

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

FORM 3

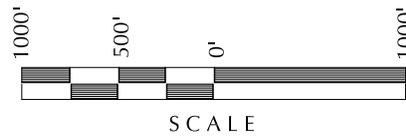
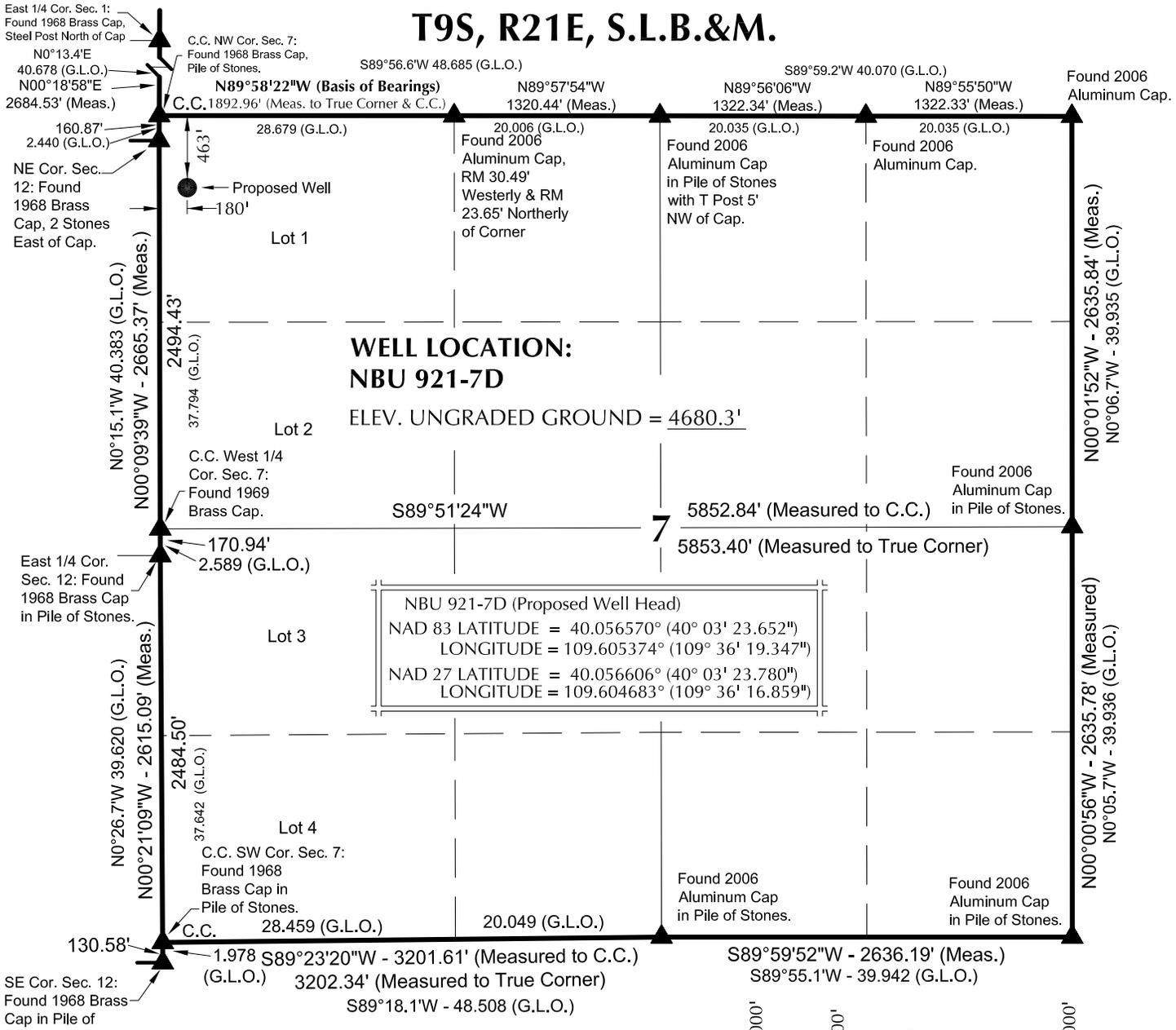
AMENDED REPORT 

<b>APPLICATION FOR PERMIT TO DRILL</b>						<b>1. WELL NAME and NUMBER</b> NBU 921-7D	
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						<b>3. FIELD OR WILDCAT</b> NATURAL BUTTES	
<b>4. TYPE OF WELL</b> Gas Well Coalbed Methane Well: NO						<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> NATURAL BUTTES	
<b>6. NAME OF OPERATOR</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.						<b>7. OPERATOR PHONE</b> 720 929-6587	
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217						<b>9. OPERATOR E-MAIL</b> mary.mondragon@anadarko.com	
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UTU 0149767			<b>11. MINERAL OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>			<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>	
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>						<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>	
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>						<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>	
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b> Ute Tribe			<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>			<b>19. SLANT</b> VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>	
<b>20. LOCATION OF WELL</b>	<b>FOOTAGES</b>	<b>QTR-QTR</b>	<b>SECTION</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>MERIDIAN</b>	
<b>LOCATION AT SURFACE</b>	463 FNL 180 FWL	NWNW	7	9.0 S	21.0 E	S	
<b>Top of Uppermost Producing Zone</b>	463 FNL 180 FWL	NWNW	7	9.0 S	21.0 E	S	
<b>At Total Depth</b>	463 FNL 180 FWL	NWNW	7	9.0 S	21.0 E	S	
<b>21. COUNTY</b> UINTAH			<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 180			<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 777	
			<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 1200			<b>26. PROPOSED DEPTH</b> MD: 10800 TVD: 10800	
<b>27. ELEVATION - GROUND LEVEL</b> 4680			<b>28. BOND NUMBER</b> WYB000291			<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> Permit #43-8496	
<b>ATTACHMENTS</b>							
<b>VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES</b>							
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER				<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN			
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)				<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER			
<input type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)				<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP			
<b>NAME</b> Danielle Piernot			<b>TITLE</b> Regulatory Analyst			<b>PHONE</b> 720 929-6156	
<b>SIGNATURE</b>			<b>DATE</b> 09/10/2009			<b>EMAIL</b> danielle.piernot@anadarko.com	
<b>API NUMBER ASSIGNED</b> 43047507350000			<b>APPROVAL</b>  Permit Manager				

<b>Proposed Hole, Casing, and Cement</b>						
<b>String</b>	<b>Hole Size</b>	<b>Casing Size</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>		
Prod	7.875	4.5	0	10800		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade HCP-110 LT&C	1200	11.6			
	Grade I-80 Buttress	9600	11.6			

<b>Proposed Hole, Casing, and Cement</b>						
<b>String</b>	<b>Hole Size</b>	<b>Casing Size</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>		
Surf	12.25	9.625	0	2860		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade J-55 LT&C	2860	36.0			

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



### 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.

*Kathy R. Kay*  
 REGISTERED LAND SURVEYOR  
 REGISTRATION No. 362251  
 STATE OF UTAH

**NOTES:**

- ▲ = Section Corners Located
- 1. Well footages are measured at right angles to the Section Lines.
- 2. G.L.O. distances are shown in feet or chains. 1 chain = 66 feet.
- 3. Bearings are based on Global Positioning Satellite observations.
- 4. Basis of elevation is Tri-Sta "Two Water" located in the NW ¼ of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.

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

**609**  
**CONSULTING, LLC**  
 371 Coffeen Avenue  
 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: 04-16-09	SURVEYED BY: D.J.S.	SHEET NO: <b>1</b> 1 OF 9
DATE DRAWN: 04-17-09	DRAWN BY: M.W.W.	
SCALE: 1" = 1000'		

**WELL PAD - NBU 921-7D**

**NBU 921-7D  
WELL PLAT**  
**463' FNL, 180' FWL**  
**LOT 1 OF SECTION 7, T9S, R21E,**  
**S.L.B.&M., UINTAH COUNTY, UTAH.**

**NBU 921-7D**

Surface: 463' FNL 180' FWL (NW/4NW/4) Lot 1  
Sec. 7 T9S R21E

Uintah, Utah  
Mineral Lease: UTU 0149767

**ONSHORE ORDER NO. 1**

***DRILLING PROGRAM***

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

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 – Surface	
Green River	1,843'	
Birds Nest	2,137'	Water
Mahogany	2,657'	Water
Wasatch	5,328'	Gas
Mesaverde	8,563'	Gas
MVU2	9,578'	Gas
MVL1	10,056'	Gas
TD	10,800'	

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

*Please refer to the attached Drilling Program.*

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

*Please refer to the attached Drilling Program.*

5. **Drilling Fluids Program:**

*Please refer to the attached Drilling Program.*

6. **Evaluation Program:**

*Please refer to the attached Drilling Program.*

**7. Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 10,800' TD, approximately equals 6,729 psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 4,353 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

**8. Anticipated Starting Dates:**

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

**9. Variances:**

*Please refer to the attached Drilling Program.*

*Onshore Order #2 – Air Drilling Variance*

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

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

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

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

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

***Background***

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

*Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found*

competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

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

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

#### **Variance for BOPE Requirements**

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

#### **Variance for Mud Material Requirements**

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

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

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

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

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see

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

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

***Variance for FIT Requirements***

*KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). The air rig operation utilizes a 5M BOPE when drilling. This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.*

***Conclusion***

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

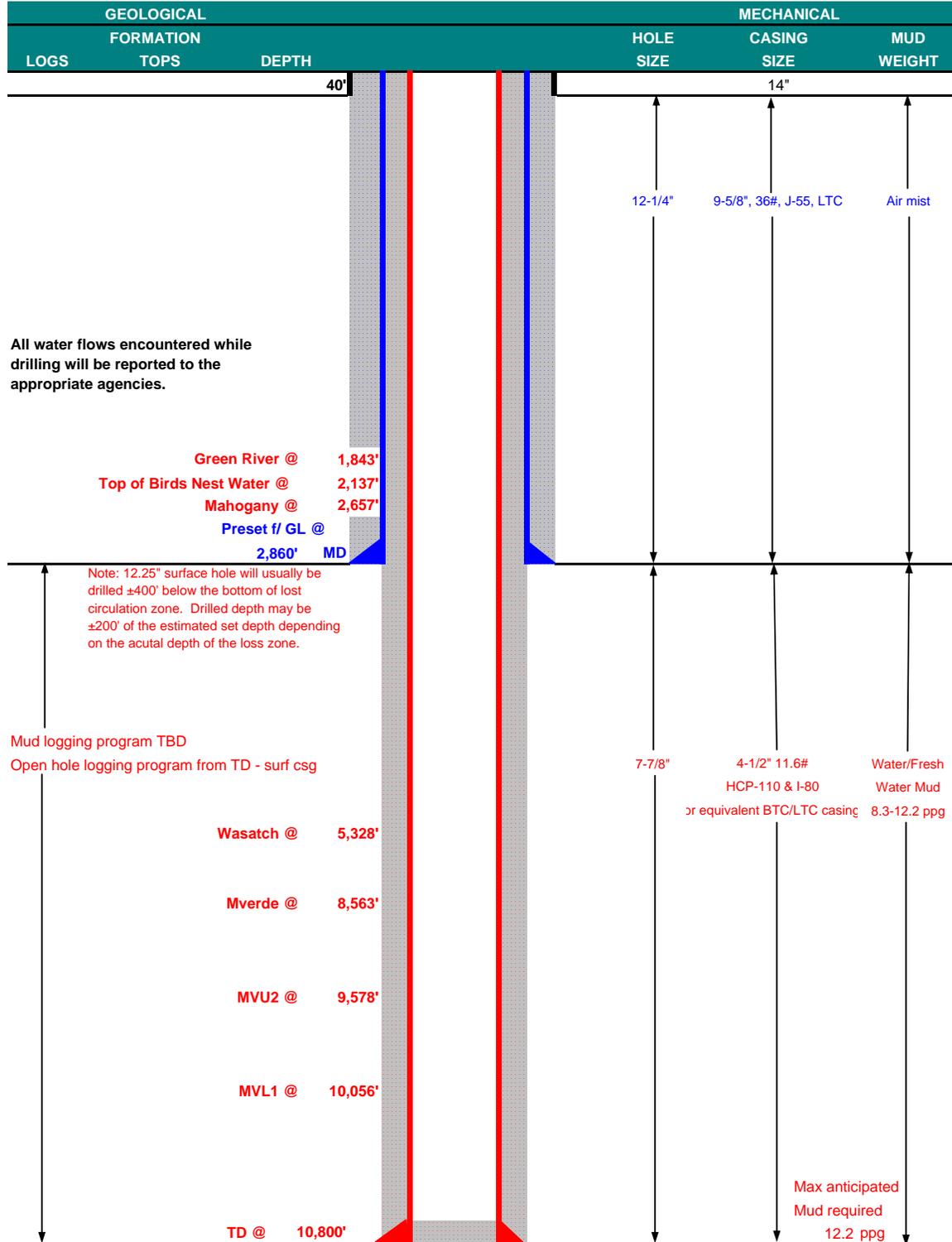
**10. Other Information:**

*Please refer to the attached Drilling Program.*



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

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	September 3, 2009	
WELL NAME	NBU 921-7D		TD	10,800' MD/TVD	
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
				FINISHED ELEVATION	4,679'
SURFACE LOCATION	NW/4 NW/4	463' FNL	180' FWL	Sec 7 T 9S R 21E	Lot 1 BHL
	Latitude: 40.056750		Longitude: -109.605374		NAD 83
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: BLM (MINERALS), Ute Tribe (SURFACE), UDOGM, Tri-County Health Dept.				





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

**CASING PROGRAM**

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3,520	2,020	453,000
SURFACE	9-5/8"	0 to 2860	36.00	J-55	LTC	0.79*	1.51	4.40
PRODUCTION	4-1/2"	0 to 9600	11.60	I-80	BTC	1.74	1.04	2.73
		9600 to 10800	11.60	HCP-110	LTC	2.39	1.26	24.64

\*Burst on surface casing is controlled by fracture gradient as shoe with gas gradient above. D.F. = 1.95

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

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)  
 (Burst Assumptions: TD = 12.2 ppg) 0.22 psi/ft = gradient for partially evac wellbore  
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)  
**MASP 4,353 psi**

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD  
 (Burst Assumptions: TD = 12.2 ppg) 0.62 psi/ft = bottomhole gradient  
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)  
**MABHP 6,729 psi**

**CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	215	60%	15.60	1.18
<b>Option 1</b>						
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	380	0%	15.60	1.18
		Premium cmt + 2% CaCl				
<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>						
SURFACE LEAD	2,360'	Prem cmt + 16% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOC	270	35%	11.00	3.82
<b>Option 2</b>						
TAIL	500	Premium cmt + 2% CaCl + 0.25 pps flocele	180	35%	15.60	1.18
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION LEAD	4,820'	Premium Lite II + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 1% Retarder	460	40%	11.00	3.38
TAIL	5,980'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1460	40%	14.30	1.31

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

**FLOAT EQUIPMENT & CENTRALIZERS**

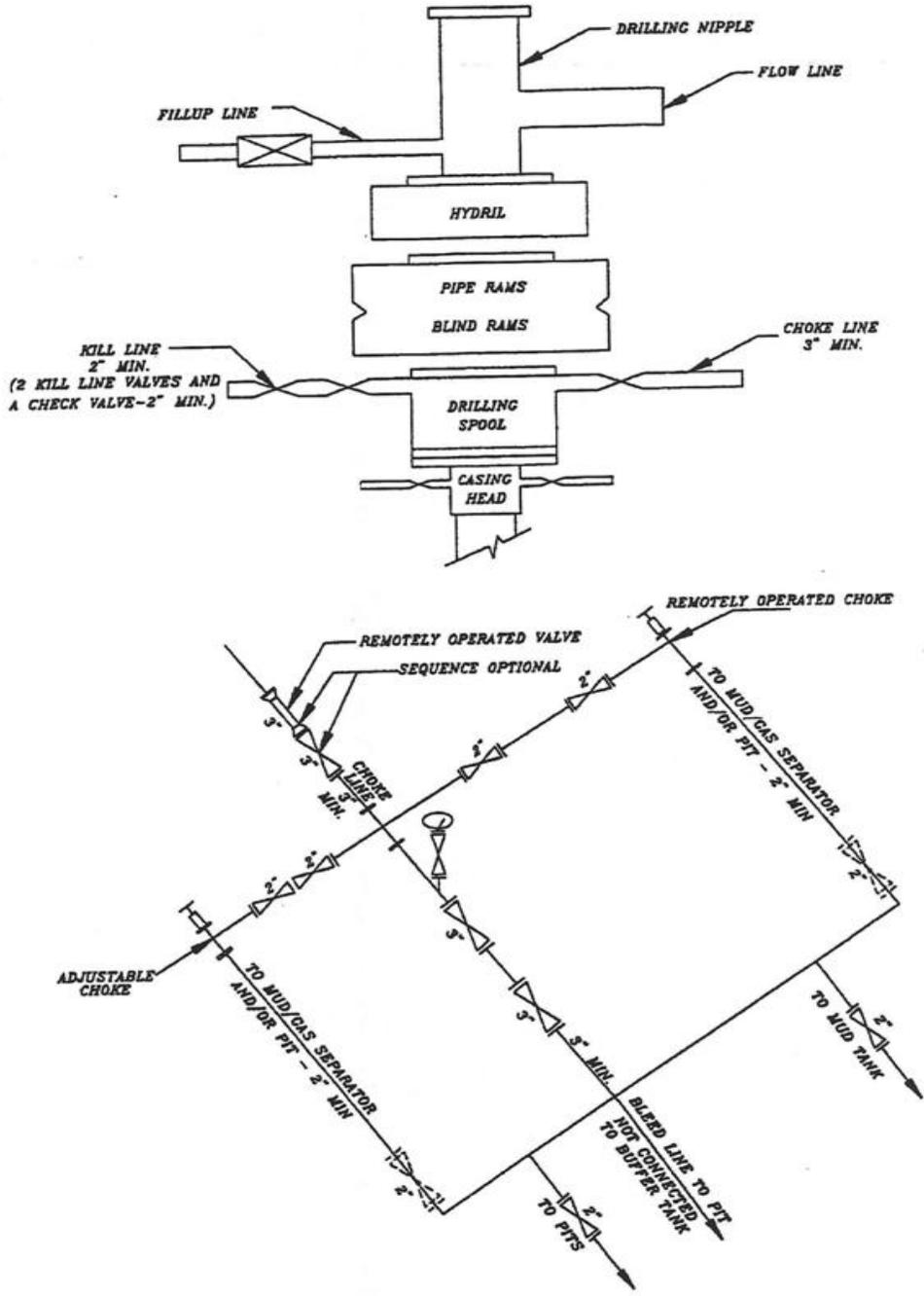
SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint for a total of 15 bow spring centralizers.

