API Well Number: 43047541110000

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

FORM 3

AMENDED REPORT ☐

## APPLICATION FOR PERMIT TO DRILL

**1. WELL NAME and NUMBER**
NBU 922-35D4CS

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

**3. FIELD OR WILDCAT**
NATURAL BUTTES

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

**5. UNIT or COMMUNITIZATION AGREEMENT NAME**
NATURAL BUTTES

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

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

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

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

**10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)**
UTU-010954-A

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

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

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

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

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

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

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

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

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

| 20. LOCATION OF WELL | FOOTAGES | QTR-QTR | SECTION | TOWNSHIP | RANGE | MERIDIAN |
|---|---|---|---|---|---|---|
| LOCATION AT SURFACE | 1999 FNL 1804 FWL | SENW | 35 | 9.0 S | 22.0 E | S |
| Top of Uppermost Producing Zone | 1220 FNL 836 FWL | NWNW | 35 | 9.0 S | 22.0 E | S |
| At Total Depth | 1220 FNL 836 FWL | NWNW | 35 | 9.0 S | 22.0 E | S |

**21. COUNTY**
UINTAH

**22. DISTANCE TO NEAREST LEASE LINE (Feet)**
836

**23. NUMBER OF ACRES IN DRILLING UNIT**
600

**25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)**
879

**26. PROPOSED DEPTH**
MD: 9133 TVD: 8935

**27. ELEVATION - GROUND LEVEL**
4988

**28. BOND NUMBER**
WYB000291

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

### Hole, Casing, and Cement Information

| String | Hole Size | Casing Size | Length | Weight | Grade & Thread | Max Mud Wt. | Cement | Sacks | Yield | Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| Surf | 11 | 8.625 | 0 - 2460 | 28.0 | J-55 LT&C | 0.2 | Type V | 180 | 1.15 | 15.8 |
| | | | | | | | Class G | 270 | 1.15 | 15.8 |
| Prod | 7.875 | 4.5 | 0 - 9133 | 11.6 | I-80 LT&C | 12.0 | Premium Lite High Strength | 310 | 3.38 | 12.0 |
| | | | | | | | 50/50 Poz | 1240 | 1.31 | 14.3 |

### ATTACHMENTS

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

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

**NAME** Laura Abrams | **TITLE** Regulatory Analyst II | **PHONE** 720 929-6356

**SIGNATURE** | **DATE** 10/31/2013 | **EMAIL** Laura.Abrams@anadarko.com

**API NUMBER ASSIGNED**
43047541110000

**APPROVAL**

Permit Manager

RECEIVED: November 14, 2013

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

**NBU 922-35D4CS**

Surface: 1999 FNL / 1804 FWL SENW
BHL: 1220 FNL / 836 FWL NWNW

Section 35 T9S R22E

Uintah County, Utah
Mineral Lease: UTU-010954-A

**ONSHORE ORDER NO. 1**

**DRILLING PROGRAM**

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

| Formation | Depth | Resource |
|---|---|---|
| Uinta | 0 - Surface | |
| Green River | 1,274' | |
| Birds Nest | 1,546' | Water |
| Mahogany | 2,006' | Water |
| Wasatch | 4,393' | Gas |
| Mesaverde | 6,689' | Gas |
| Sego | 8,935' | Gas |
| TVD | 8,935' | |
| TD | 9,133' | |

**3. Pressure Control Equipment**

Please refer to the Standard Operating Practices on file with the BLM Vernal Field Office.

**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



RECEIVED: October 25, 2013

**7. Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 8935' TVD, approximately equals 5,450 psi 0.61 psi/ft = actual bottomhole gradient

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

Maximum anticipated surface pressure equals approximately 3,508 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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

**8. Anticipated Starting Dates:**

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

**9. Variances:**

Please refer to the Standard Operating Practices on file with the BLM Vernal Field Office.

**10. Other Information:**

Please refer to the attached Drilling Program.



RECEIVED: October 25, 2013

# KERR-McGEE OIL & GAS ONSHORE LP

## DRILLING PROGRAM

| | | | |
|---|---|---|---|
| COMPANY NAME | KERR-McGEE OIL & GAS ONSHORE LP | DATE | August 27, 2013 |
| WELL NAME | **NBU 922-35D4CS** | TD | 8,935' TVD 9,133' MD |
| FIELD | Natural Buttes | COUNTY Uintah STATE Utah | FINISHED ELEVATION 4,988' |
| SURFACE LOCATION | SENW 1999 FNL 1804 FWL Sec 35 T 9S R 22E | | |
| | Latitude: 39.994279 Longitude: -109.410267 | | NAD 83 |
| BTM HOLE LOCATION | NWNW 1220 FNL 836 FWL Sec 35 T 9S R 22E | | |
| | Latitude: 39.996413 Longitude: -109.413719 | | NAD 83 |
| OBJECTIVE ZONE(S) | Wasatch/Mesaverde | | |
| ADDITIONAL INFO | Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept. | | |

| GEOLOGICAL | | | MECHANICAL | | |
|---|---|---|---|---|---|
| LOGS | FORMATION TOPS | DEPTH | HOLE SIZE | CASING SIZE | MUD WEIGHT |
| | | 40' | | 14" | |
| | | 200' | 12-1/4 | 8-5/8", 28#, IJ-55, LTC | Air mist |
| | | | 11' | 8-5/8", 28#, IJ-55, LTC | Air mist |
| | | | 7-7/8" | 4-1/2" 11.6# I-80 Ultra DQX/LTC csg | Water / Fresh Water Mud 8.3-12.0 ppg |

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

**Green River @ 1,274'**
**Top of Birds Nest @ 1,546'**
**Mahogany @ 2,006'**

**Preset f/ GL @ 2,460' TVD**

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

**Wasatch @ 4,393'**

Mud logging program TBD
Cased hole logging program from TD - surf csg

**Mverde @ 6,689' TVD**

**Sego @ 8,935' TVD**

Max anticipated Mud required 12.0 ppg

**TD @ 8,935' TVD 9,133' MD**



RECEIVED: October 25, 2013

# KERR-McGEE OIL & GAS ONSHORE LP

## DRILLING PROGRAM

**CASING PROGRAM**

| | SIZE | INTERVAL | | | WT. | GR. | CPLG. | DESIGN FACTORS BURST | COLLAPSE | LTC | DQX TENSION |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CONDUCTOR | 14" | 0-40' | | | | | | | | | |
| | | | | | | | | 3,390 | 1,880 | 348,000 | N/A |
| SURFACE | 8-5/8" | 0 | to | 2,460 | 28.00 | IJ-55 | LTC | 2.20 | 1.63 | 5.77 | N/A |
| | | | | | | | | 7,780 | 6,350 | 223,000 | 267,035 |
| PRODUCTION | 4-1/2" | 0 | to | 5,000 | 11.60 | I-80 | DQX | 1.11 | 1.14 | | 3.09 |
| | | | | | | | | 7,780 | 6,350 | 223,000 | 267,035 |
| | 4-1/2" | 5,000 | to | 9,133' | 11.60 | I-80 | LTC | 1.11 | 1.14 | 5.70 | |

**Surface Casing:**

(Burst Assumptions: TD = 12.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

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

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

**Production casing:**

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.61 psi/ft = bottomhole gradient

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

**CEMENT PROGRAM**

| | | FT. OF FILL | DESCRIPTION | SACKS | EXCESS | WEIGHT | | YIELD |
|---|---|---|---|---|---|---|---|---|
| SURFACE | LEAD | 500' | Premium cmt + 2% CaCl | 180 | 60% | 15.80 | | 1.15 |
| **Option 1** | | | + 0.25 pps flocele | | | | | |
| | TOP OUT CMT (6 jobs) | 1,200' | 20 gals sodium silicate + Premium cmt | 270 | 0% | 15.80 | | 1.15 |
| | | | + 2% CaCl + 0.25 pps flocele | | | | | |
| SURFACE | | | **NOTE: If well will circulate water to surface, option 2 will be utilized** | | | | | |
| **Option 2** | LEAD | 1,960' | 65/35 Poz + 6% Gel + 10 pps gilsonite | 180 | 35% | 11.00 | | 3.82 |
| | | | + 0.25 pps Flocele + 3% salt BWOW | | | | | |
| | TAIL | 500' | Premium cmt + 2% CaCl | 150 | 35% | 15.80 | | 1.15 |
| | | | + 0.25 pps flocele | | | | | |
| | TOP OUT CMT | as required | Premium cmt + 2% CaCl | as req. | | 15.80 | | 1.15 |
| PRODUCTION | LEAD | 3,893' | Premium Lite II +0.25 pps celloflake + .4% FL-52 | 310 | 35% | 12.00 | | 3.38 |
| | | | + .3% R-3 + .5 lbs/sk Kol-Seal + 6%Bentonite II + | | | | | |
| | | | 1.2% Sodium Metasilicate + .05 lbs/sk Static Free | | | | | |
| | TAIL | 5,240' | 50/50 Poz/G + 10% salt + .05 lbs/sk Static Free | 1,240 | 35% | 14.30 | | 1.31 |
| | | | + 1.2% Sodium Metasilicate + .5 % EC-1 | | | | | |
| | | | +.002 gps FP-6L + 2% Bentonite II | | | | | |

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

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

**FLOAT EQUIPMENT & CENTRALIZERS**

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

**ADDITIONAL INFORMATION**

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

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

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

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

IF extreme mud losses are observed OR cement doesn't reach surface on a well on the pad, a DV Tool may be used. With Cement Baskets above and Below it.

**DRILLING ENGINEER:** _____ **DATE:** _____

Nick Spence / John Tuckwiller / Brian Cocchiere / Tyler Elliott

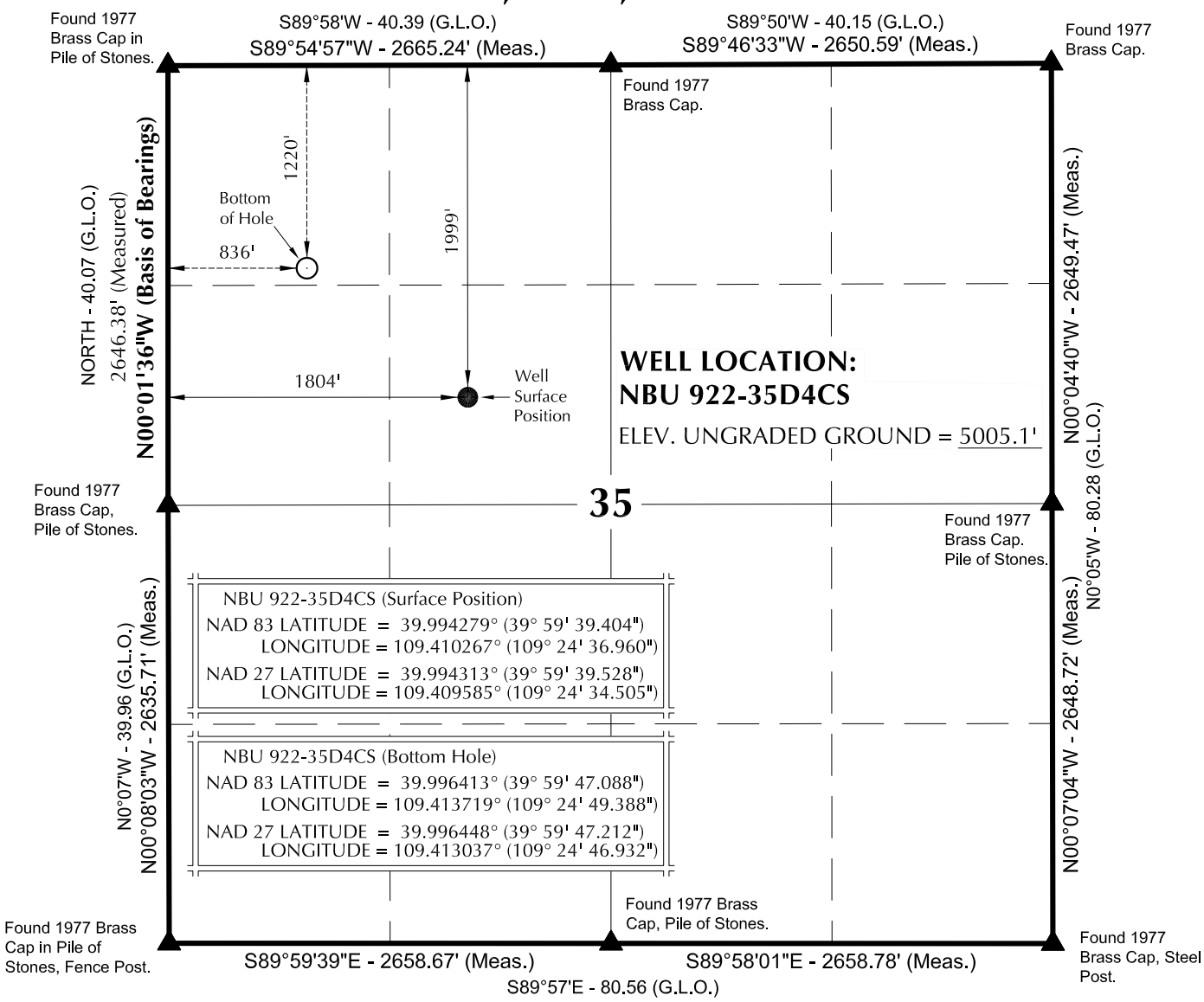
**DRILLING SUPERINTENDENT:** _____ **DATE:** _____

Kenny Gathings / Lovel Young



RECEIVED: October 25, 2013

# T9S, R22E, S.L.B.&M.




NOTES:

▲ = Section Corners Located

1. Well footages are measured at right angles to the Section Lines. G.L.O. distances are shown in feet or chains.
2. 1 chain = 66 feet.
3. The Bottom of hole bears N51°14'21"W 1241.33' from the Surface Position.
4. NAD 83 Latitude & Longitude are (CORS 96)(EPOCH:2002).
5. Bearings and Distances are based upon a Local Cartesian Grid, oriented to Geodetic North at the North 1/4 Corner of Section 8, T10S, R22E, S.L.B.&M. The Grid having a mean project height of 5300'. Lineal units used are U.S. Survey Foot.
6. Basis of elevation is Tri-Sta "Two Water" located in Lot 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'.

N

1000' 500' 0' 1000'

SCALE

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.

5-2-2013

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

PROFESSIONAL LAND SURVEYOR
REGISTRATION No. 6028691
STATE OF UTAH

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

**WELL PAD - NBU 922-35F**

**NBU 922-35D4CS**
**WELL PLAT**
**1220' FNL, 836' FWL (Bottom Hole)**
**NW ¼ NW ¼ OF SECTION 35, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.**

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

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

| | | |
|---|---|---|
| DATE SURVEYED: 4-8-13 | SURVEYED BY: W.W. | SHEET NO: 10 |
| DATE DRAWN: 4-19-13 | DRAWN BY: T.J.R. | |
| SCALE: 1" = 1000' | Date Last Revised: | 10 OF 27 |

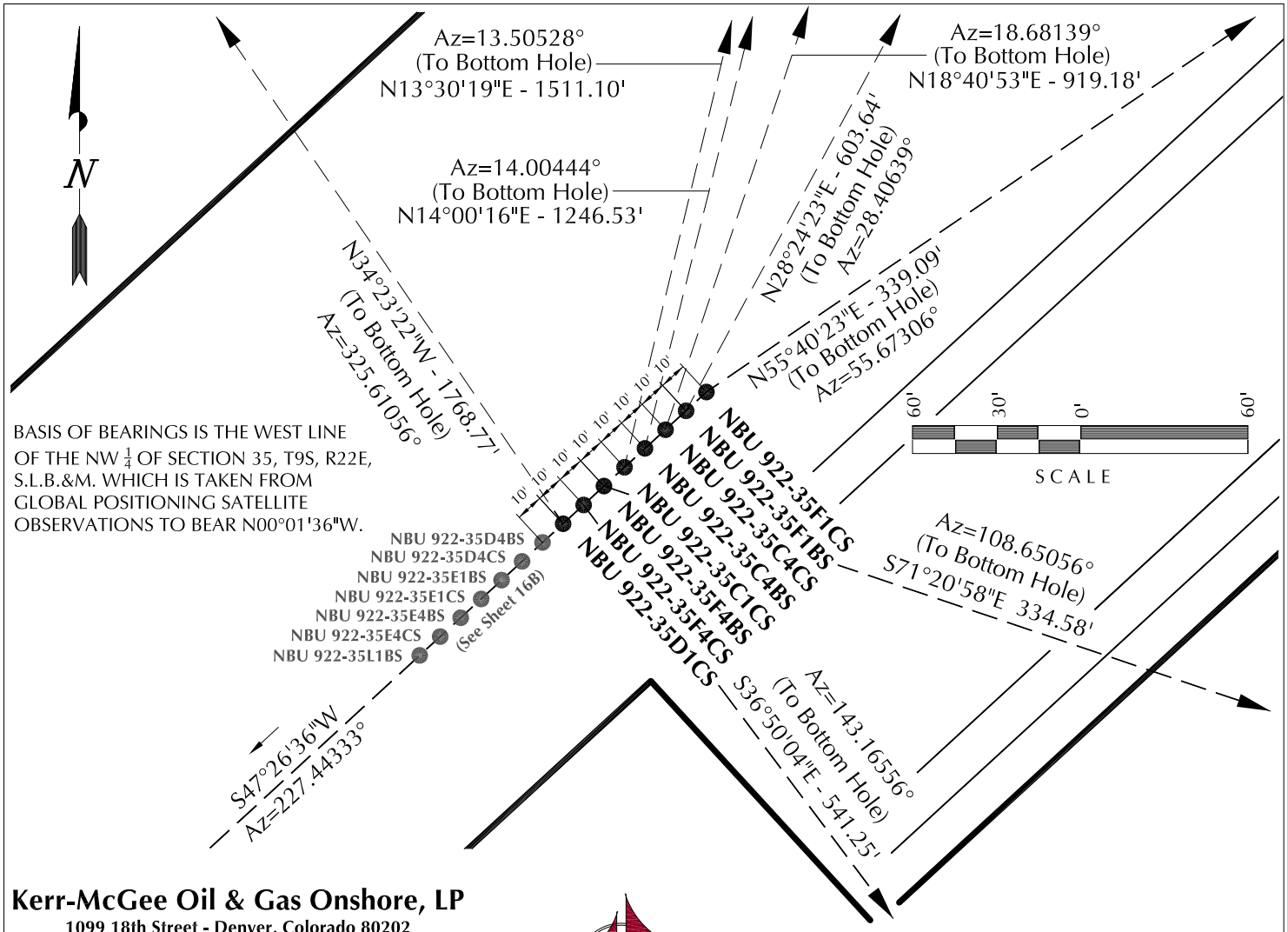
RECEIVED: October 25, 2013

API Well Number: 43047541110000

| WELL NAME | SURFACE POSITION | | | | | BOTTOM HOLE | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | NAD83 | | NAD27 | | | NAD83 | | NAD27 | | |
| | LATITUDE | LONGITUDE | LATITUDE | LONGITUDE | FOOTAGES | LATITUDE | LONGITUDE | LATITUDE | LONGITUDE | FOOTAGES |
| NBU 922-35F1CS | 39°59'40.005" 39.994446° | 109°24'36.109" 109.410030° | 39°59'40.129" 39.994480° | 109°24'33.653" 109.409348° | 1938' FNL 1870' FWL | 39°59'41.892" 39.994970° | 109°24'32.510" 109.409031° | 39°59'42.017" 39.995005° | 109°24'30.055" 109.408349° | 1747' FNL 2150' FWL |
| NBU 922-35F1BS | 39°59'39.938" 39.994427° | 109°24'36.202" 109.410056° | 39°59'40.063" 39.994462° | 109°24'33.747" 109.409374° | 1944' FNL 1863' FWL | 39°59'45.182" 39.995884° | 109°24'32.509" 109.409030° | 39°59'45.307" 39.995919° | 109°24'30.054" 109.408348° | 1414' FNL 2150' FWL |
| NBU 922-35C4CS | 39°59'39.871" 39.994409° | 109°24'36.297" 109.410083° | 39°59'39.996" 39.994443° | 109°24'33.842" 109.409401° | 1951' FNL 1855' FWL | 39°59'48.472" 39.996798° | 109°24'32.509" 109.409030° | 39°59'48.597" 39.996832° | 109°24'30.053" 109.408348° | 1081' FNL 2150' FWL |
| NBU 922-35C4BS | 39°59'39.805" 39.994390° | 109°24'36.392" 109.410109° | 39°59'39.929" 39.994425° | 109°24'33.937" 109.409427° | 1958' FNL 1848' FWL | 39°59'51.753" 39.997709° | 109°24'32.508" 109.409030° | 39°59'51.877" 39.997744° | 109°24'30.053" 109.408348° | 749' FNL 2150' FWL |
| NBU 922-35C1CS | 39°59'39.738" 39.994372° | 109°24'36.487" 109.410135° | 39°59'39.862" 39.994406° | 109°24'34.032" 109.409453° | 1965' FNL 1840' FWL | 39°59'54.253" 39.998403° | 109°24'31.942" 109.408873° | 39°59'54.377" 39.998438° | 109°24'29.487" 109.408191° | 496' FNL 2194' FWL |
| NBU 922-35F4BS | 39°59'39.671" 39.994353° | 109°24'36.582" 109.410162° | 39°59'39.796" 39.994388° | 109°24'34.126" 109.409480° | 1972' FNL 1833' FWL | 39°59'38.612" 39.994059° | 109°24'32.511" 109.409031° | 39°59'38.737" 39.994094° | 109°24'30.055" 109.408349° | 2079' FNL 2150' FWL |
| NBU 922-35F4CS | 39°59'39.604" 39.994335° | 109°24'36.676" 109.410188° | 39°59'39.729" 39.994369° | 109°24'34.220" 109.409506° | 1978' FNL 1826' FWL | 39°59'35.322" 39.993145° | 109°24'32.511" 109.409031° | 39°59'35.447" 39.993180° | 109°24'30.056" 109.408349° | 2412' FNL 2150' FWL |
| NBU 922-35D1CS | 39°59'39.537" 39.994316° | 109°24'36.771" 109.410214° | 39°59'39.662" 39.994351° | 109°24'34.315" 109.409532° | 1985' FNL 1818' FWL | 39°59'53.964" 39.998323° | 109°24'49.593" 109.413776° | 39°59'54.089" 39.998358° | 109°24'47.137" 109.413094° | 524' FNL 820' FWL |

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

| WELL NAME | NORTH | EAST | WELL NAME | NORTH | EAST | WELL NAME | NORTH | EAST | WELL NAME | NORTH | EAST |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NBU 922-35F1CS | 191.2' | 280.0' | NBU 922-35F1BS | 531.0' | 287.2' | NBU 922-35C4CS | 870.8' | 294.4' | NBU 922-35C4BS | 1209.5' | 301.7' |
| **WELL NAME** | **NORTH** | **EAST** | **WELL NAME** | **NORTH** | **EAST** | **WELL NAME** | **NORTH** | **EAST** | **WELL NAME** | **NORTH** | **EAST** |
| NBU 922-35C1CS | 1469.3' | 352.9' | NBU 922-35F4BS | -107.0' | 317.0' | NBU 922-35F4CS | -433.2' | 324.5' | NBU 922-35D1CS | 1459.6' | -999.0' |




