. Doucet  
 Div of Oil, Gas & Mining

Phone:  
 FAX:

Date: September 24, 2009  
 Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 2500 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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





## 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          | 2,680    | 437,000 |
| SURFACE    | 8-5/8" | 0 to 2,460 | 28.00 | J-55 | LTC   | 0.89           | 2.33     | 6.28    |
| PRODUCTION | 4-1/2" | 0 to 9,861 | 11.60 | I-80 | LTC   | 2.09           | 1.09     | 2.01    |

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

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)  
 (Burst Assumptions: TD = 11.7 ppg) 0.22 psi/ft = gradient for partially evac wellbore  
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoys.Fact. of water)  
**MASP 3,620 psi**

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD  
 (Burst Assumptions: TD = 11.7 ppg) 0.60 psi/ft = bottomhole gradient  
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoys.Fact. of water)  
**MABHP 5,888 psi**

### CEMENT PROGRAM

|            |                      | FT. OF FILL   | DESCRIPTION  | SACKS   | EXCESS | WEIGHT | YIELD |
|------------|----------------------|---|--|---------|--------|--------|-------|
| SURFACE    | LEAD                 | 500'  | Premium cmt + 2% CaCl<br>+ 0.25 pps flocele  | 215     | 60%    | 15.60  | 1.18  |
| Option 1   | TOP OUT CMT (6 jobs) | 1,200'  | 20 gals sodium silicate + Premium cmt<br>+ 2% CaCl + 0.25 pps flocele<br>Premium cmt + 2% CaCl | 380     | 0%     | 15.60  | 1.18  |
| SURFACE    |                      | <b>NOTE: If well will circulate water to surface, option 2 will be utilized</b> |  |         |        |        |       |
| Option 2   | LEAD                 | 1,960'  | 65/35 Poz + 6% Gel + 10 pps gilsonite<br>+ 0.25 pps Flocele + 3% salt BWOW                     | 460     | 35%    | 12.60  | 1.81  |
|            | TAIL                 | 500'  | Premium cmt + 2% CaCl<br>+ 0.25 pps flocele  | 180     | 35%    | 15.60  | 1.18  |
|            | TOP OUT CMT          | as required   | Premium cmt + 2% CaCl  | as req. |        | 15.60  | 1.18  |
| PRODUCTION | LEAD                 | 4,211'  | Premium Lite II +0.25 pps<br>celloflake + 5 pps gilsonite + 10% gel<br>+ 0.5% extender         | 400     | 40%    | 11.00  | 3.38  |
|            | TAIL                 | 5,650'  | 50/50 Poz/G + 10% salt + 2% gel<br>+ 0.1% R-3  | 1,380   | 40%    | 14.30  | 1.31  |

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

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

### FLOAT EQUIPMENT & CENTRALIZERS

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

### ADDITIONAL INFORMATION

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

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

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

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

DRILLING ENGINEER: \_\_\_\_\_ DATE: \_\_\_\_\_  
 John Huycke / Emile Goodwin

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

|   |  |
|---|--|
| <p><b>STATE OF UTAH</b><br/>DEPARTMENT OF NATURAL RESOURCES<br/>DIVISION OF OIL, GAS, AND MINING</p>  | <p><b>FORM 9</b></p>   |
| <p><b>SUNDRY NOTICES AND REPORTS ON WELLS</b></p> <p>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.</p> | <p><b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b><br/>UO 01194</p> |
| <p><b>1. TYPE OF WELL</b><br/>Gas Well</p>  | <p><b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b></p>                |
| <p><b>2. NAME OF OPERATOR:</b><br/>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</p>   | <p><b>7. UNIT or CA AGREEMENT NAME:</b><br/>NATURAL BUTTES</p>     |
| <p><b>3. ADDRESS OF OPERATOR:</b><br/>P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779</p>   | <p><b>8. WELL NAME and NUMBER:</b><br/>NBU 921-25M2DS</p>          |
| <p><b>4. LOCATION OF WELL</b><br/><b>FOOTAGES AT SURFACE:</b><br/>1860 FSL 0251 FWL<br/><b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b><br/>Qtr/Qtr: NWSW Section: 25 Township: 09.0S Range: 21.0E Meridian: S</p>  | <p><b>9. API NUMBER:</b><br/>43047503840000</p>                    |
| <p><b>PHONE NUMBER:</b><br/>720 929-6007 Ext</p>  | <p><b>9. FIELD and POOL or WILDCAT:</b><br/>NATURAL BUTTES</p>     |
| <p><b>COUNTY:</b><br/>UINTAH</p>  | <p><b>STATE:</b><br/>UTAH</p>                                      |

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

| TYPE OF SUBMISSION  | TYPE OF ACTION  |   |   |
|---|---|---|---|
| <p><input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b><br/>Approximate date work will start:<br/>9/27/2009</p> <p><input type="checkbox"/> <b>SUBSEQUENT REPORT</b><br/>Date of Work Completion:</p> <p><input type="checkbox"/> <b>SPUD REPORT</b><br/>Date of Spud:</p> <p><input type="checkbox"/> <b>DRILLING REPORT</b><br/>Report Date:</p> | <p><input type="checkbox"/> ACIDIZE</p> <p><input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS</p> <p><input type="checkbox"/> CHANGE WELL STATUS</p> <p><input type="checkbox"/> DEEPEN</p> <p><input type="checkbox"/> OPERATOR CHANGE</p> <p><input type="checkbox"/> PRODUCTION START OR RESUME</p> <p><input type="checkbox"/> REPERFORATE CURRENT FORMATION</p> <p><input type="checkbox"/> TUBING REPAIR</p> <p><input type="checkbox"/> WATER SHUTOFF</p> <p><input type="checkbox"/> WILDCAT WELL DETERMINATION</p> | <p><input checked="" type="checkbox"/> ALTER CASING</p> <p><input type="checkbox"/> CHANGE TUBING</p> <p><input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS</p> <p><input type="checkbox"/> FRACTURE TREAT</p> <p><input type="checkbox"/> PLUG AND ABANDON</p> <p><input type="checkbox"/> RECLAMATION OF WELL SITE</p> <p><input type="checkbox"/> SIDETRACK TO REPAIR WELL</p> <p><input type="checkbox"/> VENT OR FLARE</p> <p><input type="checkbox"/> SI TA STATUS EXTENSION</p> <p><input type="checkbox"/> OTHER</p> | <p><input type="checkbox"/> CASING REPAIR</p> <p><input type="checkbox"/> CHANGE WELL NAME</p> <p><input type="checkbox"/> CONVERT WELL TYPE</p> <p><input type="checkbox"/> NEW CONSTRUCTION</p> <p><input type="checkbox"/> PLUG BACK</p> <p><input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION</p> <p><input type="checkbox"/> TEMPORARY ABANDON</p> <p><input type="checkbox"/> WATER DISPOSAL</p> <p><input type="checkbox"/> APD EXTENSION</p> <p>OTHER:  </p> |

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

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests to change the surface casing size for this well. The surface casing size is changing FROM: **Accepted by the** 9-5/8" TO: 8-5/8". Please see the attached drilling diagram for additional **Utah Division of** details. All other information remains the same. If you have any questions, please contact the undersigned. Thank you.

**Oil, Gas and Mining**  
**FOR RECORD ONLY**  
September 28, 2009

|  |                                     |                                    |
|--|-------------------------------------|------------------------------------|
| <b>NAME (PLEASE PRINT)</b><br>Danielle Piernot | <b>PHONE NUMBER</b><br>720 929-6156 | <b>TITLE</b><br>Regulatory Analyst |
| <b>SIGNATURE</b><br>N/A                        | <b>DATE</b><br>9/23/2009            |                                    |

Well name:  
 Operator:  
 String type: Surface  
 AFE No.:  
 Location: Uintah County

**Kerr McGee - NBU**

**Design parameters:**

**Collapse**

Mud weight: 8.400 ppg  
 Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Environment:**

H2S considered? No  
 Surface temperature: 0 °F  
 Bottom hole temperature: °F  
 Temperature gradient: 0.00 °F/100ft

**Burst:**

Design factor 1.00

Cement top: Surface

**Burst**

Max anticipated surface pressure: 2,200 psi  
 Internal gradient: 0.120 psi/ft  
 Calculated BHP 2,500 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: 1.50 (B)

Tension is based on air weight.  
 Neutral point: 2,190 ft

**Non-directional string.**

**Re subsequent strings:**

Next setting depth: 9,600 ft  
 Next mud weight: 11.700 ppg  
 Next setting BHP: 5,835 psi  
 Fracture mud wt: 19.250 ppg  
 Fracture depth: 2,500 ft  
 Injection pressure: 2,500 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) | Internal Capacity (ft³) |
|---------|---------------------|-----------|-------------------------|-------|------------|----------------------|---------------------|---------------------|-------------------------|
| 1       | 2500                | 8.625     | 28.00                   | K-55  | ST&C       | 2500                 | 2500                | 7.892               | 876.4                   |

| 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       | 1091                | 1880                    | 1.723                  | 2500             | 3390                 | 1.36                | 70                  | 414                     | 5.91 J                |

**Accepted by the  
 Utah Division of  
 Oil, Gas and Mining  
 FOR RECORD ONLY**  
 September 28, 2009

Prepared by: Dustin K. Doucet  
 Div of Oil, Gas & Mining

Phone:  
 FAX:

Date: September 24, 2009  
 Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 2500 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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





## 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          | 2,680    | 437,000 |
| SURFACE    | 8-5/8" | 0 to 2,460 | 28.00 | J-55 | LTC   | 0.89           | 2.33     | 6.28    |
| PRODUCTION | 4-1/2" | 0 to 9,861 | 11.60 | I-80 | LTC   | 2.09           | 1.09     | 2.01    |

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

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)  
 (Burst Assumptions: TD = 11.7 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 3,620 psi**

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD  
 (Burst Assumptions: TD = 11.7 ppg) 0.60 psi/ft = bottomhole gradient  
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)  
**MABHP 5,888 psi**

### CEMENT PROGRAM

|            |                      | FT. OF FILL   | DESCRIPTION  | SACKS   | EXCESS | WEIGHT | YIELD |
|------------|----------------------|---|--|---------|--------|--------|-------|
| SURFACE    | LEAD                 | 500'  | Premium cmt + 2% CaCl<br>+ 0.25 pps flocele  | 215     | 60%    | 15.60  | 1.18  |
| Option 1   | TOP OUT CMT (6 jobs) | 1,200'  | 20 gals sodium silicate + Premium cmt<br>+ 2% CaCl + 0.25 pps flocele<br>Premium cmt + 2% CaCl | 380     | 0%     | 15.60  | 1.18  |
| SURFACE    |                      | <b>NOTE: If well will circulate water to surface, option 2 will be utilized</b> |  |         |        |        |       |
| Option 2   | LEAD                 | 1,960'  | 65/35 Poz + 6% Gel + 10 pps gilsonite<br>+ 0.25 pps Flocele + 3% salt BWOW                     | 460     | 35%    | 12.60  | 1.81  |
|            | TAIL                 | 500'  | Premium cmt + 2% CaCl<br>+ 0.25 pps flocele  | 180     | 35%    | 15.60  | 1.18  |
|            | TOP OUT CMT          | as required   | Premium cmt + 2% CaCl  | as req. |        | 15.60  | 1.18  |
| PRODUCTION | LEAD                 | 4,211'  | Premium Lite II +0.25 pps<br>celloflake + 5 pps gilsonite + 10% gel<br>+ 0.5% extender         | 400     | 40%    | 11.00  | 3.38  |
|            | TAIL                 | 5,650'  | 50/50 Poz/G + 10% salt + 2% gel<br>+ 0.1% R-3  | 1,380   | 40%    | 14.30  | 1.31  |

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

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

### FLOAT EQUIPMENT & CENTRALIZERS

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

### ADDITIONAL INFORMATION

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

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

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

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

**DRILLING ENGINEER:** \_\_\_\_\_ **DATE:** \_\_\_\_\_  
 John Huycke / Emile Goodwin

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

# DIVISION OF OIL, GAS AND MINING

## SPUDDING INFORMATION

Name of Company: KERR-McGEE OIL & GAS ONSHORE, L.P.

Well Name: NBU 921-25M2DS

Api No: 43-047-50384 Lease Type: STATE

Section 25 Township 09S Range 21E County UINTAH

Drilling Contractor PETE MARTIN DRLG RIG # BUCKET

### SPUDDED:

Date 10/27/2009

Time 1:00 PM

How DRY

**Drilling will Commence:** \_\_\_\_\_

Reported by JAMES GOBER

Telephone # (435) 828-7024

Date 10/28/2009 Signed CHD

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

FORM 6

**ENTITY ACTION FORM**

Operator: KERR MCGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995  
 Address: P.O. Box 173779  
city DENVER  
state CO zip 80217 Phone Number: (720) 929-6100

**Well 1**

| API Number   | Well Name             |                   | QQ         | Sec | Twp                              | Rng | County |
|--|-----------------------|-------------------|------------|-----|----------------------------------|-----|--------|
| 4304750385   | NBU 921-25M2AS        |                   | NWSW       | 25  | 9S                               | 21E | UINTAH |
| Action Code  | Current Entity Number | New Entity Number | Spud Date  |     | Entity Assignment Effective Date |     |        |
| <u>B</u>   | 99999                 | <u>2900</u>       | 10/27/2009 |     | <u>11/10/09</u>                  |     |        |
| <b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <u>W5MVD</u><br>SPUD WELL LOCATION ON 10/27/2009 AT 11:00 HRS. <u>BHL = SWSW</u> |                       |                   |            |     |                                  |     |        |

**Well 2**

| API Number   | Well Name             |                   | QQ         | Sec | Twp                              | Rng | County |
|--|-----------------------|-------------------|------------|-----|----------------------------------|-----|--------|
| 4304750384   | NBU 921-25M2DS        |                   | NWSW       | 25  | 9S                               | 21E | UINTAH |
| Action Code  | Current Entity Number | New Entity Number | Spud Date  |     | Entity Assignment Effective Date |     |        |
| <u>B</u>   | 99999                 | <u>2900</u>       | 10/27/2009 |     | <u>11/10/09</u>                  |     |        |
| <b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <u>W5MVD</u><br>SPUD WELL LOCATION ON 10/27/2009 AT 13:00 HRS. <u>BHL = SWSW</u> |                       |                   |            |     |                                  |     |        |

**Well 3**

| API Number   | Well Name             |                   | QQ         | Sec | Twp                              | Rng | County |
|--|-----------------------|-------------------|------------|-----|----------------------------------|-----|--------|
| 4304750383   | NBU 921-25M3DS        |                   | NWSW       | 25  | 9S                               | 21E | UINTAH |
| Action Code  | Current Entity Number | New Entity Number | Spud Date  |     | Entity Assignment Effective Date |     |        |
| <u>B</u>   | 99999                 | <u>2900</u>       | 10/27/2009 |     | <u>11/10/09</u>                  |     |        |
| <b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <u>W5MVD</u><br>SPUD WELL LOCATION ON 10/27/2009 AT 15:00 HRS. <u>BHL = SWSW</u> |                       |                   |            |     |                                  |     |        |

**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)

ANDY LYTLE

Name (Please Print)

Signature [Signature]

REGULATORY ANALYST

Title

10/30/2009

Date

**RECEIVED**

NOV 02 2009

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><br><br><b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b><br>UO 01194                                     |
| <b>SUNDRY NOTICES AND REPORTS ON WELLS</b><br><br>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><br><br><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 921-25M2DS   |
| <b>2. NAME OF OPERATOR:</b><br>KERR-MCGEE OIL & GAS ONSHORE, L.P.  | <b>9. API NUMBER:</b><br>43047503840000   |
| <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>720 929-6007 Ext  |
| <b>4. LOCATION OF WELL</b><br><b>FOOTAGES AT SURFACE:</b><br>1860 FSL 0251 FWL<br><b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b><br>Qtr/Qtr: NWSW Section: 25 Township: 09.0S Range: 21.0E Meridian: S  | <b>9. FIELD and POOL or WILDCAT:</b><br>NATURAL BUTTES<br><br><b>COUNTY:</b><br>UINTAH<br><br><b>STATE:</b><br>UTAH |

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

| TYPE OF SUBMISSION  | TYPE OF ACTION  |   |   |
|---|---|---|---|
| <input type="checkbox"/> <b>NOTICE OF INTENT</b><br>Approximate date work will start:   | <input type="checkbox"/> ACIDIZE                                      | <input type="checkbox"/> ALTER CASING                   | <input type="checkbox"/> CASING REPAIR                  |
| <input type="checkbox"/> <b>SUBSEQUENT REPORT</b><br>Date of Work Completion:           | <input type="checkbox"/> CHANGE TO PREVIOUS PLANS                     | <input type="checkbox"/> CHANGE TUBING                  | <input type="checkbox"/> CHANGE WELL NAME               |
| <input type="checkbox"/> <b>SPUD REPORT</b><br>Date of Spud:                            | <input type="checkbox"/> CHANGE WELL STATUS                           | <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS | <input type="checkbox"/> CONVERT WELL TYPE              |
| <input checked="" type="checkbox"/> <b>DRILLING REPORT</b><br>Report Date:<br>3/26/2010 | <input type="checkbox"/> DEEPEN                                       | <input type="checkbox"/> FRACTURE TREAT                 | <input type="checkbox"/> NEW CONSTRUCTION               |
|   | <input type="checkbox"/> OPERATOR CHANGE                              | <input type="checkbox"/> PLUG AND ABANDON               | <input type="checkbox"/> PLUG BACK                      |
|   | <input checked="" type="checkbox"/> <b>PRODUCTION START OR RESUME</b> | <input type="checkbox"/> RECLAMATION OF WELL SITE       | <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION |
|   | <input type="checkbox"/> REPERFORATE CURRENT FORMATION                | <input type="checkbox"/> SIDETRACK TO REPAIR WELL       | <input type="checkbox"/> TEMPORARY ABANDON              |
|   | <input type="checkbox"/> TUBING REPAIR                                | <input type="checkbox"/> VENT OR FLARE                  | <input type="checkbox"/> WATER DISPOSAL                 |
|   | <input type="checkbox"/> WATER SHUTOFF                                | <input type="checkbox"/> SI TA STATUS EXTENSION         | <input type="checkbox"/> APD EXTENSION                  |
|   | <input type="checkbox"/> WILDCAT WELL DETERMINATION                   | <input type="checkbox"/> OTHER                          | OTHER:  |

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

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 3/26/2010 AT 12:00 P.M. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**  
**FOR RECORD ONLY**  
 March 29, 2010

|  |                                     |                                    |
|--|-------------------------------------|------------------------------------|
| <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>3/29/2010            |                                    |

|   |   |
|---|---|
| <p><b>STATE OF UTAH</b><br/>DEPARTMENT OF NATURAL RESOURCES<br/>DIVISION OF OIL, GAS, AND MINING</p>  | <p><b>FORM 9</b></p>  |
| <p><b>SUNDRY NOTICES AND REPORTS ON WELLS</b></p> <p>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.</p> | <p><b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b><br/>UO 01194</p> <p><b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b></p> <p><b>7. UNIT or CA AGREEMENT NAME:</b><br/>NATURAL BUTTES</p> |
| <p><b>1. TYPE OF WELL</b><br/>Gas Well</p>  | <p><b>8. WELL NAME and NUMBER:</b><br/>NBU 921-25M2DS</p>   |
| <p><b>2. NAME OF OPERATOR:</b><br/>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</p>   | <p><b>9. API NUMBER:</b><br/>43047503840000</p>   |
| <p><b>3. ADDRESS OF OPERATOR:</b><br/>P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779</p>   | <p><b>PHONE NUMBER:</b><br/>720 929-6007 Ext</p> <p><b>9. FIELD and POOL or WILDCAT:</b><br/>NATURAL BUTTES</p>   |
| <p><b>4. LOCATION OF WELL</b><br/><b>FOOTAGES AT SURFACE:</b><br/>1860 FSL 0251 FWL<br/><b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b><br/>Qtr/Qtr: NWSW Section: 25 Township: 09.0S Range: 21.0E Meridian: S</p>  | <p><b>COUNTY:</b><br/>UINTAH</p> <p><b>STATE:</b><br/>UTAH</p>  |

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

| TYPE OF SUBMISSION  | TYPE OF ACTION  |   |   |
|---|---|---|---|
| <input type="checkbox"/> <b>NOTICE OF INTENT</b><br>Approximate date work will start:   | <input type="checkbox"/> ACIDIZE                                      | <input type="checkbox"/> ALTER CASING                   | <input type="checkbox"/> CASING REPAIR                  |
| <input type="checkbox"/> <b>SUBSEQUENT REPORT</b><br>Date of Work Completion:           | <input type="checkbox"/> CHANGE TO PREVIOUS PLANS                     | <input type="checkbox"/> CHANGE TUBING                  | <input type="checkbox"/> CHANGE WELL NAME               |
| <input type="checkbox"/> <b>SPUD REPORT</b><br>Date of Spud:                            | <input type="checkbox"/> CHANGE WELL STATUS                           | <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS | <input type="checkbox"/> CONVERT WELL TYPE              |
| <input checked="" type="checkbox"/> <b>DRILLING REPORT</b><br>Report Date:<br>3/26/2010 | <input type="checkbox"/> DEEPEN                                       | <input type="checkbox"/> FRACTURE TREAT                 | <input type="checkbox"/> NEW CONSTRUCTION               |
|   | <input type="checkbox"/> OPERATOR CHANGE                              | <input type="checkbox"/> PLUG AND ABANDON               | <input type="checkbox"/> PLUG BACK                      |
|   | <input checked="" type="checkbox"/> <b>PRODUCTION START OR RESUME</b> | <input type="checkbox"/> RECLAMATION OF WELL SITE       | <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION |
|   | <input type="checkbox"/> REPERFORATE CURRENT FORMATION                | <input type="checkbox"/> SIDETRACK TO REPAIR WELL       | <input type="checkbox"/> TEMPORARY ABANDON              |
|   | <input type="checkbox"/> TUBING REPAIR                                | <input type="checkbox"/> VENT OR FLARE                  | <input type="checkbox"/> WATER DISPOSAL                 |
|   | <input type="checkbox"/> WATER SHUTOFF                                | <input type="checkbox"/> SI TA STATUS EXTENSION         | <input type="checkbox"/> APD EXTENSION                  |
|   | <input type="checkbox"/> WILDCAT WELL DETERMINATION                   | <input type="checkbox"/> OTHER                          | OTHER:  |

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

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 3/26/2010 AT 12:00 P.M. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**  
**FOR RECORD ONLY**  
 March 29, 2010

|  |                                     |                                    |
|--|-------------------------------------|------------------------------------|
| <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>3/29/2010            |                                    |

**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**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

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

8. WELL NAME and NUMBER:  
**NBU 921-25M2DS**

9. API NUMBER:  
**4304750384**

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

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:  
**NWSW 25 9S 21E**

12. COUNTY  
**UINTAH**

13. STATE  
**UTAH**

1a. TYPE OF WELL: OIL WELL  GAS WELL  DRY  OTHER \_\_\_\_\_

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

2. NAME OF OPERATOR:  
**KERR McGEE OIL & GAS ONSHORE LP**

3. ADDRESS OF OPERATOR: P.O. BOX 173779 CITY **DENVER** STATE **CO** ZIP **80217** PHONE NUMBER: **(720) 929-6100**

4. LOCATION OF WELL (FOOTAGES)  
AT SURFACE: **NWSW 1860 FSL & 251 FWL**  
AT TOP PRODUCING INTERVAL REPORTED BELOW: **SWSW 757 FSL & 615 FWL SEC.25-9S-21E**  
AT TOTAL DEPTH: **SWSW 772 FSL & 619 FWL SEC.25-9S-21E** *Per HSM review*

