API Well Number: 43047538110000

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

FORM 3

AMENDED REPORT ☐

## APPLICATION FOR PERMIT TO DRILL

**1. WELL NAME and NUMBER**
NBU 1022-6H1BS

**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-01195

**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 | 1060 FNL 90 FEL | NENE | 6 | 10.0 S | 22.0 E | S |
| Top of Uppermost Producing Zone | 1433 FNL 456 FEL | SENE | 6 | 10.0 S | 22.0 E | S |
| At Total Depth | 1433 FNL 456 FEL | SENE | 6 | 10.0 S | 22.0 E | S |

**21. COUNTY**
UINTAH

**22. DISTANCE TO NEAREST LEASE LINE (Feet)**
866

**23. NUMBER OF ACRES IN DRILLING UNIT**
577

**25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)**
557

**26. PROPOSED DEPTH**
MD: 10353 TVD: 10303

**27. ELEVATION - GROUND LEVEL**
5079

**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 - 2500 | 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 - 10353 | 11.6 | HCP-110 LT&C | 12.5 | Premium Lite High Strength | 310 | 3.38 | 12.0 |
| | | | | | | | 50/50 Poz | 1510 | 1.31 | 14.3 |

### ATTACHMENTS

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

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

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

**SIGNATURE** | **DATE** 05/29/2013 | **EMAIL** gina.becker@anadarko.com

**API NUMBER ASSIGNED**
43047538110000

**APPROVAL**
Permit Manager

RECEIVED: June 05, 2013

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

**NBU 1022-6H1BS**

| | | |
|---|---|---|
| Surface: | 1060 FNL / 90 FEL | NENE |
| BHL: | 1433 FNL / 456 FEL | SENE |

Section 6 T10S R22E

Unitah County, Utah
Mineral Lease: UTU-01195

**ONSHORE ORDER NO. 1**

**DRILLING PROGRAM**

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

| Formation | Depth | Resource |
|---|---|---|
| Uinta | 0 - Surface | |
| Green River | 1,248' | |
| Birds Nest | 1,558' | Water |
| Mahogany | 2,047' | Water |
| Wasatch | 4,455' | Gas |
| Mesaverde | 7,028' | Gas |
| Sego | 9,184' | Gas |
| Castlegate | 9,256' | Gas |
| Blackhawk | 9,703' | Gas |
| TVD = | 10,303' | |
| TD = | 10,353' | |

**2.b** Kerr McGee Oil & Gas Onshore LP (Kerr McGee) may elect to drill to (i) the Blackhawk formation (part of the Mesaverde Group), (ii) to a shallower depth within the Mesaverde Group, or (iii) to the Wasatch Formation. If Kerr McGee drills to the Blackhawk formation, please refer to Blackhawk as the bottom formation. The attached Blackhawk Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the deeper formation.

If Kerr-McGee drills to a shallower depth in the Mesaverde Group or to the Wasatch Formation, please refer to the attached Wasatch/Mesaverde Drilling Program which includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the shallower formations.

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

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



RECEIVED: May 16, 2013

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

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

**5. Drilling Fluids Program:**

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

**6. Evaluation Program:**

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

**7. Abnormal Conditions:**

**7.a Blackhawk (Part of Mesaverde Group)**

Maximum anticipated bottom hole pressure calculated at 10303' TVD, approximately equals 6,594 psi (0.64 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,313 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))

**7.b Wasach Formation/Mesaverde Group**

Maximum anticipated bottom hole pressure calculated at 9184' TVD, approximately equals 5,602 psi (0.61 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 3,606 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 Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program



RECEIVED: May 16, 2013

KerrMcGee

# KERR-McGEE OIL & GAS ONSHORE LP

## Blackhawk Drilling Program

| | | | |
|---|---|---|---|
| COMPANY NAME | KERR-McGEE OIL & GAS ONSHORE LP | DATE | January 24, 2013 |
| WELL NAME | **NBU 1022-6H1BS** | TD | 10,303' TVD 10,353' MD |
| FIELD | Natural Buttes | COUNTY Uintah | STATE Utah FINISHED ELEVATION 5,079' |
| SURFACE LOCATION | NENE 1060 FNL 90 FEL | Sec 6 | T 10S R 22E |
| | Latitude: 39.982343 | Longitude: -109.473564 | NAD 83 |
| BTM HOLE LOCATION | SENE 1433 FNL 456 FEL | Sec 6 | T 10S R 22E |
| | Latitude: 39.981320 | Longitude: -109.474856 | NAD 83 |
| OBJECTIVE ZONE(S) | BLACKHAWK (Part of the Mesaverde Group) | | |
| 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" | |
| | | | 12-1/4 | 8-5/8", 28#, IJ-55, LTC | Air mist |
| | | 200' | | | |
| All water flows encountered while drilling will be reported to the appropriate agencies. | | | 11.00' | 8-5/8", 28#, IJ-55, LTC | Air mist |
| | Green River @ | 1,248' | | | |
| | Top of Birds Nest @ | 1,558' | | | |
| | Mahogany @ | 2,047' | | | |
| | Preset f/ GL @ | 2,500' 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 @ | 4,455' | | | |
| Mud logging program TBD<br>Cased hole logging program from TD - surf csg | | | 7-7/8" | 4-1/2" 11.6#<br>HCP-110<br>Ultra DQX/LTC csg | Water / Fresh<br>Water Mud<br>8.3-12.5 ppg |
| | Mesaverde @ | 7,028' TVD | | | |
| | Sego @ | 9,184' TVD | | | |
| | Castlegate @ | 9,256' TVD | | | |
| | Blackhawk | 9,703' TVD | | | |
| Max anticipated Mud required 12.5 ppg | TD @ | 10,303' TVD<br>10,353' MD | | | |



RECEIVED: May 16, 2013

KerrMcGee

# KERR-McGEE OIL & GAS ONSHORE LP

## Blackhawk Drilling Program

**CASING PROGRAM**

| | SIZE | INTERVAL | | | WT. | GR. | CPLG. | DESIGN FACTORS BURST | COLLAPSE | TENSION LTC | TENSION DQX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CONDUCTOR | 14" | 0-40' | | | | | | | | | |
| | | | | | | | | 3,390 | 1,880 | 348,000 | N/A |
| SURFACE | 8-5/8" | 0 | to | 2,500 | 28.00 | IJ-55 | LTC | 2.15 | 1.61 | 5.68 | N/A |
| | | | | | | | | 10,690 | 8,650 | 279,000 | 367,174 |
| PRODUCTION | 4-1/2" | 0 | to | 5,000 | 11.60 | HCP-110 | DQX | 1.19 | 1.29 | | 3.78 |
| | 4-1/2" | 5,000 | to | 10,353' | 11.60 | HCP-110 | LTC | 1.19 | 1.29 | 5.55 | |

**Surface Casing:**

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

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

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

**Production casing:**

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.64 psi/ft = bottomhole gradient

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

**CEMENT PROGRAM**

| | | FT. OF FILL | DESCRIPTION | SACKS | EXCESS | WEIGHT | | YIELD |
|---|---|---|---|---|---|---|---|---|
| SURFACE | LEAD | 500' | Premium cmt + 2% CaCl | 180 | 60% | 15.80 | | 1.15 |
| **Option 1** | | | + 0.25 pps flocele | | | | | |
| | TOP OUT CMT (6 jobs) | 1,200' | 20 gals sodium silicate + Premium cmt | 270 | 0% | 15.80 | | 1.15 |
| | | | + 2% CaCl + 0.25 pps flocele | | | | | |
| SURFACE | | | **NOTE: If well will circulate water to surface, option 2 will be utilized** | | | | | |
| **Option 2** | LEAD | 2,000' | Premium cmt + 16% Gel + 10 pps gilsonite | 250 | 35% | 12.00 | | 2.86 |
| | | | + 0.25 pps Flocele + 3% salt BWOC + GR 3 pps | | | | | |
| | 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 | 3,953' | 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 | 6,400' | 50/50 Poz/G + 10% salt + .05 lbs/sk Static Free | 1,510 | 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: May 16, 2013

# KERR-McGEE OIL & GAS ONSHORE LP

## Wasatch/Mesaverde Drilling Program

| | | | |
|---|---|---|---|
| COMPANY NAME | KERR-McGEE OIL & GAS ONSHORE LP | DATE | January 24, 2013 |
| WELL NAME | **NBU 1022-6H1BS** | TD | 9,184' TVD 9,234' MD |
| FIELD | Natural Buttes | COUNTY Uintah STATE Utah | FINISHED ELEVATION 5,079' |
| SURFACE LOCATION | NENE 1060 FNL 90 FEL Sec 6 T 10S R 22E | | |
| | Latitude: 39.982343 Longitude: -109.473564 | | NAD 83 |
| BTM HOLE LOCATION | SENE 1433 FNL 456 FEL Sec 6 T 10S R 22E | | |
| | Latitude: 39.981320 Longitude: -109.474856 | | NAD 83 |
| OBJECTIVE ZONE(S) | Wasatch Formation/Mesaverde Group | | |
| 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" | |
| | | | 12-1/4 | 8-5/8", 28#, IJ-55, LTC | Air mist |
| | | 200' | | | |
| All water flows encountered while drilling will be reported to the appropriate agencies. | | | 11.00' | 8-5/8", 28#, IJ-55, LTC | Air mist |
| | Green River @ | 1,248' | | | |
| | Top of Birds Nest @ | 1,558' | | | |
| | Mahogany @ | 2,047' | | | |
| | Preset f/ GL @ 2,500' 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 @ | 4,455' | | | |
| Mud logging program TBD<br>Cased hole logging program from TD - surf csg | | | 7-7/8" | 4-1/2" 11.6# I-80 Ultra DQX/LTC csg | Water / Fresh Water Mud 8.3-12.0 ppg |
| | Mesaverde @ | 7,028' TVD | | | |
| | Sego @ | 9,184' TVD | | | |
| Max anticipated Mud required 12.0 ppg | TD @ | 9,184' TVD<br>9,234' MD | | | |



RECEIVED: May 16, 2013

KerrMcGee

## KERR-McGEE OIL & GAS ONSHORE LP

# Wasatch/Mesaverde Drilling Program

**CASING PROGRAM**

| | SIZE | INTERVAL | | | WT. | GR. | CPLG. | DESIGN FACTORS BURST | COLLAPSE | TENSION LTC | TENSION DQX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CONDUCTOR | 14" | 0-40' | | | | | | | | | |
| | | | | | | | | 3,390 | 1,880 | 348,000 | N/A |
| SURFACE | 8-5/8" | 0 | to | 2,500 | 28.00 | IJ-55 | LTC | 2.15 | 1.61 | 5.68 | N/A |
| | | | | | | | | 7,780 | 6,350 | | 267,035 |
| PRODUCTION | 4-1/2" | 0 | to | 5,000 | 11.60 | I-80 | DQX | 1.11 | 1.11 | | 3.05 |
| | | | | | | | | 7,780 | 6,350 | 223,000 | |
| | 4-1/2" | 5,000 | to | 9,234' | 11.60 | I-80 | LTC | 1.11 | 1.11 | 5.56 | |

**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 | 2,000' | Premium cmt + 16% Gel + 10 pps gilsonite | 250 | 35% | 12.00 | | 2.86 |
| | | | + 0.25 pps Flocele + 3% salt BWOC + GR 3 pps | | | | | |
| | TAIL | 500' | Premium cmt + 2% CaCl | 150 | 35% | 15.80 | | 1.15 |
| | | | + 0.25 pps Flocele + 3% salt BWOC + GR 3 pps | | | | | |
| | TOP OUT CMT | as required | Premium cmt + 2% CaCl | as req. | | 15.80 | | 1.15 |
| PRODUCTION | LEAD | 3,954' | 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 | 5,280' | 50/50 Poz/G + 10% salt + .05 lbs/sk Static Free | 1,250 | 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

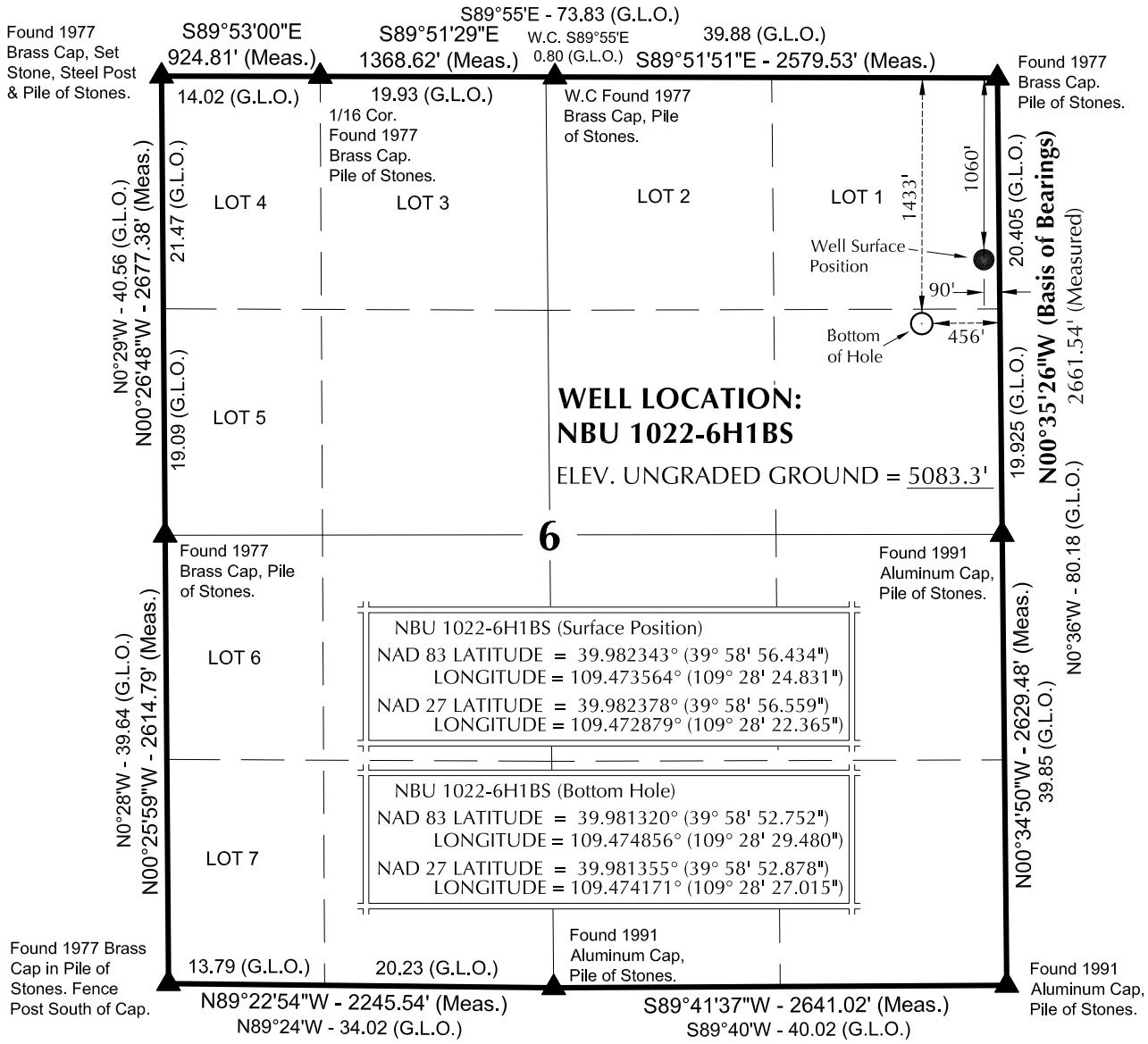
**DRILLING SUPERINTENDENT:** _____ **DATE:** _____

Kenny Gathings / Lovel Young



RECEIVED: May 16, 2013

# T10S, 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 S44°10'47"W 519.53' 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.

09-12-12

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 1022-6A**

**NBU 1022-6H1BS**
**WELL PLAT**
**1433' FNL, 456' FEL (Bottom Hole)**
**SE ¼ NE ¼ OF SECTION 6, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.**

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

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

| | | |
|---|---|---|
| DATE SURVEYED: 8-9-12 | SURVEYED BY: W.W. | SHEET NO: |
| DATE DRAWN: 8-20-12 | DRAWN BY: T.J.R. | 4 |
| SCALE: 1" = 1000' | Date Last Revised: | 4 OF 18 |

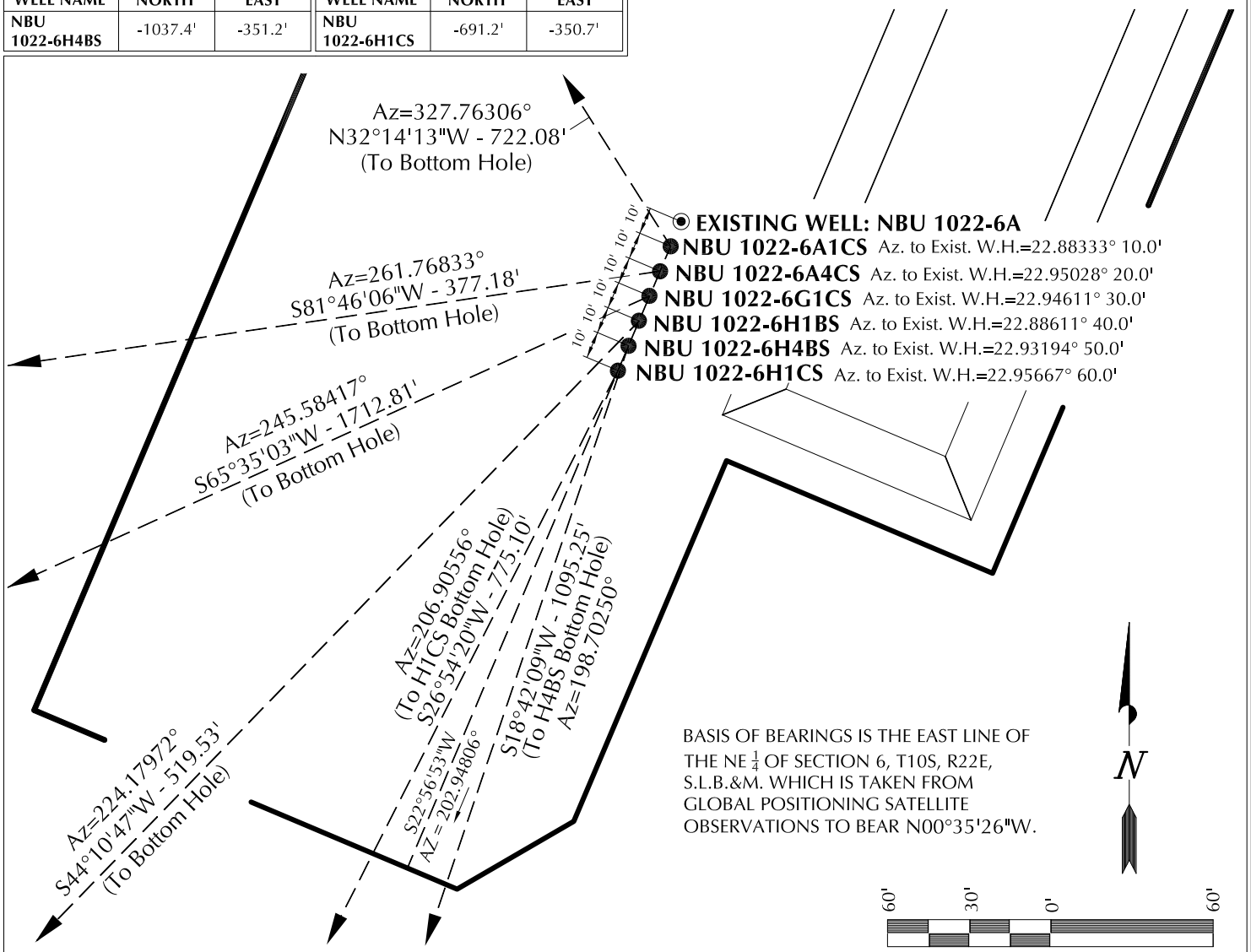
RECEIVED: May 16, 2013

API Well Number: 43047538110000

| WELL NAME | SURFACE POSITION | | | | | BOTTOM HOLE | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | NAD83 | | NAD27 | | | NAD83 | | NAD27 | | |
| | LATITUDE | LONGITUDE | LATITUDE | LONGITUDE | FOOTAGES | LATITUDE | LONGITUDE | LATITUDE | LONGITUDE | FOOTAGES |
| NBU 1022-6A1CS | 39°58'56.707" 39.982419° | 109°28'24.681" 109.473522° | 39°58'56.833" 39.982454° | 109°28'22.215" 109.472838° | 1032' FNL 78' FEL | 39°59'02.741" 39.984095° | 109°28'29.629" 109.474897° | 39°59'02.867" 39.984130° | 109°28'27.163" 109.474212° | 422' FNL 457' FEL |
| NBU 1022-6A4CS | 39°58'56.616" 39.982393° | 109°28'24.731" 109.473536° | 39°58'56.741" 39.982428° | 109°28'22.266" 109.472852° | 1041' FNL 82' FEL | 39°58'56.082" 39.982245° | 109°28'29.526" 109.474868° | 39°58'56.207" 39.982280° | 109°28'27.060" 109.474183° | 1096' FNL 456' FEL |
| NBU 1022-6G1CS | 39°58'56.525" 39.982368° | 109°28'24.781" 109.473550° | 39°58'56.651" 39.982403° | 109°28'22.316" 109.472865° | 1050' FNL 86' FEL | 39°58'49.528" 39.980424° | 109°28'44.810" 109.479114° | 39°58'49.653" 39.980459° | 109°28'42.344" 109.478429° | 1762' FNL 1653' FEL |
| NBU 1022-6H1BS | 39°58'56.434" 39.982343° | 109°28'24.831" 109.473564° | 39°58'56.559" 39.982378° | 109°28'22.365" 109.472879° | 1060' FNL 90' FEL | 39°58'52.752" 39.981320° | 109°28'29.480" 109.474856° | 39°58'52.878" 39.981355° | 109°28'27.015" 109.474171° | 1433' FNL 456' FEL |
| NBU 1022-6H4BS | 39°58'56.343" 39.982318° | 109°28'24.881" 109.473578° | 39°58'56.468" 39.982352° | 109°28'22.416" 109.472893° | 1069' FNL 94' FEL | 39°58'46.093" 39.979470° | 109°28'29.390" 109.474831° | 39°58'46.218" 39.979505° | 109°28'26.925" 109.474146° | 2107' FNL 456' FEL |
| NBU 1022-6H1CS | 39°58'56.252" 39.982292° | 109°28'24.932" 109.473592° | 39°58'56.377" 39.982327° | 109°28'22.466" 109.472907° | 1078' FNL 98' FEL | 39°58'49.423" 39.980395° | 109°28'29.435" 109.474843° | 39°58'49.548" 39.980430° | 109°28'26.970" 109.474158° | 1770' FNL 456' FEL |
| NBU 1022-6A | 39°58'56.798" 39.982444° | 109°28'24.631" 109.473509° | 39°58'56.923" 39.982479° | 109°28'22.166" 109.472824° | 1023' FNL 74' FEL | | | | | |

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

| WELL NAME | NORTH | EAST | WELL NAME | NORTH | EAST | WELL NAME | NORTH | EAST | WELL NAME | NORTH | EAST |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NBU 1022-6A1CS | 610.8' | -385.2' | NBU 1022-6A4CS | -54.0' | -373.3' | NBU 1022-6G1CS | -708.0' | -1559.6' | NBU 1022-6H1BS | -372.6' | -362.1' |
| WELL NAME | NORTH | EAST | WELL NAME | NORTH | EAST | | | | | | |
| NBU 1022-6H4BS | -1037.4' | -351.2' | NBU 1022-6H1CS | -691.2' | -350.7' | | | | | | |

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1099 18th Street - Denver, Colorado 80202

## WELL PAD - NBU 1022-6A

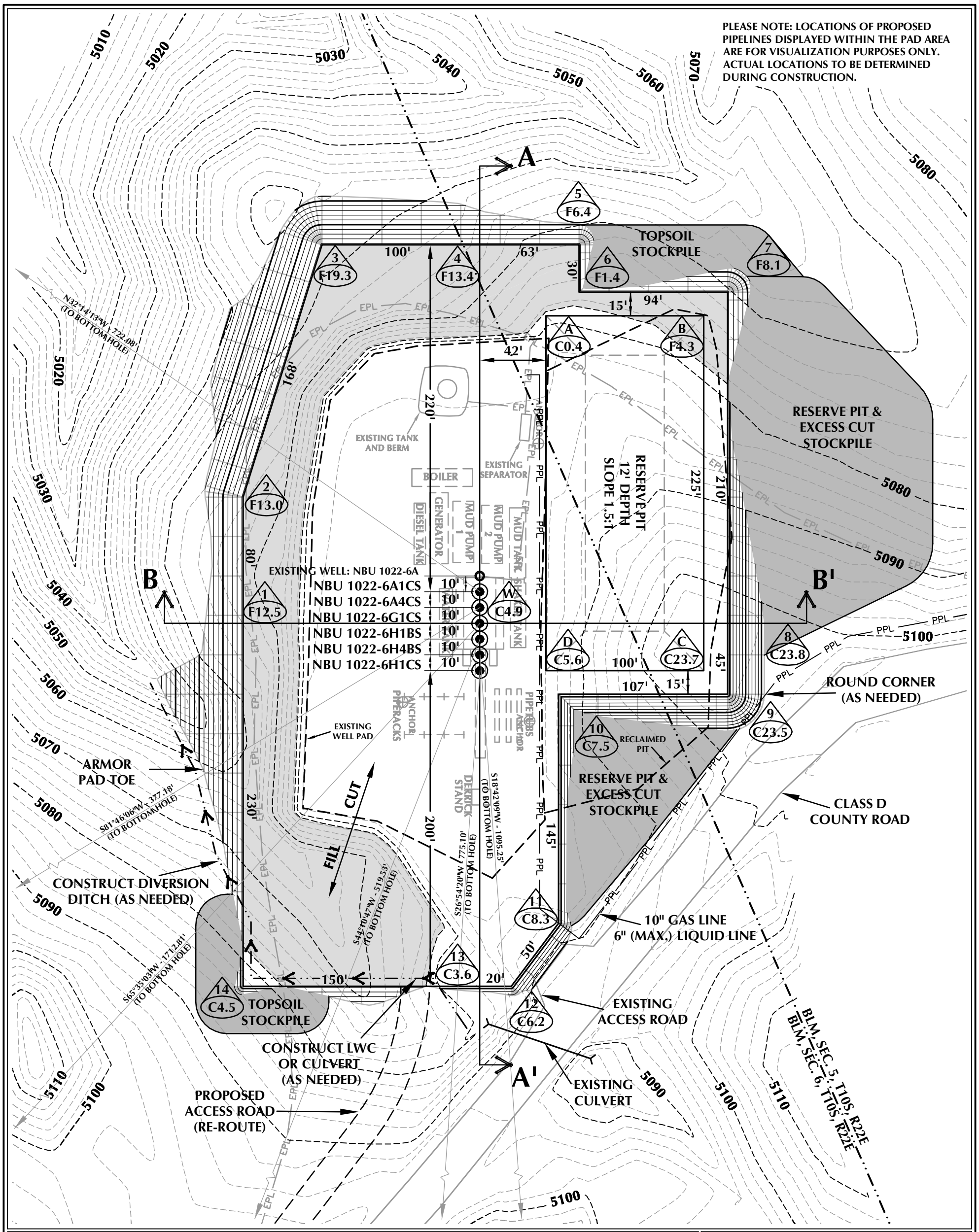
**WELL PAD INTERFERENCE PLAT**
**WELLS - NBU 1022-6A1CS, NBU 1022-6A4CS, NBU 1022-6G1CS, NBU 1022-6H1BS, NBU 1022-6H4BS & NBU 1022-6H1CS**
**LOCATED IN SECTION 6, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.**

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

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

| | | |
|---|---|---|
| DATE SURVEYED: 8-9-12 | SURVEYED BY: W.W. | SHEET NO: 7 |
| DATE DRAWN: 8-20-12 | DRAWN BY: T.J.R. | |
| SCALE: 1" = 60' | Date Last Revised: | 7 OF 18 |

RECEIVED: May 16, 2013




## WELL PAD - NBU 1022-6A DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5083.4'
FINISHED GRADE ELEVATION = 5078.5'
CUT SLOPES = 1:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.28 ACRES
TOTAL DISTURBANCE AREA = 4.15 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

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

### WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 20,203 C.Y.
TOTAL FILL FOR WELL PAD = 18,316 C.Y.
TOPSOIL @ 6" DEPTH = 1,806 C.Y.
EXCESS MATERIAL = 1,887 C.Y.

### RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT
+/- 7,590 C.Y.
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 28,850 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

WELL PAD - NBU 1022-6A

WELL PAD - LOCATION LAYOUT
NBU 1022-6A1CS, NBU 1022-6A4CS,
NBU 1022-6G1CS, NBU 1022-6H1BS,
NBU 1022-6H4BS & NBU 1022-6H1CS
LOCATED IN SECTION 6, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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209 NORTH 300 WEST - VERNAL, UTAH 84078

| SCALE: 1"=60' | DATE: 9/4/12 | SHEET NO: |
|---|---|---|
| REVISED: | ANK 11/30/12 | 8 8 OF 18 |

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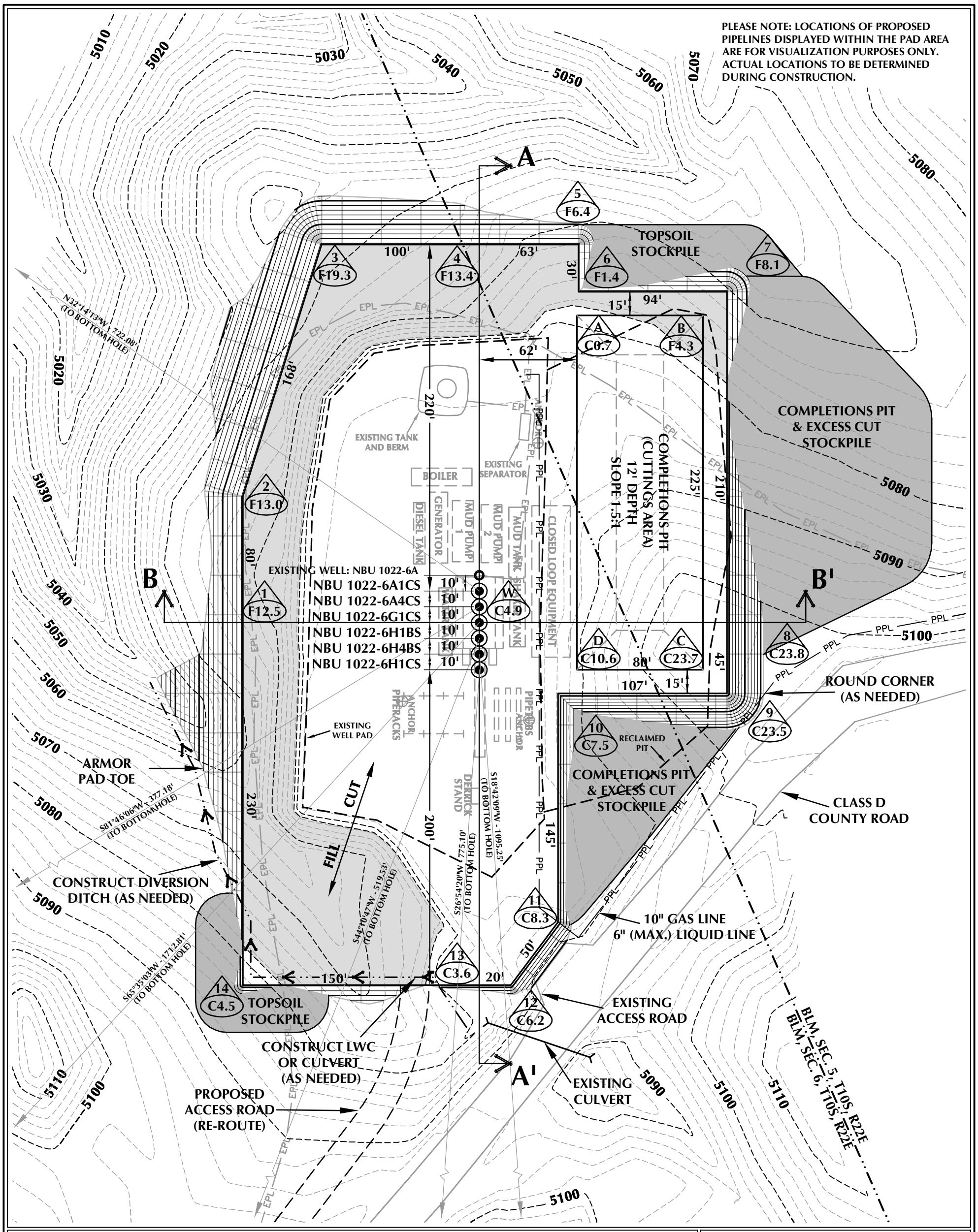


## WELL PAD - NBU 1022-6A (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5083.4'
FINISHED GRADE ELEVATION = 5078.5'
CUT SLOPES = 1:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.28 ACRES
TOTAL DISTURBANCE AREA = 4.15 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

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

### WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 20,203 C.Y.
TOTAL FILL FOR WELL PAD = 18,316 C.Y.
TOPSOIL @ 6" DEPTH = 1,806 C.Y.
EXCESS MATERIAL = 1,887 C.Y.