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

## WELL PAD - NBU 922-35F

**WELL PAD INTERFERENCE PLAT**
WELLS -NBU 922-35F1CS, NBU 922-35F1BS, NBU 922-35C4CS, NBU 922-35C4BS, NBU 922-35C1CS, NBU 922-35F4BS, NBU 922-35F4CS, NBU 922-35D1CS, NBU 922-35D4BS, NBU 922-35D4CS, NBU 922-35E1BS, NBU 922-35E1CS, NBU 922-35E4BS, NBU 922-35E4CS & NBU 922-35L1BS
LOCATED IN SECTION 35, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
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**TIMBERLINE** (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

| | | |
|---|---|---|
| DATE SURVEYED: 4-8-13 | SURVEYED BY: W.W. | SHEET NO: |
| DATE DRAWN: 4-19-13 | DRAWN BY: T.J.R. | **16A** |
| SCALE: 1" = 60' | Date Last Revised: 4-18-13 J.G.C. | 16A OF 27 |

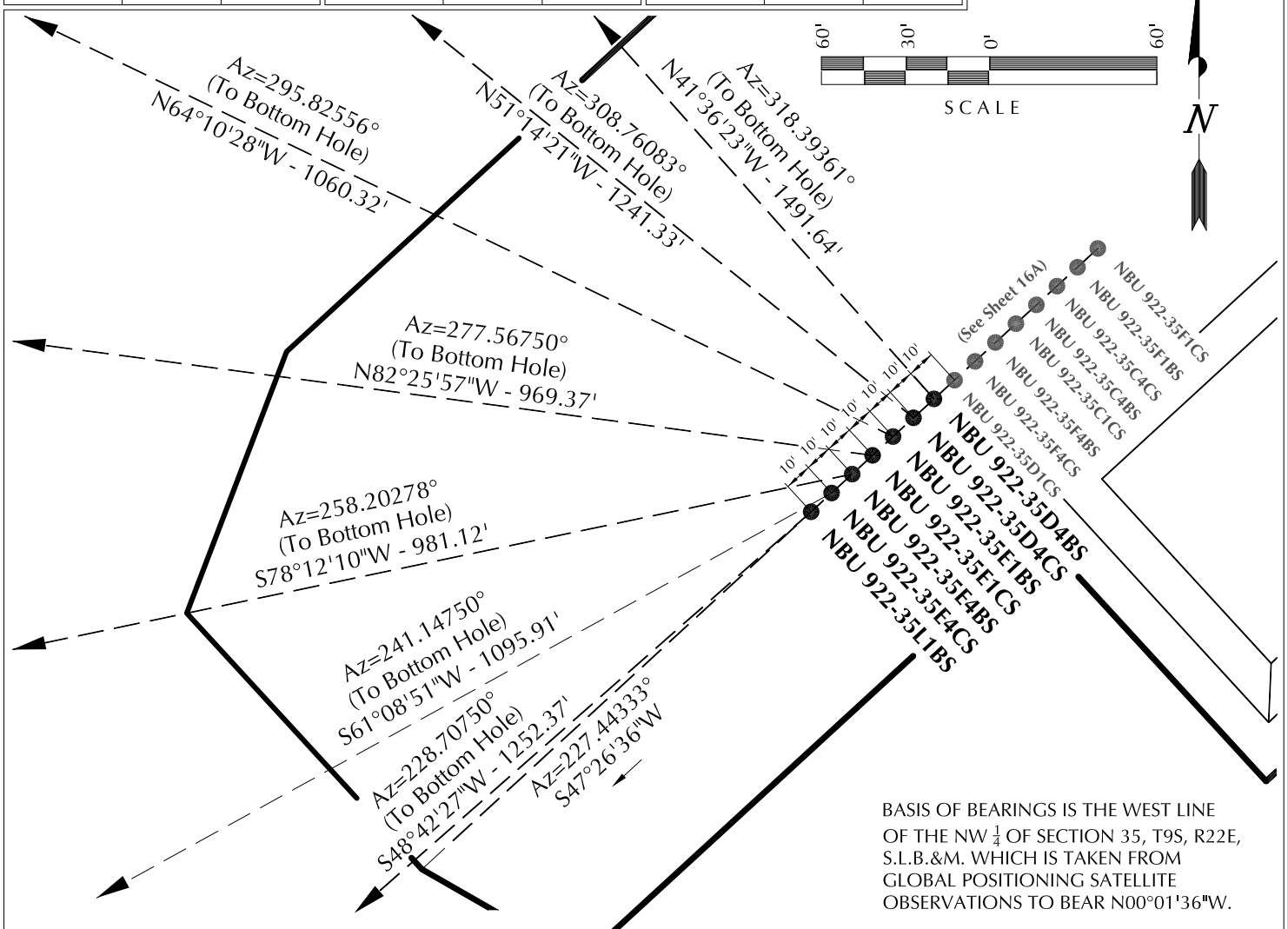
RECEIVED: October 25, 2013

API Well Number: 43047541110000

| WELL NAME | SURFACE POSITION | | | | | BOTTOM HOLE | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | NAD83 | | NAD27 | | | NAD83 | | NAD27 | | |
| | LATITUDE | LONGITUDE | LATITUDE | LONGITUDE | FOOTAGES | LATITUDE | LONGITUDE | LATITUDE | LONGITUDE | FOOTAGES |
| NBU 922-35D4BS | 39°59'39.471" 39.994298° | 109°24'36.866" 109.410240° | 39°59'39.596" 39.994332° | 109°24'34.410" 109.409558° | 1992' FNL 1811' FWL | 39°59'50.496" 39.997360° | 109°24'49.581" 109.413772° | 39°59'50.621" 39.997395° | 109°24'47.124" 109.413090° | 875' FNL 821' FWL |
| NBU 922-35D4CS | 39°59'39.404" 39.994279° | 109°24'36.960" 109.410267° | 39°59'39.528" 39.994313° | 109°24'34.505" 109.409585° | 1999' FNL 1804' FWL | 39°59'47.088" 39.996413° | 109°24'49.388" 109.413719° | 39°59'47.212" 39.996448° | 109°24'46.932" 109.413037° | 1220' FNL 836' FWL |
| NBU 922-35E1BS | 39°59'39.337" 39.994260° | 109°24'37.055" 109.410293° | 39°59'39.462" 39.994295° | 109°24'34.600" 109.409611° | 2005' FNL 1796' FWL | 39°59'43.906" 39.995530° | 109°24'49.312" 109.413698° | 39°59'44.031" 39.995564° | 109°24'46.855" 109.413015° | 1542' FNL 842' FWL |
| NBU 922-35E1CS | 39°59'39.271" 39.994242° | 109°24'37.149" 109.410319° | 39°59'39.395" 39.994276° | 109°24'34.694" 109.409637° | 2012' FNL 1789' FWL | 39°59'40.537" 39.994594° | 109°24'49.492" 109.413748° | 39°59'40.662" 39.994628° | 109°24'47.036" 109.413065° | 1883' FNL 828' FWL |
| NBU 922-35E4BS | 39°59'39.204" 39.994223° | 109°24'37.244" 109.410346° | 39°59'39.328" 39.994258° | 109°24'34.789" 109.409664° | 2019' FNL 1781' FWL | 39°59'37.227" 39.993674° | 109°24'49.582" 109.413773° | 39°59'37.352" 39.993709° | 109°24'47.126" 109.413091° | 2218' FNL 821' FWL |
| NBU 922-35E4CS | 39°59'39.137" 39.994205° | 109°24'37.339" 109.410372° | 39°59'39.261" 39.994239° | 109°24'34.883" 109.409690° | 2026' FNL 1774' FWL | 39°59'33.918" 39.992755° | 109°24'49.672" 109.413798° | 39°59'34.042" 39.992789° | 109°24'47.217" 109.413116° | 2553' FNL 814' FWL |
| NBU 922-35L1BS | 39°59'39.070" 39.994186° | 109°24'37.433" 109.410398° | 39°59'39.195" 39.994221° | 109°24'34.978" 109.409716° | 2032' FNL 1767' FWL | 39°59'30.911" 39.991920° | 109°24'49.526" 109.413757° | 39°59'31.035" 39.991954° | 109°24'47.071" 109.413075° | 2426' FSL 825' FWL |

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

| WELL NAME | NORTH | EAST | WELL NAME | NORTH | EAST | WELL NAME | NORTH | EAST | WELL NAME | NORTH | EAST |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NBU 922-35D4BS | 1115.3' | -990.5' | NBU 922-35D4CS | 777.2' | -967.9' | NBU 922-35E1BS | 461.9' | -954.4' | NBU 922-35E1CS | 127.7' | -960.9' |
| WELL NAME | NORTH | EAST | WELL NAME | NORTH | EAST | WELL NAME | NORTH | EAST | | | |
| NBU 922-35E4BS | -200.6' | -960.4' | NBU 922-35E4CS | -528.8' | -959.9' | NBU 922-35L1BS | -826.4' | -941.0' | | | |




BASIS OF BEARINGS IS THE WEST LINE OF THE NW $\frac{1}{4}$ OF SECTION 35, T9S, R22E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°01'36"W.

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

## WELL PAD - NBU 922-35F

**WELL PAD INTERFERENCE PLAT**
WELLS -NBU 922-35F1CS, NBU 922-35F1BS, NBU 922-35C4CS, NBU 922-35C4BS, NBU 922-35C1CS, NBU 922-35F4BS, NBU 922-35F4CS, NBU 922-35D1CS, NBU 922-35D4BS, NBU 922-35D4CS, NBU 922-35E1BS, NBU 922-35E1CS, NBU 922-35E4BS, NBU 922-35E4CS & NBU 922-35L1BS
LOCATED IN SECTION 35, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

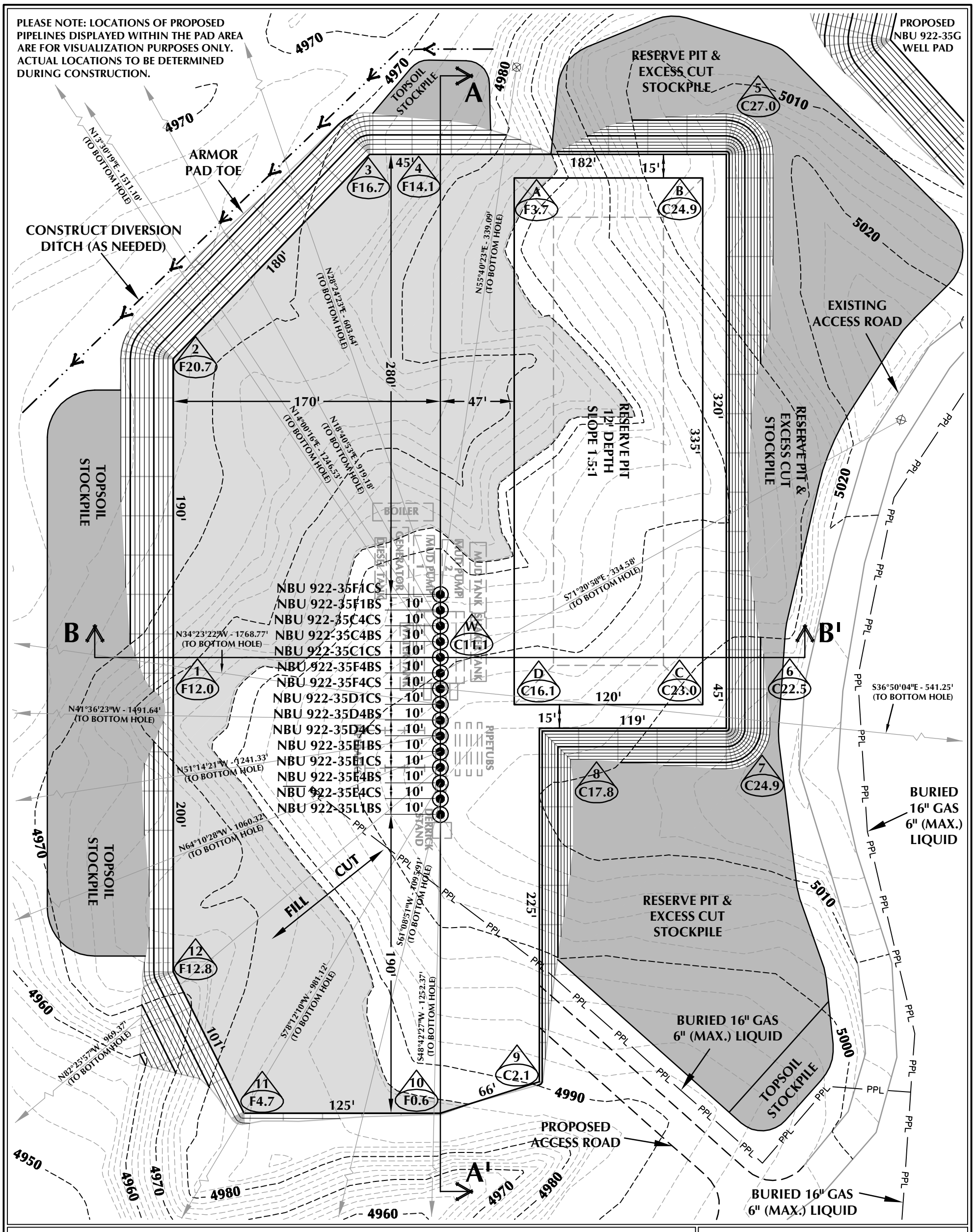
609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

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

| | | |
|---|---|---|
| DATE SURVEYED: 4-8-13 | SURVEYED BY: W.W. | SHEET NO: |
| DATE DRAWN: 4-19-13 | DRAWN BY: T.J.R. | 16B |
| SCALE: 1" = 60' | Date Last Revised: | 16B OF 27 |

RECEIVED: October 25, 2013

API Well Number: 43047541110000




## WELL PAD - NBU 922-35F DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4999.1'
FINISHED GRADE ELEVATION = 4988.2'
CUT SLOPES = 1:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 4.89 ACRES
TOTAL DISTURBANCE AREA = 6.81 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

**WELL PAD QUANTITIES**

TOTAL CUT FOR WELL PAD = 39,987 C.Y.
TOTAL FILL FOR WELL PAD = 39,095 C.Y.
TOPSOIL @ 6" DEPTH = 3,940 C.Y.
EXCESS MATERIAL = 892 C.Y.

**RESERVE PIT QUANTITIES**

TOTAL CUT FOR RESERVE PIT
+/- 14,420 C.Y.
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 55,510 BARRELS

**WELL PAD LEGEND**

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

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


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


**WELL PAD - NBU 922-35F**

WELL PAD - LOCATION LAYOUT
NBU 922-35F1CS, NBU 922-35F1BS, NBU 922-35C4CS, NBU 922-35C4BS, NBU 922-35C1CS, NBU 922-35F4BS, NBU 922-35F4CS, NBU 922-35D1CS, NBU 922-35D4BS, NBU 922-35D4CS, NBU 922-35E1BS, NBU 922-35E1CS, NBU 922-35E4BS, NBU 922-35E4CS & NBU 922-35L1BS
LOCATED IN SECTION 35, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH


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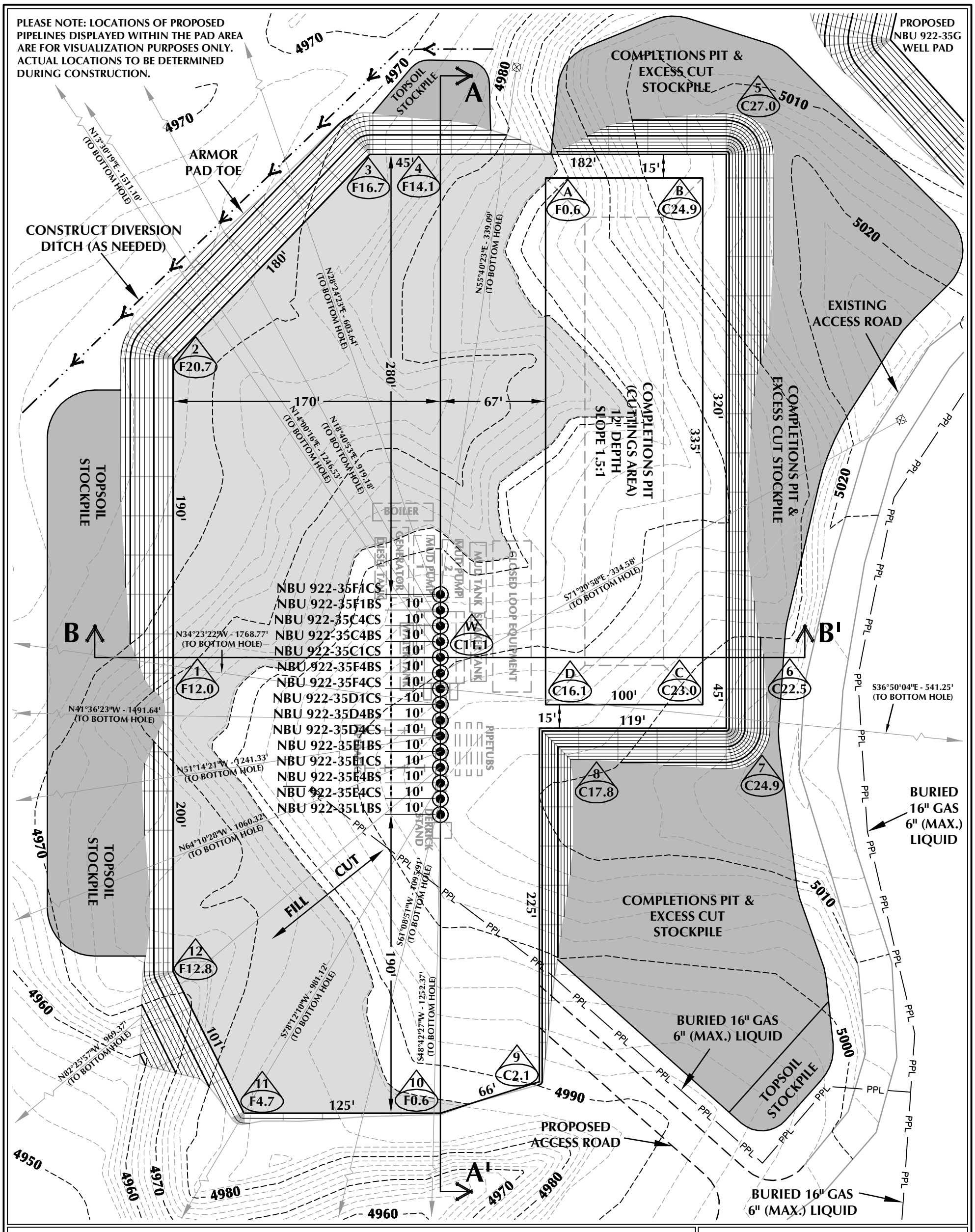
Fax 307-674-0182

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


| SCALE: 1"=60' | DATE: 10/15/12 | SHEET NO: |
|---|---|---|
| REVISED: | DJD 6/7/13 | 17 17 OF 27 |


RECEIVED: October 25, 2013

API Well Number: 43047541110000




## WELL PAD - NBU 922-35F (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4999.1'
FINISHED GRADE ELEVATION = 4988.2'
CUT SLOPES = 1:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 4.89 ACRES
TOTAL DISTURBANCE AREA = 6.81 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

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

**WELL PAD - NBU 922-35F**

WELL PAD - LOCATION LAYOUT
NBU 922-35F1CS, NBU 922-35F1BS, NBU 922-35C4CS, NBU 922-35C4BS, NBU 922-35C1CS, NBU 922-35F4BS, NBU 922-35F4CS, NBU 922-35D1CS, NBU 922-35D4BS, NBU 922-35D4CS, NBU 922-35E1BS, NBU 922-35E1CS, NBU 922-35E4BS, NBU 922-35E4CS & NBU 922-35L1BS
LOCATED IN SECTION 35, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

### WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 39,987 C.Y.
TOTAL FILL FOR WELL PAD = 39,095 C.Y.
TOPSOIL @ 6" DEPTH = 3,940 C.Y.
EXCESS MATERIAL = 892 C.Y.

### COMPLETIONS PIT QUANTITIES

TOTAL CUT FOR COMPLETIONS PIT
+/- 11,600 C.Y.
COMPLETIONS PIT CAPACITY
(2' OF FREEBOARD)
+/- 44,330 BARRELS

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209 NORTH 300 WEST - VERNAL, UTAH 84078

### WELL PAD LEGEND

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

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

| SCALE: 1"=60' | DATE: 12/19/12 | SHEET NO: |
|---|---|---|
| REVISED: | DJD 6/7/13 | 17B 17B OF 27 |

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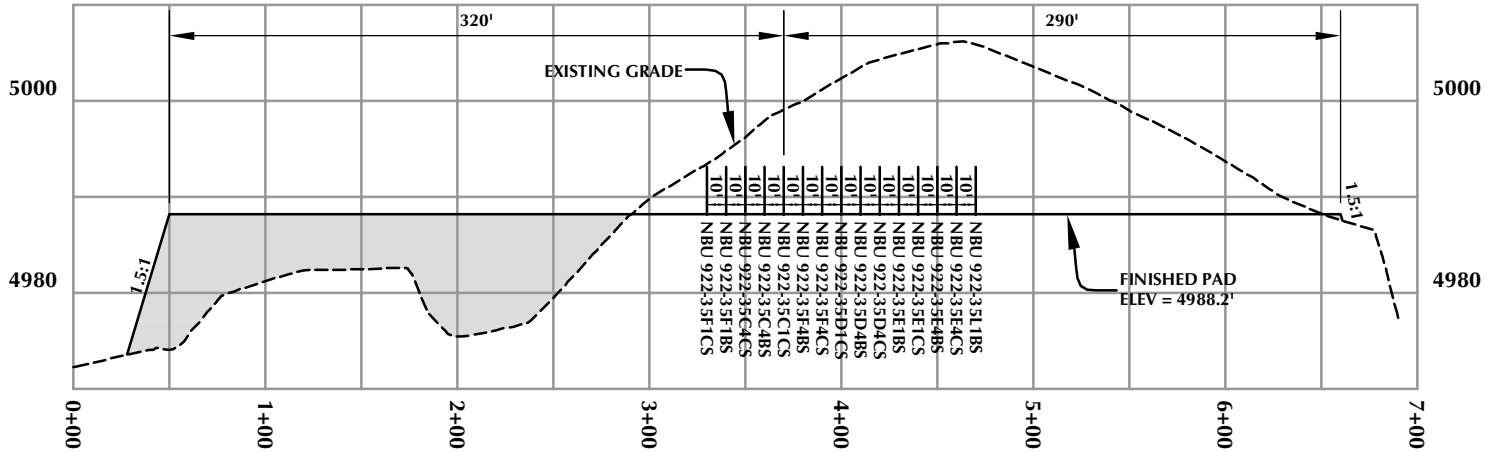
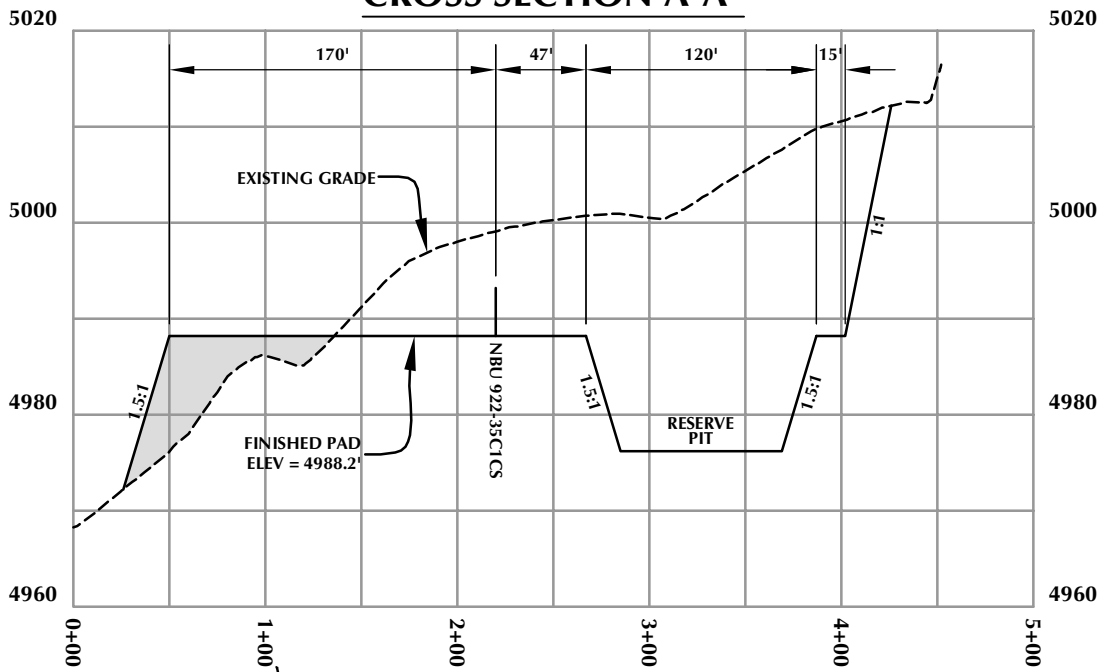
RECEIVED: October 25, 2013