14. DATE SPUNDED: **10/27/2009** 15. DATE T.D. REACHED: **1/12/2010** 16. DATE COMPLETED: **3/26/2010** ABANDONED  READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL):  
**5004' GL**

18. TOTAL DEPTH: MD **9,823** 19. PLUG BACK T.D.: MD **9,765** 20. IF MULTIPLE COMPLETIONS, HOW MANY? \*  
TVD **9,655** TVD **9,597**

21. DEPTH BRIDGE MD PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)  
**GR/CCL-BHV-SDL/DSN/ACTR**

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

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

| HOLE SIZE | SIZE/GRADE | WEIGHT (#/ft.) | TOP (MD) | BOTTOM (MD) | STAGE CEMENTER DEPTH | CEMENT TYPE & NO. OF SACKS | SLURRY VOLUME (BBL) | CEMENT TOP ** | AMOUNT PULLED |
|-----------|------------|----------------|----------|-------------|----------------------|----------------------------|---------------------|---------------|---------------|
| 20"       | 14" STL    | 36.7#          |          | 40          |                      | 28                         |                     |               |               |
| 11"       | 8 5/8 J-55 | 28#            |          | 2,521       |                      | 480                        |                     |               |               |
| 7 7/8"    | 4 1/2 I-80 | 11.6#          |          | 9,812       |                      | 1600                       |                     |               |               |
|           |            |                |          |             |                      |                            |                     |               |               |
|           |            |                |          |             |                      |                            |                     |               |               |

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" | 8,803          |                 |      |                |                 |      |                |                 |

| 26. PRODUCING INTERVALS |          |             |           |              | 27. PERFORATION RECORD  |      |           |  |                                   |
|-------------------------|----------|-------------|-----------|--------------|-------------------------|------|-----------|--|-----------------------------------|
| FORMATION NAME          | TOP (MD) | BOTTOM (MD) | TOP (TVD) | BOTTOM (TVD) | INTERVAL (Top/Bot - MD) | SIZE | NO. HOLES | PERFORATION STATUS                       |                                   |
| (A) MESAVERDE           | 7,558    | 9,610       |           |              | 7,558 9,610             | 0.36 | 242       | Open <input checked="" type="checkbox"/> | Squeezed <input type="checkbox"/> |
| (B) WSMVD               |          |             |           |              |                         |      |           | 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"/> |

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

| DEPTH INTERVAL | AMOUNT AND TYPE OF MATERIAL                       |
|----------------|---|
| 7,558-9,610    | PMP 11,178 BBLS SLICK H2O & 433,884 LBS 30/50 SD. |

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:  
**PROD**

**RECEIVED**

**31. INITIAL PRODUCTION**

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

|  |                             |                                |             |                            |               |                           |                        |                            |                            |                                 |
|--|-----------------------------|--------------------------------|-------------|----------------------------|---------------|---------------------------|------------------------|----------------------------|----------------------------|---------------------------------|
| DATE FIRST PRODUCED:<br><b>3/26/2010</b> |                             | TEST DATE:<br><b>3/30/2010</b> |             | HOURS TESTED:<br><b>24</b> |               | TEST PRODUCTION RATES: →  | OIL – BBL:<br><b>0</b> | GAS – MCF:<br><b>2,597</b> | WATER – BBL:<br><b>360</b> | PROD. METHOD:<br><b>FLOWING</b> |
| CHOKE SIZE:<br><b>18/64</b>              | TBG. PRESS.<br><b>2,093</b> | CSG. PRESS.<br><b>2,794</b>    | API GRAVITY | BTU – GAS                  | GAS/OIL RATIO | 24 HR PRODUCTION RATES: → | OIL – BBL:<br><b>0</b> | GAS – MCF:<br><b>2,597</b> | WATER – BBL:<br><b>360</b> | INTERVAL STATUS:<br><b>PROD</b> |

**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.)**

**SOLD**

**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 | 1,549    |             |                              |      |                      |
| MAHOGANY    | 2,272    |             |                              |      |                      |
| WASATCH     | 4,891    | 7,530       |                              |      |                      |
| MESAVERDE   | 7,544    | 9,823       |                              |      |                      |

**35. ADDITIONAL REMARKS (Include plugging procedure)**

ATTACHED TO THIS COMPLETION REPORT IS THE CHRONOLOGICAL WELL HISTORY AND FINAL SURVEY.

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

NAME (PLEASE PRINT) ANDY LYTLE TITLE REGULATORY ANALYST  
 SIGNATURE  DATE 4/29/2010

This report must be submitted within 30 days of

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

\* ITEM 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 Phone: 801-538-5340  
 1594 West North Temple, Suite 1210  
 Box 145801 Fax: 801-359-3940  
 Salt Lake City, Utah 84114-5801

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-25M2DS [YELLOW] Spud Conductor: 10/27/2009 Spud Date: 11/1/2009  
 Project: UTAH-UINTAH Site: NBU 921-25L PAD Rig Name No: PROPETRO/, H&P 298/298  
 Event: DRILLING Start Date: 10/22/2009 End Date: 1/13/2010  
 Active Datum: RKB @5,030.00ft (above Mean Sea Level) UWI: NW/SW/09/S/21/E/25/0/0/26/PM/S/1,860.00/W/0/251.00/0/0

| Date      | Time Start-End | Duration (hr) | Phase  | Code | Sub Code | P/U | MD From (ft) | Operation  |
|-----------|----------------|---------------|--------|------|----------|-----|--------------|--|
| 11/1/2009 | 16:30 - 17:00  | 0.50          | MIRU   | 01   | A        | P   |              | MOVE RIG   |
|           | 17:00 - 18:00  | 1.00          | MAINT  | 08   | A        | P   |              | RIG MAIN. CHANGE OIL, FILLTER, LUB RIG   |
|           | 18:00 - 20:00  | 2.00          | PRPSPD | 01   | B        | P   |              | RIG UP TO SPUD   |
|           | 20:00 - 21:00  | 1.00          | PRPSPD | 02   | A        | P   |              | P/U AIR HAMMER DRILL TO 180'   |
|           | 21:00 - 22:30  | 1.50          | PRPSPD | 06   | A        | P   |              | TOH,P/U MWD TOOLSTIH   |
|           | 22:30 - 0:00   | 1.50          | PRPSPD | 02   | B        | P   |              | DRILL F/ 180 TO 480'   |
| 11/2/2009 | 0:00 - 20:30   | 20.50         | DRLSUR | 02   | B        | P   |              | DRLG. F 480 TO 2524 WT 18-20 K RPM 40 MM RPM 104 650 GPM, ON BOTTOM PSI 1700, OFF BOTTOM 1450 PSI ROP 99'  |
|           | 20:30 - 22:30  | 2.00          | DRLSUR | 05   | A        | P   |              | CIRC HOLE CLEAN ( UNLOAD 8 5/8 # 28 CSG.)  |
|           | 22:30 - 0:00   | 1.50          | DRLSUR | 06   | A        | P   |              | TOH L/D MWD TOOLS  |
| 11/3/2009 | 0:00 - 2:30    | 2.50          | DRLSUR | 06   | A        | P   |              | TOH L/D MWD TOOLS  |
|           | 2:30 - 6:00    | 3.50          | DRLSUR | 12   | A        | P   |              | RIG UP TO RUN CASING HSM RUN 57 JTS 8 5/8 # 28 J-55 LT&C SHOE @ 2495 BAFFLE @2450  |
|           | 6:00 - 6:00    | 0.00          | RDMO   | 01   | E        | P   |              | RIG RELESED @ 06:00 11/03/2009   |
|           | 6:00 - 8:00    | 2.00          | DRLSUR | 12   | B        | P   |              | R/U CEMENT CREW HSM TEST LINES TO 2000 PSI 20 BBLs.GEL WATER AHEAD, LEAD 11.0 Y 3.82 180 SX CMT 16:% GEL, 10LBSX GILSNIGHT, .25 LBBBLFLOW SEAL, TAIL 15.8 Y 1.15 200 SX CMT 41 BBLs, 2:% CAL .25LBSX FLOWSEAL , DISPLACED W/ 152.8 BBLs BUMPED PLUG 500 PSI OVER 1000 PSI FLOAT HELD, LIFT PSI 450 PSI RETRUNED 37 BBLs CMT TO PIT, TOP OUT #1 100SX 15.8 Y1.15 4% CAL,.25 FLOWSEAL TOTAL CMT SX 480 |
| 1/4/2010  | 15:00 - 20:30  | 5.50          | MIRU   | 01   | C        | P   |              | SKID RIG 10' REMOVE SKID BEAMS& BRACES FROM BACK OF RIG & PLACE IN FRONT,EXTEND WIRE TRAYS, SKID RIG 10' TO NEXT WELL NBU 921-25M2DS   |
|           | 20:30 - 22:00  | 1.50          | PRPSPD | 14   | A        | P   |              | NUBOP ,FLOW LINE,EXTEND MUD LINE.  |
|           | 22:00 - 0:00   | 2.00          | PRPSPD | 15   | A        | P   |              | PRESSURE TEST,KELLY, IBOP, FLOOR VALVE,PIPE RAMS, BOP WING VALVES , HCR VALVE + CHOKE LINE; INNER OUTER CHOKE VALVES,250 PSI LOW ,5000 PSI HIGH  |
| 1/5/2010  | 0:00 - 3:30    | 3.50          | PRPSPD | 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                                 |
|           | 3:30 - 4:00    | 0.50          | PRPSPD | 14   | B        | P   |              | INSTALL WEAR BUSHING   |
|           | 4:00 - 4:30    | 0.50          | PRPSPD | 23   |          | P   |              | PRE SPUD INSPECTION  |
|           | 4:30 - 6:30    | 2.00          | DRLPRO | 06   | A        | P   |              | PU M MTR / BIT/DIRECT TOOLS/ORIENT & SHALLOW TEST TOOLS, TIH TAG CMT @2398'  |
|           | 6:30 - 8:00    | 1.50          | DRLPRO | 02   | F        | P   |              | DRILL FLOAT TRAC 2398-2521 FLOAT @ 2476 SHOE @ 2521  |

**US ROCKIES REGION  
Operation Summary Report**

|  |  |  |  |                                     |  |
|--|--|--|--|-------------------------------------|--|
| Well: NBU 921-25M2DS [YELLOW]                      |  | Spud Conductor: 10/27/2009                                   |  | Spud Date: 11/1/2009                |  |
| Project: UTAH-UINTAH                               |  | Site: NBU 921-25L PAD  |  | Rig Name No: PROPETRO/, H&P 298/298 |  |
| Event: DRILLING                                    |  | Start Date: 10/22/2009                                       |  | End Date: 1/13/2010                 |  |
| Active Datum: RKB @5,030.00ft (above Mean Sea Leve |  | UWI: NW/SW/0/9/S/21/E/25/0/0/26/PM/S/1,860.00/W/0/251.00/0/0 |  |                                     |  |

| Date     | Time Start-End | Duration (hr) | Phase  | Code | Sub Code | P/U | MD From (ft) | Operation  |
|----------|----------------|---------------|--------|------|----------|-----|--------------|--|
|          | 8:00 - 16:00   | 8.00          | DRLPRO | 02   | D        | P   |              | DRILL (ROTATE & SLIDE) F/2546 T/ 3191' = 645' @ 80.6 FPH / WOB 14/17 / RPM TOP DRV 35-45 / MTR 109 RPM / PUMP SPM 110 = 495 GPM / SPP ON/OFF 1565-1280 / TQ ON/OFF 5/2K / PU/SO/ROT 101/92/98 / H2O + POLY / WEIGHTED SWEEPS / SLIDE 239' IN 3.5 HRS = 44% OF FOOTAGE 37% OF HRS DRILLED   |
|          | 16:00 - 16:30  | 0.50          | DRLPRO | 07   | A        | P   |              | RIG SERVICE,BOP DRILL  |
|          | 16:30 - 0:00   | 7.50          | DRLPRO | 02   | D        | P   |              | DRILL (ROTATE & SLIDE) F/3191 T/3772' = 581' @ 77.4 FPH / WOB 14/18 / RPM TOP DRV 35-45 / MTR 109 RPM / PUMP SPM 110 = 495 GPM / SPP ON/OFF 1700-1300 / TQ ON/OFF 7/3K / PU/SO/ROT 130/96/110 / H2O + POLY / WEIGHTED SWEEPS / SLIDE 148' IN 3.0 HRS = 25% OF FOOTAGE 47% OF HRS DRILLED   |
| 1/6/2010 | 0:00 - 6:00    | 6.00          | DRLPRO | 02   | D        | P   |              | DRILL (ROTATE & SLIDE) F/3772 T/4190' = 418' @ 69.6 FPH / WOB 14/18 / RPM TOP DRV 35-45 / MTR 109 RPM / PUMP SPM 110 = 495 GPM / SPP ON/OFF 1700-1300 / TQ ON/OFF 7/3K / PU/SO/ROT 130/96/110 / H2O + POLY / WEIGHTED SWEEPS / SLIDE 148' IN 2.3 HRS = 40% OF FOOTAGE 38% OF HRS DRILLED   |
|          | 6:00 - 16:00   | 10.00         | DRLPRO | 02   | D        | P   |              | DRILL - SURVEY (ROTATE / SLIDE) F/ 4190' - T/ 4898' = 708' @ 70.8' FPH / WOB 16K-18K / TOP DRIVE RPM 35-45 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 1825/1465 PSI / MUD MOTOR RPM 109 / PU/SO/ROT WT 145/103/122 / TORQUE ON/OFF BOTTOM 8K/5K / SLIDE 286' IN 5.25 HOURS = 40.3% OF FOOTAGE & 52.5% OF HOURS DRILLED / H2O + POLYMER W/ WEIGHTED SWEEPS @ +/- 2.0 PPG / NO APPARENT LOSSES TO HOLE   |
|          | 16:00 - 16:30  | 0.50          | DRLPRO | 07   | A        | P   |              | SERVICE RIG & EQUIPMENT / VISUAL INSPECTION IN B.O.P.E. / WORK PIPE RAMS   |
|          | 16:30 - 0:00   | 7.50          | DRLPRO | 02   | D        | P   |              | DRILL - SURVEY (ROTATE / SLIDE) F/ 4898' - T/ 5498' = 600' @ 80' FPH / WOB 16K-18K / TOP DRIVE RPM 35-45 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 1930/1600 PSI / MUD MOTOR RPM 109 / PU/SO/ROT WT 161/109/128 / TORQUE ON/OFF BOTTOM 8K/6K / SLIDE 90' IN 1.5 HOURS = 15% OF FOOTAGE & 20% OF HOURS DRILLED / H2O + POLYMER W/ WEIGHTED SWEEPS @ +/- 2.0 PPG / START LIGHT MUD UP 5000' / 29 VIS - 8.8 PPG - 5% LCM / LOST 25 BBLs MUD TO HOLE          |
| 1/7/2010 | 0:00 - 6:00    | 6.00          | DRLPRO | 02   | D        | P   |              | DRILL - SURVEY (ROTATE / SLIDE) F/ 5498' - T/ 5875' = 377' @ 62.8' FPH / WOB 16K-18K / TOP DRIVE RPM 35-45 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2100/1820 PSI / MUD MOTOR RPM 109 / PU/SO/ROT WT 166/112/134 / TORQUE ON/OFF BOTTOM 8K/6K / SLIDE 38' IN 1.33 HOURS = 10% OF FOOTAGE & 22% OF HOURS DRILLED / H2O + POLYMER W/ WEIGHTED SWEEPS @ +/- 2.0 PPG / START LIGHT MUD UP 5000' / 31 VIS - 8.9 PPG - 5% LCM / NO APPARENT MUD LOSSES TO HOLE |

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

|  |  |                            |                                     |
|--|--|----------------------------|-------------------------------------|
| Well: NBU 921-25M2DS [YELLOW]  |  | Spud Conductor: 10/27/2009 | Spud Date: 11/1/2009                |
| Project: UTAH-UINTAH   |  | Site: NBU 921-25L PAD      | Rig Name No: PROPETRO/, H&P 298/298 |
| Event: DRILLING  |  | Start Date: 10/22/2009     | End Date: 1/13/2010                 |
| Active Datum: RKB @5,030.00ft (above Mean Sea Level) UWI: NW/SW/09/S/21/E/25/0/0/26/PM/S/1,860.00/W/0/251.00/0/0 |  |                            |                                     |

| Date     | Time Start-End | Duration (hr) | Phase  | Code | Sub Code | P/U | MD From (ft) | Operation  |
|----------|----------------|---------------|--------|------|----------|-----|--------------|--|
|          | 6:00 - 8:00    | 2.00          | DRLPRO | 02   | D        | P   |              | DRILL - SURVEY (ROTATE / SLIDE) F/ 5875' - T/ 5981' = 106' @ 53' FPH / WOB 16K-18K / TOP DRIVE RPM 35-45 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2100/1820 PSI / MUD MOTOR RPM 109 / PU/SO/ROT WT 166/112/134 / TORQUE ON/OFF BOTTOM 8K/6K / SLIDE 9' IN .42 HOURS = 8.5% OF FOOTAGE & 21% OF HOURS DRILLED / 32 VIS - 9.4 PPG - 5% LCM / LOST 10 BBLS MUD TO HOLE SINCE 06:00 HOURS                  |
|          | 8:00 - 9:00    | 1.00          | DRLPRO | 07   | A        | P   |              | SERVICE RIG & EQUIPMENT / VISUAL INSPECTION ON B.O.P.E. / CONDUCT "MAN DOWN" DRILL   |
|          | 9:00 - 18:00   | 9.00          | DRLPRO | 02   | D        | P   |              | DRILL - SURVEY (ROTATE / SLIDE) F/ 5981' - T/ 6510' = 529' @ 58.7' FPH / WOB 18K-20K / TOP DRIVE RPM 35-45 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2150/1825 PSI / MUD MOTOR RPM 109 / PU/SO/ROT WT 195/120/135 / TORQUE ON/OFF BOTTOM 9K/7K / SLIDE 86' IN 2.93 HOURS = 16.2% OF FOOTAGE & 32.5% OF HOURS DRILLED / 38 VIS - 9.5 PPG - 5% LCM / LOST 120 BBLS MUD @ 6018' - NO APPARENT LOSSES AFTER |
|          | 18:00 - 0:00   | 6.00          | DRLPRO | 02   | D        | P   |              | DRILL - SURVEY (ROTATE) F/ 6510' - T/ 6838' = 328' @ 54.6' FPH / WOB 18K-20K / TOP DRIVE RPM 35-45 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2160/1830 PSI / MUD MOTOR RPM 109 / PU/SO/ROT WT 211/128/149 / TORQUE ON/OFF BOTTOM 9K/7K / ROTATING = 100% OF FOOTAGE DRILLED / 39 VIS - 9.5 PPG - 5% LCM / LOST 25 BBLS MUD TO HOLE SINCE 18:00 HRS  |
| 1/8/2010 | 0:00 - 6:00    | 6.00          | DRLPRO | 02   | D        | P   |              | DRILL - SURVEY (ROTATE) F/ 6838' - T/ 7105' = 328' @ 44.5' FPH / WOB 18K-20K / TOP DRIVE RPM 35-45 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2035/1870 PSI / MUD MOTOR RPM 109 / PU/SO/ROT WT 210/130/154 / TORQUE ON/OFF BOTTOM 9K/7K / ROTATING = 100% OF FOOTAGE DRILLED / 39 VIS - 9.5 PPG - 5% LCM / LOST 18 BBLS MUD TO HOLE SINCE 00:00 HRS  |
|          | 6:00 - 15:00   | 9.00          | DRLPRO | 02   | D        | P   |              | DRILL - SURVEY (ROTATE) F/ 7015' - T/ 7549' = 534' @ 59.3' FPH / WOB 19K-22K / TOP DRIVE RPM 35-45 / PUMP 105 SPM = 472 GPM / PUMP PRESSURE ON/OFF BOTTOM 1975/1785 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 215/130/160 / TORQUE ON/OFF BOTTOM 10K/9K / ROTATING = 100% OF FOOTAGE DRILLED / 36 VIS - 9.7 PPG - 5% LCM / LOST 10 BBLS MUD TO HOLE SINCE 06:00 HRS   |
|          | 15:00 - 15:30  | 0.50          | DRLPRO | 07   | A        | P   |              | SERVICE RIG & EQUIPMENT / VISUAL INSPECTION ON B.O.P.E. / WORK PIPE RAMS   |
|          | 15:30 - 0:00   | 8.50          | DRLPRO | 02   | D        | P   |              | DRILL - SURVEY (ROTATE / SLIDE) F/ 7549' - T/ 7866' = 317' @ 37.2' FPH / WOB 20K-22K / TOP DRIVE RPM 30-45 / PUMP 105 SPM = 472 GPM / PUMP PRESSURE ON/OFF BOTTOM 2100/1820 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 220/132/163 / TORQUE ON/OFF BOTTOM 11K/10K / SLIDE 15' IN .50 HOURS = 4.7% OF FOOTAGE & 5.8% OF HOURS DRILLED / 37 VIS - 9.9 PPG - 5% LCM / LOST 30 BBLS MUD TO HOLE SINCE 15:30 HOURS            |