### COMPLETIONS PIT QUANTITIES

TOTAL CUT FOR COMPLETIONS PIT +/- 5,750 C.Y.
COMPLETIONS PIT CAPACITY (2' OF FREEBOARD) +/- 21,580 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

WELL PAD - NBU 1022-6A

WELL PAD - LOCATION LAYOUT
NBU 1022-6A1CS, NBU 1022-6A4CS,
NBU 1022-6G1CS, NBU 1022-6H1BS,
NBU 1022-6H4BS & NBU 1022-6H1CS
LOCATED IN SECTION 6, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
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Phone 307-674-0609
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TIMBERLINE (435) 789-1365
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209 NORTH 300 WEST - VERNAL, UTAH 84078

SCALE: 1"=60' | DATE: 11/30/12 | SHEET NO: 8B 8B OF 18
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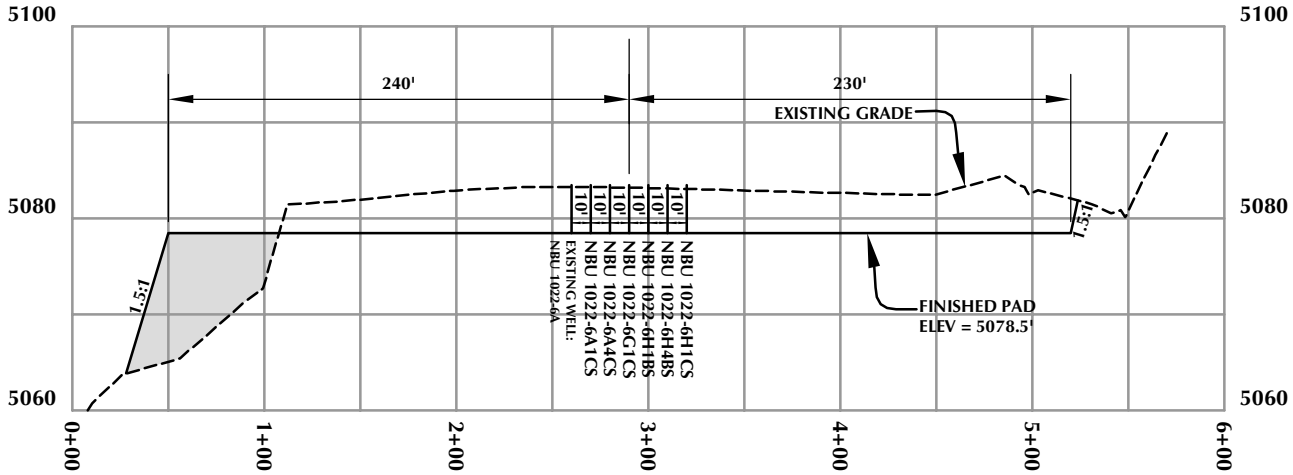
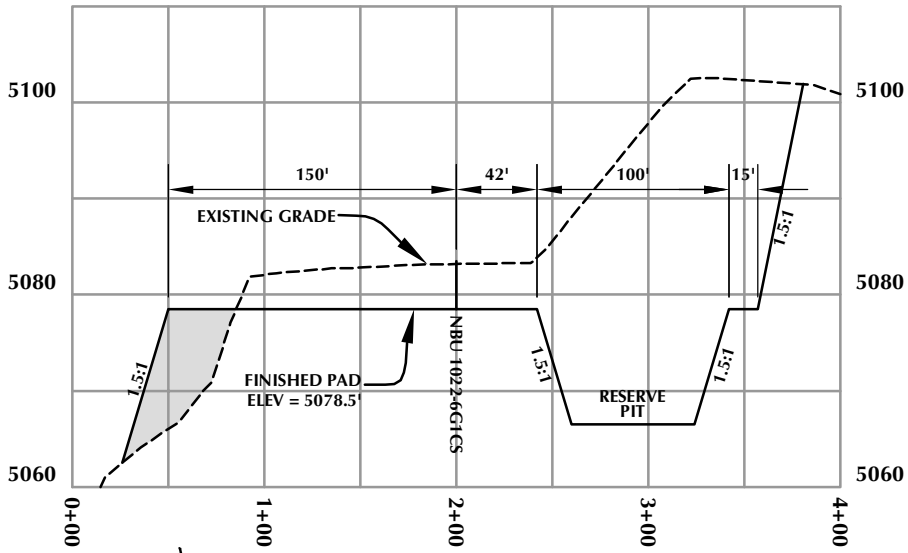



## CROSS SECTION A-A'




## CROSS SECTION B-B'

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

WELL PAD - NBU 1022-6A

WELL PAD - CROSS SECTIONS
NBU 1022-6A1CS, NBU 1022-6A4CS,
NBU 1022-6G1CS, NBU 1022-6H1BS,
NBU 1022-6H4BS & NBU 1022-6H1CS
LOCATED IN SECTION 6, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

609
CONSULTING, LLC
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Sheridan, WY 82801
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HORIZONTAL 0 50' 100' 1" = 100'
VERTICAL 0 10' 20' 1" = 20'

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209 NORTH 300 WEST - VERNAL, UTAH 84078

Scale: 1"=100' | Date: 9/4/12 | SHEET NO: 9
REVISED:
9 OF 18

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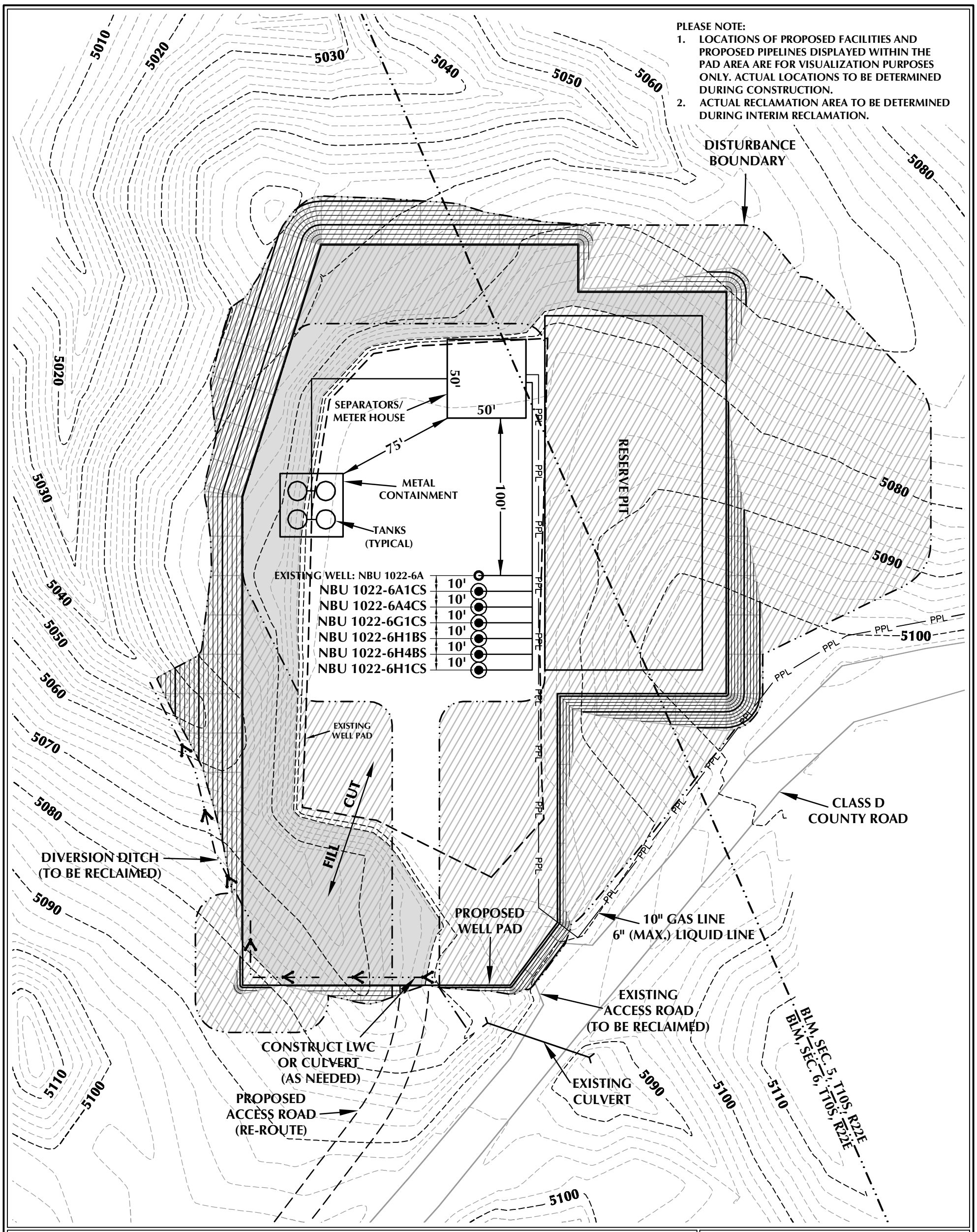


## WELL PAD - NBU 1022-6A RECLAMATION DESIGN SUMMARY

TOTAL DISTURBANCE AREA = 4.15 ACRES (INCLUDING EXISTING)
RECLAMATION AREA = 3.04 ACRES
TOTAL WELL PAD AREA AFTER RECLAMATION = 1.11 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 1022-6A

WELL PAD - RECLAMATION LAYOUT
NBU 1022-6A1CS, NBU 1022-6A4CS,
NBU 1022-6G1CS, NBU 1022-6H1BS,
NBU 1022-6H4BS & NBU 1022-6H1CS
LOCATED IN SECTION 6, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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

| SCALE: 1"=60' | DATE: 9/4/12 | SHEET NO: |
|---|---|---|
| REVISED: | ANK 11/30/12 | 10 10 OF 18 |

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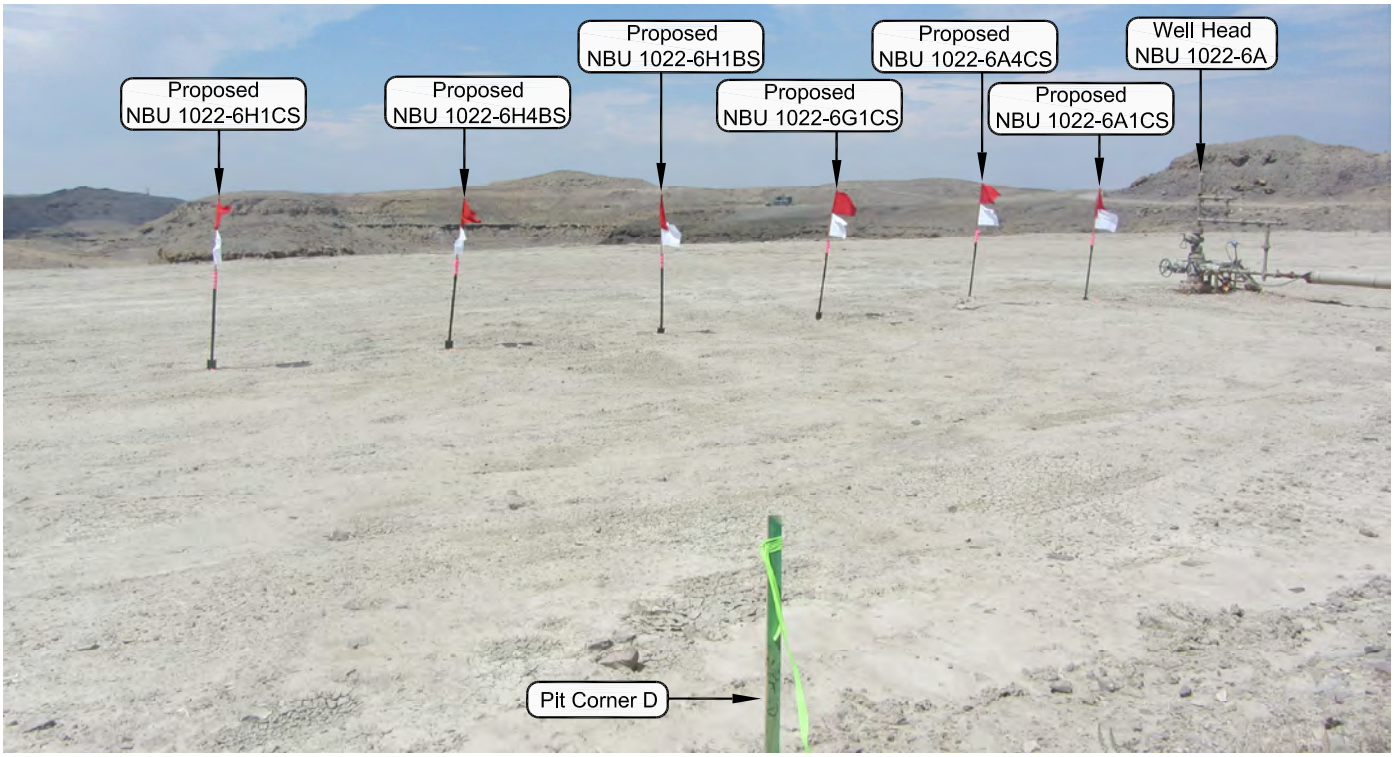


**PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE** **CAMERA ANGLE: NORTHWESTERLY**

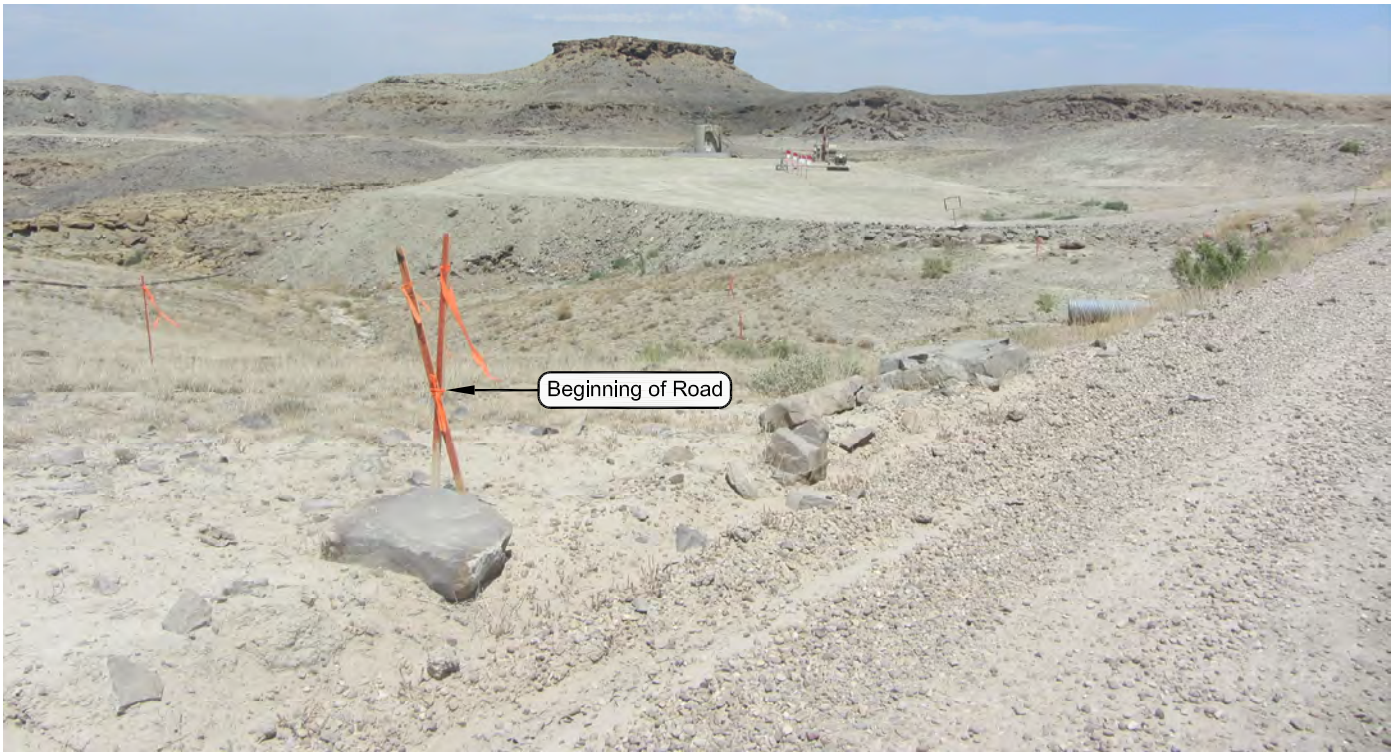


**PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD** **CAMERA ANGLE: NORTHEASTERLY**

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

**WELL PAD - NBU 1022-6A**

**LOCATION PHOTOS**
**NBU 1022-6A1CS, NBU 1022-6A4CS, NBU 1022-6G1CS, NBU 1022-6H1BS, NBU 1022-6H4BS & NBU 1022-6H1CS LOCATED IN SECTION 6, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.**

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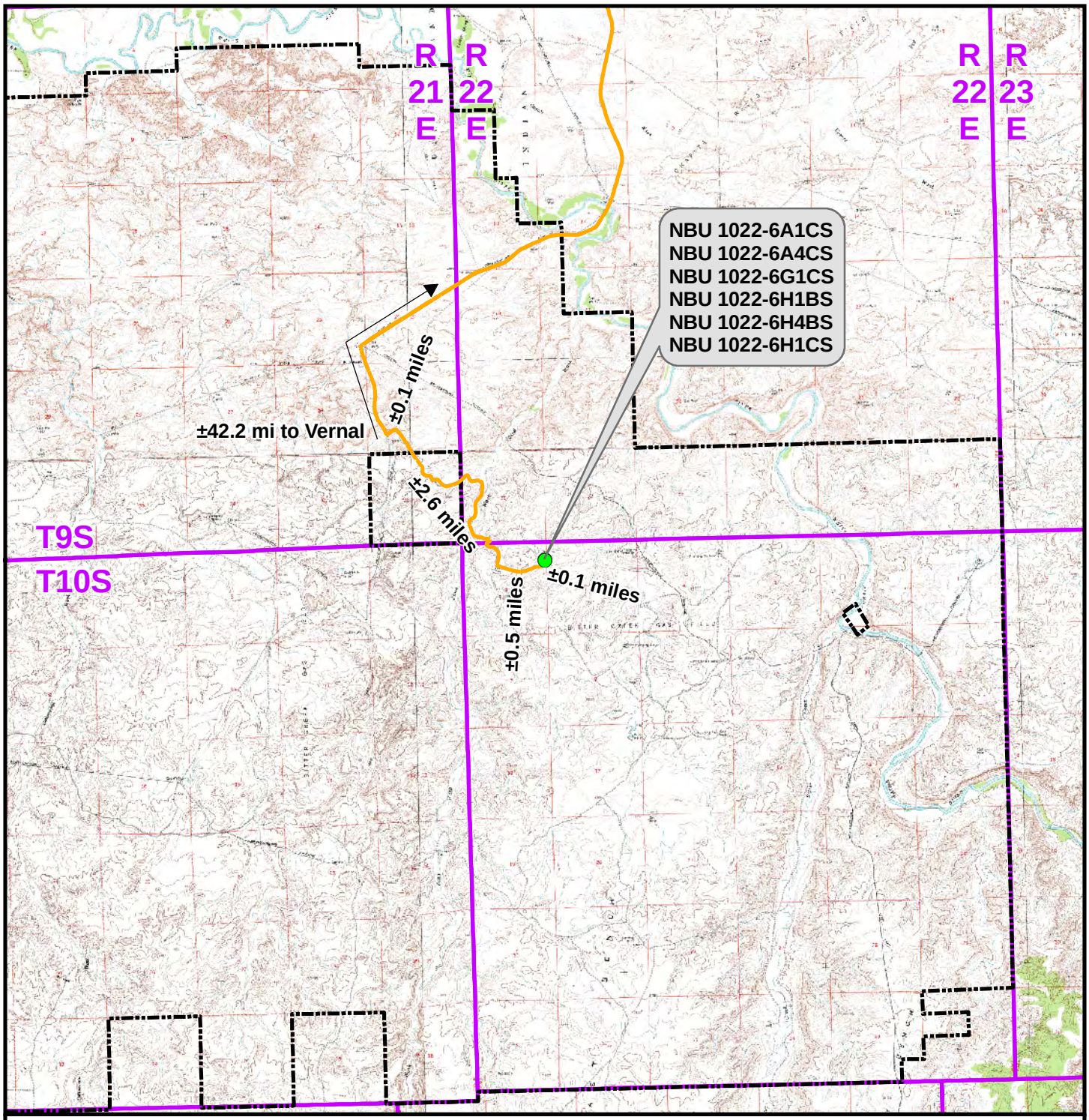
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

| | | |
|---|---|---|
| DATE PHOTOS TAKEN: 8-9-12 | PHOTOS TAKEN BY: W.W. | SHEET NO: |
| DATE DRAWN: 8-20-12 | DRAWN BY: T.J.R. | 11 |
| Date Last Revised: | | 11 OF 18 |

RECEIVED: May 16, 2013

API Well Number: 43047538110000




**Legend**

Distance From Well Pad - NBU 1022-6A To Unit Boundary: ±4,907ft

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

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## WELL PAD - NBU 1022-6A

TOPO A
NBU 1022-6A1CS, NBU 1022-6A4CS, NBU 1022-6G1CS, NBU 1022-6H1BS, NBU 1022-6H4BS & NBU 1022-6H1CS
LOCATED IN SECTION 6, T10S, 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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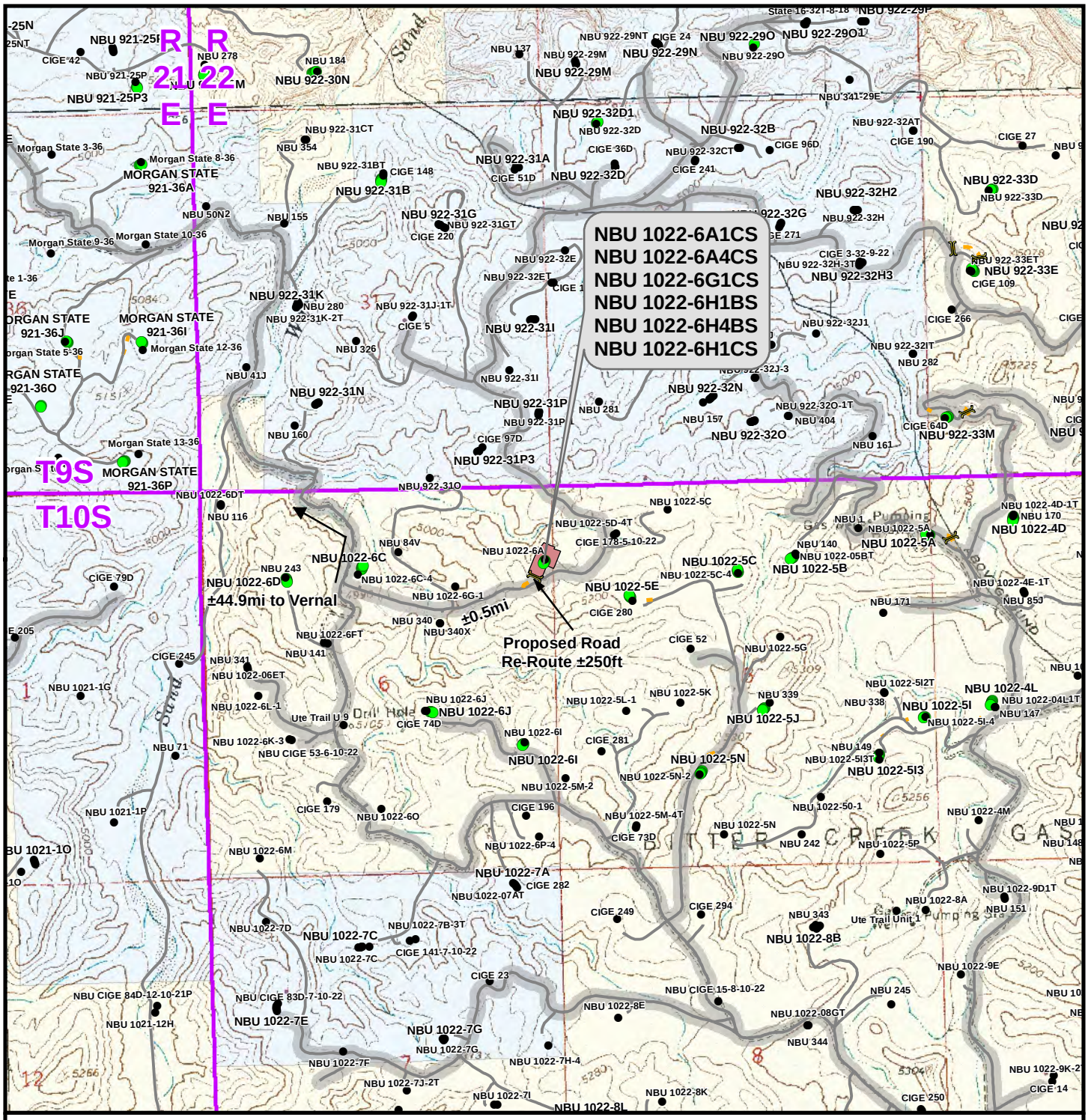
|---|---|---|
| SCALE: 1:100,000 | NAD83 USP Central | SHEET NO: 12 |
| DRAWN: TL | DATE: 20 Sept 2012 | 12 OF 18 |
| REVISED: | DATE: | |

RECEIVED: May 16, 2013

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## WELL PAD - NBU 1022-6A

**TOPO B**

**NBU 1022-6A1CS, NBU 1022-6A4CS, NBU 1022-6G1CS, NBU 1022-6H1BS, NBU 1022-6H4BS & NBU 1022-6H1CS LOCATED IN SECTION 6, T10S, 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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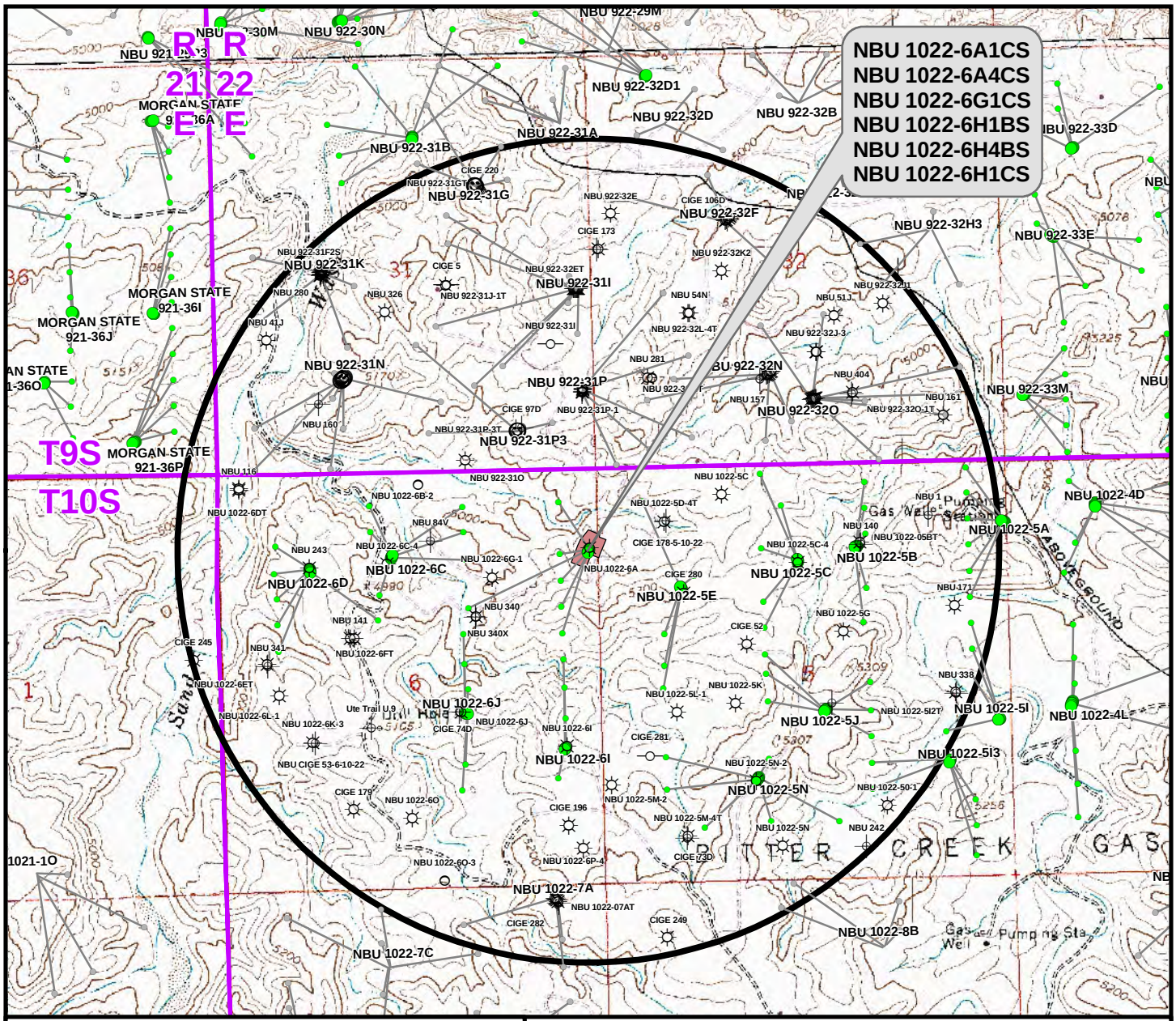
|---|---|---|
| SCALE: 1" = 2,000ft | NAD83 USP Central | SHEET NO: 13 |
| DRAWN: TL | DATE: 20 Sept 2012 | 13 OF 18 |
| REVISED: TL | DATE: 30 Nov 2012 | |

RECEIVED: May 16, 2013




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 1022-6A1CS | NBU 1022-6A | 716ft |
| NBU 1022-6A4CS | NBU 1022-6A | 388ft |
| NBU 1022-6G1CS | NBU 340 | 145ft |
| NBU 1022-6H1BS | NBU 1022-6A | 557ft |
| NBU 1022-6H4BS | NBU 340X | 1,135ft |
| NBU 1022-6H1CS | NBU 1022-6A | 835ft |

**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 1022-6A

TOPO C
NBU 1022-6A1CS, NBU 1022-6A4CS, NBU 1022-6G1CS, NBU 1022-6H1BS, NBU 1022-6H4BS & NBU 1022-6H1CS
LOCATED IN SECTION 6, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

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Fax 307-674-0182

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|---|---|---|
| SCALE: 1" = 2,000ft | NAD83 USP Central | SHEET NO: 14 |
| DRAWN: TL | DATE: 30 Nov 2012 | 14 OF 18 |
| REVISED: | DATE: | |

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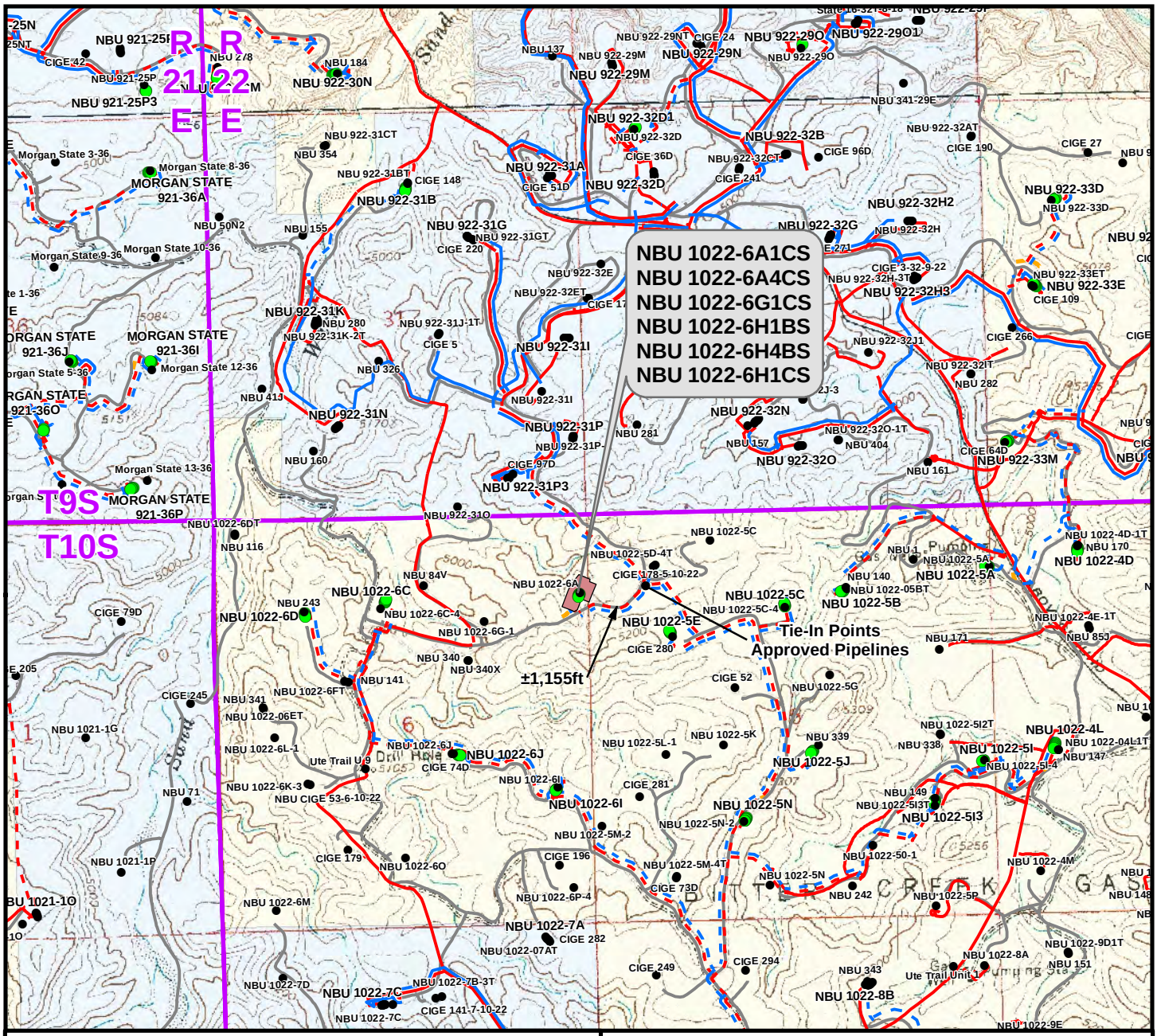


| Proposed Liquid Pipeline | Length |
|---|---|
| Buried 6"(Max.) (Separator to Edge of Pad) | ±365ft |
| Buried 6"(Max.) (Edge of Pad to Approved 6" Liquid Pipeline) | ±1,155ft |
| TOTAL PROPOSED BURIED LIQUID PIPELINE = | ±1,520ft |

| Proposed Gas Pipeline | Length |
|---|---|
| Buried 10" (Meter House to Edge of Pad) | ±365ft |
| Buried 10" (Edge of Pad to Approved 16" Gas Pipeline) | ±1,155ft |
| TOTAL PROPOSED BURIED GAS PIPELINE = | ±1,520ft |

**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 1022-6A

TOPO D
NBU 1022-6A1CS, NBU 1022-6A4CS, NBU 1022-6G1CS, NBU 1022-6H1BS, NBU 1022-6H4BS & NBU 1022-6H1CS
LOCATED IN SECTION 6, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

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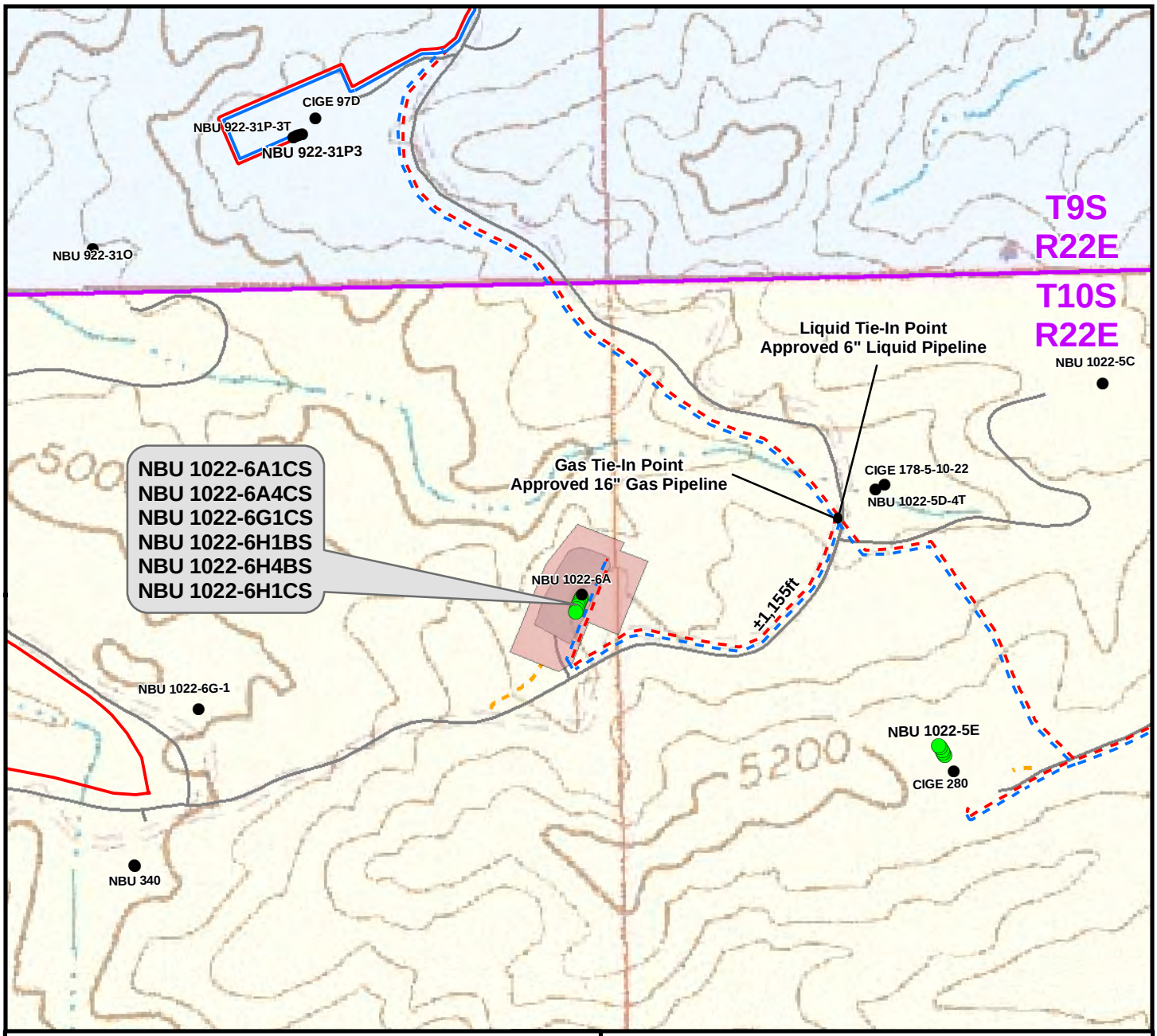
|---|---|---|
| SCALE: 1" = 2,000ft | NAD83 USP Central | SHEET NO: 15 |
| DRAWN: TL | DATE: 30 Nov 2012 | 15 OF 18 |
| REVISED: | DATE: | |

File: K:\ANADARKO\2012\2012_54_NBU_1022-6_FOCUS\GIS\Maps_ABCDE\NBU 1022-6A\NBU 1022-6A_D.mxd, 11/28/2012 12:25:15 PM

RECEIVED: May 16, 2013




| Proposed Liquid Pipeline | Length |
|---|---|
| Buried 6"(Max.) (Separator to Edge of Pad) | ±365ft |
| Buried 6"(Max.) (Edge of Pad to Approved 6" Liquid Pipeline) | ±1,155ft |
| TOTAL PROPOSED BURIED LIQUID PIPELINE = | ±1,520ft |

| Proposed Gas Pipeline | Length |
|---|---|
| Buried 10" (Meter House to Edge of Pad) | ±365ft |
| Buried 10" (Edge of Pad to Approved 16" Gas Pipeline) | ±1,155ft |
| TOTAL PROPOSED BURIED GAS PIPELINE = | ±1,520ft |

**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 1022-6A

TOPO D2 (PAD & PIPELINE DETAIL)
NBU 1022-6A1CS, NBU 1022-6A4CS,
NBU 1022-6G1CS, NBU 1022-6H1BS,
NBU 1022-6H4BS & NBU 1022-6H1CS
LOCATED IN SECTION 6, T10S, 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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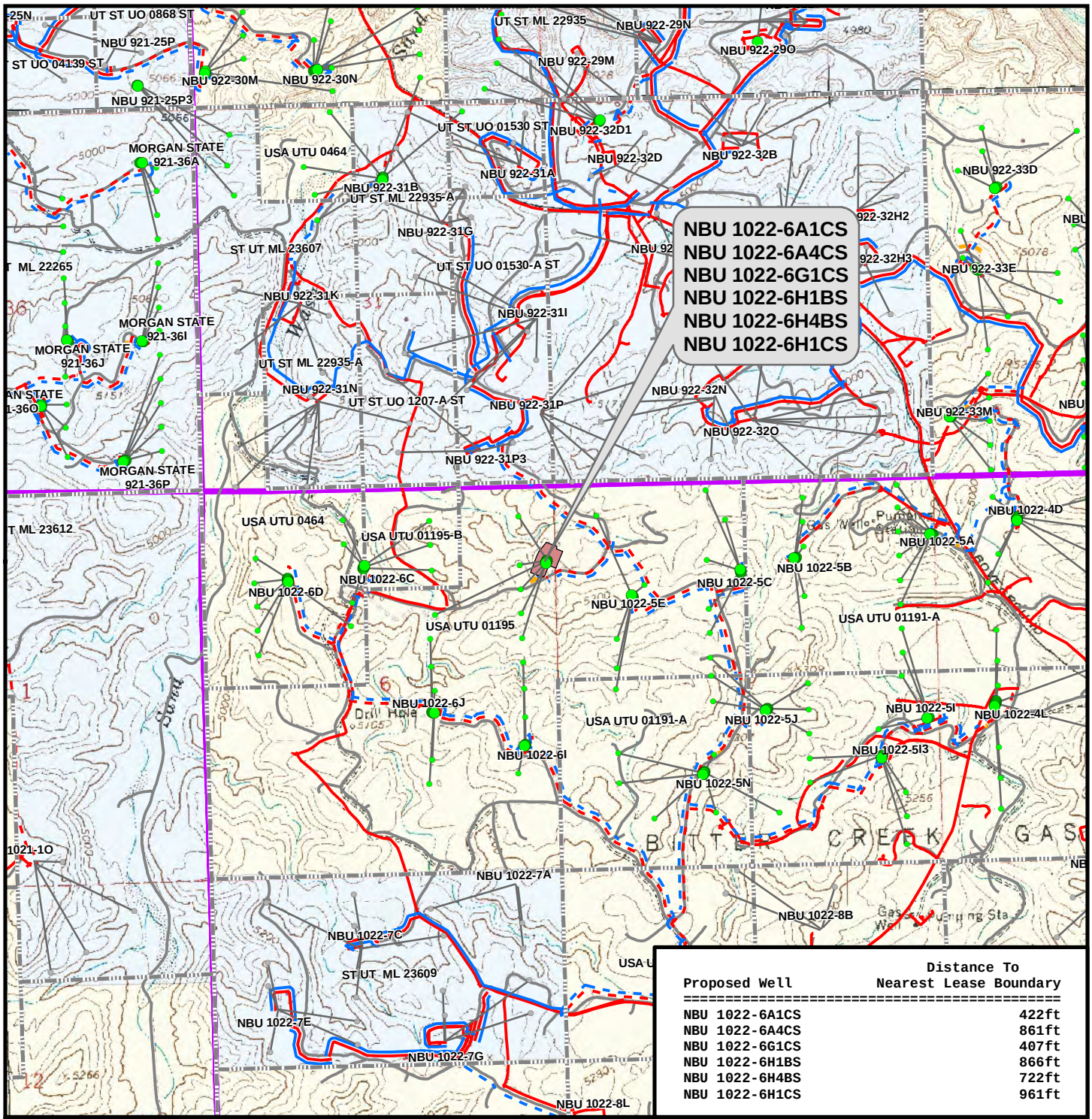
| | | |
|---|---|---|
| SCALE: 1" = 500ft | NAD83 USP Central | SHEET NO: 16 |
| DRAWN: TL | DATE: 20 Sept 2012 | 16 OF 18 |
| REVISED: TL | DATE: 30 Nov 2012 | |

File: K:\ANADARKO\2012\2012_54_NBU_1022-6_FOCUS\GIS\Maps_ABCDE\NBU 1022-6A\NBU 1022-6A_D2.mxd, 12/11/2012 4:59:54 PM

RECEIVED: May 16, 2013

API Well Number: 43047538110000




| Proposed Well | Distance To Nearest Lease Boundary |
|---|---|
| NBU 1022-6A1CS | 422ft |
| NBU 1022-6A4CS | 861ft |
| NBU 1022-6G1CS | 407ft |
| NBU 1022-6H1BS | 866ft |
| NBU 1022-6H4BS | 722ft |
| NBU 1022-6H1CS | 961ft |

**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 1022-6A

**TOPO E**
**NBU 1022-6A1CS, NBU 1022-6A4CS, NBU 1022-6G1CS, NBU 1022-6H1BS, NBU 1022-6H4BS & NBU 1022-6H1CS**
**LOCATED IN SECTION 6, T10S, 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: 17 |
| DRAWN: TL | DATE: 30 Nov 2012 | 17 OF 18 |
| REVISED: | DATE: | |

File: K:\ANADARKO\2012\2012_54_NBU_1022-6_FOCUS\GIS\Maps_ABCDE\NBU 1022-6A\NBU 1022-6A_E.mxd 12/11/2012 5:05:33 PM

RECEIVED: May 16, 2013

**Kerr-McGee Oil & Gas Onshore, LP**
**WELL PAD – NBU 1022-6A**
**WELLS - NBU 1022-6A1CS, NBU 1022-6A4CS,**
**NBU 1022-6G1CS, NBU 1022-6H1BS,**
**NBU 1022-6H4BS & NBU 1022-6H1CS**
**Section 6, T10S, R22E, S.L.B.&M.**

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45; exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 18.7 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the Class D County Road approximately 0.1 miles to a second Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the second Class D County Road approximately 2.6 miles to a third Class D County road to the east. Exit left and proceed in an easterly direction approximately 0.5 miles to the proposed access road to the northeast. Follow road flags in a northeasterly direction approximately 250 feet to the proposed well pad.