**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.  
 Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.  
 Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

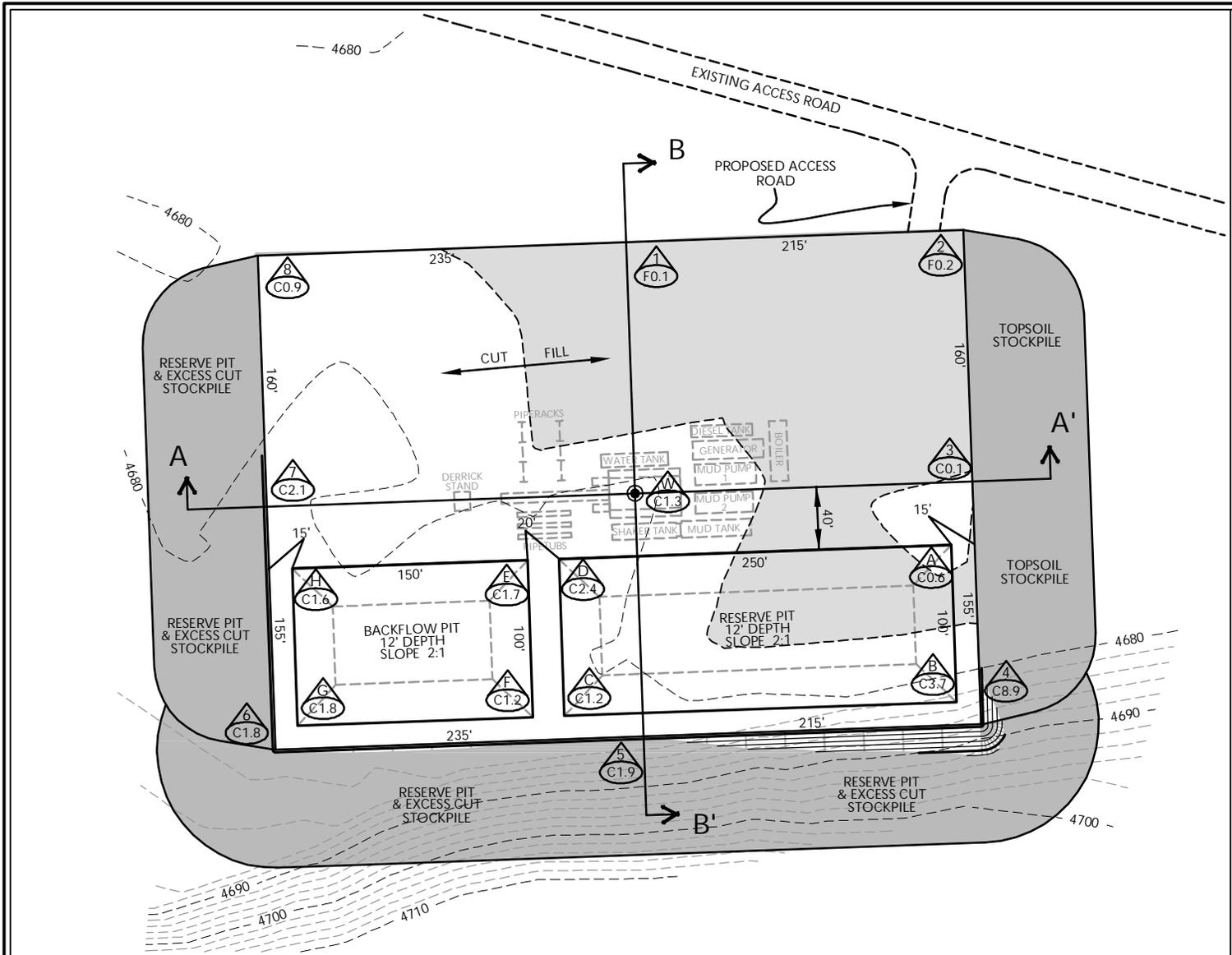
DRILLING ENGINEER: \_\_\_\_\_ DATE: \_\_\_\_\_  
 John Huycke / Emile Goodwin  
 DRILLING SUPERINTENDENT: \_\_\_\_\_ DATE: \_\_\_\_\_  
 John Merkel / Lovel Young

### EXHIBIT A NBU 921-7D



**SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK**

'APIWellNo:43047507350000'



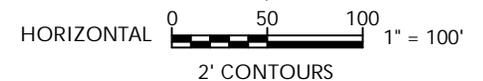
**WELL PAD LEGEND**

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

**WELL PAD NBU 921-7D QUANTITIES**

EXISTING GRADE @ LOC. STAKE = 4,680.3'  
 FINISHED GRADE ELEVATION = 4,679.0'  
 CUT SLOPES = 1.5:1  
 FILL SLOPES = 1.5:1

TOTAL CUT FOR WELL PAD = 2,222 C.Y.  
 TOTAL FILL FOR WELL PAD = 1,729 C.Y.  
 TOPSOIL @ 6" DEPTH = 2,718 C.Y.  
 EXCESS MATERIAL = 493 C.Y.  
 TOTAL PAD DISTURBANCE = 3.37 ACRES  
 SHRINKAGE FACTOR = 1.10  
 SWELL FACTOR = 1.00  
 RESERVE PIT CAPACITY (2' OF FREEBOARD)  
 +/- 28,730 BARRELS  
 RESERVE PIT VOLUME  
 +/- 7,720 CY  
 BACKFLOW PIT CAPACITY (2' OF FREEBOARD)  
 +/- 15,900 BARRELS  
 BACKFLOW PIT VOLUME  
 +/- 4,350 CY



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

**WELL PAD - NBU 921-7D**

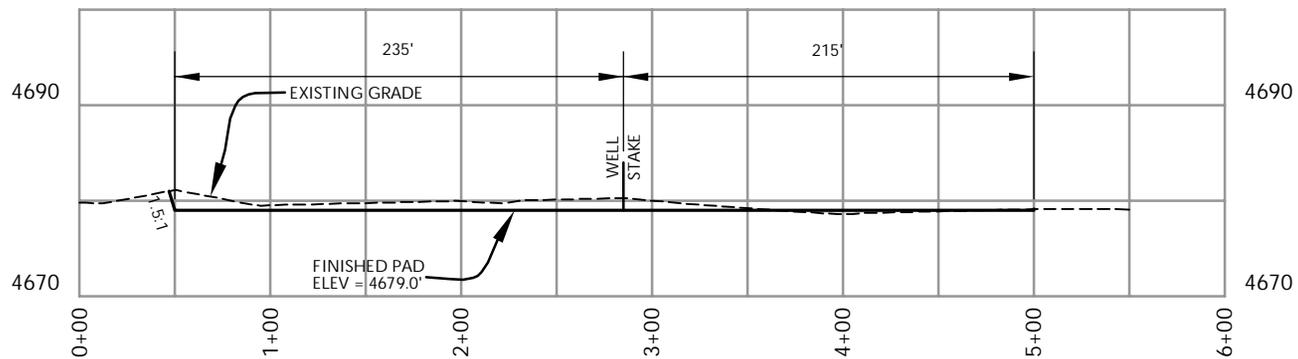
**WELL PAD - LOCATION LAYOUT**  
 NBU 921-7D  
 463' FNL, 180' FWL  
 LOT 1 OF SECTION 7, T.9S., R.21E.  
 S.L.B.&M., Uintah County, Utah



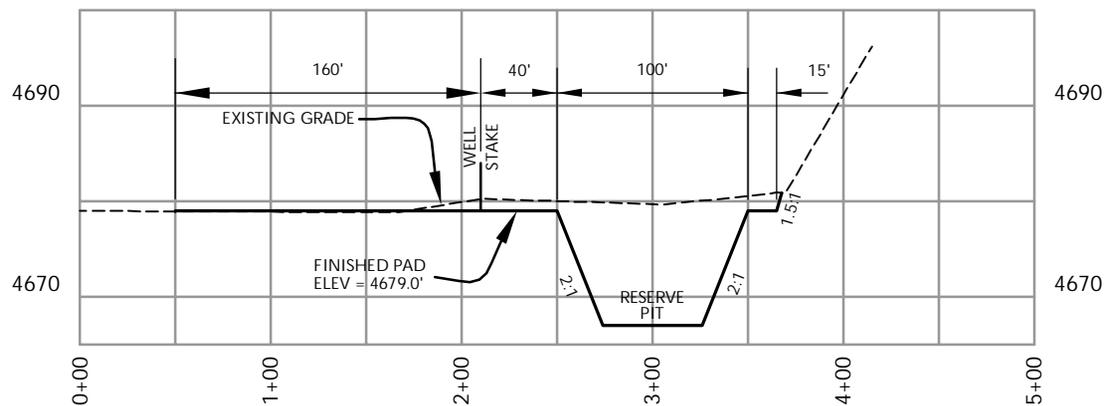
**CONSULTING, LLC**  
 371 Coffeen Avenue  
 Sheridan WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

Scale: 1"=100'	Date: 4/23/09	SHEET NO:
REVISED:		<b>2</b> OF 9

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



**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

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

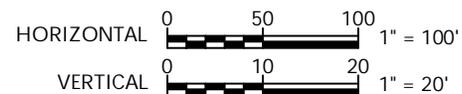
WELL PAD - NBU 921-7D

WELL PAD - CROSS SECTIONS  
NBU 921-7D

463' FNL, 180' FWL  
LOT 1 OF SECTION 7, T.9S., R.21E.  
S.L.B.&M., Uintah County, Utah



CONSULTING, LLC  
371 Coffeen Avenue  
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Scale: 1"=100'

Date: 4/23/09

SHEET NO:

**3**

3 OF 9

REVISED:

**TIMBERLINE** (435) 789-1365  
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209 NORTH 300 WEST - VERNAL, UTAH 84078

'APIWellNo:43047507350000'

K:\ANADARKO\2009\_08\_NBU\_Tribal\_3D\WG\NBU\_921-7D\921-7D.dwg, 4/29/2009 11:32:39 AM, PDF-XChange for Acrobat Pro









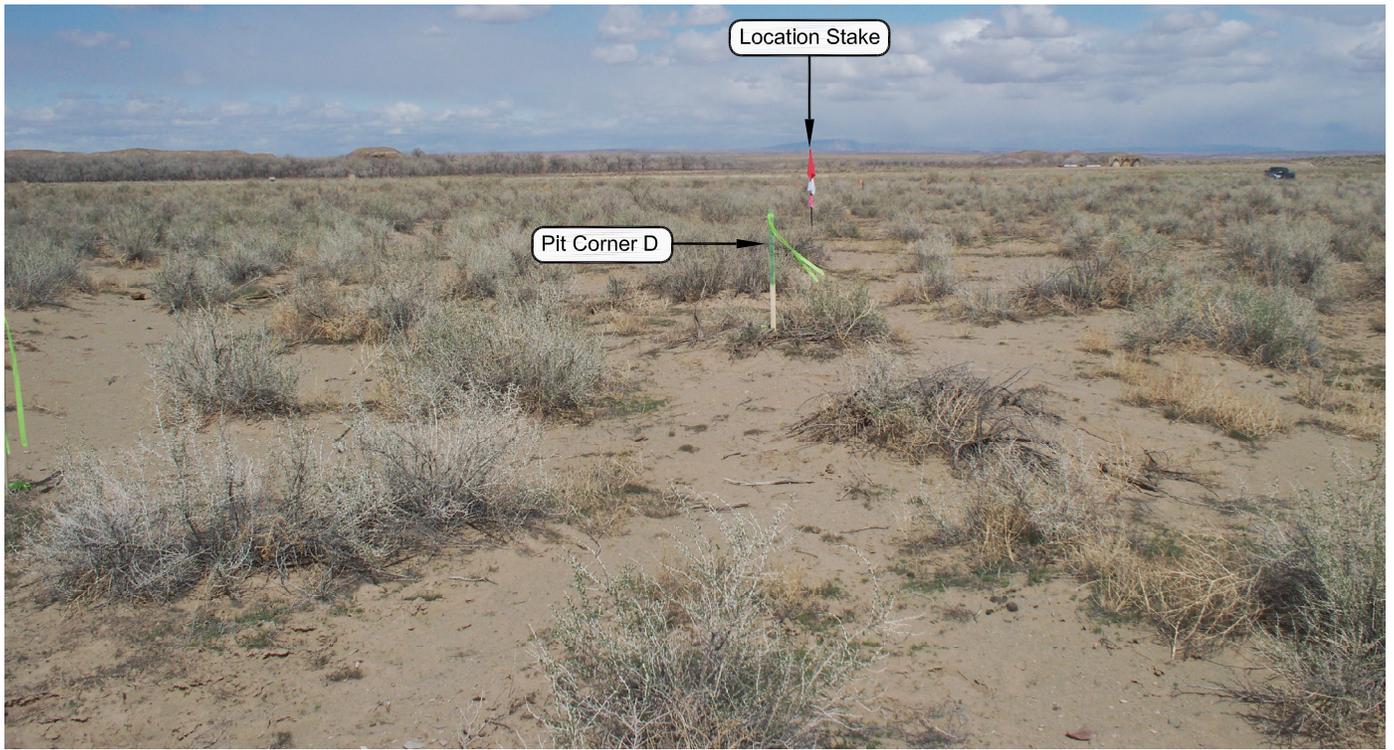


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: SOUTHERLY

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

**Well Pad - NBU 921-7D**

**NBU 921-7D  
 LOCATION PHOTOS  
 463' FNL, 180' FWL  
 LOT 1 OF SECTION 7, T9S, R21E,  
 S.L.B.&M., Uintah County, UTAH.**



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 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 04-16-09	PHOTOS TAKEN BY: D.J.S.	SHEET NO: <b>4</b>
DATE DRAWN: 04-17-09	DRAWN BY: M.W.W.	
Date Last Revised:		4 OF 9

**Kerr-McGee Oil & Gas Onshore, LP**  
**WELL PAD – NBU 921-7D**  
**WELL - NBU 921-7D**  
**Section 7, T9S, R21E, S.L.B.&M.**

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 3.0 MILES TO A SERVICE ROAD TO THE EAST. EXIT LEFT AND PROCEED IN AN EASTERLY DIRECTION ALONG THE SERVICE ROAD APPROXIMATELY 1.1 MILES TO A SECOND SERVICE ROAD TO THE NORTHEAST. EXIT LEFT AND PROCEED IN A NORTHEASTERLY DIRECTION ALONG THE SECOND SERVICE ROAD APPROXIMATELY 2.4 MILES TO A THIRD SERVICE ROAD TO THE EAST. EXIT RIGHT AND PROCEED IN AN EAST BY SOUTHEAST DIRECTION ALONG THE THIRD SERVICE ROAD APPROXIMATELY 1.5 MILES TO THE PROPOSED ACCESS ROAD. FOLLOW ROAD FLAGS IN A SOUTHERLY DIRECTION APPROXIMATELY 50 FEET TO THE PROPOSED WELL LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 38.7 MILES IN A SOUTHERLY DIRECTION.

**NBU 921-7D**

Surface: 463' FNL 180' FWL (NW/4NW/4) Lot 1  
Sec. 7 T9S R21E

Uintah, Utah  
Mineral Lease: UTU 0149767

Surface Owner: Ute Indian Tribe

**ONSHORE ORDER NO. 1**

***MULTI-POINT SURFACE USE & OPERATIONS PLAN  
SUBMITTED WITH SITE-SPECIFIC INFORMATION***

This Application for Permit to Drill (APD) is filed under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) and Bureau of Indian Affairs (BIA) documents. An NOS was submitted showing the surface location in NW/4 NW/4 of Section 7 T9S R21E.

This Surface Use Plan of Operations (SUPO) or 13-point plan provides the site-specific information for the above-referenced wells. This information is to be incorporated by reference into the Master Development Plan (MDP) for Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee). The MDP is available upon request from the BIA-Ft Duchesne Office.

An on-site meeting was held on August 27, 2009.

**A. Existing Roads:**

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

**B. Planned Access Roads:**

*See MDP for additional details on road construction.*

Approximately  $\pm 50'$  ( $\pm 0.01$  miles) of new access road is proposed. Please refer to the attached Topo Map B. No pipelines will be crossed with the new construction.

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

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

Please refer to Topo Map C.

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

*See MDP for additional details on Existing and Proposed Facilities.*

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

Approximately  $\pm 2,655'$  ( $\pm 0.50$  miles) of new pipeline is proposed for this well. Please refer to the attached Topo Map D for existing pipeline. Appropriate surface use agreements have been or will be obtained from the Ute Indian Tribe. Pipeline segments will be welded or zaplocked together on disturbed areas in or near the location, whenever possible, and dragged into place

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

*See MDP for additional details on Location and Type of Water Supply.*

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

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

No water well is to be drilled on this lease.

**F. Source of Construction Materials:**

*See MDP for additional details on Source of Construction Materials.*

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

*See MDP for additional details on Methods of Handling Waste Materials.*

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites:

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

**H. Ancillary Facilities:**

*See MDP for additional details on Ancillary Facilities.*

None are anticipated.

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

*See MDP for additional details on Well Site Layout.*

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

- Net wire (39-inch) will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.
- Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.
- All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

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

*See MDP for additional details on Plans for Reclamation of the Surface.*

Kerr-McGee shall call the BIA for the seed mixture prior to starting interim and/or final reclamation actions.

**K. Surface/Mineral Ownership:**

The well pad and access road are located on lands owned by:

Ute Indian Tribe  
PO Box 70  
Fort Duchesne, Utah 84026  
435-722-5141

The mineral ownership is listed below:

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

**L. Other Information:**

*See MDP for additional details on Other Information.*

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

Kathy Schneebeck Dulnoan  
Regulatory Analyst  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6007

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

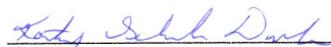
Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

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.

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

September 3, 2009  
\_\_\_\_\_  
Date

CLASS I REVIEW OF KERR-MCGEE OIL & GAS  
ONSHORE LP'S 51 PROPOSED WELL LOCATIONS  
(T9S, R21E, SECTIONS 7, 8, 10, 11, 12,  
17, 18, 19, 20, 23, 25, AND 30)  
IN UINTAH COUNTY, UTAH

By:

Jacki A. Montgomery

Prepared For:

Ute Tribal Land  
Uintah and Ouray Agency

Bureau of Land Management  
Vernal Field Office

Prepared Under Contract With:

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

Prepared By:

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

MOAC Report No. 09-39

May 11, 2009

United States Department of Interior (FLPMA)  
Permit No. 09-UT-60122

Public Lands Policy Coordination Office  
Archaeological Survey Permit No. 117

Ute Tribal Permit No. A09-363

**IPC #09-79**

# **Paleontological Reconnaissance Survey Report**

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**Survey of Kerr McGee's Proposed Well Pads, Access Roads and  
Pipelines for "NBU #921-7D, 8C, D, F & 17B" (Sec. 12,  
T 9 S, R 20 E) & (Sec. 6-8 & 17, T 9 S, R 21 E)**

Ouray SE  
Topographic Quadrangle  
Uintah County, Utah

June 22, 2009

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



# Grasslands Consulting, Inc.

4800 Happy Canyon Road, Suite 110, Denver, CO 80237

(303) 759-5377 Office (303) 759-5324 Fax

## **SPECIAL STATUS PLANT AND WILDLIFE SPECIES REPORT**

**Report #:** GCI #69

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

**Wells:** NBU 921-7D, NBU 921-7F, NBU 921-7L

**Pipelines:** Associated pipelines to proposed well pads

**Access Roads:** Associated access roads to proposed well pads

**Location:** Section 07, Township 9 South, Range 21 East; Uintah County, Utah

**Survey-Species:** Uinta Basin Hookless Cactus (*Sclerocactus wetlandicus*)

**Date:** 07/02/2009

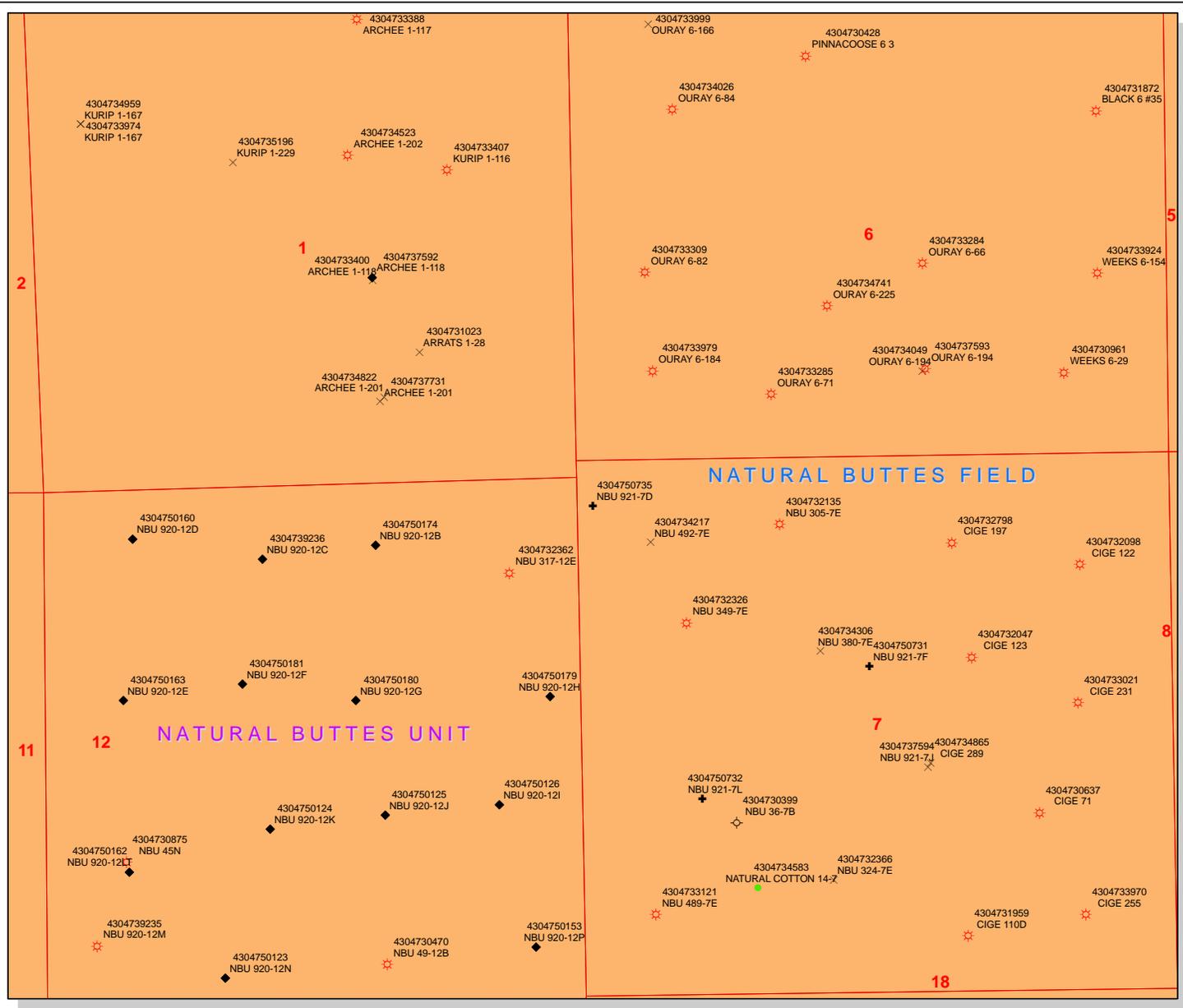
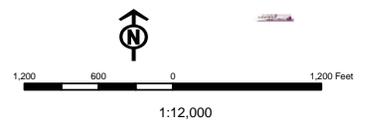
**Observer(s):** Grasslands Consulting, Inc. Biologists: Chris Gayer, Nick Hall, Dan Hamilton, and Jonathan Sexauer. Technicians: Chad Johnson, Dane Bartlett, and Daniel Ortiz,