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

|  |                            |                                     |
|--|----------------------------|-------------------------------------|
| Well: NBU 921-25M2DS [YELLOW]  | Spud Conductor: 10/27/2009 | Spud Date: 11/1/2009                |
| Project: UTAH-UINTAH   | Site: NBU 921-25L PAD      | Rig Name No: PROPETRO/, H&P 298/298 |
| Event: DRILLING  | Start Date: 10/22/2009     | End Date: 1/13/2010                 |
| Active Datum: RKB @5,030.00ft (above Mean Sea Level) UWI: NW/SW/09/S/21/E/25/0/0/26/PM/S/1,860.00/W/0/251.00/0/0 |                            |                                     |

| Date      | Time Start-End | Duration (hr) | Phase  | Code | Sub Code | P/U | MD From (ft) | Operation   |
|-----------|----------------|---------------|--------|------|----------|-----|--------------|---|
| 1/9/2010  | 0:00 - 6:00    | 6.00          | DRLPRO | 02   | D        | P   |              | DRILL - SURVEY (ROTATE / SLIDE) F/ 7866' - T/ 8059' = 193' @ 32.16' FPH / WOB 20K-22K / TOP DRIVE RPM 30-45 / PUMP 105 SPM = 473 GPM / PUMP PRESSURE ON/OFF BOTTOM 2150/1830 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 235/140/170 / TORQUE ON/OFF BOTTOM 12K/10K / SLIDE 20' IN 1.0 HOURS = 10.4% OF FOOTAGE & 16.7% OF HOURS DRILLED / 40 VIS - 10.2 PPG - 5% LCM / LOST 20 BBLS MUD TO HOLE SINCE 00:00 HOURS / WEIGHT RAISED TO CONTROL SHALE                    |
|           | 6:00 - 16:30   | 10.50         | DRLPRO | 02   | D        | P   |              | DRILL - SURVEY (ROTATE / SLIDE) F/ 8059' - T/ 8402' = 343' @ 32.7' FPH / WOB 20K-22K / TOP DRIVE RPM 30-45 / PUMP 104 SPM = 473 GPM / PUMP PRESSURE ON/OFF BOTTOM 2050/1920 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 242/143/173 / TORQUE ON/OFF BOTTOM 12K/10K / SLIDE 44' IN 2.5 HOURS = 12.8% OF FOOTAGE & 23.8% OF HOURS DRILLED / 38 VIS - 10.7 PPG - 3% LCM / NO APPARENT MUD LOST TO HOLE SINCE 06:00 HOURS / WEIGHT RAISED TO CONTROL SHALE                 |
|           | 16:30 - 17:00  | 0.50          | DRLPRO | 07   | A        | P   |              | SERVICE RIG & EQUIPMENT / VISUAL INSPECTION ON B.O.P.E.   |
|           | 17:00 - 0:00   | 7.00          | DRLPRO | 02   | D        | P   |              | DRILL - SURVEY (ROTATE) F/ 8402' - T/ 8655' = 253' @ 36.1' FPH / WOB 20K-22K / TOP DRIVE RPM 30-45 / PUMP 104 SPM = 473 GPM / PUMP PRESSURE ON/OFF BOTTOM 2050/1910 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 243/140/175 / TORQUE ON/OFF BOTTOM 13K/12K / ROTATING = 100% OF FOOTAGE DRILLED / 39 VIS - 10.9 PPG - 5% LCM / NO APPARENT MUD LOST TO HOLE SINCE 16:30 HOURS / WEIGHT RAISED TO CONTROL SHALE / WEIGHT RAISED TO CONTROL SHALE / CONDUCT B.O.P. DRILL |
| 1/10/2010 | 0:00 - 6:00    | 6.00          | DRLPRO | 02   | D        | P   |              | DRILL - SURVEY (ROTATE) F/ 8655' - T/ 8844' = 189' @ 31.5' FPH / WOB 20K-23K / TOP DRIVE RPM 30-45 / PUMP 104 SPM = 473 GPM / PUMP PRESSURE ON/OFF BOTTOM 2170/1970 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 257/145/180 / TORQUE ON/OFF BOTTOM 13K/11K / ROTATING = 100% OF FOOTAGE DRILLED / 39 VIS - 11.0 PPG - 3% LCM / NO APPARENT MUD LOST TO HOLE SINCE 00:00 HOURS / WEIGHT RAISED TO CONTROL SHALE   |
|           | 6:00 - 16:30   | 10.50         | DRLPRO | 02   | D        | P   |              | DRILL - SURVEY (ROTATE/SLIDE) F/ 8844' - T/ 9160' = 316' @ 30.1' FPH / WOB 20K-23K / TOP DRIVE RPM 30-45 / PUMP 100 SPM = 450 GPM / PUMP PRESSURE ON/OFF BOTTOM 2250/2000 PSI / MUD MOTOR RPM 99 / PU/SO/ROT WT 265/145/180 / TORQUE ON/OFF BOTTOM 14K/11K / SLIDE 27' IN 2.0 HOURS = 8.5% OF FOOTAGE DRILLED AND 19% HOURS DRILLED / 38 VIS - 11.6 PPG - 5% LCM / NO APPARENT MUD LOST TO HOLE SINCE 06:00 HOURS / WEIGHT RAISED TO CONTROL SHALE & GAS          |
|           | 16:30 - 17:00  | 0.50          | DRLPRO | 07   | A        | P   |              | SERVICE RIG & EQUIPMENT / VISUAL INSPECTION ON B.O.P.E. / WORK PIPE RAMS / S.P.C.C. INSPECTION  |

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

|  |                            |                                     |
|--|----------------------------|-------------------------------------|
| Well: NBU 921-25M2DS [YELLOW]  | Spud Conductor: 10/27/2009 | Spud Date: 11/1/2009                |
| Project: UTAH-UINTAH   | Site: NBU 921-25L PAD      | Rig Name No: PROPETRO/, H&P 298/298 |
| Event: DRILLING  | Start Date: 10/22/2009     | End Date: 1/13/2010                 |
| Active Datum: RKB @5,030.00ft (above Mean Sea Level) UWI: NW/SW/09/S/21/E/25/0/0/26/PM/S/1,860.00/W/0/251.00/0/0 |                            |                                     |

| Date      | Time Start-End | Duration (hr) | Phase  | Code | Sub Code | P/U | MD From (ft) | Operation   |
|-----------|----------------|---------------|--------|------|----------|-----|--------------|---|
|           | 17:00 - 0:00   | 7.00          | DRLPRO | 02   | D        | P   |              | DRILL - SURVEY (ROTATE) F/ 9160' - T/ 9376' = 216' @ 30.8' FPH / WOB 20K-23K / TOP DRIVE RPM 30-45 / PUMP 105 SPM = 473 GPM / PUMP PRESSURE ON/OFF BOTTOM 2600/2320 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 258/148/183 / TORQUE ON/OFF BOTTOM 16K/13K / ROTATING = 100% OF FOOTAGE DRILLED / 38 VIS - 11.7 PPG - 5% LCM / NO APPARENT MUD LOST TO HOLE SINCE 16:30 HOURS / WEIGHT RAISED TO CONTROL SHALE & GAS |
| 1/11/2010 | 0:00 - 6:00    | 6.00          | DRLPRO | 02   | D        | P   |              | DRILL - SURVEY (ROTATE) F/ 9376' - T/ 9523' = 147' @ 24.5' FPH / WOB 20K-23K / TOP DRIVE RPM 30-45 / PUMP 105 SPM = 473 GPM / PUMP PRESSURE ON/OFF BOTTOM 2600/2340 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 260/150/185 / TORQUE ON/OFF BOTTOM 16K/13K / ROTATING = 100% OF FOOTAGE DRILLED / 40 VIS - 11.7 PPG - 5% LCM / NO APPARENT MUD LOST TO HOLE SINCE 00:00 HOURS / WEIGHT RAISED TO CONTROL SHALE & GAS |
|           | 6:00 - 8:30    | 2.50          | DRLPRO | 02   | D        | P   |              | DRILL - SURVEY (ROTATE) F/ 9523' - T/ 9576' = 53' @ 21.2' FPH / WOB 20K-24K / TOP DRIVE RPM 30-45 / PUMP 100 SPM = 450 GPM / PUMP PRESSURE ON/OFF BOTTOM 2375/2200 PSI / MUD MOTOR RPM 99 / PU/SO/ROT WT 270/148/187 / TORQUE ON/OFF BOTTOM 15K/12K / ROTATING = 100% OF FOOTAGE DRILLED / 40 VIS - 11.7 PPG - 5% LCM / NO APPARENT MUD LOST TO HOLE SINCE 06:00 HOURS  |
|           | 8:30 - 9:30    | 1.00          | DRLPRO | 05   | C        | P   |              | CIRCULATE & CONDITION HOLE FOR BIT TRIP   |
|           | 9:30 - 14:00   | 4.50          | DRLPRO | 06   | A        | P   |              | PUMP PILL / STRAIGHT PULL OUT OF HOLE / LAY DOWN DIRECTIONAL TOOLS + MOTOR + BIT (NO MUD IN MOTOR & APPROXIMATELY 1/4" UP/DOWN PLAY IN BEARINGS) / WORK PIPE & BLIND RAMS   |
|           | 14:00 - 15:30  | 1.50          | DRLPRO | 06   | A        | P   |              | PICK UP AND STRAIGHTEN MOTOR #2 TO 0 DEGREES/ MAKE UP BIT #2 & T.I.H. TO CASING SHOE / FILL PIPE  |
|           | 15:30 - 16:00  | 0.50          | DRLPRO | 07   | A        | P   |              | SERVICE RIG & EQUIPMENT / VISUAL INSPECTION ON B.O.P.E.   |
|           | 16:00 - 17:00  | 1.00          | DRLPRO | 09   | A        | P   |              | SLIP & CUT 524' OF DRILL LINE   |
|           | 17:00 - 20:00  | 3.00          | DRLPRO | 06   | A        | P   |              | T.I.H. TO 9480' BREAKING CIRCULATION AT SELECTED INTERVALS / LOST 20 BBLs MUD ON TRIP   |
|           | 20:00 - 20:30  | 0.50          | DRLPRO | 03   | D        | P   |              | FILL PIPE & PRECAUTIONARY WASH & REAM F/ 9480' - T/ 9576' / CUT NEW BIT PATTERN   |
|           | 20:30 - 0:00   | 3.50          | DRLPRO | 02   | A        | P   |              | DRILL F/ 9576' - T/ 9732' = 156' @ 44.5' FPH / WOB 20K-22K / TOP DRIVE RPM 30-40 / PUMP 100 SPM = 450 GPM / PUMP PRESSURE ON/OFF BOTTOM 2740/2330 PSI / MUD MOTOR RPM / PU/SO/ROT WT 280/150/190 / TORQUE ON/OFF BOTTOM 17K/14K / 42 VIS - 11.8 PPG - 3% LCM / NO APPARENT MUD LOST TO HOLE SINCE 20:30 HOURS   |
| 1/12/2010 | 0:00 - 1:30    | 1.50          | DRLPRO | 02   | A        | P   |              | DRILL F/ 9732' - T/ 9823' (T.D.) = 91' @ 60.6' FPH / WOB 20K-22K / TOP DRIVE RPM 30-40 / PUMP 100 SPM = 450 GPM / PUMP PRESSURE ON/OFF BOTTOM 2740/2335 PSI / MUD MOTOR RPM / PU/SO/ROT WT 280/150/190 / TORQUE ON/OFF BOTTOM 17K/14K / 42 VIS - 11.8 PPG - 3% LCM / NO APPARENT MUD LOST TO HOLE SINCE 00:00 HOURS   |

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

|  |  |                            |   |                      |                                     |
|--|--|----------------------------|---|----------------------|-------------------------------------|
| Well: NBU 921-25M2DS [YELLOW]                        |  | Spud Conductor: 10/27/2009 |   | Spud Date: 11/1/2009 |                                     |
| Project: UTAH-UINTAH                                 |  |                            | Site: NBU 921-25L PAD                                       |                      | Rig Name No: PROPETRO/, H&P 298/298 |
| Event: DRILLING                                      |  |                            | Start Date: 10/22/2009                                      |                      | End Date: 1/13/2010                 |
| Active Datum: RKB @5,030.00ft (above Mean Sea Level) |  |                            | UWI: NW/SW/09/S/21/E/25/0/0/26/PM/S/1,860.00/N/0/251.00/0/0 |                      |                                     |

| Date      | Time Start-End | Duration (hr) | Phase  | Code | Sub Code | P/U | MD From (ft) | Operation   |
|-----------|----------------|---------------|--------|------|----------|-----|--------------|---|
|           | 1:30 - 8:00    | 6.50          | DRLPRO | 06   | E        | P   |              | PUMP PILL / BLOW DOWN MUD LINES / P.O.O.H. TO SHOE / FILL PIPE / T.I.H. BREAKING CIRCULATION AT SELECTED INTERVALS  |
|           | 8:00 - 10:00   | 2.00          | EVALPR | 05   | C        | P   |              | CIRCULATE & CONDITION HOLE FOR LOGS / PUMP HI-VIS SWEEP / RAISE VIS TO 50 / DROP SINGLE SHOT SURVEY TOOL / PUMP PILL / WAIT FOR SURVEY TOOL TO COLLECT DATA   |
|           | 10:00 - 12:30  | 2.50          | EVALPR | 06   | B        | P   |              | P.O.O.H. FOR LOGS TO 4010'  |
|           | 12:30 - 0:00   | 11.50         | EVALPR | 22   | K        | Z   |              | DRAW-WORKS MOTOR SHORTED OUT / SHUT DOWN ON RIG REPAIR WHILE MOTOR WAS REPLACED / CIRCULATED HOLE @ 40 SPM (180 GPM)  |
| 1/13/2010 | 0:00 - 2:00    | 2.00          | EVALPR | 22   | K        | Z   |              | REPLACE & CALIBRATE DRAW-WORKS MOTOR  |
|           | 2:00 - 3:00    | 1.00          | EVALPR | 06   | B        | P   |              | P.O.O.H. / RECOVER SURVEY TOOL (MIS-FIRE 19.0 DEG - 150.2 AZI) / BREAK BIT / LAY DOWN MOTOR / FINAL SURVEY WILL BE PROJECTED FROM LAST SURVEY W/ M.W.D.   |
|           | 3:00 - 3:30    | 0.50          | EVALPR | 14   | B        | P   |              | PULL WEAR BUSHING   |
|           | 3:30 - 10:00   | 6.50          | EVALPR | 11   | D        | P   |              | SAFETY MEETING / M.I.R.U. HALLIBURTON EQUIPMENT / RUN TRIPLE COMBO TO 9828' - LOG UP / R.D.M.O. TOOLS   |
|           | 10:00 - 11:00  | 1.00          | EVALPR | 12   | A        | P   |              | SAFETY MEETING / M.I.R.U. WEATHERFORD EQUIPMENT   |
|           | 11:00 - 16:00  | 5.00          | EVALPR | 12   | C        | P   |              | RUN 217 JTS 4.5 #11.6 I-80 LT&C CASING + 1 JT 4.5 #11.6 I-80 BT7C CASING + RELATED TOOLS BREAKING CIRCULATION AT SELECTED INTERVALS   |
|           | 16:00 - 16:30  | 0.50          | EVALPR | 12   | C        | P   |              | INSTALL MANDREL + ROTATING RUBBER / FILL PIPE   |
|           | 16:30 - 17:30  | 1.00          | EVALPR | 05   | D        | P   |              | HOLD CASING @ 9810' / CIRCULATE & CONDITION HOLE FOR CEMENT / R.D.M.O. WEATHERFORD EQUIPMENT / HIGH GAS = 1055 UNITS W/ 10' - 15' FLARE   |
|           | 17:30 - 20:30  | 3.00          | EVALPR | 12   | E        | P   |              | SAFETY MEETING / M.I.R.U. B.J. SERVICES EQUIPMENT / TEST PUMPS & LINES TO 4500 PSI / CEMENT W/ 40 BBLS H2O + 440 SX 11.7 PPG PREM LITE II + ADDITIVES @ 2.50 YIELD + 1160 SX 14.3 50/50 POZ + ADDITIVES @ 1.31 YIELD + DISPLACED W/ 151.5 BBLS H2O + ADDITIVES / LOST TOTAL RETURNS 85 BBLS INTO DISPLACEMENT / PLUG DOWN @ 20:07 HRS W/ 2 BBLS CEMENT TO SURFACE / LIFT PRESSURE 2700 PSI PRIOR TO BUMP / PRESSURED TO 3200 & HELD FOR 5 MINUTES W/ 1.5 BBLS RETURNED TO INVENTORY / TOP OF TAIL CEMENT CALCULATED @ 4500' BASED ON LIFT PRESSURE / R.D.M.O. B.J. SERVICES |
|           | 20:30 - 21:30  | 1.00          | EVALPR | 12   | C        | P   |              | LAND MANDREL W/ 100K ON BOWL / SHOE @ 9812.13, TOP OF FLOAT COLLAR @ 9765.85 AND TOP OF MARKER JT. @ 4929.63 / FLUSH B.O.P.E. + FLOW LINE / BACK OUT AND LAY DOWN LANDING JOINT   |
|           | 21:30 - 23:00  | 1.50          | EVALPR | 14   | A        | P   |              | BLOW DOWN ALL MUD LINES / INSTALL B.O.P. LIFT CABLES / NIPPLE DOWN B.O.P.E. TO SKID 20' / RIG RELEASED @ 23:00 HOURS 01/13/2010   |

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-25M2DS [YELLOW] Spud Conductor: 10/27/2009 Spud Date: 11/1/2009  
 Project: UTAH-UINTAH Site: NBU 921-25L PAD Rig Name No:  
 Event: COMPLETION Start Date: 3/12/2010 End Date: 3/25/2010  
 Active Datum: RKB @5,030.00ft (above Mean Sea Leve UWV: NW/SW/0/9/S/21/E/25/0/0/26/PM/S/1,860.00/W/0/251.00/0/0

| Date          | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (ft)   | Operation   |
|---------------|----------------|---------------|-------|------|----------|-----|--|---|
| 3/12/2010     | 7:00 - 7:15    | 0.25          | COMP  | 48   |          | P   |  | HSM, MIRU   |
|               | 7:15 - 15:00   | 7.75          | COMP  | 37   | B        | P   |  | MIRU SCHLUMBERGER WIRE LINE, RIH PERF MESAVERDE USING 3-3/8 EXPEND, [SLICK] 23 GRM, 0.36" HOLE, 9606'-9610' 4 SPF, 90* PH, 16 HOLES. 9542'-9544' 3 SPF, 120* PH, 6 HOLES. 9346'-9348' 3 SPF, 120* PH, 6 HOLES. 9284'-9288' 3 SPF, 120* PH, 12 HOLES [40 HOLES] SWIFN.   |
| 3/15/2010     | 7:00 - 7:15    | 0.25          | ALL   | 48   |          | P   |  | HSM, PRE FRAC SAFETY  |
|               | 9:00 - 10:10   | 1.17          |       |      |          |     |  | MIRU, PRESSURE TEST SURFACE LINES TO 8000#, OPEN WELL FRAC STG #1 MESAVERDE 8284'-9610' [40 HOLES]  |
|               | 14:45 - 17:00  | 2.25          |       |      |          |     |  | WHP=3659#, BRK DN PERFS=3659#, INJT RT=45, INJT PSI=6400#, ISIP=3029#, FG=.75, PUMP'D 1596 BBLs SLK WTR W/ 56703# 30/50 MESH W/ 5000# RESIN COAT INB TAIL, ISIP=2971#, FG=.75, AR=48.6, AP=6210#, MR=50.1, MP=6594#, NPI=-58#, 21/40 CALC PERFS OPEN 53% STG #2] P/U RIH W/ BKR 8K CBP & PERF GUN, SET CBP @ 9104'. PERF MESAVERDE USING 3-3/8 EXPEND [SLICK] 23 GRM, 0.36" HOLE. 9072'-9074' 4 SPF, 90* PH, 8 HOLES. 9028'-9032' 3 SPF, 120* PH, 12 HOLES. 8986'-8988' 4 SPF, 90* PH, 8 HOLES. 8940'-8942' 3 SPF, 120* PH, 6 HOLES. 8832'-8834' 3 SPF, 120* PH, 6 HOLES [40 HOLES] |
| 17:00 - 19:30 | 2.50           |               |       |      |          |     | WHP=1350#, BRK DN PERFS=2847#, INJT RT=51, INJT PSI=5140#, ISIP=2265#, FG=.69, PUMP'D BBLs 2099 SLK WTR W/ 81604# 30/50 MESH W/ 5000# RESIN COAT INB TAIL, ISIP=2635#, FG=.73, AR=51.3, AP=4950#, MR=54.4, MP=5340#, NPI=370#, 33/40 CALC PERFS OPEN 83% STG #3] P/U RIH W/ BKR 8K CBP & PERF GUN, COULD NOT SET PLUG POOH FIX PROBLEM W/ GUN. |   |
| 3/16/2010     | 6:30 - 6:45    | 0.25          | COMP  | 48   |          | P   |  | FIXED PROBLEMS RIH SET CBP @ 8758' PERF MESAVERDE USING 3-3/8 EXPEND [SLICK] 23 GRM, 0.36" HOLE. 8722'-8728' 4 SPF, 90* PH, 24 HOLES. 8590'-8594' 4 SPF, 90* PH, 16 HOLES. [40 HOLES] SWIFN.  |
|               |                |               |       |      |          |     |  | HSM, FRACING, WORKING W/ WIRELINE   |

**US ROCKIES REGION  
Operation Summary Report**

|   |  |                            |                      |
|---|--|----------------------------|----------------------|
| Well: NBU 921-25M2DS [YELLOW]   |  | Spud Conductor: 10/27/2009 | Spud Date: 11/1/2009 |
| Project: UTAH-UINTAH  |  | Site: NBU 921-25L PAD      | Rig Name No:         |
| Event: COMPLETION   |  | Start Date: 3/12/2010      | End Date: 3/25/2010  |
| Active Datum: RKB @5,030.00ft (above Mean Sea Level) UWI: NW/SW/0/9/S/21/E/25/0/0/26/PM/S/1,860.00/W/0/251.00/0/0 |  |                            |                      |

| Date      | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (ft) | Operation  |
|-----------|----------------|---------------|-------|------|----------|-----|--------------|--|
|           | 6:45 - 7:30    | 0.75          | COMP  | 36   | E        | P   |              | <p>FRAC MESAVERDE 8590'-8728' [40 HOLES]</p> <p>STG #3] WHP=1840#, BRK DN PERFS=3812#, INJ RT=46, INJ PSI=6029#, ISIP=2918#, FG=.77, PUMP'D 753 BBLS SLICK WTR W/ 25676# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2618#, FG=.73, AR=48.7, AP=5465#, MR=50.5, MP=6471#, NPI=-300#, 23/40 CALC PERFS OPEN 58%</p> <p>STG #4] P/U RIH W/ BKR 8K CBP &amp; PERF GUN, SET CBP @ ', PERF MESAVERDE USING 3-3/8 EXPEND [SLK] 23 GRM, 0.36" HOLE. 8310'-8314' 4 SPF, 90* PH, 16 HOLES. 8114'-8120' 2 SPF, 180* PH, 12 HOLES. 8018'-8022' 3 SPF, 120* PH, 12 HOLES. [40 HOLES]</p> <p>WHP=765#, BRK DN PERFS=2853#, INJ RT=51, INJ PSI=5475#, ISIP=2065#, FG=.69, PUMP'D 1114 BBLS SLICK WTR W/ 42986# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2206#, FG=.70, AR=50.8, AP=4570#, MR=51.3, MP=5518#, NPI=141#, 25/40 CALC PERFS OPEN 63%</p> <p>STG #5] P/U RIH W/ BKR 8K CBP &amp; PERF GUN, SET CBP @ ', PERF MESAVERDE USING 3-3/8 EXPEND [SLK] 23 GRM, 0.36" HOLE. 7934'-7936' 4 SPF, 90* PH, 8 HOLES. 7892'-7894' 4 SPF, 90* PH, 8 HOLES. 7870'-7872' 3 SPF, 120* PH, 6 HOLES. 7846'-7848' 3 SPF, 120* PH, 6 HOLES. 7788'-7792' 3 SPF, 120* PH, 12 HOLES. [40 HOLES]</p> <p>WHP= 810#, BRK DN PERFS=2853#, INJ RT=50, INJ PSI=4230#, ISIP=2012#, FG=.69, PUMP'D 3293 BBLS SLICK WTR W/ 135266# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2324#, FG=.73, AR=50.8, AP=4625#, MR=51, MP=5065#, NPI=312#, 40/40 CALC PERFS OPEN 100%</p> <p>STG #6] P/U RIH W/ BKR 8K CBP &amp; PERF GUN, SET CBP @ ', PERF MESAVERDE USING 3-3/8 EXPEND [SLK] 23 GRM, 0.36" HOLE. 7714'-7720' 3 SPF, 120* PH, 18 HOLES. 7588'-7590' 3 SPF, 120* PH, 6 HOLES. 7558'-7564' 3 SPF, 120* PH, 18 HOLES. [42 HOLES] SWI.</p> |
| 3/17/2010 | 7:00 - 7:15    | 0.25          | COMP  | 48   |          | P   |              | HSM SIM OPERATIONS   |
|           | 7:15 -         |               | COMP  | 36   | E        | P   |              | <p>FRAC STG 6 MESAVERDE 7558 - 7720 42 HOLES WHP=1,450#, BRK DN PERFS=2,229#, INJ RT=50, INJ PSI=5,440#, ISIP=1,782#, FG=.67, PUMP'D 2324 BBLS SLICK WTR W 91,649 # 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2488#, FG=.76, AR=49.9, AP=4865#, MR=52, MP=6412#, NPI=706#, 22/42 CALC PERFS OPEN 52%</p>  |
| 3/24/2010 | 12:00 -        |               | COMP  | 44   | C        | P   |              | <p>P/U BKR 8K CBP SET @ 7,508' FOR TOP KILL MIRU, ND FRAC, NU BOP'S, TEST BOP'S 3000#, PU TBG, POBS, BIT, SN, RIH. TBG 34 JTS, EOT 1098' SDFN</p>  |
| 3/25/2010 | 7:00 - 7:30    | 0.50          | COMP  | 48   |          | P   |              | PU TBG FROM TLR  |