## CROSS SECTION A-A'




## CROSS SECTION B-B'

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

**WELL PAD - NBU 922-35F**

WELL PAD - CROSS SECTIONS
NBU 922-35F1CS, NBU 922-35F1BS, NBU 922-35C4CS, NBU 922-35C4BS, NBU 922-35C1CS, NBU 922-35F4BS, NBU 922-35F4CS, NBU 922-35D1CS, NBU 922-35D4BS, NBU 922-35D4CS, NBU 922-35E1BS, NBU 922-35E1CS, NBU 922-35E4BS, NBU 922-35E4CS & NBU 922-35L1BS
LOCATED IN SECTION 35, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

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

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

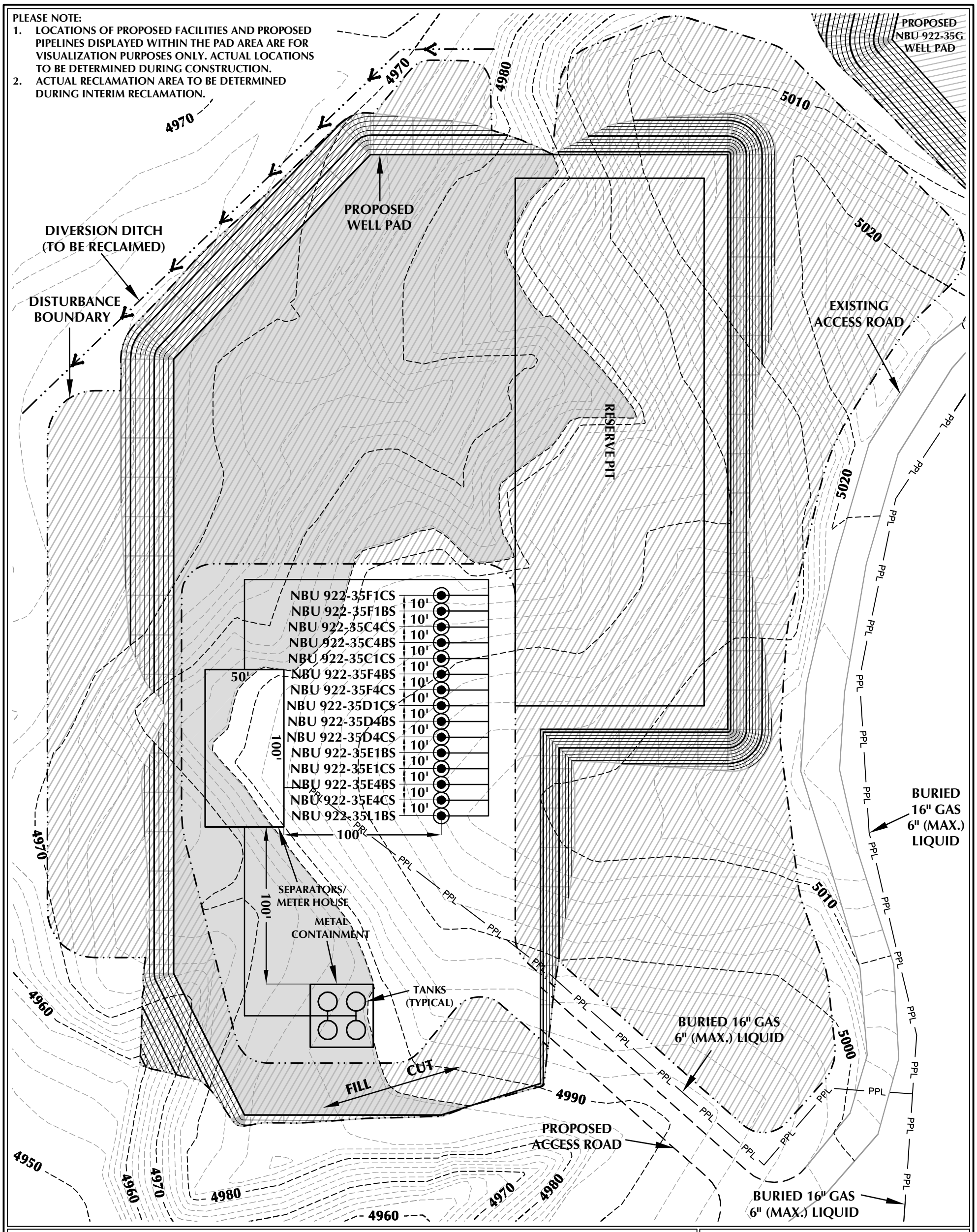
HORIZONTAL 0 50' 100' 1" = 100'
VERTICAL 0 10' 20' 1" = 20'

| Scale: 1"=100' | Date: 10/15/12 | SHEET NO: |
|---|---|---|
| REVISED: | RAL 5/17/13 | 18 18 OF 27 |

K:\ANADARKO\2012\2012_74_NBU_922-35_FOCUS\DWGS\NBU 922-35F\NBU 922-35F.dwg, 5/22/2013 1:38:52 PM, kimberly

RECEIVED: October 25, 2013

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




## WELL PAD - NBU 922-35F RECLAMATION DESIGN SUMMARY

TOTAL DISTURBANCE AREA = 6.81 ACRES
RECLAMATION AREA = 5.36 ACRES
TOTAL WELL PAD AREA AFTER RECLAMATION = 1.45 ACRES

**WELL PAD LEGEND**

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE
- RECLAMATION AREA

HORIZONTAL 0 30' 60' 1" = 60'

2' CONTOURS

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

WELL PAD - NBU 922-35F

WELL PAD - RECLAMATION LAYOUT
NBU 922-35F1CS, NBU 922-35F1BS, NBU 922-35C4CS, NBU 922-35C4BS, NBU 922-35C1CS, NBU 922-35F4BS, NBU 922-35F4CS, NBU 922-35D1CS, NBU 922-35D4BS, NBU 922-35D4CS, NBU 922-35E1BS, NBU 922-35E1CS, NBU 922-35E4BS, NBU 922-35E4CS & NBU 922-35L1BS
LOCATED IN SECTION 35, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

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

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

| SCALE: 1"=60' | DATE: 10/15/12 | SHEET NO: |
|---|---|---|
| REVISED: | DJD 6/7/13 | 19 — 19 OF 27 |

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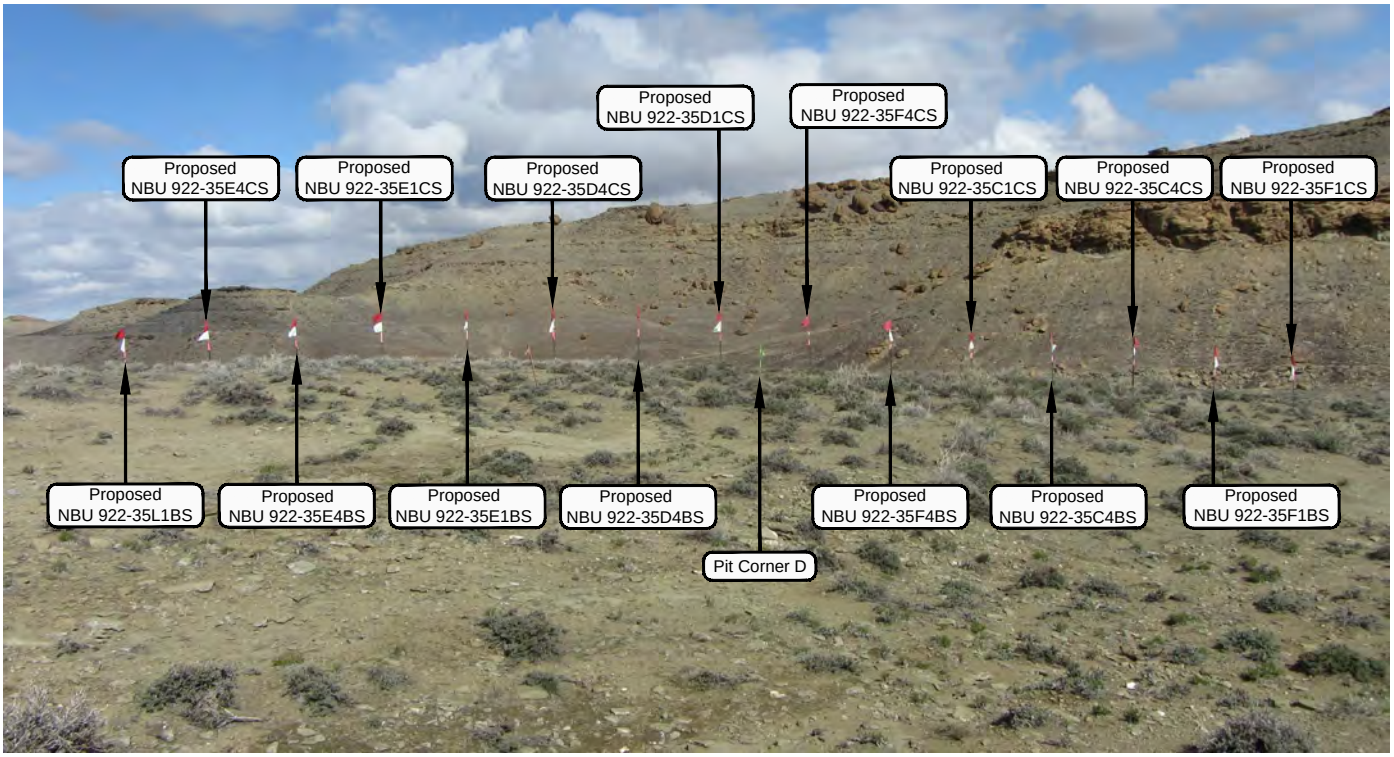


**PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE** **CAMERA ANGLE: NORTHWESTERLY**

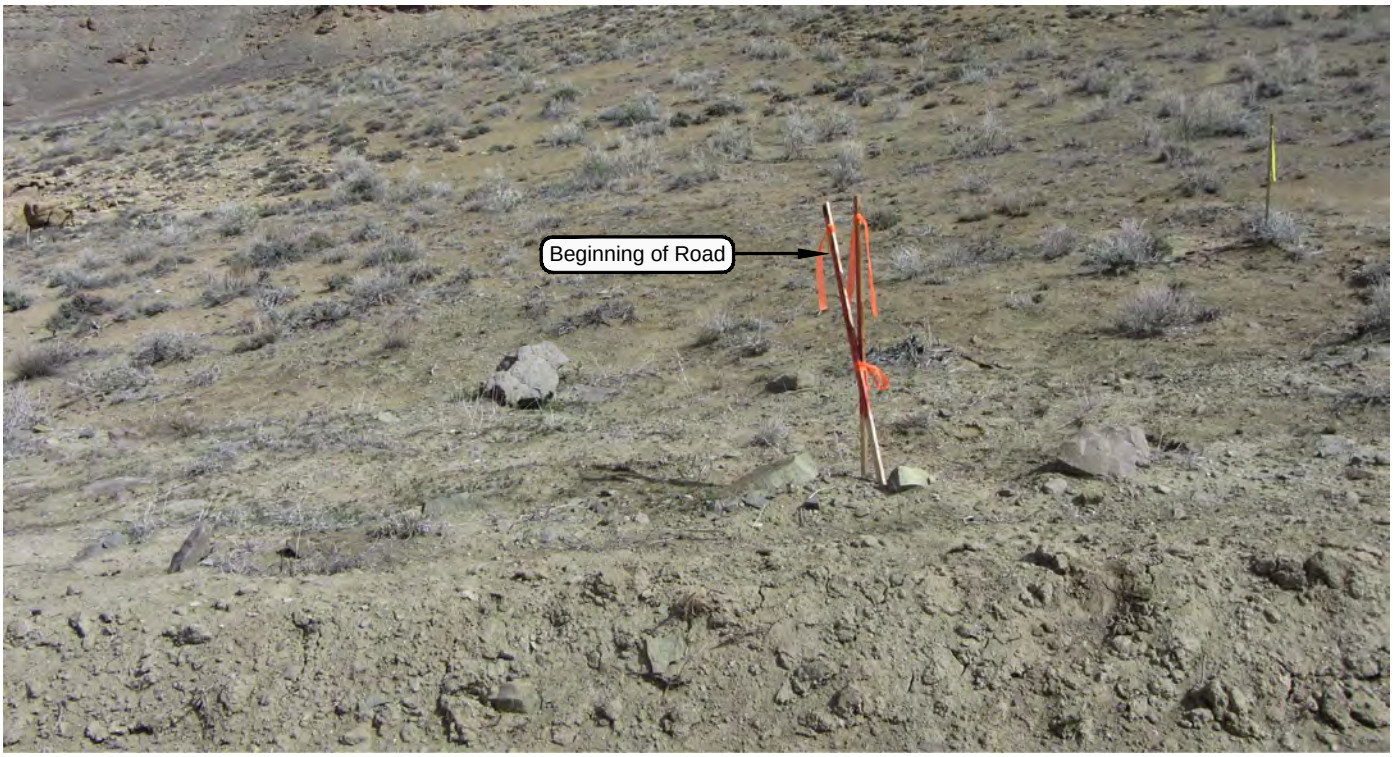


**PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD** **CAMERA ANGLE: NORTHERLY**

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

**WELL PAD - NBU 922-35F**

**LOCATION PHOTOS**
NBU 922-35F1CS, NBU 922-35F1BS, NBU 922-35C4CS, NBU 922-35C4BS, NBU 922-35C1CS, NBU 922-35F4BS, NBU 922-35F4CS, NBU 922-35D1CS, NBU 922-35D4BS, NBU 922-35D4CS, NBU 922-35E1BS, NBU 922-35E1CS, NBU 922-35E4BS, NBU 922-35E4CS & NBU 922-35L1BS
LOCATED IN SECTION 35, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

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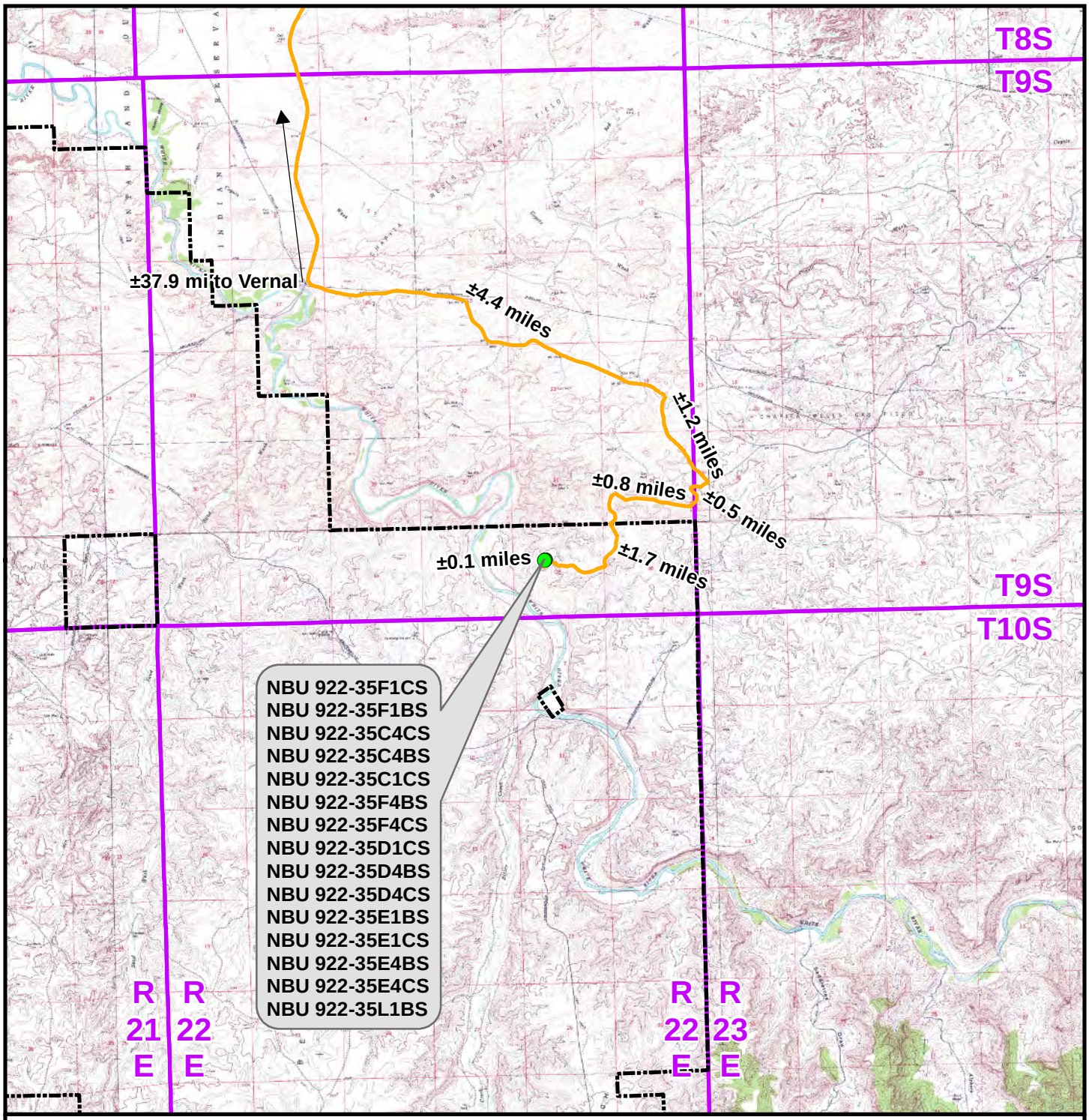
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

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

| | | |
|---|---|---|
| DATE PHOTOS TAKEN: 4-8-13 | PHOTOS TAKEN BY: W.W. | SHEET NO: 20 |
| DATE DRAWN: 4-19-13 | DRAWN BY: T.J.R. | |
| Date Last Revised: 4-18-13 J.G.C. | | 20 OF 27 |

RECEIVED: October 25, 2013

API Well Number: 43047541110000




**Legend**

Distance From Well Pad - NBU 922-35F To Unit Boundary: ±1,938ft

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

## WELL PAD - NBU 922-35F

TOPO A
NBU 922-35F1CS, NBU 922-35F1BS, NBU 922-35C4CS, NBU 922-35C4BS, NBU 922-35C1CS, NBU 922-35F4BS, NBU 922-35F4CS, NBU 922-35D1CS, NBU 922-35D4BS, NBU 922-35D4CS, NBU 922-35E1BS, NBU 922-35E1CS, NBU 922-35E4BS, NBU 922-35E4CS & NBU 922-35L1BS
LOCATED IN SECTION 35, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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

1099 18th Street
Denver, Colorado 80202

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

N

| | | |
|---|---|---|
| SCALE: 1:100,000 | NAD83 USP Central | SHEET NO: 21 |
| DRAWN: TL | DATE: 17 Oct 2012 | 21 OF 27 |
| REVISED: TL | DATE: 17 May 2013 | |

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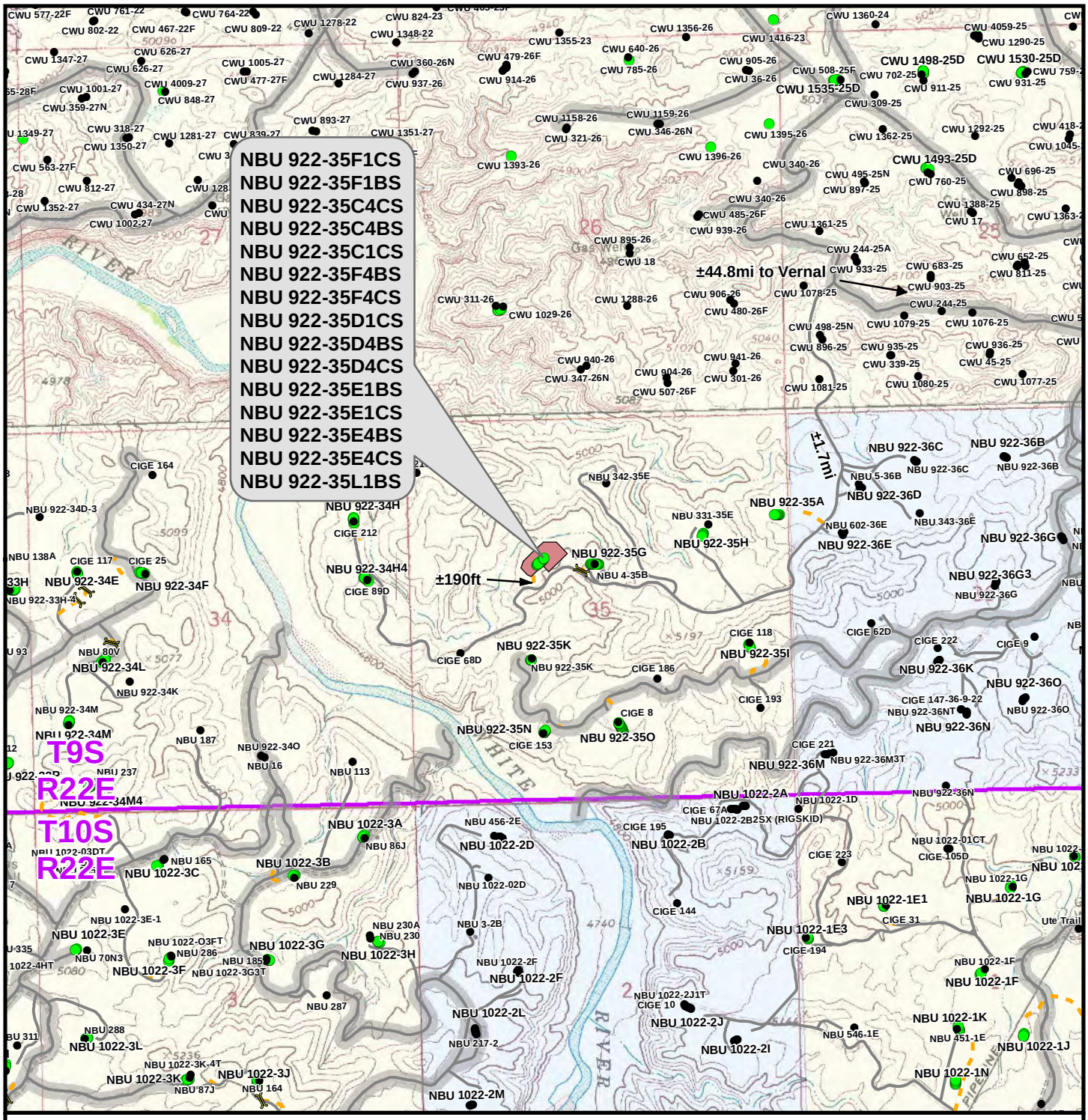
RECEIVED: October 25, 2013