**Weather:** Partly cloudy, 85-90°F, 0-5 mph winds with no precipitation.

**API Number: 4304750735**  
**Well Name: NBU 921-7D**  
**Township 09.0 S Range 21.0 E Section 7**  
**Meridian: SLBM**  
 Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:  
 Map Produced by Diana Mason

<b>Units</b>	<b>Wells Query Events</b>
<b>STATUS</b>	<b>GIS_STAT_TYPE</b>
ACTIVE	-Null-
EXPLORATORY	APD
GAS STORAGE	DRL
NF PP OIL	GI
NF SECONDARY	GS
PI OIL	LA
PP GAS	NEW
PP GEOTHERM	OPS
PP OIL	PA
SECONDARY	PGW
TERMINATED	POW
<b>Fields</b>	RET
<b>STATUS</b>	SGW
ACTIVE	SOW
COMBINED	TA
Sections	TW
	WD
	WT
	WS



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, Utah 84145-0155

**IN REPLY REFER TO:**

**3160  
(UT-922)**

September 18, 2009

Memorandum

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

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2009 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-50731	NBU 921-7F	Sec 07 T09S R21E 2079 FNL 2869 FWL
43-047-50732	NBU 921-7L	Sec 07 T09S R21E 1948 FSL 1196 FWL
43-047-50733	NBU 921-8D	Sec 08 T09S R21E 0469 FNL 0652 FWL
43-047-50734	NBU 921-8N	Sec 08 T09S R21E 0705 FSL 2033 FWL
43-047-50735	NBU 921-7D	Sec 07 T09S R21E 0463 FNL 0180 FWL
43-047-50736	NBU 921-8C	Sec 08 T09S R21E 0483 FNL 1729 FWL
43-047-50737	NBU 1022-9B4CS	Sec 09 T10S R22E 0228 FNL 2643 FWL
	BHL	Sec 09 T10S R22E 1100 FNL 1956 FEL
43-047-50738	NBU 1022-9C2DS	Sec 09 T10S R22E 0224 FNL 2563 FWL
	BHL	Sec 09 T10S R22E 0591 FNL 1782 FWL
43-047-50739	NBU 1022-9C3CS	Sec 09 T10S R22E 0225 FNL 2583 FWL
	BHL	Sec 09 T10S R22E 1131 FNL 1548 FWL
43-047-50740	NBU 1022-9C4DS	Sec 09 T10S R22E 0227 FNL 2623 FWL
	BHL	Sec 09 T10S R22E 1141 FNL 2505 FWL
43-047-50751	NBU 920-21G	Sec 21 T09S R20E 1998 FNL 2319 FEL

API #	WELL NAME	LOCATION
 (Proposed PZ WASATCH-MESA VERDE)		
43-047-50752	NBU 1022-8L3CS	Sec 08 T10S R22E 1761 FSL 0309 FWL
	BHL	Sec 08 T10S R22E 1330 FSL 0005 FWL
43-047-50753	NBU 1022-8M3DS	Sec 08 T10S R22E 1765 FSL 0329 FWL
	BHL	Sec 08 T10S R22E 0245 FSL 0350 FWL
43-047-50754	NBU 1022-8N1DS	Sec 08 T10S R22E 1772 FSL 0368 FWL
	BHL	Sec 08 T10S R22E 0940 FSL 2635 FWL
43-047-50755	NBU 1022-8N2DS	Sec 08 T10S R22E 1769 FSL 0348 FWL
	BHL	Sec 08 T10S R22E 0735 FSL 1700 FWL
43-047-50756	NBU 1022-35I1CS	Sec 35 T10S R22E 2335 FSL 0650 FEL
	BHL	Sec 35 T10S R22E 2170 FSL 0460 FEL

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

/s/ Michael L. Coulthard

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

MCoulthard:mc:9-18-09

**WORKSHEET  
APPLICATION FOR PERMIT TO DRILL**

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**APD RECEIVED:** 9/10/2009

**API NO. ASSIGNED:** 43047507350000

**WELL NAME:** NBU 921-7D

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

**PHONE NUMBER:** 720 929-6156

**CONTACT:** Danielle Piernot

**PROPOSED LOCATION:** NWNW 7 090S 210E

**Permit Tech Review:**

**SURFACE:** 0463 FNL 0180 FWL

**Engineering Review:**

**BOTTOM:** 0463 FNL 0180 FWL

**Geology Review:**

**COUNTY:** UINTAH

**LATITUDE:** 40.05658

**LONGITUDE:** -109.60469

**UTM SURF EASTINGS:** 619010.00

**NORTHINGS:** 4434760.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 1 - Federal

**LEASE NUMBER:** UTU 0149767

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

**SURFACE OWNER:** 2 - Indian

**COALBED METHANE:** NO

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**RECEIVED AND/OR REVIEWED:**

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

**Commingling Approved**

**LOCATION AND SITING:**

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

**Comments:** Presite Completed

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



GARY R. HERBERT  
*Governor*

GREGORY S. BELL  
*Lieutenant Governor*

## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

### Permit To Drill

\*\*\*\*\*

**Well Name:** NBU 921-7D  
**API Well Number:** 43047507350000  
**Lease Number:** UTU 0149767  
**Surface Owner:** INDIAN  
**Approval Date:** 9/29/2009

**Issued to:**

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

**Authority:**

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

**Duration:**

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

**Commingling:**

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

**General:**

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

**Conditions of Approval:**

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

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

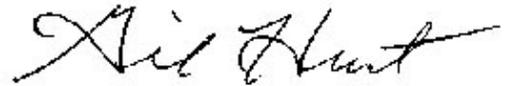
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <https://oilgas.ogm.utah.gov>

**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:**

A handwritten signature in black ink that reads "Gil Hunt". The signature is written in a cursive, flowing style.

Gil Hunt  
Associate Director, Oil & Gas

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0149767
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> Ute Tr
<b>1. TYPE OF WELL</b> Gas Well	<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>8. WELL NAME and NUMBER:</b> NBU 921-7D
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>9. API NUMBER:</b> 43047507350000
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0463 FNL 0180 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNW Section: 07 Township: 09.0S Range: 21.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
	<b>COUNTY:</b> UINTAH
	<b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 9/30/2010	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input checked="" type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

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: October 06, 2010  
By: 

<b>NAME (PLEASE PRINT)</b> Danielle Piernot	<b>PHONE NUMBER</b> 720 929-6156	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A		<b>DATE</b> 9/30/2010



**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 43047507350000**

**API:** 43047507350000

**Well Name:** NBU 921-7D

**Location:** 0463 FNL 0180 FWL QTR NWNW SEC 07 TWP 090S RNG 210E MER S

**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 9/29/2009

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

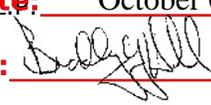
**Approved by the  
Utah Division of  
Oil, Gas and Mining**

**Signature:** Danielle Piernot

**Date:** 9/30/2010

**Title:** Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date:** October 06, 2010

**By:** 

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0149767
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> Ute Tr
<b>1. TYPE OF WELL</b> Gas Well	<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>8. WELL NAME and NUMBER:</b> NBU 921-7D
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>9. API NUMBER:</b> 43047507350000
<b>4. LOCATION OF WELL FOOTAGES AT SURFACE:</b> 0463 FNL 0180 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNW Section: 07 Township: 09.0S Range: 21.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES  <b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA	

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 8/22/2011	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input checked="" type="checkbox"/> <b>APD EXTENSION</b>
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

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: 08/22/2011  
By: 

<b>NAME (PLEASE PRINT)</b> Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A		<b>DATE</b> 8/22/2011



**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 43047507350000**

**API:** 43047507350000

**Well Name:** NBU 921-7D

**Location:** 0463 FNL 0180 FWL QTR NWNW SEC 07 TWP 090S RNG 210E MER S

**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 9/29/2009

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:** Andy Lytle

**Date:** 8/22/2011

**Title:** Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**RECEIVED**

SEP 18 2009  
mc

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

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU0149767
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator KERRMCGEE OIL&GAS ONSHORE LP Contact: DANIELLE E PIERNOT Email: Danielle.Piernot@anadarko.com		7. If Unit or CA Agreement, Name and No. 891008900A
3a. Address PO BOX 173779 DENVER, CO 80202-3779		8. Lease Name and Well No. NBU 921-7D
3b. Phone No. (include area code) Ph: 720-929-6156 Fx: 720-929-7156		9. API Well No. 43-047-50735
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NWNW Lot 1 463FNL 180FWL 40.05657 N Lat, 109.60537 W Lon At proposed prod. zone NWNW Lot 1 463FNL 180FWL 40.05657 N Lat, 109.60537 W Lon		10. Field and Pool, or Exploratory NATURAL BUTTES
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 8 MILES SOUTHEAST OF OURAY, UTAH		11. Sec., T., R., M., or Blk. and Survey or Area Sec 7 T9S R21E Mer SLB
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 180 FEET	16. No. of Acres in Lease 777.33	12. County or Parish UINTAH
17. Spacing Unit dedicated to this well	13. State UT	20. BLM/BIA Bond No. on file WYB000291
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. APPROXIMATELY 1200 FEET	19. Proposed Depth 10800 MD 10800 TVD	21. Estimated duration 60-90 DAYS
21. Elevations (Show whether DF, KB, RT, GL, etc.) 4680 GL	22. Approximate date work will start 09/28/2009	

24. Attachments

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

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

25. Signature (Electronic Submission)	Name (Printed/Typed) DANIELLE E PIERNOT Ph: 720-929-6156	Date 09/10/2009
Title REGULATORY ANALYST		
Approved by (Signature) 	Name (Printed/Typed) Jerry Kenczka	Date JUL 29 2011
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.

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 #74104 verified by the BLM Well Information System  
For KERRMCGEE OIL&GAS ONSHORE LP, sent to the Vernal  
Committed to AFMSS for processing by ROBIN R. HANSEN on 09/11/2009

**RECEIVED**

AUG 15 2011

**UDOGM**

**NOTICE OF APPROVAL**

**NOS**

**CONDITIONS OF APPROVAL ATTACHED**

**AFMSS#**

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

09RRH0260AE

N/A N/A



UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
VERNAL FIELD OFFICE

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



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

Company:	Kerr McGee Oil & Gas Onshore LP	Location:	Lot 1, Sec. 7, T9S R21E
Well No:	NBU 921-7D	Lease No:	UTU-0149767
API No:	43-047-50735	Agreement:	Natural Buttes Unit

**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**

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.
Spud Notice (Notify BLM Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <a href="mailto:ut_vn_opreport@blm.gov">ut_vn_opreport@blm.gov</a> .
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify BLM 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<sub>x</sub> 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<sub>x</sub> per horsepower-hour.

**Site-Specific Conditions of Approval:**

- Paint facilities "Shadow Gray."
- Monitor location by a permitted archaeologist during the construction process.
- Bury pipeline under all existing access roads.
- In accordance with the guidelines specified in the Guidelines for Raptor Protection from Human and Land Use Disturbances, a raptor survey should be conducted prior to construction of the proposed location, pipeline, or access road if construction would take place during raptor nesting season (January 1 through September 30). If active raptor nests are identified during the survey, LMG should conduct its operations according to the seasonal restrictions detailed in the Uintah Basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Guidelines (See Appendix D).
- Conduct a new biological survey in accordance with the guidelines specified in the USFWS Rare Plant Conservation Measures for Uinta Basin hookless cactus and the 2008 BLM RMP Rod, to include a 300 foot buffer from proposed construction operations (See Appendix D), and conduct operations according to agency specifications and the requirements of the BO issued as a result of Section 7 USFWS consultation.

**BIA Standard Conditions of Approval:**

- Soil erosion will be mitigated by reseeding all disturbed areas.
- The gathering pipelines will be constructed to lie on the surface. The surface pipelines will not be bladed or cleared of vegetation. Where pipelines are constructed parallel to roads they may be welded on the road and then lifted from the road onto the right-of-way. Where pipelines do not parallel roads but cross-country between sites, they shall be welded in place at well sites or on access roads and then pulled between stations with a suitable piece of equipment. Traffic will be restricted along these areas so that the pipeline right-of-way will not be used as an access road.
- An open drilling system shall be used, unless otherwise specified in 10.0 Additional Stipulations of this document and in the Application for Permit to Drill. A closed drilling system shall be used in all flood plain areas, and other highly sensitive areas, recommended by the Ute Tribe Technician, BIA, and other agencies involved.

- The reserve pit shall be lined with a synthetic leak proof liner. After the drilling operation is complete, excess fluids shall be removed from the reserve pit and either hauled to an approved disposal site or shall be used to drill other wells. When the fluids are removed the pit shall be backfilled a minimum of 3.0' below the soil surface elevation.
- A closed production system shall be used. This means all produced water and oil field fluid wastes shall be contained in leak proof tanks. These fluids shall be disposed of in either approved injection wells or disposal pits.
- Major low water crossings will be armored with pit run material to protect them from erosion.
- All personnel should refrain from collecting any paleontological fossils and from disturbing any fossil resources in the area.
- If fossils are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.
- Before the site is abandoned the company will be required to restore the right-of-way to near its original state. The disturbed area will be reseeded with desirable perennial vegetation. If necessary, the Bureau of Indian Affairs or Bureau of Land Management will provide a suitable seed mixture.
- Noxious weeds will be controlled on all surface disturbances within the project area. If noxious weeds spread from the project area onto adjoining land, the company will also be responsible for their control.
- If project construction operations are scheduled to occur after December 31, 2009, KMG should conduct annual raptor surveys in accordance with the guidelines specified in the Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002. If active raptor nest are indentified during a new survey, KMG should conduct its operations according to the seasonal restrictions detailed in the Uinta basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Guidelines (See Appendix D).
- USFWS threatened and endangered plant and animal conservation measures will be followed, as appropriate to the species identified by the biological resource survey (See Appendix D).
- All personnel should refrain from collecting artifacts and from disturbing any significant cultural resources in the area.
- If artifacts or any culturally sensitive materials are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.

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

**SITE SPECIFIC DOWNHOLE COAs:**

- Gamma Ray Log shall be run from Total Depth to Surface.

**Variations Granted**

**Air Drilling**

- Properly lubricated and maintained rotating head, variance granted to use a properly maintained and lubricated diverter bowl in place of a rotating head.
- Blooie line discharge 100' from the well bore, variance granted for blooie line discharge to be 45' from the well bore.
- Variance granted for two truck/trailer mounted air compressors located within 40 feet from the well bore and 60' from the blooie line.
- Mud Material Requirements. In lieu of mud products on location, Kerr McGee will fill the reserve pit with water for kill fluid.
- Automatic igniter. Variance granted for igniter due to there being no productive formations while drilling with air.
- FIT test. Variance granted due to knowledge of geology and problems that can occur with FIT test.

**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 in LAS format to [UT\\_VN\\_Welllogs@BLM.gov](mailto:UT_VN_Welllogs@BLM.gov). 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](http://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 ( $\frac{1}{4}$  $\frac{1}{4}$ , 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.

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG  
Submitted By JAIME SCHARNOWSKE Phone Number 720.929.6304  
Well Name/Number NBU 921-7D  
Qtr/Qtr NWNW Section 7 Township 9S Range 21E  
Lease Serial Number UTU0149767  
API Number 4304750735

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

Date/Time 12/28/2011 08:00 HRS AM  PM

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

- Surface Casing
- Intermediate Casing
- Production Casing
- Liner
- Other

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DEC 28 2011  
DIV. OF OIL, GAS & MINING

Date/Time 01/17/2012 00:00 HRS AM  PM

BOPE

- Initial BOPE test at surface casing point
- BOPE test at intermediate casing point
- 30 day BOPE test
- Other

Date/Time \_\_\_\_\_ AM  PM

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT 435.828.0986 OR LOVEL YOUNG AT 435.781.7051

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

FORM 6

**ENTITY ACTION FORM**

Operator: KERR MCGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995  
 Address: P.O. Box 173779  
city DENVER  
state CO zip 80217 Phone Number: (720) 929-6086

**Well 1**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750735	NBU 921-7D		NWNW	7	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	12/28/2011			<u>12/29/11</u>	
<b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <u>WSTMVD</u> SPUD WELL LOCATION ON 12/28/2011 AT 07:30 HRS.							

**Well 2**

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<b>Comments:</b>							

**Well 3**

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<b>Comments:</b>							

**ACTION CODES:**

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

GINA BECKER

Name (Please Print)

Signature

REGULATORY ANALYST

12/28/2011

Title

Date

**RECEIVED**

DEC 29 2011

DIV. OF OIL, GAS & MINING

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0149767
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE
		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> NBU 921-7D	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047507350000	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6515 Ext	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0463 FNL 0180 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNW Section: 07 Township: 09.0S Range: 21.0E Meridian: S	<b>COUNTY:</b> UINTAH	
		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 12/28/2011  <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> OTHER	
<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input type="text"/>		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 CONDUCTOR PIPE. CMT W/ 28 SX READY MIX. SPUD WELL LOCATION ON DEC. 28, 2011 AT 07:30 HRS.		
<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY</b>		
<b>NAME (PLEASE PRINT)</b> Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 12/29/2011	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0149767
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<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6514  <b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0463 FNL 0180 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNW Section: 07 Township: 09.0S Range: 21.0E Meridian: S	<b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH

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TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: <b>3/5/2012</b>  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> <b>CHANGE TO PREVIOUS PLANS</b> <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 50px;" type="text"/>

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

The operator requests approval to deepen the well to the Blackhawk formation (part of the Mesaverde Group). The Operator also requests approval for a FIT wavier, closed loop drilling option, and a production casing change. All other aspects of the previously approved drilling plan will not change. Please see the attachment. Thank you.

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

**Date:** March 12, 2012

**By:** 

<b>NAME (PLEASE PRINT)</b> Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 3/5/2012	

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

NBU 921-7D

Surface: 463 FNL / 180 FWL      NWNW

Section 7 T9S R21E

Unitah County, Utah  
Mineral Lease: UTU 0149767

**ONSHORE ORDER NO. 1****DRILLING PROGRAM**

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

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,824'	
Birds Nest	2,126'	Water
Mahogany	2,729'	Water
Wasatch	5,328'	Gas
Mesaverde	8,538'	Gas
Sego	10,865'	Gas
Castlegate	10,917'	Gas
Blackhawk	11,267'	Gas
TVD	11,867'	
TD	11,867'	

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

Please refer to the attached Drilling Program

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

Please refer to the attached Drilling Program

**5. Drilling Fluids Program:**

Please refer to the attached Drilling Program

**6. Evaluation Program:**

Please refer to the attached Drilling Program

**7. Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 11867' TVD, approximately equals  
7,832 psi (0.66 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 5,276 psi (bottom hole pressure  
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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

**8. Anticipated Starting Dates:**

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

**9. Variances:**

Please refer to the attached Drilling Program.  
Onshore Order #2 – Air Drilling Variance

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

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

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

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

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

### **Background**

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

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

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

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

### **Variance for BOPE Requirements**

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

### **Variance for Mud Material Requirements**

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

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

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

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

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

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

**Variance for FIT Requirements**

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

**Conclusion**

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

**10. Other Information:**

Please refer to the attached Drilling Program.