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

|   |  |                            |                      |
|---|--|----------------------------|----------------------|
| Well: NBU 921-25M2DS [YELLOW]   |  | Spud Conductor: 10/27/2009 | Spud Date: 11/1/2009 |
| Project: UTAH-UINTAH  |  | Site: NBU 921-25L PAD      | Rig Name No:         |
| Event: COMPLETION   |  | Start Date: 3/12/2010      | End Date: 3/25/2010  |
| Active Datum: RKB @5,030.00ft (above Mean Sea Level) UWI: NW/SW/0/9/S/21/E/25/0/0/26/PM/S/1,860.00/W/0/251.00/0/0 |  |                            |                      |

| Date      | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (ft) | Operation   |
|-----------|----------------|---------------|-------|------|----------|-----|--------------|---|
|           | 7:30 - 7:30    | 0.00          | COMP  | 44   | C        | P   |              | PU TBG RIH TO 1ST CBP @ 7508', DRILL PLUGS.<br><br>PLUG #1 7508' 15' SAND 15 MIN<br>400# KICK<br>PLUG #2 7750' 30' SAND 10 MIN<br>500# KICK<br>PLUG #3 7966' 25' SAND 10 MIN<br>400# KICK<br>PLUG #4 8344' 30' SAND 10 MIN<br>100# KICK<br>PLUG #5 8758' 25' SAND 10 MIN<br>600# KICK<br>PLUG #6 9104' 45' SAND 12 MIN<br>500# Kick   |
| 3/26/2010 | 7:00 -         |               |       | 33   | A        |     |              | RIH WITH 308 JTS 9764' C/O SAND, CIRC BTMS UP, POOH LD 37 JTS ON TLR.<br>LAND WITH 277 JTS L-80 @ 8803.50' EOT XNSN 1.875.ND BOP'S, NU WELL HEAD.<br>POBS, TURN TO FBC, RDMO TO GREEN WELL<br>7 AM FLBK REPORT: CP 2775#, TP 2150#, 20/64" CK, 49 BWPH, TRACE SAND, MED GAS<br>TTL BBLS RECOVERED: 2968<br>BBLS LEFT TO RECOVER: 8501 |
|           | 12:00 -        |               | PROD  | 50   |          |     |              | WELL TURNED TO SALES @ 1200 HR ON 3/26/10 - 2100 MCFD, 1176 BWPD, CP 3125#, FTP 2500#, CK 20/64"  |
| 3/27/2010 | 7:00 -         |               |       | 33   | A        |     |              | 7 AM FLBK REPORT: CP 3125#, TP 2175#, 20/64" CK, 37 BWPH, TRACE SAND, - GAS<br>TTL BBLS RECOVERED: 4009<br>BBLS LEFT TO RECOVER: 7460   |
| 3/28/2010 | 7:00 -         |               |       | 33   | A        |     |              | 7 AM FLBK REPORT: CP 2900#, TP 2075#, 20/64" CK, 28 BWPH, TRACE SAND, - GAS<br>TTL BBLS RECOVERED: 4780<br>BBLS LEFT TO RECOVER: 6689   |
| 3/29/2010 | 7:00 -         |               |       | 33   | A        |     |              | 7 AM FLBK REPORT: CP 2750#, TP 1975#, 20/64" CK, 22 BWPH, TRACE SAND, - GAS<br>TTL BBLS RECOVERED: 5346<br>BBLS LEFT TO RECOVER: 6123   |

## 1 General

### 1.1 Customer Information

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

### 1.2 Well Information

|                          |  |                 |   |
|--------------------------|--|-----------------|---|
| Well                     | NBU 921-25M2DS [YELLOW]                | Wellbore No.    | OH  |
| Well Name                | NBU 921-25M2DS                         | Common Name     | NBU 921-25M2DS  |
| Project                  | UTAH-UINTAH                            | Site            | NBU 921-25L PAD   |
| Vertical Section Azimuth | 161.57 (°)                             | North Reference | True  |
| Origin N/S               |  | Origin E/W      |   |
| Spud Date                | 11/1/2009                              | UWI             | NW/SW/0/9/S/21/E/25/0/0/26/PM/S/1,860.00/W/0/251.00/0/0 |
| Active Datum             | RKB @5,030.00ft (above Mean Sea Level) |                 |   |

## 2 Survey Name

### 2.1 Survey Name: Survey #1

|             |           |          |            |
|-------------|-----------|----------|------------|
| Survey Name | Survey #1 | Company  | SCIENTIFIC |
| Started     | 11/1/2009 | Ended    | 11/3/2009  |
| Tool Name   | MWD       | Engineer | JERRY      |

#### 2.1.1 Tie On Point

| MD (ft) | Inc (°) | Azi (°) | TVD (ft) | N/S (ft) | E/W (ft) |
|---------|---------|---------|----------|----------|----------|
| 22.00   | 0.00    | 0.00    | 22.00    | 0.00     | 0.00     |

#### 2.1.2 Survey Stations

| Date      | Type   | MD (ft)  | Inc (°) | Azi (°) | TVD (ft) | N/S (ft) | E/W (ft) | V. Sec (ft) | DLeg (°/100ft) | Build (°/100ft) | Turn (°/100ft) | TFace (°) |
|-----------|--------|----------|---------|---------|----------|----------|----------|-------------|----------------|-----------------|----------------|-----------|
| 11/1/2009 | Tie On | 22.00    | 0.00    | 0.00    | 22.00    | 0.00     | 0.00     | 0.00        | 0.00           | 0.00            | 0.00           | 0.00      |
| 11/1/2009 | NORMAL | 174.00   | 0.36    | 113.04  | 174.00   | -0.19    | 0.44     | 0.32        | 0.24           | 0.24            | 0.00           | 113.04    |
|           | NORMAL | 264.00   | 0.36    | 142.09  | 264.00   | -0.52    | 0.87     | 0.77        | 0.20           | 0.00            | 32.28          | 104.52    |
|           | NORMAL | 354.00   | 0.51    | 141.35  | 353.99   | -1.06    | 1.30     | 1.41        | 0.17           | 0.17            | -0.82          | -2.51     |
|           | NORMAL | 444.00   | 0.14    | 95.33   | 443.99   | -1.38    | 1.66     | 1.83        | 0.47           | -0.41           | -51.13         | -166.28   |
| 11/2/2009 | NORMAL | 534.00   | 0.63    | 125.67  | 533.99   | -1.68    | 2.17     | 2.28        | 0.57           | 0.54            | 33.71          | 38.25     |
|           | NORMAL | 630.00   | 1.63    | 124.22  | 629.97   | -2.75    | 3.73     | 3.79        | 1.04           | 1.04            | -1.51          | -2.36     |
|           | NORMAL | 714.00   | 1.94    | 121.16  | 713.93   | -4.16    | 5.93     | 5.82        | 0.39           | 0.37            | -3.64          | -18.62    |
|           | NORMAL | 804.00   | 2.09    | 134.71  | 803.88   | -6.10    | 8.40     | 8.45        | 0.55           | 0.17            | 15.06          | 79.37     |
|           | NORMAL | 894.00   | 2.16    | 133.59  | 893.81   | -8.43    | 10.80    | 11.41       | 0.09           | 0.08            | -1.24          | -31.24    |
|           | NORMAL | 984.00   | 2.74    | 135.35  | 983.73   | -11.13   | 13.54    | 14.84       | 0.65           | 0.64            | 1.96           | 8.27      |
|           | NORMAL | 1,074.00 | 2.95    | 146.39  | 1,073.62 | -14.59   | 16.33    | 19.00       | 0.65           | 0.23            | 12.27          | 74.60     |
|           | NORMAL | 1,164.00 | 3.34    | 147.67  | 1,163.48 | -18.73   | 19.01    | 23.78       | 0.44           | 0.43            | 1.42           | 10.85     |
|           | NORMAL | 1,254.00 | 3.54    | 154.94  | 1,253.32 | -23.46   | 21.59    | 29.09       | 0.53           | 0.22            | 8.08           | 69.03     |
|           | NORMAL | 1,344.00 | 2.86    | 159.73  | 1,343.18 | -28.09   | 23.55    | 34.09       | 0.81           | -0.76           | 5.32           | 160.91    |
|           | NORMAL | 1,434.00 | 2.99    | 162.55  | 1,433.06 | -32.43   | 25.03    | 38.68       | 0.22           | 0.14            | 3.13           | 49.32     |
|           | NORMAL | 1,524.00 | 2.47    | 151.05  | 1,522.96 | -36.37   | 26.67    | 42.94       | 0.84           | -0.58           | -12.78         | -139.16   |
|           | NORMAL | 1,614.00 | 2.36    | 155.43  | 1,612.88 | -39.75   | 28.38    | 46.68       | 0.24           | -0.12           | 4.87           | 122.97    |
|           | NORMAL | 1,704.00 | 2.58    | 151.19  | 1,702.80 | -43.21   | 30.13    | 50.52       | 0.32           | 0.24            | -4.71          | -41.84    |
|           | NORMAL | 1,794.00 | 2.50    | 144.95  | 1,792.71 | -46.59   | 32.23    | 54.39       | 0.32           | -0.09           | -6.93          | -109.24   |

2.1.2 Survey Stations (Continued)

| Date      | Type   | MD (ft)  | Inc (°) | Azi (°) | TVD (ft) | N/S (ft) | E/W (ft) | V. Sec (ft) | DLeg (°/100ft) | Build (°/100ft) | Turn (°/100ft) | TFace (°) |
|-----------|--------|----------|---------|---------|----------|----------|----------|-------------|----------------|-----------------|----------------|-----------|
| 11/2/2009 | NORMAL | 1,884.00 | 2.97    | 156.51  | 1,882.61 | -50.34   | 34.29    | 58.60       | 0.80           | 0.52            | 12.84          | 55.44     |
|           | NORMAL | 1,974.00 | 3.37    | 161.58  | 1,972.47 | -54.99   | 36.05    | 63.56       | 0.54           | 0.44            | 5.63           | 37.58     |
|           | NORMAL | 2,064.00 | 3.79    | 157.67  | 2,062.30 | -60.25   | 38.02    | 69.18       | 0.54           | 0.47            | -4.34          | -32.13    |
|           | NORMAL | 2,154.00 | 3.57    | 163.48  | 2,152.11 | -65.69   | 39.95    | 74.95       | 0.48           | -0.24           | 6.46           | 123.42    |
|           | NORMAL | 2,244.00 | 3.55    | 168.81  | 2,241.94 | -71.11   | 41.28    | 80.51       | 0.37           | -0.02           | 5.92           | 96.12     |
|           | NORMAL | 2,334.00 | 3.49    | 159.88  | 2,331.77 | -76.41   | 42.77    | 86.01       | 0.61           | -0.07           | -9.92          | -100.69   |
|           | NORMAL | 2,424.00 | 3.45    | 158.46  | 2,421.60 | -81.50   | 44.70    | 91.45       | 0.11           | -0.04           | -1.58          | -115.67   |
|           | NORMAL | 2,474.00 | 3.50    | 154.03  | 2,471.51 | -84.27   | 45.92    | 94.47       | 0.55           | 0.10            | -8.86          | -81.67    |

2.2 Survey Name: Survey #2

|             |           |          |             |
|-------------|-----------|----------|-------------|
| Survey Name | Survey #2 | Company  | WEATHERFORD |
| Started     | 1/5/2010  | Ended    |             |
| Tool Name   | MWD       | Engineer | Anadarko    |

2.2.1 Tie On Point

| MD (ft)  | Inc (°) | Azi (°) | TVD (ft) | N/S (ft) | E/W (ft) |
|----------|---------|---------|----------|----------|----------|
| 2,474.00 | 3.50    | 154.03  | 2,474.00 | -84.30   | 45.99    |

2.2.2 Survey Stations

| Date     | Type   | MD (ft)  | Inc (°) | Azi (°) | TVD (ft) | N/S (ft) | E/W (ft) | V. Sec (ft) | DLeg (°/100ft) | Build (°/100ft) | Turn (°/100ft) | TFace (°) |
|----------|--------|----------|---------|---------|----------|----------|----------|-------------|----------------|-----------------|----------------|-----------|
| 1/5/2010 | Tie On | 2,474.00 | 3.50    | 154.03  | 2,474.00 | -84.30   | 45.99    | 94.52       | 0.00           | 0.00            | 0.00           | 0.00      |
| 1/5/2010 | NORMAL | 2,572.00 | 3.41    | 159.57  | 2,571.82 | -89.72   | 48.32    | 100.39      | 0.35           | -0.09           | 5.65           | 107.84    |
|          | NORMAL | 2,666.00 | 6.23    | 162.99  | 2,665.48 | -97.22   | 50.79    | 108.29      | 3.01           | 3.00            | 3.64           | 7.53      |
|          | NORMAL | 2,761.00 | 9.10    | 167.30  | 2,759.62 | -109.48  | 53.95    | 120.92      | 3.08           | 3.02            | 4.54           | 13.47     |
|          | NORMAL | 2,856.00 | 11.94   | 162.54  | 2,853.02 | -126.19  | 58.55    | 138.22      | 3.12           | 2.99            | -5.01          | -19.37    |
|          | NORMAL | 2,951.00 | 13.94   | 160.92  | 2,945.60 | -146.38  | 65.24    | 159.49      | 2.14           | 2.11            | -1.71          | -11.07    |
|          | NORMAL | 3,045.00 | 15.50   | 161.67  | 3,036.51 | -169.00  | 72.89    | 183.38      | 1.67           | 1.66            | 0.80           | 7.33      |
|          | NORMAL | 3,139.00 | 19.06   | 167.29  | 3,126.26 | -195.91  | 80.22    | 211.22      | 4.18           | 3.79            | 5.98           | 27.83     |
|          | NORMAL | 3,234.00 | 21.56   | 165.04  | 3,215.35 | -227.91  | 88.14    | 244.08      | 2.76           | 2.63            | -2.37          | -18.41    |
|          | NORMAL | 3,329.00 | 21.31   | 162.17  | 3,303.78 | -261.21  | 97.93    | 278.77      | 1.13           | -0.26           | -3.02          | -104.74   |
|          | NORMAL | 3,423.00 | 20.94   | 160.42  | 3,391.47 | -293.29  | 108.79   | 312.64      | 0.78           | -0.39           | -1.86          | -121.21   |
|          | NORMAL | 3,519.00 | 19.94   | 159.54  | 3,481.42 | -324.79  | 120.26   | 346.15      | 1.09           | -1.04           | -0.92          | -163.33   |
|          | NORMAL | 3,614.00 | 18.72   | 159.89  | 3,571.06 | -354.29  | 131.17   | 377.58      | 1.29           | -1.28           | 0.37           | 174.74    |
|          | NORMAL | 3,708.00 | 19.69   | 161.54  | 3,659.83 | -383.47  | 141.37   | 408.50      | 1.18           | 1.03            | 1.76           | 30.01     |
| 1/6/2010 | NORMAL | 3,803.00 | 19.31   | 160.29  | 3,749.38 | -413.44  | 151.73   | 440.21      | 0.59           | -0.40           | -1.32          | -132.91   |
|          | NORMAL | 3,898.00 | 19.31   | 164.42  | 3,839.04 | -443.36  | 161.25   | 471.60      | 1.44           | 0.00            | 4.35           | 91.95     |
|          | NORMAL | 3,993.00 | 20.00   | 159.91  | 3,928.51 | -473.75  | 171.05   | 503.53      | 1.75           | 0.73            | -4.75          | -67.68    |
|          | NORMAL | 4,088.00 | 18.63   | 158.04  | 4,018.16 | -503.08  | 182.30   | 534.91      | 1.58           | -1.44           | -1.97          | -156.58   |
|          | NORMAL | 4,183.00 | 18.38   | 161.79  | 4,108.25 | -531.38  | 192.66   | 565.04      | 1.28           | -0.26           | 3.95           | 103.64    |
|          | NORMAL | 4,278.00 | 20.00   | 162.92  | 4,197.97 | -561.14  | 202.11   | 596.26      | 1.75           | 1.71            | 1.19           | 13.45     |
|          | NORMAL | 4,372.00 | 20.19   | 157.78  | 4,286.26 | -591.53  | 212.97   | 628.52      | 1.89           | 0.20            | -5.47          | -86.28    |
|          | NORMAL | 4,467.00 | 19.38   | 156.67  | 4,375.65 | -621.18  | 225.41   | 660.58      | 0.94           | -0.85           | -1.17          | -155.64   |
|          | NORMAL | 4,562.00 | 20.50   | 160.67  | 4,464.96 | -651.35  | 237.16   | 692.92      | 1.86           | 1.18            | 4.21           | 52.51     |
|          | NORMAL | 4,656.00 | 18.94   | 164.54  | 4,553.45 | -681.59  | 246.68   | 724.62      | 2.16           | -1.66           | 4.12           | 141.88    |
|          | NORMAL | 4,751.00 | 17.94   | 164.92  | 4,643.57 | -710.58  | 254.59   | 754.62      | 1.06           | -1.05           | 0.40           | 173.33    |
|          | NORMAL | 4,846.00 | 18.13   | 157.29  | 4,733.91 | -738.34  | 264.11   | 783.97      | 2.49           | 0.20            | -8.03          | -89.04    |
|          | NORMAL | 4,940.00 | 20.06   | 156.79  | 4,822.74 | -766.65  | 276.11   | 814.62      | 2.06           | 2.05            | -0.53          | -5.08     |
|          | NORMAL | 5,035.00 | 21.14   | 161.52  | 4,911.67 | -797.88  | 287.96   | 847.99      | 2.09           | 1.14            | 4.98           | 59.25     |
|          | NORMAL | 5,129.00 | 21.38   | 163.29  | 4,999.27 | -830.36  | 298.26   | 882.07      | 0.73           | 0.26            | 1.88           | 70.32     |
|          | NORMAL | 5,224.00 | 19.44   | 162.79  | 5,088.30 | -862.05  | 307.92   | 915.19      | 2.05           | -2.04           | -0.53          | -175.10   |
|          | NORMAL | 5,319.00 | 19.13   | 164.17  | 5,177.97 | -892.13  | 316.84   | 946.54      | 0.58           | -0.33           | 1.45           | 124.87    |