Total distance from Vernal, Utah to the proposed well location is approximately 45.4 miles in a southerly direction.



RECEIVED: May 16, 2013

API Well Number: 43047538110000

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6A PAD
Well: NBU 1022-6H1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Scientific Drilling

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52166.0snT
Dip Angle: 65.82°
Date: 2013/01/10
Model: IGRF2010

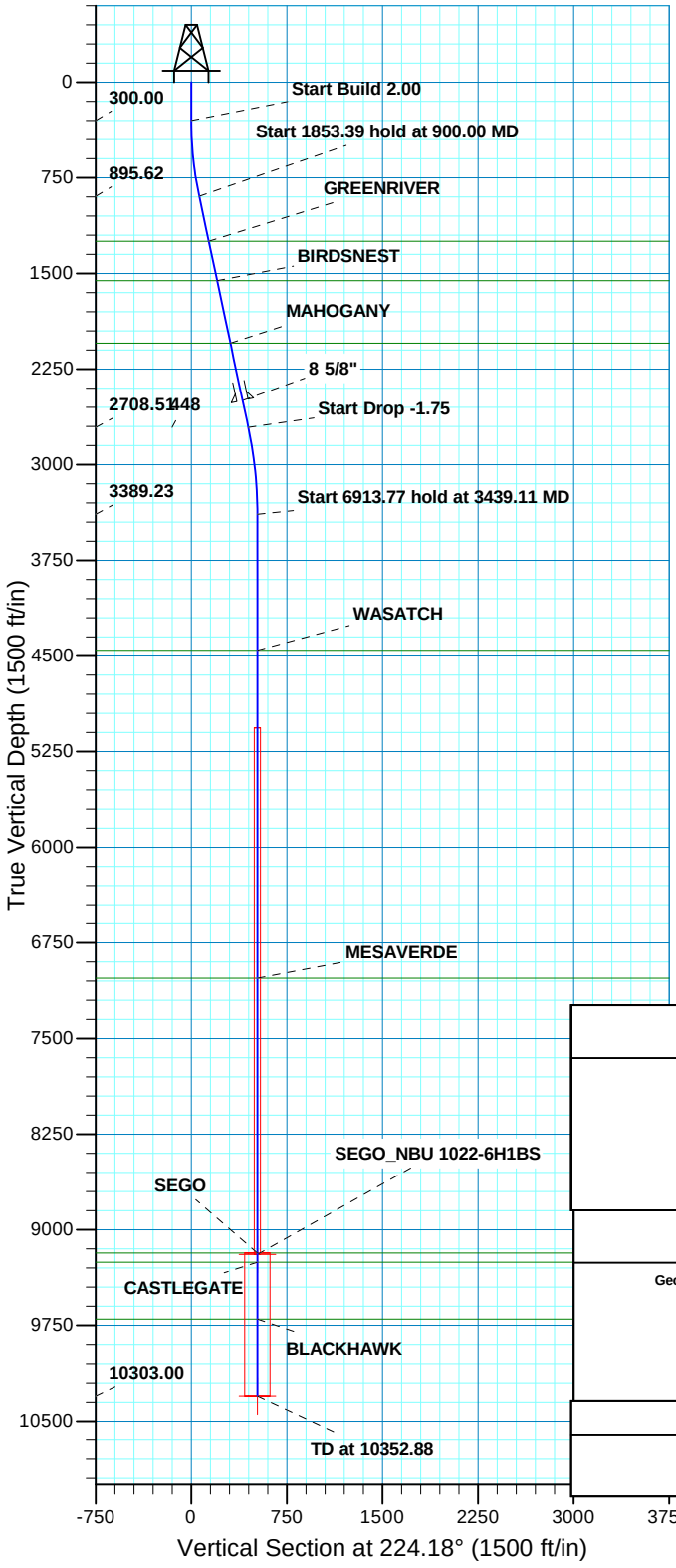
**WELL DETAILS: NBU 1022-6H1BS**

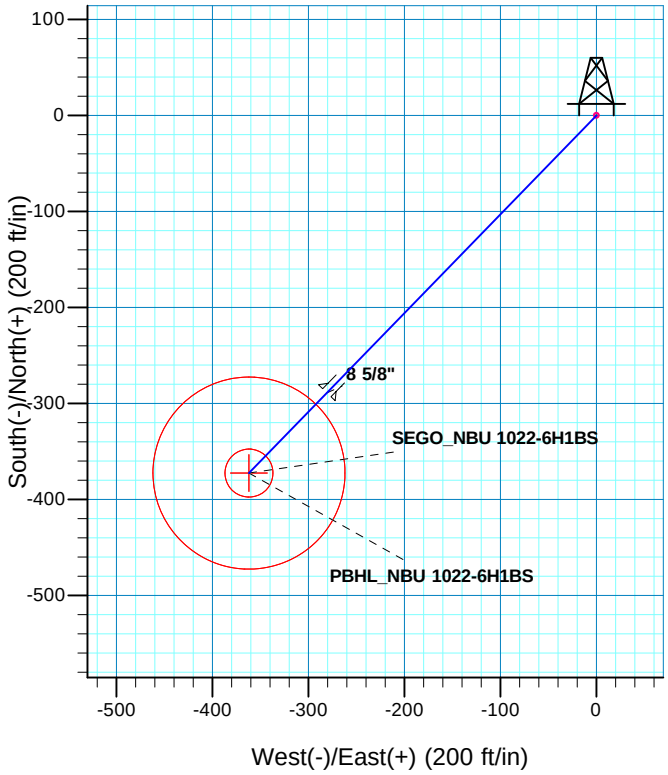
GL 5079 & KB 4 @ 5083.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14523291.31 | 2068218.41 | 39.9823778 | -109.4728791 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9194.00 | -372.58 | -362.01 | 14522912.58 | 2067862.84 | 39.9813548 | -109.4741711 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10303.00 | -372.58 | -362.01 | 14522912.58 | 2067862.84 | 39.9813548 | -109.4741711 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 900.00 | 12.00 | 224.18 | 895.62 | -44.90 | -43.63 | 2.00 | 224.18 | 62.60 | |
| 2753.39 | 12.00 | 224.18 | 2708.51 | -321.27 | -312.15 | 0.00 | 0.00 | 447.94 | |
| 3439.11 | 0.00 | 0.00 | 3389.23 | -372.58 | -362.01 | 1.75 | 180.00 | 519.49 | |
| 10352.88 | 0.00 | 0.00 | 10303.00 | -372.58 | -362.01 | 0.00 | 0.00 | 519.49 | PBHL_NBU 1022-6H1BS |

**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 6 T10N R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1248.00 | 1260.25 | GREENRIVER |
| 1558.00 | 1577.17 | BIRDSNEST |
| 2047.00 | 2077.10 | MAHOGANY |
| 4455.00 | 4504.88 | WASATCH |
| 7028.00 | 7077.88 | MESAVERDE |
| 9184.00 | 9233.88 | SEGO |
| 9256.00 | 9305.88 | CASTLEGATE |
| 9703.00 | 9752.88 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2497.00 | 2537.15 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6H1BS/OH)

Created By: RobertScott Date: 15:08, January 10 2013

RECEI

API Well Number: 43047538110000

Scientific Drilling

# US ROCKIES REGION PLANNING

**UTAH - UTM (feet), NAD27, Zone 12N**
**NBU 1022-6A PAD**
**NBU 1022-6H1BS**

**OH**

**Plan: PLAN #1 PRELIMINARY**

# Standard Planning Report

**10 January, 2013**

Anadarko Petroleum Corporation

RECEIVED: May 16, 2013

Scientific Drilling

# SDI
## Planning Report

Anadarko Petroleum Corporation

| | | | |
|---|---|---|---|
| **Database:** | EDM5000-RobertS-Local | **Local Co-ordinate Reference:** | Well NBU 1022-6H1BS |
| **Company:** | US ROCKIES REGION PLANNING | **TVD Reference:** | GL 5079 & KB 4 @ 5083.00ft (ASSUMED) |
| **Project:** | UTAH - UTM (feet), NAD27, Zone 12N | **MD Reference:** | GL 5079 & KB 4 @ 5083.00ft (ASSUMED) |
| **Site:** | NBU 1022-6A PAD | **North Reference:** | True |
| **Well:** | NBU 1022-6H1BS | **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 1022-6A PAD, SECTION 6 T10N R22E

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 14,523,319.19 usft | **Latitude:** | 39.9824538 |
| **From:** | Lat/Long | **Easting:** | 2,068,229.70 usft | **Longitude:** | -109.4728371 |
| **Position Uncertainty:** | 0.00 ft | **Slot Radius:** | 13.200 in | **Grid Convergence:** | 0.98 ° |

**Well** NBU 1022-6H1BS, 1060 FNL 90 FEL

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | -27.68 ft | **Northing:** | 14,523,291.32 usft | **Latitude:** | 39.9823778 |
| | **+E/-W** | -11.77 ft | **Easting:** | 2,068,218.41 usft | **Longitude:** | -109.4728791 |
| **Position Uncertainty** | | 0.00 ft | **Wellhead Elevation:** | | **Ground Level:** | 5,079.00 ft |

**Wellbore** OH

| **Magnetics** | **Model Name** | **Sample Date** | **Declination (°)** | **Dip Angle (°)** | **Field Strength (nT)** |
|---|---|---|---|---|---|
| | IGRF2010 | 2013/01/10 | 10.86 | 65.82 | 52,166 |

**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 | 224.18 |

**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 | |
| 900.00 | 12.00 | 224.18 | 895.62 | -44.90 | -43.63 | 2.00 | 2.00 | 0.00 | 224.18 | |
| 2,753.39 | 12.00 | 224.18 | 2,708.51 | -321.27 | -312.15 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3,439.11 | 0.00 | 0.00 | 3,389.23 | -372.58 | -362.01 | 1.75 | -1.75 | 0.00 | 180.00 | |
| 10,352.88 | 0.00 | 0.00 | 10,303.00 | -372.58 | -362.01 | 0.00 | 0.00 | 0.00 | 0.00 | PBHL_NBU 1022-6H |



RECEIVED: May 16, 2013

Scientific Drilling

**SDI**
Planning Report

Anadarko Petroleum Corporation

| | | | |
|---|---|---|---|
| **Database:** | EDM5000-RobertS-Local | **Local Co-ordinate Reference:** | Well NBU 1022-6H1BS |
| **Company:** | US ROCKIES REGION PLANNING | **TVD Reference:** | GL 5079 & KB 4 @ 5083.00ft (ASSUMED) |
| **Project:** | UTAH - UTM (feet), NAD27, Zone 12N | **MD Reference:** | GL 5079 & KB 4 @ 5083.00ft (ASSUMED) |
| **Site:** | NBU 1022-6A PAD | **North Reference:** | True |
| **Well:** | NBU 1022-6H1BS | **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 | 224.18 | 399.98 | -1.25 | -1.22 | 1.75 | 2.00 | 2.00 | 0.00 |
| 500.00 | 4.00 | 224.18 | 499.84 | -5.01 | -4.86 | 6.98 | 2.00 | 2.00 | 0.00 |
| 600.00 | 6.00 | 224.18 | 599.45 | -11.26 | -10.94 | 15.69 | 2.00 | 2.00 | 0.00 |
| 700.00 | 8.00 | 224.18 | 698.70 | -20.00 | -19.43 | 27.88 | 2.00 | 2.00 | 0.00 |
| 800.00 | 10.00 | 224.18 | 797.47 | -31.21 | -30.33 | 43.52 | 2.00 | 2.00 | 0.00 |
| 900.00 | 12.00 | 224.18 | 895.62 | -44.90 | -43.63 | 62.60 | 2.00 | 2.00 | 0.00 |
| **Start 1853.39 hold at 900.00 MD** | | | | | | | | | |
| 1,000.00 | 12.00 | 224.18 | 993.44 | -59.81 | -58.11 | 83.39 | 0.00 | 0.00 | 0.00 |
| 1,100.00 | 12.00 | 224.18 | 1,091.25 | -74.72 | -72.60 | 104.18 | 0.00 | 0.00 | 0.00 |
| 1,200.00 | 12.00 | 224.18 | 1,189.07 | -89.63 | -87.09 | 124.98 | 0.00 | 0.00 | 0.00 |
| 1,260.25 | 12.00 | 224.18 | 1,248.00 | -98.62 | -95.82 | 137.50 | 0.00 | 0.00 | 0.00 |
| **GREENRIVER** | | | | | | | | | |
| 1,300.00 | 12.00 | 224.18 | 1,286.88 | -104.55 | -101.58 | 145.77 | 0.00 | 0.00 | 0.00 |
| 1,400.00 | 12.00 | 224.18 | 1,384.70 | -119.46 | -116.07 | 166.56 | 0.00 | 0.00 | 0.00 |
| 1,500.00 | 12.00 | 224.18 | 1,482.51 | -134.37 | -130.56 | 187.35 | 0.00 | 0.00 | 0.00 |
| 1,577.17 | 12.00 | 224.18 | 1,558.00 | -145.88 | -141.74 | 203.40 | 0.00 | 0.00 | 0.00 |
| **BIRDSNEST** | | | | | | | | | |
| 1,600.00 | 12.00 | 224.18 | 1,580.33 | -149.28 | -145.04 | 208.14 | 0.00 | 0.00 | 0.00 |
| 1,700.00 | 12.00 | 224.18 | 1,678.14 | -164.19 | -159.53 | 228.93 | 0.00 | 0.00 | 0.00 |
| 1,800.00 | 12.00 | 224.18 | 1,775.96 | -179.10 | -174.02 | 249.72 | 0.00 | 0.00 | 0.00 |
| 1,900.00 | 12.00 | 224.18 | 1,873.77 | -194.02 | -188.51 | 270.51 | 0.00 | 0.00 | 0.00 |
| 2,000.00 | 12.00 | 224.18 | 1,971.59 | -208.93 | -203.00 | 291.31 | 0.00 | 0.00 | 0.00 |
| 2,077.10 | 12.00 | 224.18 | 2,047.00 | -220.42 | -214.17 | 307.34 | 0.00 | 0.00 | 0.00 |
| **MAHOGANY** | | | | | | | | | |
| 2,100.00 | 12.00 | 224.18 | 2,069.40 | -223.84 | -217.49 | 312.10 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 12.00 | 224.18 | 2,167.22 | -238.75 | -231.98 | 332.89 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 12.00 | 224.18 | 2,265.03 | -253.66 | -246.46 | 353.68 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 12.00 | 224.18 | 2,362.84 | -268.57 | -260.95 | 374.47 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 12.00 | 224.18 | 2,460.66 | -283.49 | -275.44 | 395.26 | 0.00 | 0.00 | 0.00 |
| 2,537.15 | 12.00 | 224.18 | 2,497.00 | -289.03 | -280.82 | 402.99 | 0.00 | 0.00 | 0.00 |
| **8 5/8"** | | | | | | | | | |
| 2,600.00 | 12.00 | 224.18 | 2,558.47 | -298.40 | -289.93 | 416.05 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 12.00 | 224.18 | 2,656.29 | -313.31 | -304.42 | 436.84 | 0.00 | 0.00 | 0.00 |
| 2,753.39 | 12.00 | 224.18 | 2,708.51 | -321.27 | -312.15 | 447.94 | 0.00 | 0.00 | 0.00 |
| **Start Drop -1.75** | | | | | | | | | |
| 2,800.00 | 11.18 | 224.18 | 2,754.17 | -327.99 | -318.68 | 457.31 | 1.75 | -1.75 | 0.00 |
| 2,900.00 | 9.43 | 224.18 | 2,852.55 | -340.82 | -331.15 | 475.21 | 1.75 | -1.75 | 0.00 |
| 3,000.00 | 7.68 | 224.18 | 2,951.44 | -351.50 | -341.52 | 490.09 | 1.75 | -1.75 | 0.00 |
| 3,100.00 | 5.93 | 224.18 | 3,050.73 | -360.00 | -349.78 | 501.94 | 1.75 | -1.75 | 0.00 |
| 3,200.00 | 4.18 | 224.18 | 3,150.33 | -366.32 | -355.93 | 510.76 | 1.75 | -1.75 | 0.00 |
| 3,300.00 | 2.43 | 224.18 | 3,250.16 | -370.46 | -359.95 | 516.54 | 1.75 | -1.75 | 0.00 |
| 3,400.00 | 0.68 | 224.18 | 3,350.12 | -372.42 | -361.85 | 519.26 | 1.75 | -1.75 | 0.00 |
| 3,439.11 | 0.00 | 0.00 | 3,389.23 | -372.58 | -362.01 | 519.49 | 1.75 | -1.75 | 0.00 |
| **Start 6913.77 hold at 3439.11 MD** | | | | | | | | | |
| 3,500.00 | 0.00 | 0.00 | 3,450.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 0.00 | 0.00 | 3,550.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 0.00 | 0.00 | 3,650.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 0.00 | 0.00 | 3,750.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |



RECEIVED: May 16, 2013

Scientific Drilling

**SDI**
Planning Report

Anadarko Petroleum Corporation

| | | | |
|---|---|---|---|
| **Database:** | EDM5000-RobertS-Local | **Local Co-ordinate Reference:** | Well NBU 1022-6H1BS |
| **Company:** | US ROCKIES REGION PLANNING | **TVD Reference:** | GL 5079 & KB 4 @ 5083.00ft (ASSUMED) |
| **Project:** | UTAH - UTM (feet), NAD27, Zone 12N | **MD Reference:** | GL 5079 & KB 4 @ 5083.00ft (ASSUMED) |
| **Site:** | NBU 1022-6A PAD | **North Reference:** | True |
| **Well:** | NBU 1022-6H1BS | **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) |
|---|---|---|---|---|---|---|---|---|---|
| 3,900.00 | 0.00 | 0.00 | 3,850.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 0.00 | 0.00 | 3,950.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 0.00 | 0.00 | 4,050.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 4,200.00 | 0.00 | 0.00 | 4,150.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 0.00 | 0.00 | 4,250.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 0.00 | 0.00 | 4,350.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 4,500.00 | 0.00 | 0.00 | 4,450.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 4,504.88 | 0.00 | 0.00 | 4,455.00 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| **WASATCH** | | | | | | | | | |
| 4,600.00 | 0.00 | 0.00 | 4,550.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 0.00 | 0.00 | 4,650.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 0.00 | 0.00 | 4,750.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 4,900.00 | 0.00 | 0.00 | 4,850.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 0.00 | 0.00 | 4,950.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 0.00 | 0.00 | 5,050.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 0.00 | 0.00 | 5,150.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 0.00 | 0.00 | 5,250.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 0.00 | 0.00 | 5,350.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 0.00 | 0.00 | 5,450.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 0.00 | 0.00 | 5,550.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 0.00 | 0.00 | 5,650.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 0.00 | 0.00 | 5,750.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 0.00 | 0.00 | 5,850.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 0.00 | 0.00 | 5,950.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 0.00 | 0.00 | 6,050.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 0.00 | 0.00 | 6,150.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 0.00 | 0.00 | 6,250.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 6,400.00 | 0.00 | 0.00 | 6,350.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 0.00 | 0.00 | 6,450.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 6,600.00 | 0.00 | 0.00 | 6,550.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 6,700.00 | 0.00 | 0.00 | 6,650.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 6,800.00 | 0.00 | 0.00 | 6,750.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 6,900.00 | 0.00 | 0.00 | 6,850.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 7,000.00 | 0.00 | 0.00 | 6,950.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 7,077.88 | 0.00 | 0.00 | 7,028.00 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| **MESAVERDE** | | | | | | | | | |
| 7,100.00 | 0.00 | 0.00 | 7,050.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 7,200.00 | 0.00 | 0.00 | 7,150.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 7,300.00 | 0.00 | 0.00 | 7,250.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 7,400.00 | 0.00 | 0.00 | 7,350.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 0.00 | 0.00 | 7,450.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 7,600.00 | 0.00 | 0.00 | 7,550.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 0.00 | 0.00 | 7,650.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 0.00 | 0.00 | 7,750.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 0.00 | 0.00 | 7,850.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 0.00 | 0.00 | 7,950.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 0.00 | 0.00 | 8,050.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 0.00 | 0.00 | 8,150.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 0.00 | 0.00 | 8,250.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 0.00 | 0.00 | 8,350.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 0.00 | 0.00 | 8,450.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 8,600.00 | 0.00 | 0.00 | 8,550.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 0.00 | 0.00 | 8,650.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 0.00 | 0.00 | 8,750.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |



RECEIVED: May 16, 2013

Scientific Drilling

**SDI**
Planning Report

Anadarko Petroleum Corporation

| | | | |
|---|---|---|---|
| **Database:** | EDM5000-RobertS-Local | **Local Co-ordinate Reference:** | Well NBU 1022-6H1BS |
| **Company:** | US ROCKIES REGION PLANNING | **TVD Reference:** | GL 5079 & KB 4 @ 5083.00ft (ASSUMED) |
| **Project:** | UTAH - UTM (feet), NAD27, Zone 12N | **MD Reference:** | GL 5079 & KB 4 @ 5083.00ft (ASSUMED) |
| **Site:** | NBU 1022-6A PAD | **North Reference:** | True |
| **Well:** | NBU 1022-6H1BS | **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) |
|---|---|---|---|---|---|---|---|---|---|
| 8,900.00 | 0.00 | 0.00 | 8,850.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 0.00 | 0.00 | 8,950.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 9,100.00 | 0.00 | 0.00 | 9,050.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 9,200.00 | 0.00 | 0.00 | 9,150.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 9,233.88 | 0.00 | 0.00 | 9,184.00 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| **SEGO** | | | | | | | | | |
| 9,243.88 | 0.00 | 0.00 | 9,194.00 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| **SEGO_NBU 1022-6H1BS** | | | | | | | | | |
| 9,300.00 | 0.00 | 0.00 | 9,250.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 9,305.88 | 0.00 | 0.00 | 9,256.00 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| **CASTLEGATE** | | | | | | | | | |
| 9,400.00 | 0.00 | 0.00 | 9,350.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 9,500.00 | 0.00 | 0.00 | 9,450.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 0.00 | 0.00 | 9,550.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 9,700.00 | 0.00 | 0.00 | 9,650.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 9,752.88 | 0.00 | 0.00 | 9,703.00 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| **BLACKHAWK** | | | | | | | | | |
| 9,800.00 | 0.00 | 0.00 | 9,750.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 0.00 | 0.00 | 9,850.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 0.00 | 0.00 | 9,950.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 10,100.00 | 0.00 | 0.00 | 10,050.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 10,200.00 | 0.00 | 0.00 | 10,150.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 0.00 | 0.00 | 10,250.12 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| 10,352.88 | 0.00 | 0.00 | 10,303.00 | -372.58 | -362.01 | 519.49 | 0.00 | 0.00 | 0.00 |
| **TD at 10352.88 - PBHL_NBU 1022-6H1BS** | | | | | | | | | |

**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 |
|---|---|---|---|---|---|---|---|---|---|
| SEGO_NBU 1022-6H1B<br>- plan hits target center<br>- Circle (radius 25.00) | 0.00 | 0.00 | 9,194.00 | -372.58 | -362.01 | 14,522,912.59 | 2,067,862.83 | 39.9813548 | -109.4741711 |
| PBHL_NBU 1022-6H1B<br>- plan hits target center<br>- Circle (radius 100.00) | 0.00 | 0.00 | 10,303.00 | -372.58 | -362.01 | 14,522,912.59 | 2,067,862.83 | 39.9813548 | -109.4741711 |

**Casing Points**

| Measured Depth (ft) | Vertical Depth (ft) | Name | Casing Diameter (in) | Hole Diameter (in) |
|---|---|---|---|---|
| 2,537.15 | 2,497.00 | 8 5/8" | 8.625 | 11.000 |



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Scientific Drilling

# SDI
## Planning Report

Anadarko Petroleum Corporation

| | | | |
|---|---|---|---|
| **Database:** | EDM5000-RobertS-Local | **Local Co-ordinate Reference:** | Well NBU 1022-6H1BS |
| **Company:** | US ROCKIES REGION PLANNING | **TVD Reference:** | GL 5079 & KB 4 @ 5083.00ft (ASSUMED) |
| **Project:** | UTAH - UTM (feet), NAD27, Zone 12N | **MD Reference:** | GL 5079 & KB 4 @ 5083.00ft (ASSUMED) |
| **Site:** | NBU 1022-6A PAD | **North Reference:** | True |
| **Well:** | NBU 1022-6H1BS | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | PLAN #1 PRELIMINARY | | |

**Formations**

| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|---|---|---|---|---|---|
| 1,260.25 | 1,248.00 | GREENRIVER | | | |
| 1,577.17 | 1,558.00 | BIRDSNEST | | | |
| 2,077.10 | 2,047.00 | MAHOGANY | | | |
| 4,504.88 | 4,455.00 | WASATCH | | | |
| 7,077.88 | 7,028.00 | MESAVERDE | | | |
| 9,233.88 | 9,184.00 | SEGO | | | |
| 9,305.88 | 9,256.00 | CASTLEGATE | | | |
| 9,752.88 | 9,703.00 | BLACKHAWK | | | |

**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 |
| 900.00 | 895.62 | -44.90 | -43.63 | Start 1853.39 hold at 900.00 MD |
| 2,753.39 | 2,708.51 | -321.27 | -312.15 | Start Drop -1.75 |
| 3,439.11 | 3,389.23 | -372.58 | -362.01 | Start 6913.77 hold at 3439.11 MD |
| 10,352.88 | 10,303.00 | -372.58 | -362.01 | TD at 10352.88 |



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

## NBU 1022-6A PAD

| API # | | NBU 1022-6A1CS | | |
|---|---|---|---|---|
| | Surface: | 1032 FNL / 78 FEL | NENE | Lot 1 |
| | BHL: | 422 FNL / 457 FEL | NENE | Lot 1 |
| API # | | NBU 1022-6A4CS | | |
| | Surface: | 1041 FNL / 82 FEL | NENE | Lot 1 |
| | BHL: | 1096 FNL / 456 FEL | NENE | Lot 1 |
| API # | | NBU 1022-6G1CS | | |
| | Surface: | 1050 FNL / 86 FEL | NENE | Lot 1 |
| | BHL: | 1762 FNL / 1653 FEL | SWNE | |
| API # | | NBU 1022-6H1BS | | |
| | Surface: | 1060 FNL / 90 FEL | NENE | Lot 1 |
| | BHL: | 1433 FNL / 456 FEL | SENE | |
| API # | | NBU 1022-6H1CS | | |
| | Surface: | 1078 FNL / 98 FEL | NENE | Lot 1 |
| | BHL: | 1770 FNL / 456 FEL | SENE | |
| API # | | NBU 1022-6H4BS | | |
| | Surface: | 1069 FNL / 94 FEL | NENE | Lot 1 |
| | BHL: | 2107 FNL / 456 FEL | SENE | |

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

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

An on-site meeting was held on October 10, 2012. Present were:

- Dave Gordon, Melissa Wardle, Aaron Roe and Lynn Dehner - BLM
- Jacob Dunham and Mitch Batty - 609 Consulting, LLC and Timberline Engineering & Land Surveying, Inc.
- Alan Rabinoff- ICF International
- Gina Becker, Tony Kazeck, Casey McKee, Charles Chase and Robert Townley- 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.

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**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.

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

±250' (0.05 miles) – Section 6 T10S R22E (NE/4 NE/4) – On-lease UTU-01195, an access road re-route from the edge of pad to the T-intersection in NE/4 NE/4. Please refer to the 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 expand the existing pad for the NBU 1022-6A Pad, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on January 16, 2013. 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 ±1,520' and the individual segments are broken up as follows:

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

±365' (0.07 miles) – Section 6 T10S R22E (NE/4 NE/4) – On-lease UTU-01195, BLM surface, New 10" buried gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

±1,155' (0.2 miles) – Section 6 T10S R22E (NE/4 NE/4) – On-lease UTU-01195, BLM surface, New 10" buried gas gathering pipeline from the edge of the pad traveling northwest into section 5, T10S-R22E to tie-in to the approved 16" gas gathering pipeline at the NBU 1022-5E Pad intersection. Please refer Exhibit A, Line 11.

**LIQUID GATHERING**

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

The total liquid gathering pipeline distance from the separator to the tie in point is ±1,520' and the individual segments are broken up as follows:

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

±365' (0.07 miles) – Section 6 T10S R22E (NE/4 NE/4) – On-lease UTU-01195, BLM surface, New 6" buried liquid gathering pipeline from the meter to the separator of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

±1,155' (0.2 miles) – Section 6 T10S R22E (NE/4 NE/4) – On-lease UTU-01195, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad traveling northwest into section 5, T10S-R22E to tie-in to the approved 6" liquid gathering pipeline at the NBU 1022-5E Pad intersection. Please refer Exhibit B, Line 11.

**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:**

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.

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**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

**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 October 31, 2012 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 12-311.

A paleontological reconnaissance survey was completed on May 31, 2010 by IPC Block Survey. SWCA Environmental Consultants has prepared the survey report. For additional details please refer to report UT12-14314-207.

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Biological field survey was completed on October 16, 2012 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-861.

**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
Senior Regulatory Analyst
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.

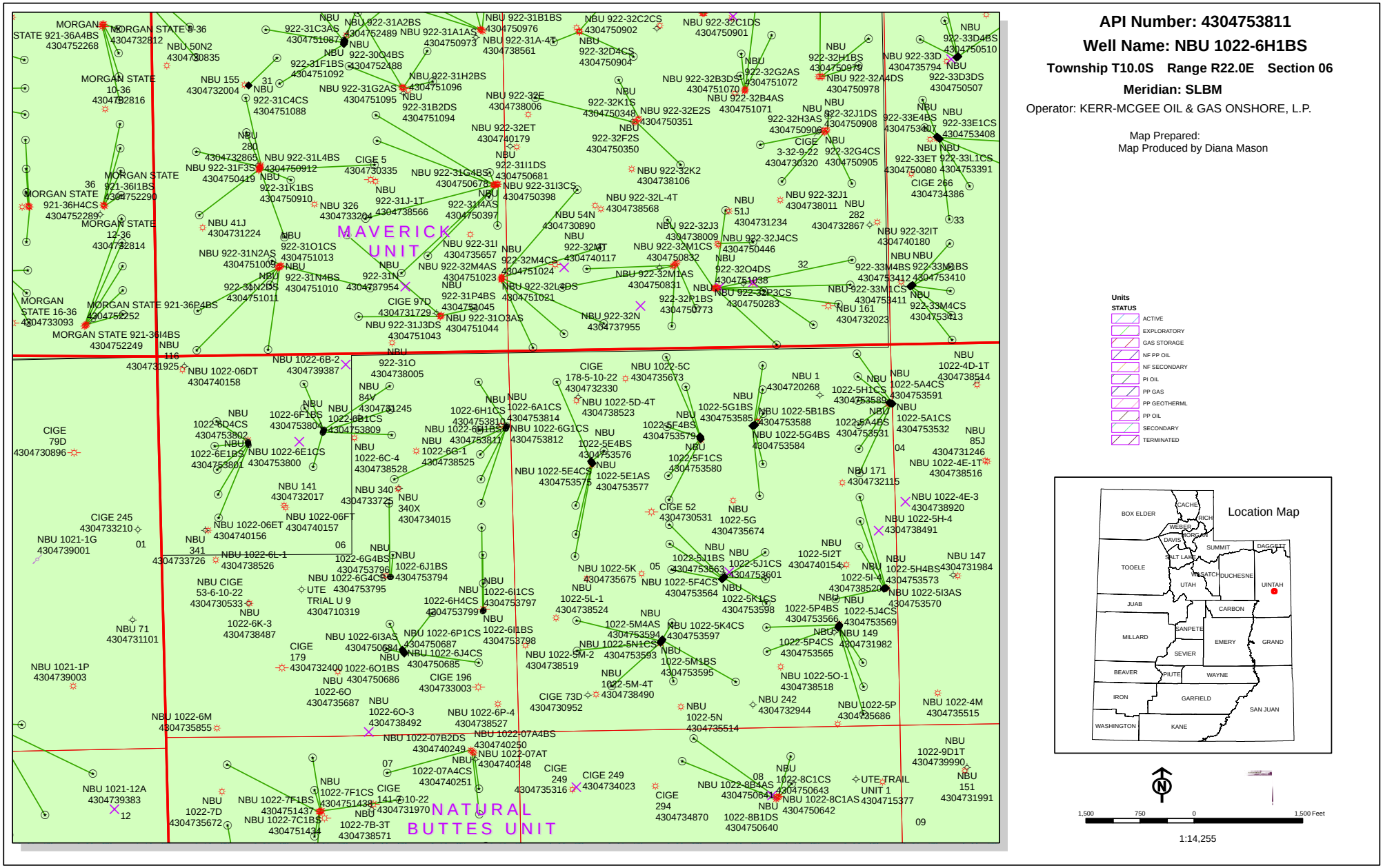
Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

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

January 21, 2013
Date

API Well Number: 43047538110000

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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)**

June 3, 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 Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2013 within the Natural Buttes Unit, Uintah County, Utah.

| API # | WELL NAME | LOCATION |
|---|---|---|
| **WELL PAD - NBU 1022-6A** | | |
| 43-047-53792 | NBU 1022-6H4BS | Sec 06 T10S R22E 1069 FNL 0094 FEL<br>BHL Sec 06 T10S R22E 2107 FNL 0456 FEL |
| 43-047-53810 | NBU 1022-6H1CS | Sec 06 T10S R22E 1078 FNL 0098 FEL<br>BHL Sec 06 T10S R22E 1770 FNL 0456 FEL |
| 43-047-53811 | NBU 1022-6H1BS | Sec 06 T10S R22E 1060 FNL 0090 FEL<br>BHL Sec 06 T10S R22E 1433 FNL 0456 FEL |
| 43-047-53812 | NBU 1022-6G1CS | Sec 06 T10S R22E 1050 FNL 0086 FEL<br>BHL Sec 06 T10S R22E 1762 FNL 1653 FEL |
| 43-047-53813 | NBU 1022-6A4CS | Sec 06 T10S R22E 1041 FNL 0082 FEL<br>BHL Sec 06 T10S R22E 1096 FNL 0456 FEL |
| **WELL PAD - NBU 1022-6D** | | |
| 43-047-53793 | NBU 1022-6E4BS | Sec 06 T10S R22E 1264 FNL 1200 FWL<br>BHL Sec 06 T10S R22E 2272 FNL 0760 FWL |
| 43-047-53800 | NBU 1022-6E1CS | Sec 06 T10S R22E 1244 FNL 1196 FWL<br>BHL Sec 06 T10S R22E 1935 FNL 0760 FWL |
| 43-047-53801 | NBU 1022-6E1BS | Sec 06 T10S R22E 1234 FNL 1195 FWL<br>BHL Sec 06 T10S R22E 1598 FNL 0760 FWL |
| 43-047-53802 | NBU 1022-6D4CS | Sec 06 T10S R22E 1225 FNL 1193 FWL<br>BHL Sec 06 T10S R22E 1273 FNL 0729 FWL |
| 43-047-53803 | NBU 1022-6D4BS | Sec 06 T10S R22E 1215 FNL 1191 FWL<br>BHL Sec 06 T10S R22E 0924 FNL 0761 FWL |

RECEIVED: June 04, 2013

| API # | WELL NAME | LOCATION |
|---|---|---|
| **WELL PAD - NBU 1022-6J** | | |
| 43-047-53794 | NBU 1022-6J1BS | Sec 06 T10S R22E 2189 FSL 1727 FEL |
| | | BHL Sec 06 T10S R22E 2497 FSL 1695 FEL |
| 43-047-53795 | NBU 1022-6G4CS | Sec 06 T10S R22E 2192 FSL 1737 FEL |
| | | BHL Sec 06 T10S R22E 2480 FNL 1726 FEL |
| 43-047-53796 | NBU 1022-6G4BS | Sec 06 T10S R22E 2195 FSL 1746 FEL |
| | | BHL Sec 06 T10S R22E 2094 FNL 1731 FEL |
| **WELL PAD - NBU 1022-6I** | | |
| 43-047-53797 | NBU 1022-6I1CS | Sec 06 T10S R22E 1716 FSL 0457 FEL |
| | | BHL Sec 06 T10S R22E 2088 FSL 0452 FEL |
| 43-047-53798 | NBU 1022-6I1BS | Sec 06 T10S R22E 1708 FSL 0463 FEL |
| | | BHL Sec 06 T10S R22E 2484 FSL 0451 FEL |
| 43-047-53799 | NBU 1022-6H4CS | Sec 06 T10S R22E 1700 FSL 0470 FEL |
| | | BHL Sec 06 T10S R22E 2444 FNL 0456 FEL |
| **WELL PAD - NBU 1022-6C** | | |
| 43-047-53804 | NBU 1022-6F1BS | Sec 06 T10S R22E 1103 FNL 2630 FEL |
| | | BHL Sec 06 T10S R22E 1572 FNL 2083 FWL |
| 43-047-53805 | NBU 1022-6C4BS | Sec 06 T10S R22E 1075 FNL 2619 FEL |
| | | BHL Sec 06 T10S R22E 0759 FNL 1985 FWL |
| 43-047-53806 | NBU 1022-6C1CS | Sec 06 T10S R22E 1066 FNL 2615 FEL |
| | | BHL Sec 06 T10S R22E 0422 FNL 1986 FWL |
| 43-047-53807 | NBU 1022-6B4CS | Sec 06 T10S R22E 1094 FNL 2626 FEL |
| | | BHL Sec 06 T10S R22E 1139 FNL 1677 FEL |
| 43-047-53808 | NBU 1022-6B4BS | Sec 06 T10S R22E 1085 FNL 2622 FEL |
| | | BHL Sec 06 T10S R22E 0791 FNL 1688 FEL |
| 43-047-53809 | NBU 1022-6B1CS | Sec 06 T10S R22E 1057 FNL 2611 FEL |
| | | BHL Sec 06 T10S R22E 0460 FNL 1688 FEL |