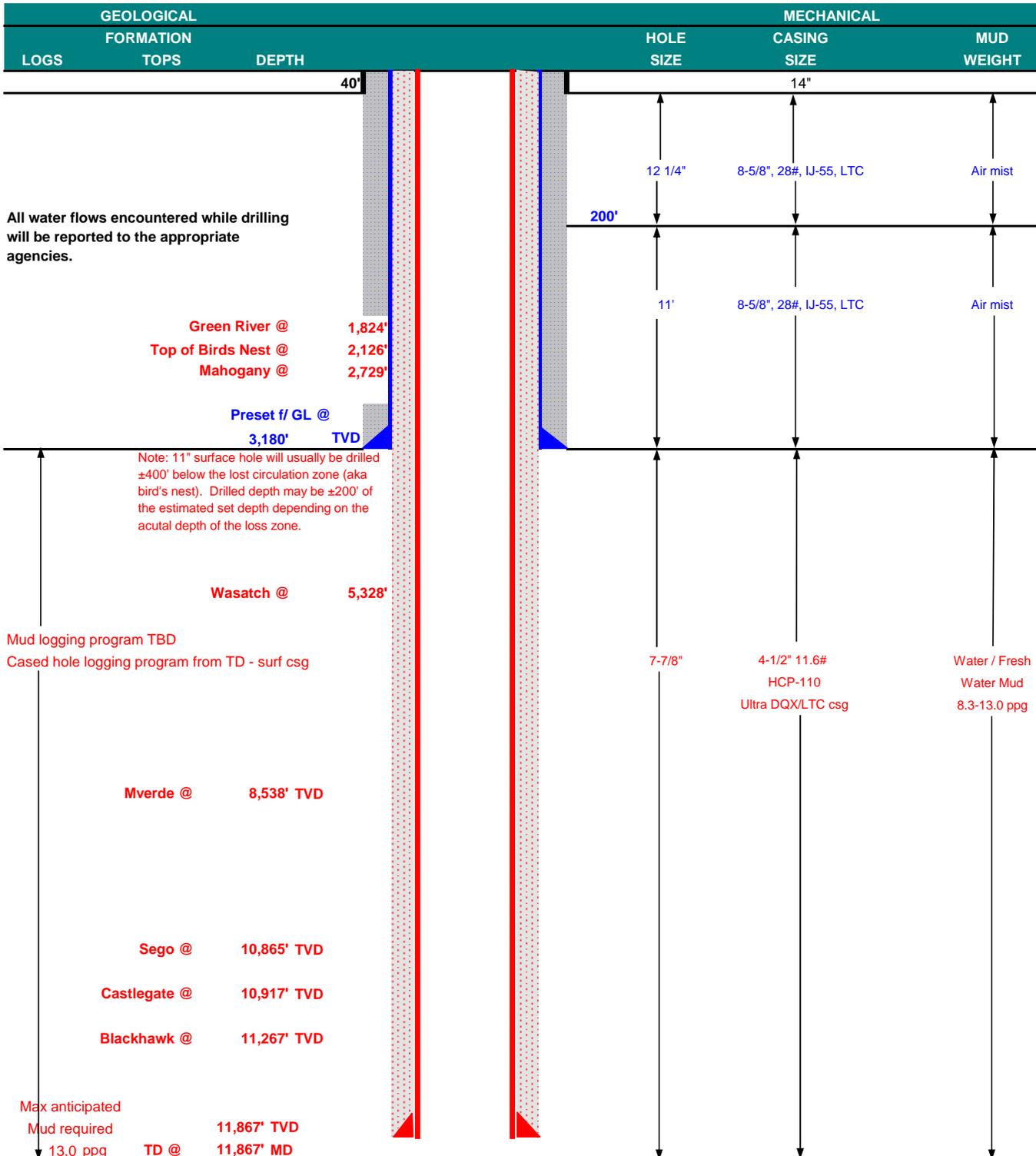
NBU 921-7D

Drilling Program  
5 of 7



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

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	March 5, 2012			
WELL NAME	<b>NBU 921-7D</b>		TD	11,867'	TVD	11,867' MD	
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION	4,679'
SURFACE LOCATION	NWNW	463 FNL	180 FWL	Sec 7	T 9S	R 21E	
	Latitude:	40.056570	Longitude:	-109.605374	NAD 83		
OBJECTIVE ZONE(S)	BLACKHAWK (Part of the Mesaverde Group)						
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), Tribe (Surface), UDOGM Tri-County Health Dept.						





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

**CASING PROGRAM**

							DESIGN FACTORS			
							LTC		DQX	
	SIZE	INTERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION	
CONDUCTOR	14"	0-40'								
							3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to 3,180	28.00	IJ-55	LTC	1.69	1.26	4.46	N/A
							10,690	8,650	279,000	367,000
PRODUCTION	4-1/2"	0	to 5,000	11.60	HCP-110	DQX	1.19	1.08		3.33
	4-1/2"	5,000	to 11,867'	11.60	HCP-110	LTC	1.19	1.08	4.37	

**Surface casing:**

(Burst Assumptions: TD = 13.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

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

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

**Production casing:**

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.66 psi/ft = bottomhole gradient

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

**CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
<b>Option 1</b>							
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
SURFACE			<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>				
<b>Option 2</b>							
	LEAD	2,680'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	250	35%	11.00	3.82
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,827'	Premium Lite II + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	380	35%	12.00	3.38
	TAIL	7,040'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,660	35%	14.30	1.31

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

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

**FLOAT EQUIPMENT & CENTRALIZERS**

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

**ADDITIONAL INFORMATION**

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

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

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

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

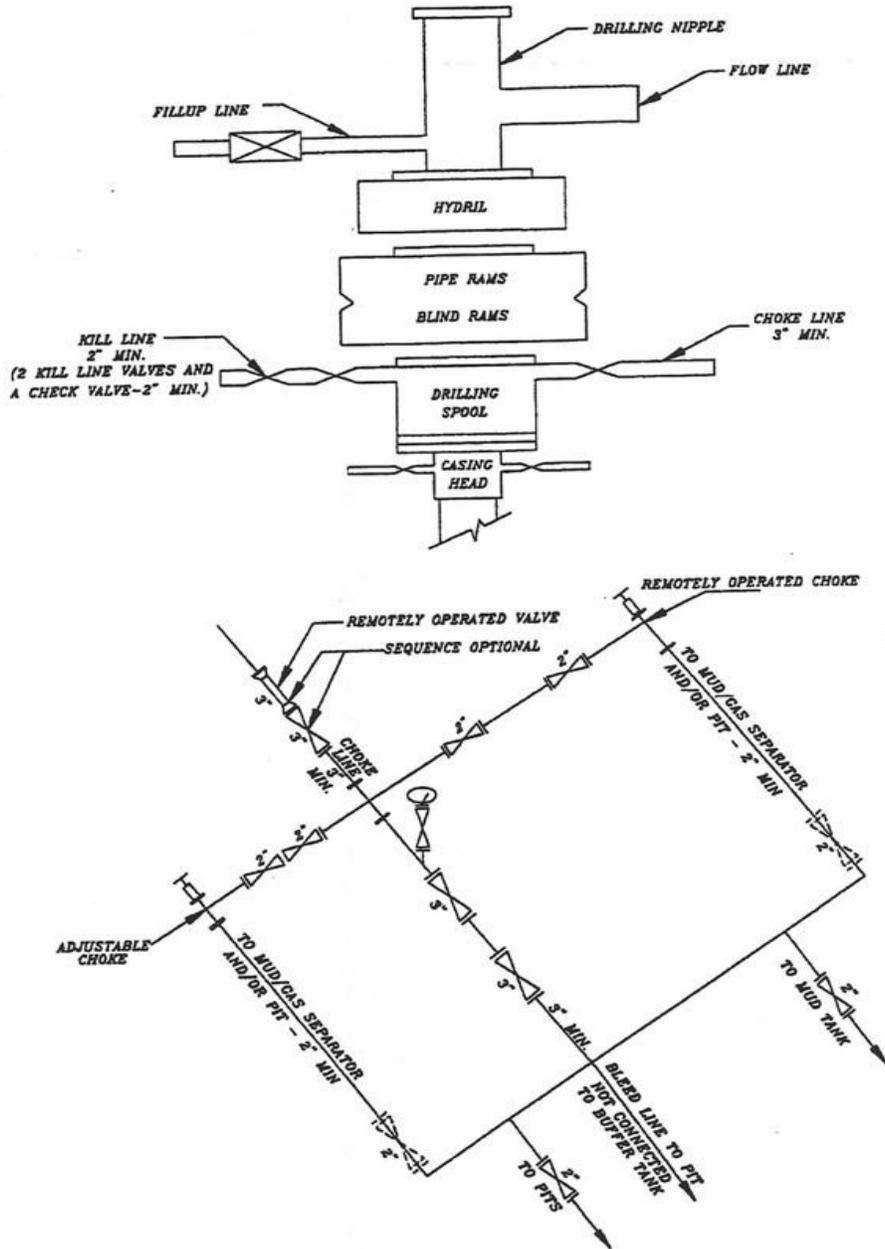
DRILLING ENGINEER: \_\_\_\_\_  
Nick Spence / Danny Showers / Chad Loesel

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

DRILLING SUPERINTENDENT: \_\_\_\_\_  
Kenny Gathings / Lovel Young

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

**EXHIBIT A  
NBU 921-7D**



**SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK**

Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

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<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 3/8/2012	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CHANGE WELL NAME	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> APD EXTENSION	
	OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU AIR RIG ON MARCH 5, 2012. DRILLED SURFACE HOLE TO 3,200'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.		
<b>Accepted by the          Utah Division of          Oil, Gas and Mining          FOR RECORD ONLY          March 12, 2012</b>		
<b>NAME (PLEASE PRINT)</b> Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	<b>TITLE</b> Regularatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 3/12/2012	

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<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6511
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0463 FNL 0180 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNW Section: 07 Township: 09.0S Range: 21.0E Meridian: S	<b>COUNTY:</b> Uintah  <b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:			
<input type="checkbox"/> SPUD REPORT Date of Spud:			
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 5/7/2012			

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

MIRU ROTARY RIG. FINISHED DRILLING FROM 3200' TO 11962' ON 5/4/2012. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED SST 54 RIG ON 5/6/2012 @ 18:00 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES.

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**  
**FOR RECORD ONLY**  
 May 09, 2012

<b>NAME (PLEASE PRINT)</b> Cara Mahler	<b>PHONE NUMBER</b> 720 929-6029	<b>TITLE</b> Regulatory Analyst I
<b>SIGNATURE</b> N/A	<b>DATE</b> 5/9/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9	
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0149767	
		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE	
<b>1. TYPE OF WELL</b> Gas Well		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>8. WELL NAME and NUMBER:</b> NBU 921-7D	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>9. API NUMBER:</b> 43047507350000	
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0463 FNL 0180 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNW Section: 07 Township: 09.0S Range: 21.0E Meridian: S		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES	
		<b>COUNTY:</b> UINTAH	
		<b>STATE:</b> UTAH	
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 6/6/2012	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input checked="" type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION  OTHER: <input style="width: 100px;" type="text"/>
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.			
<p>THE SUBJECT WELL WAS PLACED ON PRODUCTION ON JUNE 6, 2012 AT 1530 HOURS. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.</p> <div style="text-align: right; font-weight: bold; font-size: 1.2em;">             Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> June 07, 2012           </div>			
<b>NAME (PLEASE PRINT)</b> Jenn Hawkins		<b>PHONE NUMBER</b> 720 929-6247	<b>TITLE</b> Staff Operations Specialist III
<b>SIGNATURE</b> N/A		<b>DATE</b> 6/6/2012	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9  <b>5.LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0149767
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE  <b>7.UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> NBU 921-7D
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047507350000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6511  <b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0463 FNL 0180 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNW Section: 07 Township: 09.0S Range: 21.0E Meridian: S	<b>COUNTY:</b> Uintah  <b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 8/2/2012	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

Well was completed, finishing well completion report.

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**  
**FOR RECORD ONLY**  
 August 08, 2012

<b>NAME (PLEASE PRINT)</b> Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	<b>TITLE</b> Regularatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 8/2/2012	

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

5. Lease Serial No.  
UTU0149767

1a. Type of Well  Oil Well  Gas Well  Dry  Other  
 b. Type of Completion  New Well  Work Over  Deepen  Plug Back  Diff. Resvr.  
 Other \_\_\_\_\_

2. Name of Operator: KERR MCGEE OIL & GAS ONSHORE  
 Contact: CARA MAHLER  
 Email: cara.mahler@anadarko.com

3. Address: 1099 18TH STREET, SUITE 1800  
 DENVER, CO 80202

3a. Phone No. (include area code)  
 Ph: 720-929-6029

4. Location of Well (Report location clearly and in accordance with Federal requirements)\*  
 At surface NWNW Lot 1 463FNL 180FWL 40.056570 N Lat, 109.605374 W Lon  
 At top prod interval reported below NWNW Lot 1 463FNL 180FWL 40.056570 N Lat, 109.605374 W Lon  
 At total depth NWNW Lot 1 <sup>642</sup> ~~463~~ <sup>175</sup> ~~180~~ FNL ~~180~~ FWL 40.056570 N Lat, 109.605374 W Lon *BLL by HSM*

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.  
 UTU63047A

8. Lease Name and Well No.  
 NBU 921-7D

9. API Well No.  
 43-047-50735

10. Field and Pool, or Exploratory  
 NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey  
 or Area Sec 7 T9S R21E Mer SLB

12. County or Parish  
 UINTAH

13. State  
 UT

14. Date Spudded  
 12/28/2011

15. Date T.D. Reached  
 05/04/2012

16. Date Completed  
 D & A  Ready to Prod.  
 06/06/2012

17. Elevations (DF, KB, RT, GL)\*  
 4679 GL

18. Total Depth: MD 11962 TVD 11958  
 19. Plug Back T.D.: MD 11916 TVD 11912  
 20. Depth Bridge Plug Set: MD TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)  
 RSL/SM-CBL/GR/COLLARS-BHV-DSN/SD/ACTR

22. Was well cored?  No  Yes (Submit analysis)  
 Was DST run?  No  Yes (Submit analysis)  
 Directional Survey?  No  Yes (Submit analysis)

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20.000	14.000 STL	36.7	0	40		28			
11.000	8.625 IJ-55	28.0	0	3200		550		0	
7.875	4.500 P-110	11.6	0	11961		2038		2774	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	11389							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) MESAVERDE	10262	11716	10262 TO 11716	0.360	111	OPEN
B)						
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
10262 TO 11716	PUMP 12,970 BBLs SLICK H2O & 221,340 LBS 30/50 TLC SAND & 28,894 LBS 30/50 WHITE SAND

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
06/06/2012	06/20/2012	24	→	0.0	3866.0	432.0			FLOWS FROM WELL
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
18/64	2700 SI	3471.0	→	0	3866	432		PGW	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
	SI		→						

(See Instructions and spaces for additional data on reverse side)  
 ELECTRONIC SUBMISSION #145521 VERIFIED BY THE BLM WELL INFORMATION SYSTEM  
 \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

RECEIVED  
 AUG 21 2012  
 DIV. OF OIL, GAS & MINING

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

29. Disposition of Gas(Sold, used for fuel, vented, etc.)  
SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
				GREEN RIVER BIRD'S NEST MAHOGANY WASATCH MESAVERDE	1839 2087 2519 5338 8435

32. Additional remarks (include plugging procedure):

The first 210' of the surface hole was drilled with a 12 ?? bit. The remainder of surface hole was drilled with an 11? bit. DQX P-110 csg was run from surface to 5134'; LTC csg was run from 5134? to 11,961?. Attached is the chronological well history, perforation report & final survey.

33. Circle enclosed attachments:

- 1. Electrical/Mechanical Logs (1 full set req'd.)
- 2. Geologic Report
- 3. DST Report
- 4. Directional Survey
- 5. Sundry Notice for plugging and cement verification
- 6. Core Analysis
- 7 Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #145521 Verified by the BLM Well Information System.  
For KERR MCGEE OIL & GAS ONSHORE L, sent to the Vernal

Name (please print) CARA MAHLER Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission) Date 08/10/2012

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.

**\*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\***

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-7D		Spud Date: 3/6/2012	
Project: UTAH-UINTAH		Site: NBU 921-7D	Rig Name No: PROPETRO 12/12, SST 54/54
Event: DRILLING		Start Date: 1/24/2012	End Date: 5/6/2012
Active Datum: RKB @4,697.01ft (above Mean Sea Level)		UWI: NW/NW/0/9/S/21/E/7/0/0/26/PM/N/463/W/0/180/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/5/2012	14:30 - 0:00	9.50	MIRU	01	A	P		MIRU W/JD SERVICES, MOUNTAIN WEST- MOVE RIG AND CAMPS 24 MILES W/4 J D FIELD SERVICE TRUCKS. MOVE RIG W/ 3 PRO PETRO CDL DRIVERS - 5 MAN CREWS. RIG UP CAMPS W/2 MOUNTAIN WEST SWAMPERS AND 1 ELECTRICIAN, 2 MOUNTAIN WEST TRUCKS, 1 VAC TRUCK/SEWAGE AND 1 WATER TRUCK. 1 KNOP MECHANIC AND TRUCK. ENTIRE RIG ON LOCATION BY 0000 hrs. (JD TRUCKS- FRAC TANKS, PUMP, C-CANS, FUEL TANK, FORK LIFT. (MOUNTAIN WEST HAULED CAMPS) SPOT IN RIG AND MUD PUMP. RIG UP CAMPS. SET UP BHA COMPONENTS FOR INSPECTION.
3/6/2012	0:00 - 8:00	8.00	MIRU	01	B	P		INSTALL DIVERTER HEAD AND BLOOIE LINE, BUILD DITCH, SPOT IN RIG, CATWALK AND PIPE RACKS. RIG UP PIT PUMP. RIG UP HOLE PUMP. INSPECT RIG.
	8:00 - 8:30	0.50	PRSPD	01	B	P		HELD PJSM. P/U 8" 1.83 BEND .17 RPG MUD MOTOR (2nd RUN) (SN 775-77252). M/U QD507 12.25" BIT (17th RUN) (SN 7137066). TRIP IN CONDUCTOR TO SPUD.
	8:30 - 10:00	1.50	DRLSUR	02	D	P		SPUD 03/06/2012 08:30. DRILL 12.25" HOLE 44 ft TO 210 ft (166 FT, 111 FPH). WOB 5-15 Kips. GPM 491. PSI ON/OFF 600/400. SURFACE RPM 55, MOTOR 83, TOTAL RPM 138. UP/DOWN/ ROT 20/20/20 K. DRAG 0 Kips . CIRC RESERVE W/8.4 ppg WATER. DRILL DOWN TO 210 ft W/6 in COLLARS. CIRC 15 min.
	10:00 - 12:30	2.50	DRLSUR	06	A	P		PJSM, LAY DOWN 6 in DRILL COLLARS, 12 1/4 in BIT. MAKE UP Q506F 11in BIT (1st RUN) (SN 7138966) P/U 8 in DIRECTIONAL ASSEMBLY. INSTALL EM TOOL. TRIP IN HOLE.
	12:30 - 0:00	11.50	DRLSUR	02	D	P		DRILL 11in. SURFACE HOLE 210 ft TO 1720 ft, (2000 ft, 131 FPH). WOB 15-20 Kips. GPM 491. PSI ON/OFF 1370/1185. SURFACE RPM 55, MOTOR 83, TOTAL RPM 138. UP/DOWN/ ROT 66/60/64 K. DRAG 2 Kips. CIRC RESERVE PIT W/8.4 ppg WATER. NO HOLE ISSUES. SLIDING @ 1.5 PERCENT FOR VERTICAL CONTROL. 1.5 ft SOUTHWEST OF PLAN.