## 2.2.2 Survey Stations (Continued)

| Date      | Type   | MD<br>(ft) | Inc<br>(°) | Azi<br>(°) | TVD<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | DLeg<br>(°/100ft) | Build<br>(°/100ft) | Turn<br>(°/100ft) | TFace<br>(°) |
|-----------|--------|------------|------------|------------|-------------|-------------|-------------|----------------|-------------------|--------------------|-------------------|--------------|
| 1/6/2010  | NORMAL | 5,412.00   | 18.25      | 164.29     | 5,266.07    | -920.81     | 324.94      | 976.31         | 0.95              | -0.95              | 0.13              | 177.55       |
|           | NORMAL | 5,507.00   | 17.63      | 163.54     | 5,356.45    | -948.93     | 333.04      | 1,005.55       | 0.70              | -0.65              | -0.79             | -159.92      |
|           | NORMAL | 5,601.00   | 15.94      | 166.17     | 5,446.44    | -975.11     | 340.16      | 1,032.64       | 1.97              | -1.80              | 2.80              | 157.06       |
|           | NORMAL | 5,696.00   | 14.13      | 166.91     | 5,538.18    | -999.08     | 345.91      | 1,057.19       | 1.92              | -1.91              | 0.78              | 174.30       |
| 1/7/2010  | NORMAL | 5,791.00   | 12.63      | 168.16     | 5,630.60    | -1,020.54   | 350.67      | 1,079.06       | 1.61              | -1.58              | 1.32              | 169.69       |
|           | NORMAL | 5,886.00   | 11.13      | 169.42     | 5,723.57    | -1,039.72   | 354.48      | 1,098.46       | 1.60              | -1.58              | 1.33              | 170.81       |
|           | NORMAL | 5,980.00   | 10.44      | 168.54     | 5,815.91    | -1,056.98   | 357.84      | 1,115.90       | 0.75              | -0.73              | -0.94             | -167.01      |
|           | NORMAL | 6,075.00   | 8.75       | 174.79     | 5,909.58    | -1,072.62   | 360.20      | 1,131.48       | 2.09              | -1.78              | 6.58              | 151.40       |
|           | NORMAL | 6,170.00   | 6.75       | 175.79     | 6,003.70    | -1,085.38   | 361.27      | 1,143.93       | 2.11              | -2.11              | 1.05              | 176.64       |
|           | NORMAL | 6,265.00   | 5.06       | 177.42     | 6,098.20    | -1,095.14   | 361.87      | 1,153.37       | 1.79              | -1.78              | 1.72              | 175.14       |
|           | NORMAL | 6,359.00   | 2.94       | 180.54     | 6,191.96    | -1,101.69   | 362.03      | 1,159.64       | 2.27              | -2.26              | 3.32              | 175.69       |
|           | NORMAL | 6,454.00   | 1.94       | 175.92     | 6,286.87    | -1,105.73   | 362.12      | 1,163.50       | 1.07              | -1.05              | -4.86             | -171.17      |
|           | NORMAL | 6,548.00   | 0.06       | 73.54      | 6,380.86    | -1,107.30   | 362.29      | 1,165.04       | 2.08              | -2.00              | -108.91           | -178.28      |
|           | NORMAL | 6,643.00   | 0.31       | 120.79     | 6,475.86    | -1,107.42   | 362.55      | 1,165.24       | 0.29              | 0.26               | 49.74             | 56.54        |
| 1/8/2010  | NORMAL | 6,738.00   | 1.44       | 9.42       | 6,570.85    | -1,106.37   | 362.97      | 1,164.38       | 1.66              | 1.19               | -117.23           | -121.90      |
|           | NORMAL | 6,833.00   | 1.06       | 9.17       | 6,665.82    | -1,104.33   | 363.31      | 1,162.55       | 0.40              | -0.40              | -0.26             | -179.30      |
|           | NORMAL | 6,928.00   | 0.75       | 10.92      | 6,760.81    | -1,102.85   | 363.56      | 1,161.22       | 0.33              | -0.33              | 1.84              | 175.78       |
|           | NORMAL | 7,022.00   | 0.38       | 12.79      | 6,854.81    | -1,101.94   | 363.75      | 1,160.42       | 0.39              | -0.39              | 1.99              | 178.08       |
|           | NORMAL | 7,117.00   | 0.19       | 84.42      | 6,949.81    | -1,101.62   | 363.98      | 1,160.19       | 0.39              | -0.20              | 75.40             | 150.61       |
|           | NORMAL | 7,212.00   | 0.31       | 119.04     | 7,044.80    | -1,101.73   | 364.36      | 1,160.41       | 0.20              | 0.13               | 36.44             | 69.71        |
|           | NORMAL | 7,307.00   | 0.44       | 129.91     | 7,139.80    | -1,102.09   | 364.86      | 1,160.91       | 0.16              | 0.14               | 11.44             | 34.20        |
|           | NORMAL | 7,402.00   | 0.38       | 139.54     | 7,234.80    | -1,102.56   | 365.35      | 1,161.51       | 0.10              | -0.06              | 10.14             | 135.79       |
|           | NORMAL | 7,497.00   | 0.59       | 133.96     | 7,329.80    | -1,103.14   | 365.90      | 1,162.24       | 0.23              | 0.22               | -5.87             | -15.48       |
|           | NORMAL | 7,591.00   | 0.94       | 291.17     | 7,423.79    | -1,103.20   | 365.53      | 1,162.18       | 1.60              | 0.37               | 167.24            | 165.96       |
| 1/9/2010  | NORMAL | 7,686.00   | 0.50       | 256.17     | 7,518.79    | -1,103.02   | 364.40      | 1,161.65       | 0.63              | -0.46              | -36.84            | -151.60      |
|           | NORMAL | 7,781.00   | 0.50       | 226.79     | 7,613.78    | -1,103.40   | 363.70      | 1,161.79       | 0.27              | 0.00               | -30.93            | -104.69      |
|           | NORMAL | 7,876.00   | 0.81       | 211.17     | 7,708.78    | -1,104.26   | 363.05      | 1,162.40       | 0.37              | 0.33               | -16.44            | -37.91       |
|           | NORMAL | 7,970.00   | 1.13       | 202.29     | 7,802.76    | -1,105.68   | 362.35      | 1,163.53       | 0.38              | 0.34               | -9.45             | -29.65       |
|           | NORMAL | 8,065.00   | 1.69       | 177.79     | 7,897.73    | -1,107.95   | 362.05      | 1,165.58       | 0.85              | 0.59               | -25.79            | -59.80       |
|           | NORMAL | 8,160.00   | 0.25       | 189.67     | 7,992.72    | -1,109.55   | 362.07      | 1,167.11       | 1.52              | -1.52              | 12.51             | 177.96       |
|           | NORMAL | 8,255.00   | 0.44       | 305.29     | 8,087.72    | -1,109.55   | 361.74      | 1,167.00       | 0.62              | 0.20               | 121.71            | 137.98       |
|           | NORMAL | 8,350.00   | 0.28       | 288.62     | 8,182.72    | -1,109.26   | 361.22      | 1,166.57       | 0.20              | -0.17              | -17.55            | -154.94      |
|           | NORMAL | 8,445.00   | 0.19       | 250.42     | 8,277.71    | -1,109.24   | 360.85      | 1,166.43       | 0.18              | -0.09              | -40.21            | -138.04      |
|           | NORMAL | 8,540.00   | 0.38       | 210.92     | 8,372.71    | -1,109.56   | 360.54      | 1,166.64       | 0.28              | 0.20               | -41.58            | -66.88       |
| 1/10/2010 | NORMAL | 8,634.00   | 0.50       | 206.92     | 8,466.71    | -1,110.20   | 360.20      | 1,167.13       | 0.13              | 0.13               | -4.26             | -16.36       |
|           | NORMAL | 8,729.00   | 0.31       | 200.42     | 8,561.71    | -1,110.81   | 359.92      | 1,167.62       | 0.21              | -0.20              | -6.84             | -169.64      |
|           | NORMAL | 8,824.00   | 0.69       | 177.67     | 8,656.70    | -1,111.62   | 359.85      | 1,168.37       | 0.44              | 0.40               | -23.95            | -39.27       |
|           | NORMAL | 8,919.00   | 1.00       | 167.42     | 8,751.69    | -1,113.00   | 360.06      | 1,169.75       | 0.36              | 0.33               | -10.79            | -31.18       |
|           | NORMAL | 9,013.00   | 1.50       | 179.92     | 8,845.67    | -1,115.03   | 360.24      | 1,171.73       | 0.60              | 0.53               | 13.30             | 34.95        |
|           | NORMAL | 9,108.00   | 1.23       | 173.96     | 8,940.64    | -1,117.29   | 360.34      | 1,173.91       | 0.32              | -0.28              | -6.27             | -155.22      |
|           | NORMAL | 9,203.00   | 1.31       | 162.29     | 9,035.62    | -1,119.34   | 360.78      | 1,175.99       | 0.28              | 0.08               | -12.28            | -78.70       |
|           | NORMAL | 9,298.00   | 1.63       | 160.17     | 9,130.59    | -1,121.64   | 361.57      | 1,178.42       | 0.34              | 0.34               | -2.23             | -10.71       |
|           | NORMAL | 9,392.00   | 1.88       | 160.91     | 9,224.55    | -1,124.36   | 362.53      | 1,181.30       | 0.27              | 0.27               | 0.79              | 5.55         |
|           | NORMAL | 9,486.00   | 2.13       | 155.29     | 9,318.49    | -1,127.40   | 363.76      | 1,184.58       | 0.34              | 0.27               | -5.98             | -41.02       |
| 1/11/2010 | NORMAL | 9,524.00   | 1.88       | 155.17     | 9,356.47    | -1,128.61   | 364.32      | 1,185.90       | 0.66              | -0.66              | -0.32             | -179.10      |
|           | NORMAL | 9,576.00   | 1.88       | 155.01     | 9,408.44    | -1,130.16   | 365.04      | 1,187.60       | 0.01              | 0.00               | -0.31             | -90.08       |
|           | NORMAL | 9,623.00   | 1.88       | 155.17     | 9,455.30    | -1,137.51   | 368.45      | 1,195.65       | 0.00              | 0.00               | 0.06              | 90.08        |

|  |   |
|--|---|
| <b>STATE OF UTAH</b><br>DEPARTMENT OF NATURAL RESOURCES<br>DIVISION OF OIL, GAS, AND MINING  | <b>FORM 9</b><br><br><b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b><br>UO 01194                                     |
| <b>SUNDRY NOTICES AND REPORTS ON WELLS</b><br><br>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><br><br><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 921-25M2DS   |
| <b>2. NAME OF OPERATOR:</b><br>KERR-MCGEE OIL & GAS ONSHORE, L.P.  | <b>9. API NUMBER:</b><br>43047503840000   |
| <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>4. LOCATION OF WELL FOOTAGES AT SURFACE:</b><br>1860 FSL 0251 FWL<br><b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b><br>Qtr/Qtr: NWSW Section: 25 Township: 09.0S Range: 21.0E Meridian: S  | <b>9. FIELD and POOL or WILDCAT:</b><br>NATURAL BUTTES<br><br><b>COUNTY:</b><br>UINTAH<br><br><b>STATE:</b><br>UTAH |

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

| TYPE OF SUBMISSION   | TYPE OF ACTION  |  |  |
|--|---|--|--|
| <input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b><br>Approximate date work will start:<br>4/5/2011<br><br><input type="checkbox"/> <b>SUBSEQUENT REPORT</b><br>Date of Work Completion:<br><br><input type="checkbox"/> <b>SPUD REPORT</b><br>Date of Spud:<br><br><input type="checkbox"/> <b>DRILLING REPORT</b><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 | <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 checked="" type="checkbox"/> <b>CASING REPAIR</b><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><br>OTHER: <input type="text" value="Wellhead"/> |

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

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

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

Date: 04/05/2011

By: *Dark K. Quist*

|  |                                     |                                    |
|--|-------------------------------------|------------------------------------|
| <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>4/5/2011             |                                    |

**WORKORDER #:** 88120979

3/2/11

**Name:** NBU 921-25M2DS - 921-25L PAD  
**Surface Location:** NWSW SEC.25, T9S, R21E  
 Uintah County, UT

**API:** 4304750384      **LEASE#:** UO 01194

**ELEVATIONS:** 5004' GL      5030' KB

**TOTAL DEPTH:** 9823'      **PBTD:** 9765'

**SURFACE CASING:** 8 5/8", 28# J-55 @ 2521'

**PRODUCTION CASING:** 4 1/2", 11.6#, I-80 @ 9812'  
 TOC @ ~250 per CBL

**PERFORATIONS:** Mesaverde 7558' - 9610'

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

**GEOLOGICAL MARKERS, TOPS:**

1549' Green River  
 2272' Mahogany  
 4891' Wasatch  
 7544' Mesaverde

## **NBU 921-25M2DS – WELLHEAD REPLACEMENT PROCEDURE**

### **PREP-WORK PRIOR TO MIRU:**

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

### **WORKOVER PROCEDURE:**

1. MIRU workover rig.
2. Kill well with 10# brine / KCL (dictated by well pressure ).
3. Remove tree, install double BOP with blind and 2 3/8" pipe rams, with accumulator closing unit and manual back-ups. Function test BOP system.
4. POOH w/ tubing laying down extra tubing.
5. Rig up wireline service. RIH and set CBP @ ~7508'. Dump bail 4 sx cement on top of plug. POOH and RD wireline service. TIH w/ tubing and seating nipple. Land tubing ±60' above cement. RDMO.
6. Monitor well pressures. If surface casing is dead. MIRU. ND WH and NU BOP. POOH w/ tubing.
7. Depending on conditions at wellsite, continue with either CUT/PATCH Procedure or BACK-OFF Procedure.

**CUT/PATCH PROCEDURE:**

1. PU internal casing cutters and RIH. Cut casing at +/- 30' from surface.
2. POOH, LD cutters and casing.
3. PU 7 3/8" overshoot with 4 1/2" right hand standard wicker grapple, 1 - 4 3/4" drill collar with 3 1/2" IF threads, pup joint, manual bumper sub, and crossovers. If casing cut is deeper than ±30' utilize >7000 ft-lb torque pipe as needed. Pull a minimum of 10,000# to keep grapple engaged if cement top is high (<~900'). If cement top is low (>~900'), more weight will be required to put casing in neutral. Torque casing string to ±7000 ft-lbs, count number of turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place ±7000 ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out, release overshoot, POOH, and lay down.
4. TIH w/ skirted mill and dress off the fish top for approximately 1/2 hour. TOOH.
5. PU & RIH w/ 4 1/2" 10k external casing patch on 4 1/2" P-110 casing. Ensure that sliding sleeve assembly shifts ±3' and casing tags no-go portion of patch. NOTE: Shear pins will shear at 3500 to 4500 lbs.
6. Latch fish, PU to 100,000# tension. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.
7. Install slips. Land casing w/ 80,000# tension.
8. Cut-off and dress 4 1/2" casing stub.
9. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~7458'. Clean out to PBTD (9765').
10. POOH, land tbg and pump off POBS.
11. NUWH, RDMO. Turn well over to production ops.

**BACK-OFF PROCEDURE:**

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

6. PU new casing joint with buttress threads and entry guide and RIH. Tag casing top. Thread into casing and torque up to  $\pm 7000$  ft-lbs, count number of additional turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place  $\pm 7000$  ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out go to step 7.
7. PU 100,000# tension string weight. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.
8. Install slips. Land casing w/ 80,000# tension.
9. Cut-off and dress 4 1/2" casing stub.
10. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~7458'. Clean out to PBTD (9765').
11. POOH, land tbg and pump off POBS.
12. NUWH, RDMO. Turn well over to production ops.



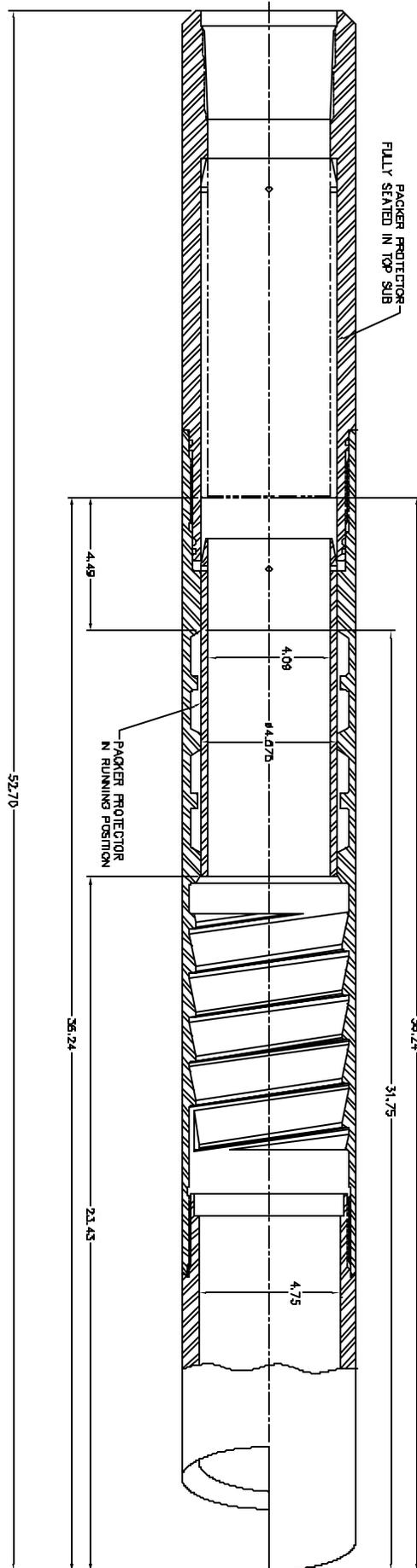
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## **Logan High Pressure Casing Patches Assembly Procedure**

All parts should be thoroughly greased before being assembled.

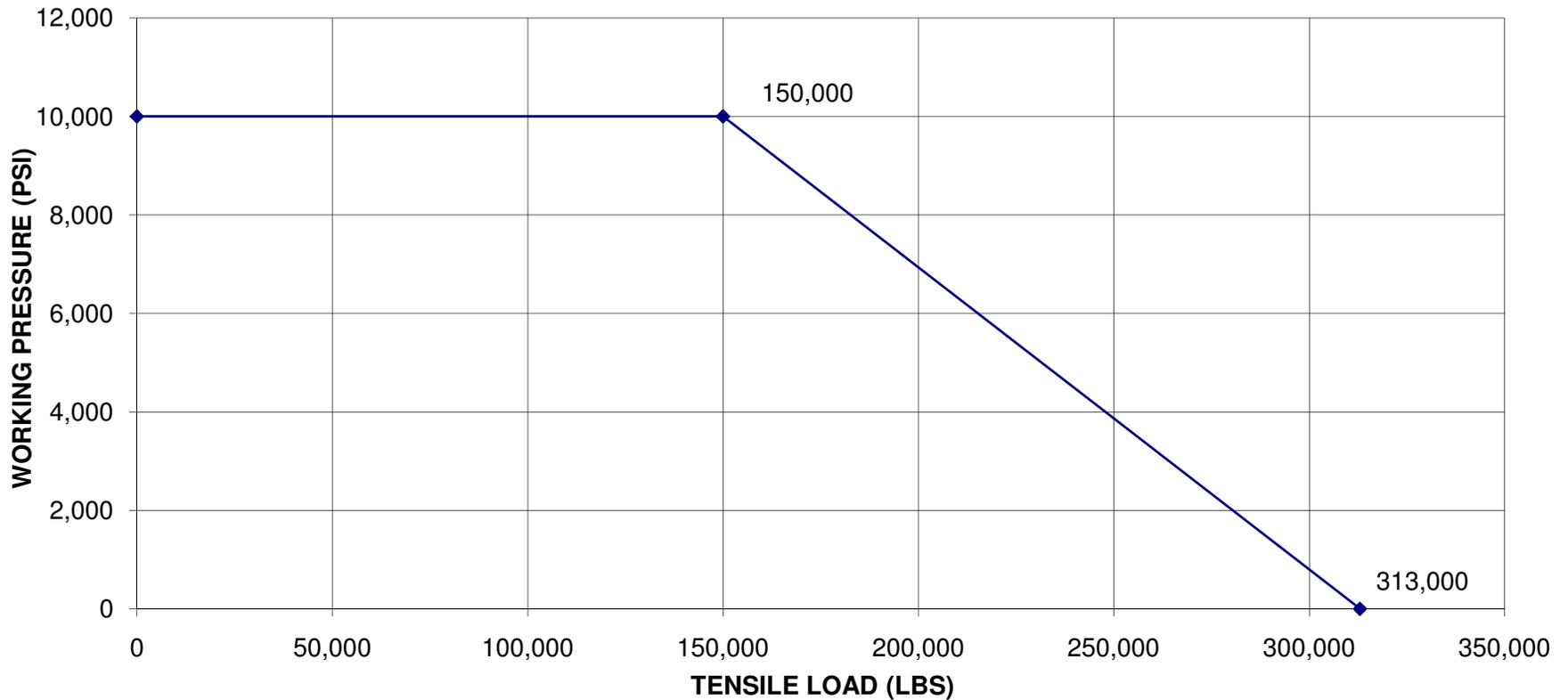
1. Install all four Logan Type "L" Packers in the spaces provided in the Casing Patch Bowl. Refer to diagram provided for proper installation.
2. Install Packer Protector from the Basket Grapple end of the Bowl. The beveled end of the Packer Protector goes in first. Carefully push the Packer Protector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

Follow recommended Make-Up Torque as provided in chart.



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

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



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

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

DATA BY SLS 11/16/2009

**RECEIVED** Apr. 05, 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   |  |
| <b>SUNDRY NOTICES AND REPORTS ON WELLS</b>   |  |
| Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals. |  |
| <b>1. TYPE OF WELL</b><br>Gas Well   | <b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>           |
| <b>2. NAME OF OPERATOR:</b><br>KERR-MCGEE OIL & GAS ONSHORE, L.P.  | <b>7. UNIT or CA AGREEMENT NAME:</b><br>NATURAL BUTTES |
| <b>3. ADDRESS OF OPERATOR:</b><br>P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779  | <b>8. WELL NAME and NUMBER:</b><br>NBU 921-25M2DS      |
| <b>PHONE NUMBER:</b><br>720 929-6511   | <b>9. API NUMBER:</b><br>43047503840000                |
| <b>4. LOCATION OF WELL</b><br><b>FOOTAGES AT SURFACE:</b><br>1860 FSL 0251 FWL<br><b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b><br>Qtr/Qtr: NWSW Section: 25 Township: 09.0S Range: 21.0E Meridian: S                                      | <b>9. FIELD and POOL or WILDCAT:</b><br>NATURAL BUTTES |
|  | <b>COUNTY:</b><br>UINTAH                               |
|  | <b>STATE:</b><br>UTAH                                  |

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

| TYPE OF SUBMISSION   | TYPE OF ACTION   |   |   |
|--|--|---|---|
| <input type="checkbox"/> NOTICE OF INTENT<br>Approximate date work will start:                 | <input type="checkbox"/> ACIDIZE                       | <input type="checkbox"/> ALTER CASING                   | <input checked="" type="checkbox"/> CASING REPAIR       |
| <input checked="" type="checkbox"/> SUBSEQUENT REPORT<br>Date of Work Completion:<br>9/26/2011 | <input type="checkbox"/> CHANGE TO PREVIOUS PLANS      | <input type="checkbox"/> CHANGE TUBING                  | <input type="checkbox"/> CHANGE WELL NAME               |
| <input type="checkbox"/> SPUD REPORT<br>Date of Spud:  | <input type="checkbox"/> CHANGE WELL STATUS            | <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS | <input type="checkbox"/> CONVERT WELL TYPE              |
| <input type="checkbox"/> DRILLING REPORT<br>Report Date:                                       | <input type="checkbox"/> DEEPEN                        | <input type="checkbox"/> FRACTURE TREAT                 | <input type="checkbox"/> NEW CONSTRUCTION               |
|  | <input type="checkbox"/> OPERATOR CHANGE               | <input type="checkbox"/> PLUG AND ABANDON               | <input type="checkbox"/> PLUG BACK                      |
|  | <input type="checkbox"/> PRODUCTION START OR RESUME    | <input type="checkbox"/> RECLAMATION OF WELL SITE       | <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION |
|  | <input type="checkbox"/> REPERFORATE CURRENT FORMATION | <input type="checkbox"/> SIDETRACK TO REPAIR WELL       | <input type="checkbox"/> TEMPORARY ABANDON              |
|  | <input type="checkbox"/> TUBING REPAIR                 | <input type="checkbox"/> VENT OR FLARE                  | <input type="checkbox"/> WATER DISPOSAL                 |
|  | <input type="checkbox"/> WATER SHUTOFF                 | <input type="checkbox"/> SI TA STATUS EXTENSION         | <input type="checkbox"/> APD EXTENSION                  |
|  | <input type="checkbox"/> WILDCAT WELL DETERMINATION    | <input checked="" type="checkbox"/> OTHER               | OTHER: <input style="width: 100px;" type="text"/>       |

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

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

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**  
**FOR RECORD ONLY**  
 January 27, 2012

|   |                                     |                                      |
|---|-------------------------------------|--------------------------------------|
| <b>NAME (PLEASE PRINT)</b><br>Jaime Scharnowske | <b>PHONE NUMBER</b><br>720 929-6304 | <b>TITLE</b><br>Regularatory Analyst |
| <b>SIGNATURE</b><br>N/A                         | <b>DATE</b><br>1/24/2012            |                                      |