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

Michael L. Coulthard

Digitally signed by Michael L. Coulthard
DN: cn=Michael L. Coulthard, o=Bureau of Land Management, ou=Branch of Minerals, email=Michael_Coulthard@blm.gov, c=US
Date: 2013.06.03 12:57:02 -06'00'

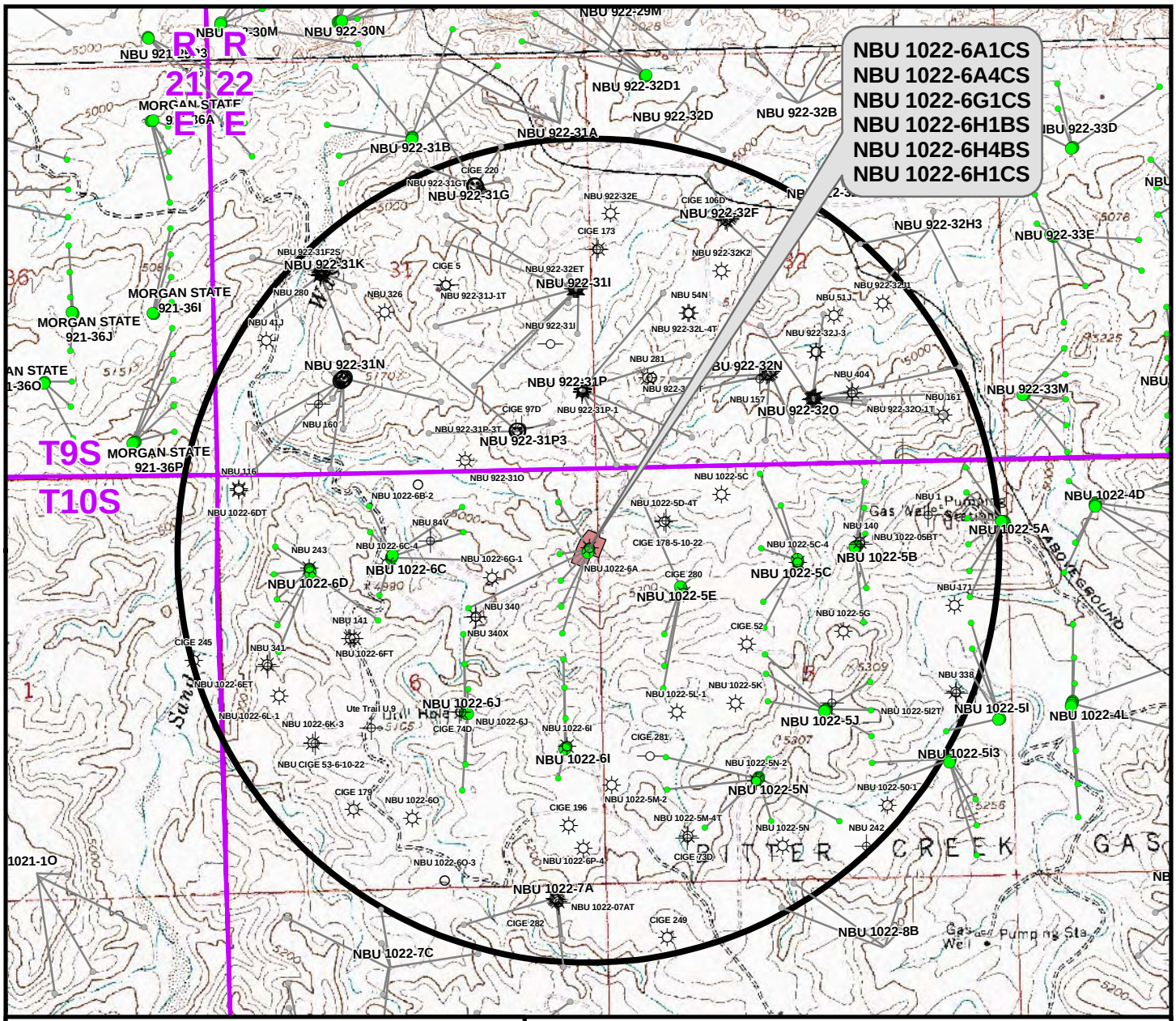
bcc: File - Natural Buttes Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:6-3-13

RECEIVED: June 04, 2013

| API Number | Well Name | Surface Location |
|---|---|---|
| 43-047-53792 | NBU 1022-6H4BS | Sec 06 T10S R22E 1069 FNL 0094 FEL |
| 43-047-53793 | NBU 1022-6E4BS | Sec 06 T10S R22E 1264 FNL 1200 FWL |
| 43-047-53794 | NBU 1022-6J1BS | Sec 06 T10S R22E 2189 FSL 1727 FEL |
| 43-047-53795 | NBU 1022-6G4CS | Sec 06 T10S R22E 2192 FSL 1737 FEL |
| 43-047-53796 | NBU 1022-6G4BS | Sec 06 T10S R22E 2195 FSL 1746 FEL |
| 43-047-53797 | NBU 1022-6I1CS | Sec 06 T10S R22E 1716 FSL 0457 FEL |
| 43-047-53798 | NBU 1022-6I1BS | Sec 06 T10S R22E 1708 FSL 0463 FEL |
| 43-047-53799 | NBU 1022-6H4CS | Sec 06 T10S R22E 1700 FSL 0470 FEL |
| 43-047-53800 | NBU 1022-6E1CS | Sec 06 T10S R22E 1244 FNL 1196 FWL |
| 43-047-53801 | NBU 1022-6E1BS | Sec 06 T10S R22E 1234 FNL 1195 FWL |
| 43-047-53802 | NBU 1022-6D4CS | Sec 06 T10S R22E 1225 FNL 1193 FWL |
| 43-047-53803 | NBU 1022-6D4BS | Sec 06 T10S R22E 1215 FNL 1191 FWL |
| 43-047-53804 | NBU 1022-6F1BS | Sec 06 T10S R22E 1103 FNL 2630 FEL |
| 43-047-53805 | NBU 1022-6C4BS | Sec 06 T10S R22E 1075 FNL 2619 FEL |
| 43-047-53806 | NBU 1022-6C1CS | Sec 06 T10S R22E 1066 FNL 2615 FEL |
| 43-047-53807 | NBU 1022-6B4CS | Sec 06 T10S R22E 1094 FNL 2626 FEL |
| 43-047-53808 | NBU 1022-6B4BS | Sec 06 T10S R22E 1085 FNL 2622 FEL |
| 43-047-53809 | NBU 1022-6B1CS | Sec 06 T10S R22E 1057 FNL 2611 FEL |
| 43-047-53810 | NBU 1022-6H1CS | Sec 06 T10S R22E 1078 FNL 0098 FEL |
| 43-047-53811 | NBU 1022-6H1BS | Sec 06 T10S R22E 1060 FNL 0090 FEL |
| 43-047-53812 | NBU 1022-6G1CS | Sec 06 T10S R22E 1050 FNL 0086 FEL |
| 43-047-53813 | NBU 1022-6A4CS | Sec 06 T10S R22E 1041 FNL 0082 FEL |

RECEIVED: June 04, 2013




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 1022-6A1CS | NBU 1022-6A | 716ft |
| NBU 1022-6A4CS | NBU 1022-6A | 388ft |
| NBU 1022-6G1CS | NBU 340 | 145ft |
| NBU 1022-6H1BS | NBU 1022-6A | 557ft |
| NBU 1022-6H4BS | NBU 340X | 1,135ft |
| NBU 1022-6H1CS | NBU 1022-6A | 835ft |

**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 1022-6A

**TOPO C**
**NBU 1022-6A1CS, NBU 1022-6A4CS, NBU 1022-6G1CS, NBU 1022-6H1BS, NBU 1022-6H4BS & NBU 1022-6H1CS**
**LOCATED IN SECTION 6, T10S, 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: 14 |
| DRAWN: TL | DATE: 30 Nov 2012 | 14 OF 18 |
| REVISED: | DATE: | |

File: K:\ANADARKO\2012\2012_54_NBU_1022-6_FOCUS\GIS\Maps_ABCDE\NBU 1022-6A\NBU 1022-6A_C.mxd, 12/11/2012 4:53:50 PM

RECEIVED: May 20, 2013

API Well Number: 43047533810000

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6A PAD
Well: NBU 1022-6H4BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Scientific Drilling

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52166.0snT
Dip Angle: 65.82°
Date: 2013/01/10
Model: IGRF2010

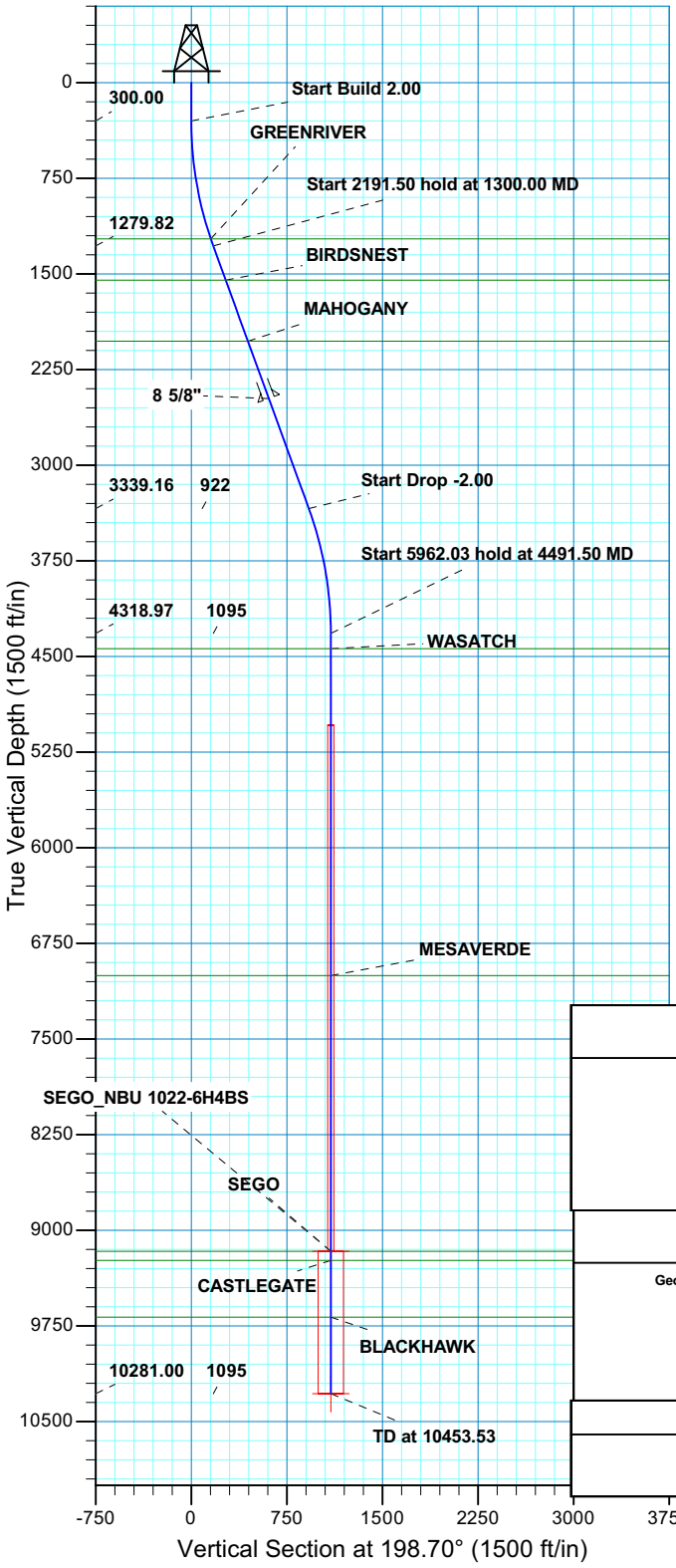
**WELL DETAILS: NBU 1022-6H4BS**

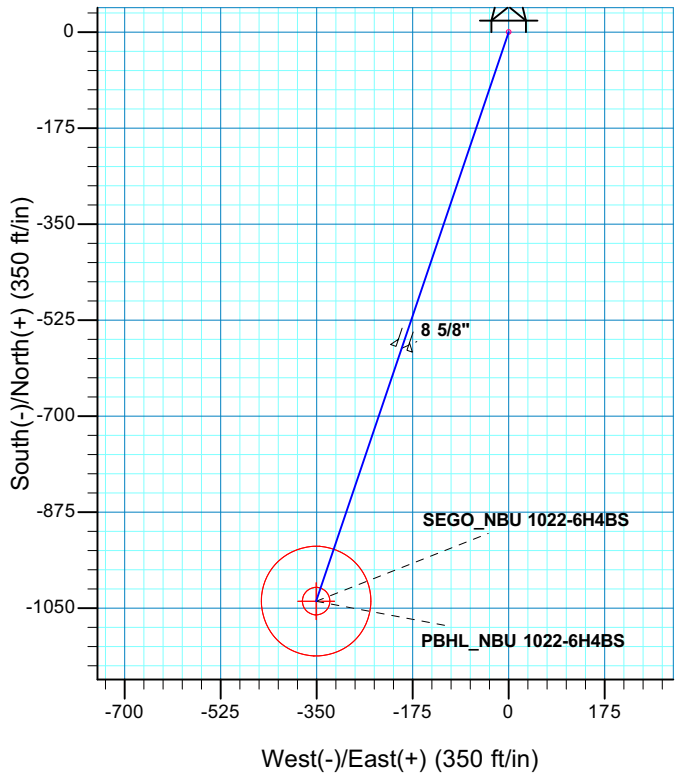
GL 5079 & KB 4 @ 5083.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14523282.14 | 2068214.65 | 39.9823528 | -109.4728931 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9166.00 | -1037.27 | -351.09 | 14522239.01 | 2067881.37 | 39.9795048 | -109.4741461 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10281.00 | -1037.27 | -351.09 | 14522239.01 | 2067881.37 | 39.9795048 | -109.4741461 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1300.00 | 20.00 | 198.70 | 1279.82 | -163.65 | -55.39 | 2.00 | 198.70 | 172.77 | |
| 3491.50 | 20.00 | 198.70 | 3339.16 | -873.62 | -295.70 | 0.00 | 0.00 | 922.31 | |
| 4491.50 | 0.00 | 0.00 | 4318.97 | -1037.27 | -351.09 | 2.00 | 180.00 | 1095.07 | |
| 10453.53 | 0.00 | 0.00 | 10281.00 | -1037.27 | -351.09 | 0.00 | 0.00 | 1095.07 | PBHL_NBU 1022-6H4BS |

**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 6 T10N R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1224.00 | 1240.82 | GREENRIVER |
| 1549.00 | 1586.46 | BIRDSNEST |
| 2027.00 | 2095.14 | MAHOGANY |
| 4439.00 | 4611.53 | WASATCH |
| 7003.00 | 7175.53 | MESAVERDE |
| 9166.00 | 9338.53 | SEGO |
| 9236.00 | 9408.53 | CASTLEGATE |
| 9681.00 | 9853.53 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2477.00 | 2574.02 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6H4BS/OH)

Created By: Robert Scott Date: 15:11, January 10 2013

RECEIVED
Received: May 20, 2013

API Well Number: 43047538110000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6A PAD
Well: NBU 1022-6H1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52166.0snT
Dip Angle: 65.82°
Date: 2013/01/10
Model: IGRF2010

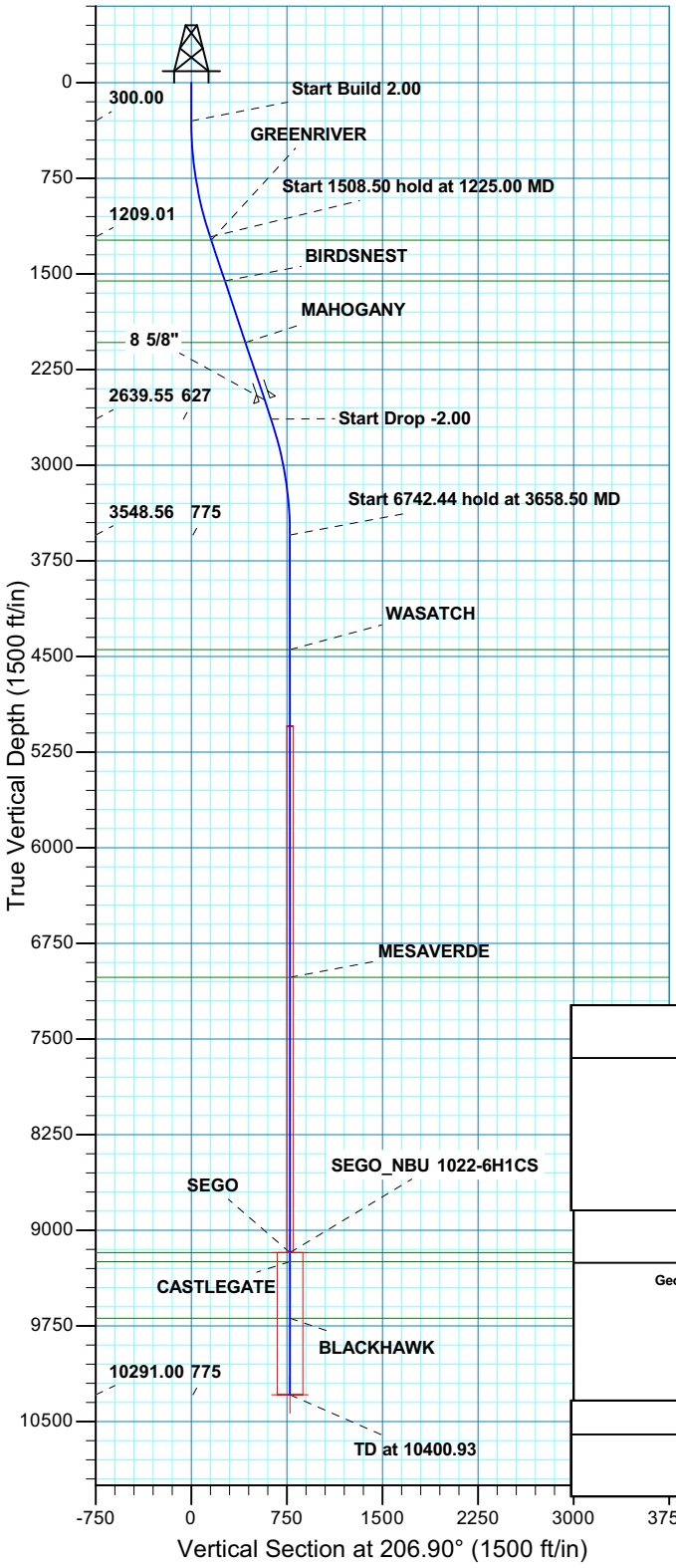
**WELL DETAILS: NBU 1022-6H1CS**

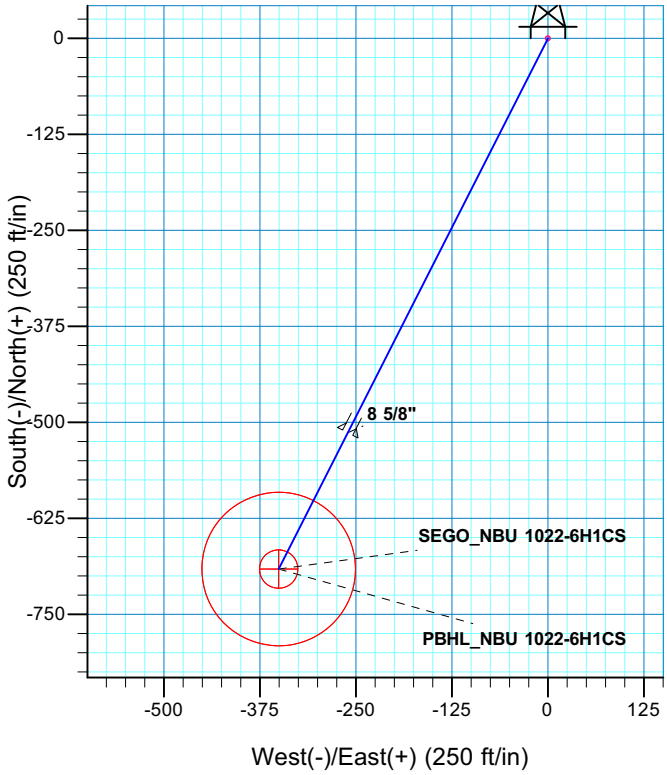
GL 5079 & KB 4 @ 5083.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14523272.60 | 2068210.89 | 39.9823268 | -109.4729071 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9175.00 | -690.90 | -350.53 | 14522575.80 | 2067872.24 | 39.9804298 | -109.4741581 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10291.00 | -690.90 | -350.53 | 14522575.80 | 2067872.24 | 39.9804298 | -109.4741581 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1225.00 | 18.50 | 206.90 | 1209.01 | -132.02 | -66.98 | 2.00 | 206.90 | 148.04 | |
| 2733.50 | 18.50 | 206.90 | 2639.55 | -558.88 | -283.55 | 0.00 | 0.00 | 626.69 | |
| 3658.50 | 0.00 | 0.00 | 3548.56 | -690.90 | -350.53 | 2.00 | 180.00 | 774.74 | |
| 10400.93 | 0.00 | 0.00 | 10291.00 | -690.90 | -350.53 | 0.00 | 0.00 | 774.74 | PBHL_NBU 1022-6H1CS |

**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 6 T10N R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1235.00 | 1252.41 | GREENRIVER |
| 1555.00 | 1589.84 | BIRDSNEST |
| 2037.00 | 2098.11 | MAHOGANY |
| 4447.00 | 4556.93 | WASATCH |
| 7016.00 | 7125.93 | MESAVERDE |
| 9175.00 | 9284.93 | SEGO |
| 9246.00 | 9355.93 | CASTLEGATE |
| 9691.00 | 9800.93 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2487.00 | 2572.63 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6H1CS/OH)

Created By: Robert Scott Date: 15:09, January 10 2013

RECEIVED Received: May 16, 2013

API Well Number: 43047538110000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6A PAD
Well: NBU 1022-6H1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52166.0snT
Dip Angle: 65.82°
Date: 2013/01/10
Model: IGRF2010

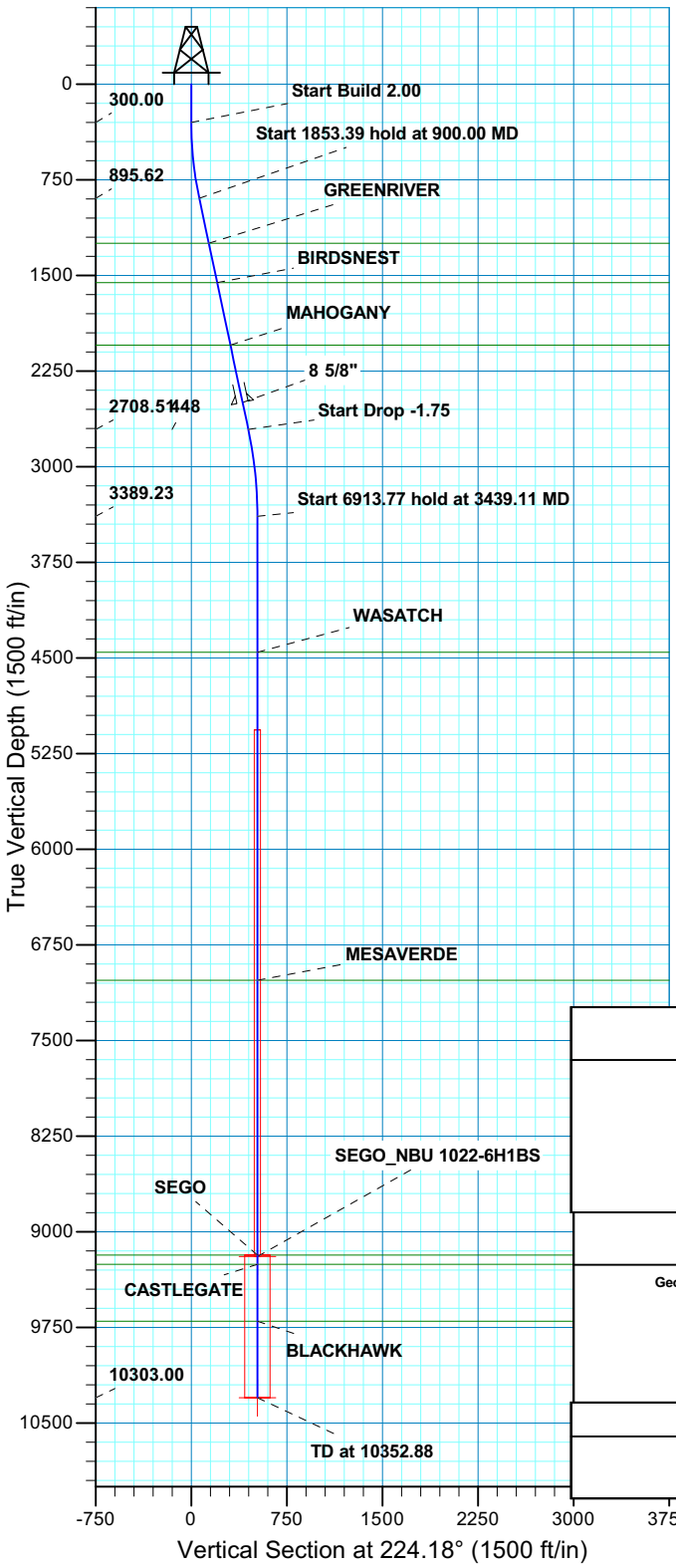
**WELL DETAILS: NBU 1022-6H1BS**

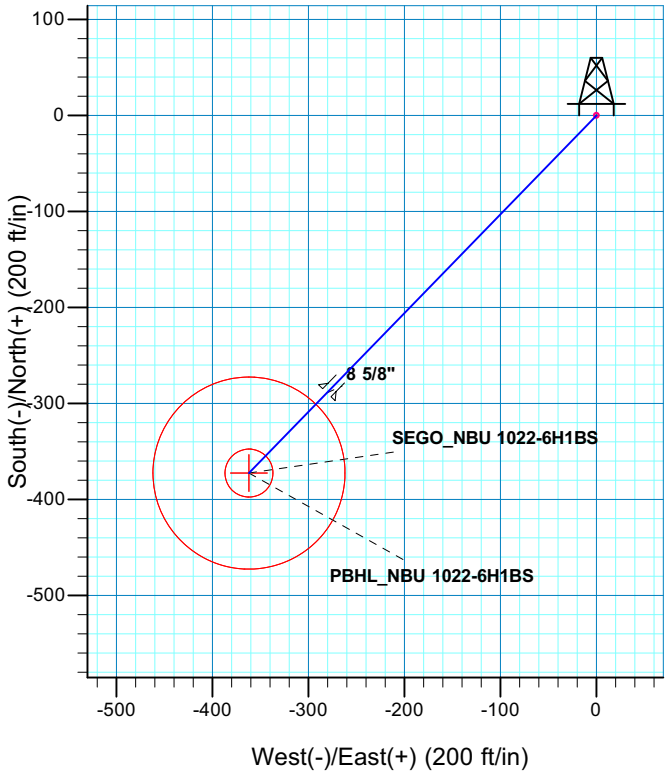
GL 5079 & KB 4 @ 5083.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14523291.31 | 2068218.41 | 39.9823778 | -109.4728791 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9194.00 | -372.58 | -362.01 | 14522912.58 | 2067862.84 | 39.9813548 | -109.4741711 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10303.00 | -372.58 | -362.01 | 14522912.58 | 2067862.84 | 39.9813548 | -109.4741711 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 900.00 | 12.00 | 224.18 | 895.62 | -44.90 | -43.63 | 2.00 | 224.18 | 62.60 | |
| 2753.39 | 12.00 | 224.18 | 2708.51 | -321.27 | -312.15 | 0.00 | 0.00 | 447.94 | |
| 3439.11 | 0.00 | 0.00 | 3389.23 | -372.58 | -362.01 | 1.75 | 180.00 | 519.49 | |
| 10352.88 | 0.00 | 0.00 | 10303.00 | -372.58 | -362.01 | 0.00 | 0.00 | 519.49 | PBHL_NBU 1022-6H1BS |

**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 6 T10N R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1248.00 | 1260.25 | GREENRIVER |
| 1558.00 | 1577.17 | BIRDSNEST |
| 2047.00 | 2077.10 | MAHOGANY |
| 4455.00 | 4504.88 | WASATCH |
| 7028.00 | 7077.88 | MESAVERDE |
| 9184.00 | 9233.88 | SEGO |
| 9256.00 | 9305.88 | CASTLEGATE |
| 9703.00 | 9752.88 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2497.00 | 2537.15 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6H1BS/OH)

Created By: Robert Scott Date: 15:08, January 10 2013

RECEIVED Received: May 16, 2013

API Well Number: 43047538110000

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6A PAD
Well: NBU 1022-6G1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Scientific Drilling

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52166.0snT
Dip Angle: 65.82°
Date: 2013/01/10
Model: IGRF2010

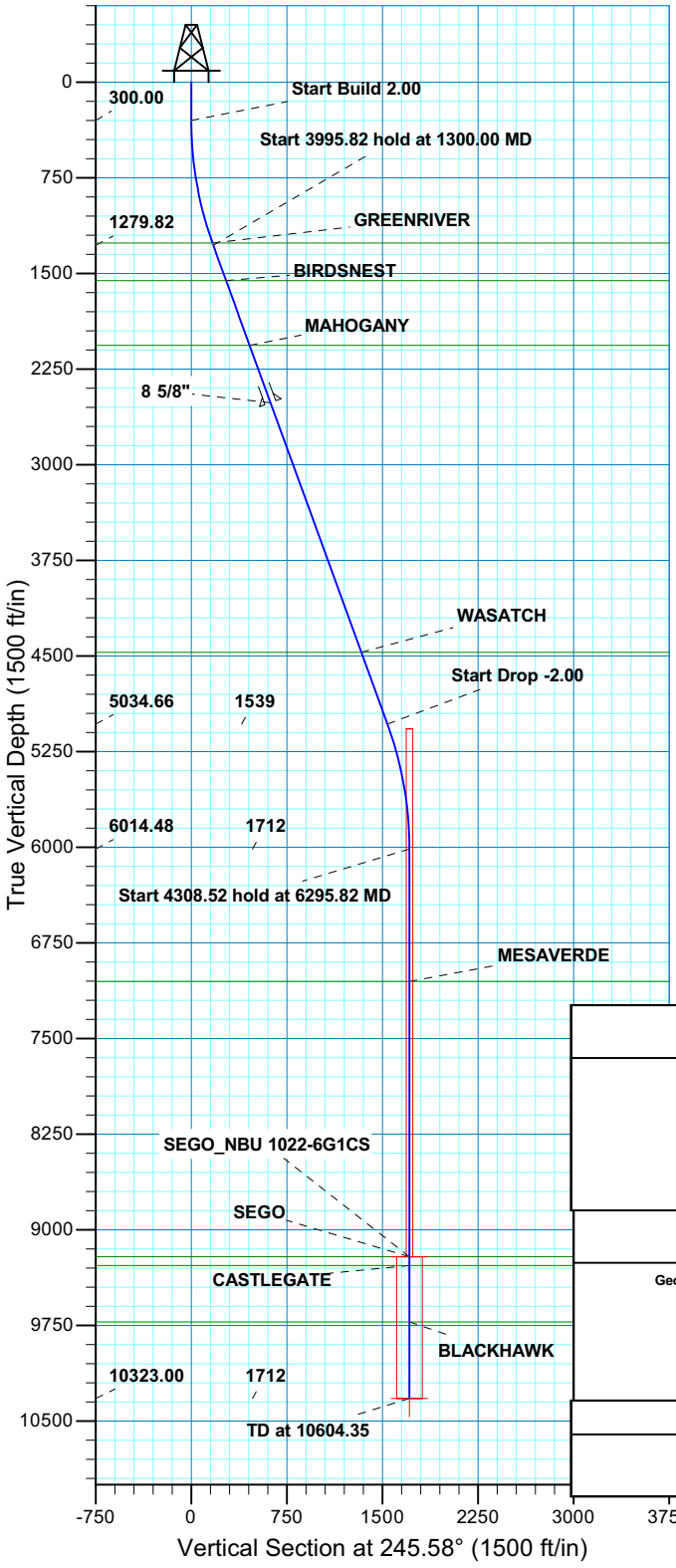
**WELL DETAILS: NBU 1022-6G1CS**

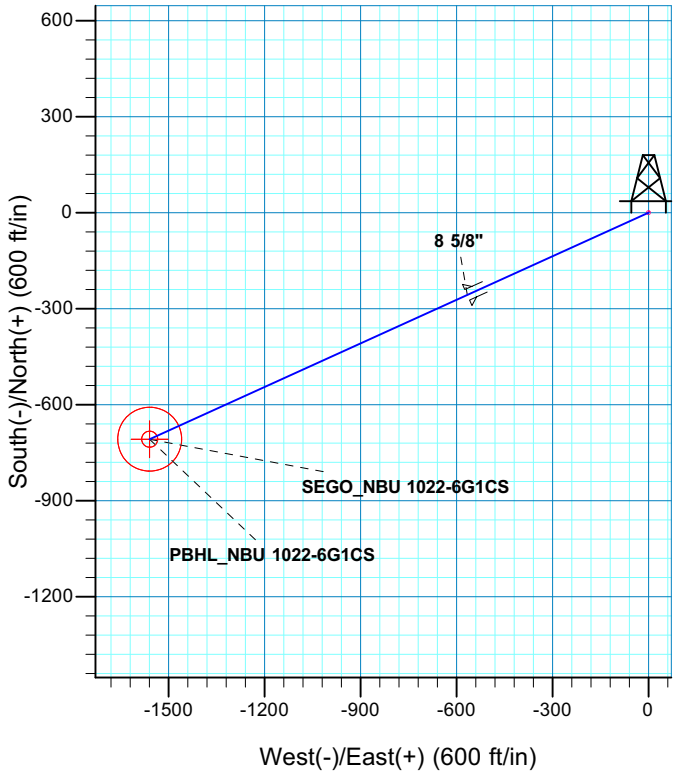
GL 5079 & KB 4 @ 5083.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14523300.48 | 2068222.18 | 39.9824028 | -109.4728651 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9212.00 | -707.97 | -1558.96 | 14522565.91 | 2066675.57 | 39.9804588 | -109.4784289 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10323.00 | -707.97 | -1558.96 | 14522565.91 | 2066675.57 | 39.9804588 | -109.4784289 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1300.00 | 20.00 | 245.58 | 1279.82 | -71.44 | -157.31 | 2.00 | 245.58 | 172.77 | |
| 5295.82 | 20.00 | 245.58 | 5034.66 | -636.53 | -1401.66 | 0.00 | 0.00 | 1539.42 | |
| 6295.82 | 0.00 | 0.00 | 6014.48 | -707.97 | -1558.96 | 2.00 | 180.00 | 1712.19 | |
| 10604.35 | 0.00 | 0.00 | 10323.00 | -707.97 | -1558.96 | 0.00 | 0.00 | 1712.19 | PBHL_NBU 1022-6G1CS |

**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 6 T10N R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1262.00 | 1281.06 | GREENRIVER |
| 1558.00 | 1596.04 | BIRDSNEST |
| 2064.00 | 2134.51 | MAHOGANY |
| 4472.00 | 4697.05 | WASATCH |
| 7053.00 | 7334.35 | MESAVERDE |
| 9212.00 | 9493.35 | SEGO |
| 9281.00 | 9562.35 | CASTLEGATE |
| 9723.00 | 10004.35 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2514.00 | 2613.39 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6G1CS/OH)

Created By: Robert Scott Date: 15:06, January 10 2013

RECEIVED
Received: May 16, 2013

API Well Number: 43047538110000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6A PAD
Well: NBU 1022-6A4CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52166.0snT
Dip Angle: 65.82°
Date: 2013/01/10
Model: IGRF2010