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-7D Spud Date: 3/6/2012  
 Project: UTAH-UINTAH Site: NBU 921-7D Rig Name No: PROPETRO 12/12, SST 54/54  
 Event: DRILLING Start Date: 1/24/2012 End Date: 5/6/2012  
 Active Datum: RKB @4,697.01ft (above Mean Sea Level) UWI: NW/NW/0/9/S/21/E/7/0/0/26/PM/N/463/W/0/180/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/7/2012	0:00 - 3:30	3.50	DRLSUR	02	D	P		DRILL 11in. SURFACE HOLE 1720 ft TO 2050 ft, (330 ft, 94 FPH). WOB 15-20 Kips. GPM 491. PSI ON/OFF 1530/1245. SURFACE RPM 55, MOTOR 83, TOTAL RPM 138. UP/DOWN/ ROT 69/62/67 K. DRAG 2 Kips. CIRC RESERVE PIT W/8.4 ppg WATER. NO HOLE ISSUES. SLIDING @ 1.5 PERCENT FOR VERTICAL CONTROL. 1.5 ft SOUTHWEST OF PLAN.
	3:30 - 7:00	3.50	DRLSUR	22	L	Z		TROUBLE-SHOOT WEAK MWD SIGNAL, PULL 10 JTS, BOOST TOOL TRANSMITTER POWER, ESTABLISHED COMM. AT DEPTH
	7:00 - 8:30	1.50	DRLSUR	02	D	P		DRILL 11in. SURFACE HOLE 2050 ft TO 2170 ft, (120 ft, 80 FPH). WOB 15-20 Kips. GPM 491. PSI ON/OFF 1630/1490. SURFACE RPM 55, MOTOR 83, TOTAL RPM 138. UP/DOWN/ ROT 70/66/72 K. DRAG 2 Kips. CIRC RESERVE PIT W/8.4 ppg WATER. NO HOLE ISSUES. SLIDING @ 1.5 PERCENT FOR VERTICAL CONTROL. 1.0 ft SOUTHWEST OF CENTER.
	8:30 - 12:00	3.50	DRLSUR	08	B	Z		PULL TEN JOINTS OUTOF HOLE, WELD ON HOLE PUMP POD #1 AND REGASKET & REINSTALL LINER
	12:00 - 18:00	6.00	DRLSUR	02	D	P		DRILL 11in. SURFACE HOLE 2170 ft TO 2650 ft, (480 ft, 80 FPH). WOB 15-20 Kips. GPM 491. PSI ON/OFF 1860/1660. SURFACE RPM 55, MOTOR 83, TOTAL RPM 138. UP/DOWN/ ROT 79/69/75 K. DRAG 4 Kips. CIRC RESERVE PIT W/8.4 ppg WATER. NO HOLE ISSUES. SLIDING @ 1.5 PERCENT FOR VERTICAL CONTROL.
	18:00 - 0:00	6.00	DRLSUR	02	D	P		DRILL 11in. SURFACE HOLE 2650 ft TO 3040 ft, (390 ft, 65 FPH). WOB 15-20 Kips. GPM 491. PSI ON/OFF 1920/1740. SURFACE RPM 55, MOTOR 83, TOTAL RPM 138. UP/DOWN/ ROT 83/74/79 K. DRAG 5 Kips. CIRC RESERVE PIT W/8.4 ppg WATER. HOLE MAY BE PRODUCING WATER. SLIDING @ 2.5 PERCENT FOR VERTICAL CONTROL. 2' SW of CENTER @ 3010'
3/8/2012	0:00 - 3:00	3.00	DRLSUR	02	D	P		DRILL 11in. SURFACE HOLE 3040 ft TO 3200 ft, (160 ft, 57 FPH). WOB 15-20 Kips. GPM 491. PSI ON/OFF 1980/1790. SURFACE RPM 55, MOTOR 83, TOTAL RPM 138. UP/DOWN/ ROT 85/72/79 K. DRAG 6 Kips. CIRC RESERVE PIT WITH 8.6 ppg WATER. HOLE IS PRODUCING VERY SMALL AMOUNTS WATER BHL= 2.5 ft.' SW of CENTER @ 3200 ft. (TD)

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-7D Spud Date: 3/6/2012  
 Project: UTAH-UINTAH Site: NBU 921-7D Rig Name No: PROPETRO 12/12, SST 54/54  
 Event: DRILLING Start Date: 1/24/2012 End Date: 5/6/2012  
 Active Datum: RKB @4,697.01ft (above Mean Sea Level) UWI: NWNW/0/9/S/21/E/7/0/0/26/PM/N/463/W/0/180/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	3:00 - 5:00	2.00	DRLSUR	05	C	P		CIRCULATE AND CONDITION WELLBORE FOR TRIP OUT OF HOLE
	5:00 - 6:00	1.00	DRLSUR	06	D	P		PRE-JOB SAFETY MEETING, TRIP OUT OF HOLE
	6:00 - 6:30	0.50	DRLSUR	07	A			PRE-JOB SAFETY MEETING/ RIG SERVICE
	6:30 - 10:00	3.50	DRLSUR	06	D	P		TRIP OUT OF HOLE, LAY DOWN BOTTOM HOLE ASSEMBLY AND DIRECTIONAL TOOLS, MOTOR AND BIT. BREAK DOWN TOOLS FOR INSPECTION. REMOVE UNRELATED- OPERATIONAL TOOLS FROM AREA.
	10:00 - 15:00	5.00	DRLSUR	12	C	P		PJSM, MOVE PIPE RACKS AND CATWALK. PULL DIVERTER HEAD. RIG UP TO RUN CASING. RUN 72 JOINTS OF 8-5/8 in. 28# J-55 LTC CASING. LAND FLOAT SHOE @ 3185 ft KB. LAND BAFFLE PLATE @ 3132 ft KB. RAN 5 TOTAL CENTRALIZERS. LAND CASING WHILE RIGGING UP CEMENTERS. RAN 120 ft OF 1 lin. PIPE DOWN BACK-SIDE. CASING. RELEASE RIG AT 15:00 3/8/2012.
	15:00 - 15:00	0.00	DRLSUR	12	E	P		WAIL 1.5 HOURS ON CEMENT, CEMENT DOWN BACKSIDE W/ 100 sx SAME TAIL CEMENT WITH RETURNS TO SURFACE, CEMENT TO SURFACE AND WELL TOPPED OUT. RIG DOWN CEMENTERS. (CEMENT JOB FINISHED AT 18:30 3/8/2012)
	15:00 - 15:00	0.00	DRLSUR	12	E	P		PJSM, PRESSURE TEST LINES TO 1500 PSI. PUMP 50 BBLS OF WATER AHEAD. MIX AND PUMP 20 BBLS OF 8.5# GEL WATER AHEAD. MIX AND PUMP (250 sx) 170 BBLS OF 11.8# 1.85 YIELD 5 GAL/SK HYFILL CEMENT W/ 4% CALC AS LEAD. MIX AND PUMP (200 sx) 41 BBLS OF 15.8# 1.15 YIELD 5 GAL/SK PREMIUM CEMENT W/ 4% CALC AS TAIL. DROP PLUG ON FLY. DISPLACE W/ 195 BBLS OF H2O. FULL RETURNS THROUGH OUT JOB. FINAL LIFT OF 700 PSI AT 3 BBL/MIN. BUMP PLUG AT DISPLACEMENT VOLUME. LAND THE PLUG WITH 1000 PSI. SHUT DOWN HELD 1000 PSI FOR 5 MIN. TESTED FLOAT AND FLOAT HELD. RETURNED 35 BBLS LEAD BACK TO PIT. CEMENT FELL BACK. TEAR DOWN & PREPARE FOR TRUCKS
4/21/2012	10:00 - 12:00	2.00	DRLPRO	01	E	P		TEAR DOWN & MOVE RIG / JD FIELD SERVICES HAD 2 TRUCKS WITH 2 DRIVERS
	12:00 - 17:00	5.00	DRLPRO	01	E	P		TEAR DOWN / DERRICK DOWN @ 18:00
	17:00 - 0:00	7.00	DRLPRO	01	E	P		RIG DOWN & PREPARE FOR TRUCKS
4/22/2012	0:00 - 7:00	7.00	DRLPRO	01	E	P		PJSM / RIG DOWN & MOVE RIG / JD FIELD SERVICE HAD 9 TRUCKS, 2 FORKLIFTS, 1 PILOT CAR, 1 SWAMPER, & 2 PUSHERS / CURTS CRANE HAD 1 OPERATOR AND 2 SWAMPERS / MOUNTAIN WEST HAD 3 TRUCKS, 2 - 1TONS, 1 PILOT CAR, & 5 ROUSTABOUTS / SST HAD EXTRA 5 MAN CREW / MOVE & SET UP HOUSING / MUD TANKS & BACK YARD OF RIG IS SET IN.
	7:00 - 19:00	12.00	DRLPRO	01	A	P		SHUT DOWN FOR NIGHT
	19:00 - 0:00	5.00	DRLPRO	21	C	P		WAIT ON DAY LIGHT
4/23/2012	0:00 - 7:00	7.00	DRLPRO	21	C	P		

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-7D

Spud Date: 3/6/2012

Project: UTAH-UINTAH

Site: NBU 921-7D

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 1/24/2012

End Date: 5/6/2012

Active Datum: RKB @4,697.01ft (above Mean Sea Level)

UWI: NWNW/0/9/S/21/E7/0/0/26/PM/N/463/W/0/180/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:00 - 20:30	13.50	DRLPRO	01	B	P		MOVE IN AND RIG UP / JD FIELD SERVICE HAD 9 TRUCKS, 2 FORKLIFTS, 1 PILOT CAR, 1 SWAMPER, & 2 PUSHERS. LAST TRUCK LEFT @ 17:30 / CURTS CRANE HAD OPERATOR & 2 SWAMPERS CRANE SHUT DOWN @ 18:30 / 90% RIGGED UP / DRAWWORKS AND CROWN IN SHOP / ESTIMATED TIME FOR REPAIRS = FINISH RIG UP ON THURSDAY THE 26TH / HAD EXTRA SST CREW / RIG CREWS SHUT DOWN @ 20:30
4/24/2012	20:30 - 0:00	3.50	DRLPRO	21	C	P		SHUT DOWN FOR NIGHT
	0:00 - 7:00	7.00	DRLPRO	21	C	P		WAIT ON DAYLIGHT
	7:00 - 21:00	14.00	DRLPRO	21	D	P		WAIT ON DRAWWORKS & CROWN / ESTIMATE DRAW WORKS DONE & BACK TO LOCATION @ 12:00 ON THE 25TH / CREWS WORKED ON RIG /CLEANED & PAINT DERRICK / CLEANED RADIATORS ON MOTORS / INSTALLED VENTS IN MOTOR SHED ROOF. ONE CREW IN TOWN HELPING ON DRAWWORKS.
4/25/2012	21:00 - 0:00	3.00	DRLPRO	21	C	P		SHUT DOWN FOR NIGHT
	0:00 - 6:00	6.00	MAINT	08	C	P		WAIT ON DAYLIGHT
	6:00 - 18:00	12.00	MAINT	08	A	P		REPAIR DRAWWORKS CHG.OUT DRUM & DRUM SHAFT, REPAIR CHAIN GUARD TO EATON BRAKE INSTALL NEW CHAINS IN DRAWWORKS,CHANGE CROWN SHEAVES ALL BUT FASTLINE SHEAVE, ESTIMATED TIME ON LOCATION @ 10:00 AM ON THE 26TH /CREW WORKING IN HOWCROFT SHOP AND FINISH REPAIRS TO DRAWWORKS & CROWN,CLEAN & PAINTING DERRICK AND SUB,CLEAN RADIATORS ON MOTORS / FINISH INSTALLING VENTS IN MOTOR SHED ROOF,INSTALL LIGHTING IN DERRICK, CHANGE SHAKER SCREENS TO ALL 170 API,CLEAN TOP OF MUD TANKS CHECK AND REPAIR L/P VALVES,CHECK ALL LINERS,VALVES & SEATS IN PUMP 1&2 CLEAN SUCTION SCREENS,
4/26/2012	18:00 - 0:00	6.00	MAINT	08	A	P		W/O/DAYLIGHT
	0:00 - 7:00	7.00	MAINT	08	C	P		W/O/DAYLIGHT
	7:00 - 9:00	2.00	MIRU	08	B	P		LOAD DRAWWORKS & CROWN AT HOWCROFT,S YARD TRANSPORT TO LOCATION AT 09:00
	9:00 - 13:00	4.00	MIRU	08	B	P		SAFETY MEETING, RIG UP SET DRAWWORKS,INSTALL CROWN,STRING UP,SET DERRICK ON FLOOR,SET DOG HOUSE,RIG UP ELECTRIC CABLES.
	13:00 - 17:00	4.00	MIRU	08	B	P		RIG UP RAISE DERRICK AT 15:30 RIG UP TO PICK UP TOP DRIVE
	17:00 - 0:00	7.00	MIRU	08	B	P		PICK UP TOP DRIVE HANG AND RIG UP TOP DRIVE,RIG UP ROTARY TOOLS,
4/27/2012	0:00 - 0:30	0.50	MIRU	01	B	P		RIG UP TOP DRIVE,RIG UP ROTARY TOOLS, RIG ON DAYWORK 00:30 4/27/12
	0:30 - 1:30	1.00	DRLPRO	14	A	P		NIPPLE UP BOP & FUNCTION TEST
	1:30 - 2:00	0.50	DRLPRO	15	A	P		TEST BOP WELL HEAD LECKING
	2:00 - 4:00	2.00	DRLPRO	14	A	S		NIPPLE DOWN BOP CHANGE O-RING CHECK FLANGE ALL LOOKS GOOD NIPPLE UP BOP.

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-7D Spud Date: 3/6/2012  
 Project: UTAH-UINTAH Site: NBU 921-7D Rig Name No: PROPETRO 12/12, SST 54/54  
 Event: DRILLING Start Date: 1/24/2012 End Date: 5/6/2012  
 Active Datum: RKB @4,697.01ft (above Mean Sea Level) UWI: NWN/NW/0/9/S/21/E/7/0/0/26/PM/N/463/W/0/180/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	4:00 - 7:30	3.50	DRLPRO	15	A	P		TEST BOP MAKE UP & SET TEST PLUG. TEST ANNULAR 250 PSI LOW, 2500 PSI HIGH. TEST PIPE RAMS, BLIND RAMS, KILL LINE VALVES, CHOKE LINE VALVES, CHOKE LINE, CHOKE MANIFOLD VALVES, FLOOR VALVES, IBOP 250 PSI LOW, 5000 PSI HIGH. TEST CASING, 1500 PSI FOR 30 MINUTES. FUNCTION TEST BOTH CHOKES LEEK OFF TEST GOOD TEST, LAY DOWN TEST JT. AND PLUG.
	7:30 - 8:30	1.00	DRLPRO	15	A	P		SET WEAR BUSHING, NIPPLE UP SMITH BEARING ASS. FOR TEST SWACO CHOKE LINES, WELL HEAD LEEKING.
	8:30 - 12:00	3.50	DRLPRO	14	A	S		NIPPLE DOWN BOP PICK UP LOOKING FOR PROBLEM WEATHERFORD REP REMOVED LOCK DOWN RING TO CHECK FOR PROBLEM AND FOUND RING NOT PROPERLEY INSTALLED CLEAN AND IN STALL AND AJUST LOCK DOWN RING, NIPPLE UP BOP FOR TEST.
	12:00 - 12:30	0.50	DRLPRO	15	A	S		PICK UP TEST PLUG TEST PIPE RAMS AND WELL HEAD FLANGE 250 LOW/5000 HIGH GOOD TEST.
	12:30 - 14:00	1.50	DRLPRO	15	A	S		PULL TEST PLUG INSTALL WEAR WUSHING AND SMITH BEARING ASS. TEST MI SWACO LINES AND CHOKE MANIFOLD AND ORBIT VALVES 1,000 GOOD TEST, RIG DOWN TESTER.
	14:00 - 15:30	1.50	DRLPRO	06	A	P		SAFETY MEETING, RIG UP LAY DOWN MACHINE PICK UP DIRECTIONAL TOOLS ORIENT MOTOR.
	15:30 - 19:30	4.00	DRLPRO	06	A	P		TRIP IN PICK UP BHA AND DRILL PIPE TAG CEMENT@ 3,117
	19:30 - 20:30	1.00	DRLPRO	06	A	P		RIG DOWN LAY DOWN MACHINE
	20:30 - 21:30	1.00	DRLPRO	06	A	P		INSTALL ROTATING HEAD RUBBER
	21:30 - 0:00	2.50	DRLPRO	02	F	P		DRILL CEMENT F/ 3,117 & FLOAT EQUIPMENT TO 3,214
4/28/2012	0:00 - 14:00	14.00	DRLPRO	02	D	P		DRILL, ROT, SLIDE, SURVEY, F/3,214 TO 4,920 AROP, 121.8 WOB 24K ROT. 50/62, MMRPM 88/93, TOTAL RPM 138/155, DIFF. 285/460 GPM. 540/605 PSI ON/OFF 1,950/ 1,655, TORQUE ON/OFF 6,885/6,525, ROT. 96%, SLIDE 4% , HOLE SEEPING 3/4+/- BBL/HR 1 SK. LCM PER 3 HRS, FLARE 2' TO 4' AFTER CONN.
	14:00 - 14:30	0.50	DRLPRO	07	A	P		SPUD 4/28/12@00:30 RIG SERVICE
	14:30 - 0:00	9.50	DRLPRO	02	D	P		DRILL, ROT, SLIDE, SURVEY, F/4,920 TO 6,160, AROP, 130.5 WOB 22/24K ROT. 57/62, MMRPM 95, TOTAL RPM 157, DIFF. 265 GPM. 605 SPP ON/OFF 2,220/2,060, TORQUE ON/OFF 6,455/6,120, ROT. 96.6%, SLIDE 3.94% , HOLE SEEPING 1/2+/- BBL/HR 1 SK. LCM PER 3 HRS, FLARE 3' TO 4' AT 4,950 TO 5,005 SPOT OIL ON PITS FLARE 0 TO 6' INTERMITTENT, @ 6,000 NO FLARE

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

Well: NBU 921-7D		Spud Date: 3/6/2012	
Project: UTAH-UINTAH		Site: NBU 921-7D	Rig Name No: PROPETRO 12/12, SST 54/54
Event: DRILLING		Start Date: 1/24/2012	End Date: 5/6/2012
Active Datum: RKB @4,697.01ft (above Mean Sea Level)		UWI: NW/NW/0/9/S/21/E/7/0/0/26/PM/N/463/W/0/180/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
4/29/2012	0:00 - 15:00	15.00	DRLPRO	02	D	P		DRILL,ROT,SLIDE,SURVEY, F/6,160 TO 7,781,ROP,108 WOB 22/24K RPM.57, MMRPM 95,TOTAL RPM 152, DIFF,285, GPM 601,SPP ON/OFF 2,460/2,125 TORQUE ON/OFF 9,685/8,245, ROT.95.7%,SLIDE 4.3% HOLE SEEPING 2+/- BBL/HR. 5 SK. LCM W/ 30 Bbl GEL SWEEP 45 VIS. PER 6,HRS, SPOTTING OIL ON PITS FLARE 0 TO 10' INTERMITTENT,
	15:00 - 15:30	0.50	DRLPRO	02	D	P		RIG SERVICE FUNCTION BOP
	15:30 - 0:00	8.50	DRLPRO	02	D	P		DRILL,ROT,SLIDE,SURVEY, F/7,781 TO 8,450,ROP,78.7 WOB 22/24K RPM.53, MMRPM 89,TOTAL RPM 142, DIFF,385, GPM 558,SPP ON/OFF 2,420,1,920 TORQUE ON/OFF 8,685/7,245, ROT.91.26%,SLIDE 8.74% SPOTTING OIL ON PITS FLARE 2 TO 10' INTERMITTENT,
4/30/2012	0:00 - 0:30	0.50	DRLPRO	02	D	P		DRILL,ROT,SLIDE,SURVEY, F/8,450 TO 8507,ROP 114, WOB 22K RPM.55, MMRPM 89,TOTAL RPM 144, DIFF,365,GPM 558,SPP ON/OFF 2,420,1,920 TORQUE ON/OFF 8,685/7,245, ROT.100%,FLARE 0 TO 10' INTERMITTENT,
	0:30 - 1:00	0.50	DRLPRO	05	A	P		CIRC. BOTTOMS UP FOR TRIP
	1:00 - 5:00	4.00	DRLPRO	06	E	P		WIPER TRIP OUT FOR CHOST REAMER TIGHT SPOT AT 5,840 TO 5,400.
	5:00 - 5:30	0.50	DRLPRO	06	E	P		PICK UP MAKE UP CHOST REAMER
	5:30 - 8:00	2.50	DRLPRO	06	E	P		WIPER TRIP IN TAG UP TIGHT SPOT WASH F/ 5,448 TO 5,735 & 5,831 TO 6,500 WASH LAST TWO STANDS TO BOTTOM@ 8,507 BOTTOMS UP FLARE 10' TO 20'OIL TO SURFACE. MI SWACO ON LINE
	8:00 - 15:30	7.50	DRLPRO	02	D	P		DRILL,ROT,SLIDE,SURVEY, F/8,507 TO 8,932,ROP,56.6 WOB 22K RPM.55,MMRPM 95,TOTAL RPM 150, DIFF,285/365, GPM 600,SPP,ON/OFF 2,660/2,100 TORQUE ON/OFF 8,790/8,445, ROT.94.1%,SLIDE 5.9% HOLE DRINKING 30+/- BBL/HR. PUMP 25 SK. LCM W/ 30 Bbl GEL SWEEP 55 VIS. 10 Bbl INTERVALS STOP LOSS, FLARE 0 TO 10' INTERMITTENT, MI SWACO ON LINE
	15:30 - 16:00	0.50	DRLPRO	07	A	P		SERVICE RIG
	16:00 - 0:00	8.00	DRLPRO	02	D	P		DRILL,ROT,SLIDE,SURVEY, F/8,932 TO 9,390,ROP,57.25 WOB 22K RPM.55,MMRPM 95,TOTAL RPM 150, DIFF,285, GPM 575,SPP,ON/OFF 2,630/2,350 TORQUE ON/OFF 9,800/9,250, ROT.98%,SLIDE 2% HOLE SEEPING 5+/- BBL/HR. DUST TWO SX. LCM PER HR. FLARE 6 TO 8' INTERMITTENT, MI SWACO ON LINE