US ROCKIES REGION  
Operation Summary Report

| US ROCKIES REGION                                    |                |               |  |      |          |                          |              |  |
|--|----------------|---------------|--|------|----------|--------------------------|--------------|--|
| Operation Summary Report                             |                |               |  |      |          |                          |              |  |
| Well: NBU 921-25M2DS [YELLOW]                        |                |               | Spud Conductor: 10/27/2009                                   |      |          | Spud Date: 11/1/2009     |              |  |
| Project: UTAH-UINTAH                                 |                |               | Site: NBU 921-25L PAD  |      |          | Rig Name No: SWABBCO 6/6 |              |  |
| Event: WELL WORK EXPENSE                             |                |               | Start Date: 9/22/2011  |      |          | End Date: 9/26/2011      |              |  |
| Active Datum: RKB @5,030.01ft (above Mean Sea Level) |                |               | UWI: NW/SW/0/9/S/21/E/25/0/0/26/PM/S/1,860.00/W/0/251.00/0/0 |      |          |                          |              |  |
| Date   | Time Start-End | Duration (hr) | Phase  | Code | Sub Code | P/U                      | MD From (ft) | Operation  |
| 9/22/2011  | 7:00 - 7:15    | 0.25          | WO/REP   | 48   |          | P                        |              | JSA= WELL CONTROL  |
|  | 7:15 - 17:00   | 9.75          | WO/REP   | 30   |          | P                        |              | FWP= 100 PSI MIRU SPOT EQUIP RU PMP CONTROL TUB W/ TMAC ND WELLHEAD NU BOPS RU FLOOR & TUBING EQUIP CONTROL CSG W/ TMAC UNLAND TUBING LD HNGR POOH W/ 277 JNTS LD BHA RU W/L RIH W/ GUAGE RNG TO 7550' POOH PU RIH W/ 10K CIBP SET @ 7510' DUMP BAIL 2 SKS CEM ON PLG RD W/L FILL HOLE W/ TMAC PRESS TEST TO 500# SIW PREP TO REPAIR WELLHEAD IN AM SDFN |
| 9/23/2011  | 7:00 - 7:15    | 0.25          | WO/REP   | 48   |          | P                        |              | JSA= W/L SAFETY  |
|  | 7:15 - 17:00   | 9.75          | WO/REP   | 30   |          | P                        |              | SIWP= 0 PSI ND BOPS & WELLHEAD PU INT CUTTER CUT CSG BELOW HNGR CEM TO SURFACE PU WASH PIPE & SWVL WASH OVER 10' LD EQUIP PU OVERSHOT RU W/L & TONGS B/O PUP PU 10' PUP RIH THREAD ONTO CSG @ 7000 FT/# TORQUE RU TESTERS TEST 3500# SET SLIPS @ 90000# NU WELLHEAD BAD FITTING ON W/H WOULD NOT TEST SEND IN TO REPAIR BACK IN AM SET ON CAP SIW SDFN   |
| 9/24/2011  | 7:00 - 7:15    | 0.25          | WO/REP   | 48   |          | P                        |              | JSA= FOAM AIR SAFETY   |
|  | 7:15 - 17:00   | 9.75          | WO/REP   | 30   |          | P                        |              | SIWP=0 ND W/H CAP NU REPAIRED W/H NU BOPS RU FLOOR & TUBING EQUIP PU BIT RIH TAG TOC @ 7490' EST CIRC W/ FOAMER DRILL THRU CEM & CIBP @ 7510' CIRC CLEAN CONTINUE TO RIH TAG @ 9610' RU PWR SWVL EST CIRC C/O & DRILL TO 9722' CIRC CLEAN POOH LD 30 JNTS LAND TUB ON HNGR W/ 277 JNTS EOT @ 8803.50' SIW SDFW   |
| 9/26/2011  | 7:00 - 7:15    | 0.25          | WO/REP   | 48   |          | P                        |              | JSA= BROACHING   |
|  | 7:15 - 9:00    | 1.75          | WO/REP   | 30   |          | P                        |              | SIWP= 1000# OPEN TUB TO FBT PMP 20 TMAC TO CONTROL WELL RIH W/ BROACHTO XN NPL RD SANDLINE RD FLOOR & TUBING EQUIP ND BOPS NU WELLHEAD RDMOVE TO 25L4BS  |

|  |   |
|--|---|
| <b>STATE OF UTAH</b><br>DEPARTMENT OF NATURAL RESOURCES<br>DIVISION OF OIL, GAS, AND MINING  | <b>FORM 9</b>                                       |
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| 1. TYPE OF WELL<br>Gas Well  | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME:               |
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| 3. ADDRESS OF OPERATOR:<br>P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779   | 8. WELL NAME and NUMBER:<br>NBU 921-25M2DS          |
| 4. LOCATION OF WELL<br>FOOTAGES AT SURFACE:<br>1860 FSL 0251 FWL<br>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:<br>Qtr/Qtr: NWSW Section: 25 Township: 09.0S Range: 21.0E Meridian: S   | 9. API NUMBER:<br>43047503840000                    |
| 5. PHONE NUMBER:<br>720 929-6511   | 9. FIELD and POOL or WILDCAT:<br>NATURAL BUTTES     |
| COUNTY:<br>UINTAH  | STATE:<br>UTAH                                      |

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

| TYPE OF SUBMISSION   | TYPE OF ACTION   |   |  |
|--|--|---|--|
| <input checked="" type="checkbox"/> NOTICE OF INTENT<br>Approximate date work will start:<br>4/30/2013 | <input type="checkbox"/> ACIDIZE                       | <input type="checkbox"/> ALTER CASING                   | <input type="checkbox"/> CASING REPAIR                             |
| <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"/> CHANGE WELL NAME                          |
| <input type="checkbox"/> SPUD REPORT<br>Date of Spud:  | <input type="checkbox"/> CHANGE WELL STATUS            | <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS | <input type="checkbox"/> CONVERT WELL TYPE                         |
| <input type="checkbox"/> DRILLING REPORT<br>Report Date:   | <input type="checkbox"/> DEEPEN                        | <input type="checkbox"/> FRACTURE TREAT                 | <input type="checkbox"/> NEW CONSTRUCTION                          |
|  | <input type="checkbox"/> OPERATOR CHANGE               | <input type="checkbox"/> PLUG AND ABANDON               | <input type="checkbox"/> PLUG BACK                                 |
|  | <input type="checkbox"/> PRODUCTION START OR RESUME    | <input type="checkbox"/> RECLAMATION OF WELL SITE       | <input checked="" type="checkbox"/> RECOMPLETE DIFFERENT FORMATION |
|  | <input type="checkbox"/> REPERFORATE CURRENT FORMATION | <input type="checkbox"/> SIDETRACK TO REPAIR WELL       | <input type="checkbox"/> TEMPORARY ABANDON                         |
|  | <input type="checkbox"/> TUBING REPAIR                 | <input type="checkbox"/> VENT OR FLARE                  | <input type="checkbox"/> WATER DISPOSAL                            |
|  | <input type="checkbox"/> WATER SHUTOFF                 | <input type="checkbox"/> SI TA STATUS EXTENSION         | <input type="checkbox"/> APD EXTENSION                             |
|  | <input type="checkbox"/> WILDCAT WELL DETERMINATION    | <input type="checkbox"/> OTHER                          | OTHER: <input style="width: 100px;" type="text"/>                  |

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

The operator requests authorization to recomplete the subject well in the WASATCH formation. Please see the attached procedure.

**Approved by the Utah Division of Oil, Gas and Mining**  
**Date:** May 02, 2013  
**By:** *D. K. Duff*

|   |                                     |   |
|---|-------------------------------------|---|
| <b>NAME (PLEASE PRINT)</b><br>Teena Paulo | <b>PHONE NUMBER</b><br>720 929-6236 | <b>TITLE</b><br>Staff Regulatory Specialist |
| <b>SIGNATURE</b><br>N/A                   | <b>DATE</b><br>4/30/2013            |   |



## Greater Natural Buttes Unit

**NBU 921-25M2DS  
RE-COMPLETIONS PROCEDURE  
NBU 921-25L PAD  
FIELD ID: YELLOW WELL**

**DATE: 4/23/13  
AFE#:  
API#: 4304750384  
USER ID: MRX575 (Frac Invoices Only)**

**COMPLETIONS ENGINEER: Paul Ryza , Denver, CO  
(720) 929-6915 (Office)  
(936) 499-6895 (Cell)**

**REMEMBER SAFETY FIRST!**

**Name:** NBU 921-25M2DS  
**Location:** SE NW SW SW Sec 25 T9S R21E  
**LAT:** 40.004848 **LONG:** -109.508599 **COORDINATE:** NAD83 (Surface Location)  
**Uintah County, UT**  
**Date:** 4/23/13

**ELEVATIONS:** 5004' GL 5030' KB *Frac Registry TVD: 9655'*

**TOTAL DEPTH:** 9823' **PBTD:** 9764'  
**SURFACE CASING:** 8 5/8", 28# J-55 LTC @ 2521'  
**PRODUCTION CASING:** 4 1/2", 11.6#, I-80 BTC @ 115'  
 4 1/2", 11.6#, I-80 LTC @ 115-9812'  
 Marker Joint **4912-4932'**

**TUBULAR PROPERTIES:**

|                               | BURST<br>(psi) | COLLAPSE<br>(psi) | DRIFT DIA.<br>(in.) | CAPACITIES |          |
|-------------------------------|----------------|-------------------|---------------------|------------|----------|
|                               |                |                   |                     | (bbl./ft)  | (gal/ft) |
| 2 3/8" 4.7# L-80 tbg          | 11,200         | 11,780            | 1.901"              | 0.00387    | 0.1624   |
| 4 1/2" 11.6# I-80 (See above) | 7780           | 6350              | 3.875"              | 0.0155     | 0.6528   |
| 4 1/2" 11.6# P-110            | 10691          | 7580              | 3.875"              | 0.0155     | 0.6528   |
| 2 3/8" by 4 1/2" Annulus      |                |                   |                     | 0.0101     | 0.4227   |

**TOPS:**

1497' Green River Top  
 1783' Bird's Nest Top  
 2320' Mahogany Top  
 4870' Wasatch Top  
 7642' Mesaverde Top  
 \*Based on latest geological interpretation

**BOTTOMS:**

7642' Wasatch Bottom  
 9823' Mesaverde Bottom (TD)

**T.O.C. @ 490'**

\*\*Based on latest interpretation of CBL

**GENERAL NOTES:**

- **Please note that:**
  - All stages on this procedure may or may not be completed due to low frac gradients, timing, or other possible reasons. Total stages completed can be found in the post-job-report.
  - CBP depth on this procedure is only to be used as a reference. This depth is subject to change as per field operations and the discretion of the wireline supervisor and field foreman.
- A minimum of **11** tanks (cleaned lined 500 bbl) of recycled water will be required. Note: Use biocide in tanks and the water needs to be at least 45°F at pump time.
- All perforation depths are from Halliburton's CBL log dated **2/19/10**.
- **5** fracturing stages required for coverage.
- Hydraulic isolation estimated at **4192'** based upon Halliburton's CBL dated 2/19/10.
- Procedure calls for **6** CBP's (**8000** psi) .
- Calculate open perforations after each breakdown. If less than 60% of the perforations appear to be open, ball out with 15% HCl.

- **Pump scale inhibitor at 0.5 gpt. Remember to pre-load the casing with scale inhibitor.**
- **This is a NO Clay stabilizer pilot \*\*\* Please Do NOT pump Clay Stabilizer \*\*\***
- FR will be pumped at 0.3 gpt for this well. This concentration will be raised or lowered on the job at the discretion of the APC foreman per the well's treating pressure.
- 30/50 mesh Ottawa sand, **Slickwater frac.**
- Maximum surface pressure **6200 psi.**
- **If casing pressure test fails (pressure loss of 1.5% psi or more), retest for 15 minutes. If pressure loss of 1.5% more on second test, notify Denver engineers. Record in Openwells. MIRU with tubing and packer. Isolate leak by pressure testing above and below the packer. RIH and set appropriate casing leak remediation. Re-pressure test to 1000 and 3500 psi for 15 minutes each and to 6200 psi for 30 minutes (specific details on remediation should be documented in OpenWells).**
- Flush volumes are the sum of slick water and acid used during displacement (include scale inhibitor as mentioned above). Stage acid and scale inhibitor if necessary to cover the next perforated interval.
- Call flush at 0 PPG @ inline densimeters. Slow to 5 bbl/min over last 10-20 bbls of flush. Flush to top perf.
- Max Sand Concentration: Wasatch 2 ppg;
- If distance between plug and top perf of previous stage is less than 50', it is considered to be tight spacing - over flush stage by 5 bbls (from top perf)
- **TIGHT SPACING ON STAGE 1 & 2- OVERFLUSH BY 5 BBLS**
- **If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work**

#### Existing Perforations:

| <u>PERFORATIONS</u> |             |            |            |            |              |             |
|---------------------|-------------|------------|------------|------------|--------------|-------------|
| <u>Formation</u>    | <u>Zone</u> | <u>Top</u> | <u>Btm</u> | <u>spf</u> | <u>Shots</u> | <u>Date</u> |
| MESAVERDE           |             | 7558       | 7564       | 3          | 18           | 03/15/2010  |
| MESAVERDE           |             | 7588       | 7590       | 3          | 6            | 03/15/2010  |
| MESAVERDE           |             | 7714       | 7720       | 3          | 18           | 03/15/2010  |
| MESAVERDE           |             | 7788       | 7792       | 3          | 12           | 03/15/2010  |
| MESAVERDE           |             | 7846       | 7848       | 3          | 6            | 03/15/2010  |
| MESAVERDE           |             | 7870       | 7872       | 3          | 6            | 03/15/2010  |
| MESAVERDE           |             | 7892       | 7894       | 4          | 8            | 03/15/2010  |
| MESAVERDE           |             | 7934       | 7936       | 4          | 8            | 03/15/2010  |
| MESAVERDE           |             | 8018       | 8022       | 3          | 12           | 03/15/2010  |
| MESAVERDE           |             | 8114       | 8120       | 2          | 12           | 03/15/2010  |
| MESAVERDE           |             | 8310       | 8314       | 4          | 16           | 03/15/2010  |
| MESAVERDE           |             | 8500       | 8504       | 4          | 16           | 03/15/2010  |
| MESAVERDE           |             | 8722       | 8728       | 4          | 24           | 03/15/2010  |
| MESAVERDE           |             | 8832       | 8834       | 3          | 6            | 03/15/2010  |
| MESAVERDE           |             | 8940       | 8942       | 3          | 6            | 03/15/2010  |
| MESAVERDE           |             | 8986       | 8988       | 4          | 8            | 03/15/2010  |
| MESAVERDE           |             | 9028       | 9032       | 3          | 12           | 03/15/2010  |
| MESAVERDE           |             | 9072       | 9074       | 4          | 8            | 03/15/2010  |
| MESAVERDE           |             | 9264       | 9288       | 3          | 12           | 03/15/2010  |
| MESAVERDE           |             | 9346       | 9348       | 3          | 6            | 03/15/2010  |
| MESAVERDE           |             | 9542       | 9544       | 3          | 6            | 03/15/2010  |
| MESAVERDE           |             | 9606       | 9610       | 4          | 16           | 03/15/2010  |

**Relevant History:**

- 3/15/10: Originally completed in Mesaverde formation (6 stages) with ~ 467,841 gallons of Slickwater, 404,876 lbs of 30/50 Ottawa Sand sand and 34,660 lbs of 20/40 Resin coated sand.
- 9/23/11: Backed off top joint of 4-1/2" casing. Ran new joint of casing and screwed into 4-1/2" casing. Pressure tested casing to 3500 psi. Re-landed casing with 90,000# tension.
- 10/1/12: Last slickline report:  
Rigged up ran jdc set down @ 8771 came out with nothing ran g1 tool set down @ 8771 came out with the a venturi plunger ran jdc set down @ 8771 jarred on spring for while came out with the stainless steal spring ran td set down @ 9667 came out ran scratcher out the tubing came out ran 1.9 broach set down @ 8771 came out tubing was clean there was a trace of scale on the broach and spring plunger looks good chance cups on the spring drop and chase stainless steal spring and venturi plunger to btm came out rigged down.
- 4/23/13: Tubing Currently Landed @~8804'

**H2S History:**

| Production Date | Gas (avg mcf/day) | Water (avg bbl/day) | Oil (avg bbl/day) | LGR (bbl/Mmcf) | Max H2S Seperator (ppm) |
|-----------------|-------------------|---------------------|-------------------|----------------|-------------------------|
| 3/31/2013       | 277.81            | 12.94               | 0.00              | 46.56          |                         |
| 2/28/2013       | 244.82            | 11.86               | 0.00              | 48.43          |                         |
| 1/31/2013       | 246.32            | 10.84               | 0.00              | 44.00          |                         |
| 12/31/2012      | 272.90            | 12.42               | 0.00              | 45.51          |                         |
| 11/30/2012      | 292.07            | 12.83               | 0.00              | 43.94          |                         |
| 10/31/2012      | 304.19            | 12.97               | 0.00              | 42.63          |                         |
| 9/30/2012       | 317.33            | 13.00               | 0.00              | 40.97          |                         |
| 8/31/2012       | 324.16            | 13.00               | 0.00              | 40.10          |                         |
| 7/31/2012       | 331.90            | 12.94               | 0.00              | 38.97          |                         |
| 6/30/2012       | 324.60            | 12.57               | 0.00              | 38.71          |                         |
| 5/31/2012       | 360.16            | 13.00               | 0.00              | 36.09          |                         |
| 4/30/2012       | 332.63            | 11.70               | 0.00              | 35.17          |                         |
| 3/31/2012       | 371.90            | 17.55               | 1.06              | 50.05          |                         |
| 2/29/2012       | 363.93            | 23.86               | 2.00              | 71.08          |                         |
| 1/31/2012       | 403.23            | 24.00               | 1.81              | 64.00          |                         |
| 12/31/2011      | 434.71            | 23.94               | 1.90              | 59.44          |                         |
| 11/30/2011      | 477.73            | 24.73               | 2.20              | 56.38          |                         |
| 10/31/2011      | 513.65            | 24.52               | 2.06              | 51.75          | 5.00                    |
| 9/30/2011       | 426.97            | 19.97               | 1.53              | 50.36          |                         |
| 8/31/2011       | 560.16            | 24.77               | 2.13              | 48.03          |                         |
| 7/31/2011       | 577.26            | 25.16               | 2.90              | 48.62          |                         |
| 6/30/2011       | 677.37            | 25.17               | 3.33              | 42.07          |                         |
| 5/31/2011       | 663.13            | 25.16               | 3.42              | 43.10          |                         |
| 4/30/2011       | 684.90            | 25.17               | 4.00              | 42.59          |                         |
| 3/31/2011       | 722.87            | 31.84               | 2.71              | 47.79          |                         |
| 2/28/2011       | 767.36            | 25.43               | 2.32              | 36.16          |                         |
| 1/31/2011       | 814.97            | 31.42               | 2.23              | 41.28          |                         |

|            |         |       |      |       |      |
|------------|---------|-------|------|-------|------|
| 12/31/2010 | 878.00  | 38.55 | 4.35 | 48.86 |      |
| 11/30/2010 | 911.47  | 40.97 | 4.37 | 49.74 |      |
| 10/31/2010 | 953.13  | 46.68 | 4.23 | 53.41 | 2.00 |
| 9/30/2010  | 1034.80 | 47.67 | 3.83 | 49.57 | 0.00 |
| 8/31/2010  | 1148.39 | 52.06 | 5.19 | 49.88 | 0.00 |
| 7/31/2010  | 1270.23 | 52.94 | 7.52 | 47.59 |      |
| 6/30/2010  | 1472.27 | 77.23 | 8.27 | 58.07 |      |
| 5/31/2010  | 1821.03 | 95.35 | 8.55 | 57.06 |      |
| 4/30/2010  | 2140.43 | 0.00  | 0.00 | 0.00  |      |
| 3/31/2010  | 424.32  | 0.00  | 0.00 | 0.00  |      |

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

1. MIRU. Control well with recycled water and biocide as required. ND WH, NU BOP's and test.
2. The tubing is below the proposed CBP depth. TOO H with 2-3/8", 4.7#, L-80 tubing. Visually inspect for scale and consider replacing if needed.
3. If tbg looks ok consider running a gauge ring to 7558' (10' below proposed CBP). Otherwise P/U a mill and C/O to 7558' (10' below proposed CBP).
4. Set 8000 psi CBP at ~ 7548'. ND BOPs and NU frac valves Test frac valves and casing to to **6200 psi** for 15 minutes; if pressure test fails contact Denver engineer and see notes above. **Lock OPEN the Braden head valve**. Flow from annulus will be visually monitored throughout stimulation. If release occurs, stimulation will be shut down. Well conditions will be assessed and actions taken as necessary to secure the well. UDOGM will be notified if a release to the annulus occurs.
5. Pressure test frac lines to max surface pressure + 1000 psi for 15 minutes. Pressure loss should be less than 10% to be considered acceptable. Check and correct for existing leaks.
6. Perf the following with 3-3/8" gun, 23 gm, 0.36"hole:

| Zone    | From | To   | spf | # of shots |
|---------|------|------|-----|------------|
| WASATCH | 7375 | 7376 | 3   | 3          |
| WASATCH | 7388 | 7389 | 3   | 3          |
| WASATCH | 7435 | 7436 | 3   | 3          |
| WASATCH | 7468 | 7469 | 3   | 3          |
| WASATCH | 7485 | 7486 | 3   | 3          |
| WASATCH | 7517 | 7519 | 3   | 6          |
7. Breakdown perfs and establish injection rate (include scale inhibitor in fluid). Spot 250 gals of 15% HCL and let soak 5-10 min. Fracture as outlined in Stage 1 on attached listing. Under-displace to ~7375' and trickle 250gal 15%HCL w/ scale inhibitor in flush .  
**NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLs**
8. Set 8000 psi CBP at ~7361'. Perf the following 3-3/8" gun, 23 gm, 0.36"hole:

| Zone    | From | To   | spf | # of shots |
|---------|------|------|-----|------------|
| WASATCH | 7140 | 7141 | 3   | 3          |
| WASATCH | 7218 | 7219 | 3   | 3          |
| WASATCH | 7237 | 7238 | 3   | 3          |
| WASATCH | 7273 | 7274 | 3   | 3          |
| WASATCH | 7289 | 7290 | 3   | 3          |
| WASATCH | 7317 | 7319 | 3   | 6          |

9. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 2 on attached listing. Under-displace to ~7140' and trickle 250gal 15%HCL w/ scale inhibitor in flush.  
**NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLs**

10. Set 8000 psi CBP at ~7092'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

| Zone    | From | To   | spf | # of shots |
|---------|------|------|-----|------------|
| WASATCH | 6913 | 6914 | 4   | 4          |
| WASATCH | 6924 | 6925 | 4   | 4          |
| WASATCH | 7019 | 7020 | 4   | 4          |
| WASATCH | 7033 | 7034 | 4   | 4          |
| WASATCH | 7057 | 7059 | 4   | 8          |

11. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 3 on attached listing. Under-displace to ~6913' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

12. Set 8000 psi CBP at ~6799'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

| Zone    | From | To   | spf | # of shots |
|---------|------|------|-----|------------|
| WASATCH | 6532 | 6533 | 4   | 4          |
| WASATCH | 6577 | 6578 | 4   | 4          |
| WASATCH | 6739 | 6741 | 3   | 6          |
| WASATCH | 6767 | 6769 | 3   | 6          |

13. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 4 on attached listing. Under-displace to ~6532' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

14. Set 8000 psi CBP at ~6071'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

| Zone    | From | To   | spf | # of shots |
|---------|------|------|-----|------------|
| WASATCH | 6019 | 6022 | 4   | 12         |
| WASATCH | 6039 | 6041 | 4   | 8          |

15. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 5 on attached listing. Under-displace to ~6019' and flush only with recycled water.