API Well Number: 43047541110000




**Legend**

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

Total Proposed Road Length: ±190ft

# WELL PAD - NBU 922-35F

TOPO B
NBU 922-35F1CS, NBU 922-35F1BS, NBU 922-35C4CS, NBU 922-35C4BS, NBU 922-35C1CS, NBU 922-35F4BS, NBU 922-35F4CS, NBU 922-35D1CS, NBU 922-35D4BS, NBU 922-35D4CS, NBU 922-35E1BS, NBU 922-35E1CS, NBU 922-35E4BS, NBU 922-35E4CS & NBU 922-35L1BS
LOCATED IN SECTION 35, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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

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Denver, Colorado 80202


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


N

| | | | |
|---|---|---|---|
| SCALE: 1" = 2,000ft | NAD83 USP Central | SHEET NO: | |
| DRAWN: TL | DATE: 17 Oct 2012 | 22 | |
| REVISED: TL | DATE: 17 May 2013 | 22 OF 27 | |

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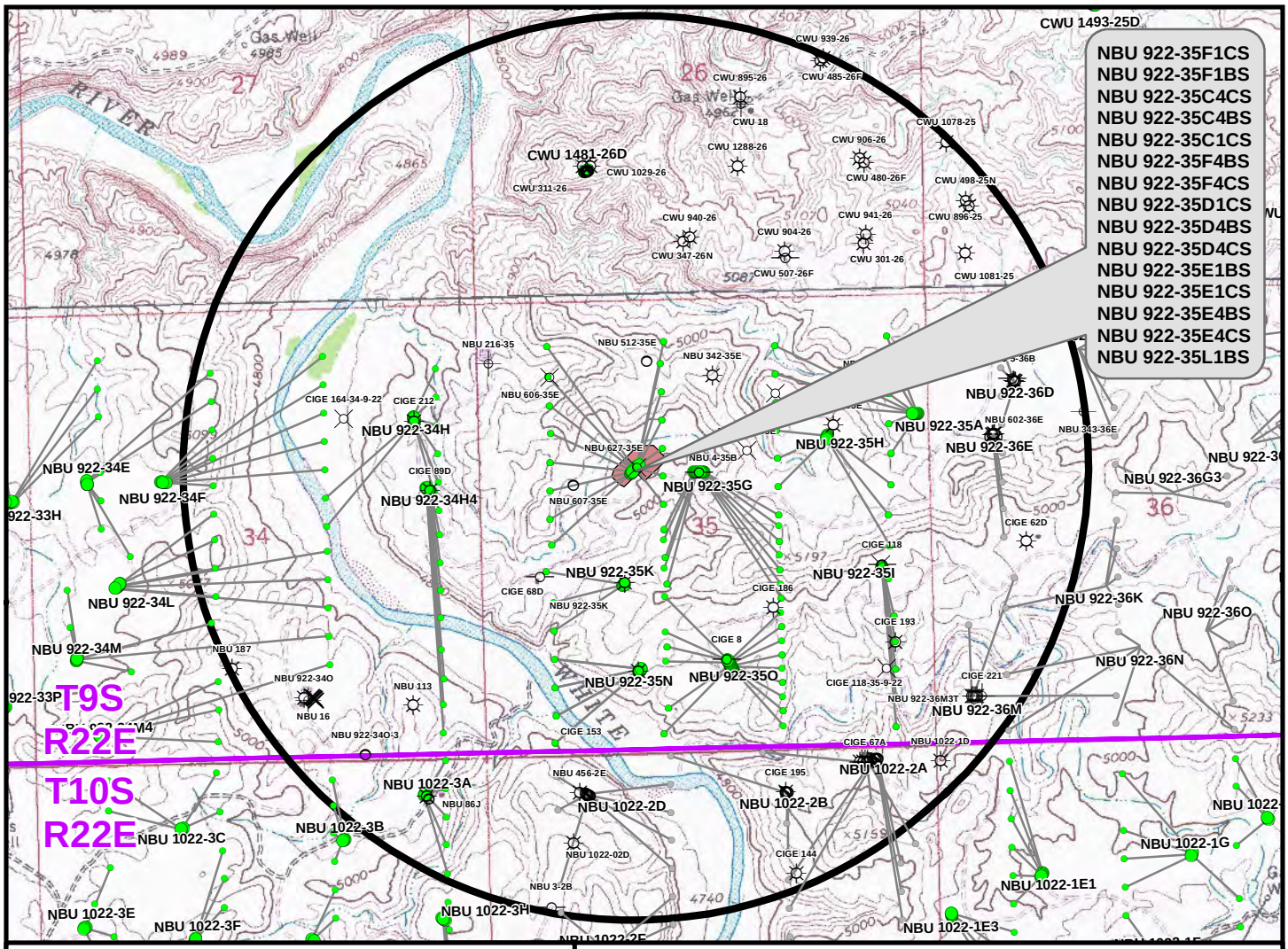
RECEIVED: October 25, 2013

API Well Number: 43047541110000




Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

| Proposed Well | Nearest Well Bore | Footage |
|---|---|---|
| NBU 922-35F1CS | NBU 4-35B | 511ft |
| NBU 922-35F1BS | NBU 4-35B | 751ft |
| NBU 922-35C4CS | NBU 342-35E | 633ft |
| NBU 922-35C4BS | NBU 342-35E | 629ft |
| NBU 922-35C1CS | NBU 342-35E | 699ft |
| NBU 922-35F4BS | NBU 4-35B | 425ft |
| NBU 922-35F4CS | NBU 4-35B | 566ft |
| NBU 922-35D1CS | NBU 216-35 | 719ft |
| NBU 922-35D4BS | NBU 216-35 | 718ft |
| NBU 922-35D4CS | NBU 216-35 | 879ft |
| NBU 922-35E1BS | NBU 216-35 | 1,103ft |
| NBU 922-35E1CS | CIGE 68D | 1,349ft |
| NBU 922-35E4BS | CIGE 68D | 1,016ft |
| NBU 922-35E4CS | CIGE 68D | 685ft |
| NBU 922-35L1BS | CIGE 68D | 396ft |

**Legend**

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

## WELL PAD - NBU 922-35F

TOPO C
NBU 922-35F1CS, NBU 922-35F1BS, NBU 922-35C4CS, NBU 922-35C4BS, NBU 922-35C1CS, NBU 922-35F4BS, NBU 922-35F4CS, NBU 922-35D1CS, NBU 922-35D4BS, NBU 922-35D4CS, NBU 922-35E1BS, NBU 922-35E1CS, NBU 922-35E4BS, NBU 922-35E4CS & NBU 922-35L1BS
LOCATED IN SECTION 35, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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

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Denver, Colorado 80202

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

N

| | | | |
|---|---|---|---|
| SCALE: 1" = 2,000ft | NAD83 USP Central | SHEET NO: | 23 |
| DRAWN: TL | DATE: 21 Dec 2012 | | |
| REVISED: TL | DATE: 17 May 2013 | | 23 OF 27 |

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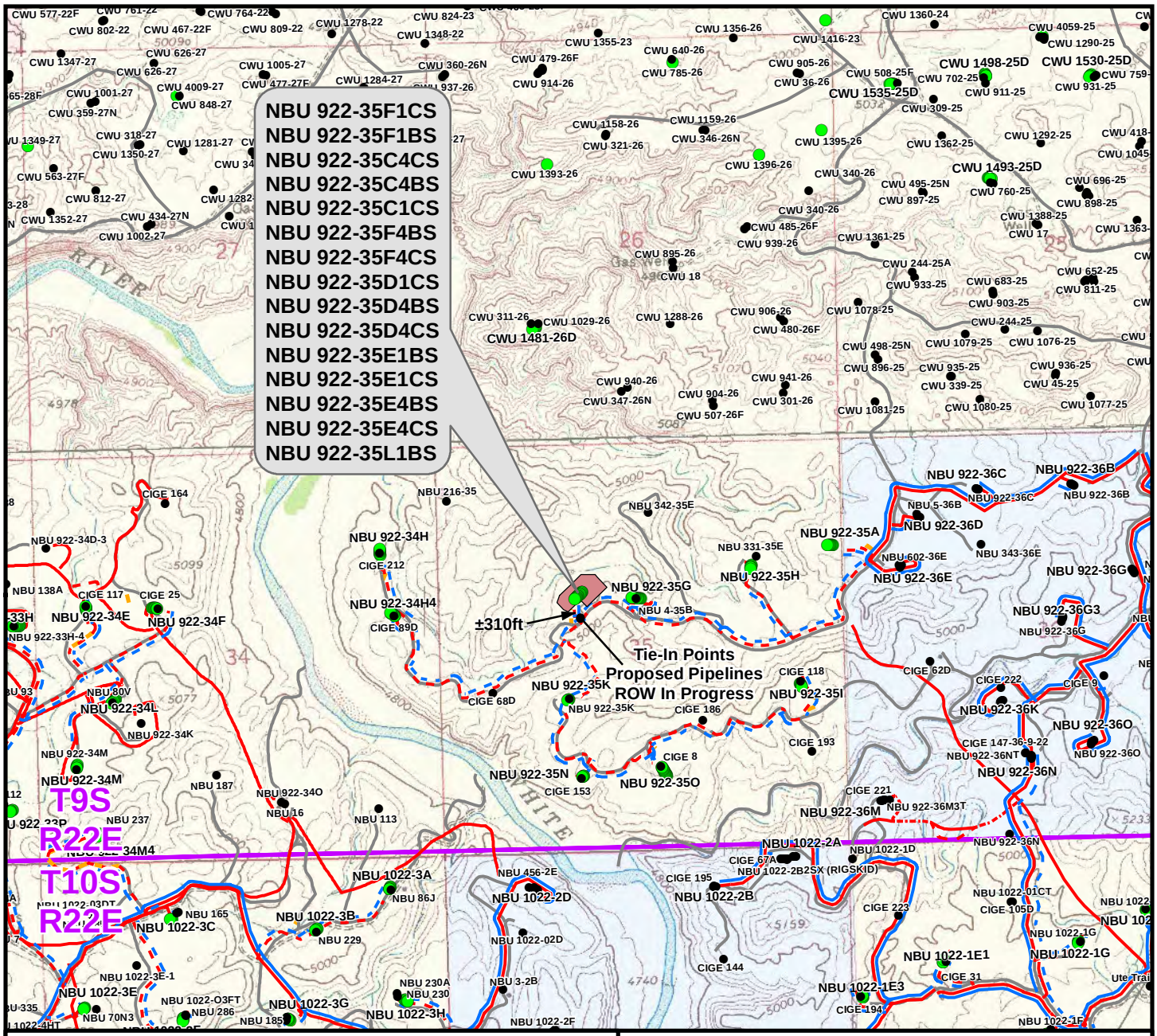
RECEIVED: October 25, 2013

API Well Number: 43047541110000




| Proposed Liquid Pipeline | Length |
|---|---|
| Buried 6"(Max.) (Separator to Edge of Pad) | ±205ft |
| Buried 6"(Max.) (Edge of Pad to Proposed 6"(Max.) Liquid Pipeline ROW In Progress) | ±310ft |
| TOTAL PROPOSED BURIED LIQUID PIPELINE = | ±515ft |

| Proposed Gas Pipeline | Length |
|---|---|
| Buried 16" (Meter House to Edge of Pad) | ±205ft |
| Buried 16" (Edge of Pad to Proposed 16" Gas Pipeline ROW In Progress) | ±310ft |
| TOTAL PROPOSED BURIED GAS PIPELINE = | ±515ft |

**Legend**

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

# WELL PAD - NBU 922-35F

TOPO D
NBU 922-35F1CS, NBU 922-35F1BS, NBU 922-35C4CS, NBU 922-35C4BS, NBU 922-35C1CS, NBU 922-35F4BS, NBU 922-35F4CS, NBU 922-35D1CS, NBU 922-35D4BS, NBU 922-35D4CS, NBU 922-35E1BS, NBU 922-35E1CS, NBU 922-35E4BS, NBU 922-35E4CS & NBU 922-35L1BS
LOCATED IN SECTION 35, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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

1099 18th Street
Denver, Colorado 80202

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

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| | | | |
|---|---|---|---|
| SCALE: 1" = 2,000ft | NAD83 USP Central | SHEET NO: | 24 |
| DRAWN: TL | DATE: 21 Dec 2012 | | |
| REVISED: TL | DATE: 10 June 2013 | | 24 OF 27 |

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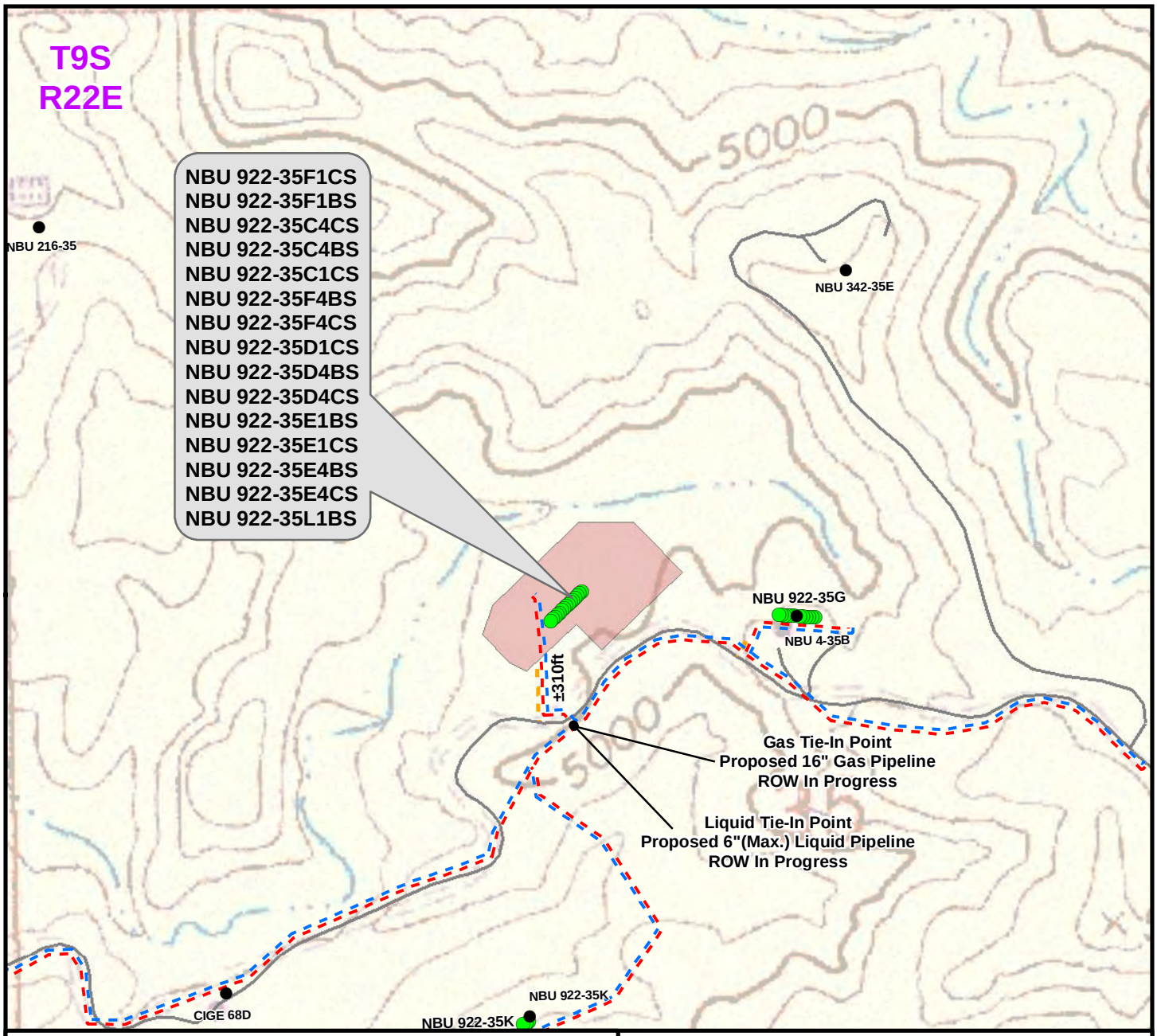
RECEIVED: October 25, 2013

API Well Number: 43047541110000




| Proposed Liquid Pipeline | Length |
|---|---|
| Buried 6"(Max.) (Separator to Edge of Pad) | ±205ft |
| Buried 6"(Max.) (Edge of Pad to Proposed 6"(Max.) Liquid Pipeline ROW In Progress) | ±310ft |
| TOTAL PROPOSED BURIED LIQUID PIPELINE = | ±515ft |

| Proposed Gas Pipeline | Length |
|---|---|
| Buried 16" (Meter House to Edge of Pad) | ±205ft |
| Buried 16" (Edge of Pad to Proposed 16" Gas Pipeline ROW In Progress) | ±310ft |
| TOTAL PROPOSED BURIED GAS PIPELINE = | ±515ft |

**Legend**

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

# WELL PAD - NBU 922-35F

TOPO D2 (PAD & PIPELINE DETAIL)
NBU 922-35F1CS, NBU 922-35F1BS, NBU 922-35C4CS, NBU 922-35C4BS, NBU 922-35C1CS, NBU 922-35F4BS, NBU 922-35F4CS, NBU 922-35D1CS, NBU 922-35D4BS, NBU 922-35D4CS, NBU 922-35E1BS, NBU 922-35E1CS, NBU 922-35E4BS, NBU 922-35E4CS & NBU 922-35L1BS
LOCATED IN SECTION 35, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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

1099 18th Street
Denver, Colorado 80202

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

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| | | | |
|---|---|---|---|
| SCALE: 1" = 500ft | NAD83 USP Central | SHEET NO: | |
| DRAWN: TL | DATE: 17 Oct 2012 | 25 | |
| REVISED: TL | DATE: 10 June 2013 | 25 OF 27 | |

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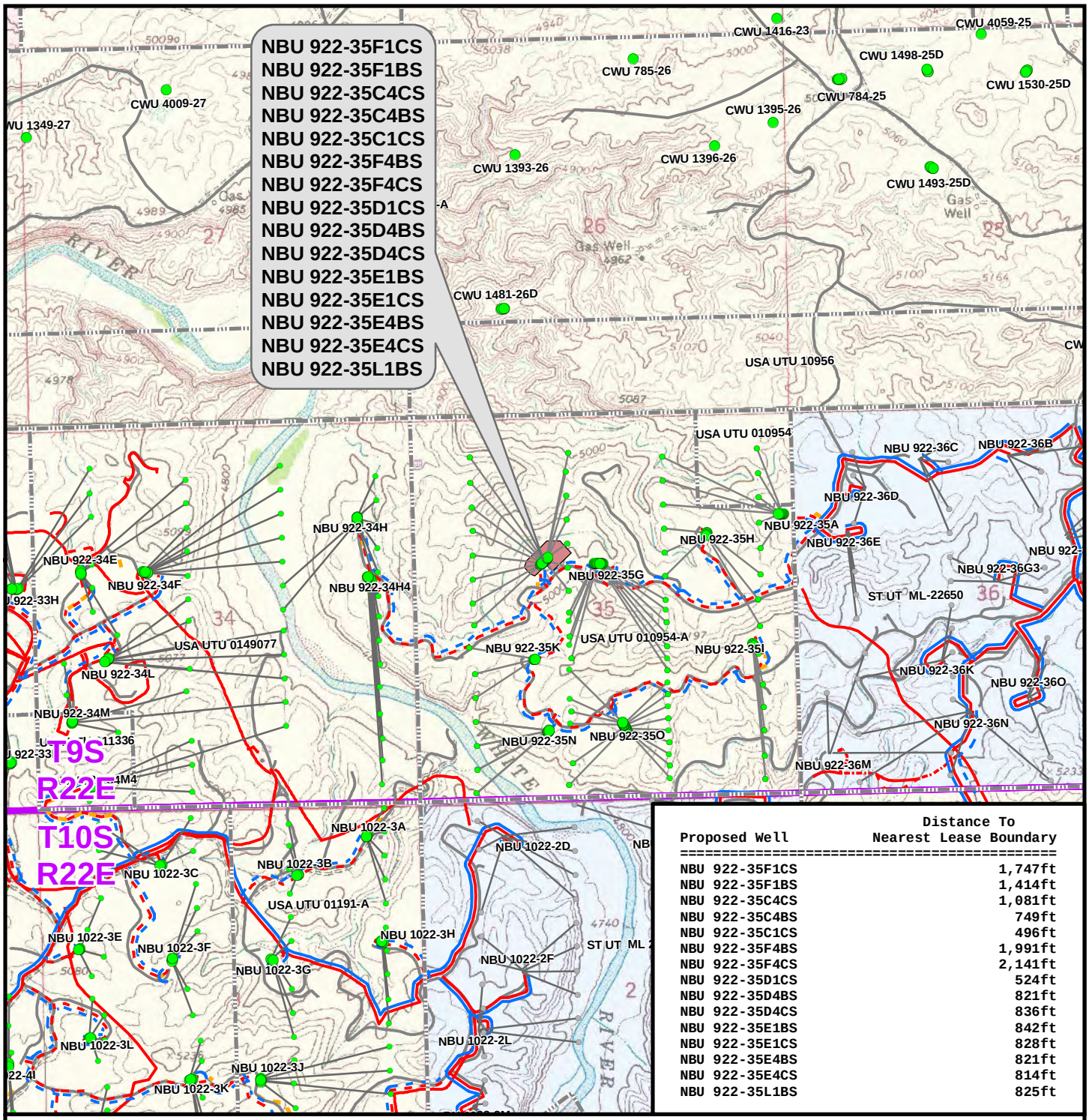
RECEIVED: October 25, 2013

API Well Number: 43047541110000




| Proposed Well | Distance To Nearest Lease Boundary |
|---|---|
| NBU 922-35F1CS | 1,747ft |
| NBU 922-35F1BS | 1,414ft |
| NBU 922-35C4CS | 1,081ft |
| NBU 922-35C4BS | 749ft |
| NBU 922-35C1CS | 496ft |
| NBU 922-35F4BS | 1,991ft |
| NBU 922-35F4CS | 2,141ft |
| NBU 922-35D1CS | 524ft |
| NBU 922-35D4BS | 821ft |
| NBU 922-35D4CS | 836ft |
| NBU 922-35E1BS | 842ft |
| NBU 922-35E1CS | 828ft |
| NBU 922-35E4BS | 821ft |
| NBU 922-35E4CS | 814ft |
| NBU 922-35L1BS | 825ft |

**Legend**

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

# WELL PAD - NBU 922-35F

TOPO E
NBU 922-35F1CS, NBU 922-35F1BS, NBU 922-35C4CS, NBU 922-35C4BS, NBU 922-35C1CS, NBU 922-35F4BS, NBU 922-35F4CS, NBU 922-35D1CS, NBU 922-35D4BS, NBU 922-35D4CS, NBU 922-35E1BS, NBU 922-35E1CS, NBU 922-35E4BS, NBU 922-35E4CS & NBU 922-35L1BS
LOCATED IN SECTION 35, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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

1099 18th Street
Denver, Colorado 80202

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

N

| | | | |
|---|---|---|---|
| SCALE: 1" = 2,000ft | NAD83 USP Central | SHEET NO: | |
| DRAWN: TL | DATE: 21 Dec 2012 | 26 | |
| REVISED: TL | DATE: 17 May 2013 | 26 OF 27 | |

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RECEIVED: October 25, 2013

**Kerr-McGee Oil & Gas Onshore, LP**
**WELL PAD – NBU 922-35F**
**WELLS – NBU 922-35F1CS, NBU 922-35F1BS, NBU 922-35C4CS, NBU 922-35C4BS, NBU 922-35C1CS, NBU 922-35F4BS, NBU 922-35F4CS, NBU 922-35D1CS, NBU 922-35D4BS, NBU 922-35D4CS, NBU 922-35E1BS, NBU 922-35E1CS, NBU 922-35E4BS, NBU 922-35E4CS & NBU 922-35L1BS**
**Section 35, T9S, R22E, S.L.B.&M.**

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 14.4 miles to the intersection of the Fidlar Road (County B Road 3410) which road intersection is approximately 400 feet northeast of the Mountain Fuel Bridge at the White River. Exit left and proceed in a southeasterly direction along the Fidlar Road approximately 4.4 miles to the intersection of the Seven Sisters Road (County B Road 3420). Exit right and proceed in a southerly, then southeasterly direction along the Seven Sisters Road approximately 1.2 miles to a Class D County Road to the southwest. Exit right and proceed in a southwesterly direction along the Class D County Road approximately 0.5 miles to a second Class D County Road to the west. Exit right and proceed in a westerly direction along the second Class D County Road approximately 0.8 miles to a service road to the south. Exit left and proceed in a southerly, then westerly direction along the service road approximately 1.7 miles to the proposed access road to the north. Follow road flags in a northerly direction approximately 190 feet to the proposed well pad.