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-7D Spud Date: 3/6/2012  
 Project: UTAH-UINTAH Site: NBU 921-7D Rig Name No: PROPETRO 12/12, SST 54/54  
 Event: DRILLING Start Date: 1/24/2012 End Date: 5/6/2012  
 Active Datum: RKB @4,697.01ft (above Mean Sea Level) UWI: NWNW0/9/S/21/E/7/0/0/26/PM/N/463/W/0/180/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation	
5/1/2012	0:00 - 12:00	12.00	DRLPRO	02	D	P		DRILL, ROT, SURVEY, F/9,390 TO 9,978 ROP, 49 WOB 24K RPM.50/65, MMRPM 88, TOTAL RPM 153, DIFF, 140/160, GPM 510/550, SPP, ON/OFF 2,500/2,350 TORQUE ON/OFF 10,400/9,700, ROT.100%, HOLE STABLE, FLARE 3' TO 6' INTERMITTENT, MI SWACO ON LINE HOLD 60 PSI, PVT 476 GAS INFLUX 60 Bbls, HOLD 150 1/2 CHOKE TOTAL PRESSURE 300 FLARE 40 ft. +/- F/2 MINS. DROPE BACK TO 20 ft. F/3 MINS, DROPE BACK TO 5' TO 6' FLARE HOLD 150 ANNULAR PRESSURE TO REPLACE GAIN FLUID PVT BACK TO 476 SAME HOLDING 75/100 PSI W/ DRILLING SHUT IN ON CONN. W/ 200 PSI TO CHECK FOR INFLUX, WHILE SERVICE RIG NO INFLUX SERVICE RIG	
	12:00 - 12:30	0.50	DRLPRO	07	A	P			
	12:30 - 15:00	2.50	DRLPRO	02	D	P		DRILL, ROT, SURVEY, F/9,978 TO 9,994 ROP, 6.4 WOB 24K RPM.45/60, MMRPM 88/93, TOTAL RPM 133/153, DIFF, 110/120 GPM 510/560, SPP, ON/OFF 2,500/2,350 TORQUE ON/OFF 10,400/9,700, ROT.100%, HOLE STABLE, FLARE 3' TO 6' INTERMITTENT, MI SWACO ON LINE HOLD 100 PSI W/ DRILLING CIRC. BOTTOMS UP & SPOT 125 Bbls 11. KILL MUD. HOLD 100 ON ANNULAR PRESSURE TOO H WORK TIGHT SPOT @ 9,750	
	15:00 - 16:30	1.50	DRLPRO	05	A	P		CHANGE OUT BIT & MOTOR , PU MU NEW BATTERY PACK , ORIENT MOTOR.	
	16:30 - 21:00	4.50	DRLPRO	06	A	P		TIH BHA & 5 STDS. DP, TEST MOTOR	
	21:00 - 23:00	2.00	DRLPRO	06	A	P		TRIP IN TO SHOE INSTALL REAMER & ROT. RUBBER CUT DRILLING LINE 85'	
	23:00 - 0:00	1.00	DRLPRO	06	A	P		TIH WASH LAST TWO STANDS TO BOTTOM F/9,788 TO 9,994	
	5/2/2012	0:00 - 0:30	0.50	DRLPRO	06	A	P		DRILL, ROT, SURVEY, F/9,994 TO 10,553 ROP, 55.9 WOB 22K RPM.50, MMRPM 88, TOTAL RPM 138, DIFF, 245 GPM 550, SPP, ON/OFF 2,655/2,350 TORQUE ON/OFF 10,245/8,580, ROT.100%, HOLE SEEPING 3/5 Bbls PER HR, FLARE 8' TO 10' MI SWACO ON LINE HOLD 125 PSI W/ DRILLING, 200 SHUT IN ON CONN.
		0:30 - 1:30	1.00	DRLPRO	09	A	P		RIG SERVICE
		1:30 - 5:00	3.50	DRLPRO	06	A	P		DRILL, ROT, SURVEY, F/10,553 TO 10,934 ROP, 44.8 WOB 22K RPM.53, MMRPM 88, TOTAL RPM 138, DIFF, 245 GPM 550, SPP, ON/OFF 2,785/2,350 TORQUE ON/OFF 8,500/8,165, ROT.100%, HOLE SEEPING 3/5 Bbls PER HR, MIX LCM 3 SX PER 2 HRS. FLARE 8' TO 10' MI SWACO ON LINE HOLD 155 PSI W/ DRILLING, 200 SHUT IN. CONN.
5:00 - 15:00		10.00	DRLPRO	02	D	P			
	15:00 - 15:30	0.50	DRLPRO	07	A	P			
	15:30 - 0:00	8.50	DRLPRO	02	D	P			

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

Well: NBU 921-7D Spud Date: 3/6/2012  
 Project: UTAH-UINTAH Site: NBU 921-7D Rig Name No: PROPETRO 12/12, SST 54/54  
 Event: DRILLING Start Date: 1/24/2012 End Date: 5/6/2012  
 Active Datum: RKB @4,697.01ft (above Mean Sea Level) UWI: NW/NW/0/9/S/21/E/7/0/0/26/PM/N/463/W/0/180/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
5/3/2012	0:00 - 12:00	12.00	DRLPRO	02	B	P		DRILL,ROT,SURVEY, F/ 10,934 TO 11,219 ROP,23.75 WOB 22/28K RPM.45,MMRPM 88,TOTAL RPM 138, DIFF,45 GPM 505,SPP,ON/OFF 2,430/2,020 TORQUE ON/OFF 9,785/8,865, ROT.100% FLARE 8' TO 10' INFLUX 20 Bbls,AT 11,218 HOLD 250 W/ CHOKE TOTAL PRESSURE 401 FLARE 60 TO 80 ft.+/- DROPEL BACK TO 30' TO 40' ft.IN 4 MINS,DROPEL BACK TO 8' TO 10' FLARE,  MI SWACO ON LINE HOLD 100 PSI W/ DRILLING, 200 SHUT IN. CONN.
	12:00 - 12:30	0.50	DRLPRO	07	A	P		RIG SERVICE CHG, ALL SHAKER SCREENS F/ API 170 TO API 200
	12:30 - 0:00	11.50	DRLPRO	02	B	P		DRILL,ROT,SURVEY, F/ 11,219 TO 11,631 ROP,35.8 WOB 22/28K RPM.45/75,MMRPM 88,TOTAL RPM 138, DIFF,45/210 GPM 505,SPP,ON/OFF 2,430/2,020 TORQUE ON/OFF 9,785/8,865, ROT.100% FLARE 6' TO 8'  MI SWACO ON LINE HOLD 100 PSI W/ DRILLING, 200 SHUT IN. CONN.
5/4/2012	0:00 - 7:30	7.50	DRLPRO	02	B	P		DRILL,ROT,SURVEY, F/ 11,631 TO 11,867 ROP,31.4 WOB 24K RPM.55,MMRPM 88,TOTAL RPM 138, DIFF,280 GPM 505,SPP,ON/OFF 2,500/2,100 TORQUE ON/OFF 9,885/8,855, ROT.100% TD WELL AT 07:30 5/4/12, FLARE 6' TO 8' MUD WT. AT TD 10.8 IN AND 10.2 OUT, MUD LOSS 325 Bbls +/-  MI SWACO ON LINE HOLD 70 PSI W/ DRILLING, 200 SHUT IN.ON CONN.
	7:30 - 9:00	1.50	DRLPRO	05	A	P		CIRC.COND.MUD F/LOGS DRILLING BREAK AT TD, CIRC OUT GAS INFLUX 42 Bbls 425 PSI ON ANNULAR FLARE 60' TO 80' OFFICE ORDERS, DRILL 100' OF RAT HOLE F/LOGS NEW TD IS 11,963 MUD LOSS 125 Bbls.
	9:00 - 12:00	3.00	DRLPRO	02	B	P		DRILL,ROT,SURVEY, F/ 11,867 TO 11,962 ROP,31.6 WOB 24K RPM.55,MMRPM 88,TOTAL RPM 138, DIFF,95/280 GPM 505,SPP,ON/OFF 2,500/2,100 TORQUE ON/OFF 9,885/8,855,TD WELL AT 12:00 5/4/12, FLARE 8' TO 10' COND.MUD WHILE DRILLING TO 11. IN VIS 55/ OUT 10.8 VIS 55 MUD LOSS 225 Bbls.
	12:00 - 16:00	4.00	DRLPRO	05	A	P		MI SWACO ON LINE HOLD 130/75 PSI W/ DRILLING, 250 SHUT IN ON CONN.@ 12:00 MI SWACO OFF LINE. TALK WITH KENNY GATHINGS AND BYPASS SHAKER MIX LCM TO 20% HAUL MUD F/ ENSIGN 139, 300 Bbls. 11.7 PPB
	16:00 - 19:00	3.00	DRLPRO	06	E	P		CIRC.COND.MUD TO VIS 55 WT 11.2 & LCM 30% FOR WPER TRIP LOSS 223 Bbls. WPER TRIP OUT F/ 11,962 TO 7,961 WORK TIGHT SPOT@ 11,864 TO 11,769 100K OVER PULL, WHILE MAKING WPER TRIP JD FIELD SER. BUILT VOLUME IN PITS COND MUD 300 Bbls 13.PPG FOR SPOT,MOVE TO UPRIGHT & 300 Bbls 11.4 IN PITS.

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

Well: NBU 921-7D		Spud Date: 3/6/2012	
Project: UTAH-UINTAH		Site: NBU 921-7D	Rig Name No: PROPETRO 12/12, SST 54/54
Event: DRILLING		Start Date: 1/24/2012	End Date: 5/6/2012
Active Datum: RKB @4,697.01ft (above Mean Sea Level)		UWI: NW/NW/0/9/S/21/E/7/0/0/26/PM/N/463/W/0/180/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	19:00 - 21:00	2.00	DRLPRO	06	E	P		WPER TRIP IN WASH LAST TWO STANDS TO BOTTOM 30' OF FILL.
	21:00 - 23:00	2.00	DRLPRO	05	A	P		CIRC.COND F/ LOGS MUD LOSS 120 Bbls
	23:00 - 0:00	1.00	DRLPRO	05	G	P		CIRC.COND.SPOT 300 Bbls 13. MUD ON BOTTOM EMW 11.3 TOP OF PILL@ 7,100
5/5/2012	0:00 - 9:30	9.50	DRLPRO	06	A	P		POOH RACK BACK 5 STDS DP, LAY DOWN DP TIGHT SPOT@5,689 TIH 5 STDS.LAY DOWN DP&BHA
	9:30 - 11:00	1.50	DRLPRO	06	A	P		LD BIT,MUD MOTOR,MWD,MONEL FUNCTION BLIND RAMS
	11:00 - 12:30	1.50	DRLPRO	06	A	P		REMOVE SMITH BEARING ASS.INSTALL CASING RUNNING HEAD,REMOVE WEAR BUSHING.
	12:30 - 18:00	5.50	DRLPRO	11	D	P		SAFETY MEETING RIG UP HALLIBURTON WIRE LINE RUN IN HOLE W/ LOG #1 TRIPLE COMBO, BRIDGE OUT AT 5,646 WORK TOOL 1/2 HR. NO LUCK POOH TO REMOVE BOW SPRING.RIH WITH LOG BRIDGE OUT AT 5,646, LOG OUT F/ 5646 TO SURFACE TRIPLE COMBO,RIG DOWN
	18:00 - 20:00	2.00	DRLPRO	12	A	P		SAFETY MEETING RIG UP FRANK'S
5/6/2012	20:00 - 0:00	4.00	DRLPRO	12	A	P		RUN 4.5 LTC 11.6 P-110 CASING 161 JTS.@6,486
	-	-	CSGPRO					Primary CEMENT JOB PRODUCTION CASING- 4.500 in
	0:00 - 4:30	4.50	CSGPRO	12	C	P		RUN CASING,CASING RAN AS FOLLOWS RAN 159 JTS OF 4.5", 11.6#, P-110, LT&C CASING & 116 JTS OF 4.5", 11.6#, P-110, DQX CASING TOTAL JTS. 275, WITH HALLIBURTON FLOAT SHOE & FLOAT COLLAR PLACED 1 JT ABOVE SHOE. 20 CENTRALIZERS SPACED @ 15' ABOVE SHOE, TOP OF SECOUND COLLARS, & EVERY 3RD COLLAR TO 9,572' 2 MARKER JOINTS AT 11,295' & 8,566' + X-OVER AT 5,112, TAG AT 11,962 LAY DOWN TAG JT.AND LAND CASING @ 11,961' PU 155K. SO 115K. STRING WT 135K
	4:30 - 8:00	3.50	CSGPRO	05	A	P		CIRC.GAS CUT MUD F/ 13 PPG TO 11.2 PPG COND. FOR CEMENTING 4.5 CASING FLARE 40 TO 50 FT.

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-7D		Spud Date: 3/6/2012	
Project: UTAH-UINTAH		Site: NBU 921-7D	Rig Name No: PROPETRO 12/12, SST 54/54
Event: DRILLING		Start Date: 1/24/2012	End Date: 5/6/2012
Active Datum: RKB @4,697.01ft (above Mean Sea Level)		UWI: NW/NW/0/9/S/21/E/7/0/0/26/PM/N/463/W/0/180/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	8:00 - 11:30	3.50	CSGPRO	12	E	P		CEMENT 4 1/2 CASING AS FOLLOWS SAFETY MEETING, BAKER HUGHES BJ,INSTALL CMT.HEAD,TEST PUMP & LINES TO 7,000 PSI, DROP BTM.PLUG, PUMP 25 BBLS OF FRESH WATER SPACER MIX AND PUMP LEAD CEMENT 673 SKS.@12.5 PPB YLD 2.02 MIX WATER GPS 10.62, 242.11 Bbls.SLURRY+ADD.PL2+6%Gel+5#KOL+0.4%SMS+0.25#CF+0.3%R-3, MIX AND PUMP TAIL CEMENT 1365 SKS @14.3 PPB. YLD 1.31 MIX WATER GPS 5.91 318.41 Bbls.SLURRY+ADD.50:50:2+10%NaCL+0.2%R-3+0.05#SF+0.002FP-6L SHUT DOWN. WASH LINES. DROP PLUG DISPLACE @ 7 BPM W/ 185 Bbls.FRESH WATER + CLAYCARE + 1 GAL. MAGNACIDE. SLOW TO 2.5 BPM BUMP PLUG TO 3857 PSI HOLD 5 MINS.BLEAD BACK 2.5 Bbls. FLOATS HELD TOP OF TAIL CEMENT CALCULATED TO 4,153, 25 Bbls. OF SPACER WATER TO PIT GOOD RETURNS THROUGH OUT JOB. RIG DOWN B J SERVICE. LIFT PRESSURE@ 3429 PSI.
	11:30 - 14:00	2.50	CSGPRO	14	A	P		WASH OUT BOP & EQUIPMENT SET SLIPS W/ 115K, NIPPLE DOWN CUT OFF CASING LAY DOWN CUT OFF JT.
	14:00 - 18:00	4.00	CSGPRO	01	E	P		CLEAN TANKS RELEASE RIG 5/5/12@18:00 RIG MOVE 11 MILES TO NEW LOCATION NBU 922-30C PAD,R W JONES TO BE ON LOCATION, 5/6/12@06:00 AM FOR RIG MOVE

## 1 General

### 1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

### 1.2 Well/Wellbore Information

Well	NBU 921-7D	Wellbore No.	OH
Well Name	NBU 921-7D	Wellbore Name	NBU 921-7D
Report No.	1	Report Date	5/25/2012
Project	UTAH-UINTAH	Site	NBU 921-7D
Rig Name/No.		Event	COMPLETION
Start Date	5/25/2012	End Date	6/6/2012
Spud Date	3/6/2012	Active Datum	RKB @4,697.00usft (above Mean Sea Level)
UWI	NW/NW/0/9/S/21/E/7/0/0/26/PM/N/463/W/0/180/0/0		

### 1.3 General

Contractor	CASED HOLE	Job Method		Supervisor	STEVE WALL, SR.
Perforated Assembly	PRODUCTION CASING	Conveyed Method			

### 1.4 Initial Conditions

Fluid Type		Fluid Density	
Surface Press		Estimate Res Press	
TVD Fluid Top		Fluid Head	
Hydrostatic Press		Press Difference	
Balance Cond	NEUTRAL		

### 1.5 Summary

Gross Interval	10,262.0 (usft)-11,716.0 (u	Start Date/Time	5/30/2012 12:00AM
No. of Intervals	27	End Date/Time	6/5/2012 12:00AM
Total Shots	111	Net Perforation Interval	35.00 (usft)
Avg Shot Density	3.17 (shot/ft)	Final Surface Pressure	
		Final Press Date	

## 2 Intervals

### 2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
6/5/2012 12:00AM	MESAVERDE/			10,262.0	10,262.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

## 2.1 Perforated Interval (Continued)

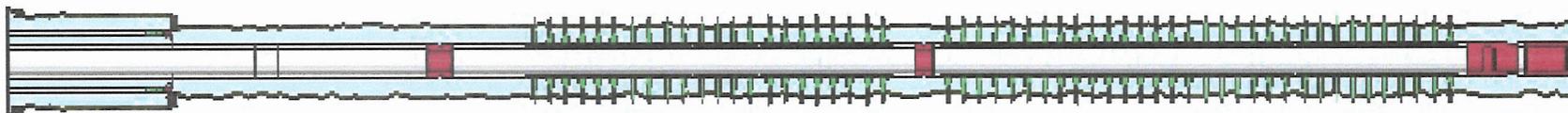
Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
6/5/2012 12:00AM	MESAVERDE/			10,289.0	10,290.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/5/2012 12:00AM	MESAVERDE/			10,306.0	10,307.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/5/2012 12:00AM	MESAVERDE/			10,324.0	10,325.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/5/2012 12:00AM	MESAVERDE/			10,397.0	10,398.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/5/2012 12:00AM	MESAVERDE/			10,466.0	10,467.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/5/2012 12:00AM	MESAVERDE/			10,546.0	10,548.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/5/2012 12:00AM	MESAVERDE/			10,560.0	10,561.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/5/2012 12:00AM	MESAVERDE/			10,657.0	10,658.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/5/2012 12:00AM	MESAVERDE/			10,683.0	10,684.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/5/2012 12:00AM	MESAVERDE/			10,697.0	10,698.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/5/2012 12:00AM	MESAVERDE/			10,761.0	10,763.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/4/2012 12:00AM	MESAVERDE/			11,327.0	11,328.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/4/2012 12:00AM	MESAVERDE/			11,348.0	11,352.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/4/2012 12:00AM	MESAVERDE/			11,369.0	11,370.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/4/2012 12:00AM	MESAVERDE/			11,399.0	11,400.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/4/2012 12:00AM	MESAVERDE/			11,409.0	11,410.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/4/2012 12:00AM	MESAVERDE/			11,428.0	11,429.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/4/2012 12:00AM	MESAVERDE/			11,442.0	11,443.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/4/2012 12:00AM	MESAVERDE/			11,460.0	11,461.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/4/2012 12:00AM	MESAVERDE/			11,500.0	11,501.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/4/2012 12:00AM	MESAVERDE/			11,511.0	11,512.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
6/4/2012 12:00AM	MESAVERDE/			11,525.0	11,526.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
5/30/2012 12:00AM	MESAVERDE/			11,614.0	11,616.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
5/30/2012 12:00AM	MESAVERDE/			11,628.0	11,629.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
5/30/2012 12:00AM	MESAVERDE/			11,642.0	11,644.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
5/30/2012 12:00AM	MESAVERDE/			11,655.0	11,656.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
5/30/2012 12:00AM	MESAVERDE/			11,714.0	11,716.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