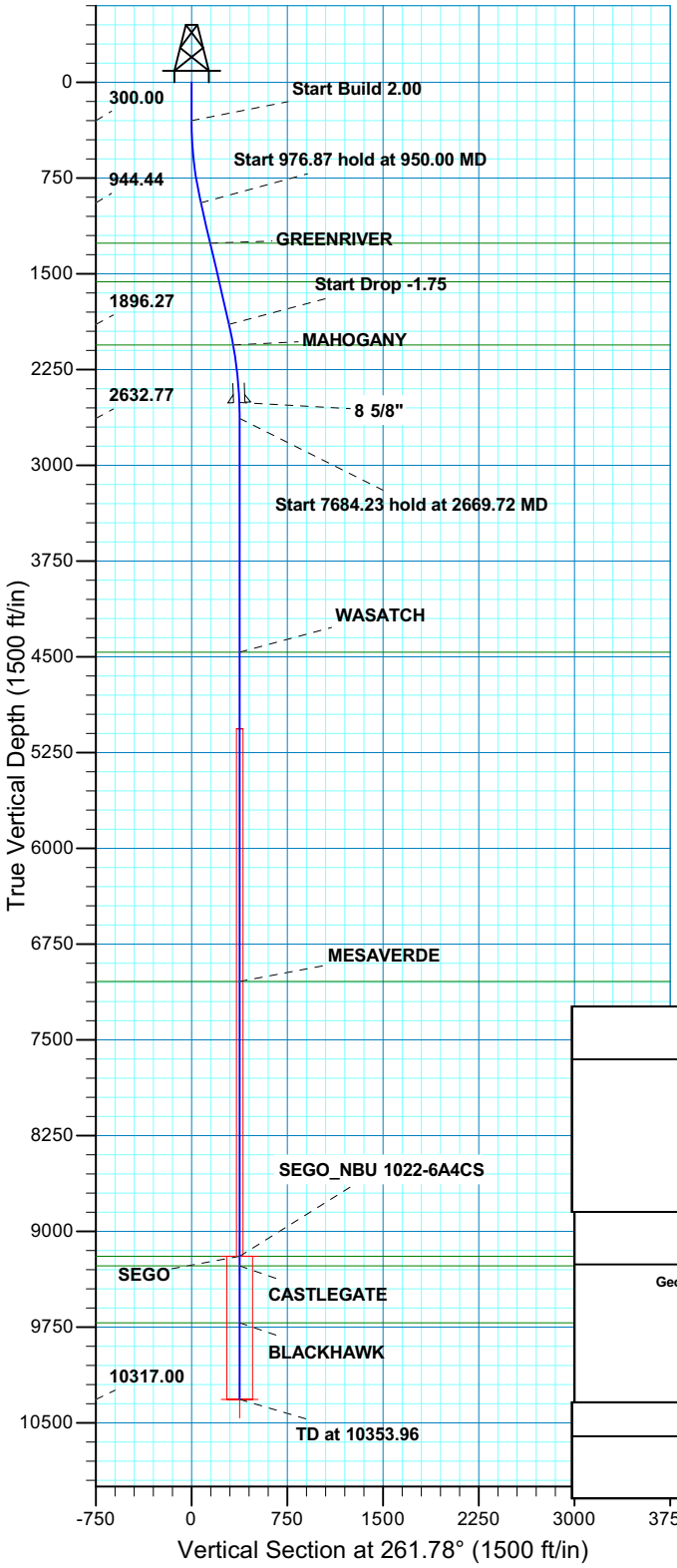
**WELL DETAILS: NBU 1022-6A4CS**

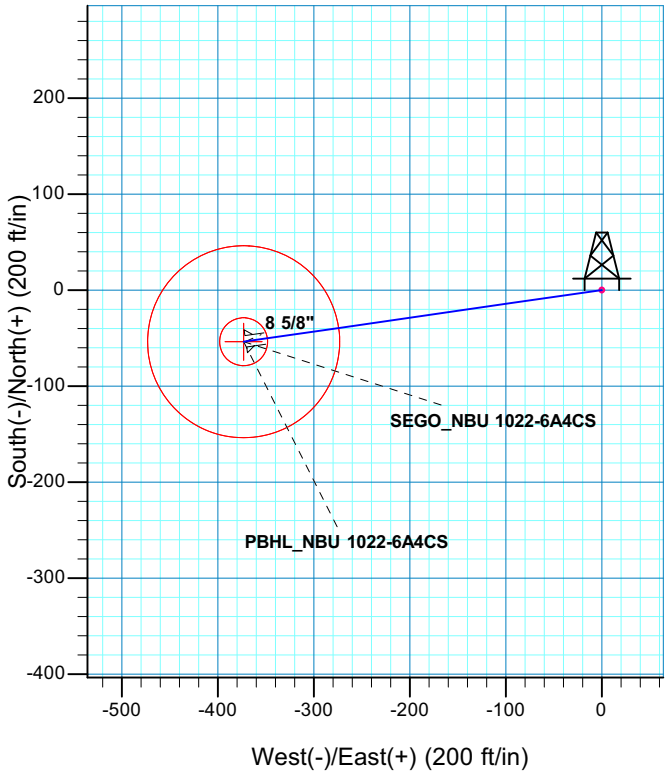
GL 5079 & KB 4 @ 5083.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14523309.65 | 2068225.94 | 39.9824278 | -109.4728511 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9196.00 | -53.90 | -373.21 | 14523249.37 | 2067853.71 | 39.9822798 | -109.4741831 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10317.00 | -53.90 | -373.21 | 14523249.37 | 2067853.71 | 39.9822798 | -109.4741831 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 950.00 | 13.00 | 261.78 | 944.44 | -10.50 | -72.67 | 2.00 | 261.78 | 73.42 | |
| 1926.87 | 13.00 | 261.78 | 1896.27 | -41.91 | -290.16 | 0.00 | 0.00 | 293.17 | |
| 2669.72 | 0.00 | 0.00 | 2632.77 | -53.90 | -373.21 | 1.75 | 180.00 | 377.08 | |
| 10353.96 | 0.00 | 0.00 | 10317.00 | -53.90 | -373.21 | 0.00 | 0.00 | 377.08 | PBHL_NBU 1022-6A4CS |

**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 6 T10N R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1261.00 | 1274.89 | GREENRIVER |
| 1563.00 | 1584.83 | BIRDSNEST |
| 2059.00 | 2092.98 | MAHOGANY |
| 4465.00 | 4501.96 | WASATCH |
| 7043.00 | 7079.96 | MESAVERDE |
| 9196.00 | 9232.96 | SEGO |
| 9270.00 | 9306.96 | CASTLEGATE |
| 9717.00 | 9753.96 | BLACKHAWK |

**CASING DETAILS**

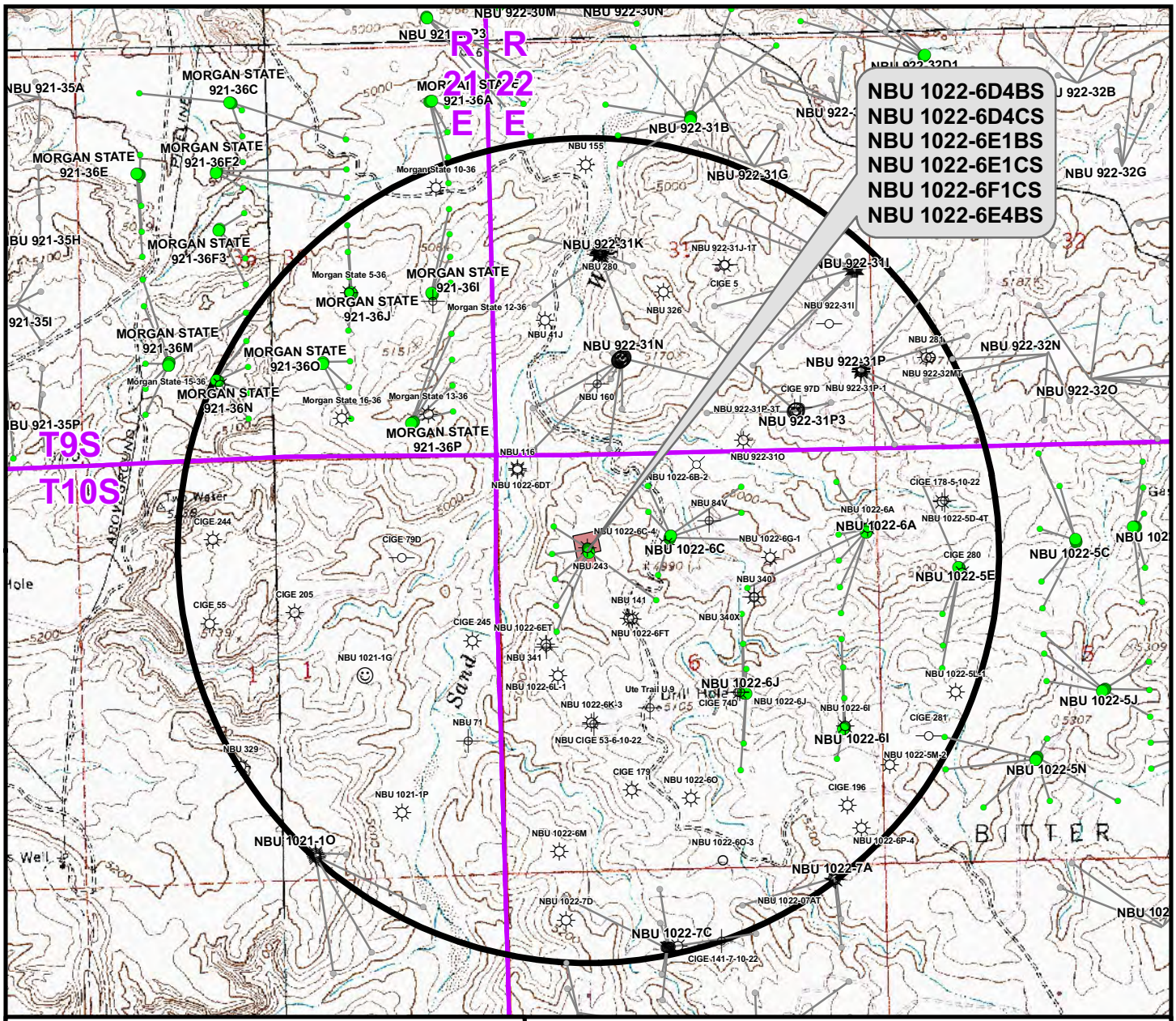
| TVD | MD | Name | Size |
|---|---|---|---|
| 2509.00 | 2545.93 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6A4CS/OH)

Created By: Robert Scott Date: 15:05, January 10 2013

RECEIVED
Received: May 16, 2013

API Well Number: 43047538110000




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 1022-6D4BS | NBU 243 | 515ft |
| NBU 1022-6D4CS | NBU 243 | 465ft |
| NBU 1022-6E1BS | NBU 243 | 579ft |
| NBU 1022-6E1CS | NBU 1022-6ET | 520ft |
| NBU 1022-6F1CS | NBU 1022-6FT | 391ft |
| NBU 1022-6E4BS | NBU 1022-6ET | 219ft |

**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 1022-6D

**TOPO C**
**NBU 1022-6D4BS, NBU 1022-6D4CS, NBU 1022-6E1BS, NBU 1022-6E1CS, NBU 1022-6F1CS & NBU 1022-6E4BS**
**LOCATED IN SECTION 6, T10S, 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: 14 |
| DRAWN: TL | DATE: 30 Nov 2012 | 14 OF 18 |
| REVISED: | DATE: | |

File: K:\ANADARKO\2012\2012_54_NBU_1022-6_FOCUS\GIS\Maps_ABCDE\NBU 1022-6D_C.mxd, 12/12/2012 10:41:34 AM


RECEIVED: May 16, 2013

API Well Number: 43047538110000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6D PAD
Well: NBU 1022-6E4BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52162.2snT
Dip Angle: 65.81°
Date: 2013/01/16
Model: IGRF2010

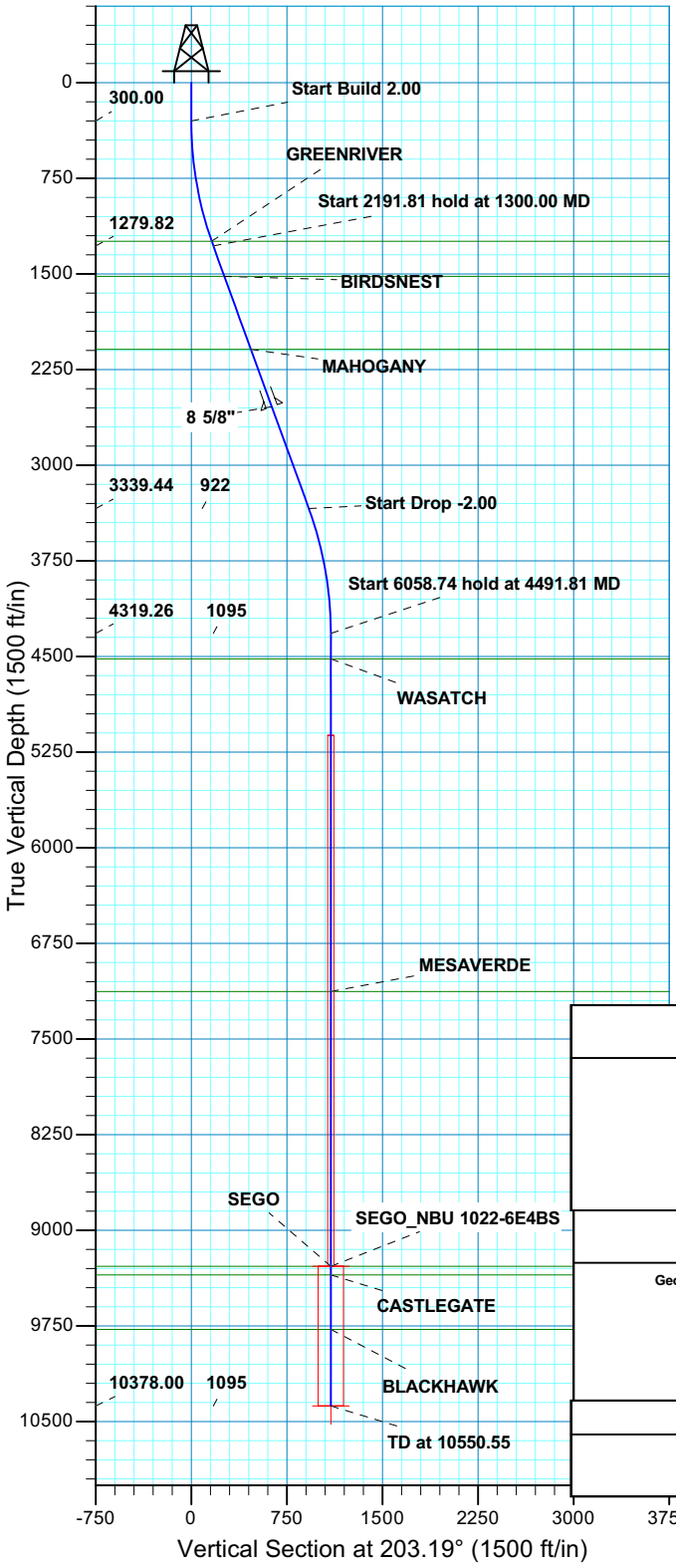
**WELL DETAILS: NBU 1022-6E4BS**

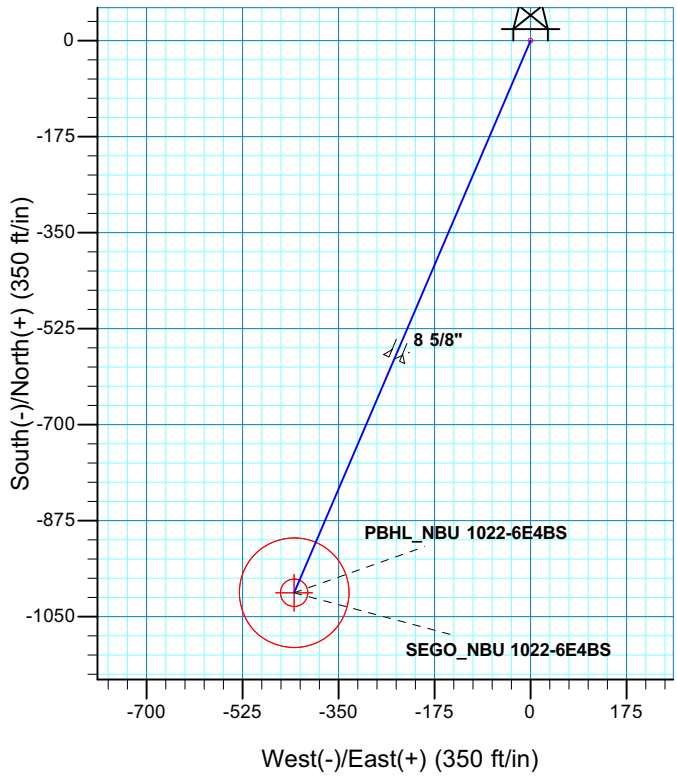
GL 5094 & KB 4 @ 5098.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14523033.96 | 2064639.66 | 39.9818389 | -109.4856655 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9282.00 | -1006.70 | -431.23 | 14522020.08 | 2064225.59 | 39.9790748 | -109.4872045 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10378.00 | -1006.70 | -431.23 | 14522020.08 | 2064225.59 | 39.9790748 | -109.4872045 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1300.00 | 20.00 | 203.19 | 1279.82 | -158.81 | -68.03 | 2.00 | 203.19 | 172.77 | |
| 3491.81 | 20.00 | 203.19 | 3339.44 | -847.89 | -363.20 | 0.00 | 0.00 | 922.41 | |
| 4491.81 | 0.00 | 0.00 | 4319.26 | -1006.70 | -431.23 | 2.00 | 180.00 | 1095.18 | |
| 10550.55 | 0.00 | 0.00 | 10378.00 | -1006.70 | -431.23 | 0.00 | 0.00 | 1095.18 | PBHL_NBU 1022-6E4BS |

**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 6 T10S R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1244.00 | 1261.98 | GREENRIVER |
| 1518.00 | 1553.47 | BIRDSNEST |
| 2091.00 | 2163.24 | MAHOGANY |
| 4518.00 | 4690.55 | WASATCH |
| 7127.00 | 7299.55 | MESAVERDE |
| 9282.00 | 9454.55 | SEGO |
| 9350.00 | 9522.55 | CASTLEGATE |
| 9778.00 | 9950.55 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2541.00 | 2642.12 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6E4BS/OH)

Created By: Robert Scott Date: 14:12, January 16 2013

RECEIVED
Received: May 16, 2013

API Well Number: 43047538110000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6D PAD
Well: NBU 1022-6E1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52162.2snT
Dip Angle: 65.81°
Date: 2013/01/16
Model: IGRF2010

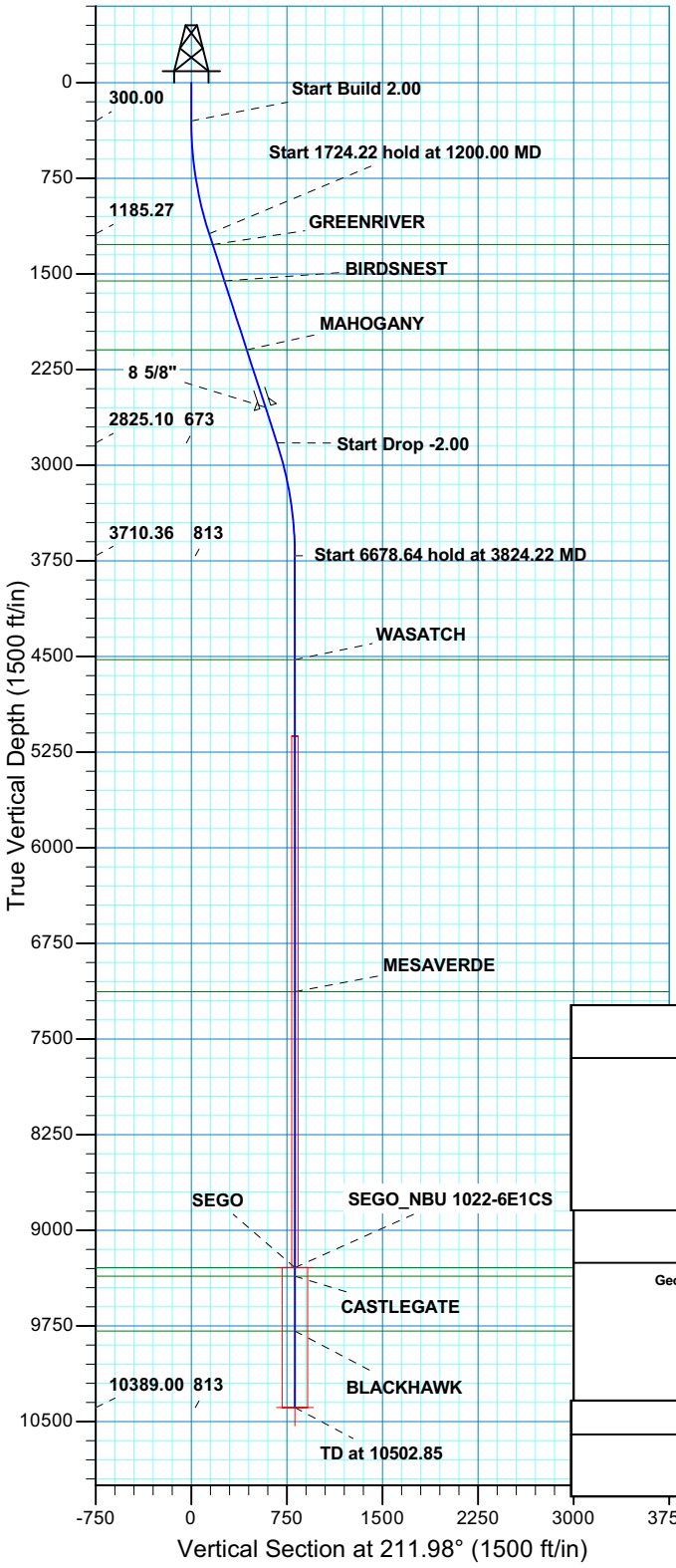
**WELL DETAILS: NBU 1022-6E1CS**

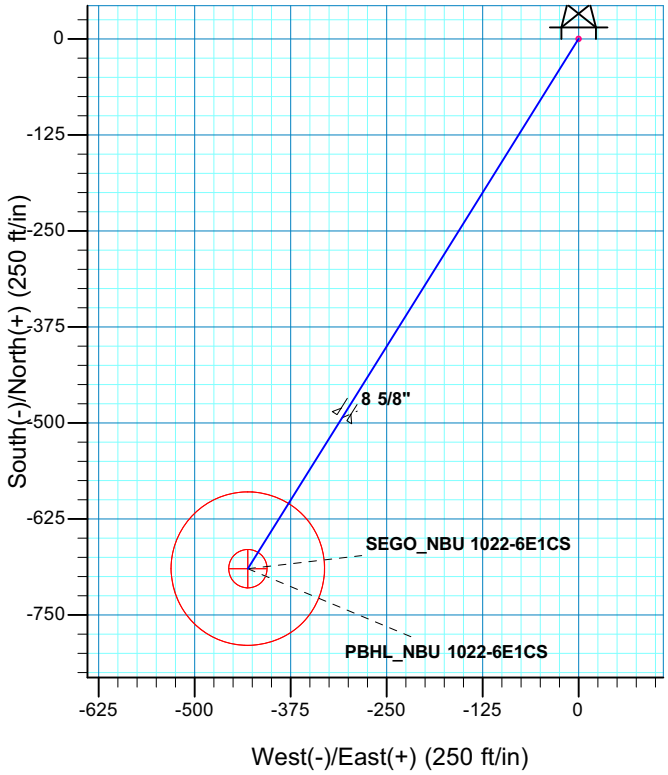
GL 5094 & KB 4 @ 5098.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14523053.57 | 2064635.97 | 39.9818929 | -109.4856775 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9293.00 | -689.84 | -430.67 | 14522356.51 | 2064217.08 | 39.9799988 | -109.4872145 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10389.00 | -689.84 | -430.67 | 14522356.51 | 2064217.08 | 39.9799988 | -109.4872145 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1200.00 | 18.00 | 211.98 | 1185.27 | -118.94 | -74.25 | 2.00 | 211.98 | 140.21 | |
| 2924.22 | 18.00 | 211.98 | 2825.10 | -570.90 | -356.41 | 0.00 | 0.00 | 673.03 | |
| 3824.22 | 0.00 | 0.00 | 3710.36 | -689.84 | -430.67 | 2.00 | 180.00 | 813.24 | |
| 10502.85 | 0.00 | 0.00 | 10389.00 | -689.84 | -430.67 | 0.00 | 0.00 | 813.24 | PBHL_NBU 1022-6E1CS |

**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 6 T10S R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1270.00 | 1289.09 | GREENRIVER |
| 1555.00 | 1588.76 | BIRDSNEST |
| 2094.00 | 2155.50 | MAHOGANY |
| 4524.00 | 4637.85 | WASATCH |
| 7129.00 | 7242.85 | MESAVERDE |
| 9293.00 | 9406.85 | SEGO |
| 9360.00 | 9473.85 | CASTLEGATE |
| 9789.00 | 9902.85 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2544.00 | 2628.65 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6E1CS/OH)

Created By: Robert Scott Date: 14:10, January 16 2013

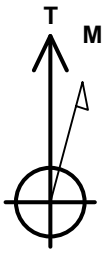
RECEIVED Received: May 16, 2013

API Well Number: 43047538110000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6D PAD
Well: NBU 1022-6E1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation




Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52162.2snT
Dip Angle: 65.81°
Date: 2013/01/16
Model: IGRF2010

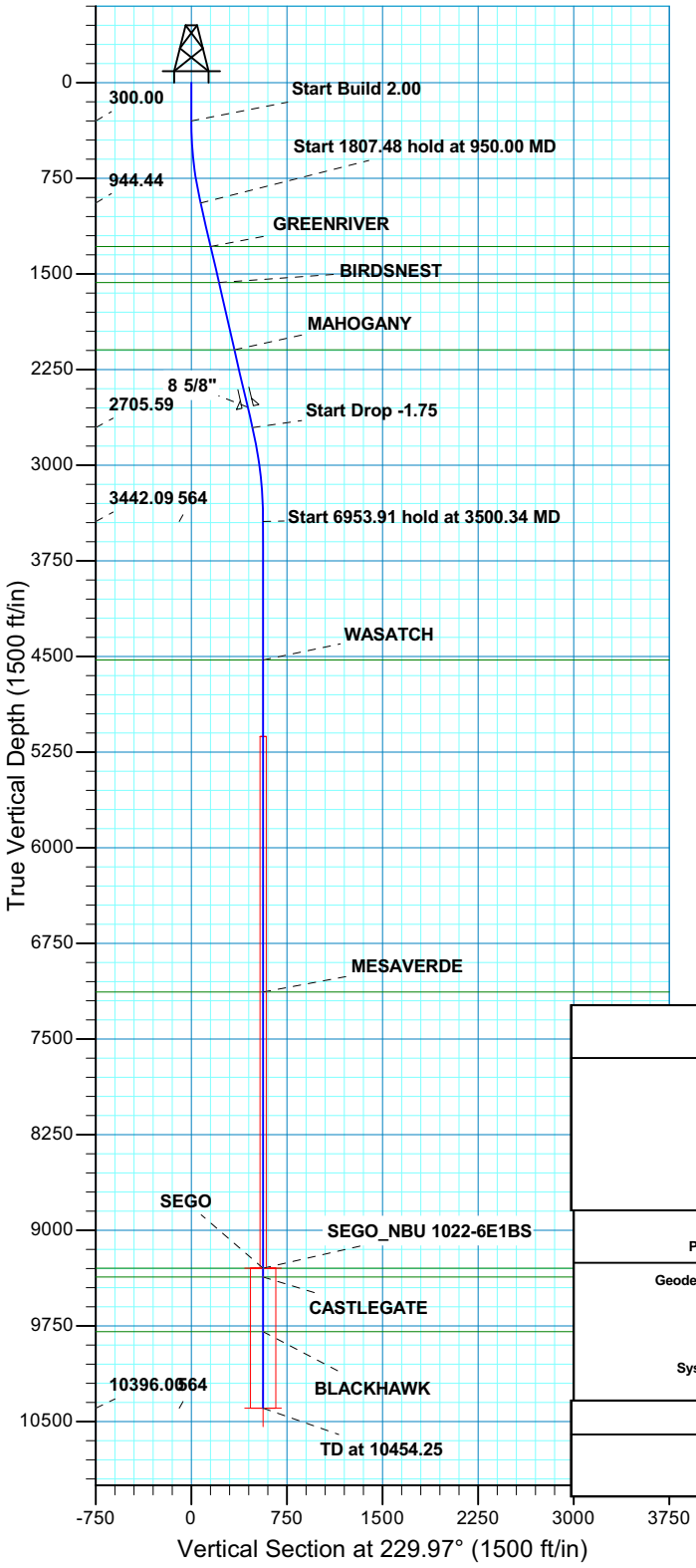
**WELL DETAILS: NBU 1022-6E1BS**

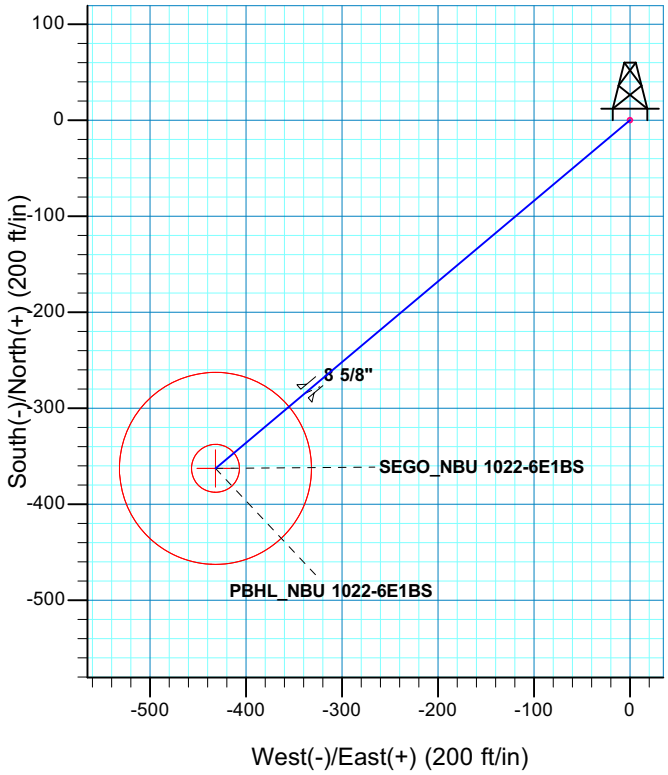
GL 5094 & KB 4 @ 5098.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14523063.37 | 2064634.12 | 39.9819199 | -109.4856835 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9297.00 | -362.75 | -431.78 | 14522693.35 | 2064208.57 | 39.9809239 | -109.4872245 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10396.00 | -362.75 | -431.78 | 14522693.35 | 2064208.57 | 39.9809239 | -109.4872245 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 950.00 | 13.00 | 229.97 | 944.44 | -47.23 | -56.22 | 2.00 | 229.97 | 73.42 | |
| 2757.48 | 13.00 | 229.97 | 2705.59 | -308.77 | -367.53 | 0.00 | 0.00 | 480.02 | |
| 3500.34 | 0.00 | 0.00 | 3442.09 | -362.75 | -431.78 | 1.75 | 180.00 | 563.93 | |
| 10454.25 | 0.00 | 0.00 | 10396.00 | -362.75 | -431.78 | 0.00 | 0.00 | 563.93 | PBHL_NBU 1022-6E1BS |

**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 6 T10S R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1285.00 | 1299.52 | GREENRIVER |
| 1568.00 | 1589.96 | BIRDSNEST |
| 2094.00 | 2129.80 | MAHOGANY |
| 4527.00 | 4585.25 | WASATCH |
| 7132.00 | 7190.25 | MESAVERDE |
| 9297.00 | 9355.25 | SEGO |
| 9367.00 | 9425.25 | CASTLEGATE |
| 9796.00 | 9854.25 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2544.00 | 2591.64 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6E1BS/OH)

Created By: Robert Scott Date: 14:10, January 16 2013

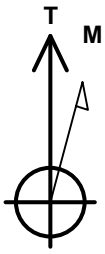
RECEIVED
Received: May 16, 2013

API Well Number: 43047538110000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6D PAD
Well: NBU 1022-6D4CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation




Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52162.2snT
Dip Angle: 65.81°
Date: 2013/01/16
Model: IGRF2010

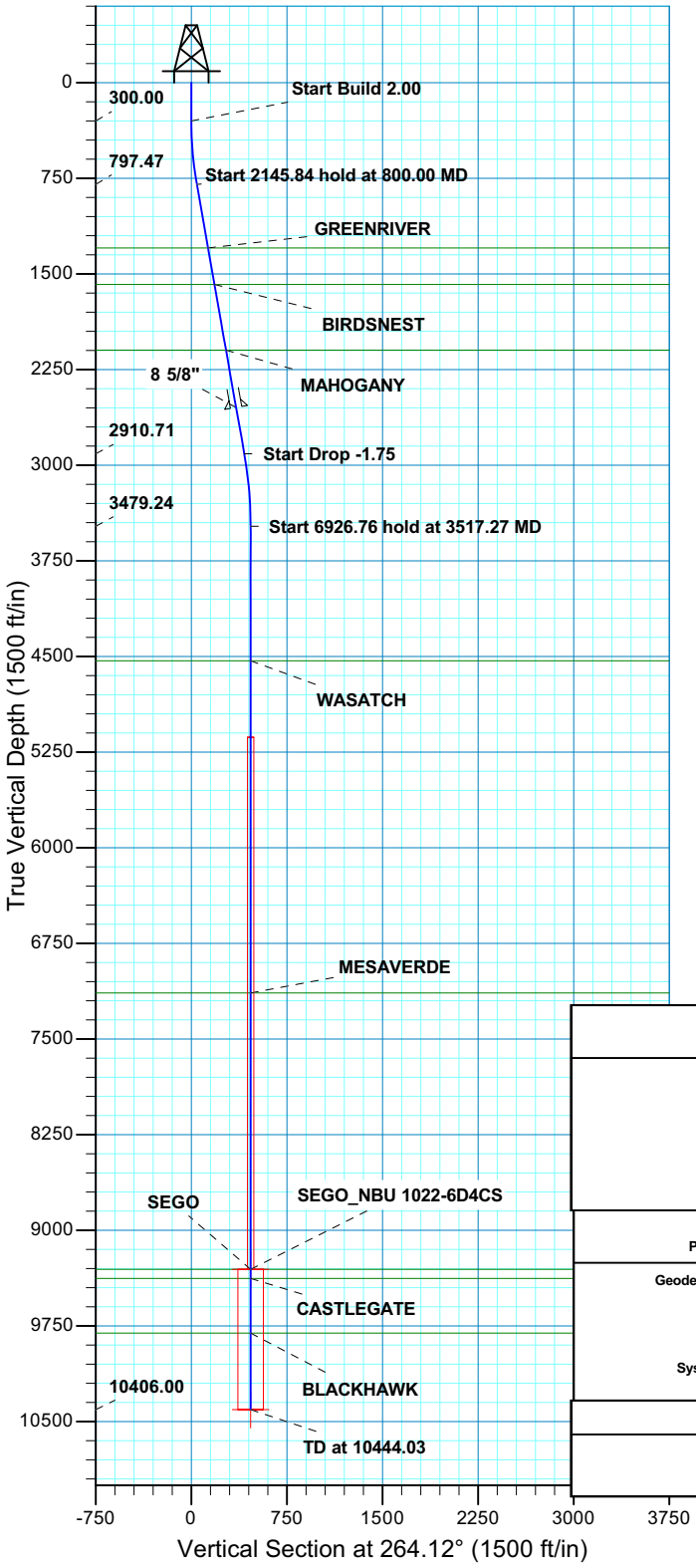
**WELL DETAILS: NBU 1022-6D4CS**

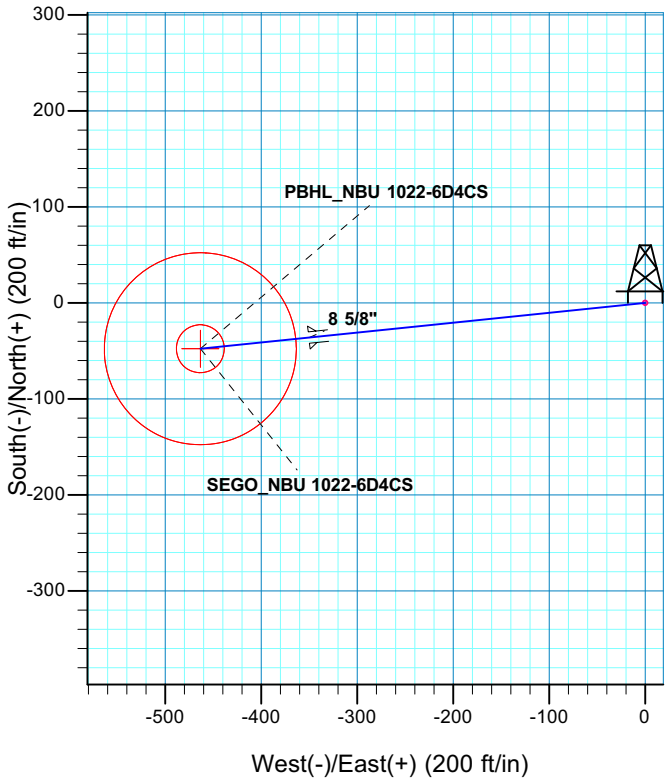
GL 5094 @ 5098.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14523073.17 | 2064631.99 | 39.9819469 | -109.4856905 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9307.00 | -47.71 | -463.44 | 14523017.60 | 2064169.44 | 39.9818159 | -109.4873445 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10406.00 | -47.71 | -463.44 | 14523017.60 | 2064169.44 | 39.9818159 | -109.4873445 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 800.00 | 10.00 | 264.12 | 797.47 | -4.46 | -43.29 | 2.00 | 264.12 | 43.52 | |
| 2945.84 | 10.00 | 264.12 | 2910.71 | -42.61 | -413.96 | 0.00 | 0.00 | 416.14 | |
| 3517.27 | 0.00 | 0.00 | 3479.24 | -47.71 | -463.44 | 1.75 | 180.00 | 465.88 | |
| 10444.03 | 0.00 | 0.00 | 10406.00 | -47.71 | -463.44 | 0.00 | 0.00 | 465.88 | PBHL_NBU 1022-6D4CS |

**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 6 T10S R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1297.00 | 1307.24 | GREENRIVER |
| 1583.00 | 1597.65 | BIRDSNEST |
| 2097.00 | 2119.58 | MAHOGANY |
| 4533.00 | 4571.03 | WASATCH |
| 7139.00 | 7177.03 | MESAVERDE |
| 9307.00 | 9345.03 | SEGO |
| 9377.00 | 9415.03 | CASTLEGATE |
| 9806.00 | 9844.03 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2547.00 | 2576.52 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6D4CS/OH)

Created By: Robert Scott Date: 18:30, January 16 2013

RECEIVED
Received: May 16, 2013

API Well Number: 43047538110000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6D PAD
Well: NBU 1022-6D4BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52162.3snT
Dip Angle: 65.81°
Date: 2013/01/16
Model: IGRF2010