16. Set 8000 psi CBP at ~5969'.

17. ND Frac Valves, NU and Test BOPs.

18. TIH with 3 7/8" bit, pump off sub, SN and tubing.

19. Drill 5 plugs and clean out to a depth of 7539' (~ 20' below bottom perfs).

20. Shear off bit and land tubing at 7345'. Flow back completion load. RDMO.

21. MIRU, POOH tbg and POBS. TIH with POBS.
22. Drill last plug @ 7548' clean out to PBTD at 9764'. Shear off bit and land tubing at  $\pm 8804'$ . This well WILL be commingled at this time. **NOTE: If the CBP between the initial completion and the recompleted sands has been in the well for more than 30 days from the beginning of flowback for the recompletion, a sundry will need to be filed with the necessary agency. Contact the Regulatory group to file the sundry prior to commencing work.**
23. Clean out well with foam and/or swabbing unit until steady flow has been established from completion.
24. **Leave surface casing valve open.** Monitor and report any flow from surface casing. RDMO

Completion Engineer

Paul Ryza: 936/499-6895, 720/929-6915

Production Engineer

Mickey Doherty: 406/491-7294, 435/781-9740

Ronald Trigo: 352/213-6630, 435/781-7037

Completion Supervisor Foreman

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

Completion Manager

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

Vernal Main Office

435/789-3342

Emergency Contact Information—Call 911

Vernal Regional Hospital Emergency: 435-789-3342

Police: (435) 789-5835

Fire: 435-789-4222

Acid Pickling and H2S Procedures (If Required)

**\*\*PROCEDURE FOR PUMPING ACID DOWN TBG**

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

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

**\*\* PROCEDURE FOR PUMPING H2S SCAVENGER WITHOUT ACID**

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

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

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

Name NBU 921-25M2DS  
 Perforation and CBP Summary

| Stage | Zones            | Perforations |            | SPF | Holes | Fracture Coverage |       |       |
|-------|------------------|--------------|------------|-----|-------|-------------------|-------|-------|
|       |                  | Top, ft      | Bottom, ft |     |       |                   |       |       |
| 1     | WASATCH          | 7375         | 7376       | 3   | 3     | 7372              | to    | 7528  |
|       | WASATCH          | 7388         | 7389       | 3   | 3     |                   |       |       |
|       | WASATCH          | 7435         | 7436       | 3   | 3     |                   |       |       |
|       | WASATCH          | 7468         | 7469       | 3   | 3     |                   |       |       |
|       | WASATCH          | 7485         | 7486       | 3   | 3     |                   |       |       |
|       | WASATCH          | 7517         | 7519       | 3   | 6     |                   |       |       |
|       | # of Perfs/stage |              |            |     | 21    | CBP DEPTH         | 7,361 |       |
| 2     | WASATCH          | 7140         | 7141       | 3   | 3     | 7135              | to    | 7322  |
|       | WASATCH          | 7218         | 7219       | 3   | 3     |                   |       |       |
|       | WASATCH          | 7237         | 7238       | 3   | 3     |                   |       |       |
|       | WASATCH          | 7273         | 7274       | 3   | 3     |                   |       |       |
|       | WASATCH          | 7289         | 7290       | 3   | 3     |                   |       |       |
|       | WASATCH          | 7317         | 7319       | 3   | 6     |                   |       |       |
|       | # of Perfs/stage |              |            |     | 21    | CBP DEPTH         | 7,092 |       |
| 3     | WASATCH          | 6913         | 6914       | 4   | 4     | 6911              | to    | 7062  |
|       | WASATCH          | 6924         | 6925       | 4   | 4     |                   |       |       |
|       | WASATCH          | 7019         | 7020       | 4   | 4     |                   |       |       |
|       | WASATCH          | 7033         | 7034       | 4   | 4     |                   |       |       |
|       | WASATCH          | 7057         | 7059       | 4   | 8     |                   |       |       |
|       | # of Perfs/stage |              |            |     | 24    | CBP DEPTH         | 6,799 |       |
| 4     | WASATCH          | 6532         | 6533       | 4   | 4     | 6531              | to    | 6771  |
|       | WASATCH          | 6577         | 6578       | 4   | 4     |                   |       |       |
|       | WASATCH          | 6739         | 6741       | 3   | 6     |                   |       |       |
|       | WASATCH          | 6767         | 6769       | 3   | 6     |                   |       |       |
|       | # of Perfs/stage |              |            |     | 20    | CBP DEPTH         | 6,071 |       |
| 5     | WASATCH          | 6019         | 6022       | 4   | 12    | 6017              | to    | 6049  |
|       | WASATCH          | 6039         | 6041       | 4   | 8     |                   |       |       |
|       | # of Perfs/stage |              |            |     | 20    | CBP DEPTH         | 5,969 |       |
|       | Totals           |              |            |     | 106   | Total Pay         |       | 206.0 |

**Fracturing Schedules**  
 Name NBU 921-25M2DS  
 Slickwater Frac

Copy to new book

|               |     |
|---------------|-----|
| Casing Size   | 4.5 |
| Recomplete?   | Y   |
| Pad?          | Y   |
| ACTIS?        | N   |
| Days on Pad?  | 2   |
| Wells on Pad? | 4   |

|                |   |
|----------------|---|
| Swabbing Days  | 3 |
| Production Log | 0 |
| DFT            | 0 |
| GR only        | Y |
| Low Scale      | Y |
| Clay Stab.     | N |

Enter Number of swabbing days here for recompletes  
 Enter 1 if running a Production Log  
 Enter Number of DFTs  
 Enter Y if only Gamma Ray log was run  
 Enter Y if a LOW concentration of Scale inhibitor will be pumped  
 Enter N if there will be NO Clay stabilizer

| Stage | Zone    | Perfs<br>Top, ft. Bot. ft | SPF | Holes | Rate<br>BPM | Fluid<br>Type                        | Initial<br>ppg | Final<br>ppg | Fluid             | Volume<br>gals | Cum Vol<br>gals | Volume<br>BBLs | Cum Vol<br>BBLs   | Fluid<br>% of frac | Sand<br>% of frac | Sand<br>lbs | Cum. Sand<br>lbs | Footage from<br>CBP to Flush | Scale<br>Inhib.,<br>gal. |
|-------|---------|---------------------------|-----|-------|-------------|--------------------------------------|----------------|--------------|-------------------|----------------|-----------------|----------------|-------------------|--------------------|-------------------|-------------|------------------|------------------------------|--------------------------|
| 1     | WASATCH | 7375                      | 3   | 3     | Varied      | Pre-Pad & Pump-in test               |                |              | Slickwater        | 4,814          | 4,814           | 115            | 115               |                    |                   |             |                  |                              | 2                        |
|       | WASATCH | 7388                      | 3   | 3     | 0           | ISP and 5 min ISDP                   | 0.25           |              | Slickwater        | 6,300          | 11,114          | 150            | 265               | 15.0%              | 0.0%              | 0           | 0                |                              | 3                        |
|       | WASATCH | 7435                      | 3   | 3     | 50          | Slickwater Pad                       |                |              | Slickwater        | 21,000         | 32,114          | 500            | 765               | 50.0%              | 37.3%             | 13,125      | 13,125           |                              | 11                       |
|       | WASATCH | 7468                      | 3   | 3     | 50          | Slickwater Ramp                      | 1              | 2            | Slickwater        | 14,700         | 46,814          | 350            | 1,115             | 35.0%              | 62.7%             | 22,050      | 35,175           |                              | 7                        |
|       | WASATCH | 7485                      | 3   | 3     | 50          | Slickwater Ramp                      |                |              | Slickwater        | 4,814          | 51,629          | 115            | 1,229             |                    |                   |             | 35,175           |                              | 0                        |
|       | WASATCH | 7517                      | 3   | 6     | 50          | Flush (4-1/2)<br>ISDP and 5 min ISDP |                |              | Slickwater        |                |                 |                |                   |                    |                   |             |                  |                              | 0                        |
|       | WASATCH |                           |     |       |             |                                      |                |              | Slickwater        | 51,629         | 51,629          | 115            | 1,229             |                    |                   |             | 35,175           |                              | 0                        |
|       | WASATCH |                           |     |       |             |                                      |                |              | Sand laden Volume |                | 42,000          |                |                   |                    |                   |             | 628 lbs sand/ft  | 14                           | 26                       |
|       | WASATCH |                           |     |       | 21          |                                      |                |              |                   |                |                 |                | Flush depth 7,375 |                    | gal/ft            | 750         | 7,361            |                              |                          |
| 2     | WASATCH | 7140                      | 3   | 3     | 24.6        | << Above pump time (min)             |                |              | Slickwater        | 0              | 0               | 0              | 0                 |                    |                   |             |                  |                              |                          |
|       | WASATCH | 7218                      | 3   | 3     | Varied      | Pump-in test                         |                |              | Slickwater        | 5,850          | 5,850           | 139            | 139               | 15.0%              | 0.0%              | 0           | 0                |                              | 3                        |
|       | WASATCH | 7237                      | 3   | 3     | 0           | ISP and 5 min ISDP                   | 0.25           |              | Slickwater        | 19,500         | 25,350          | 464            | 604               | 50.0%              | 37.3%             | 12,188      | 12,188           |                              | 10                       |
|       | WASATCH | 7273                      | 3   | 3     | 50          | Slickwater Pad                       |                |              | Slickwater        | 13,650         | 39,000          | 325            | 929               | 35.0%              | 62.7%             | 20,475      | 32,663           |                              | 7                        |
|       | WASATCH | 7289                      | 3   | 3     | 50          | Slickwater Ramp                      | 1              | 2            | Slickwater        | 4,661          | 43,661          | 111            | 1,040             |                    |                   |             | 32,663           |                              | 0                        |
|       | WASATCH | 7317                      | 3   | 6     | 50          | Flush (4-1/2)<br>ISDP and 5 min ISDP |                |              | Slickwater        |                |                 |                |                   |                    |                   |             |                  |                              | 0                        |
|       | WASATCH |                           |     |       |             |                                      |                |              | Sand laden Volume |                | 43,661          | 111            | 1,040             |                    |                   |             | 32,663           |                              | 0                        |
|       | WASATCH |                           |     |       |             |                                      |                |              |                   |                | 39,000          |                |                   |                    |                   |             | 628 lbs sand/ft  | 48                           | 22                       |
|       | WASATCH |                           |     |       | 21          |                                      |                |              |                   |                |                 |                | Flush depth 7,140 |                    | gal/ft            | 750         | 7,092            |                              |                          |
| 3     | WASATCH | 6913                      | 4   | 4     | 20.8        | << Above pump time (min)             |                |              | Slickwater        | 0              | 0               | 0              | 0                 |                    |                   |             |                  |                              |                          |
|       | WASATCH | 6924                      | 4   | 4     | Varied      | Pump-in test                         |                |              | Slickwater        | 4,219          | 4,219           | 100            | 100               | 15.0%              | 0.0%              | 0           | 0                |                              | 2                        |
|       | WASATCH | 7019                      | 4   | 4     | 0           | ISP and 5 min ISDP                   | 0.25           |              | Slickwater        | 14,063         | 18,281          | 335            | 435               | 50.0%              | 37.3%             | 8,789       | 8,789            |                              | 7                        |
|       | WASATCH | 7033                      | 4   | 4     | 50          | Slickwater Pad                       |                |              | Slickwater        | 9,844          | 28,125          | 234            | 670               | 35.0%              | 62.7%             | 14,766      | 23,555           |                              | 5                        |
|       | WASATCH | 7057                      | 4   | 8     | 50          | Slickwater Ramp                      | 1              | 2            | Slickwater        | 4,513          | 32,638          | 107            | 777               |                    |                   |             | 23,555           |                              | 2                        |
|       | WASATCH |                           |     |       | 50          | Flush (4-1/2)<br>ISDP and 5 min ISDP |                |              | Slickwater        |                |                 |                |                   |                    |                   |             |                  |                              | 0                        |
|       | WASATCH |                           |     |       |             |                                      |                |              | Sand laden Volume |                | 32,638          | 107            | 777               |                    |                   |             | 23,555           |                              | 0                        |
|       | WASATCH |                           |     |       |             |                                      |                |              |                   |                | 28,125          |                |                   |                    |                   |             | 628 lbs sand/ft  | 114                          | 16                       |
|       | WASATCH |                           |     |       | 15.5        | << Above pump time (min)             |                |              |                   |                |                 |                | Flush depth 6,913 |                    | gal/ft            | 750         | 6,799            |                              |                          |
|       | WASATCH |                           |     |       | 24          |                                      |                |              |                   |                |                 |                | Flush depth 6,913 |                    | gal/ft            | 750         | 6,799            |                              |                          |



| NBU 921-25M2DS Directional Survey |      |       |        |      |       |  |      |      |       |         |      |       |
|-----------------------------------|------|-------|--------|------|-------|--|------|------|-------|---------|------|-------|
| MD                                | TVD  | EW    | NS     | INC  | AZI   |  | MD   | TVD  | EW    | NS      | INC  | AZI   |
| 0                                 | 0    | 0.0   | 0.0    | 0.0  | 0.0   |  | 4940 | 4820 | 275.9 | -766.7  | 20.1 | 156.8 |
| 174                               | 174  | 0.5   | -0.2   | 0.4  | 113.0 |  | 5035 | 4909 | 287.7 | -798.0  | 21.1 | 161.5 |
| 264                               | 264  | 0.9   | -0.6   | 0.4  | 142.1 |  | 5129 | 4997 | 298.0 | -830.5  | 21.4 | 163.3 |
| 354                               | 354  | 1.4   | -1.1   | 0.5  | 141.4 |  | 5224 | 5086 | 307.7 | -862.2  | 19.4 | 162.8 |
| 444                               | 444  | 1.7   | -1.4   | 0.1  | 95.3  |  | 5319 | 5175 | 316.6 | -892.2  | 19.1 | 164.2 |
| 534                               | 534  | 2.2   | -1.7   | 0.6  | 125.7 |  | 5412 | 5264 | 324.7 | -920.9  | 18.3 | 164.3 |
| 630                               | 630  | 3.8   | -2.8   | 1.6  | 124.2 |  | 5507 | 5354 | 332.8 | -949.0  | 17.6 | 163.5 |
| 714                               | 714  | 6.0   | -4.2   | 1.9  | 121.2 |  | 5601 | 5444 | 339.9 | -975.2  | 15.9 | 166.2 |
| 804                               | 804  | 8.5   | -6.1   | 2.1  | 134.7 |  | 5696 | 5536 | 345.7 | -999.2  | 14.1 | 166.9 |
| 894                               | 894  | 10.9  | -8.5   | 2.2  | 133.6 |  | 5791 | 5628 | 350.5 | -1020.6 | 12.6 | 168.2 |
| 984                               | 984  | 13.6  | -11.2  | 2.7  | 135.4 |  | 5886 | 5721 | 354.3 | -1039.8 | 11.1 | 169.4 |
| 1074                              | 1074 | 16.4  | -14.6  | 3.0  | 146.4 |  | 5980 | 5813 | 357.6 | -1057.1 | 10.4 | 168.5 |
| 1164                              | 1163 | 19.1  | -18.8  | 3.3  | 147.7 |  | 6075 | 5907 | 360.0 | -1072.7 | 8.8  | 174.8 |
| 1254                              | 1253 | 21.7  | -23.5  | 3.5  | 154.9 |  | 6170 | 6001 | 361.1 | -1085.5 | 6.8  | 175.8 |
| 1344                              | 1343 | 23.6  | -28.1  | 2.9  | 159.7 |  | 6265 | 6096 | 361.7 | -1095.2 | 5.1  | 177.4 |
| 1434                              | 1433 | 25.1  | -32.5  | 3.0  | 162.6 |  | 6359 | 6189 | 361.8 | -1101.8 | 2.9  | 180.5 |
| 1524                              | 1523 | 26.7  | -36.4  | 2.5  | 151.1 |  | 6454 | 6284 | 361.9 | -1105.8 | 1.9  | 175.9 |
| 1614                              | 1613 | 28.4  | -39.8  | 2.4  | 155.4 |  | 6548 | 6378 | 362.1 | -1107.4 | 0.1  | 73.5  |
| 1704                              | 1703 | 30.2  | -43.2  | 2.6  | 151.2 |  | 6643 | 6473 | 362.3 | -1107.5 | 0.3  | 120.8 |
| 1794                              | 1793 | 32.3  | -46.6  | 2.5  | 145.0 |  | 6738 | 6568 | 362.8 | -1106.5 | 1.4  | 9.4   |
| 1884                              | 1883 | 34.4  | -50.4  | 3.0  | 156.5 |  | 6833 | 6663 | 363.1 | -1104.4 | 1.1  | 9.2   |
| 1974                              | 1972 | 36.1  | -55.0  | 3.4  | 161.6 |  | 6928 | 6758 | 363.3 | -1102.9 | 0.8  | 10.9  |
| 2064                              | 2062 | 38.1  | -60.3  | 3.8  | 157.7 |  | 7022 | 6852 | 363.5 | -1102.0 | 0.4  | 12.8  |
| 2154                              | 2152 | 40.0  | -65.7  | 3.6  | 163.5 |  | 7117 | 6947 | 363.8 | -1101.7 | 0.2  | 84.4  |
| 2244                              | 2242 | 41.4  | -71.1  | 3.6  | 168.8 |  | 7212 | 7042 | 364.1 | -1101.8 | 0.3  | 119.0 |
| 2334                              | 2332 | 42.8  | -76.4  | 3.5  | 159.9 |  | 7307 | 7137 | 364.6 | -1102.2 | 0.4  | 129.9 |
| 2424                              | 2422 | 44.8  | -81.5  | 3.5  | 158.5 |  | 7402 | 7232 | 365.1 | -1102.7 | 0.4  | 139.5 |
| 2474                              | 2472 | 46.0  | -84.3  | 3.5  | 154.0 |  | 7497 | 7327 | 365.7 | -1103.2 | 0.6  | 134.0 |
| 2572                              | 2569 | 48.3  | -89.7  | 3.4  | 159.6 |  | 7591 | 7421 | 365.3 | -1103.3 | 0.9  | 291.2 |
| 2666                              | 2663 | 50.8  | -97.2  | 6.2  | 163.0 |  | 7686 | 7516 | 364.2 | -1103.1 | 0.5  | 256.2 |
| 2761                              | 2757 | 53.9  | -109.5 | 9.1  | 167.3 |  | 7781 | 7611 | 363.5 | -1103.5 | 0.5  | 226.8 |
| 2856                              | 2851 | 58.5  | -126.2 | 11.9 | 162.5 |  | 7876 | 7706 | 362.8 | -1104.4 | 0.8  | 211.2 |
| 2951                              | 2943 | 65.2  | -146.4 | 13.9 | 160.9 |  | 7970 | 7800 | 362.1 | -1105.8 | 1.1  | 202.3 |
| 3045                              | 3034 | 72.9  | -169.0 | 15.5 | 161.7 |  | 8065 | 7895 | 361.8 | -1108.0 | 1.7  | 177.8 |
| 3139                              | 3124 | 80.2  | -195.9 | 19.1 | 167.3 |  | 8160 | 7990 | 361.9 | -1109.7 | 0.3  | 189.7 |
| 3234                              | 3213 | 88.1  | -227.9 | 21.6 | 165.0 |  | 8255 | 8085 | 361.5 | -1109.6 | 0.4  | 305.3 |
| 3329                              | 3301 | 97.9  | -261.2 | 21.3 | 162.2 |  | 8350 | 8180 | 361.0 | -1109.4 | 0.3  | 288.6 |
| 3424                              | 3390 | 108.9 | -293.6 | 20.9 | 160.4 |  | 8445 | 8275 | 360.6 | -1109.3 | 0.2  | 250.4 |
| 3519                              | 3479 | 120.2 | -324.9 | 19.9 | 159.9 |  | 8540 | 8370 | 360.3 | -1109.7 | 0.4  | 210.9 |
| 3614                              | 3569 | 131.0 | -354.4 | 18.7 | 159.9 |  | 8634 | 8464 | 360.0 | -1110.3 | 0.5  | 206.9 |
| 3708                              | 3657 | 141.2 | -383.6 | 19.7 | 161.5 |  | 8729 | 8559 | 359.7 | -1110.9 | 0.3  | 200.4 |
| 3803                              | 3747 | 151.5 | -413.5 | 19.3 | 160.3 |  | 8824 | 8654 | 359.6 | -1111.7 | 0.7  | 177.7 |
| 3898                              | 3837 | 161.0 | -443.5 | 19.3 | 164.4 |  | 8919 | 8749 | 359.8 | -1113.1 | 1.0  | 167.4 |
| 3993                              | 3926 | 170.8 | -473.8 | 20.0 | 159.9 |  | 9013 | 8843 | 360.0 | -1115.1 | 1.5  | 179.9 |
| 4088                              | 4016 | 182.1 | -503.2 | 18.6 | 158.0 |  | 9108 | 8938 | 360.1 | -1117.4 | 1.2  | 174.0 |
| 4183                              | 4106 | 192.4 | -531.5 | 18.4 | 161.8 |  | 9203 | 9033 | 360.6 | -1119.4 | 1.3  | 162.3 |
| 4278                              | 4195 | 201.9 | -561.2 | 20.0 | 162.9 |  | 9298 | 9128 | 361.4 | -1121.7 | 1.6  | 160.2 |
| 4372                              | 4284 | 212.8 | -591.6 | 20.2 | 157.8 |  | 9392 | 9222 | 362.3 | -1124.5 | 1.9  | 160.9 |
| 4467                              | 4373 | 225.2 | -621.3 | 19.4 | 156.7 |  | 9486 | 9316 | 363.5 | -1127.5 | 2.1  | 155.3 |
| 4562                              | 4462 | 236.9 | -651.4 | 20.5 | 160.7 |  | 9524 | 9354 | 364.1 | -1128.7 | 1.9  | 155.2 |
| 4656                              | 4551 | 246.5 | -681.7 | 18.9 | 164.5 |  | 9576 | 9406 | 364.8 | -1130.3 | 1.9  | 155.0 |
| 4751                              | 4641 | 254.4 | -710.7 | 17.9 | 164.9 |  | 9823 | 9655 | 368.5 | -1137.5 | 1.9  | 155.2 |
| 4846                              | 4731 | 263.9 | -738.4 | 18.1 | 157.3 |  |      |      |       |         |      |       |

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

**SHL 1060 FSL**

AMENDED REPORT  FORM 8  
(highlight changes)

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

|  |  |  |
|--|--|--|
| 1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> OTHER _____  |  | 5. LEASE DESIGNATION AND SERIAL NUMBER:<br>UO 01194                  |
| b. TYPE OF WORK: NEW WELL <input type="checkbox"/> HORIZ. LATS. <input type="checkbox"/> DEEP-EN <input type="checkbox"/> RE-ENTRY <input type="checkbox"/> DIFF. RESVR. <input checked="" type="checkbox"/> OTHER <b>RECOMPLETION</b> |  | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME                                 |
| 2. NAME OF OPERATOR:<br>KERR MCGEE OIL & GAS ONSHORE, L.P.   |  | 7. UNIT or CA AGREEMENT NAME<br>UTU63047A                            |
| 3. ADDRESS OF OPERATOR:<br>P.O.BOX 173779 CITY DENVER STATE CO ZIP 80217   |  | 8. WELL NAME and NUMBER:<br>NBU 921-25M2DS                           |
| PHONE NUMBER: (720) 929-6000   |  | 9. API NUMBER:<br>4304750384   |
| 4. LOCATION OF WELL (FOOTAGES)<br>AT SURFACE: NWSW 1800 FSL 251 FWL S25,T9S,R21E   |  | 10 FIELD AND POOL, OR WILDCAT<br>NATURAL BUTTES                      |
| AT TOP PRODUCING INTERVAL REPORTED BELOW: SWSW 727 FSL 611 FWL   |  | 11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:<br>NWSW 25 9S 21E S |
| AT TOTAL DEPTH: SWSW 722 FSL 619 FWL S25,T9S,R21E  |  | 12. COUNTY<br>UINTAH   |
|  |  | 13. STATE<br>UTAH  |

|  |   |  |   |  |
|--|---|--|---|--|
| 14. DATE SPUDDED:<br>10/27/2009  | 15. DATE T.D. REACHED:<br>1/12/2010       | 16. DATE COMPLETED:<br>6/29/2013         | ABANDONED <input type="checkbox"/> READY TO PRODUCE <input checked="" type="checkbox"/>   | 17. ELEVATIONS (DF, RKB, RT, GL):<br>RKB |
| 18. TOTAL DEPTH: MD 9,823<br>TVD 9,655   | 19. PLUG BACK T.D.: MD 9,765<br>TVD 9,597 | 20. IF MULTIPLE COMPLETIONS, HOW MANY? * |   | 21. DEPTH BRIDGE MD<br>PLUG SET: TVD     |
| 22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)<br>GR/CCL-BHV-SDL/DSN/ACTR |   |  | 23.<br>WAS WELL CORED? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit analysis)<br>WAS DST RUN? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit report)<br>DIRECTIONAL SURVEY? NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (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 |
|-----------|-------------|----------------|----------|-------------|----------------------|----------------------------|---------------------|---------------|---------------|
| 11"       | 8 5/8" J-55 | 28#            | 0        | 2,521       |                      | 480                        |                     | 0             |               |
| 7 7/8"    | 4 1/2" I-80 | 11.6#          |          | 9,812       |                      | 1,600                      |                     | 490           |               |
|           |             |                |          |             |                      |                            |                     |               |               |
|           |             |                |          |             |                      |                            |                     |               |               |
|           |             |                |          |             |                      |                            |                     |               |               |
|           |             |                |          |             |                      |                            |                     |               |               |