Total distance from Vernal, Utah to the proposed well location is approximately 46.6 miles in a southerly direction.



RECEIVED: October 25, 2013

API Well Number: 43047541110000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 922-35F PAD
Well: NBU 922-35D4CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

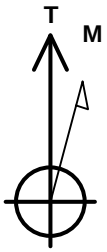
**WELL DETAILS: NBU 922-35D4CS**

GL 4988 & KB 4 @ 4992.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14527947.87 | 2085872.64 | 39.9943136 | -109.4095849 |

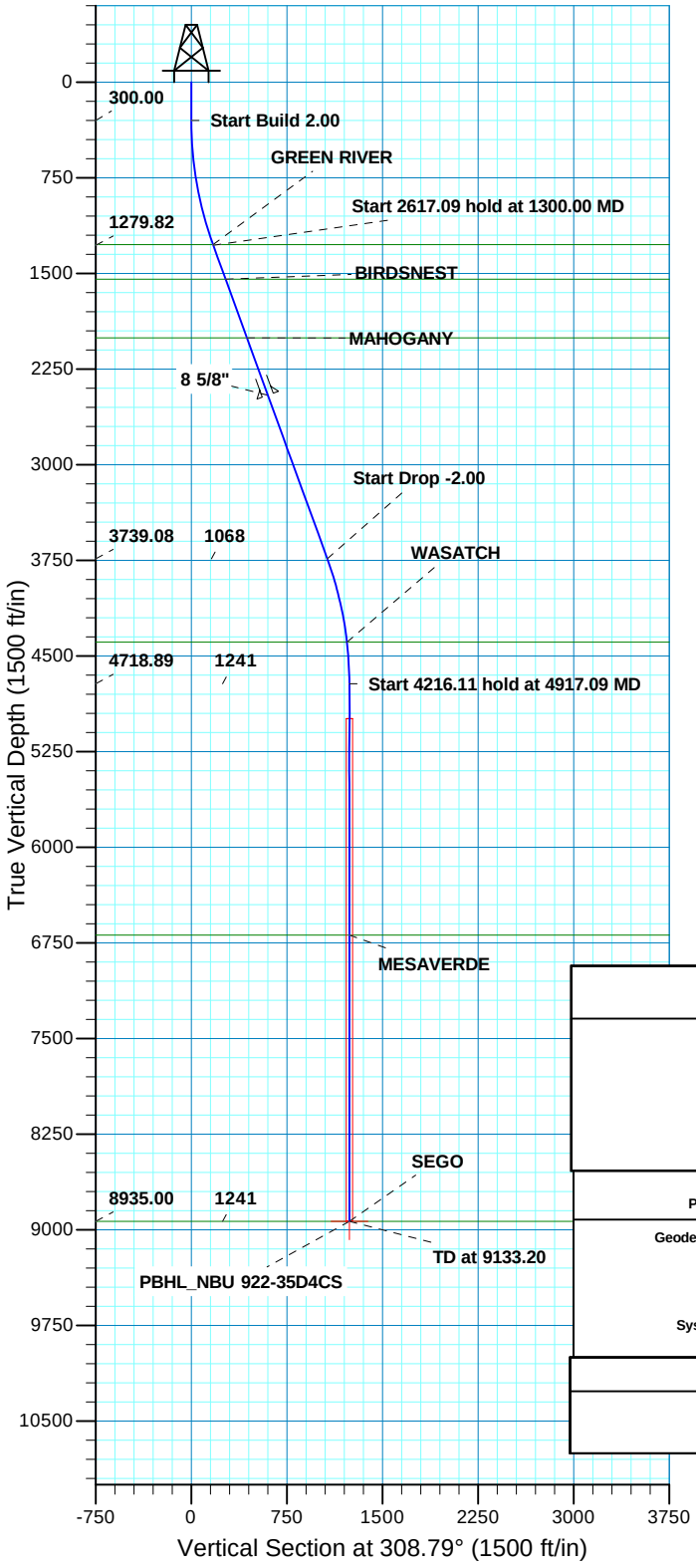
**DESIGN TARGET DETAILS**

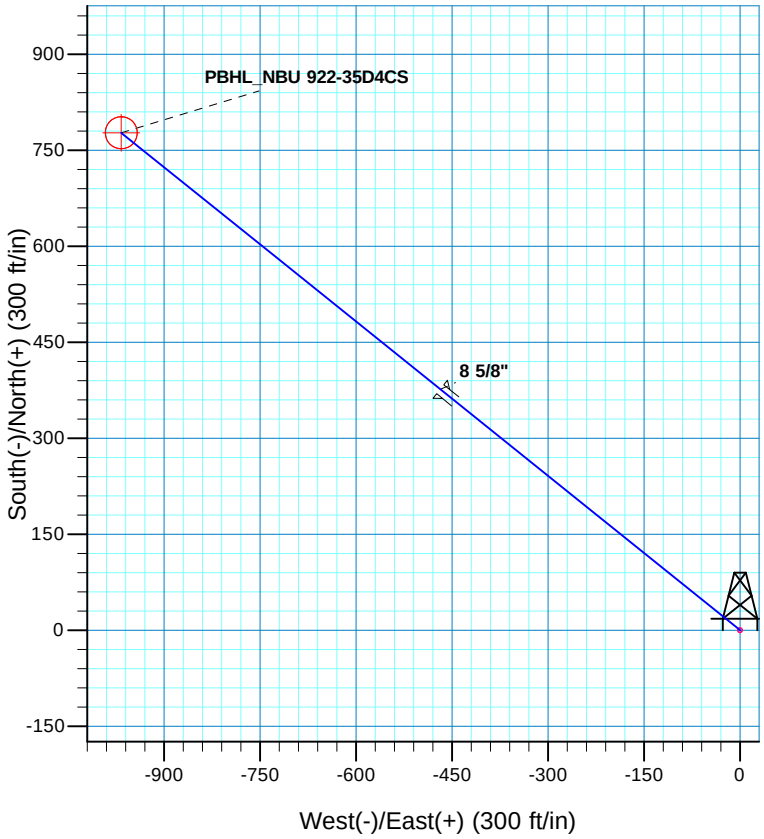
| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| PBHL | 8935.00 | 777.26 | -966.98 | 14528707.75 | 2084891.95 | 39.9964476 | -109.4130367 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |




Azimuths to True North
Magnetic North: 10.83°

Magnetic Field
Strength: 52178.3snT
Dip Angle: 65.84°
Date: 2013/01/23
Model: IGRF2010




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1300.00 | 20.00 | 308.79 | 1279.82 | 108.24 | -134.66 | 2.00 | 308.79 | 172.77 | |
| 3917.09 | 20.00 | 308.79 | 3739.08 | 669.02 | -832.32 | 0.00 | 0.00 | 1067.87 | |
| 4917.09 | 0.00 | 0.00 | 4718.89 | 777.26 | -966.98 | 2.00 | 180.00 | 1240.63 | |
| 9133.20 | 0.00 | 0.00 | 8935.00 | 777.26 | -966.98 | 0.00 | 0.00 | 1240.63 | PBHL_NBU 922-35D4CS |

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

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 35 T9S R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1274.00 | 1293.81 | GREEN RIVER |
| 1546.00 | 1583.27 | BIRDSNEST |
| 2006.00 | 2072.79 | MAHOGANY |
| 4393.00 | 4590.49 | WASATCH |
| 6689.00 | 6887.20 | MESAVERDE |
| 8934.99 | 9133.19 | SEGO |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2456.00 | 2551.67 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 922-35D4CS/OH)

Created By: RobertScott Date: 15:06, August 08 2013

RECEIVED:

API Well Number: 43047541110000

Scientific Drilling

# US ROCKIES REGION PLANNING

**UTAH - UTM (feet), NAD27, Zone 12N**
**NBU 922-35F PAD**
**NBU 922-35D4CS**

**OH**

**Plan: PLAN #1 PRELIMINARY**

# Standard Planning Report

**08 August, 2013**

Anadarko Petroleum Corporation

RECEIVED: October 25, 2013

Scientific Drilling

# SDI
## Planning Report

Anadarko Petroleum Corporation

| | | | |
|---|---|---|---|
| **Database:** | EDM5000-RobertS-Local | **Local Co-ordinate Reference:** | Well NBU 922-35D4CS |
| **Company:** | US ROCKIES REGION PLANNING | **TVD Reference:** | GL 4988 & KB 4 @ 4992.00ft (ASSUMED) |
| **Project:** | UTAH - UTM (feet), NAD27, Zone 12N | **MD Reference:** | GL 4988 & KB 4 @ 4992.00ft (ASSUMED) |
| **Site:** | NBU 922-35F PAD | **North Reference:** | True |
| **Well:** | NBU 922-35D4CS | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | PLAN #1 PRELIMINARY | | |

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

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

**Site** NBU 922-35F PAD, SECTION 35 T9S R22E

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 14,527,961.62 usft | **Latitude:** | 39.9943506 |
| **From:** | Lat/Long | **Easting:** | 2,085,887.24 usft | **Longitude:** | -109.4095319 |
| **Position Uncertainty:** | 0.00 ft | **Slot Radius:** | 13.200 in | **Grid Convergence:** | 1.02 ° |

**Well** NBU 922-35D4CS, 1999 FNL 1804 FWL

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | -13.48 ft | **Northing:** | 14,527,947.88 usft | **Latitude:** | 39.9943136 |
| | **+E/-W** | -14.85 ft | **Easting:** | 2,085,872.63 usft | **Longitude:** | -109.4095849 |
| **Position Uncertainty** | | 0.00 ft | **Wellhead Elevation:** | | **Ground Level:** | 4,988.00 ft |

**Wellbore** OH

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | IGRF2010 | 2013/01/23 | 10.83 | 65.84 | 52,178 |

**Design** PLAN #1 PRELIMINARY

**Audit Notes:**

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

| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
|---|---|---|---|---|
| | 0.00 | 0.00 | 0.00 | 308.79 |

**Plan Sections**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,300.00 | 20.00 | 308.79 | 1,279.82 | 108.24 | -134.66 | 2.00 | 2.00 | 0.00 | 308.79 | |
| 3,917.09 | 20.00 | 308.79 | 3,739.08 | 669.02 | -832.32 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4,917.09 | 0.00 | 0.00 | 4,718.89 | 777.26 | -966.98 | 2.00 | -2.00 | 0.00 | 180.00 | |
| 9,133.20 | 0.00 | 0.00 | 8,935.00 | 777.26 | -966.98 | 0.00 | 0.00 | 0.00 | 0.00 | PBHL_NBU 922-35D4 |



RECEIVED: October 25, 2013

Scientific Drilling

# SDI
## Planning Report

Anadarko Petroleum Corporation

| | | | |
|---|---|---|---|
| **Database:** | EDM5000-RobertS-Local | **Local Co-ordinate Reference:** | Well NBU 922-35D4CS |
| **Company:** | US ROCKIES REGION PLANNING | **TVD Reference:** | GL 4988 & KB 4 @ 4992.00ft (ASSUMED) |
| **Project:** | UTAH - UTM (feet), NAD27, Zone 12N | **MD Reference:** | GL 4988 & KB 4 @ 4992.00ft (ASSUMED) |
| **Site:** | NBU 922-35F PAD | **North Reference:** | True |
| **Well:** | NBU 922-35D4CS | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | PLAN #1 PRELIMINARY | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 200.00 | 0.00 | 0.00 | 200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Start Build 2.00** | | | | | | | | | |
| 400.00 | 2.00 | 308.79 | 399.98 | 1.09 | -1.36 | 1.75 | 2.00 | 2.00 | 0.00 |
| 500.00 | 4.00 | 308.79 | 499.84 | 4.37 | -5.44 | 6.98 | 2.00 | 2.00 | 0.00 |
| 600.00 | 6.00 | 308.79 | 599.45 | 9.83 | -12.23 | 15.69 | 2.00 | 2.00 | 0.00 |
| 700.00 | 8.00 | 308.79 | 698.70 | 17.47 | -21.73 | 27.88 | 2.00 | 2.00 | 0.00 |
| 800.00 | 10.00 | 308.79 | 797.47 | 27.27 | -33.92 | 43.52 | 2.00 | 2.00 | 0.00 |
| 900.00 | 12.00 | 308.79 | 895.62 | 39.22 | -48.79 | 62.60 | 2.00 | 2.00 | 0.00 |
| 1,000.00 | 14.00 | 308.79 | 993.06 | 53.31 | -66.33 | 85.10 | 2.00 | 2.00 | 0.00 |
| 1,100.00 | 16.00 | 308.79 | 1,089.64 | 69.53 | -86.50 | 110.98 | 2.00 | 2.00 | 0.00 |
| 1,200.00 | 18.00 | 308.79 | 1,185.27 | 87.84 | -109.28 | 140.21 | 2.00 | 2.00 | 0.00 |
| 1,293.81 | 19.88 | 308.79 | 1,274.00 | 106.92 | -133.01 | 170.66 | 2.00 | 2.00 | 0.00 |
| **GREEN RIVER** | | | | | | | | | |
| 1,300.00 | 20.00 | 308.79 | 1,279.82 | 108.24 | -134.66 | 172.77 | 2.00 | 2.00 | 0.00 |
| **Start 2617.09 hold at 1300.00 MD** | | | | | | | | | |
| 1,400.00 | 20.00 | 308.79 | 1,373.78 | 129.67 | -161.32 | 206.97 | 0.00 | 0.00 | 0.00 |
| 1,500.00 | 20.00 | 308.79 | 1,467.75 | 151.09 | -187.97 | 241.17 | 0.00 | 0.00 | 0.00 |
| 1,583.27 | 20.00 | 308.79 | 1,546.00 | 168.94 | -210.17 | 269.65 | 0.00 | 0.00 | 0.00 |
| **BIRDSNEST** | | | | | | | | | |
| 1,600.00 | 20.00 | 308.79 | 1,561.72 | 172.52 | -214.63 | 275.37 | 0.00 | 0.00 | 0.00 |
| 1,700.00 | 20.00 | 308.79 | 1,655.69 | 193.95 | -241.29 | 309.58 | 0.00 | 0.00 | 0.00 |
| 1,800.00 | 20.00 | 308.79 | 1,749.66 | 215.38 | -267.95 | 343.78 | 0.00 | 0.00 | 0.00 |
| 1,900.00 | 20.00 | 308.79 | 1,843.63 | 236.80 | -294.61 | 377.98 | 0.00 | 0.00 | 0.00 |
| 2,000.00 | 20.00 | 308.79 | 1,937.60 | 258.23 | -321.26 | 412.18 | 0.00 | 0.00 | 0.00 |
| 2,072.79 | 20.00 | 308.79 | 2,006.00 | 273.83 | -340.67 | 437.08 | 0.00 | 0.00 | 0.00 |
| **MAHOGANY** | | | | | | | | | |
| 2,100.00 | 20.00 | 308.79 | 2,031.57 | 279.66 | -347.92 | 446.38 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 20.00 | 308.79 | 2,125.54 | 301.09 | -374.58 | 480.59 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 20.00 | 308.79 | 2,219.51 | 322.52 | -401.24 | 514.79 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 20.00 | 308.79 | 2,313.48 | 343.94 | -427.89 | 548.99 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 20.00 | 308.79 | 2,407.45 | 365.37 | -454.55 | 583.19 | 0.00 | 0.00 | 0.00 |
| 2,551.67 | 20.00 | 308.79 | 2,456.00 | 376.44 | -468.33 | 600.86 | 0.00 | 0.00 | 0.00 |
| **8 5/8"** | | | | | | | | | |
| 2,600.00 | 20.00 | 308.79 | 2,501.42 | 386.80 | -481.21 | 617.39 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 20.00 | 308.79 | 2,595.39 | 408.23 | -507.87 | 651.60 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 20.00 | 308.79 | 2,689.35 | 429.65 | -534.53 | 685.80 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 20.00 | 308.79 | 2,783.32 | 451.08 | -561.18 | 720.00 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 20.00 | 308.79 | 2,877.29 | 472.51 | -587.84 | 754.20 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 20.00 | 308.79 | 2,971.26 | 493.94 | -614.50 | 788.40 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 20.00 | 308.79 | 3,065.23 | 515.36 | -641.16 | 822.61 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 20.00 | 308.79 | 3,159.20 | 536.79 | -667.81 | 856.81 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 20.00 | 308.79 | 3,253.17 | 558.22 | -694.47 | 891.01 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 20.00 | 308.79 | 3,347.14 | 579.65 | -721.13 | 925.21 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 20.00 | 308.79 | 3,441.11 | 601.07 | -747.79 | 959.41 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 20.00 | 308.79 | 3,535.08 | 622.50 | -774.45 | 993.62 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 20.00 | 308.79 | 3,629.05 | 643.93 | -801.10 | 1,027.82 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 20.00 | 308.79 | 3,723.02 | 665.36 | -827.76 | 1,062.02 | 0.00 | 0.00 | 0.00 |
| 3,917.09 | 20.00 | 308.79 | 3,739.08 | 669.02 | -832.32 | 1,067.87 | 0.00 | 0.00 | 0.00 |
| **Start Drop -2.00** | | | | | | | | | |
| 4,000.00 | 18.34 | 308.79 | 3,817.39 | 686.08 | -853.54 | 1,095.09 | 2.00 | -2.00 | 0.00 |



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**SDI**
Planning Report

Anadarko Petroleum Corporation

| | | | |
|---|---|---|---|
| **Database:** | EDM5000-RobertS-Local | **Local Co-ordinate Reference:** | Well NBU 922-35D4CS |
| **Company:** | US ROCKIES REGION PLANNING | **TVD Reference:** | GL 4988 & KB 4 @ 4992.00ft (ASSUMED) |
| **Project:** | UTAH - UTM (feet), NAD27, Zone 12N | **MD Reference:** | GL 4988 & KB 4 @ 4992.00ft (ASSUMED) |
| **Site:** | NBU 922-35F PAD | **North Reference:** | True |
| **Well:** | NBU 922-35D4CS | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | PLAN #1 PRELIMINARY | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 4,100.00 | 16.34 | 308.79 | 3,912.83 | 704.75 | -876.77 | 1,124.90 | 2.00 | -2.00 | 0.00 |
| 4,200.00 | 14.34 | 308.79 | 4,009.27 | 721.32 | -897.39 | 1,151.35 | 2.00 | -2.00 | 0.00 |
| 4,300.00 | 12.34 | 308.79 | 4,106.56 | 735.78 | -915.37 | 1,174.43 | 2.00 | -2.00 | 0.00 |
| 4,400.00 | 10.34 | 308.79 | 4,204.60 | 748.10 | -930.70 | 1,194.09 | 2.00 | -2.00 | 0.00 |
| 4,500.00 | 8.34 | 308.79 | 4,303.27 | 758.27 | -943.35 | 1,210.32 | 2.00 | -2.00 | 0.00 |
| 4,590.49 | 6.53 | 308.79 | 4,393.00 | 765.61 | -952.48 | 1,222.04 | 2.00 | -2.00 | 0.00 |
| **WASATCH** | | | | | | | | | |
| 4,600.00 | 6.34 | 308.79 | 4,402.45 | 766.28 | -953.31 | 1,223.10 | 2.00 | -2.00 | 0.00 |
| 4,700.00 | 4.34 | 308.79 | 4,502.01 | 772.11 | -960.57 | 1,232.41 | 2.00 | -2.00 | 0.00 |
| 4,800.00 | 2.34 | 308.79 | 4,601.83 | 775.76 | -965.11 | 1,238.24 | 2.00 | -2.00 | 0.00 |
| 4,900.00 | 0.34 | 308.79 | 4,701.80 | 777.23 | -966.94 | 1,240.58 | 2.00 | -2.00 | 0.00 |
| 4,917.09 | 0.00 | 0.00 | 4,718.89 | 777.26 | -966.98 | 1,240.63 | 2.00 | -2.00 | 0.00 |
| **Start 4216.11 hold at 4917.09 MD** | | | | | | | | | |
| 5,000.00 | 0.00 | 0.00 | 4,801.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 0.00 | 0.00 | 4,901.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 0.00 | 0.00 | 5,001.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 0.00 | 0.00 | 5,101.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 0.00 | 0.00 | 5,201.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 0.00 | 0.00 | 5,301.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 0.00 | 0.00 | 5,401.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 0.00 | 0.00 | 5,501.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 0.00 | 0.00 | 5,601.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 0.00 | 0.00 | 5,701.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 0.00 | 0.00 | 5,801.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 0.00 | 0.00 | 5,901.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 0.00 | 0.00 | 6,001.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 0.00 | 0.00 | 6,101.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 6,400.00 | 0.00 | 0.00 | 6,201.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 0.00 | 0.00 | 6,301.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 6,600.00 | 0.00 | 0.00 | 6,401.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 6,700.00 | 0.00 | 0.00 | 6,501.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 6,800.00 | 0.00 | 0.00 | 6,601.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 6,887.20 | 0.00 | 0.00 | 6,689.00 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| **MESAVERDE** | | | | | | | | | |
| 6,900.00 | 0.00 | 0.00 | 6,701.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 7,000.00 | 0.00 | 0.00 | 6,801.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 7,100.00 | 0.00 | 0.00 | 6,901.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 7,200.00 | 0.00 | 0.00 | 7,001.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 7,300.00 | 0.00 | 0.00 | 7,101.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 7,400.00 | 0.00 | 0.00 | 7,201.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 0.00 | 0.00 | 7,301.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 7,600.00 | 0.00 | 0.00 | 7,401.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 0.00 | 0.00 | 7,501.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 0.00 | 0.00 | 7,601.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 0.00 | 0.00 | 7,701.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 0.00 | 0.00 | 7,801.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 0.00 | 0.00 | 7,901.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 0.00 | 0.00 | 8,001.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 0.00 | 0.00 | 8,101.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 0.00 | 0.00 | 8,201.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 0.00 | 0.00 | 8,301.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 8,600.00 | 0.00 | 0.00 | 8,401.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 0.00 | 0.00 | 8,501.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |



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Scientific Drilling

# SDI
## Planning Report

Anadarko Petroleum Corporation

| | | | |
|---|---|---|---|
| **Database:** | EDM5000-RobertS-Local | **Local Co-ordinate Reference:** | Well NBU 922-35D4CS |
| **Company:** | US ROCKIES REGION PLANNING | **TVD Reference:** | GL 4988 & KB 4 @ 4992.00ft (ASSUMED) |
| **Project:** | UTAH - UTM (feet), NAD27, Zone 12N | **MD Reference:** | GL 4988 & KB 4 @ 4992.00ft (ASSUMED) |
| **Site:** | NBU 922-35F PAD | **North Reference:** | True |
| **Well:** | NBU 922-35D4CS | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | PLAN #1 PRELIMINARY | | |

### 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) |
|---|---|---|---|---|---|---|---|---|---|
| 8,800.00 | 0.00 | 0.00 | 8,601.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 8,900.00 | 0.00 | 0.00 | 8,701.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 0.00 | 0.00 | 8,801.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 9,100.00 | 0.00 | 0.00 | 8,901.80 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| 9,133.19 | 0.00 | 0.00 | 8,934.99 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| **SEGO** | | | | | | | | | |
| 9,133.20 | 0.00 | 0.00 | 8,935.00 | 777.26 | -966.98 | 1,240.63 | 0.00 | 0.00 | 0.00 |
| **TD at 9133.20 - PBHL_NBU 922-35D4CS** | | | | | | | | | |

### Design Targets

| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| PBHL_NBU 922-35D4C - plan hits target center - Circle (radius 25.00) | 0.00 | 0.00 | 8,935.00 | 777.26 | -966.98 | 14,528,707.76 | 2,084,891.95 | 39.9964476 | -109.4130367 |

### Casing Points

| Measured Depth (ft) | Vertical Depth (ft) | Name | Casing Diameter (in) | Hole Diameter (in) |
|---|---|---|---|---|
| 2,551.67 | 2,456.00 | 8 5/8" | 8.625 | 11.000 |

### Formations

| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|---|---|---|---|---|---|
| 1,293.81 | 1,274.00 | GREEN RIVER | | | |
| 1,583.27 | 1,546.00 | BIRDSNEST | | | |
| 2,072.79 | 2,006.00 | MAHOGANY | | | |
| 4,590.49 | 4,393.00 | WASATCH | | | |
| 6,887.20 | 6,689.00 | MESAVERDE | | | |
| 9,133.19 | 8,934.99 | SEGO | | 0.00 | |

### Plan Annotations

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates +N/-S (ft) | Local Coordinates +E/-W (ft) | Comment |
|---|---|---|---|---|
| 300.00 | 300.00 | 0.00 | 0.00 | Start Build 2.00 |
| 1,300.00 | 1,279.82 | 108.24 | -134.66 | Start 2617.09 hold at 1300.00 MD |
| 3,917.09 | 3,739.08 | 669.02 | -832.32 | Start Drop -2.00 |
| 4,917.09 | 4,718.89 | 777.26 | -966.98 | Start 4216.11 hold at 4917.09 MD |
| 9,133.20 | 8,935.00 | 777.26 | -966.98 | TD at 9133.20 |



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

## NBU 922-35F Pad

**NBU 922-35C1CS**

| | | |
|---|---|---|
| Surface: | 1965 FNL / 1840 FWL | SENW |
| BHL: | 496 FNL / 2194 FWL | NENW |

**NBU 922-35C4BS**

| | | |
|---|---|---|
| Surface: | 1958 FNL / 1848 FWL | SENW |
| BHL: | 749 FNL / 2150 FWL | NENW |

**NBU 922-35C4CS**

| | | |
|---|---|---|
| Surface: | 1951 FNL / 1855 FWL | SENW |
| BHL: | 1081 FNL / 2150 FWL | NENW |

**NBU 922-35D1CS**

| | | |
|---|---|---|
| Surface: | 1985 FNL / 1818 FWL | SENW |
| BHL: | 524 FNL / 820 FWL | NWNW |

**NBU 922-35D4BS**

| | | |
|---|---|---|
| Surface: | 1992 FNL / 1811 FWL | SENW |
| BHL: | 875 FNL / 821 FWL | NWNW |

**NBU 922-35D4CS**

| | | |
|---|---|---|
| Surface: | 1999 FNL / 1804 FWL | SENW |
| BHL: | 1220 FNL / 836 FWL | NWNW |

**NBU 922-35E1BS**

| | | |
|---|---|---|
| Surface: | 2005 FNL / 1796 FWL | SENW |
| BHL: | 1542 FNL / 842 FWL | SWNW |

**NBU 922-35E1CS**

| | | |
|---|---|---|
| Surface: | 2012 FNL / 1789 FWL | SENW |
| BHL: | 1883 FNL / 828 FWL | SWNW |

**NBU 922-35E4BS**

| | | |
|---|---|---|
| Surface: | 2019 FNL / 1781 FWL | SENW |
| BHL: | 2218 FNL / 821 FWL | SENW |

**NBU 922-35E4CS**

| | | |
|---|---|---|
| Surface: | 2026 FNL / 1774 FWL | SENW |
| BHL: | 2553 FNL / 814 FWL | SWNW |

**NBU 922-35F1BS**

| | | |
|---|---|---|
| Surface: | 1944 FNL / 1863 FWL | SENW |
| BHL: | 1414 FNL / 2150 FWL | SENW |

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| | | |
|---|---|---|
| | **NBU 922-35F1CS** | |
| Surface: | 1938 FNL / 1870 FWL | SENW |
| BHL: | 1747 FNL / 2150 FWL | SENW |
| | **NBU 922-35F4BS** | |
| Surface: | 1972 FNL / 1833 FWL | SENW |
| BHL: | 2079 FNL / 2150 FWL | SENW |
| | **NBU 922-35F4CS** | |
| Surface: | 1978 FNL / 1826 FWL | SENW |
| BHL: | 2412 FNL / 2150 FWL | SENW |
| | **NBU 922-35L1BS** | |
| Surface: | 2032 FNL / 1767 FWL | SENW |
| BHL: | 2426 FSL / 825 FWL | NWSW |

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

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

The first on-site meeting was held on November 6, 2012. Present were:

- Aaron Roe, Tyler Cox and Dave Gordon - BLM;
- Mitch Batty - Timberline Engineering & Land Surveying, Inc.;
- Randy Townley, Rod Anderson, Charles Chase, Chantill Recker, Lindsey Frazier and Cara Mahler - Kerr-McGee;
- Jacob Dunham - 609 Consulting Inc.;
- Alan Rabinoff- ICF International

The second on-site meeting was held on March 14, 2013. Present were:

- Aaron Roe, Tyler Cox and Dave Gordon - BLM;
- Mitch Batty - Timberline Engineering & Land Surveying, Inc.;
- Cara Mahler, Tom Lee, Sandi Mitchell, Doreen Green, Doyle Holmes, Chantill Recker, Howdy Brown and Hal Blanchard - Kerr-McGee;

**A. Existing Roads:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Please refer to Topo B for existing roads.

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

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

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

±190' (0.04 miles) – Section 35 T9S R22E (SE/4 NW/4) – On-lease UTU-010954-A, from the edge of pad to the T-intersection in SE/4 NW/4. Please refer to Topo B.

**C. Location of Existing Wells:**

Please refer to Topo C for exiting wells.

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

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

This pad will be a brand new location and there are no existing wells on location. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

**GAS GATHERING**

*Please refer to Exhibit A and Topo D2- Pad and Pipeline Detail.*

The total gas gathering pipeline distance from the meter to the tie in point is ±5,410' and the individual segments are broken up as follows:

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

±205' (0.04 miles) – Section 35 T9S R22E (SE/4 NW/4) – On-lease UTU-010954-A, BLM surface, New 16" buried gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

±310' (0.06 miles) – Section 35 T9S R22E (SE/4 NW/4) – On-lease UTU-010954-A, BLM surface, New 16" buried gas gathering pipeline from the edge of the pad tie-in to the proposed buried 16" gas gathering pipeline ROW in progress at the NBU 922-35K Pad intersection. Please refer to Exhibit A, Line 5.

**The following segments require a ROW. Anadarko Uintah Midstream (AUM) will apply for an SF-299/POD under separate cover. Listed below is the gas gathering pipeline distances:**

±4,365' (0.8 miles) – Section 35 T9S R22E (SE/4 NW/4) – On-lease UTU-010954-A, BLM surface, New 16" buried gas gathering pipeline from the NBU 922-35K Pad pipeline intersection traveling east to the eastern lease boundary. Please refer to Exhibit A- Green highlighted.

±530' (0.1 miles) – Section 36 T9S R22E (SW/4 NW/4) – On-lease ST UT ML-22650, State surface, New 16" buried gas gathering pipeline from the western lease boundary to tie into the existing buried 16" gas gathering pipeline at the NBU 922-36E Pad. Please refer to Exhibit A- Green highlighted.

**LIQUID GATHERING**

*Please refer to Exhibit B and Topo D2- Pad and Pipeline Detail.*

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The total liquid gathering pipeline distance from the separator to the tie in point is ±5,410' and the individual segments are broken up as follows:

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

±205' (0.04 miles) – Section 35 T9S R22E (SE/4 NW/4) – On-lease UTU-010954-A, BLM surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

±310' (0.06 miles) – Section 35 T9S R22E (SE/4 NW/4) – On-lease UTU-010954-A, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad tie-in to the proposed buried 6" liquid gathering pipeline at the NBU 922-35K Pad intersection. Please refer to Exhibit B, Line 19.

±4,365' (0.8 miles) – Section 35 T9S R22E (SE/4 NW/4) – On-lease UTU-010954-A, BLM surface, New 6" buried liquid gathering pipeline from the NBU 922-35K Pad pipeline intersection traveling east to the eastern lease boundary. A segment of this pipeline travels cross country, 540' (Exhibit B, Line 5). This pipeline will be used concurrently with the NBU 922-35I, NBU 922-35O, NBU 922-35N, NBU 922-35K, NBU 922-34H, NBU 922-34H4, NBU 922-35G and NBU 922-35H pads. Please refer to Exhibit B, Lines 3-7.

**Kerr-McGee will apply for the appropriate State easements under separate cover. Listed below is the liquid gathering pipeline distances:**

±530' (0.1 miles) – Section 36 T9S R22E (SW/4 NW/4) – On-lease ST UT ML-22650, State surface, New 6" buried liquid gathering pipeline from the western lease boundary to tie into the existing buried 6" liquid gathering pipeline at the NBU 922-36E Pad. Please refer to Exhibit B, Lines 1 and 2.

**Pipeline Gathering Construction**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

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

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Please refer to Exhibit C for ACTS Lines

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

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

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

**F. Construction Materials:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**G. Methods for Handling Waste:**

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Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Materials Management**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**H. Ancillary Facilities:**

No additional ancillary facilities are planned for this location.

**I. Well Site Layout:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**J. Plans for Surface Reclamation:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Interim Reclamation**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Final Reclamation**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Measures Common to Interim and Final Reclamation**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Weed Control**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Monitoring**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**K. Surface/Mineral Ownership:**

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

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**L. Other Information:**

**Cultural and Paleontological Resources**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Resource Reports:**

A Class I literature survey was completed on April 25, 2013 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 13-077.

A paleontological reconnaissance survey was completed on October 27, 2012 by SWCA Environmental Consultants. For additional details please refer to report UT13-14314-88.

Biological field survey was completed on September 20, 2012 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-860.

**Proposed Action Annual Emissions Tables:**

Please refer to the Appendix in the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

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

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

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

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

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

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

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

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

Gina T. Becker

Gina T.Becker

August 28, 2013

Date

**October 31, 2012**

**Kerr-McGee Oil & Gas Onshore L.P., wholly owned subsidiary of Anadarko Petroleum Corporation, Standard Operating Practice Agreement for the Greater Natural Buttes Field**

# Drilling Program

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations, Onshore Oil and Gas Orders, and the approved plan of operation. As Operator, Kerr-McGee, is fully responsible for actions of subcontractors. A copy of these Standard Operating Practices will be furnished to the field representatives to insure compliance.

**BLM Notification Requirements:**

**Location Constructions**: At least 48 hours prior to construction of location and access roads including notification, if applicable, to other surface management agencies, such as Ute Tribe Energy and Mineral Department, State of Utah, or private surface owner(s).

**Location Completion:** Prior to moving on the drilling rig

**Spud Notice:** At least 24 hours prior to spudding the well.

**Casing String and Cementing:** At least 24 hours prior to running casing and cementing all casing.

**BOP & Related Equipment Tests:** At least 24 hours prior to initiating pressure tests.

**First Production Notice:** Within 5 days after a new well begins production; or, within 5 days of when production resumes after a well has been off production for more than 90 days.

Details of the on-site inspection, including date, time, weather conditions, and individuals present, will be submitted with the site-specific Application for Permit to Drill (APD).

**1. Estimated Tops of Important Geologic Markers:**

Formation and depths will be submitted with site-specific APDs.

**2. Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**



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Formation and depths will be submitted with site-specific APDs.

**3. Pressure Control Equipment:**

Pressure Control Equipment Schematic is attached as appendix F. Any variance will be included in the site-specific APDs.

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

Proposed casing and cementing will be submitted with site-specific APDs.

**5. Drilling Fluids Program:**

Proposed drilling fluids will be submitted with site-specific APDs.

**6. Evaluation Program:**

Evaluation program will be submitted with site-specific APDs.

**7. Abnormal Conditions:**

Any abnormal condition will be submitted with site specific APDs.

**8. Anticipated Starting Dates:**

Drilling is planned to commence within the administrative period of an approved application.

**9. Variances:**

Kerr-McGee respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2:

**Variance for air drilling**

An air rig is only used by Kerr-McGee 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.

KMG typically 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



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creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

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

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill an 11inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with an 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

**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 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, will supply the water to the well bore.

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

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 locations.

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



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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 are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

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

**Variance for FIT Requirements**

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part B1, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). These wells are not exploratory well and are being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

**10. Other Information:**

Drilling Program will be submitted with site-specific APDs.

# SURFACE USE PROGRAM

**A. Existing Roads:**

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

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

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



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construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

Within individual APDs, please refer to Topo B, for existing roads.

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

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

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

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

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities may be constructed to divert surface water runoff. Drainage features, including culverts, may be constructed or installed prior to commencing other operations, including drilling for facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s). Drainage features will meet the standards of the BLM's Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition (Gold Book) (USDI and USDA, 2007).

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



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

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

For individual APDs, refer to Topo B.

**C. Location of Existing Wells:**

For individual APDs, refer to Topo C

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

The following will apply if the well is productive: Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee). Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad.

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

**Gas Gathering**

The gas gathering pipeline is made of steel line pipe, surface is bare pipe and buried is of coated with fusion bonded epoxy coating (or equivalent). The individual segments will be denoted in site-specific APDs.

**Liquid Gathering**

The individual segments will be denoted in site-specific APDs.



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**Pipeline Gathering Construction**

Gas gathering pipeline(s,) gas lift, or liquids pipelines may be constructed to lie on the surface or be buried. The road and/or well pad may be utilized for construction activities and staging when the pipeline is adjacent to the road or well pad. The area of disturbance during construction from the edge of road or well pad will typically be 30 feet in width. Where pipelines run cross country, the width of disturbance will typically be 45 feet for buried lines and 30 feet for surface lines. In addition, Kerr-McGee requests for a permanent 30 feet disturbance width that will be maintained for the portion adjacent to the road. The need for the 30' permanent disturbance width is for maintenance and repairs. Cross country permanent disturbance width also are required to be 30ft.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. If installation cannot occur on the exact location, pipe may be constructed parallel and adjacent to a road and lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment. Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2 inches (typically fuel gas lines) to 24 inches (typically transportation lines) in diameter, but 6 to 16 inches is typical for a buried gas line. The diameter of liquids pipelines may vary from 2 inches to 12 inches, but 6 inches is the typical diameter. Gas lift lines may vary from 2 to 12 inches in diameter, but 6-inch diameter pipes are generally used for gas lift. If two or more pipelines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

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

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



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

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

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

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

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

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

For individual APDs, refer to Exhibit C for the proposed placement of the ACTS temporary lines.

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



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If Kerr-McGee does not use a closed loop system, it will construct a drilling reserve pit to contain drill cuttings and for use in completion operations. Depending on the location of the pit, its relation to future drilling locations, the reserve/completion pit may be utilized for the completion of the wells on that pad and/or be used as part of our ACTS system. Kerr-McGee will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of completion fluids by utilizing existing reserve pits, or newly constructed completion pits, as well as temporary, surface-laid aluminum liquids transfer lines between pad locations. The pit will be refurbished when a traditional drill pit is used including mix and pile up drill cuttings with dry dirt, bury the original liner in the pit and walk bottom of pit with cat. Kerr-McGee will reline the pit with a 30 mil liner and double felt padding. The refurbished pit will be the same size or smaller as specified in the originally approved ROW/APD. The pit refurbish will be done in a normal procedure and there will be no modification to the pit.

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

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

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

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. Kerr-McGee will keep the netted pit open for one year from first production of the first produced well on the pad. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other completion jobs in the area. After one year Kerr-McGee will backfill the pit and reclaim. If the pit is not needed for an entire year it will be backfilled and reclaimed earlier. Kerr-McGee understands that due to the temporary nature of this system, BLM considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BLM.

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

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

Green River: 1087’ FSL & 1020’ FEL, Sec. 15 – T2N – R22E



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RN Industries:

| | |
|---|---|
| High Pressure: | 705' FNL & 675' FWL, Sec. 1 – T6S – R22E |
| | 1057' FNL & 390' FWL, Sec. 1 – T6S – R22E |
| | 1239' FNL & 52' FEL, Sec. 6 – T6S – R23E |
| White River: | 501' FNL & 1676' FEL, Sec. 9 – T8S – R20E |
| | 471' FNL & 1676' FEL, Sec. 9 – T8S – R20E |
| | 900' FNL & 550' FEL, Sec. 35 – T9S – R22E |
| | 200' FNL & 950' FEL, Sec. 2 – T10S – R22E |
| | 275' FSL & 2275' FEL, Sec. 2 – T10S – R22E |
| | 122' FSL & 1350' FEL, Sec. 11 – T10S – R22E |
| | 1670' FSL & 500' FEL, Sec. 12 – T10S – R22E |
| | 959' FNL & 705' FEL, Sec. 13 – T10S – R22E |
| | 600' FSL & 900' FEL, Sec. 13 – T10S – R22E |
| Water Plant: | 481' FNL & 2176' FEL, Sec. 9 – T8S – R20E |
| | 471' FNL & 2176' FEL, Sec. 9 – T8S – R20E |
| Frog Pond: | 4820' FNL & 1200' FWL, Sec. 33 – T8S – R20E |
| | 4850' FNL & 700' FWL, Sec. 33 – T8S – R20E |
| Blue Tanks: | 200' FNL & 405' FEL, Sec. 32 – T4S – R3E |

Water will be hauled to location over the roads marked in the individual APD's Maps A and B.

**F. Construction Materials:**

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

**G. Methods for Handling Waste:**

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

Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of CERCLA, Section 102 B. If a



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release involves petroleum hydrocarbons or produced liquids, Kerr-McGee will comply with the notification requirements of NTL-3A.

Drill cuttings and/or drilling fluids may be contained in a reserve/completion pit whether a closed loop system is or isn't utilized and cuttings may be buried in the pit(s) upon closure. Unless specifically approved by the BLM, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

If utilizing a closed loop system, drill cuttings and/or drilling fluids may be stored in above ground containers while on the location. All used drilling fluids may be hauled to Anadarko Petroleum Corporation's Mud Plant where it may be recycled for use at future well locations, hauled to a permitted disposal facility, or solidified for incorporation into the pad during interim reclamation practices. Drill cuttings from a closed loop system may be either hauled to an approved Utah Department of Oil, Gas and Mining Commercial Landfarm Disposal Facility or incorporated into the pad location during interim reclamation.

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

The reserve and/or completion pit will be lined with a synthetic material 30 mil or thicker liner. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. After evaporation and when dry, the reserve pit liners will be cut off, ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per Onshore Order Number 7 (OSO 7). Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Revisions to the water source or method of transportation will be subject to written approval from the BLM.



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

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

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

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced or netted to prevent wildlife or livestock entry.

Maximum distance between fence posts shall be no greater than 16 feet. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

**Materials Management**

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

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. Kerr-McGee maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or



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substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time. Chemicals meeting the criteria for being an acutely hazardous material/substance or meet the quantities criteria per BLM Instruction Memorandum No. 93-344 will not be used. Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities (crude oil/condensate, produced water). They may also be kept in limited quantities on drilling sites (barite, diesel fuel, cement, cottonseed hulls etc.) for short periods of time during drilling or completion activities.

Any produced water separated from recoverable condensate during well operations will be contained in a water tank and will then be transported by pipeline and/or truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E
NBU #159 in Sec. 35 T9S R21E
Ace Oilfield in Sec. 2 T6S R20E
MC&MC in Sec. 12 T6S R19E
Pipeline Facility in Sec. 36 T9S R20E
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E
Bonanza Evaporation Pond in Sec. 2 T10S R23E

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

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

**H. Ancillary Facilities:**

If additional ancillary facilities are planned they will be depicted on site specific APDs.

**I. Well Site Layout:**

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit (for closed loop or non-closed loop operations), access road ingress/egress points, drilling rig,



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dikes/ditches, existing wells/infrastructure, proposed cuts and fills, and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable.

Site-specific conditions may require slight deviation in actual equipment depending on whether a closed loop system is used. Surface distance may be less if using closed loop. But in either case, the area of disturbance will not exceed the maximum disturbance outlined in the attached exhibits of the individual APDs.

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

## J. Plans for Surface Reclamation:

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

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

### Interim Reclamation

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

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. Stockpiled drill cuttings may also be incorporated into the spoils, recontoured, and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface



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will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

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

**Final Reclamation**

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

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as close as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring the site and prior to replacing topsoil, final grading and site preparation will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and the surface soil material will be uniformly pitted with longitudinal depressions perpendicular to the natural flow of water where practical. Following site preparation, topsoil will be spread on the location and prepared for seeding.

Reclamation of roads will be performed at the discretion of the BLM. All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 to 24 inches where practical, re-contoured to approximate the original contour of the ground and seeded in accordance with the seeding specifications of the BLM.

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

**Measures Common to Interim and Final Reclamation**

Soil tillage will be conducted using a disk in areas needing additional seedbed preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeding, compacted areas will be scarified by ripping or chiseling to loosen



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compacted soils, promote water infiltration, and improve soil aeration and root penetration.

Seeding will occur in the fall and will typically be accomplished through the use of a no-till rangeland style seed drill with a "picker box." Additionally an imprinter seeder may be used. An imprinter seeder creates divots to roughen the surface and collect moisture to aid in seed germination. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The seed mixes will be selected from a list provided by or approved by the BLM, or a specific seed mix will be proposed by Kerr-McGee to the BLM and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be maintained by Kerr-McGee. Every effort will be made to obtain "cheat grass free seed" and noxious weed free seed.