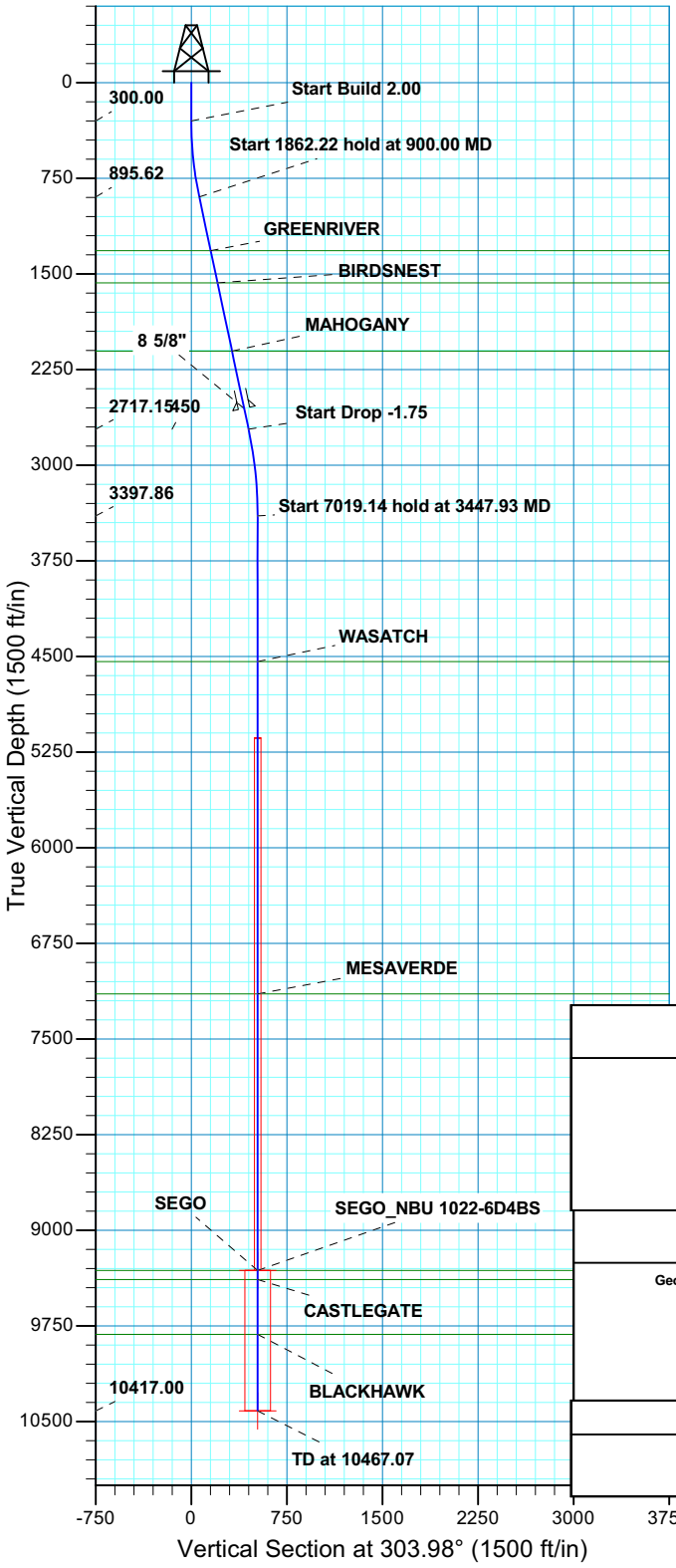
**WELL DETAILS: NBU 1022-6D4BS**

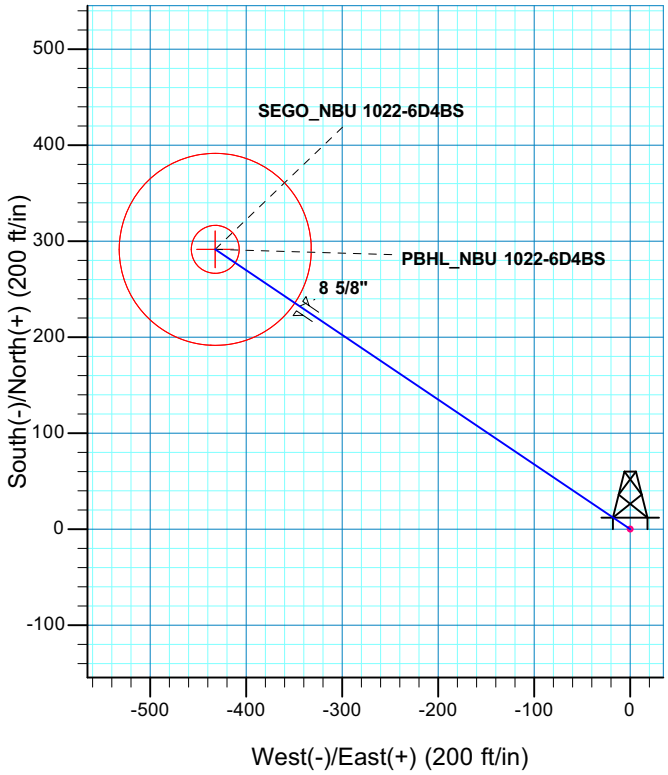
GL 5074 @ 5098.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14523082.98 | 2064630.15 | 39.9819739 | -109.4856965 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9316.00 | 291.37 | -432.30 | 14523366.96 | 2064192.96 | 39.9827739 | -109.4872394 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10417.00 | 291.37 | -432.30 | 14523366.96 | 2064192.96 | 39.9827739 | -109.4872394 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 900.00 | 12.00 | 303.98 | 895.62 | 34.99 | -51.91 | 2.00 | 303.98 | 62.60 | |
| 2762.22 | 12.00 | 303.98 | 2717.15 | 251.38 | -372.97 | 0.00 | 0.00 | 449.78 | |
| 3447.93 | 0.00 | 0.00 | 3397.86 | 291.37 | -432.30 | 1.75 | 180.00 | 521.33 | |
| 10467.07 | 0.00 | 0.00 | 10417.00 | 291.37 | -432.30 | 0.00 | 0.00 | 521.33 | PBHL_NBU 1022-6D4BS |

**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 6 T10S R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1317.00 | 1330.79 | GREENRIVER |
| 1570.00 | 1589.44 | BIRDSNEST |
| 2105.00 | 2136.40 | MAHOGANY |
| 4540.00 | 4590.07 | WASATCH |
| 7147.00 | 7197.07 | MESAVERDE |
| 9316.00 | 9366.07 | SEGO |
| 9386.00 | 9436.07 | CASTLEGATE |
| 9817.00 | 9867.07 | BLACKHAWK |

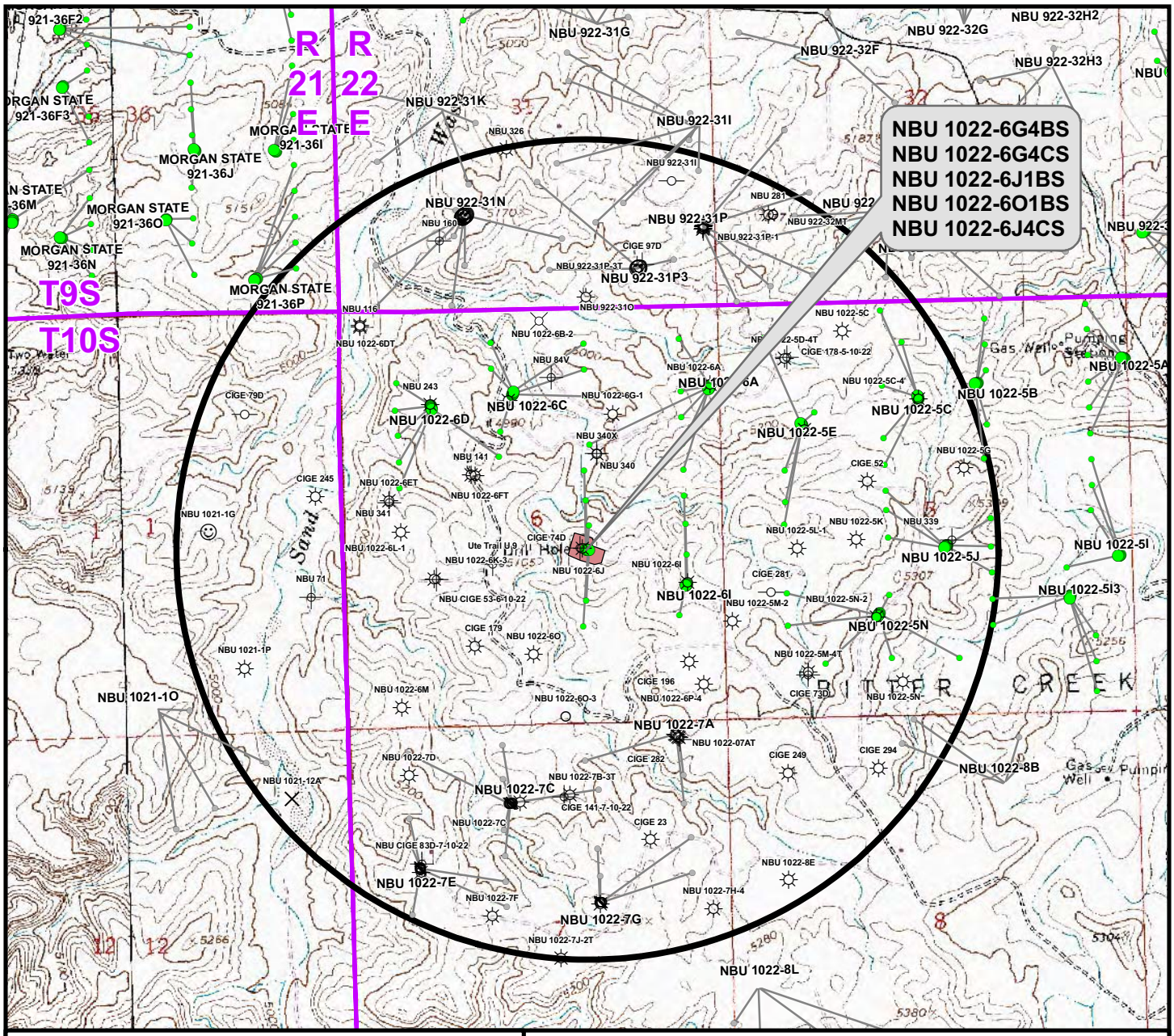
**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2555.00 | 2596.45 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6D4BS/OH)

Created By: Robert Scott Date: 14:07, January 16 2013

RECEIVED Received: May 16, 2013




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 1022-6G4BS | NBU 340X | 268ft |
| NBU 1022-6G4CS | NBU 1022-6J | 617ft |
| NBU 1022-6J1BS | NBU 1022-6J | 302ft |
| NBU 1022-6O1BS | NBU 1022-6O | 734ft |
| NBU 1022-6J4CS | NBU 1022-6J | 676ft |

**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 1022-6J

**TOPO C**
**NBU 1022-6G4BS, NBU 1022-6G4CS, NBU 1022-6J1BS, NBU 1022-6O1BS & NBU 1022-6J4CS**
**LOCATED IN SECTION 6, T10S, 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: 13 |
| DRAWN: TL | DATE: 30 Nov 2012 | 13 OF 17 |
| REVISED: | DATE: | |

File: K:\ANADARKO\2012\2012_54_NBU_1022-6_FOCUS\GIS\Maps_ABCDE\NBU 1022-6J\NBU 1022-6J_C.mxd, 12/12/2012 4:57:20 PM

RECEIVED: May 16, 2013

API Well Number: 43047538110000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6J PAD
Well: NBU 1022-6J1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52160.3snT
Dip Angle: 65.81°
Date: 2013/01/16
Model: IGRF2010

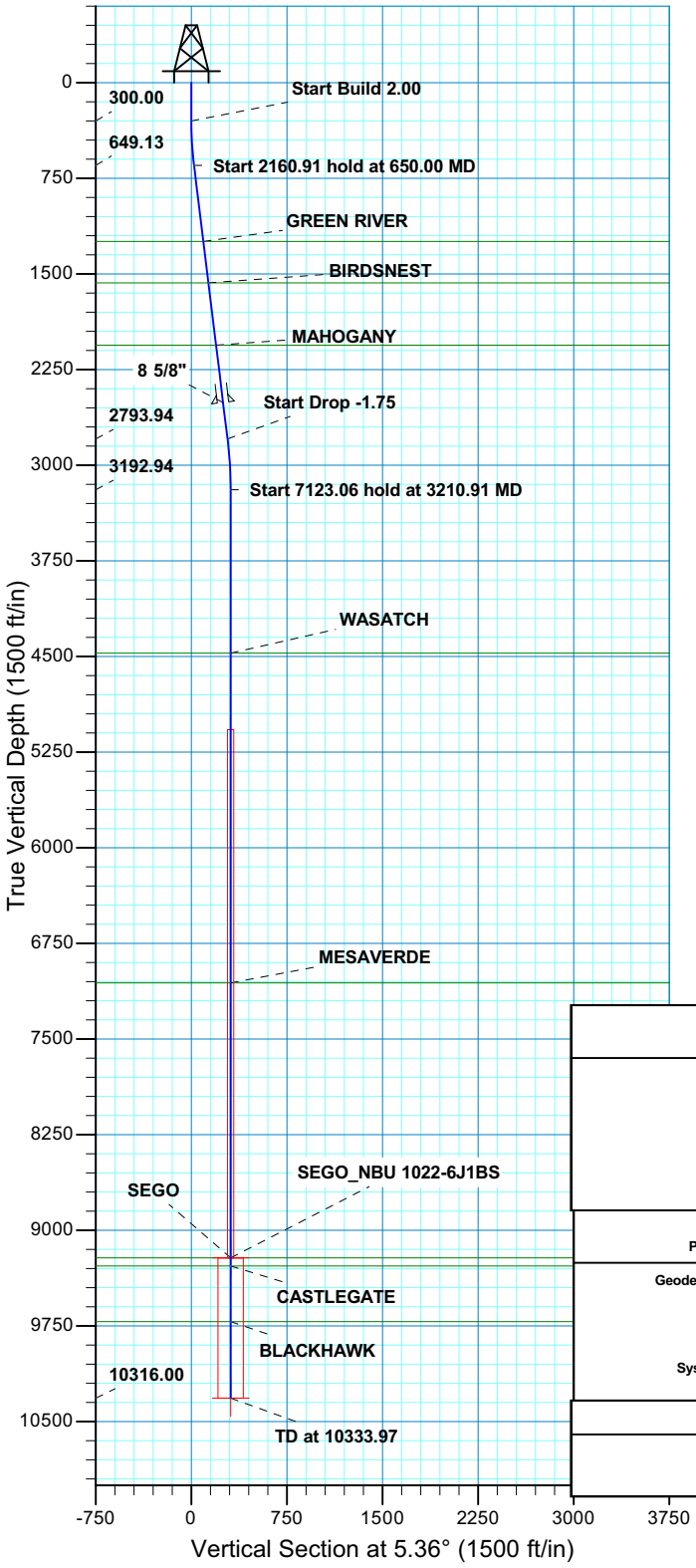
**WELL DETAILS: NBU 1022-6J1BS**

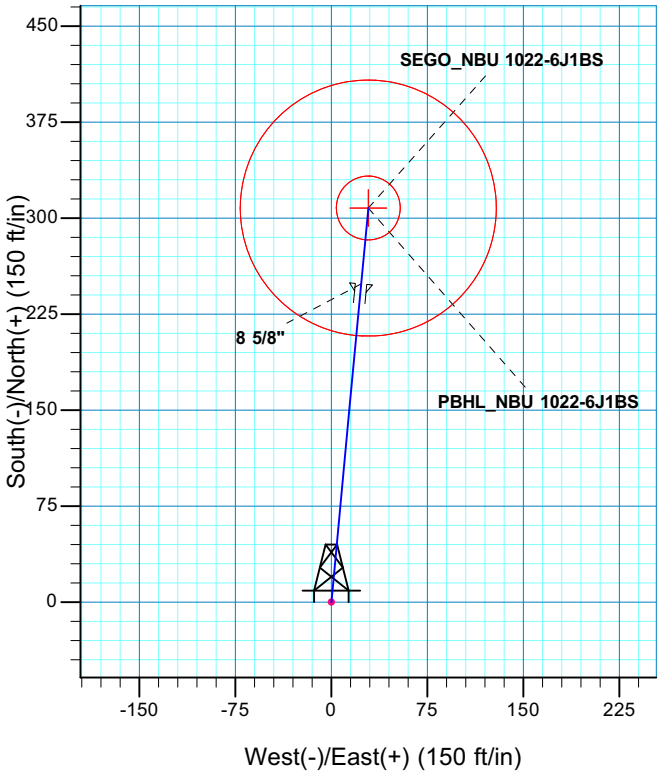
GL 5108 & KB 4 @ 5112.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14521213.14 | 2066638.66 | 39.9767468 | -109.4786430 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9216.00 | 307.76 | 28.86 | 14521521.35 | 2066662.27 | 39.9775918 | -109.4785400 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10316.00 | 307.76 | 28.86 | 14521521.35 | 2066662.27 | 39.9775918 | -109.4785400 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 650.00 | 7.00 | 5.36 | 649.13 | 21.26 | 1.99 | 2.00 | 5.36 | 21.35 | |
| 2810.91 | 7.00 | 5.36 | 2793.94 | 283.46 | 26.58 | 0.00 | 0.00 | 284.70 | |
| 3210.91 | 0.00 | 0.00 | 3192.94 | 307.76 | 28.86 | 1.75 | 180.00 | 309.11 | |
| 10333.97 | 0.00 | 0.00 | 10316.00 | 307.76 | 28.86 | 0.00 | 0.00 | 309.11 | PBHL_NBU 1022-6J1BS |

**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 6 T10S R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1245.00 | 1250.34 | GREEN RIVER |
| 1569.00 | 1576.78 | BIRDSNEST |
| 2058.00 | 2069.45 | MAHOGANY |
| 4473.00 | 4490.97 | WASATCH |
| 7060.00 | 7077.97 | MESAVERDE |
| 9216.00 | 9233.97 | SEGO |
| 9279.00 | 9296.97 | CASTLEGATE |
| 9716.00 | 9733.97 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2508.00 | 2522.83 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6J1BS/OH)
Created By: Robert Scott Date: 12:01, January 16 2013

RECEIVED: May 16, 2013

API Well Number: 43047538110000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6J PAD
Well: NBU 1022-6G4CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52160.3snT
Dip Angle: 65.81°
Date: 2013/01/16
Model: IGRF2010

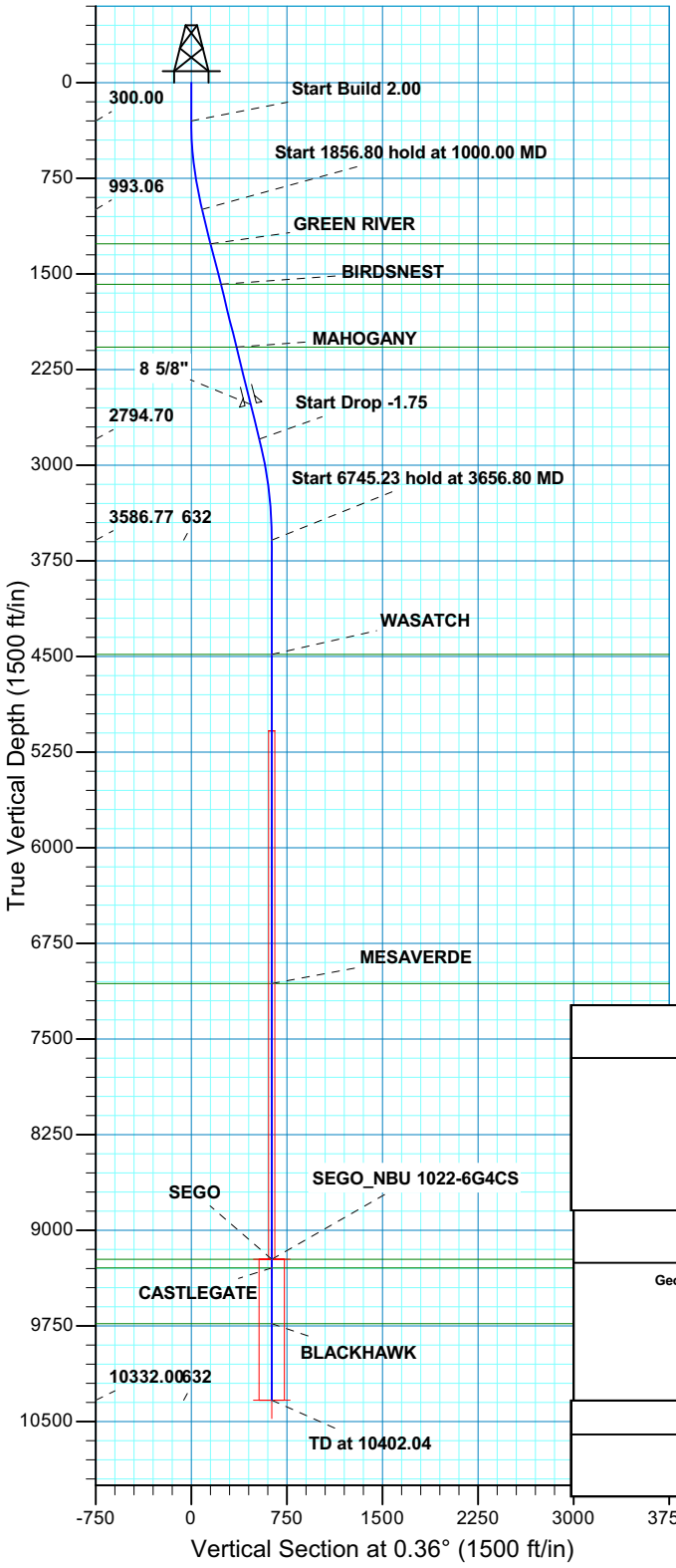
**WELL DETAILS: NBU 1022-6G4CS**

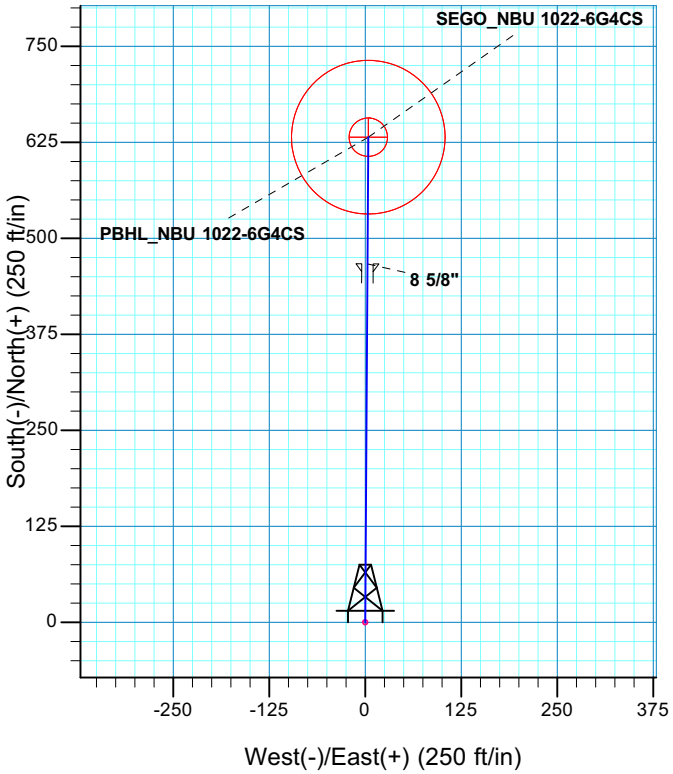
GL 5108 & KB 4 @ 5112.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14521215.89 | 2066629.08 | 39.9767548 | -109.4786770 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9227.00 | 631.54 | 3.95 | 14521847.41 | 2066622.26 | 39.9784888 | -109.4786629 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10332.00 | 631.54 | 3.95 | 14521847.41 | 2066622.26 | 39.9784888 | -109.4786629 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1000.00 | 14.00 | 0.36 | 993.06 | 85.09 | 0.53 | 2.00 | 0.36 | 85.10 | |
| 2856.80 | 14.00 | 0.36 | 2794.70 | 534.29 | 3.34 | 0.00 | 0.00 | 534.30 | |
| 3656.80 | 0.00 | 0.00 | 3586.77 | 631.54 | 3.95 | 1.75 | 180.00 | 631.55 | |
| 10402.04 | 0.00 | 0.00 | 10332.00 | 631.54 | 3.95 | 0.00 | 0.00 | 631.55 | PBHL_NBU 1022-6G4CS |

**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 6 T10S R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1263.00 | 1278.21 | GREEN RIVER |
| 1582.00 | 1606.97 | BIRDSNEST |
| 2073.00 | 2113.01 | MAHOGANY |
| 4484.00 | 4554.04 | WASATCH |
| 7065.00 | 7135.04 | MESAVERDE |
| 9227.00 | 9297.04 | SEGO |
| 9294.00 | 9364.04 | CASTLEGATE |
| 9732.00 | 9802.04 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2523.00 | 2576.78 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6G4CS/OH)

Created By: Robert Scott Date: 12:00, January 16 2013

RECEIVED
Received: May 16, 2013

API Well Number: 43047538110000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6J PAD
Well: NBU 1022-6G4BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52160.3snT
Dip Angle: 65.81°
Date: 2013/01/16
Model: IGRF2010

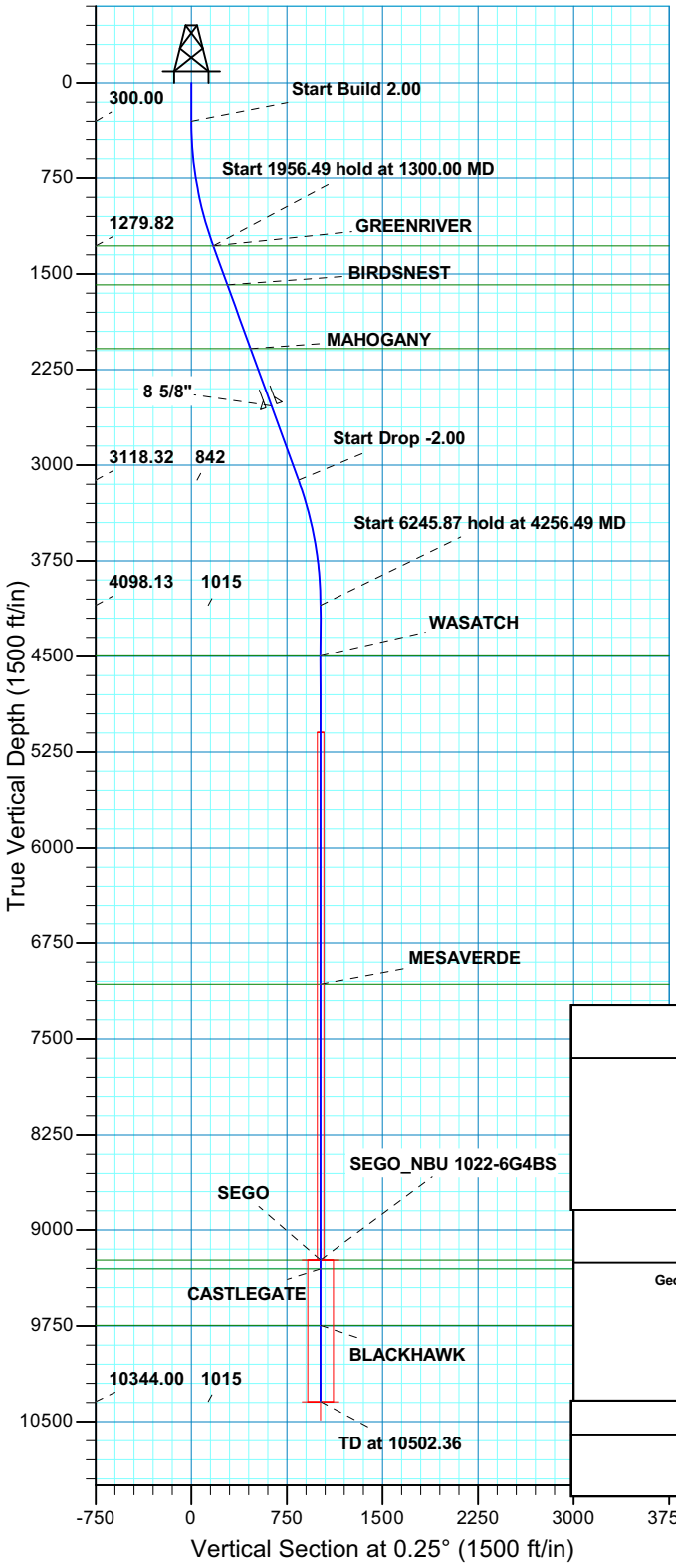
**WELL DETAILS: NBU 1022-6G4BS**

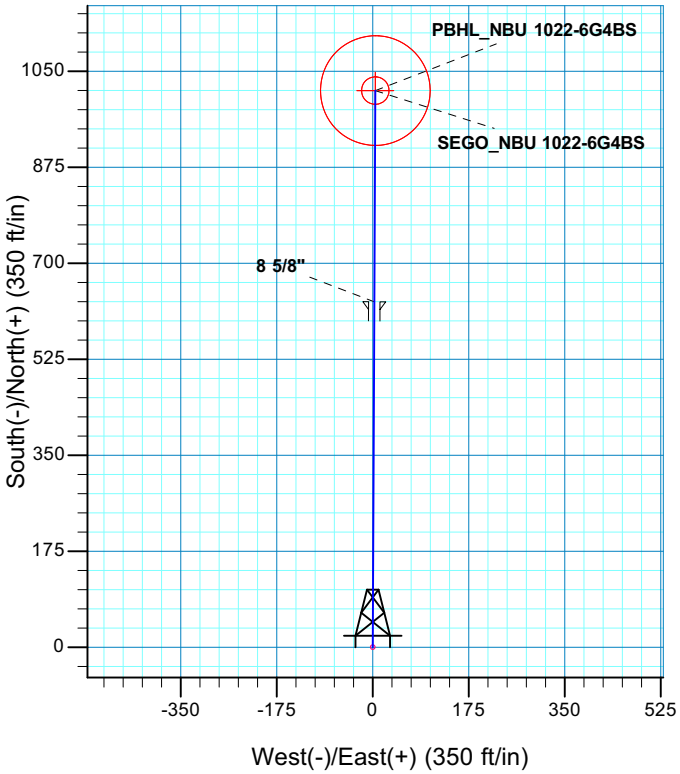
GL 5108 & KB 4 @ 5112.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14521218.64 | 2066619.51 | 39.9767628 | -109.4787110 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9235.00 | 1014.69 | 4.51 | 14522233.26 | 2066606.71 | 39.9795488 | -109.4786949 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10344.00 | 1014.69 | 4.51 | 14522233.26 | 2066606.71 | 39.9795488 | -109.4786949 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1300.00 | 20.00 | 0.25 | 1279.82 | 172.77 | 0.77 | 2.00 | 0.25 | 172.77 | |
| 3256.49 | 20.00 | 0.25 | 3118.32 | 841.92 | 3.74 | 0.00 | 0.00 | 841.93 | |
| 4256.49 | 0.00 | 0.00 | 4098.13 | 1014.69 | 4.51 | 2.00 | 180.00 | 1014.70 | |
| 10502.36 | 0.00 | 0.00 | 10344.00 | 1014.69 | 4.51 | 0.00 | 0.00 | 1014.70 | PBHL_NBU 1022-6G4BS |

**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 6 T10S R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1280.00 | 1300.20 | GREENRIVER |
| 1585.00 | 1624.77 | BIRDSNEST |
| 2085.00 | 2156.86 | MAHOGANY |
| 4495.00 | 4653.36 | WASATCH |
| 7073.00 | 7231.36 | MESAVERDE |
| 9235.00 | 9393.36 | SEGO |
| 9304.00 | 9462.36 | CASTLEGATE |
| 9744.00 | 9902.36 | BLACKHAWK |

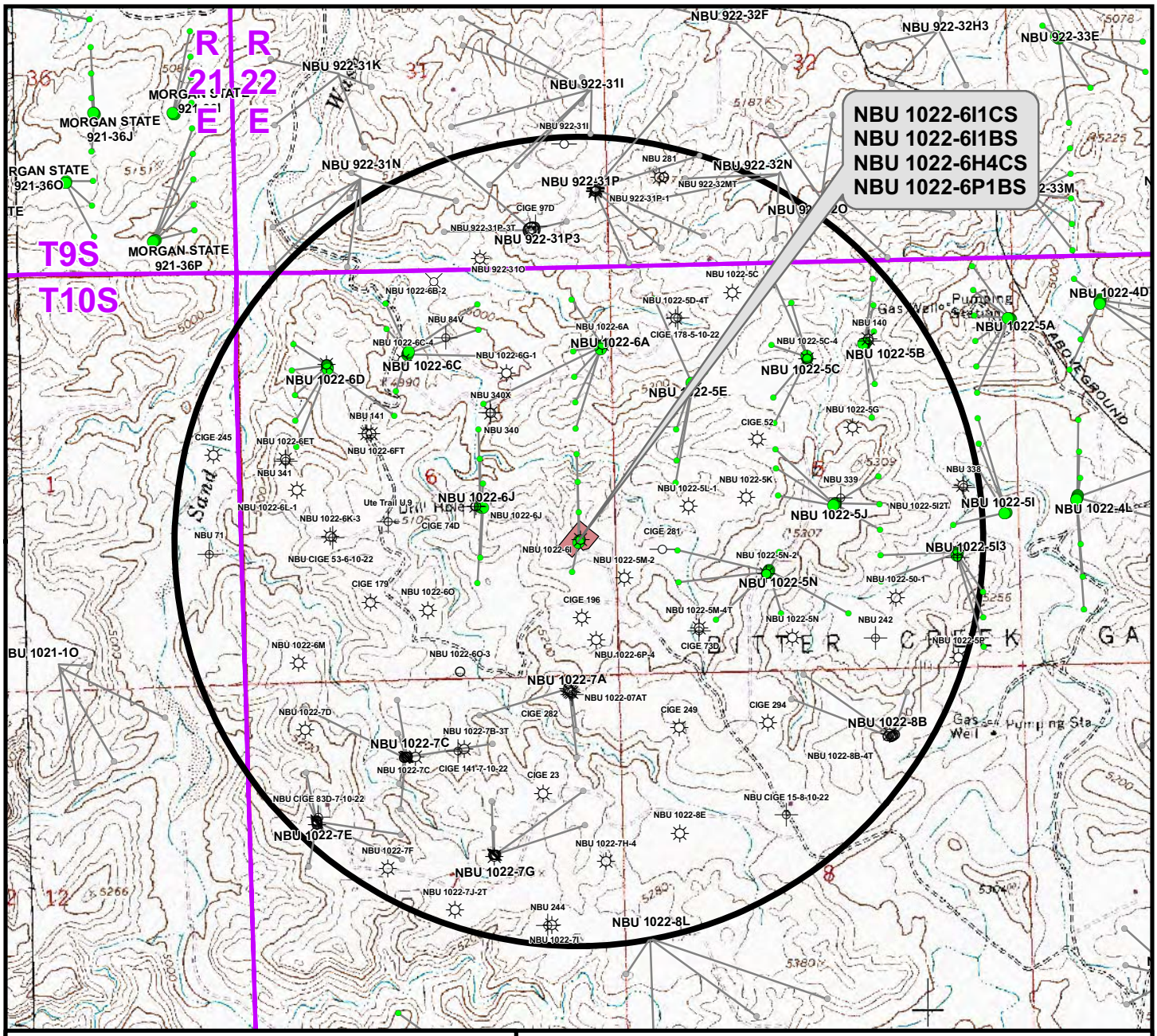
**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2535.00 | 2635.74 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6G4BS/OH)

Created By: Robert Scott Date: 11:58, January 16 2013

RECEIVED: May 16, 2013




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 1022-6I1CS | NBU 1022-6I | 357ft |
| NBU 1022-6I1BS | NBU 1022-6I | 753ft |
| NBU 1022-6H4CS | NBU 1022-6I | 1,119ft |
| NBU 1022-6P1BS | NBU 1022-6I | 435ft |

**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 1022-6I

**TOPO C**
**NBU 1022-6I1CS, NBU 1022-6I1BS, NBU 1022-6H4CS & NBU 1022-6P1BS**
**LOCATED IN SECTION 6, T10S, 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: 12 |
| DRAWN: TL | DATE: 30 Nov 2012 | 12 OF 16 |
| REVISED: | DATE: | |

File: K:\ANADARKO\2012\2012_54_NBU_1022-6_FOCUS\GIS\Maps_ABCDE\NBU 1022-6I\NBU 1022-6I_C.mxd, 11/26/2012 1:22:46 PM

RECEIVED: May 16, 2013

API Well Number: 43047538110000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6I PAD
Well: NBU 1022-6I1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52159.7snT
Dip Angle: 65.81°
Date: 2013/01/16
Model: IGRF2010

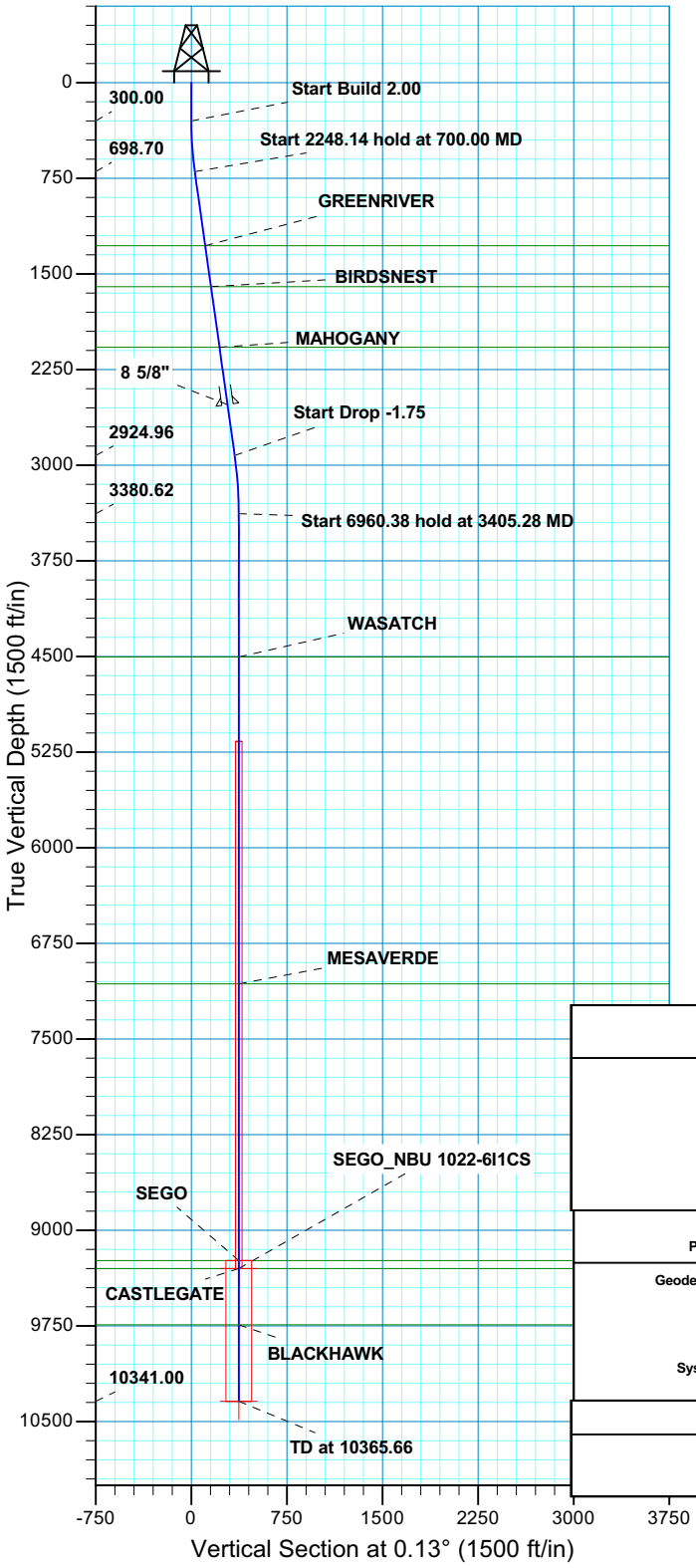
**WELL DETAILS: NBU 1022-6I1CS**

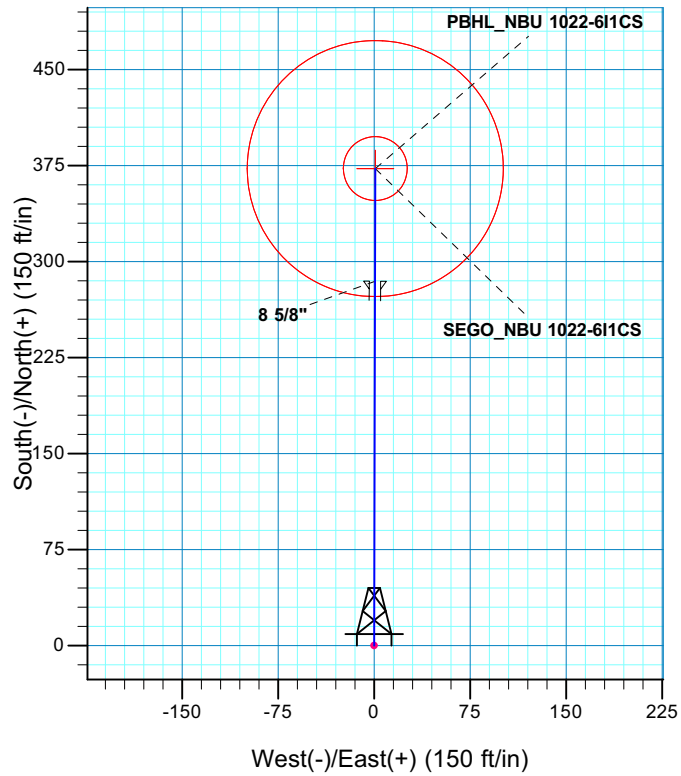
GL 5165 & KB 4 @ 5169.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14520768.40 | 2067921.08 | 39.9754657 | -109.4740942 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9301.00 | 372.62 | 0.84 | 14521140.98 | 2067915.55 | 39.9764888 | -109.4740912 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10341.00 | 372.62 | 0.84 | 14521140.98 | 2067915.55 | 39.9764888 | -109.4740912 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 700.00 | 8.00 | 0.13 | 698.70 | 27.88 | 0.06 | 2.00 | 0.13 | 27.88 | |
| 2948.14 | 8.00 | 0.13 | 2924.96 | 340.76 | 0.77 | 0.00 | 0.00 | 340.76 | |
| 3405.28 | 0.00 | 0.00 | 3380.62 | 372.62 | 0.84 | 1.75 | 180.00 | 372.62 | |
| 10365.66 | 0.00 | 0.00 | 10341.00 | 372.62 | 0.84 | 0.00 | 0.00 | 372.62 | PBHL_NBU 1022-6I1CS |