**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" | 8,812          |                 |      |                |                 |      |                |                 |

**26. PRODUCING INTERVALS**

| FORMATION NAME | TOP (MD) | BOTTOM (MD) | TOP (TVD) | BOTTOM (TVD) |
|----------------|----------|-------------|-----------|--------------|
| (A) WASATCH    | 6,019    | 7,519       |           |              |
| (B)            |          |             |           |              |
| (C)            |          |             |           |              |
| (D)            |          |             |           |              |

**27. PERFORATION RECORD**

| INTERVAL (Top/Bot - MD) | SIZE | NO. HOLES | PERFORATION STATUS   |
|-------------------------|------|-----------|--|
| 6,019 7,519             | 0.36 | 106       | Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/> |
|                         |      |           | Open <input type="checkbox"/> Squeezed <input type="checkbox"/>            |
|                         |      |           | Open <input type="checkbox"/> Squeezed <input type="checkbox"/>            |
|                         |      |           | Open <input type="checkbox"/> Squeezed <input type="checkbox"/>            |

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

| DEPTH INTERVAL | AMOUNT AND TYPE OF MATERIAL                               |
|----------------|---|
| 6019-7519      | PUMP 4,716 BBLS SLICK H2O & 142,360 LBS 30/50 OTTAWA SAND |
|                | 5 STAGES  |

**29. ENCLOSED ATTACHMENTS:**

- |   |  |                                       |   |
|---|--|---------------------------------------|---|
| <input type="checkbox"/> ELECTRICAL/MECHANICAL LOGS                         | <input type="checkbox"/> GEOLOGIC REPORT | <input type="checkbox"/> DST REPORT   | <input type="checkbox"/> DIRECTIONAL SURVEY |
| <input type="checkbox"/> SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION | <input type="checkbox"/> CORE ANALYSIS   | <input type="checkbox"/> OTHER: _____ |   |

**30. WELL STATUS:**

**PROD**

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

|                                   |                         |                     |                          |                 |                   |                           |                          |
|-----------------------------------|-------------------------|---------------------|--------------------------|-----------------|-------------------|---------------------------|--------------------------|
| DATE FIRST PRODUCED:<br>6/29/2013 | TEST DATE:<br>7/11/2013 | HOURS TESTED:<br>24 | TEST PRODUCTION RATES: → | OIL - BBL:<br>0 | GAS - MCF:<br>375 | WATER - BBL:<br>12        | PROD. METHOD:<br>FLOWING |
| CHOKE SIZE:<br>30/64              | TBG. PRESS.<br>648      | CSG. PRESS.<br>786  | API GRAVITY              | BTU - GAS       | GAS/OIL RATIO     | 24 HR PRODUCTION RATES: → | 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: → | 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: → | 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: → | INTERVAL STATUS: |

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

SOLD

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 | 1,497                |
|           |          |             |                              | BIRD'S NEST | 1,783                |
|           |          |             |                              | MAHOGANY    | 2,320                |
|           |          |             |                              | WASATCH     | 4,870                |
|           |          |             |                              | MESAVERDE   | 7,642                |

35. ADDITIONAL REMARKS (Include plugging procedure)

Attached is the recompletion history and perforation report. Casing in the well is as previously reported on the original Completion Report. New recompletion perforations are: Wasatch 6019-7519; existing perforations: Mesaverde 7558-9610. The Iso plug separating new perforations from old perforations was set at 7538 and drilled out on 6/27/13 commingling the well.

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

NAME (PLEASE PRINT) TEENA PAULO TITLE STAFF REGULATORY SPECIALIST  
 SIGNATURE  DATE 7/24/2013

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 921-25M2DS [YELLOW]                          |                |               | Spud Conductor: 10/27/2009                                   |      |          | Spud Date: 11/1/2009        |                |  |  |
| Project: UTAH-UINTAH                                   |                |               | Site: NBU 921-25L PAD  |      |          | Rig Name No: MILES-GRAY 1/1 |                |  |  |
| Event: RECOMPL/RESEREVEADD                             |                |               | Start Date: 5/28/2013  |      |          | End Date: 6/27/2013         |                |  |  |
| Active Datum: RKB @5,030.00usft (above Mean Sea Level) |                |               | UWI: NW/SW/0/9/S/21/E/25/0/0/26/PM/S/1,860.00/W/0/251.00/0/0 |      |          |                             |                |  |  |
| Date   | Time Start-End | Duration (hr) | Phase  | Code | Sub Code | P/U                         | MD From (usft) | Operation  |  |
| 5/30/2013  | 7:00 - 7:15    | 0.25          | SUBSPR   | 48   |          | P                           |                | HSM-JSA  |  |
|  | 7:15 - 17:30   | 10.25         | SUBSPR   | 45   | A        | P                           |                | RDMO 921-25M3DS, MIRU, CONTROL WELL W/ 50 BLS TMAC, NDWH, NUBOP, TBG STUCK REMOVE HANGER WORK TBG 10 MIN BROKE FREE, MIRU SCAN TECH, POOH SCAN 277 JTS TBG, 155 JTS YELLOW BAND, 122 JTS RED BAND, RDMO SCAN TECH, MIRU CUTTERS RIH W/ GAUGE RING TO 7,558', POOH PU HAL 8K CBP RIH SET @ 7,538', POOH, FILL WELL & PRESS TEST CSG TO 3,500 PSI, RDMO CUTTERS, RD FLOOR & TBG EQUIP, NDBOP, NUWH, SWI, SDFN. |  |
| 6/6/2013   | 12:00 - 13:00  | 1.00          | SUBSPR   | 33   | C        | P                           |                | FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES 1ST PSI TEST T/ 6200 PSI. HELD FOR 15 MIN LOST 52 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI.  |  |
|  |                |               |  |      |          |                             |                | PRESSURE TEST 8 5/8 X 4 1/2 TO 550 PSI HELD FOR 5 MIN LOST -536 PSI, BLEED PSI OFF, REINSTALLED POP OFF  |  |
| 6/7/2013   | 7:00 - 10:00   | 3.00          | SUBSPR   | 37   |          | P                           |                | NO PRESSURE ON SURFACE FILLED WITH 2 BBLS PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. RIH PERFWELL, AS PER PERF DESIGN. POOH. SWIFW   |  |

| US ROCKIES REGION                                      |                |               |  |      |          |                      |                             |  |  |
|--|----------------|---------------|--|------|----------|----------------------|-----------------------------|--|--|
| Operation Summary Report                               |                |               |  |      |          |                      |                             |  |  |
| Well: NBU 921-25M2DS [YELLOW]                          |                |               | Spud Conductor: 10/27/2009                                 |      |          | Spud Date: 11/1/2009 |                             |  |  |
| Project: UTAH-UJINTAH                                  |                |               | Site: NBU 921-25L PAD                                      |      |          |                      | Rig Name No: MILES-GRAY 1/1 |  |  |
| Event: RECOMPL/RESEREVEADD                             |                |               | Start Date: 5/28/2013                                      |      |          | End Date: 6/27/2013  |                             |  |  |
| Active Datum: RKB @5,030.00usft (above Mean Sea Level) |                |               | UWI: NWSW0/9/S/21/E/25/0/0/26/PM/S/1,860.00/W/0/251.00/0/0 |      |          |                      |                             |  |  |
| Date   | Time Start-End | Duration (hr) | Phase  | Code | Sub Code | P/U                  | MD From (usft)              | Operation  |  |
| 6/10/2013  | 7:00 - 17:00   | 10.00         | FRAC   | 36   | B        | P                    |                             | 6799RAC STG 1)WHP 450 PSI, BRK 1541 PSI @ 4.0 BPM. ISIP 781 PSI, FG .54<br>CALC HOLES OPEN @ 41.6 BPM @ 5493 PSI = 62% HOLES OPEN. (13/21 HOLES OPEN)<br>ISIP 2724 PSI, FG .80, NPI 1943 PSI.<br>MP 5807 PSI, MR 46.2 BPM, AP 5461 PSI, AR 42.2 BPM<br>PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L<br><br>PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7361' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW<br><br>FRAC STG 2)WHP 863 PSI, BRK 3138 PSI @ 4.2 BPM. ISIP 1852 PSI, FG .69<br>CALC HOLES OPEN @ 47.8 BPM @ 5589 PSI = 71% HOLES OPEN. (15/21 HOLES OPEN)<br>ISIP 2201 PSI, FG .74, NPI 376 PSI.<br>MP 5833 PSI, MR 48.1 BPM, AP 5322 PSI, AR 46.9 BPM<br>PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L<br><br>PERF STG 3)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7092' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW<br><br>FRAC STG 3)WHP 1104 PSI, BRK 2823 PSI @ 4.0 BPM. ISIP 2136 PSI, FG .74<br>CALC HOLES OPEN @ 47.5 BPM @ 5658 PSI = 63% HOLES OPEN. (15/24 HOLES OPEN)<br>ISIP 2063 PSI, FG .73, NPI -73 PSI.<br>MP 5782 PSI, MR 51.0 BPM, AP 5144 PSI, AR 49.3 BPM<br>PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L<br><br>PERF STG 4)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 6799' P/U PERF AS PER PERF DESIGN. POOH. SWIFN |  |

| US ROCKIES REGION                                      |                |               |  |      |          |                             |                |   |  |
|--|----------------|---------------|--|------|----------|-----------------------------|----------------|---|--|
| Operation Summary Report                               |                |               |  |      |          |                             |                |   |  |
| Well: NBU 921-25M2DS [YELLOW]                          |                |               | Spud Conductor: 10/27/2009                                   |      |          | Spud Date: 11/1/2009        |                |   |  |
| Project: UTAH-UINTAH                                   |                |               | Site: NBU 921-25L PAD  |      |          | Rig Name No: MILES-GRAY 1/1 |                |   |  |
| Event: RECOMPL/RESEREVEADD                             |                |               | Start Date: 5/28/2013  |      |          | End Date: 6/27/2013         |                |   |  |
| Active Datum: RKB @5,030.00usft (above Mean Sea Level) |                |               | UWI: NW/SW/0/9/S/21/E/25/0/0/26/PM/S/1,860.00/W/0/251.00/0/0 |      |          |                             |                |   |  |
| Date   | Time Start-End | Duration (hr) | Phase  | Code | Sub Code | P/U                         | MD From (usft) | Operation   |  |
| 6/11/2013  | 7:00 - 15:00   | 8.00          | FRAC   | 36   | B        | P                           |                | FRAC STG 4)WHP 1375 PSI, BRK 1791 PSI @ 4.2 BPM. ISIP 1476 PSI, FG .66.<br>CALC HOLES OPEN @ 50.1 BPM @ 4654 PSI = 90% HOLES OPEN. (18/20 HOLES OPEN)<br>ISIP 1633 PSI, FG .68, NPI 157 PSI.<br>MP 5209 PSI, MR 50.5 BPM, AP 4442 PSI, AR 50.0 BPM<br>PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR WL<br><br>PERF STG 5)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 6,071' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW<br><br>FRAC STG 5)WHP 79 PSI, BRK 5159 PSI @ 50.6 BPM. ISIP 960 PSI, FG .60.<br>CALC HOLES OPEN @ 42.8 BPM @ 4516 PSI = 65% HOLES OPEN. (13/20 HOLES OPEN)<br>ISIP 1184 PSI, FG .64, NPI 224 PSI.<br>MP 5302 PSI, MR 51.4 BPM, AP 3902 PSI, AR 50.9 BPM<br>PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR WL<br><br>PU 4 1/2 CBP RIH SET KILL PLUG @ 5,969 POOH SW RD FRAC & WL CREWS<br><br>TOTAL SAND= 142,360 # 30/50 OTTAWA<br>TOTAL CLFL= 4,716 BBLS |  |
| 6/19/2013  | 6:30 - 6:45    | 0.25          | DRLOUT   | 48   |          | P                           |                | JSA-SAFETY MEETING  |  |
|  | 6:45 - 9:00    | 2.25          | DRLOUT   | 30   | A        | P                           |                | MIRU, N/D WH, N/U BOPS,   |  |
|  | 9:00 - 13:30   | 4.50          | DRLOUT   | 31   | I        | P                           |                | P/U 3 7/8" BIT AND PUMP OPEN BIT SUB, RIH W/ 2 3/8" J-55 AND L-80 TBG, TAG CBP @ 5969', R/U SWIVEL AND FOAM UNIT, PRESSURE TEST CSG AND BOP TO 2000#  |  |

| US ROCKIES REGION                                      |                |               |  |      |          |                             |                |   |  |
|--|----------------|---------------|--|------|----------|-----------------------------|----------------|---|--|
| Operation Summary Report                               |                |               |  |      |          |                             |                |   |  |
| Well: NBU 921-25M2DS [YELLOW]                          |                |               | Spud Conductor: 10/27/2009                                 |      |          | Spud Date: 11/1/2009        |                |   |  |
| Project: UTAH-UINTAH                                   |                |               | Site: NBU 921-25L PAD                                      |      |          | Rig Name No: MILES-GRAY 1/1 |                |   |  |
| Event: RECOMPL/RESEREVEADD                             |                |               | Start Date: 5/28/2013                                      |      |          | End Date: 6/27/2013         |                |   |  |
| Active Datum: RKB @5,030.00usft (above Mean Sea Level) |                |               | UWI: NWSW0/9/S/21/E/25/0/0/26/PM/S/1,860.00/W/0/251.00/0/0 |      |          |                             |                |   |  |
| Date   | Time Start-End | Duration (hr) | Phase  | Code | Sub Code | P/U                         | MD From (usft) | Operation   |  |
|  | 13:30 - 18:00  | 4.50          | DRLOUT   | 44   | C        | P                           |                | ESTB CIRC,<br>( CBP #1 ) 5969', DRILL OUT CBP IN 5 MIN, DIFF, RIH TAG SAND @ 6041 ', C/O 30 ' SAND, 0 # FCP,<br><br>( CBP #2 ) 6071', DRILL OUT CBP IN 5 MIN, 0# DIFF, RIH TAG SAND @ 6779', C/O 20' SAND, 0# FCP,<br><br>( CBP #3 ) 6799', DRILL OUT CBP IN 5 MIN, 250# DIFF, RIH TAG SAND @ 7072', C/O 20' SAND, 0# FCP,<br><br>( CBP #4 ) 7092', DRILL OUT CBP IN 5 MIN, 200# DIFF, RIH TAG SAND @ 7300', C/O 61' SAND, 0# FCP,<br><br>( CBP #5 ) 7361', DRILL OUT CBP IN 5 MIN, 100# DIFF, RIH TAG SAND @ 7500', C/O TO PBTD 7539', CIRC WELL CLEAN W/ FOAM UNIT,<br>P/O LAY DN 7 JTS ON TRAILER, LAND TBG W/ 232 JTS 2 3/8" L-80 TBG AND J-55 TBG, EOT @ 7347', N/D BOPS, DROP BALL DN TBG, N/U WH, PUMP OPEN BIT SUB, TURN WELL OVER TO FLOW BACK CREW W/ 4717 BBLS WTR TO RECOVER, SDFN<br><br>KB = 26.00'<br>HANGER = .83'<br>81 JTS 2 3/8" L-80 TBG = 2570.33'<br>150 JTS 2 3/8" J-55 TBG = 4745.54'<br>XN-NIPPLE POBS = 4.37'<br><br>EOT = 7347.07'<br><br>150 JTS 2 3/8" J-55 TBG DELV<br>165 JTS 2 3/8" L-80 TBG DELV<br>JSA-SAFETY MEETING |  |
| 6/26/2013  | 6:30 - 6:45    | 0.25          | DRLOUT   | 48   |          | P                           |                | JSA-SAFETY MEETING  |  |
|  | 6:45 - 10:30   | 3.75          | DRLOUT   | 30   | A        | P                           |                | MIRU, PUMP 20 BBLS WTR DN TBG AND 40 BBLS DN CSG TO CONTROL WELL, N/D WH, N/U BOPS, TOOH W/ TBG, LAY DN PUMP OPEN SUB AND BIT,  |  |
|  | 10:30 - 13:00  | 2.50          | DRLOUT   | 31   | I        | P                           |                | P/U 3 7/8" BIT AND PUMP OFF BIT SUB, RIH W/ 2 3/8" TBG, TO 7500", R/U DRILLING EQUIP, PREPARE TO DRILL OUT IN AM, SHUT WELL IN SDFN   |  |
|  | 13:00 - 16:00  | 3.00          | DRLOUT   | 31   | I        | P                           |                | JSA-SAFETY MEETING  |  |
| 6/27/2013  | 6:30 - 6:45    | 0.25          | DRLOUT   | 48   |          | P                           |                | JSA-SAFETY MEETING  |  |

| US ROCKIES REGION                                      |                |               |                            |  |          |                      |                             |   |  |
|--|----------------|---------------|----------------------------|--|----------|----------------------|-----------------------------|---|--|
| Operation Summary Report                               |                |               |                            |  |          |                      |                             |   |  |
| Well: NBU 921-25M2DS [YELLOW]                          |                |               | Spud Conductor: 10/27/2009 |  |          | Spud Date: 11/1/2009 |                             |   |  |
| Project: UTAH-UINTAH                                   |                |               | Site: NBU 921-25L PAD      |  |          |                      | Rig Name No: MILES-GRAY 1/1 |   |  |
| Event: RECOMPL/RESEREVEADD                             |                |               | Start Date: 5/28/2013      |  |          | End Date: 6/27/2013  |                             |   |  |
| Active Datum: RKB @5,030.00usft (above Mean Sea Level) |                |               |                            | UWI: NWSW0/9/S/21/E/25/0/0/26/PM/S/1,860.00/W/0/251.00/0/0 |          |                      |                             |   |  |
| Date   | Time Start-End | Duration (hr) | Phase                      | Code   | Sub Code | P/U                  | MD From (usft)              | Operation   |  |
|  | 6:45 - 18:00   | 11.25         | DRLOUT                     | 44   | C        | P                    |                             | NO PRESSURE ON WELL, RIH TAG 7535', R/U SWIVEL AND FOAM UNIT, ESTB CIRC, C/O FILL TO 7548', DRILL OUT ISO PLUG W/ NO PRESSURE DIFF, RIH TAG SCALE @ 8901', DRILL OUT SCALE TO 9300', RIH TAG FILL 9500', C/O FILL TO 9740' PBTB, CIRC WELL CLEAN, P/O LAY DN 30 JTS ON TRAILER, LAND TBG W/ 277 JTS 2 3/8" TBG, EOT @ 8812', N/D BOPS, DROP BALL DN TBG, N/U WH, PUMP BIT SUB OFF, TURN WELL OVER TO FBC, R/D MOVE TO 25M3DS, |  |
|  |                |               |                            |  |          |                      |                             | KB = 26.00'<br>HANGER = .83'<br>127 JTS 2 3/8" L-80 TBG = 4031.77'<br>1= 6' 2 3/8" L-80 PUP JT = 6.10'<br>150 JTS 2 3/8" J-55 TBG = 4745.54' XN - NIPPLE<br>1.875" POBS = 2.20'   |  |
|  |                |               |                            |  |          |                      |                             | EOT = 8812.44'<br>NEW TBG   |  |
|  | 18:00 - 18:00  | 0.00          | DRLOUT                     | 50   |          |                      |                             | WELL TURNED TO SALES@ 1030 HR ON 6/29/2013. 0MCFD, 0BWPB, FCP 975#, FTP 900#, OPEN CK.  |  |



US ROCKIES REGION

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 /Stage No | Carr.<br>Size<br>(in) | Phasing<br>(°) | Charge Desc./Charge<br>Manufacturer | Charge<br>Weight<br>(gram) | Reason         | Misrun |
|----------------------|-------------------------|----------------|----------------------|------------------|-------------------|------------------------------|------------------------|----------------------|----------------------|-----------------------|----------------|-------------------------------------|----------------------------|----------------|--------|
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 6,039.0          | 6,041.0           | 4.00                         |                        | 0.360                | EXP/                 | 3.375                 | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 6,532.0          | 6,533.0           | 4.00                         |                        | 0.360                | EXP/                 | 3.375                 | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 6,577.0          | 6,578.0           | 4.00                         |                        | 0.360                | EXP/                 | 3.375                 | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 6,739.0          | 6,741.0           | 3.00                         |                        | 0.360                | EXP/                 | 3.375                 | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 6,767.0          | 6,769.0           | 3.00                         |                        | 0.360                | EXP/                 | 3.375                 | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 6,913.0          | 6,914.0           | 4.00                         |                        | 0.360                | EXP/                 | 3.375                 | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 6,924.0          | 6,925.0           | 4.00                         |                        | 0.360                | EXP/                 | 3.375                 | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 7,019.0          | 7,020.0           | 4.00                         |                        | 0.360                | EXP/                 | 3.375                 | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 7,033.0          | 7,034.0           | 4.00                         |                        | 0.360                | EXP/                 | 3.375                 | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 7,057.0          | 7,059.0           | 4.00                         |                        | 0.360                | EXP/                 | 3.375                 | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 7,140.0          | 7,141.0           | 3.00                         |                        | 0.360                | EXP/                 | 3.375                 | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 7,218.0          | 7,219.0           | 3.00                         |                        | 0.360                | EXP/                 | 3.375                 | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 7,237.0          | 7,238.0           | 3.00                         |                        | 0.360                | EXP/                 | 3.375                 | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 7,273.0          | 7,274.0           | 3.00                         |                        | 0.360                | EXP/                 | 3.375                 | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 7,289.0          | 7,290.0           | 3.00                         |                        | 0.360                | EXP/                 | 3.375                 | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 7,317.0          | 7,319.0           | 3.00                         |                        | 0.360                | EXP/                 | 3.375                 | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 7,375.0          | 7,376.0           | 3.00                         |                        | 0.360                | EXP/                 | 3.375                 | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 7,388.0          | 7,389.0           | 3.00                         |                        | 0.360                | EXP/                 | 3.375                 | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 7,435.0          | 7,436.0           | 3.00                         |                        | 0.360                | EXP/                 | 3.375                 | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 7,468.0          | 7,469.0           | 3.00                         |                        | 0.360                | EXP/                 | 3.375                 | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 7,485.0          | 7,486.0           | 3.00                         |                        | 0.360                | EXP/                 | 3.375                 | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |

US ROCKIES REGION

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 /Stage No | Carr.<br>Size<br>(in) | Phasing<br>(°) | Charge Desc./Charge<br>Manufacturer | Charge<br>Weight<br>(gram) | Reason         | Misrun |
|----------------------|-------------------------|----------------|----------------------|------------------|-------------------|------------------------------|------------------------|----------------------|----------------------|-----------------------|----------------|-------------------------------------|----------------------------|----------------|--------|
| 6/10/2013<br>12:00AM | WASATCH/                |                |                      | 7,517.0          | 7,519.0           | 3.00                         |                        | 0.360                | EXP/                 | 3.375                 | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |

3 Plots

3.1 Wellbore Schematic