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

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

| **Natural Buttes Area Mix Option 1:** | **Pure Live Seed lbs/acre** |
|---|---|
| Indian Ricegrass (Nezpar) | 3 |
| Sandberg bluegrass | 0.75 |
| Bottlebrush squirreltail | 1 |
| Great Basin Wildrye | 0.5 |
| Crested wheatgrass (Ephraim) | 1.5 |
| Winterfat | 0.25 |
| Shadscale | 1.5 |
| Four-wing saltbush | 0.75 |
| Forage Kochia | 0.25 |
| **Total** | **9.5** |

| **Natural Buttes Area Mix Option 2:** | **Pure Live Seed lbs/acre** |
|---|---|
| Great Basin Wildrye | 2.5 |
| Indian Ricegrass (Nezpar) | 0.5 |



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| | |
|---|---|
| Crested Wheatgrass | 2 |
| Siberian Wheatgrass | 2 |
| Bottlebrush Squirreltail | 1 |
| Munro Globemallow | 0.5 |
| Palmer Penstemon | 0.1 |
| Rocky Mtn beeplant | 0.5 |
| Western yarrow | 0.1 |
| Shadscale | 0.5 |
| Forage Kochia | 0.5 |
| **Total** | **10.2** |

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

**Weed Control**

All weed management will be done in accordance with the Vernal BLM Surface Disturbance Weed Policy. Noxious weeds will be controlled, as applicable, on project areas. Monitoring and management of noxious and/or invasive weeds of concern will be completed annually until the project is deemed successfully reclaimed by the surface management agency and/or owner according to the Anadarko Integrated Weed Management Plan. Noxious weed infestations will be mapped using a GPS unit and submitted to the BLM with information required in the Vernal BLM Surface Disturbance Weed Policy. If herbicide is to be applied it will be done according to an approved Pesticide Use Proposal (PUP), inclusive of applicable locations. All pesticide applications will be recorded using a Pesticide Application Record (PAR) and will be submitted along with a Pesticide Use Report (PUR) annually prior to Dec. 31.

**Monitoring**

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



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the reclaimed area reaches 75% basal cover of desirable vegetation when compared to the reference site. (Green River District Reclamation Guidelines).

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

**K. Surface/Mineral Ownership**:

Depicted on site specific APDs.

**L. Other Information:**

**Cultural and Paleontological Resources**

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

**Resource Reports**

Appropriate archaeological and paleontological reconnaissance surveys and biological field surveys will be completed and provide to the BLM for individual APDs.

**Proposed Action Annual Emissions Tables:**

Appendix A through E contains the emission table per pad based on well count.

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

Depicted on site specific APDs.



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## Appendix A:

### Proposed Action Annual Emissions Tables: 4 Well Pad

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

| Pollutant | Development | Production | Total |
|---|---|---|---|
| NOx | 3.8 | 1.29 | 5.09 |
| CO | 2.2 | 1.08 | 3.28 |
| VOC | 0.1 | 15.00 | 15.10 |
| $SO_2$ | 0.005 | 0.01 | 0.02 |
| $PM_{10}$ | 1.7 | 0.11 | 1.81 |
| $PM_{2.5}$ | 0.4 | 0.05 | 0.45 |
| Benzene | 2.2E-03 | 0.12 | 0.12 |
| Toluene | 1.6E-03 | 0.20 | 0.20 |
| Ethylbenzene | 3.4E-04 | 0.01 | 0.01 |
| Xylene | 1.1E-03 | 0.09 | 0.09 |
| n-Hexane | 1.7E-04 | 0.51 | 0.51 |
| Formaldehyde | 1.3E-02 | 1.30E-04 | 1.31E-02 |

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

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

| Species | Proposed Action Production Emissions (ton/yr) | WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr) | Percentage of Proposed Action to WRAP Phase III |
|---|---|---|---|
| NOx | 5.09 | 16,547 | 0.031% |
| VOC | 15.10 | 127,495 | 0.012% |

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

Uintah Basin Data



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## Appendix B:

### Proposed Action Annual Emissions Tables: 5 Well Pad

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

| Pollutant | Development | Production | Total |
|---|---|---|---|
| NOx | 3.8 | 1.61 | 5.41 |
| CO | 2.2 | 1.35 | 3.55 |
| VOC | 0.1 | 18.75 | 18.85 |
| $SO_2$ | 0.005 | 0.01 | 0.02 |
| $PM_{10}$ | 1.7 | 0.14 | 1.84 |
| $PM_{2.5}$ | 0.4 | 0.06 | 0.46 |
| Benzene | 2.2E-03 | 0.15 | 0.15 |
| Toluene | 1.6E-03 | 0.24 | 0.25 |
| Ethylbenzene | 3.4E-04 | 0.01 | 0.01 |
| Xylene | 1.1E-03 | 0.11 | 0.11 |
| n-Hexane | 1.7E-04 | 0.64 | 0.64 |
| Formaldehyde | 1.3E-02 | 1.62E-04 | 1.32E-02 |

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

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

| Species | Proposed Action Production Emissions (ton/yr) | WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr) | Percentage of Proposed Action to WRAP Phase III |
|---|---|---|---|
| NOx | 5.41 | 16,547 | 0.033% |
| VOC | 18.85 | 127,495 | 0.015% |

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

Uintah Basin Data



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## Appendix C:

### Proposed Action Annual Emissions Tables: 6 Well Pad

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

| Pollutant | Development | Production | Total |
|---|---|---|---|
| NOx | 3.8 | 1.94 | 5.74 |
| CO | 2.2 | 1.62 | 3.82 |
| VOC | 0.1 | 22.50 | 22.60 |
| $SO_2$ | 0.005 | 0.02 | 0.02 |
| $PM_{10}$ | 1.7 | 0.17 | 1.87 |
| $PM_{2.5}$ | 0.4 | 0.07 | 0.47 |
| Benzene | 2.2E-03 | 0.18 | 0.18 |
| Toluene | 1.6E-03 | 0.29 | 0.29 |
| Ethylbenzene | 3.4E-04 | 0.02 | 0.02 |
| Xylene | 1.1E-03 | 0.14 | 0.14 |
| n-Hexane | 1.7E-04 | 0.77 | 0.77 |
| Formaldehyde | 1.3E-02 | 1.94E-04 | 1.32E-02 |

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

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

| Species | Proposed Action Production Emissions (ton/yr) | WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr) | Percentage of Proposed Action to WRAP Phase III |
|---|---|---|---|
| NOx | 5.74 | 16,547 | 0.035% |
| VOC | 22.60 | 127,495 | 0.018% |

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

Uintah Basin Data



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## Appendix D:

### Proposed Action Annual Emissions Tables: 7 Well Pad

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

| Pollutant | Development | Production | Total |
|---|---|---|---|
| NOx | 3.8 | 2.26 | 6.06 |
| CO | 2.2 | 1.89 | 4.09 |
| VOC | 0.1 | 26.25 | 26.35 |
| $SO_2$ | 0.005 | 0.02 | 0.02 |
| $PM_{10}$ | 1.7 | 0.19 | 1.89 |
| $PM_{2.5}$ | 0.4 | 0.08 | 0.48 |
| Benzene | 2.2E-03 | 0.21 | 0.21 |
| Toluene | 1.6E-03 | 0.34 | 0.34 |
| Ethylbenzene | 3.4E-04 | 0.02 | 0.02 |
| Xylene | 1.1E-03 | 0.16 | 0.16 |
| n-Hexane | 1.7E-04 | 0.89 | 0.89 |
| Formaldehyde | 1.3E-02 | 2.27E-04 | 1.32E-02 |

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

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

| Species | Proposed Action Production Emissions (ton/yr) | WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr) | Percentage of Proposed Action to WRAP Phase III |
|---|---|---|---|
| NOx | 6.06 | 16,547 | 0.037% |
| VOC | 26.35 | 127,495 | 0.021% |

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

Uintah Basin Data



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## Appendix E:

### Proposed Action Annual Emissions Tables: 8 Well Pad

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

| Pollutant | Development | Production | Total |
|---|---|---|---|
| NOx | 3.8 | 2.58 | 6.38 |
| CO | 2.2 | 2.16 | 4.36 |
| VOC | 0.1 | 30.00 | 30.10 |
| $SO_2$ | 0.005 | 0.02 | 0.03 |
| $PM_{10}$ | 1.7 | 0.22 | 1.92 |
| $PM_{2.5}$ | 0.4 | 0.09 | 0.49 |
| Benzene | 2.2E-03 | 0.24 | 0.24 |
| Toluene | 1.6E-03 | 0.39 | 0.39 |
| Ethylbenzene | 3.4E-04 | 0.02 | 0.02 |
| Xylene | 1.1E-03 | 0.18 | 0.18 |
| n-Hexane | 1.7E-04 | 1.02 | 1.02 |
| Formaldehyde | 1.3E-02 | 2.59E-04 | 1.33E-02 |

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

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

| Species | Proposed Action Production Emissions (ton/yr) | WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr) | Percentage of Proposed Action to WRAP Phase III |
|---|---|---|---|
| NOx | 6.38 | 16,547 | 0.039% |
| VOC | 30.10 | 127,495 | 0.024% |

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

Uintah Basin Data



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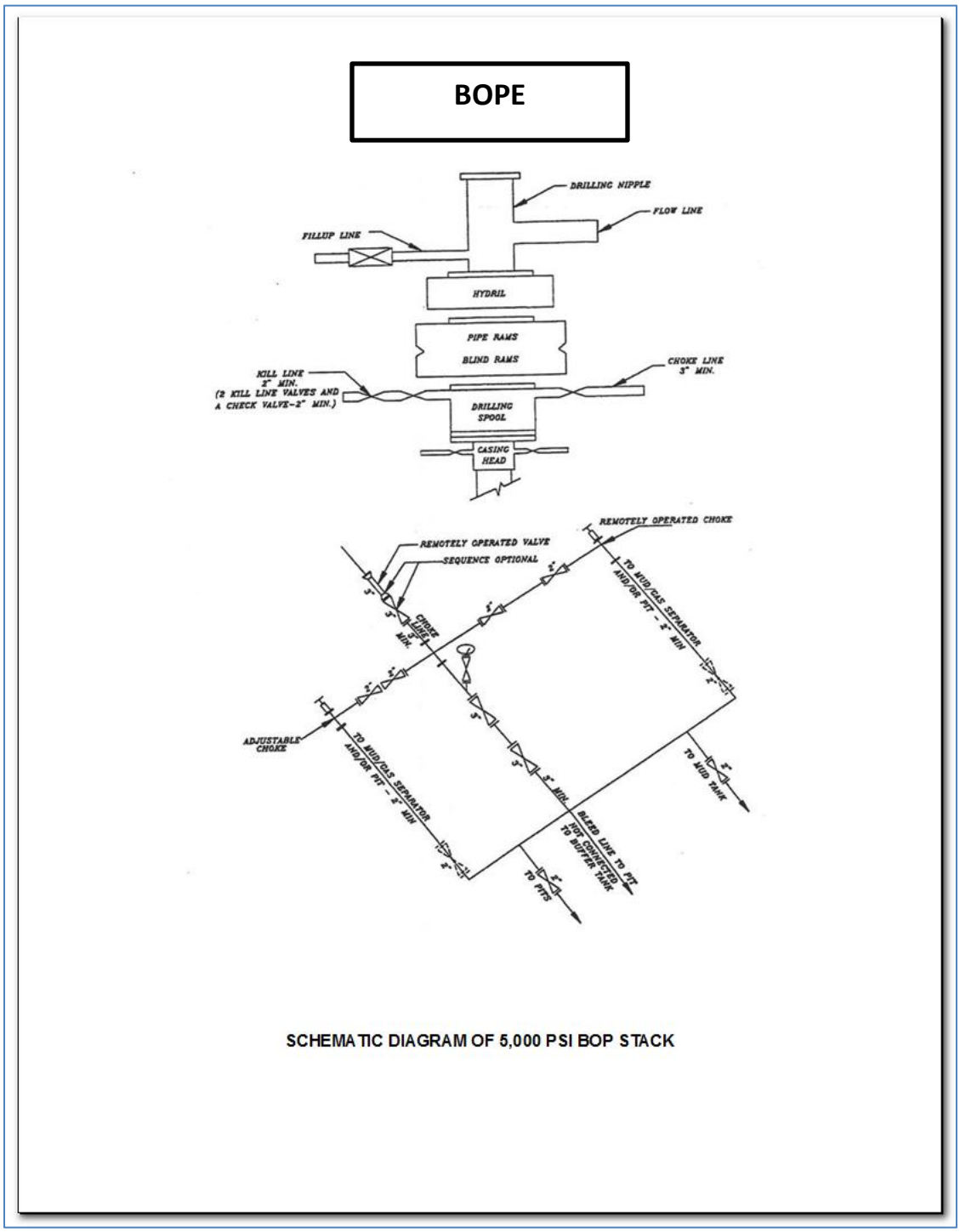
**Appendix F: Pressure Control Equipment Schematic**




SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

**END**



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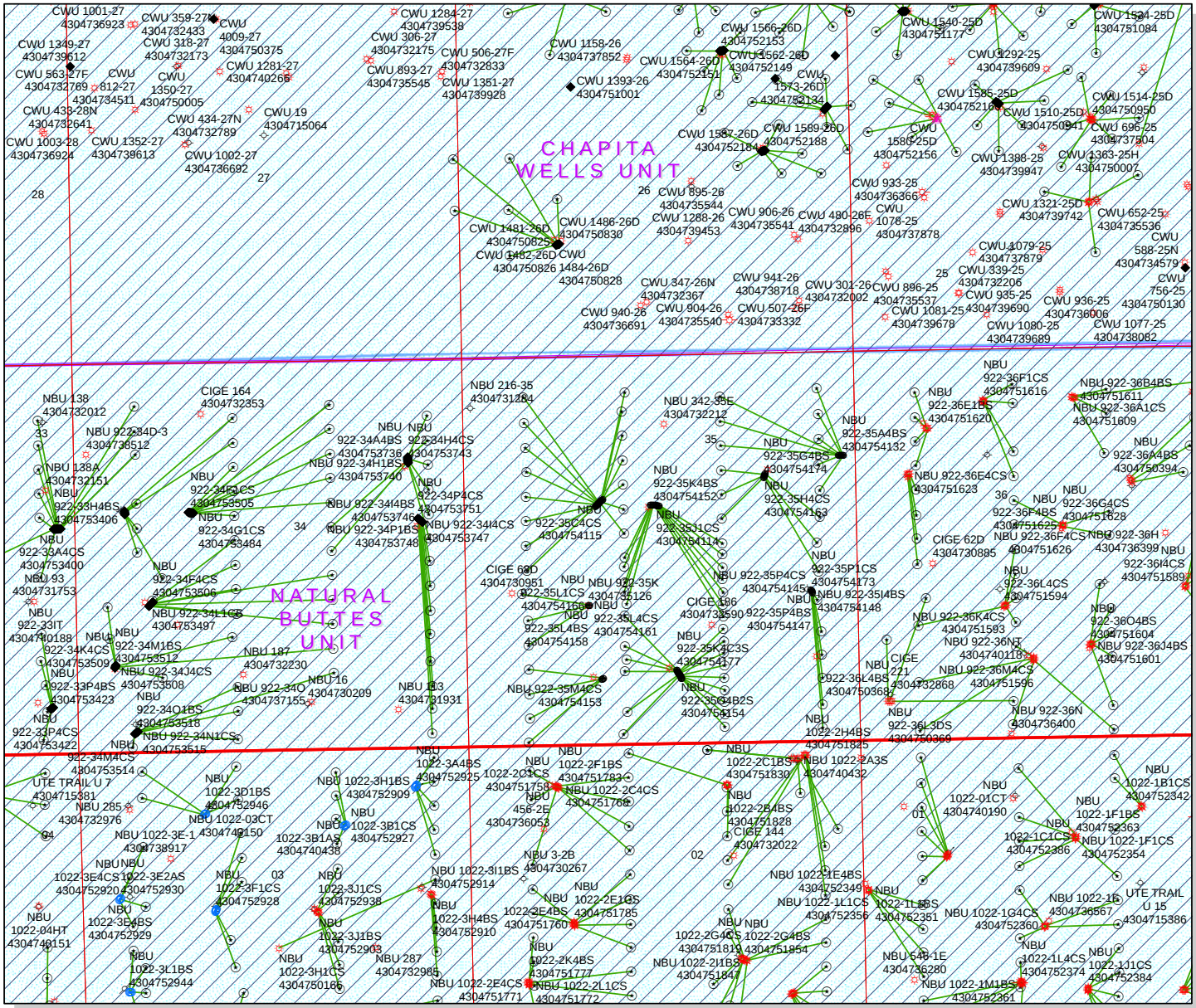
API Well Number: 43047541110000




**API Number: 4304754111**

**Well Name: NBU 922-35D4CS**

Township: T09.0S Range: R22.0E Section: 35 Meridian: S

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

Map Prepared: 11/7/2013
Map Produced by Diana Mason

**Wells Query**

**Status**

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

**Units**

**STATUS**

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

**Fields**

**STATUS**

- Unknown
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- STORAGE
- TERMINATED

1,700 850 0 1,700 Feet

1:16,807

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# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

**Utah State Office**
**440 West 200 South, Suite 500**
**Salt Lake City, UT 84101**

**IN REPLY REFER TO:**
**3160**
**(UT-922)**

November 13, 2013

Memorandum

To: Assistant Field Office Manager Minerals, Vernal Field Office

From: Michael Coulthard, Petroleum Engineer

Subject: 2013 Plan of Development Natural Buttes Unit Uintah County, Utah.

Pursuant to email between Diana Mason, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2013 within the Natural Buttes Unit, Uintah County, Utah.

| API # | WELL NAME | LOCATION |
|---|---|---|
| (Proposed PZ WASATCH-MESA VERDE) | | |
| **NBU 922-35A PAD** | | |
| 43-047-54073 | NBU 922-35A1CS | Sec 35 T09S R22E 1416 FNL 0164 FEL<br>BHL Sec 35 T09S R22E 0498 FNL 0502 FEL |
| 43-047-54119 | NBU 922-35H1CS | Sec 35 T09S R22E 1416 FNL 0154 FEL<br>BHL Sec 35 T09S R22E 1883 FNL 0482 FEL |
| 43-047-54120 | NBU 922-35H1BS | Sec 35 T09S R22E 1415 FNL 0194 FEL<br>BHL Sec 35 T09S R22E 1532 FNL 0498 FEL |
| 43-047-54125 | NBU 922-35B4CS | Sec 35 T09S R22E 1414 FNL 0224 FEL<br>BHL Sec 35 T09S R22E 1244 FNL 1820 FEL |
| 43-047-54126 | NBU 922-35B4BS | Sec 35 T09S R22E 1414 FNL 0214 FEL<br>BHL Sec 35 T09S R22E 0912 FNL 1819 FEL |
| 43-047-54127 | NBU 922-35B1CS | Sec 35 T09S R22E 1415 FNL 0204 FEL<br>BHL Sec 35 T09S R22E 0580 FNL 1819 FEL |
| 43-047-54130 | NBU 922-35A4CS | Sec 35 T09S R22E 1415 FNL 0184 FEL<br>BHL Sec 35 T09S R22E 1181 FNL 0491 FEL |
| 43-047-54132 | NBU 922-35A4BS | Sec 35 T09S R22E 1416 FNL 0174 FEL<br>BHL Sec 35 T09S R22E 0844 FNL 0489 FEL |
| **NBU 922-35F PAD** | | |
| 43-047-54109 | NBU 922-35E1CS | Sec 35 T09S R22E 2012 FNL 1789 FWL<br>BHL Sec 35 T09S R22E 1883 FNL 0828 FWL |
| 43-047-54110 | NBU 922-35E1BS | Sec 35 T09S R22E 2005 FNL 1796 FWL<br>BHL Sec 35 T09S R22E 1542 FNL 0842 FWL |
| 43-047-54111 | NBU 922-35D4CS | Sec 35 T09S R22E 1999 FNL 1804 FWL<br>BHL Sec 35 T09S R22E 1220 FNL 0836 FWL |

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| API # | WELL NAME | LOCATION |
|---|---|---|
| (Proposed PZ WASATCH-MESA VERDE) | | |
| 43-047-54112 | NBU 922-35D4BS | Sec 35 T09S R22E 1992 FNL 1811 FWL<br>BHL Sec 35 T09S R22E 0875 FNL 0821 FWL |
| 43-047-54113 | NBU 922-35D1CS | Sec 35 T09S R22E 1985 FNL 1818 FWL<br>BHL Sec 35 T09S R22E 0524 FNL 0820 FWL |
| 43-047-54115 | NBU 922-35C4CS | Sec 35 T09S R22E 1951 FNL 1855 FWL<br>BHL Sec 35 T09S R22E 1081 FNL 2150 FWL |
| 43-047-54116 | NBU 922-35C4BS | Sec 35 T09S R22E 1958 FNL 1848 FWL<br>BHL Sec 35 T09S R22E 0749 FNL 2150 FWL |
| 43-047-54117 | NBU 922-35C1CS | Sec 35 T09S R22E 1965 FNL 1840 FWL<br>BHL Sec 35 T09S R22E 0496 FNL 2194 FWL |
| 43-047-54118 | NBU 922-35E4CS | Sec 35 T09S R22E 2026 FNL 1774 FWL<br>BHL Sec 35 T09S R22E 2553 FNL 0814 FWL |
| 43-047-54121 | NBU 922-35F1CS | Sec 35 T09S R22E 1938 FNL 1870 FWL<br>BHL Sec 35 T09S R22E 1747 FNL 2150 FWL |
| 43-047-54122 | NBU 922-35E4BS | Sec 35 T09S R22E 2019 FNL 1781 FWL<br>BHL Sec 35 T09S R22E 2218 FNL 0821 FWL |
| 43-047-54124 | NBU 922-35F1BS | Sec 35 T09S R22E 1944 FNL 1863 FWL<br>BHL Sec 35 T09S R22E 1414 FNL 2150 FWL |
| 43-047-54129 | NBU 922-35L1BS | Sec 35 T09S R22E 2032 FNL 1767 FWL<br>BHL Sec 35 T09S R22E 2426 FSL 0825 FWL |
| 43-047-54133 | NBU 922-35F4CS | Sec 35 T09S R22E 1978 FNL 1826 FWL<br>BHL Sec 35 T09S R22E 2412 FNL 2150 FWL |
| 43-047-54134 | NBU 922-35F4BS | Sec 35 T09S R22E 1972 FNL 1833 FWL<br>BHL Sec 35 T09S R22E 2079 FNL 2150 FWL |
| **NBU 922-35G PAD** | | |
| 43-047-54114 | NBU 922-35J1CS | Sec 35 T09S R22E 2037 FNL 2593 FWL<br>BHL Sec 35 T09S R22E 2076 FSL 1820 FEL |
| 43-047-54123 | NBU 922-35J1C2S | Sec 35 T09S R22E 2038 FNL 2603 FWL<br>BHL Sec 35 T09S R22E 2252 FSL 1827 FEL |
| 43-047-54128 | NBU 922-35J1B2S | Sec 35 T09S R22E 2040 FNL 2623 FWL<br>BHL Sec 35 T09S R22E 2588 FSL 1823 FEL |
| 43-047-54131 | NBU 922-35G4CS | Sec 35 T09S R22E 2041 FNL 2633 FWL<br>BHL Sec 35 T09S R22E 2572 FNL 1819 FEL |
| 43-047-54135 | NBU 922-35J1BS | Sec 35 T09S R22E 2039 FNL 2613 FWL<br>BHL Sec 35 T09S R22E 2408 FSL 1819 FEL |
| 43-047-54136 | NBU 922-35K1B3S | Sec 35 T09S R22E 2030 FNL 2523 FWL<br>BHL Sec 35 T09S R22E 2455 FSL 2140 FWL |
| 43-047-54137 | NBU 922-35J4B2S | Sec 35 T09S R22E 2036 FNL 2583 FWL<br>BHL Sec 35 T09S R22E 1909 FSL 1822 FEL |
| 43-047-54138 | NBU 922-35J4BS | Sec 35 T09S R22E 2034 FNL 2563 FWL<br>BHL Sec 35 T09S R22E 1744 FSL 1820 FEL |
| 43-047-54139 | NBU 922-35K1BS | Sec 35 T09S R22E 2029 FNL 2513 FWL<br>BHL Sec 35 T09S R22E 2578 FSL 2150 FWL |