**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 6 T10S R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1278.00 | 1284.99 | GREENRIVER |
| 1599.00 | 1609.15 | BIRDSNEST |
| 2075.00 | 2089.82 | MAHOGANY |
| 4503.00 | 4527.66 | WASATCH |
| 7067.00 | 7091.66 | MESAVERDE |
| 9237.00 | 9261.66 | SEGO |
| 9301.00 | 9325.66 | CASTLEGATE |
| 9741.00 | 9765.66 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2525.00 | 2544.25 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6I1CS/OH)

Created By: Robert Scott Date: 10:30, January 16 2013

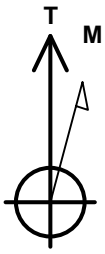
RECEIVED: May 16, 2013

API Well Number: 43047538110000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6I PAD
Well: NBU 1022-6I1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation




Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52159.7snT
Dip Angle: 65.81°
Date: 2013/01/16
Model: IGRF2010

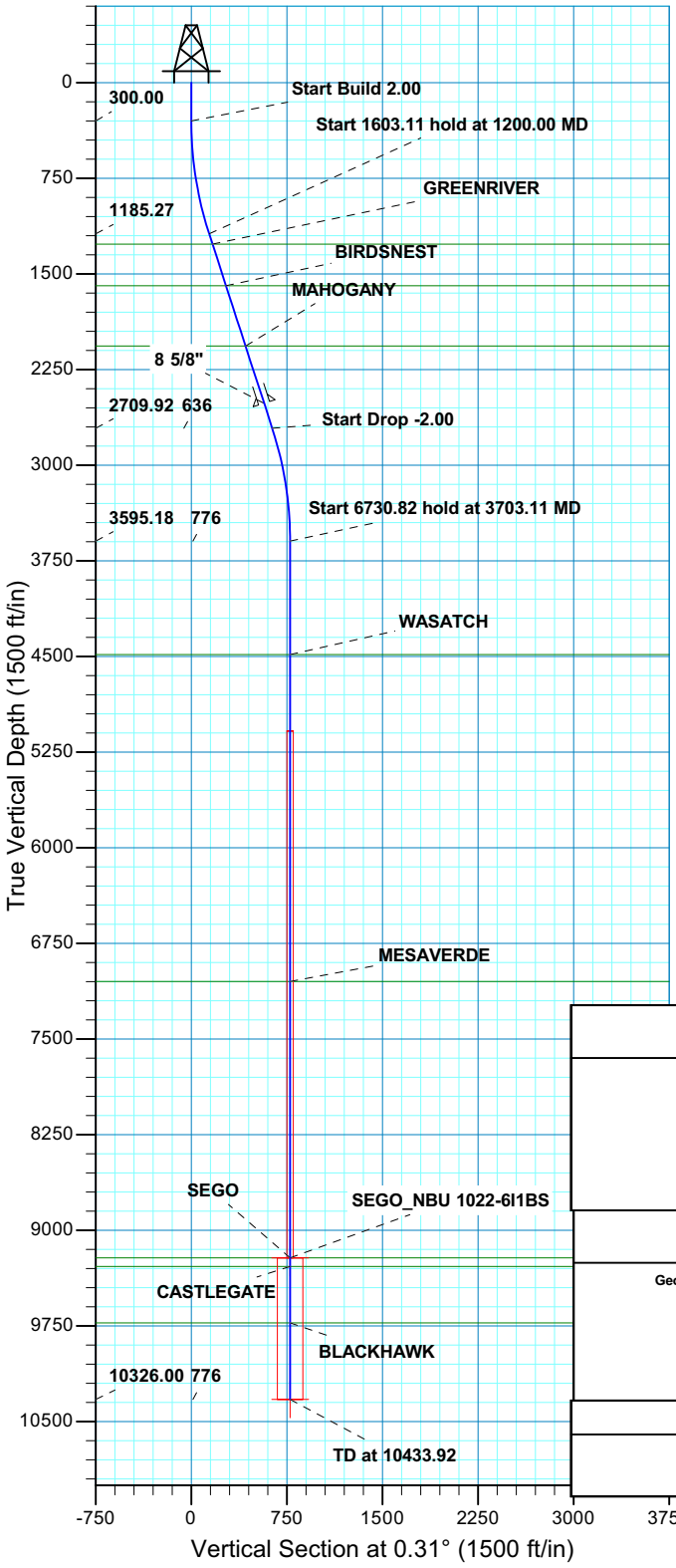
**WELL DETAILS: NBU 1022-6I1BS**

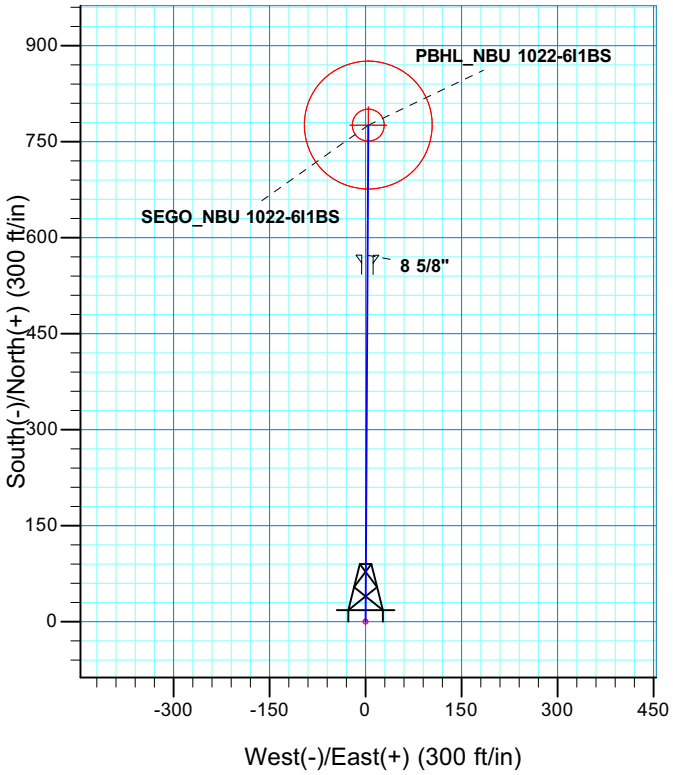
GL 5165 & KB 4 @ 5169.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14520760.65 | 2067914.77 | 39.9754447 | -109.4741172 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9216.00 | 775.80 | 4.20 | 14521536.40 | 2067905.70 | 39.9775748 | -109.4741022 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10326.00 | 775.80 | 4.20 | 14521536.40 | 2067905.70 | 39.9775748 | -109.4741022 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1200.00 | 18.00 | 0.31 | 1185.27 | 140.21 | 0.76 | 2.00 | 0.31 | 140.21 | |
| 2803.11 | 18.00 | 0.31 | 2709.92 | 635.59 | 3.44 | 0.00 | 0.00 | 635.60 | |
| 3703.11 | 0.00 | 0.00 | 3595.18 | 775.80 | 4.20 | 2.00 | 180.00 | 775.81 | |
| 10433.92 | 0.00 | 0.00 | 10326.00 | 775.80 | 4.20 | 0.00 | 0.00 | 775.81 | PBHL_NBU 1022-6I1BS |

**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 6 T10S R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1266.00 | 1284.89 | GREENRIVER |
| 1592.00 | 1627.66 | BIRDSNEST |
| 2065.00 | 2125.00 | MAHOGANY |
| 4486.00 | 4593.92 | WASATCH |
| 7049.00 | 7156.92 | MESAVERDE |
| 9216.00 | 9323.92 | SEGO |
| 9284.00 | 9391.92 | CASTLEGATE |
| 9726.00 | 9833.92 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2515.00 | 2598.16 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6I1BS/OH)
Created By: Robert Scott Date: 10:29, January 16 2013

RECEIVED: May 16, 2013

API Well Number: 43047538110000

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6I PAD
Well: NBU 1022-6H4CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Scientific Drilling

Anadarko Petroleum Corporation

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Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52159.7snT
Dip Angle: 65.81°
Date: 2013/01/16
Model: IGRF2010

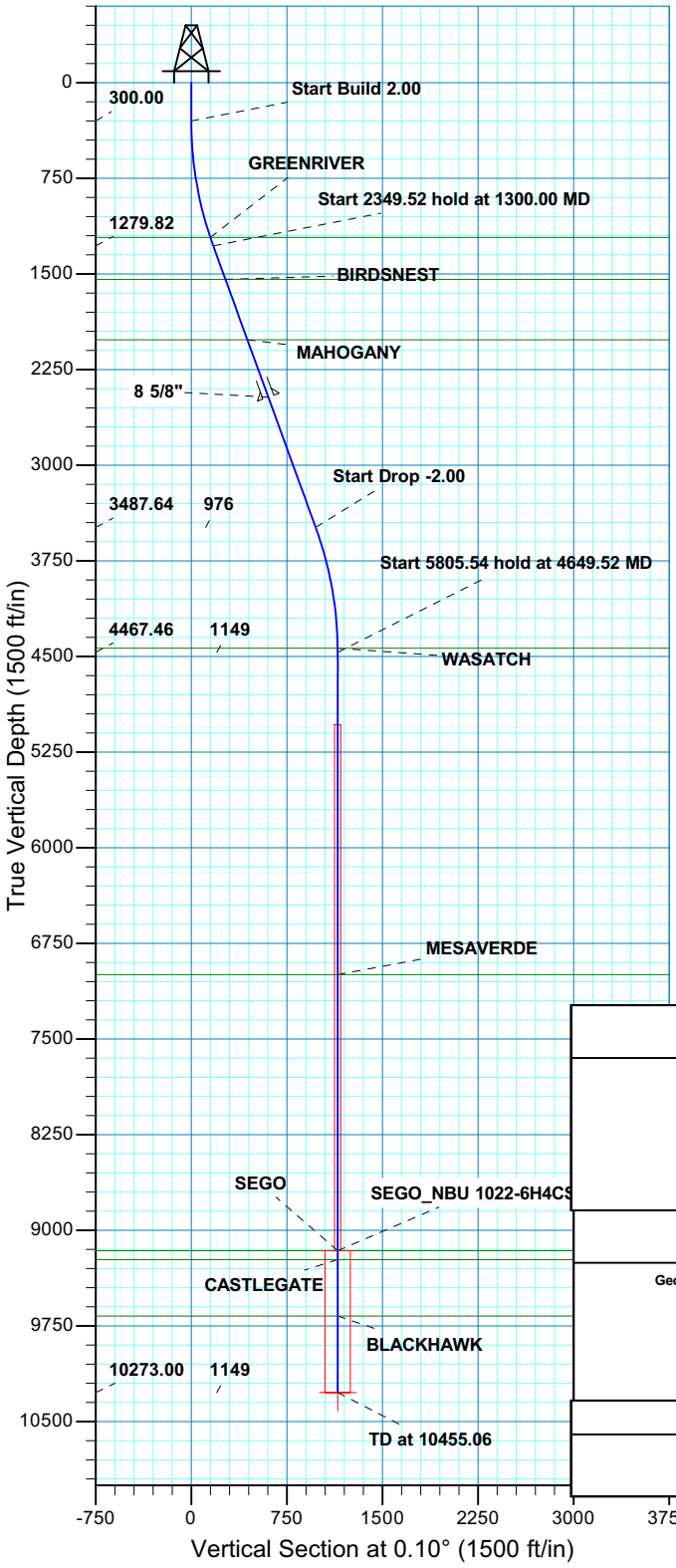
**WELL DETAILS: NBU 1022-6H4CS**

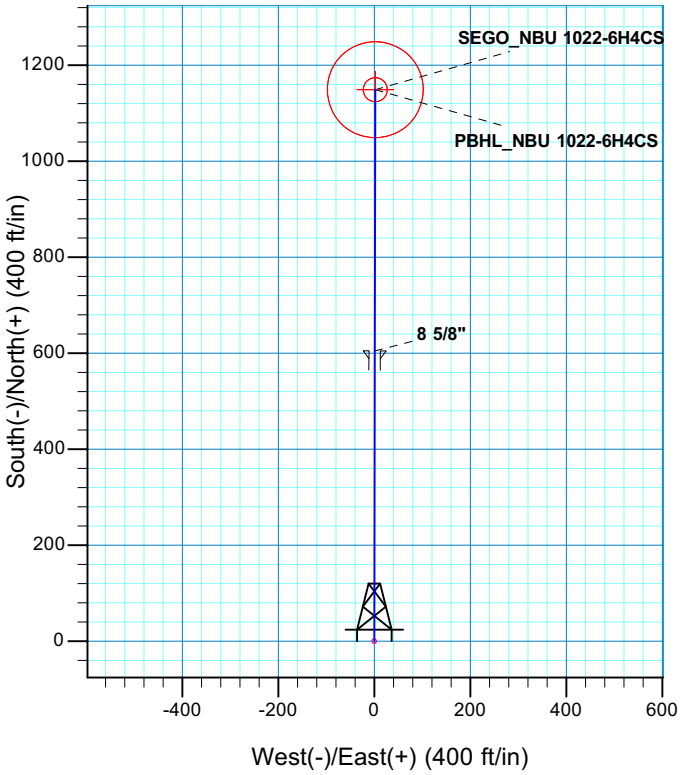
GL 5165 & KB 4 @ 5169.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14520753.25 | 2067908.45 | 39.9754247 | -109.4741402 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9160.00 | 1149.12 | 1.96 | 14521902.23 | 2067890.75 | 39.9785798 | -109.4741332 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10273.00 | 1149.12 | 1.96 | 14521902.23 | 2067890.75 | 39.9785798 | -109.4741332 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1300.00 | 20.00 | 0.10 | 1279.82 | 172.77 | 0.29 | 2.00 | 0.10 | 172.77 | |
| 3649.52 | 20.00 | 0.10 | 3487.64 | 976.35 | 1.67 | 0.00 | 0.00 | 976.35 | |
| 4649.52 | 0.00 | 0.00 | 4467.46 | 1149.12 | 1.96 | 2.00 | 180.00 | 1149.12 | |
| 10455.06 | 0.00 | 0.00 | 10273.00 | 1149.12 | 1.96 | 0.00 | 0.00 | 1149.12 | PBHL_NBU 1022-6H4CS |

**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 6 T10S R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1214.00 | 1230.26 | GREENRIVER |
| 1542.00 | 1579.01 | BIRDSNEST |
| 2017.00 | 2084.50 | MAHOGANY |
| 4434.00 | 4616.06 | WASATCH |
| 6995.00 | 7177.06 | MESAVERDE |
| 9160.00 | 9342.06 | SEGO |
| 9230.00 | 9412.06 | CASTLEGATE |
| 9673.00 | 9855.06 | BLACKHAWK |

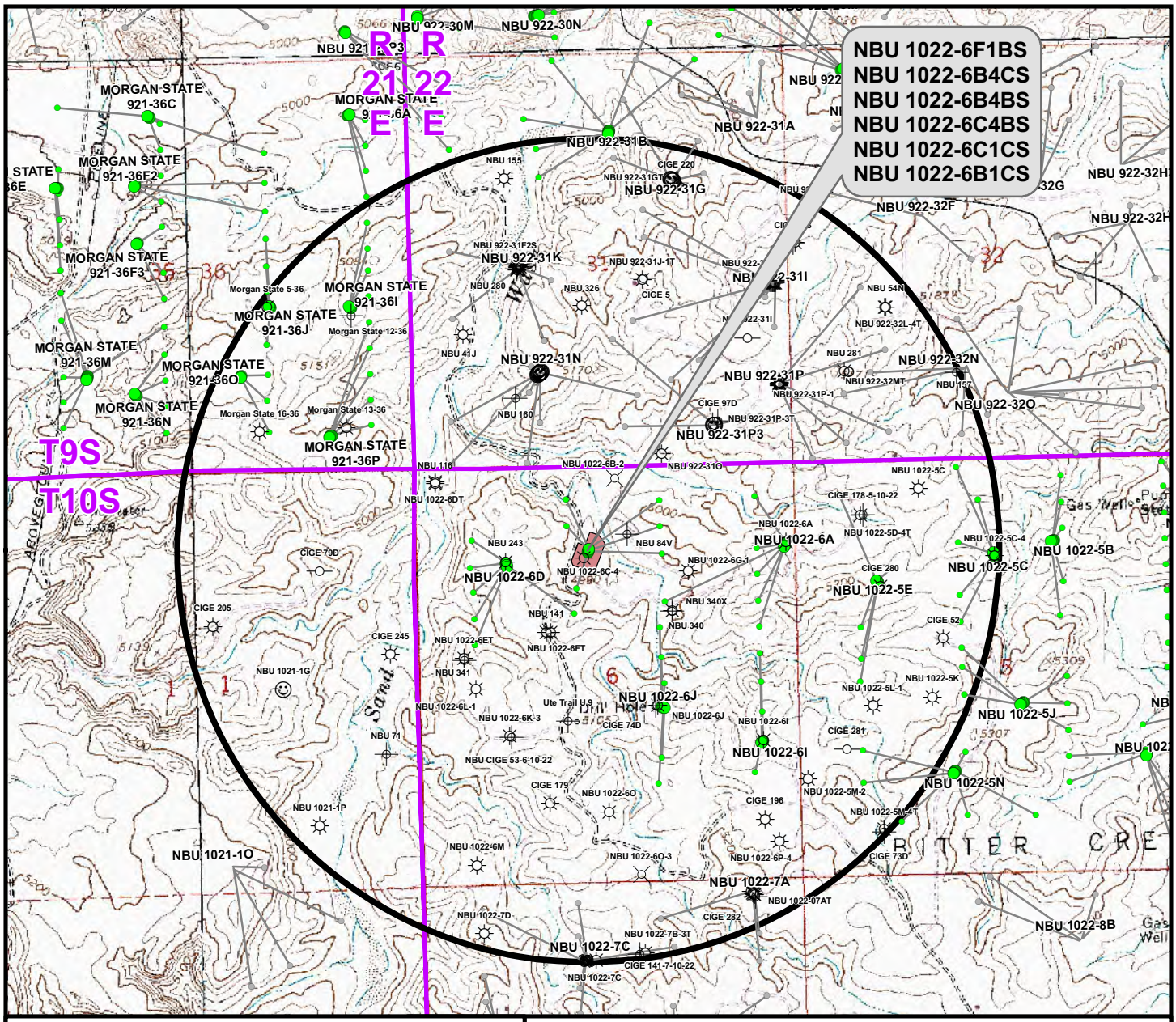
**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2467.00 | 2563.38 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6H4CS/OH)

Created By: Robert Scott Date: 10:28, January 16 2013

RECEIVED Received: May 16, 2013




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 1022-6F1BS | NBU 1022-6C-4 | 408ft |
| NBU 1022-6B4CS | NBU 1022-6G-1 | 412ft |
| NBU 1022-6B4BS | NBU 84V | 438ft |
| NBU 1022-6C4BS | NBU 1022-6C-4 | 469ft |
| NBU 1022-6C1CS | NBU 922-31N3DS BH | 687ft |
| NBU 1022-6B1CS | NBU 84V | 600ft |

**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 1022-6C

**TOPO C**
**NBU 1022-6F1BS, NBU 1022-6B4CS, NBU 1022-6B4BS, NBU 1022-6C4BS, NBU 1022-6C1CS & NBU 1022-6B1CS**
**LOCATED IN SECTION 6, T10S, 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: 14 |
| DRAWN: TL | DATE: 30 Nov 2012 | 14 OF 18 |
| REVISED: | DATE: | |

File: K:\ANADARKO\2012\2012_54_NBU_1022-6_FOCUS\GIS\Maps_ABCDE\NBU 1022-6C\NBU 1022-6C_C.mxd, 12/12/2012 9:10:19 AM

RECEIVED: May 16, 2013

API Well Number: 43047538110000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6C PAD
Well: NBU 1022-6F1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52163.9snT
Dip Angle: 65.82°
Date: 2013/01/16
Model: IGRF2010

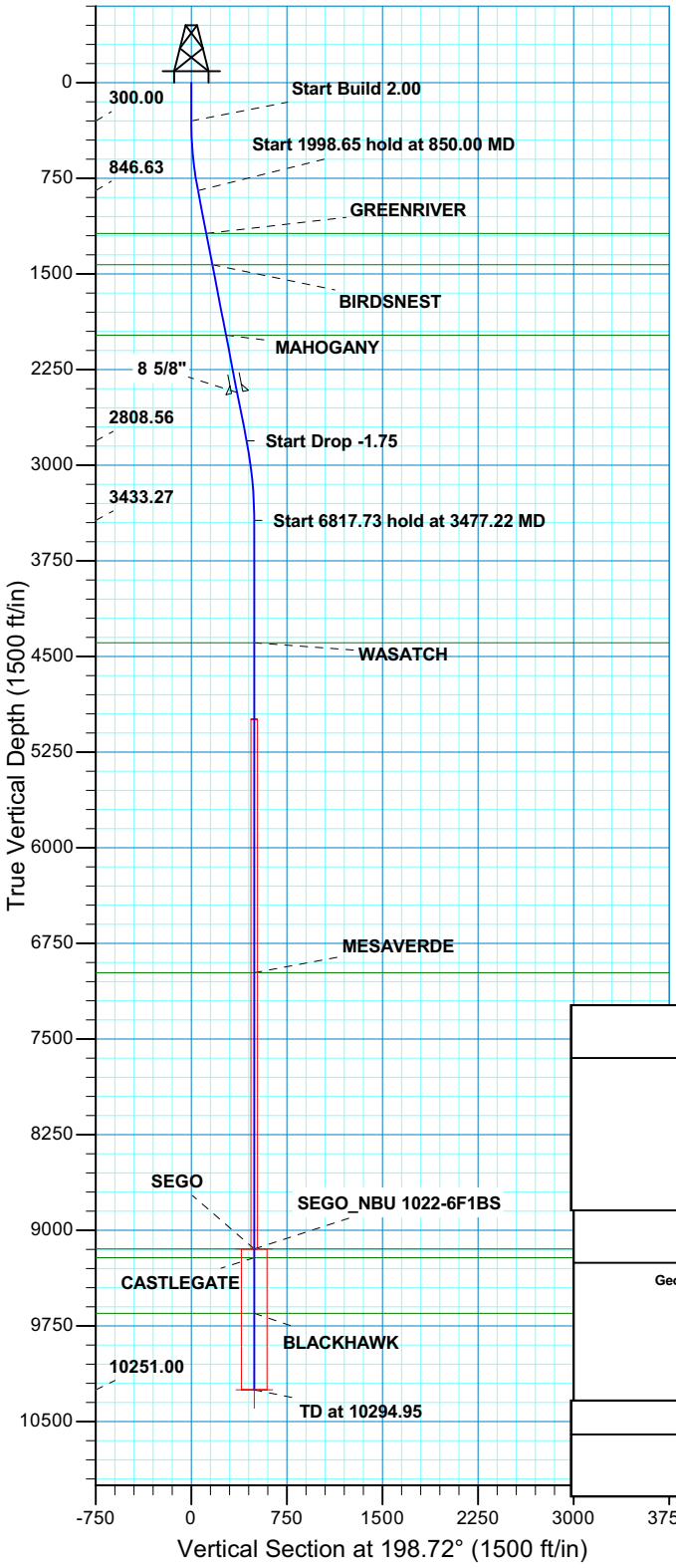
**WELL DETAILS: NBU 1022-6F1BS**

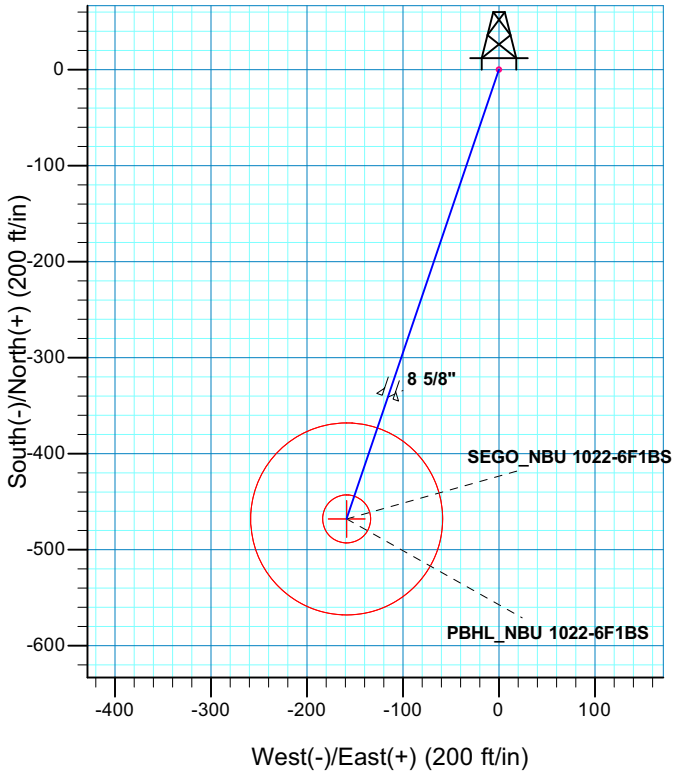
GL 4978 & KB 4 @ 4982.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14523209.73 | 2065681.04 | 39.9822728 | -109.4819387 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9146.00 | -468.01 | -158.59 | 14527739.09 | 2065530.44 | 39.9809878 | -109.4825047 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10251.00 | -468.01 | -158.59 | 14522739.09 | 2065530.44 | 39.9809878 | -109.4825047 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 850.00 | 11.00 | 198.72 | 846.63 | -49.85 | -16.89 | 2.00 | 198.72 | 52.63 | |
| 2848.65 | 11.00 | 198.72 | 2808.56 | -411.04 | -139.29 | 0.00 | 0.00 | 433.99 | |
| 3477.22 | 0.00 | 0.00 | 3433.27 | -468.01 | -158.59 | 1.75 | 180.00 | 494.15 | |
| 10294.95 | 0.00 | 0.00 | 10251.00 | -468.01 | -158.59 | 0.00 | 0.00 | 494.15 | PBHL_NBU 1022-6F1BS |

**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 6 T10S R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1182.00 | 1191.65 | GREENRIVER |
| 1427.00 | 1441.24 | BIRDSNEST |
| 1980.00 | 2004.59 | MAHOGANY |
| 4392.00 | 4435.95 | WASATCH |
| 6980.00 | 7023.95 | MESAVERDE |
| 9146.00 | 9189.95 | SEGO |
| 9215.00 | 9258.95 | CASTLEGATE |
| 9651.00 | 9694.95 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2430.00 | 2463.01 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6F1BS/OH)

Created By: Robert Scott Date: 9:10, January 16 2013

RECEIVED: May 16, 2013

API Well Number: 43047538110000

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6C PAD
Well: NBU 1022-6C4BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Scientific Drilling

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52163.9snT
Dip Angle: 65.82°
Date: 2013/01/16
Model: IGRF2010

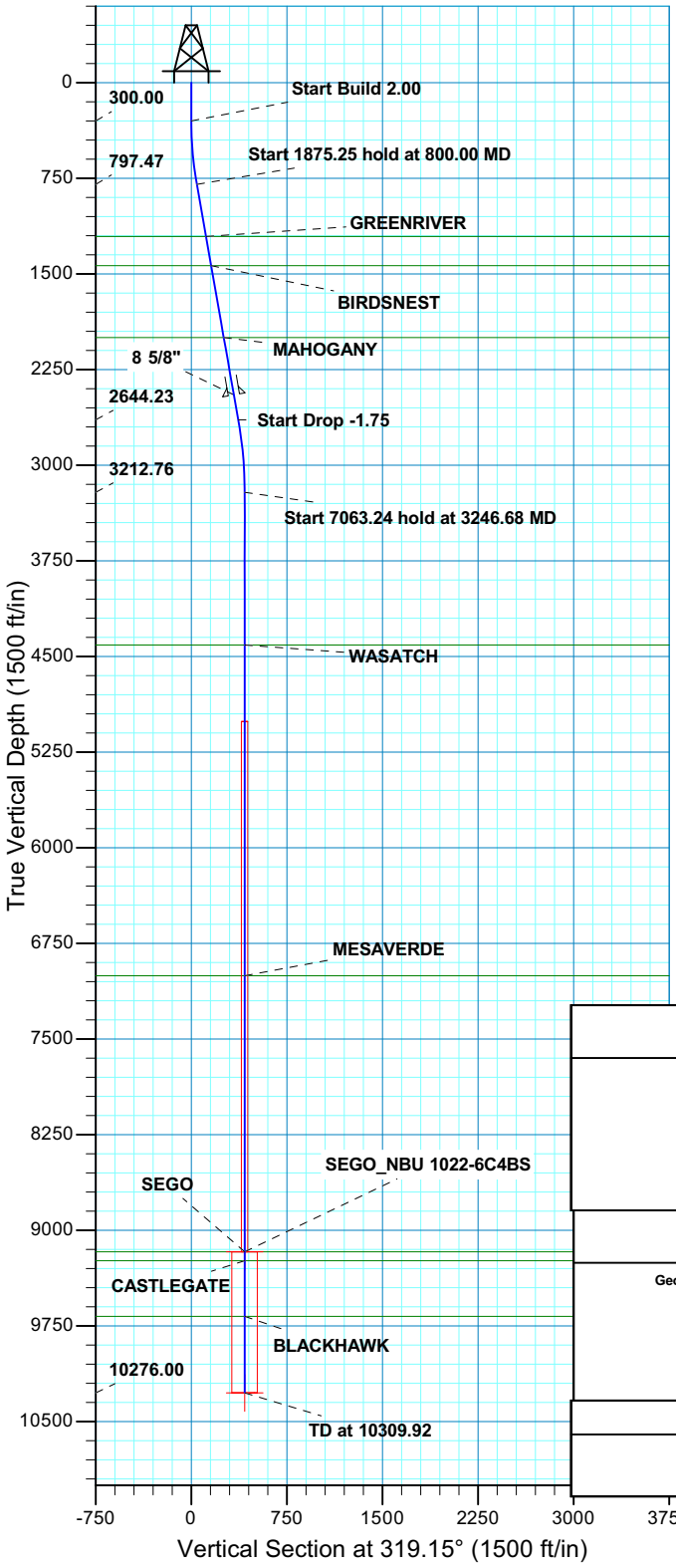
**WELL DETAILS: NBU 1022-6C4BS**

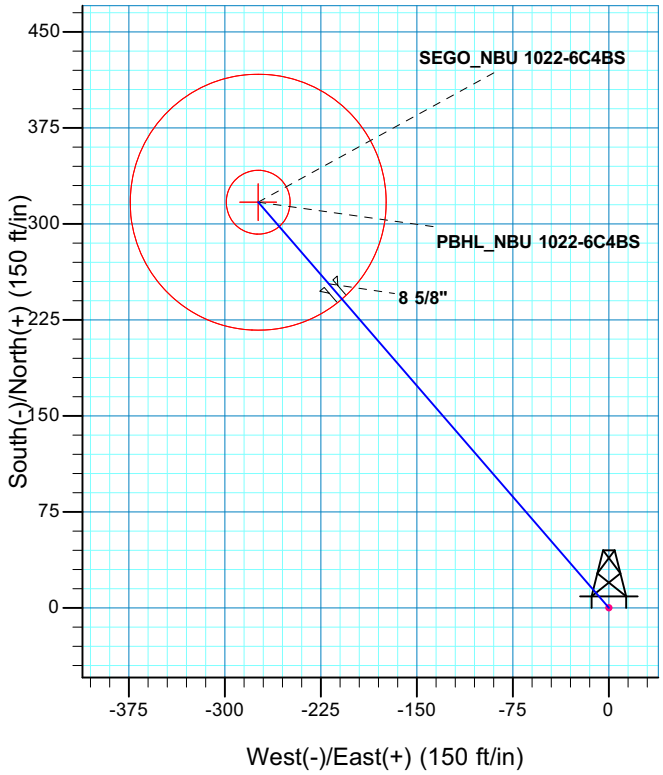
GL 4978 & KB 4 @ 4982.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14523237.95 | 2065691.48 | 39.9823498 | -109.4818997 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9168.00 | 316.86 | -273.99 | 14523550.10 | 2065412.14 | 39.9832198 | -109.4828776 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10276.00 | 316.86 | -273.99 | 14523550.10 | 2065412.14 | 39.9832198 | -109.4828776 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 800.00 | 10.00 | 319.15 | 797.47 | 32.92 | -28.47 | 2.00 | 319.15 | 43.52 | |
| 2675.25 | 10.00 | 319.15 | 2644.23 | 279.24 | -241.46 | 0.00 | 0.00 | 369.16 | |
| 3246.68 | 0.00 | 0.00 | 3212.76 | 316.86 | -273.99 | 1.75 | 180.00 | 418.90 | |
| 10309.92 | 0.00 | 0.00 | 10276.00 | 316.86 | -273.99 | 0.00 | 0.00 | 418.90 | PBHL_NBU 1022-6C4BS |

**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 6 T10S R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1207.00 | 1215.85 | GREENRIVER |
| 1435.00 | 1447.37 | BIRDSNEST |
| 1999.00 | 2020.07 | MAHOGANY |
| 4411.00 | 4444.92 | WASATCH |
| 7004.00 | 7037.92 | MESAVERDE |
| 9168.00 | 9201.92 | SEGO |
| 9239.00 | 9272.92 | CASTLEGATE |
| 9676.00 | 9709.92 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2449.00 | 2477.01 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6C4BS/OH)

Created By: Robert Scott Date: 9:09, January 16 2013

RECEIVED Received: May 20, 2013

API Well Number: 43047538110000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6C PAD
Well: NBU 1022-6C1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52163.9snT
Dip Angle: 65.82°
Date: 2013/01/16
Model: IGRF2010

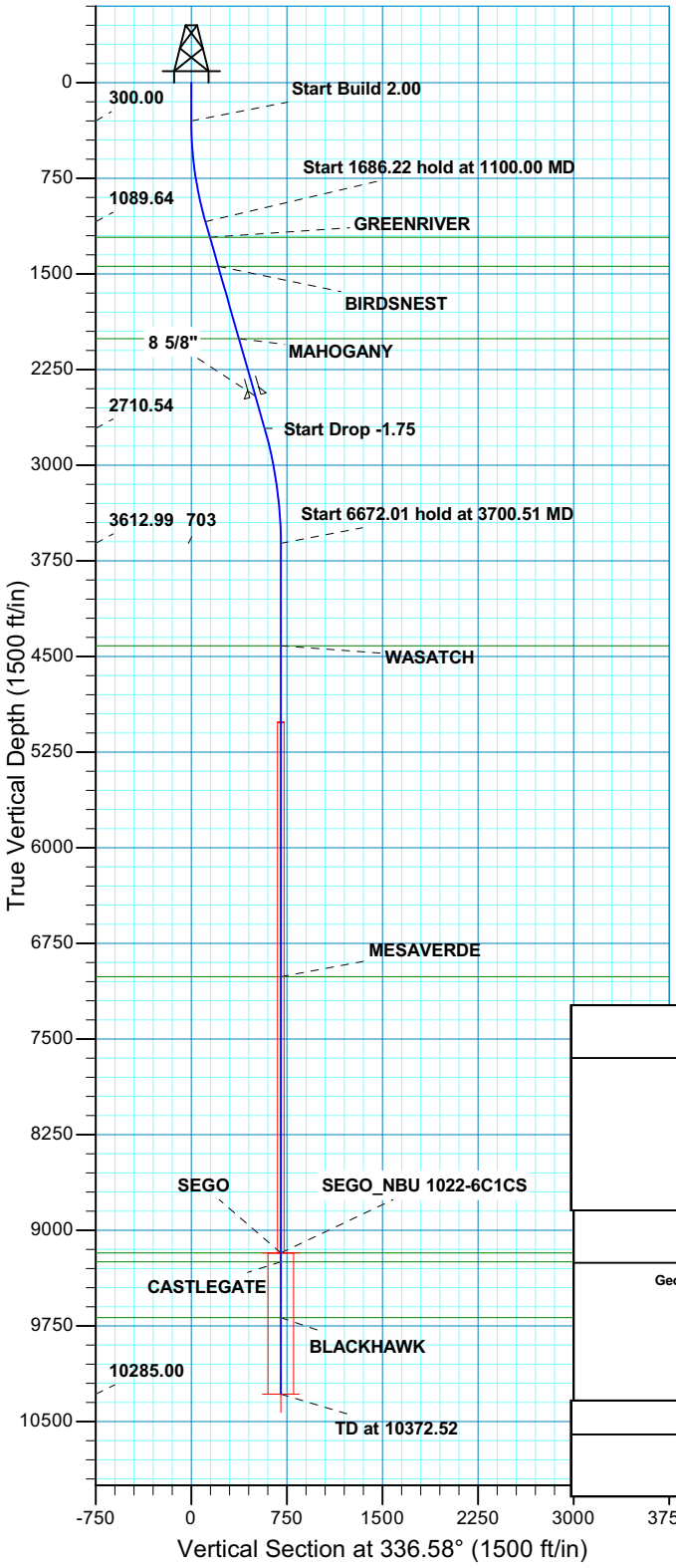
**WELL DETAILS: NBU 1022-6C1CS**

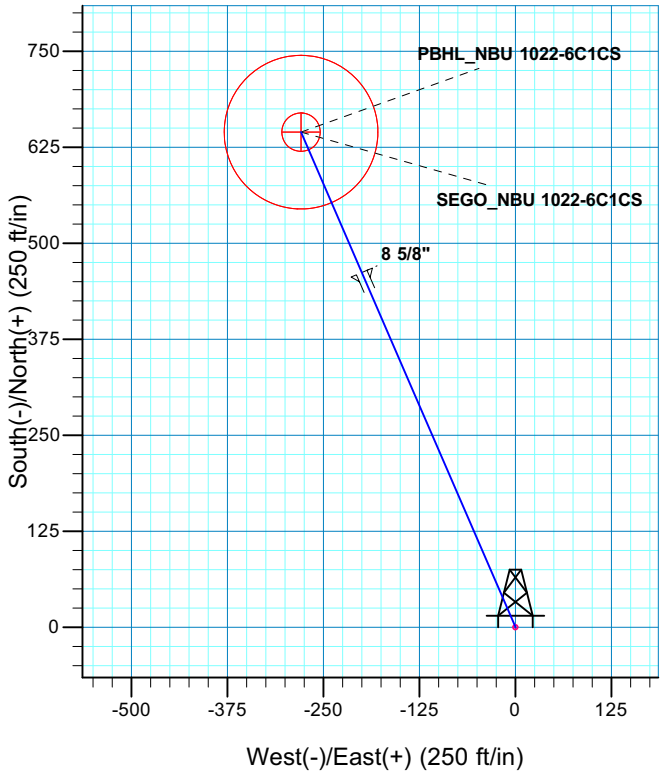
GL 4978 & KB 4 @ 4982.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14523247.12 | 2065694.97 | 39.9823748 | -109.4818867 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9177.00 | 644.69 | -279.31 | 14523886.96 | 2065404.72 | 39.9841449 | -109.4828836 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10285.00 | 644.69 | -279.31 | 14523886.96 | 2065404.72 | 39.9841449 | -109.4828836 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1100.00 | 16.00 | 336.58 | 1089.64 | 101.83 | -44.12 | 2.00 | 336.58 | 110.98 | |
| 2786.22 | 16.00 | 336.58 | 2710.54 | 528.31 | -228.89 | 0.00 | 0.00 | 575.76 | |
| 3700.51 | 0.00 | 0.00 | 3612.99 | 644.69 | -279.31 | 1.75 | 180.00 | 702.59 | |
| 10372.52 | 0.00 | 0.00 | 10285.00 | 644.69 | -279.31 | 0.00 | 0.00 | 702.59 | PBHL_NBU 1022-6C1CS |

**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 6 T10S R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1212.00 | 1227.29 | GREENRIVER |
| 1441.00 | 1465.52 | BIRDSNEST |
| 2008.00 | 2055.37 | MAHOGANY |
| 4416.00 | 4503.52 | WASATCH |
| 7012.00 | 7099.52 | MESAVERDE |
| 9177.00 | 9264.52 | SEGO |
| 9248.00 | 9335.52 | CASTLEGATE |
| 9685.00 | 9772.52 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2458.00 | 2523.50 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6C1CS/OH)

Created By: Robert Scott Date: 9:09, January 16 2013

RECEIVED: May 16, 2013

API Well Number: 43047538110000

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6C PAD
Well: NBU 1022-6B4CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Scientific Drilling

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52163.9snT
Dip Angle: 65.82°
Date: 2013/01/16
Model: IGRF2010

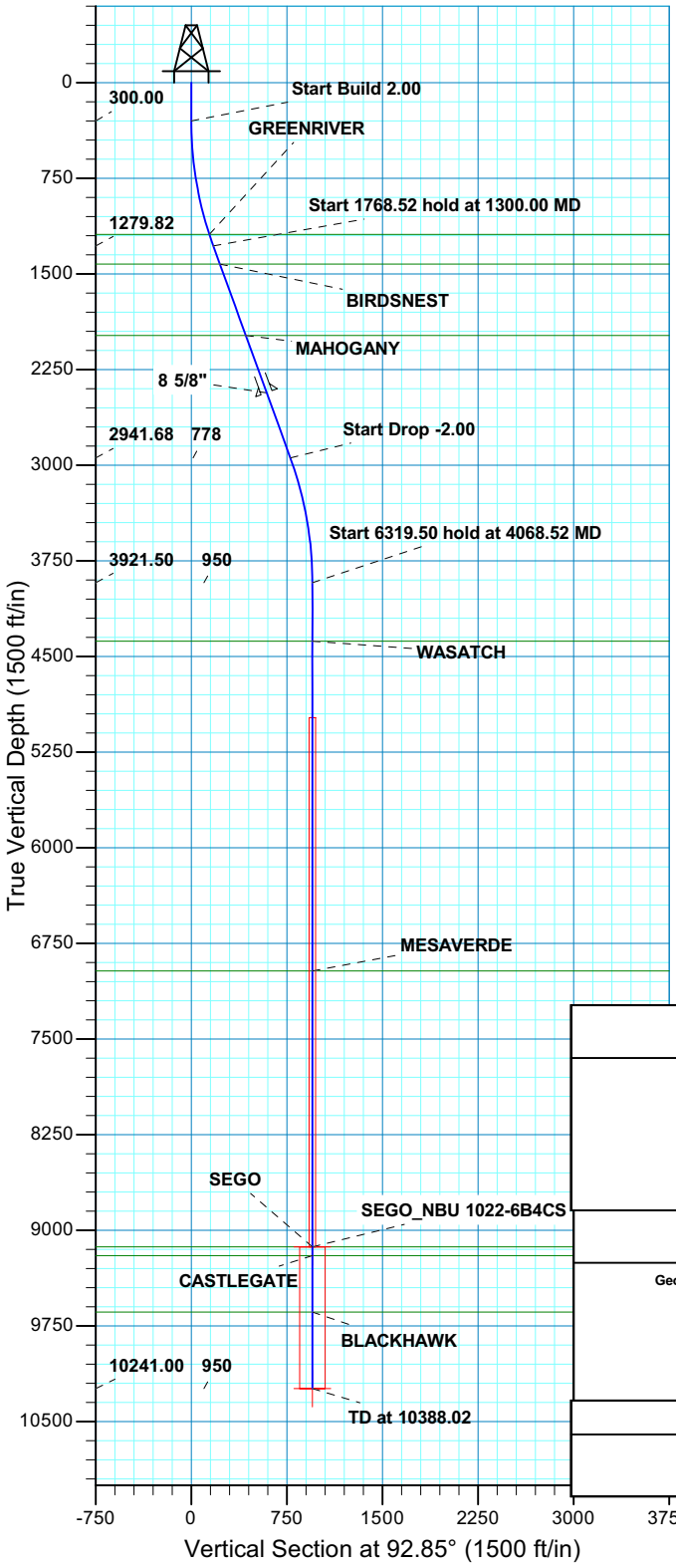
**WELL DETAILS: NBU 1022-6B4CS**

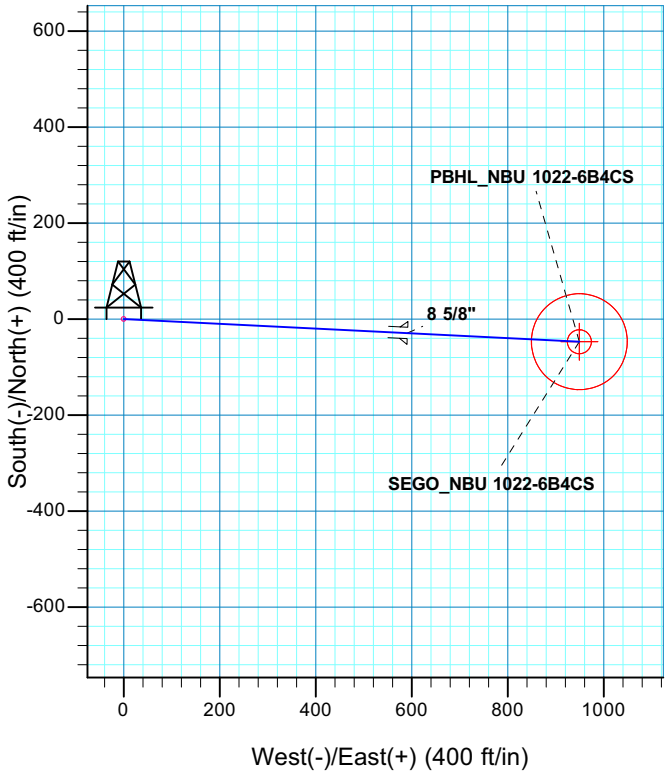
GL 4978 & KB 4 @ 4982.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14523219.26 | 2065684.52 | 39.9822988 | -109.4819257 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9129.00 | -47.33 | 949.23 | 14523188.10 | 2066634.41 | 39.9821688 | -109.4785379 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10241.00 | -47.33 | 949.23 | 14523188.10 | 2066634.41 | 39.9821688 | -109.4785379 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1300.00 | 20.00 | 92.85 | 1279.82 | -8.60 | 172.55 | 2.00 | 92.85 | 172.77 | |
| 3068.52 | 20.00 | 92.85 | 2941.68 | -38.73 | 776.67 | 0.00 | 0.00 | 777.64 | |
| 4068.52 | 0.00 | 0.00 | 3921.50 | -47.33 | 949.23 | 2.00 | 180.00 | 950.41 | |
| 10388.02 | 0.00 | 0.00 | 10241.00 | -47.33 | 949.23 | 0.00 | 0.00 | 950.41 | PBHL_NBU 1022-6B4CS |

**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 6 T10S R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1190.00 | 1204.98 | GREENRIVER |
| 1423.00 | 1452.37 | BIRDSNEST |
| 1982.00 | 2047.25 | MAHOGANY |
| 4380.00 | 4527.02 | WASATCH |
| 6967.00 | 7114.02 | MESAVERDE |
| 9129.00 | 9276.02 | SEGO |
| 9198.00 | 9345.02 | CASTLEGATE |
| 9641.00 | 9788.02 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2432.00 | 2526.13 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6B4CS/OH)

Created By: Robert Scott Date: 9:07, January 16 2013

RECEIVED Received: May 16, 2013

API Well Number: 43047538110000

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6C PAD
Well: NBU 1022-6B4BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Scientific Drilling

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52163.9snT
Dip Angle: 65.82°
Date: 2013/01/16
Model: IGRF2010

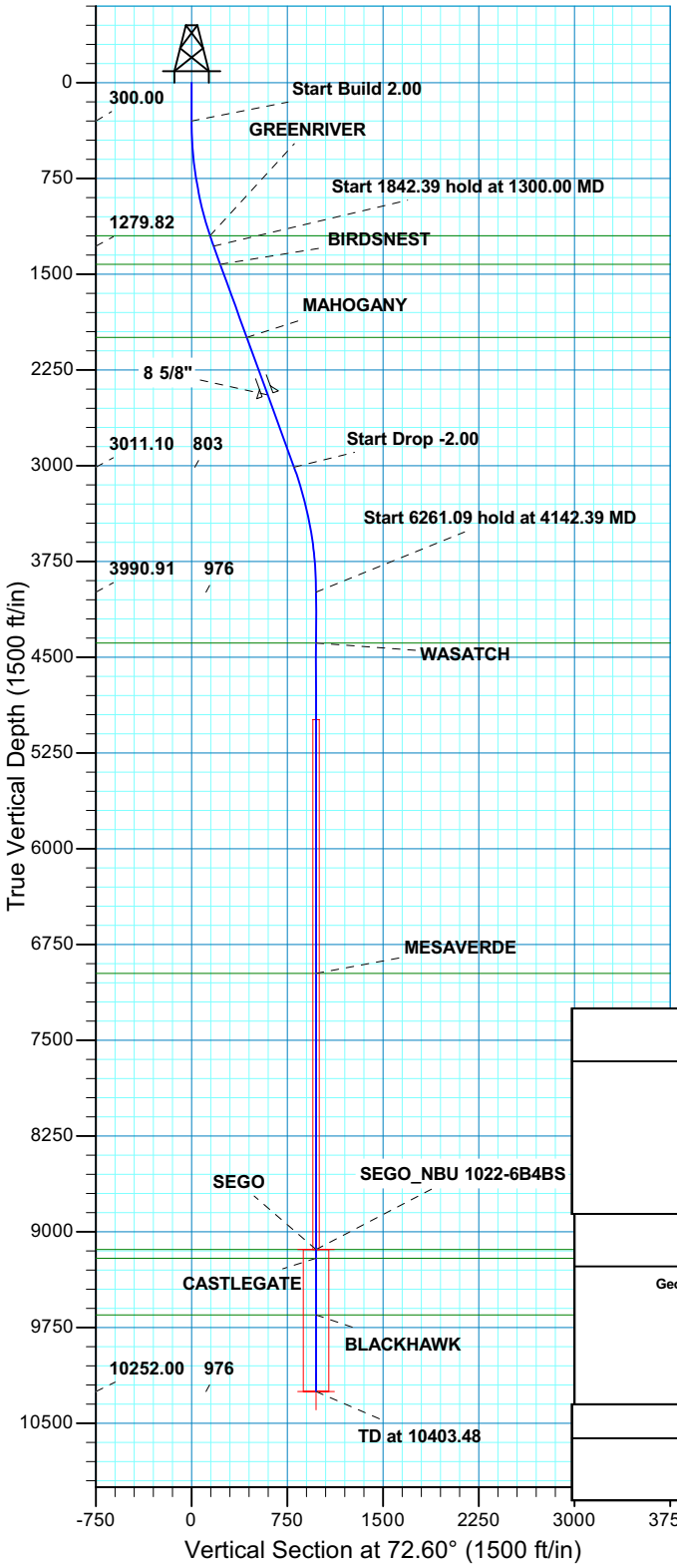
**WELL DETAILS: NBU 1022-6B4BS**

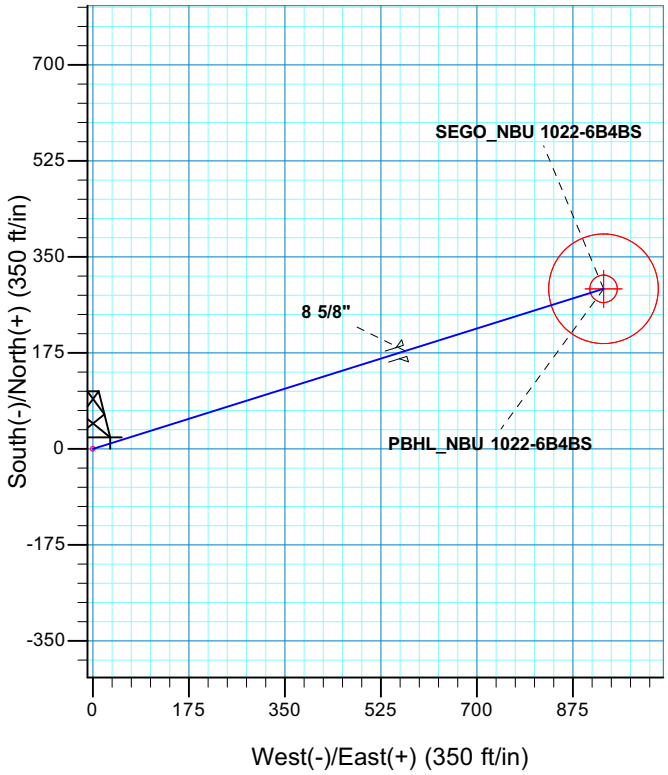
GL 4978 & KB 4 @ 4982.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14523228.42 | 2065688.00 | 39.9823238 | -109.4819127 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9139.00 | 291.75 | 931.03 | 14523535.98 | 2066613.93 | 39.9831248 | -109.4785898 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10252.00 | 291.75 | 931.03 | 14523535.98 | 2066613.93 | 39.9831248 | -109.4785898 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1300.00 | 20.00 | 72.60 | 1279.82 | 51.66 | 164.86 | 2.00 | 72.60 | 172.77 | |
| 3142.39 | 20.00 | 72.60 | 3011.10 | 240.09 | 766.17 | 0.00 | 0.00 | 802.90 | |
| 4142.39 | 0.00 | 0.00 | 3990.91 | 291.75 | 931.03 | 2.00 | 180.00 | 975.67 | |
| 10403.48 | 0.00 | 0.00 | 10252.00 | 291.75 | 931.03 | 0.00 | 0.00 | 975.67 | PBHL_NBU 1022-6B4BS |

**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 6 T10S R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1199.00 | 1214.45 | GREENRIVER |
| 1422.00 | 1451.31 | BIRDSNEST |
| 1995.00 | 2061.08 | MAHOGANY |
| 4389.00 | 4540.48 | WASATCH |
| 6977.00 | 7128.48 | MESAVERDE |
| 9139.00 | 9290.48 | SEGO |
| 9208.00 | 9359.48 | CASTLEGATE |
| 9652.00 | 9803.48 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2445.00 | 2539.96 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6B4BS/OH)

Created By: Robert Scott Date: 9:05, January 16 2013

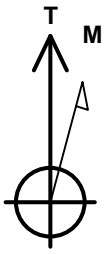
RECEIVED Received: May 16, 2013

API Well Number: 43047538110000

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-6C PAD
Well: NBU 1022-6B1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Scientific Drilling

Anadarko Petroleum Corporation




Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52163.9snT
Dip Angle: 65.82°
Date: 2013/01/16
Model: IGRF2010

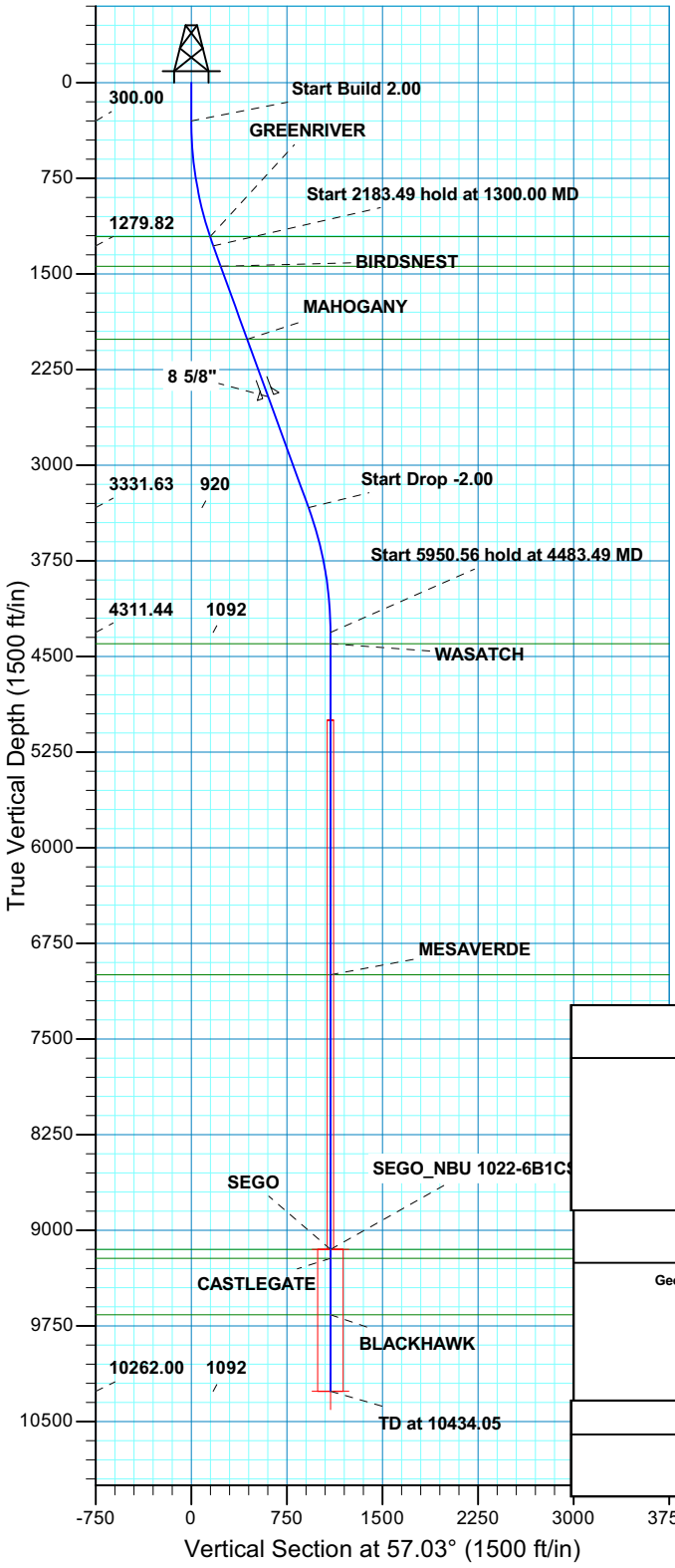
**WELL DETAILS: NBU 1022-6B1CS**

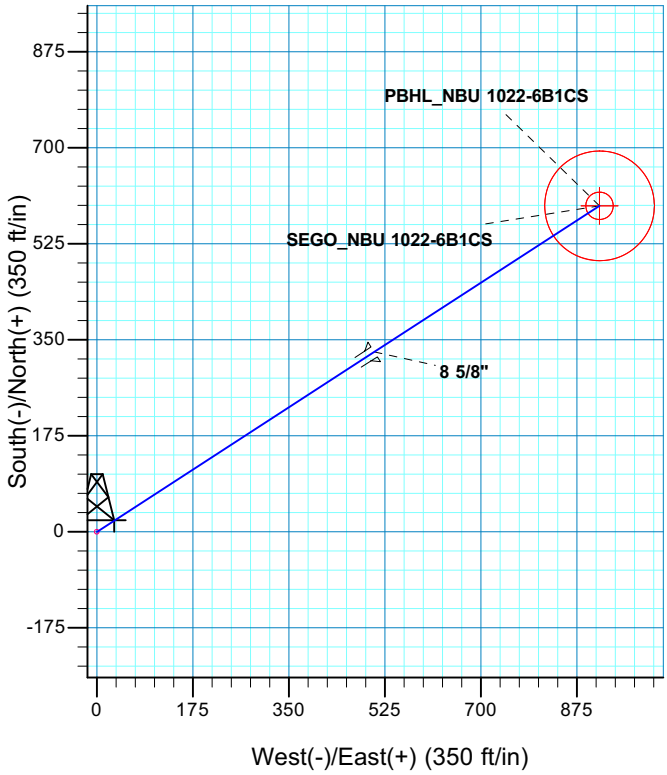
GL 4978 & KB 4 @ 4982.00ft (ASSUMED)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 14523256.65 | 2065698.45 | 39.9824008 | -109.4818737 |

**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| SEGO | 9150.00 | 594.41 | 916.45 | 14523866.57 | 2066604.64 | 39.9840328 | -109.4786028 | Circle (Radius: 25.00) |
| - plan hits target center | | | | | | | | |
| PBHL | 10262.00 | 594.41 | 916.45 | 14523866.57 | 2066604.64 | 39.9840328 | -109.4786028 | Circle (Radius: 100.00) |
| - plan hits target center | | | | | | | | |




**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1300.00 | 20.00 | 57.03 | 1279.82 | 94.01 | 144.95 | 2.00 | 57.03 | 172.77 | |
| 3483.49 | 20.00 | 57.03 | 3331.63 | 500.39 | 771.50 | 0.00 | 0.00 | 919.57 | |
| 4483.49 | 0.00 | 0.00 | 4311.44 | 594.41 | 916.45 | 2.00 | 180.00 | 1092.33 | |
| 10434.05 | 0.00 | 0.00 | 10262.00 | 594.41 | 916.45 | 0.00 | 0.00 | 1092.33 | PBHL_NBU 1022-6B1CS |

**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 6 T10S R22E
System Datum: Mean Sea Level

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1208.00 | 1223.93 | GREENRIVER |
| 1441.00 | 1471.53 | BIRDSNEST |
| 2012.00 | 2079.17 | MAHOGANY |
| 4400.00 | 4572.05 | WASATCH |
| 6997.00 | 7169.05 | MESAVERDE |
| 9150.00 | 9322.05 | SEGO |
| 9219.00 | 9391.05 | CASTLEGATE |
| 9662.00 | 9834.05 | BLACKHAWK |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 2462.00 | 2558.05 | 8 5/8" | 8.625 |

Plan: PLAN #1 PRELIMINARY (NBU 1022-6B1CS/OH)

Created By: Robert Scott Date: 9:05, January 16 2013

RECEIVED Received: May 16, 2013

# WORKSHEET
# APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 5/29/2013
**API NO. ASSIGNED:** 43047538110000
**WELL NAME:** NBU 1022-6H1BS
**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)
**PHONE NUMBER:** 720 929-6086
**CONTACT:** Gina Becker

**PROPOSED LOCATION:** NENE 06 100S 220E
**Permit Tech Review:** ✔

**SURFACE:** 1060 FNL 0090 FEL
**Engineering Review:** ✔

**BOTTOM:** 1433 FNL 0456 FEL
**Geology Review:** ✔

**COUNTY:** UINTAH
**LATITUDE:** 39.98234
**LONGITUDE:** -109.47346
**UTM SURF EASTINGS:** 630341.00
**NORTHINGS:** 4426913.00
**FIELD NAME:** NATURAL BUTTES
**LEASE TYPE:** 1 - Federal
**LEASE NUMBER:** UTU-01195
**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: June 05, 2013

GARY R. HERBERT
*Governor*

GREGORY S. BELL
*Lieutenant Governor*

# State of Utah

**DEPARTMENT OF NATURAL RESOURCES**

MICHAEL R. STYLER
*Executive Director*

**Division of Oil, Gas and Mining**

JOHN R. BAZA
*Division Director*

# Permit To Drill

**********

**Well Name:** NBU 1022-6H1BS
**API Well Number:** 43047538110000
**Lease Number:** UTU-01195
**Surface Owner:** FEDERAL
**Approval Date:** 6/5/2013

**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)

RECEIVED
JAN 29 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.
UTU01195

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.
891008900A

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

8. Lease Name and Well No.
NBU 1022-6H1BS

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

9. API Well No.
43047 53811

3a. Address
1368 SOUTH 1200 EAST
VERNAL, UT 84078

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

10. Field and Pool, or Exploratory
NATURAL BUTTES

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

At surface Lot 1 1060FNL 90FEL 39.982343 N Lat, 109.473564 W Lon

At proposed prod. zone Lot 1 1433FNL 456FEL 39.982343 N Lat, 109.473564 W Lon

11. Sec., T., R., M., or Blk. and Survey or Area
Sec 6 T10S R22E Mer SLB
SME: BLM

14. Distance in miles and direction from nearest town or post office*
APPROXIMATELY 45 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)
866

16. No. of Acres in Lease
577.75

17. Spacing Unit dedicated to this well

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.
557

19. Proposed Depth
10353 MD
10303 TVD

20. BLM/BIA Bond No. on file
WYB000291

21. Elevations (Show whether DF, KB, RT, GL, etc.
5079 GL

22. Approximate date work will start
08/01/2013

23. Estimated duration
60-90 DAYS

RECEIVED
JUN 20 2013
DIV. OF OIL, GAS & MINING

24. Attachments

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

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

25. Signature
(Electronic Submission)

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

Date
01/28/2013

Title
REGULATORY ANALYST II

Approved by (Signature)

Name (Printed/Typed)
Jerry Kenczka

Date
JUN 13 2013

Title
Assistant Field Manager
Lands & Mineral Resources

Office
VERNAL FIELD OFFICE

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

CONDITIONS OF APPROVAL ATTACHED

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

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

**Electronic Submission #191838 verified by the BLM Well Information System**
**For KERR MCGEE OIL & GAS ONSHORE L, sent to the Vernal**
**Committed to AFMSS for processing by JOHNETTA MAGEE on 02/11/2013 (13JM0201AE)**

NOTICE OF APPROVAL

UDOGM

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

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** | **Location:** | **LOT 1, Sec. 6, T10S, R22E** |
| **Well No:** | **NBU 1022-6H1BS** | **Lease No:** | **UTU-01195** |
| **API No:** | **43-047-53811** | **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.

- Mitigation measures can be found in Appendix B, Table B-2, of the GNB ROD (BLM 2012b) under the following sections of the table:
    - Air Quality
    - Soils
    - Vegetation: *Sclerocactus wetlandicus*
    - Wildlife: Colorado River Fish

Where populations or individuals of Sclerocactus wetlandicus are located within 300 feet of the proposed edge of project ROWs, the following actions will be taken to minimize impacts:

- Silt fencing will be used to protect cacti that are within 300 feet and downslope or downwind of surface disturbance. Fencing is intended to prevent sedimentation or dust deposition and will be evaluated for effectiveness by a qualified botanist.
- A qualified botanist will be on site to monitor surface-disturbing activities when cacti are within 300 feet of any surface disturbance.
- Dust abatement (consisting of water only) will occur during construction where plants are closer than 300 feet from surface-disturbing activities.
- Cacti within 300 feet of proposed surface disturbance will be flagged immediately prior to surface-disturbing activities and flags will be removed immediately after surface-disturbing activities are completed. Leaving cacti flagged for as short a time as possible will minimize drawing attention to the cacti location and reduce potential for theft.
- Pipelines will be sited to maximize distance from adjacent cacti locations.
- Project personnel associated with construction activities will be instructed to drive at a speed limit of 15 miles per hour on unpaved roads and remain in existing roadway ROWs at all times.

For permanent surface pipelines, KMG will adhere to existing cacti survey/buffer guidelines of 300 feet, or amended guidelines if developed by the BLM and USFWS. In areas where avoidance by 300 feet is not feasible and populations or individuals of *Sclerocactus wetlandicus* are within 50 feet of proposed project components, the following actions will be taken to minimize impacts:

- Prior to construction, flag individual cactus. Once pipe installation is complete, remove the flagging.
- Prior to construction, install protective fencing around the cacti if they are down gradient of the surface pipe. Once pipe installation is complete, remove the protective fencing.
- A qualified botanist will be present during construction to monitor surface line installation.

The following considerations are required for those wells where KMG deems completion fluid recycling is appropriate based on new well density and topography:

- Temporary lines associated with recycling of completion water will be sited in existing ROWs. The pressure in the lines is less than 50 pounds per square inch and the lines are constructed of rigid aluminum; therefore, virtually no movement will occur during operation.
- If surface water completion lines are placed within the footprint of a road disturbance where vegetation does not grow, *Sclerocactus wetlandicus* surveys will not be necessary.
- A qualified botanist will survey a 50-foot-wide corridor along roads where temporary lines are planned to ensure *Sclerocactus wetlandicus* is not present.
- If cacti are present within the 50-foot-wide survey corridor and avoidance is necessary (to ensure the line is more than 50 feet away from identified cactus), the new alignment will, if possible, be such that the cacti are topographically higher than the re-aligned line so a potential spill from the line will not impact the identified cacti.
- If it is not possible to re-align the surface lines to avoid individuals or populations of the *Sclerocactus wetlandicus* that are within 50 feet of surface disturbance, the following actions will be taken to minimize impacts:
- Prior to construction, KMG will flag individual cacti. Once pipe installation is complete, remove the flagging.
- Prior to construction, KMG will install protective fencing around the cacti if they are down gradient of the surface pipe. Once pipe installation is complete, remove the protective fencing.
- A qualified botanist will be present during construction to monitor surface line installation.

Avoidance of cactus by 300 feet will take priority in the expansion of pads within the cactus core conservation areas. When the 300-foot buffer cannot be avoided in pad expansion, KMG will notify the USFWS and work with the BLM to determine pad expansion that places a priority on avoiding cactus impacts.

KMG will follow existing ROWs and/or roads in constructing new buried pipelines within the cactus core conservation areas. For instance, where a new buried pipeline is unable to follow an existing ROW and/or road and exceeds 600 feet in length, KMG will work with the USFWS and the BLM to determine a route that places a priority on avoiding cactus impacts.

Maintenance activities on pipelines within cactus core conservation areas will avoid impacts to cactus, to the extent possible.

- All vehicles and equipment shall be cleaned either through power-washing, or other approved method, if the vehicles or equipment were previously operated outside the Uinta Basin, to prevent weed seed introduction.
- All disturbance areas shall be monitored for noxious weeds annually, for a minimum of three growing seasons following completion of project or until desirable vegetation is established

- Noxious and invasive weeds will be controlled throughout the area of project disturbance.
- Noxious weeds will be inventoried and reported to BLM in the annual reclamation report. Where an integrated pest management program is applicable, coordination has been undertaken with the state and local management program (if existing). A copy of the pest management plan will be submitted for each project.
- A pesticide use permit (PUP) will be obtained for the project, if applicable.
- 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 devises that prevent the perching and entry of migratory birds on or into its new fired vessel exhaust stacks (BLM 2012b).
- Tree removal within pinyon-juniper habitat will occur outside of the nesting season for migratory birds (approximately 4/1 to 7/31 (BLM 2012b).
- Damage to livestock and livestock facilities would be reported as quickly as possible to the BLM and affected livestock operators. Operators would develop and employ prevention measures to avoid damaging fences, gates, and cattleguards, including upgrading cattleguard gate widths and load-bearing requirements and fencing all open pits and cellars.
- If partial or complete removal of a fence cannot be avoided, the fence would be braced and tied off per the BLM guidance. Where the fence is crossed by a road, the fence would be braced and a cattleguard and gate installed per BLM guidance.

- On well pads 1022-6A, 1022-6C, 1022-6D, and segments of pipeline that intersect high fossil potential areas: Paleontological monitoring by a BLM permitted paleontologist is required during all ground-disturbing activities (BLM 2012b).

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

**SITE SPECIFIC DOWNHOLE COAs:**

- Cement for the 4.5 inch casing shall be brought up to a minimum of 200 feet above the surface casing shoe.
- A CBL shall be run from TD to TOC in the Production Casing.
- Variances shall be granted as requested in Section 9 of the Drilling Program of the SOP.
- Gamma Ray Log shall be run from TD to the Surface.

**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-01195

## 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 1022-6H1BS

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

**9. API NUMBER:** 43047538110000

**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:** 1060 FNL 0090 FEL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NENE Section: 06 Township: 10.0S Range: 22.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ✓ NOTICE OF INTENT<br>Approximate date work will start: 6/5/2014 | ☐ 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**

**Date:** April 16, 2014

**By:**

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Teena Paulo | 720 929-6236 | Staff Regulatory Specialist |

| SIGNATURE | DATE |
|---|---|
| N/A | 4/14/2014 |

RECEIVED: Apr. 14, 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 43047538110000

**API:** 43047538110000
**Well Name:** NBU 1022-6H1BS
**Location:** 1060 FNL 0090 FEL QTR NENE SEC 06 TWNP 100S RNG 220E MER S
**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.
**Date Original Permit Issued:** 6/5/2013

**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:** Teena Paulo **Date:** 4/14/2014
**Title:** Staff Regulatory Specialist **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED: Apr. 14, 2014

FORM 9

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

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU-01195

## 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 1022-6H1BS

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

**9. API NUMBER:** 43047538110000

**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:** 1060 FNL 0090 FEL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NENE Section: 06 Township: 10.0S Range: 22.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ✓ NOTICE OF INTENT<br>Approximate date work will start: 5/6/2015 | ☐ 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
Date: May 07, 2015
By:

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Jennifer Thomas | 720 929-6808 | Regulatory Specialist |
| **SIGNATURE** N/A | | **DATE** 5/6/2015 |

RECEIVED: May. 06, 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 43047538110000

**API:** 43047538110000
**Well Name:** NBU 1022-6H1BS
**Location:** 1060 FNL 0090 FEL QTR NENE SEC 06 TWNP 100S RNG 220E MER S
**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.
**Date Original Permit Issued:** 6/5/2013

**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:** 5/6/2015
**Title:** Regulatory Specialist **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED: May. 06, 2015

RECEIVED

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MAY 08 2015

BLM

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.
UTU01195

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 1022-6H1BS

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

9. API Well No.
43-047-53811

3a. Address
P.O. BOX 173779 1099 18TH STREET, SUITE 600
DENVER, CO 80217

3b. Phone No. (include area code)
Ph: 720-929-6808

10. Field and Pool, or Exploratory
NATURAL BUTTES

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 6 T10S R22E Mer SLB

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- 6/13/13
NEPA- 2013-179 EA

RECEIVED
JUN 15 2015
DIV. OF OIL, GAS & MINING

VERNAL FIELD OFFICE
ENG. RHH 6/3/15
GEOL.
E.S.
PET.
RECL.

**CONDITIONS OF APPROVAL ATTACHED**

14. I hereby certify that the foregoing is true and correct.
**Electronic Submission #301225 verified by the BLM Well Information System**
**For KERR MCGEE OIL & GAS ONSHORE, sent to the Vernal**
**Committed to AFMSS for processing by JOHNETTA MAGEE on 05/12/2015 ()**

Name *(Printed/Typed)* JENNIFER THOMAS — Title REGULATORY SPECIALIST

Signature (Electronic Submission) — Date 05/08/2015

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

Approved By — Title ~~Assistant Field Manager~~ Lands & Mineral Resources — Date JUN 05 2015

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

## Kerr McGee Oil and Gas Onshore LP.

### Notice of Intent
### APD Extension

**Lease:** UTU-01195
**Well:** NBU 1022-6H1BS
**Location:** SENE Sec 6-T10S-R22E

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

---

1. The extension and APD shall expire on 06/13/2017.

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-01195

## 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 1022-6H1BS

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

**9. API NUMBER:** 43047538110000

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

**PHONE NUMBER:** 720 929-6404 EXT

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

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1060 FNL 0090 FEL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NENE Section: 06 Township: 10.0S Range: 22.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ✓ NOTICE OF INTENT<br>Approximate date work will start: 5/27/2016 | ☐ 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
June 01, 2016
Date:
By:

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

| SIGNATURE | DATE |
|---|---|
| N/A | 5/27/2016 |

RECEIVED: May. 27, 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 43047538110000

**API:** 43047538110000
**Well Name:** NBU 1022-6H1BS
**Location:** 1060 FNL 0090 FEL QTR NENE SEC 06 TWNP 100S RNG 220E MER S
**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.
**Date Original Permit Issued:** 6/5/2013

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- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

**Signature:** Joel Malefyt **Date:** 5/27/2016
**Title:** Regualtory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED: May. 27, 2016