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| API # | WELL NAME | LOCATION |
|---|---|---|
| (Proposed PZ WASATCH-MESA VERDE) | | |
| 43-047-54140 | NBU 922-35K1C3S | Sec 35 T09S R22E 2032 FNL 2543 FWL<br>BHL Sec 35 T09S R22E 2120 FSL 2138 FWL |
| 43-047-54141 | NBU 922-35K1CS | Sec 35 T09S R22E 2031 FNL 2533 FWL<br>BHL Sec 35 T09S R22E 2245 FSL 2150 FWL |
| 43-047-54152 | NBU 922-35K4BS | Sec 35 T09S R22E 2033 FNL 2553 FWL<br>BHL Sec 35 T09S R22E 1940 FSL 2168 FWL |
| **NBU 922-35O PAD** | | |
| 43-047-54143 | NBU 922-35N1BS | Sec 35 T09S R22E 1018 FSL 2456 FEL<br>BHL Sec 35 T09S R22E 1198 FSL 2149 FWL |
| 43-047-54146 | NBU 922-35J4CS | Sec 35 T09S R22E 0991 FSL 2442 FEL<br>BHL Sec 35 T09S R22E 1412 FSL 1820 FEL |
| 43-047-54150 | NBU 922-35K4B3S | Sec 35 T09S R22E 1035 FSL 2465 FEL<br>BHL Sec 35 T09S R22E 1785 FSL 2135 FWL |
| 43-047-54154 | NBU 922-35O4B2S | Sec 35 T09S R22E 0929 FSL 2409 FEL<br>BHL Sec 35 T09S R22E 0580 FSL 1826 FEL |
| 43-047-54155 | NBU 922-35O1B2S | Sec 35 T09S R22E 0982 FSL 2437 FEL<br>BHL Sec 35 T09S R22E 1246 FSL 1824 FEL |
| 43-047-54156 | NBU 922-35N4CS | Sec 35 T09S R22E 0965 FSL 2428 FEL<br>BHL Sec 35 T09S R22E 0179 FSL 2090 FWL |
| 43-047-54157 | NBU 922-35N1B3S | Sec 35 T09S R22E 1009 FSL 2451 FEL<br>BHL Sec 35 T09S R22E 1028 FSL 2126 FWL |
| 43-047-54159 | NBU 922-35O4BS | Sec 35 T09S R22E 0921 FSL 2405 FEL<br>BHL Sec 35 T09S R22E 0416 FSL 1820 FEL |
| 43-047-54162 | NBU 922-35O1BS | Sec 35 T09S R22E 0956 FSL 2424 FEL<br>BHL Sec 35 T09S R22E 1080 FSL 1820 FEL |
| 43-047-54167 | NBU 922-35O1C2S | Sec 35 T09S R22E 0947 FSL 2419 FEL<br>BHL Sec 35 T09S R22E 0915 FSL 1827 FEL |
| 43-047-54170 | NBU 922-35O1CS | Sec 35 T09S R22E 0938 FSL 2414 FEL<br>BHL Sec 35 T09S R22E 0748 FSL 1820 FEL |
| 43-047-54172 | NBU 922-35J4C2S | Sec 35 T09S R22E 1000 FSL 2447 FEL<br>BHL Sec 35 T09S R22E 1578 FSL 1825 FEL |
| 43-047-54175 | NBU 922-35N4BS | Sec 35 T09S R22E 0974 FSL 2433 FEL<br>BHL Sec 35 T09S R22E 0480 FSL 2151 FWL |
| 43-047-54176 | NBU 922-35O4C2S | Sec 35 T09S R22E 0912 FSL 2400 FEL<br>BHL Sec 35 T09S R22E 0245 FSL 1825 FEL |
| 43-047-54177 | NBU 922-35K4C3S | Sec 35 T09S R22E 1027 FSL 2461 FEL<br>BHL Sec 35 T09S R22E 1375 FSL 2130 FWL |
| **NBU 922-35I PAD** | | |
| 43-047-54144 | NBU 922-35P1BS | Sec 35 T09S R22E 2060 FSL 0615 FEL<br>BHL Sec 35 T09S R22E 1199 FSL 0492 FEL |
| 43-047-54145 | NBU 922-35P4CS | Sec 35 T09S R22E 2088 FSL 0627 FEL<br>BHL Sec 35 T09S R22E 0199 FSL 0498 FEL |

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| API # | WELL NAME | LOCATION |
|---|---|---|
| (Proposed PZ WASATCH-MESA VERDE) | | |
| 43-047-54147 | NBU 922-35P4BS | Sec 35 T09S R22E 2078 FSL 0623 FEL<br>BHL Sec 35 T09S R22E 0520 FSL 0496 FEL |
| 43-047-54148 | NBU 922-35I4BS | Sec 35 T09S R22E 2042 FSL 0607 FEL<br>BHL Sec 35 T09S R22E 1945 FSL 0546 FEL |
| 43-047-54171 | NBU 922-35I4CS | Sec 35 T09S R22E 2051 FSL 0611 FEL<br>BHL Sec 35 T09S R22E 1510 FSL 0495 FEL |
| 43-047-54173 | NBU 922-35P1CS | Sec 35 T09S R22E 2069 FSL 0619 FEL<br>BHL Sec 35 T09S R22E 0883 FSL 0494 FEL |
| **NBU 922-35H PAD** | | |
| 43-047-54149 | NBU 922-35I1BS | Sec 35 T09S R22E 1681 FNL 1236 FEL<br>BHL Sec 35 T09S R22E 2329 FSL 0520 FEL |
| 43-047-54163 | NBU 922-35H4CS | Sec 35 T09S R22E 1672 FNL 1233 FEL<br>BHL Sec 35 T09S R22E 2598 FNL 0535 FEL |
| 43-047-54165 | NBU 922-35G1BS | Sec 35 T09S R22E 1653 FNL 1226 FEL<br>BHL Sec 35 T09S R22E 1576 FNL 1820 FEL |
| 43-047-54168 | NBU 922-35G1CS | Sec 35 T09S R22E 1662 FNL 1229 FEL<br>BHL Sec 35 T09S R22E 1908 FNL 1820 FEL |
| 43-047-54169 | NBU 922-35H4BS | Sec 35 T09S R22E 1644 FNL 1222 FEL<br>BHL Sec 35 T09S R22E 2245 FNL 0490 FEL |
| 43-047-54174 | NBU 922-35G4BS | Sec 35 T09S R22E 1690 FNL 1240 FEL<br>BHL Sec 35 T09S R22E 2240 FNL 1819 FEL |
| **NBU 922-35N** | | |
| 43-047-54151 | NBU 922-35M1CS | Sec 35 T09S R22E 0938 FSL 1825 FWL<br>BHL Sec 35 T09S R22E 0751 FSL 0824 FWL |
| 43-047-54153 | NBU 922-35M4CS | Sec 35 T09S R22E 0924 FSL 1810 FWL<br>BHL Sec 35 T09S R22E 0095 FSL 0803 FWL |
| 43-047-54160 | NBU 922-35M1BS | Sec 35 T09S R22E 0945 FSL 1832 FWL<br>BHL Sec 35 T09S R22E 1085 FSL 0824 FWL |
| 43-047-54164 | NBU 922-35M4BS | Sec 35 T09S R22E 0931 FSL 1817 FWL<br>BHL Sec 35 T09S R22E 0418 FSL 0824 FWL |
| **NBU 922-35K PAD** | | |
| 43-047-54158 | NBU 922-35L4BS | Sec 35 T09S R22E 1936 FSL 1645 FWL<br>BHL Sec 35 T09S R22E 1751 FSL 0825 FWL |
| 43-047-54161 | NBU 922-35L4CS | Sec 35 T09S R22E 1940 FSL 1654 FWL<br>BHL Sec 35 T09S R22E 1418 FSL 0824 FWL |
| 43-047-54166 | NBU 922-35L1CS | Sec 35 T09S R22E 1944 FSL 1664 FWL<br>BHL Sec 35 T09S R22E 2113 FSL 0750 FWL |

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

Michael Coulthard

Digitally signed by Michael Coulthard
DN: cn=Michael Coulthard, o=Bureau of Land Management, ou=Division of Minerals, email=mcoultha@blm.gov, c=US
Date: 2013.11.13 08:51:12 -07'00'

RECEIVED: November 13, 2013

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

MCoulthard:mc:11-13-13

RECEIVED: November 13, 2013

# WORKSHEET
# APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 10/31/2013
**API NO. ASSIGNED:** 43047541110000
**WELL NAME:** NBU 922-35D4CS
**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)
**PHONE NUMBER:** 720 929-6356
**CONTACT:** Laura Abrams

**PROPOSED LOCATION:** SENW 35 090S 220E
**Permit Tech Review:** ✔

**SURFACE:** 1999 FNL 1804 FWL
**Engineering Review:** ✔

**BOTTOM:** 1220 FNL 0836 FWL
**Geology Review:** ✔

**COUNTY:** UINTAH
**LATITUDE:** 39.99426
**LONGITUDE:** -109.41023
**UTM SURF EASTINGS:** 635717.00
**NORTHINGS:** 4428330.00
**FIELD NAME:** NATURAL BUTTES
**LEASE TYPE:** 1 - Federal
**LEASE NUMBER:** UTU-010954-A
**PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE
**SURFACE OWNER:** 1 - Federal
**COALBED METHANE:** NO

**RECEIVED AND/OR REVIEWED:**

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

**Commingling Approved**

**LOCATION AND SITING:**

- ☐ **R649-2-3.**

**Unit:** NATURAL BUTTES

- ☐ **R649-3-2. General**
- ☐ **R649-3-3. Exception**
- ✔ **Drilling Unit**

**Board Cause No:** Cause 173-14
**Effective Date:** 12/2/1999
**Siting:** Suspends General Siting

- ✔ **R649-3-11. Directional Drill**

**Comments:** Presite Completed

**Stipulations:**
3 - Commingling - ddoucet
4 - Federal Approval - dmason
15 - Directional - dmason
17 - Oil Shale 190-5(b) - dmason

RECEIVED: November 14, 2013

GARY R. HERBERT
*Governor*
SPENCER J. COX
*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 922-35D4CS
**API Well Number:** 43047541110000
**Lease Number:** UTU-010954-A
**Surface Owner:** FEDERAL
**Approval Date:** 11/14/2013

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

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

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

**Commingle:**
In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

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

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

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

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.

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

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

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

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

**Approved By:**

For John Rogers
Associate Director, Oil & Gas

Form 3160-3
(August 2007)

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SEP 1 0 2013

BLM

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

5. Lease Serial No.
UTU010954A

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.
UTU63047A

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

8. Lease Name and Well No.
NBU 922-35D4CS

2. Name of Operator
KERR MCGEE OIL&GAS ONSHORE LP
Contact: LAURA ABRAMS
E-Mail: laura.abrams@anadarko.com

9. API Well No.
43047541 1

3a. Address
1099 18TH STREET SUITE 600
DENVER, CO 80202

3b. Phone No. (include area code)
Ph: 720-929-6356
Fx: 720-929-7356

10. Field and Pool, or Exploratory
NATURAL BUTTES

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

At surface SENW 1999FNL 1804FWL 39.994279 N Lat, 109.410267 W Lon

At proposed prod. zone NWNW 1220FNL 836FWL 39.996413 N Lat, 109.413719 W Lon

11. Sec., T., R., M., or Blk. and Survey or Area
Sec 35 T9S R22E Mer SLB

14. Distance in miles and direction from nearest town or post office*
APPROXIMATELY 47 MILES SOUTHEAST OF VERNAL, UTAH

12. County or Parish
UINTAH

13. State
UT

15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
836

16. No. of Acres in Lease
600.00

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MAY 1 4 2014
DIV. OF OIL, GAS & MINING

17. Spacing Unit dedicated to this well

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.
879

19. Proposed Depth
9133 MD
8935 TVD

20. BLM/BIA Bond No. on file
WYB000291

21. Elevations (Show whether DF, KB, RT, GL, etc.
4988 GL

22. Approximate date work will start
04/01/2014

23. Estimated duration
30-60 DAYS

## 24. Attachments

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

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

25. Signature
(Electronic Submission)

Name (Printed/Typed)
LAURA ABRAMS Ph: 720-929-6356

Date
09/05/2013

Title
REGULATORY ANALYST II

Approved by (Signature)

Name (Printed/Typed)
Jerry Kenczka

Date
MAY 0 8 2014

Title
Assistant Field Manager
Lands & Mineral Resources

Office
VERNAL FIELD OFFICE

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

CONDITIONS OF APPROVAL ATTACHED

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

**Additional Operator Remarks (see next page)**

NOTICE OF APPROVAL

**Electronic Submission #219140 verified by the BLM Well Information System**
**For KERR MCGEE OIL&GAS ONSHORE, LP, sent to the Vernal**
**Committed to AFMSS for processing by LESLIE BUHLER on 09/16/2013 ()**

UDOGM

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

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE
170 South 500 East VERNAL, UT 84078 (435) 781-4400

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

| | | | |
|---|---|---|---|
| **Company:** | KERR MCGEE OIL&GAS ONSHORE LP | **Location:** | SENW, Sec. 35, T9S, R22E |
| **Well No:** | NBU 922-35D4CS | **Lease No:** | UTU-010954A |
| **API No:** | 43-047-54111 | **Agreement:** | |

# OFFICE NUMBER: (435) 781-4400

# OFFICE FAX NUMBER: (435) 781-3420

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

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

## NOTIFICATION REQUIREMENTS

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

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

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

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

- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.

- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.

- Paleontological monitoring by a BLM permitted paleontologist is required during all ground-disturbing activities (BLM 2012b).
- Bird exclusion netting will be installed over reserve pits containing water that are left open for more than 30 days to reduce possibility of exposure to hazardous chemicals (BLM 2012b).
- KMG will install bird-excluding devices that prevent the perching and entry of migratory birds on or into its new fired vessel exhaust stacks (BLM 2012b).

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

**SITE SPECIFIC DOWNHOLE COAs:**

- Kerr-McGee Oil & Gas Onshore L.P.. shall adhere to all referenced requirements in the SOP (version: "Standard Operating Practice Agreement for the Greater Natural Buttes Field", Oct 21, 2012). The operator shall also comply with applicable laws and regulations; with lease terms Onshore Oil and Gas Orders, NTL's; and with other orders and instructions of the, authorized officer.

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

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

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

encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.

- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.

- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.

- **Please submit an electronic copy of all other logs run on this well by CD (compact disc). This submission will supersede the requirement for submittal of paper logs to the BLM.**

- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

**OPERATING REQUIREMENT REMINDERS:**

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

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

- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:

    - Operator name, address, and telephone number.

    - Well name and number.

    - Well location (¼¼, Sec., Twn, Rng, and P.M.).

    - Date well was placed in a producing status (date of first production for which royalty will be paid).

    - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).

    - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.

    - Unit agreement and/or participating area name and number, if applicable.

    - Communitization agreement number, if applicable.

- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.

- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.

- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid,

and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.

- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.

- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.

- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.

- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.

- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.

- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

FORM 9

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

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU-010954-A

## SUNDRY NOTICES AND REPORTS ON WELLS

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

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

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

**1. TYPE OF WELL** Gas Well

**8. WELL NAME and NUMBER:** NBU 922-35D4CS

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

**9. API NUMBER:** 43047541110000

**3. ADDRESS OF OPERATOR:** P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779
**PHONE NUMBER:** 720 929-6100 EXT

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

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1999 FNL 1804 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: SENW Section: 35 Township: 09.0S Range: 22.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ✓ NOTICE OF INTENT<br>Approximate date work will start: 11/14/2014 | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| ☐ DRILLING REPORT<br>Report Date: | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ✓ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

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

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the Utah Division of Oil, Gas and Mining
October 02, 2014
Date:
By:

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Kay E. Kelly | 720 929 6582 | Regulatory Analyst |

| SIGNATURE | DATE |
|---|---|
| N/A | 9/23/2014 |

RECEIVED: Sep. 23, 2014

## The Utah Division of Oil, Gas, and Mining

**- State of Utah**
**- Department of Natural Resources**

**Electronic Permitting System - Sundry Notices**

## Request for Permit Extension Validation Well Number 43047541110000

**API:** 43047541110000
**Well Name:** NBU 922-35D4CS
**Location:** 1999 FNL 1804 FWL QTR SENW SEC 35 TWNP 090S RNG 220E MER S
**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.
**Date Original Permit Issued:** 11/14/2013

**The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.**

- **If located on private land, has the ownership changed, if so, has the surface agreement been updated?** ○ **Yes** ◉ **No**
- **Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?** ○ **Yes** ◉ **No**
- **Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?** ○ **Yes** ◉ **No**
- **Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?** ○ **Yes** ◉ **No**
- **Has the approved source of water for drilling changed?** ○ **Yes** ◉ **No**
- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

**Signature:** Kay E. Kelly **Date:** 9/23/2014
**Title:** Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED: Sep. 23, 2014

FORM 9

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

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU-010954-A

## SUNDRY NOTICES AND REPORTS ON WELLS

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

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

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

**1. TYPE OF WELL** Gas Well

**8. WELL NAME and NUMBER:** NBU 922-35D4CS

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

**9. API NUMBER:** 43047541110000

**3. ADDRESS OF OPERATOR:** P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779
**PHONE NUMBER:** 720 929-6507 EXT

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

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1999 FNL 1804 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: SENW Section: 35 Township: 09.0S Range: 22.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ✓ NOTICE OF INTENT<br>Approximate date work will start: 10/28/2015 | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| ☐ DRILLING REPORT<br>Report Date: | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ✓ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

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

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the Utah Division of Oil, Gas and Mining
October 29, 2015
Date:
By:

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Jennifer Thomas | 720 929-6808 | Regulatory Specialist |
| **SIGNATURE** N/A | | **DATE** 10/28/2015 |

RECEIVED: Oct. 28, 2015

## The Utah Division of Oil, Gas, and Mining

**- State of Utah**
**- Department of Natural Resources**

**Electronic Permitting System - Sundry Notices**

## Request for Permit Extension Validation Well Number 43047541110000

**API:** 43047541110000
**Well Name:** NBU 922-35D4CS
**Location:** 1999 FNL 1804 FWL QTR SENW SEC 35 TWNP 090S RNG 220E MER S
**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.
**Date Original Permit Issued:** 11/14/2013

**The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.**

- **If located on private land, has the ownership changed, if so, has the surface agreement been updated?** ○ **Yes** ◉ **No**
- **Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?** ○ **Yes** ◉ **No**
- **Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?** ○ **Yes** ◉ **No**
- **Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?** ○ **Yes** ◉ **No**
- **Has the approved source of water for drilling changed?** ○ **Yes** ◉ **No**
- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

**Signature:** Jennifer Thomas **Date:** 10/28/2015
**Title:** Regulatory Specialist **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED: Oct. 28, 2015

Form 3160-5
(August 2007)

RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APR 2 9 2016

BLM Vernal UT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

**SUNDRY NOTICES AND REPORTS ON WELLS**

***Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.***

***SUBMIT IN TRIPLICATE - Other instructions on reverse side.***

5. Lease Serial No.
UTU010954A

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
UTU63047A

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
NBU 922-35D4CS

2. Name of Operator
KERR MCGEE OIL & GAS ONSHORE
Contact: JOEL MALEFYT
E-Mail: JOEL.MALEFYT@ANADARKO.COM

9. API Well No.
43-047-54111

3a. Address
1368 SOUTH1200 EAST
VERNAL, UT 84078

3b. Phone No. (include area code)
Ph: 720-929-6828

10. Field and Pool, or Exploratory
GREATER NATURAL BUTTES

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 35 T9S R22E Mer SLB SENW 1999FNL 1804FWL
39.994279 N Lat, 109.410267 W Lon

11. County or Parish, and State
UINTAH COUNTY, UT

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | | |
|---|---|---|---|---|
| ☒ Notice of Intent | ☐ Acidize | ☐ Deepen | ☐ Production (Start/Resume) | ☐ Water Shut-Off |
| ☐ Subsequent Report | ☐ Alter Casing | ☐ Fracture Treat | ☐ Reclamation | ☐ Well Integrity |
| ☐ Final Abandonment Notice | ☐ Casing Repair | ☐ New Construction | ☐ Recomplete | ☒ Other Change to Original A PD |
| | ☐ Change Plans | ☐ Plug and Abandon | ☐ Temporarily Abandon | |
| | ☐ Convert to Injection | ☐ Plug Back | ☐ Water Disposal | |

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

APD- 5/8/14
NEPA- 2014-011 EA

CONDITIONS OF APPROVAL ATTACHED

RECEIVED
JUN 2 0 2016
DIV. OF OIL, GAS & MINING

VERNAL FIELD OFFICE
ENG. RAH 5/11/16
GEOL.
E.S.
PET.
RECL.

14. I hereby certify that the foregoing is true and correct.
**Electronic Submission #337965 verified by the BLM Well Information System For KERR MCGEE OIL & GAS ONSHORE, sent to the Vernal Committed to AFMSS for processing by STEVE HIRSCHI on 05/03/2016 ()**

Name *(Printed/Typed)* JOEL MALEFYT — Title REGULATORY ANALYST

Signature (Electronic Submission) — Date 04/29/2016

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By — Title Assistant Field Manager Lands & Mineral Resources — Date MAY 1 2 2016

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

Office VERNAL FIELD OFFICE

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

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

UDOGM

CONDITIONS OF APPROVAL ATTACHED

16STH0331SE

# CONDITIONS OF APPROVAL

## Kerr McGee Oil and Gas Onshore LP.

### Notice of Intent
### APD Extension

**Lease:** UTU-010954A
**Well:** NBU 922-35D4CS
**Location:** SENW Sec 35-T9S-R22E

An extension for the referenced APD is granted with the following conditions:

---

1. The extension and APD shall expire on 05/08/2018.

2. No other extension shall be granted.

If you have any other questions concerning this matter, please contact Robin L Hansen of this office at (435) 781-2777

FORM 9

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

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU-010954-A

## SUNDRY NOTICES AND REPORTS ON WELLS

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

**1. TYPE OF WELL** Gas Well

**8. WELL NAME and NUMBER:** NBU 922-35D4CS

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

**9. API NUMBER:** 43047541110000

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

**PHONE NUMBER:** 720 929-6428

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

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1999 FNL 1804 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: SENW Section: 35 Township: 09.0S Range: 22.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ✓ NOTICE OF INTENT<br>Approximate date work will start: 11/1/2016 | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| ☐ DRILLING REPORT<br>Report Date: | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ✓ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

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

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the
Utah Division of
Oil, Gas and Mining

Date: November 03, 2016

By:

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Joel Malefyt | 720 929-6828 | Regualtory Analyst |

| SIGNATURE | DATE |
|---|---|
| N/A | 11/1/2016 |

RECEIVED: Nov. 01, 2016

## The Utah Division of Oil, Gas, and Mining

**- State of Utah**
**- Department of Natural Resources**

**Electronic Permitting System - Sundry Notices**

## Request for Permit Extension Validation Well Number 43047541110000

**API:** 43047541110000
**Well Name:** NBU 922-35D4CS
**Location:** 1999 FNL 1804 FWL QTR SENW SEC 35 TWNP 090S RNG 220E MER S
**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.
**Date Original Permit Issued:** 11/14/2013

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- **Has the approved source of water for drilling changed?** ○ **Yes** ◉ **No**
- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

**Signature:** Joel Malefyt **Date:** 11/1/2016
**Title:** Regualtory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED: Nov. 01, 2016