3 Plots

3.1 Wellbore Schematic



**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-7D

Spud Date: 3/6/2012

Project: UTAH-UINTAH

Site: NBU 921-7D

Rig Name No: SWABBCO 8/8

Event: COMPLETION

Start Date: 5/25/2012

End Date: 6/6/2012

Active Datum: RKB @4,697.01ft (above Mean Sea Level)

UWI: NWNW/0/9/S/21/E/7/0/0/26/PM/N/463/W/0/180/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
5/16/2012	11:00 - 11:15	0.25	SURFPR	48		P		HSM W/B & C QUICK TEST
	11:15 - 13:00	1.75	SURFPR			P		WHP 0 PSI. FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1050 PSI. HELD FOR 15 MIN LOST 7 PSI. PSI TEST T/ 3562 PSI. HELD FOR 15 MIN LOST 44 PSI. 1ST PSI TEST T/ 9081 PSI. HELD FOR 30 MIN LOST 44 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. MOVE T/ NEXT WELL. SWIFN
5/17/2012	-							
5/18/2012	-							
5/30/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, RIGGING DOWN & MOVING EQUIP.
	7:30 - 11:00	3.50	COMP	30	A	P		RIG DWN OFF NBU 921-20C, MIRU, ND WH NU BOPS, RU FLOOR & EQUIP.
	11:00 - 17:00	6.00	COMP	31	I	P		TALLY & PU 37/8 BIT & 312 JTS 23/8 P-110 TBG OFF FLOAT. EOT @ 9900 ' SW SDFN. HSM TRIPPING TBG, WATCHING PINCH POINTS.
5/31/2012	7:00 - 7:30	0.50	COMP	48		P		SICP 0, PU 8 JTS TBG, 320 IN EOT @ 10,153', POOH W/ 320 JTS 23/8 P-110 L/D BIT. ND BOPS NU FV, RU B&C INSTALL HANGER TEST FV TO 9,000# PSI FOR 10 MIN OK, PULL HANGER. RD B&C SWM PREP TO PERF IN AM. SDFD
	7:30 - 15:00	7.50	COMP	31	I	P		HSM, WORKING W/ WIRE LINE. RU CASD HOLE, RIH W/ 31/8 23 GRM, .36" HOLES, 120 DEG PHASING GUNS PERF 1ST STG AS OF PROCEDURE, POOH SWM PREP TO FRAC 6/4/12. SDFWE
6/1/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, WORKING W/ WIRELINE & FRAC CREW & PRIME UP PUMPS & LINES, TETS TO 9500 PSI, LOST 1100 PSI IN 15 MIN, SET POPOFF @ 8750 PSI, SET KILLS ON 6 TRUCKS @ 8800 PSI, 8775 PSI, 8750 PSI, 8725 PSI, 8700 PSI, 8675 PSI.
	7:30 - 15:00	7.50	COMP	34	H	P		( STG #1 ) WHP 2245 PSI, BRK 5119 PSI @ 5.0 BPM. ISIP 4255 PSI, FG .80. SPOT ACID ON PERFS LET SOAK FOR 5 MINS. CALC HOLES OPEN @ 50.2 BPM @ 6906 PSI = 100% HOLES OPEN. MP 8446 PSI, MR 52.1 BPM, AP 7098 PSI, AR 49.8 BPM ISIP 4228 PSI, FG .80 NPI -27 PSI.
6/4/2012	6:30 - 7:00	0.50	COMP	33		P		
	7:00 - 8:17	1.28	COMP	36	E	P		

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-7D Spud Date: 3/6/2012  
 Project: UTAH-UINTAH Site: NBU 921-7D Rig Name No: SWABBCO 8/8  
 Event: COMPLETION Start Date: 5/25/2012 End Date: 6/6/2012  
 Active Datum: RKB @4,697.01ft (above Mean Sea Level) UWI: NWNW/0/9/S/21/E/7/0/0/26/PM/N/463/W/0/180/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	8:17 - 12:10	3.88	COMP	36	E	P		( STG #2 ) PU 41/2 HAL 8-K CBP & 31/8 EXP 23 GRM .36" HLS, 120 DEG PHASING, SET CBP @ 11,556', PERF WELL AS OF PROCEDURE. WHP 1880 PSI, BRK 4357 PSI @ 5.4 BPM. ISIP 3898 PSI, FG .78. CALC HOLES OPEN @ 49.6 BPM @ 5945 PSI = 100% HOLES OPEN.PUMPED 74,834 LBS SAND HAD TO SHUT DWN & FIX LEAK IN POPOFF TEE.TRYED TO GET BACK IN WELL PRESSURED UP TO 8664 8 BPM, CALL FOR ORDERS , MOVE TO NEXT ZONE. MP 8664 PSI, MR 51.8 BPM, AP 6240 PSI, AR 49.8 BPM ISIP 4086 PSI, FG .80 NPI 188 PSI.
	12:10 - 19:00	6.83	COMP	36	E	P		( STG #3 ) PU 41/2 HAL 8-K CBP & 31/8 EXP 23 GRM .36" HLS, 90 DEG PHASING, TAGGED UP @ 11,336 ' PULL UP TO 10,900' SHUT DWN FOR TRIBAL LOCATIN INSPECTION, START PULLING AGAIN @ 1500 HRS. 100 FT PER MIN. POOH FLOW WELL FOR 15 MIN. REFLUSH W/ 200 BBLS. RIH W/ CBP & GUNS SET CBP @ 11389' & PERF WELL AS OF PROCEDURE POOH SWI SDFN.
6/5/2012	6:30 - 7:53	1.38	COMP	36		P		HSM W/ SUPERIOR. ( STG # 3 ) WHP 3585 PSI, BRK 4938 PSI @ 5.7 BPM. ISIP 3984 PSI, FG .79. CALC HOLES OPEN @ 51.4 BPM @ 6386 PSI = 100% HOLES OPEN. MP 7322 PSI, MR 54.0 BPM, AP 6513 PSI, AR 51.6 BPM ISIP 3995 PSI, FG .79 NPI 11 PSI.
	7:53 - 10:20	2.45	COMP	36	E	P		( STG #4 ) PU 41/2 HAL 8-K CBP & 31/8 EXP 23 GRM .36" HLS, 120 DEG PHASING, SET CBP @ 10,793', PERF WELL AS OF PROCEDURE. WHP 630 PSI, BRK 3733 PSI @ 5.7 BPM. ISIP 2876 PSI, FG .71. CALC HOLES OPEN @ 51.4 BPM @ 5591 PSI = 100% MP 5995 PSI, MR 54.6 BPM, AP 5115 PSI, AR 52.1 BPM ISIP 3340 PSI, FG .75 NPI 464 PSI.
	10:20 - 12:04	1.73	COMP	36	E	P		( STG # 5 ) PU 41/2 HAL 8-K CBP & 31/8 EXP 23 GRM .36" HLS, 120 DEG PHASING, SET CBP @ 10,496', PERF WELL AS OF PROCEDURE. WHP 3050 PSI, BRK 4242 PSI @ 5.7 BPM. ISIP 3291 PSI, FG .76. CALC HOLES OPEN @ 52.1 BPM @ 6745 PSI = 100% MP 6816 PSI, MR 53.3 BPM, AP 5837 PSI, AR 52.0 BPM ISIP 3565 PSI, FG .78 NPI 274 PSI.
								TOTAL 30/50 TLC 221,340 LBS TOTAL 30/50 WHITE 28,894 LBS TOTAL 12,970 BBLS WATER 293 GALS SCALE INH 163 GALS BIOCIDIE FRAC CREW GALS DIESEL, 1575 GALS

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-7D

Spud Date: 3/6/2012

Project: UTAH-UINTAH

Site: NBU 921-7D

Rig Name No: SWABBCO 8/8

Event: COMPLETION

Start Date: 5/25/2012

End Date: 6/6/2012

Active Datum: RKB @4,697.01ft (above Mean Sea Level)

UWI: NWNW/0/9/S/21/E/7/0/0/26/PM/N/463/W/0/180/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	12:04 - 13:30	1.43	COMP	34	I	P		( KILL PLUG ) RIH SET 8-K CBP @ 10,172', POOH SWI RD WL & FRAC CREW.
	13:30 - 15:00	1.50	COMP	30	F	P		ND FV NU 10K BOPS RU FLOOR & TBG EQUIP. WIND BLOWING TO HARD TO TRIP TBG, SWI SDFN.
6/6/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, WORKING W/ SWI VEL DRILLING OUT CBPS.
	7:30 - 10:30	3.00	COMP	31	I	P		RIH W/ 37/8 BIT, POBS, 1.875 X/N & 320 JTS 23/8 P-110 OUT OF DERICK, RU DRLG EQUIP. BROKE CIRC CONV TEST FLOW LONE TO 4,000 #.
	10:30 - 17:00	6.50	COMP	44	C	P		C/O 10' SAND TAG 1ST PLUG @ 10,172' DRL PLG IN 6 MIN, 1800# PSI INCREASE RIH  C/O 30' SAND TAG 2ND PLUG @ 10,496' DRL PLG IN 6 MIN, 200# PSI INCREASE RIH  C/O 25' SAND TAG 3RD PLUG @ 10,793' DRL PLG IN 5 MIN, 1750# PSI INCREASE RIH  C/O 25' SAND TAG 4TH PLUG @ 11,389' DRL PLG IN 6 MIN, 1400# PSI INCREASE RIH  C/O 30' SAND TAG 5TH PLUG @ 11,556' DRL PLG IN 3 MIN, 1800# PSI INCREASE RIH  C/O TO 11,837', CIRC CLN, L/D 15 JTS. LAND TBG ON 358 JTS 23/8 L-80. ND BOPS NU WH, TEST FLOW LINE TO 4,000 PSI, PUMP OFF BIT, TURN WELL OVER TO FB CREW. RIG DOWN, RACK OUT EQUIP, PREP TO MOVE IN AM. SDFN  KB= 18' ( SURFOPEN W/ POPOFF ) HANGER = .83' SICP 4100 PSI, FTP 3100 PSI 358 JTS 23/8 P-110 = 11,368.06' POBS W/ 1.875 X/N = 2.20' EOT @ 11,389'  TWTR 13,130 BBLs TWR 1500 BBLs TWLTR 11,630 BBLs  381 JTS IN WELL 358 LANDED 23 TO RETURN
	15:30 - 16:00	0.50	COMP	50				WELL TURNED TO SALES @ 1530 HR ON 6/6/2012, 1200 MCFD, 1920 BWPD, FCP 4182#, FTP 3589#, 18/64" CK.
6/12/2012	7:00 -			50				WELL IP'D ON 6/12/12 - 3866 MCFD, 0 BOPD, 432 BWPD, CP 3471#, FTP 2700#, CK 18/64", LP 284#, 24 HRS

# **US ROCKIES REGION PLANNING**

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

**UINTAH\_NBU 921-7D**

**NBU 921-7D**

**NBU 921-7D**

**Design: NBU 921-7D**

## **Standard Survey Report**

**14 May, 2012**

# Anadarko Petroleum Corp

## Survey Report

<b>Company:</b> US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b> Well NBU 921-7D
<b>Project:</b> UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b> 18' RKB + 4680' GL @ 4698.00ft (SST 54)
<b>Site:</b> UINTAH_NBU 921-7D	<b>MD Reference:</b> 18' RKB + 4680' GL @ 4698.00ft (SST 54)
<b>Well:</b> NBU 921-7D	<b>North Reference:</b> True
<b>Wellbore:</b> NBU 921-7D	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> NBU 921-7D	<b>Database:</b> edmp

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

<b>Site</b> UINTAH_NBU 921-7D					
<b>Site Position:</b>		<b>Northing:</b>	14,549,716.60 usft	<b>Latitude:</b>	40.056606
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,030,870.64 usft	<b>Longitude:</b>	-109.604683
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.90 °

<b>Well</b> NBU 921-7D						
<b>Well Position</b>	+N/-S	0.00 ft	<b>Northing:</b>	14,549,716.60 usft	<b>Latitude:</b>	40.056606
	+E/-W	0.00 ft	<b>Easting:</b>	2,030,870.64 usft	<b>Longitude:</b>	-109.604683
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,680.00 ft

<b>Wellbore</b> NBU 921-7D					
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
	IGRF2010	3/15/2012	(°)	(°)	(nT)
			11.03	65.87	52,273

<b>Design</b> NBU 921-7D					
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	15.00
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	15.00	0.00	0.00	216.50	

<b>Survey Program</b> Date 5/14/2012					
<b>From</b>	<b>To</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
(ft)	(ft)				
189.00	3,179.00	Survey #1 (NBU 921-7D)	MWD	MWD - STANDARD	
3,244.00	11,962.00	Survey #2 (NBU 921-7D)	MWD	MWD - STANDARD	

<b>Survey</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
15.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
189.00	0.62	320.85	189.00	0.73	-0.59	-0.23	0.36	0.36	0.00	0.00
276.00	0.62	339.65	275.99	1.54	-1.06	-0.61	0.23	0.00	21.61	21.61
359.00	0.44	6.90	358.99	2.27	-1.17	-1.13	0.37	-0.22	32.83	32.83
449.00	0.15	95.33	448.99	2.61	-1.01	-1.49	0.51	-0.32	98.26	98.26
539.00	0.53	179.25	538.99	2.18	-0.89	-1.22	0.59	0.42	93.24	93.24
629.00	0.35	160.27	628.98	1.50	-0.79	-0.74	0.25	-0.20	-21.09	-21.09
719.00	0.35	166.25	718.98	0.98	-0.64	-0.41	0.04	0.00	6.64	6.64
809.00	0.41	162.43	808.98	0.40	-0.47	-0.04	0.07	0.07	-4.24	-4.24
899.00	0.44	147.00	898.98	-0.19	-0.19	0.27	0.13	0.03	-17.14	-17.14

# Anadarko Petroleum Corp

## Survey Report

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-7D  
**Well:** NBU 921-7D  
**Wellbore:** NBU 921-7D  
**Design:** NBU 921-7D

**Local Co-ordinate Reference:** Well NBU 921-7D  
**TVD Reference:** 18' RKB + 4680' GL @ 4698.00ft (SST 54)  
**MD Reference:** 18' RKB + 4680' GL @ 4698.00ft (SST 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** edmp

### Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
989.00	0.44	146.21	988.97	-0.77	0.19	0.50	0.01	0.00	-0.88
1,079.00	0.44	187.16	1,078.97	-1.40	0.34	0.92	0.34	0.00	45.50
1,169.00	0.18	105.16	1,168.97	-1.78	0.44	1.17	0.50	-0.29	-91.11
1,259.00	0.18	82.57	1,258.97	-1.80	0.71	1.02	0.08	0.00	-25.10
1,349.00	0.18	71.76	1,348.97	-1.74	0.99	0.81	0.04	0.00	-12.01
1,439.00	0.18	115.27	1,438.97	-1.75	1.25	0.67	0.15	0.00	48.34
1,529.00	0.35	349.94	1,528.97	-1.54	1.33	0.45	0.53	0.19	-139.26
1,619.00	0.00	295.88	1,618.97	-1.27	1.28	0.26	0.39	-0.39	0.00
1,709.00	0.62	293.86	1,708.97	-1.07	0.84	0.37	0.69	0.69	0.00
1,799.00	0.62	276.20	1,798.96	-0.82	-0.09	0.72	0.21	0.00	-19.62
1,889.00	0.53	243.94	1,888.96	-0.95	-0.95	1.33	0.37	-0.10	-35.84
2,159.00	0.44	190.06	2,158.95	-2.52	-2.25	3.37	0.17	-0.03	-19.96
2,249.00	0.35	219.95	2,248.95	-3.08	-2.49	3.95	0.25	-0.10	33.21
2,339.00	0.24	30.64	2,338.95	-3.12	-2.57	4.04	0.65	-0.12	189.66
2,429.00	0.35	348.00	2,428.95	-2.69	-2.53	3.67	0.26	0.12	-47.38
2,519.00	0.37	42.09	2,518.94	-2.21	-2.40	3.20	0.36	0.02	60.10
2,609.00	0.35	50.23	2,608.94	-1.82	-1.99	2.64	0.06	-0.02	9.04
2,699.00	0.26	136.71	2,698.94	-1.79	-1.64	2.41	0.47	-0.10	96.09
2,789.00	0.44	97.34	2,788.94	-1.98	-1.16	2.28	0.32	0.20	-43.74
2,879.00	0.35	109.20	2,878.94	-2.12	-0.55	2.03	0.13	-0.10	13.18
2,969.00	0.26	311.88	2,968.94	-2.07	-0.45	1.93	0.66	-0.10	-174.80
3,059.00	0.31	206.93	3,058.94	-2.15	-0.71	2.15	0.50	0.06	-116.61
3,149.00	0.62	307.40	3,148.93	-2.07	-1.21	2.38	0.82	0.34	111.63
3,179.00	0.44	334.47	3,178.93	-1.87	-1.38	2.33	1.01	-0.60	90.23
<b>tie on point</b>									
3,244.00	0.52	309.43	3,243.93	-1.46	-1.72	2.19	0.34	0.12	-38.52
3,339.00	0.56	163.56	3,338.93	-1.63	-1.92	2.45	1.09	0.04	-153.55
3,435.00	2.13	178.44	3,434.90	-3.86	-1.74	4.14	1.66	1.64	15.50
3,530.00	2.19	179.81	3,529.83	-7.44	-1.69	6.99	0.08	0.06	1.44
3,625.00	2.25	178.06	3,624.76	-11.12	-1.62	9.90	0.10	0.06	-1.84
3,721.00	2.44	175.81	3,720.68	-15.04	-1.40	12.93	0.22	0.20	-2.34
3,816.00	2.31	176.56	3,815.60	-18.97	-1.14	15.93	0.14	-0.14	0.79
3,911.00	2.44	175.31	3,910.52	-22.90	-0.86	18.92	0.15	0.14	-1.32
4,005.00	2.38	171.19	4,004.43	-26.82	-0.40	21.80	0.19	-0.06	-4.38
4,101.00	2.38	167.56	4,100.35	-30.74	0.34	24.51	0.16	0.00	-3.78
4,196.00	2.44	174.31	4,195.27	-34.68	0.96	27.30	0.31	0.06	7.11
4,292.00	2.44	202.31	4,291.18	-38.60	0.39	30.80	1.23	0.00	29.17
4,387.00	2.50	202.06	4,386.10	-42.39	-1.16	34.77	0.06	0.06	-0.26
4,481.00	2.38	200.56	4,480.01	-46.12	-2.61	38.63	0.14	-0.13	-1.60
4,575.00	2.38	192.19	4,573.93	-49.85	-3.71	42.28	0.37	0.00	-8.90
4,669.00	2.31	188.56	4,667.85	-53.63	-4.40	45.74	0.17	-0.07	-3.86
4,764.00	0.88	173.44	4,762.81	-56.25	-4.61	47.96	1.56	-1.51	-15.92
4,860.00	0.56	168.44	4,858.80	-57.44	-4.43	48.81	0.34	-0.33	-5.21

# Anadarko Petroleum Corp

## Survey Report

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-7D  
**Well:** NBU 921-7D  
**Wellbore:** NBU 921-7D  
**Design:** NBU 921-7D

**Local Co-ordinate Reference:** Well NBU 921-7D  
**TVD Reference:** 18' RKB + 4680' GL @ 4698.00ft (SST 54)  
**MD Reference:** 18' RKB + 4680' GL @ 4698.00ft (SST 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** edmp

### Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,955.00	1.00	337.31	4,953.80	-57.13	-4.65	48.70	1.63	0.46	177.76
5,050.00	0.94	334.69	5,048.79	-55.66	-5.31	47.91	0.08	-0.06	-2.76
5,146.00	0.56	296.69	5,144.78	-54.74	-6.06	47.61	0.63	-0.40	-39.58
5,241.00	0.56	245.44	5,239.78	-54.73	-6.90	48.10	0.51	0.00	-53.95
5,336.00	0.63	207.31	5,334.77	-55.38	-7.56	49.02	0.42	0.07	-40.14
5,432.00	0.88	197.69	5,430.76	-56.56	-8.03	50.24	0.29	0.26	-10.02
5,527.00	1.44	283.56	5,525.75	-56.97	-9.41	51.40	1.72	0.59	90.39
5,623.00	1.38	269.56	5,621.72	-56.70	-11.74	52.56	0.36	-0.06	-14.58
5,718.00	1.13	319.81	5,716.70	-55.99	-13.49	53.03	1.15	-0.26	52.89
5,814.00	1.06	324.44	5,812.68	-54.54	-14.61	52.54	0.12	-0.07	4.82
5,910.00	0.94	38.56	5,908.67	-53.21	-14.64	51.48	1.26	-0.13	77.21
6,005.00	0.69	63.81	6,003.66	-52.34	-13.64	50.19	0.45	-0.26	26.58
6,100.00	0.50	91.56	6,098.66	-52.10	-12.71	49.45	0.36	-0.20	29.21
6,196.00	0.44	113.81	6,194.65	-52.26	-11.96	49.13	0.20	-0.06	23.18
6,291.00	0.69	139.19	6,289.65	-52.84	-11.25	49.17	0.37	0.26	26.72
6,386.00	0.88	142.56	6,384.64	-53.86	-10.43	49.50	0.21	0.20	3.55
6,482.00	1.13	144.56	6,480.62	-55.21	-9.44	50.00	0.26	0.26	2.08
6,577.00	0.50	174.69	6,575.61	-56.39	-8.85	50.60	0.78	-0.66	31.72
6,673.00	0.75	166.69	6,671.61	-57.42	-8.67	51.31	0.28	0.26	-8.33
6,767.00	1.06	154.94	6,765.60	-58.80	-8.16	52.12	0.38	0.33	-12.50
6,863.00	0.38	197.44	6,861.59	-59.91	-7.88	52.85	0.86	-0.71	44.27
6,958.00	1.06	288.44	6,956.58	-59.93	-8.81	53.42	1.19	0.72	95.79
7,053.00	0.81	270.19	7,051.57	-59.65	-10.31	54.09	0.41	-0.26	-19.21
7,149.00	0.69	235.81	7,147.56	-59.98	-11.47	55.04	0.48	-0.13	-35.81
7,244.00	0.81	205.31	7,242.56	-60.90	-12.23	56.23	0.43	0.13	-32.11
7,339.00	0.81	184.94	7,337.55	-62.18	-12.57	57.47	0.30	0.00	-21.44
7,434.00	0.56	117.31	7,432.54	-63.06	-12.22	57.96	0.83	-0.26	-71.19
7,530.00	1.19	41.69	7,528.53	-62.53	-11.14	56.90	1.23	0.66	-78.77
7,625.00	1.06	42.19	7,623.51	-61.15	-9.89	55.04	0.14	-0.14	0.53
7,721.00	0.81	45.44	7,719.50	-60.01	-8.81	53.49	0.27	-0.26	3.39
7,816.00	0.81	59.19	7,814.49	-59.20	-7.76	52.20	0.20	0.00	14.47
7,911.00	0.81	85.56	7,909.48	-58.80	-6.51	51.14	0.39	0.00	27.76
8,007.00	0.63	103.19	8,005.47	-58.87	-5.32	50.49	0.30	-0.19	18.36
8,101.00	0.75	122.44	8,099.47	-59.32	-4.30	50.24	0.28	0.13	20.48
8,196.00	0.25	33.94	8,194.46	-59.48	-3.66	49.99	0.83	-0.53	-93.16
8,291.00	0.44	336.94	8,289.46	-58.97	-3.69	49.60	0.39	0.20	-60.00
8,387.00	0.25	285.31	8,385.46	-58.58	-4.03	49.49	0.36	-0.20	-53.78
8,491.00	0.19	192.31	8,489.46	-58.68	-4.29	49.73	0.31	-0.06	-89.42
8,586.00	0.44	333.69	8,584.46	-58.51	-4.48	49.70	0.63	0.26	148.82
8,682.00	0.06	268.44	8,680.46	-58.18	-4.70	49.57	0.44	-0.40	-67.97
8,777.00	0.31	193.44	8,775.46	-58.43	-4.81	49.83	0.32	0.26	-78.95
8,872.00	0.75	193.06	8,870.45	-59.29	-5.01	50.64	0.46	0.46	-0.40
8,968.00	0.69	210.69	8,966.45	-60.40	-5.44	51.79	0.24	-0.06	18.36

# Anadarko Petroleum Corp

## Survey Report

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-7D  
**Well:** NBU 921-7D  
**Wellbore:** NBU 921-7D  
**Design:** NBU 921-7D

**Local Co-ordinate Reference:** Well NBU 921-7D  
**TVD Reference:** 18' RKB + 4680' GL @ 4698.00ft (SST 54)  
**MD Reference:** 18' RKB + 4680' GL @ 4698.00ft (SST 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** edmp

### Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,063.00	0.63	219.69	9,061.44	-61.29	-6.07	52.88	0.13	-0.06	9.47
9,157.00	0.63	201.31	9,155.44	-62.17	-6.59	53.90	0.21	0.00	-19.55
9,253.00	0.69	193.19	9,251.43	-63.23	-6.91	54.94	0.12	0.06	-8.46
9,348.00	0.94	198.44	9,346.42	-64.52	-7.29	56.20	0.27	0.26	5.53
9,443.00	0.94	198.06	9,441.41	-66.00	-7.78	57.68	0.01	0.00	-0.40
9,537.00	1.13	180.44	9,535.39	-67.66	-8.02	59.16	0.39	0.20	-18.74
9,632.00	1.69	178.81	9,630.36	-70.00	-8.00	61.03	0.59	0.59	-1.72
9,728.00	2.19	179.44	9,726.31	-73.25	-7.95	63.61	0.52	0.52	0.66
9,823.00	2.25	182.56	9,821.24	-76.93	-8.02	66.61	0.14	0.06	3.28
9,918.00	2.31	189.69	9,916.16	-80.68	-8.42	69.87	0.30	0.06	7.51
10,016.00	2.63	190.31	10,014.07	-84.84	-9.16	73.65	0.33	0.33	0.63
10,112.00	2.81	191.19	10,109.96	-89.31	-10.01	77.75	0.19	0.19	0.92
10,207.00	2.81	183.19	10,204.85	-93.92	-10.59	81.80	0.41	0.00	-8.42
10,302.00	2.81	178.31	10,299.73	-98.57	-10.65	85.58	0.25	0.00	-5.14
10,398.00	3.00	178.81	10,395.61	-103.44	-10.53	89.42	0.20	0.20	0.52
10,493.00	3.06	182.34	10,490.48	-108.46	-10.58	93.48	0.21	0.06	3.72
10,588.00	3.13	184.69	10,585.34	-113.57	-10.90	97.78	0.15	0.07	2.47
10,683.00	3.00	187.06	10,680.20	-118.63	-11.42	102.15	0.19	-0.14	2.49
10,779.00	2.69	187.19	10,776.08	-123.35	-12.01	106.31	0.32	-0.32	0.14
10,874.00	2.25	185.94	10,871.00	-127.42	-12.48	109.86	0.47	-0.46	-1.32
10,969.00	2.25	178.94	10,965.92	-131.14	-12.64	112.94	0.29	0.00	-7.37
11,159.00	2.63	175.69	11,155.75	-139.22	-12.24	119.20	0.21	0.20	-1.71
11,254.00	2.75	175.94	11,250.65	-143.66	-11.92	122.58	0.13	0.13	0.26
11,349.00	2.63	174.06	11,345.54	-148.10	-11.53	125.92	0.16	-0.13	-1.98
11,444.00	2.75	173.06	11,440.44	-152.53	-11.03	129.18	0.14	0.13	-1.05
11,539.00	2.81	171.31	11,535.32	-157.10	-10.40	132.48	0.11	0.06	-1.84
11,634.00	2.81	167.44	11,630.21	-161.67	-9.54	135.64	0.20	0.00	-4.07
11,729.00	3.13	165.19	11,725.08	-166.45	-8.37	138.79	0.36	0.34	-2.37
11,807.00	3.06	165.19	11,802.97	-170.53	-7.30	141.42	0.09	-0.09	0.00
last mwd survey projection									
11,962.00	3.06	165.19	11,957.75	-178.52	-5.18	146.60	0.00	0.00	0.00

### Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
3,179.00	3,178.93	-1.87	-1.38	tie on point
11,807.00	11,802.97	-170.53	-7.30	last mwd survey
11,962.00	11,957.75	-178.52	-5.18	projection

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

# **US ROCKIES REGION PLANNING**

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

**UINTAH\_NBU 921-7D**

**NBU 921-7D**

**NBU 921-7D**

**Design: NBU 921-7D**

## **Survey Report - Geographic**

**14 May, 2012**

# Anadarko Petroleum Corp

## Survey Report - Geographic

<b>Company:</b> US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b> Well NBU 921-7D
<b>Project:</b> UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b> 18' RKB + 4680' GL @ 4698.00ft (SST 54)
<b>Site:</b> UINTAH_NBU 921-7D	<b>MD Reference:</b> 18' RKB + 4680' GL @ 4698.00ft (SST 54)
<b>Well:</b> NBU 921-7D	<b>North Reference:</b> True
<b>Wellbore:</b> NBU 921-7D	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> NBU 921-7D	<b>Database:</b> edmp

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

<b>Site</b>	UINTAH_NBU 921-7D		
<b>Site Position:</b>		<b>Northing:</b> 14,549,716.60 usft	<b>Latitude:</b> 40.056606
<b>From:</b> Lat/Long		<b>Easting:</b> 2,030,870.64 usft	<b>Longitude:</b> -109.604683
<b>Position Uncertainty:</b> 0.00 ft		<b>Slot Radius:</b> 13-3/16 "	<b>Grid Convergence:</b> 0.90 °

<b>Well</b>	NBU 921-7D		
<b>Well Position</b>	<b>+N/-S</b> 0.00 ft	<b>Northing:</b> 14,549,716.60 usft	<b>Latitude:</b> 40.056606
	<b>+E/-W</b> 0.00 ft	<b>Easting:</b> 2,030,870.64 usft	<b>Longitude:</b> -109.604683
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b> ft	<b>Ground Level:</b> 4,680.00 ft

<b>Wellbore</b>	NBU 921-7D				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	3/15/2012	11.03	65.87	52,273

<b>Design</b>	NBU 921-7D			
<b>Audit Notes:</b>				
<b>Version:</b> 1.0	<b>Phase:</b> ACTUAL	<b>Tie On Depth:</b> 15.00		
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	15.00	0.00	0.00	216.50

<b>Survey Program</b>	Date 5/14/2012			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
189.00	3,179.00	Survey #1 (NBU 921-7D)	MWD	MWD - STANDARD
3,244.00	11,962.00	Survey #2 (NBU 921-7D)	MWD	MWD - STANDARD

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15.00	0.00	0.00	15.00	0.00	0.00	14,549,716.60	2,030,870.64	40.056606	-109.604683
189.00	0.62	320.85	189.00	0.73	-0.59	14,549,717.32	2,030,870.03	40.056608	-109.604685
276.00	0.62	339.65	275.99	1.54	-1.06	14,549,718.12	2,030,869.56	40.056610	-109.604687
359.00	0.44	6.90	358.99	2.27	-1.17	14,549,718.85	2,030,869.43	40.056612	-109.604687
449.00	0.15	95.33	448.99	2.61	-1.01	14,549,719.19	2,030,869.58	40.056613	-109.604687
539.00	0.53	179.25	538.99	2.18	-0.89	14,549,718.76	2,030,869.71	40.056612	-109.604686
629.00	0.35	160.27	628.98	1.50	-0.79	14,549,718.09	2,030,869.82	40.056610	-109.604686
719.00	0.35	166.25	718.98	0.98	-0.64	14,549,717.56	2,030,869.99	40.056609	-109.604686
809.00	0.41	162.43	808.98	0.40	-0.47	14,549,716.99	2,030,870.16	40.056607	-109.604685
899.00	0.44	147.00	898.98	-0.19	-0.19	14,549,716.40	2,030,870.46	40.056606	-109.604684
989.00	0.44	146.21	988.97	-0.77	0.19	14,549,715.83	2,030,870.84	40.056604	-109.604683

# Anadarko Petroleum Corp

## Survey Report - Geographic

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-7D  
**Well:** NBU 921-7D  
**Wellbore:** NBU 921-7D  
**Design:** NBU 921-7D

**Local Co-ordinate Reference:** Well NBU 921-7D  
**TVD Reference:** 18' RKB + 4680' GL @ 4698.00ft (SST 54)  
**MD Reference:** 18' RKB + 4680' GL @ 4698.00ft (SST 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** edmp

### Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,079.00	0.44	187.16	1,078.97	-1.40	0.34	14,549,715.20	2,030,871.00	40.056602	-109.604682
1,169.00	0.18	105.16	1,168.97	-1.78	0.44	14,549,714.82	2,030,871.10	40.056601	-109.604682
1,259.00	0.18	82.57	1,258.97	-1.80	0.71	14,549,714.81	2,030,871.38	40.056601	-109.604681
1,349.00	0.18	71.76	1,348.97	-1.74	0.99	14,549,714.88	2,030,871.65	40.056601	-109.604680
1,439.00	0.18	115.27	1,438.97	-1.75	1.25	14,549,714.86	2,030,871.92	40.056601	-109.604679
1,529.00	0.35	349.94	1,528.97	-1.54	1.33	14,549,715.07	2,030,871.99	40.056602	-109.604679
1,619.00	0.00	295.88	1,618.97	-1.27	1.28	14,549,715.34	2,030,871.94	40.056603	-109.604679
1,709.00	0.62	293.86	1,708.97	-1.07	0.84	14,549,715.53	2,030,871.49	40.056603	-109.604680
1,799.00	0.62	276.20	1,798.96	-0.82	-0.09	14,549,715.77	2,030,870.56	40.056604	-109.604684
1,889.00	0.53	243.94	1,888.96	-0.95	-0.95	14,549,715.63	2,030,869.70	40.056603	-109.604687
2,159.00	0.44	190.06	2,158.95	-2.52	-2.25	14,549,714.04	2,030,868.42	40.056599	-109.604691
2,249.00	0.35	219.95	2,248.95	-3.08	-2.49	14,549,713.48	2,030,868.20	40.056598	-109.604692
2,339.00	0.24	30.64	2,338.95	-3.12	-2.57	14,549,713.43	2,030,868.12	40.056598	-109.604692
2,429.00	0.35	348.00	2,428.95	-2.69	-2.53	14,549,713.86	2,030,868.15	40.056599	-109.604692
2,519.00	0.37	42.09	2,518.94	-2.21	-2.40	14,549,714.35	2,030,868.28	40.056600	-109.604692
2,609.00	0.35	50.23	2,608.94	-1.82	-1.99	14,549,714.75	2,030,868.68	40.056601	-109.604690
2,699.00	0.26	136.71	2,698.94	-1.79	-1.64	14,549,714.78	2,030,869.03	40.056601	-109.604689
2,789.00	0.44	97.34	2,788.94	-1.98	-1.16	14,549,714.60	2,030,869.52	40.056601	-109.604687
2,879.00	0.35	109.20	2,878.94	-2.12	-0.55	14,549,714.47	2,030,870.12	40.056600	-109.604685
2,969.00	0.26	311.88	2,968.94	-2.07	-0.45	14,549,714.52	2,030,870.23	40.056600	-109.604685
3,059.00	0.31	206.93	3,058.94	-2.15	-0.71	14,549,714.43	2,030,869.97	40.056600	-109.604686
3,149.00	0.62	307.40	3,148.93	-2.07	-1.21	14,549,714.50	2,030,869.47	40.056600	-109.604688
3,179.00	0.44	334.47	3,178.93	-1.87	-1.38	14,549,714.70	2,030,869.29	40.056601	-109.604688
<b>tie on point</b>									
3,244.00	0.52	309.43	3,243.93	-1.46	-1.72	14,549,715.11	2,030,868.94	40.056602	-109.604689
3,339.00	0.56	163.56	3,338.93	-1.63	-1.92	14,549,714.94	2,030,868.74	40.056602	-109.604690
3,435.00	2.13	178.44	3,434.90	-3.86	-1.74	14,549,712.71	2,030,868.96	40.056595	-109.604689
3,530.00	2.19	179.81	3,529.83	-7.44	-1.69	14,549,709.13	2,030,869.07	40.056586	-109.604689
3,625.00	2.25	178.06	3,624.76	-11.12	-1.62	14,549,705.45	2,030,869.20	40.056576	-109.604689
3,721.00	2.44	175.81	3,720.68	-15.04	-1.40	14,549,701.53	2,030,869.47	40.056565	-109.604688
3,816.00	2.31	176.56	3,815.60	-18.97	-1.14	14,549,697.61	2,030,869.80	40.056554	-109.604687
3,911.00	2.44	175.31	3,910.52	-22.90	-0.86	14,549,693.69	2,030,870.14	40.056543	-109.604686
4,005.00	2.38	171.19	4,004.43	-26.82	-0.40	14,549,689.77	2,030,870.66	40.056532	-109.604685
4,101.00	2.38	167.56	4,100.35	-30.74	0.34	14,549,685.87	2,030,871.46	40.056522	-109.604682
4,196.00	2.44	174.31	4,195.27	-34.68	0.96	14,549,681.94	2,030,872.15	40.056511	-109.604680
4,292.00	2.44	202.31	4,291.18	-38.60	0.39	14,549,678.01	2,030,871.63	40.056500	-109.604682
4,387.00	2.50	202.06	4,386.10	-42.39	-1.16	14,549,674.19	2,030,870.15	40.056490	-109.604687
4,481.00	2.38	200.56	4,480.01	-46.12	-2.61	14,549,670.44	2,030,868.75	40.056479	-109.604693
4,575.00	2.38	192.19	4,573.93	-49.85	-3.71	14,549,666.69	2,030,867.71	40.056469	-109.604697
4,669.00	2.31	188.56	4,667.85	-53.63	-4.40	14,549,662.90	2,030,867.08	40.056459	-109.604699
4,764.00	0.88	173.44	4,762.81	-56.25	-4.61	14,549,660.28	2,030,866.92	40.056452	-109.604700
4,860.00	0.56	168.44	4,858.80	-57.44	-4.43	14,549,659.09	2,030,867.11	40.056448	-109.604699
4,955.00	1.00	337.31	4,953.80	-57.13	-4.65	14,549,659.40	2,030,866.88	40.056449	-109.604700
5,050.00	0.94	334.69	5,048.79	-55.66	-5.31	14,549,660.85	2,030,866.21	40.056453	-109.604702
5,146.00	0.56	296.69	5,144.78	-54.74	-6.06	14,549,661.77	2,030,865.44	40.056456	-109.604705
5,241.00	0.56	245.44	5,239.78	-54.73	-6.90	14,549,661.77	2,030,864.60	40.056456	-109.604708
5,336.00	0.63	207.31	5,334.77	-55.38	-7.56	14,549,661.10	2,030,863.95	40.056454	-109.604710
5,432.00	0.88	197.69	5,430.76	-56.56	-8.03	14,549,659.92	2,030,863.50	40.056451	-109.604712
5,527.00	1.44	283.56	5,525.75	-56.97	-9.41	14,549,659.48	2,030,862.12	40.056450	-109.604717
5,623.00	1.38	269.56	5,621.72	-56.70	-11.74	14,549,659.72	2,030,859.79	40.056450	-109.604725
5,718.00	1.13	319.81	5,716.70	-55.99	-13.49	14,549,660.40	2,030,858.03	40.056452	-109.604731
5,814.00	1.06	324.44	5,812.68	-54.54	-14.61	14,549,661.83	2,030,856.88	40.056456	-109.604735
5,910.00	0.94	38.56	5,908.67	-53.21	-14.64	14,549,663.17	2,030,856.84	40.056460	-109.604736
6,005.00	0.69	63.81	6,003.66	-52.34	-13.64	14,549,664.04	2,030,857.82	40.056462	-109.604732
6,100.00	0.50	91.56	6,098.66	-52.10	-12.71	14,549,664.30	2,030,858.74	40.056463	-109.604729

# Anadarko Petroleum Corp

## Survey Report - Geographic

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-7D  
**Well:** NBU 921-7D  
**Wellbore:** NBU 921-7D  
**Design:** NBU 921-7D

**Local Co-ordinate Reference:** Well NBU 921-7D  
**TVD Reference:** 18' RKB + 4680' GL @ 4698.00ft (SST 54)  
**MD Reference:** 18' RKB + 4680' GL @ 4698.00ft (SST 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** edmp

### Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,196.00	0.44	113.81	6,194.65	-52.26	-11.96	14,549,664.15	2,030,859.50	40.056463	-109.604726
6,291.00	0.69	139.19	6,289.65	-52.84	-11.25	14,549,663.58	2,030,860.22	40.056461	-109.604723
6,386.00	0.88	142.56	6,384.64	-53.86	-10.43	14,549,662.58	2,030,861.05	40.056458	-109.604721
6,482.00	1.13	144.56	6,480.62	-55.21	-9.44	14,549,661.24	2,030,862.07	40.056455	-109.604717
6,577.00	0.50	174.69	6,575.61	-56.39	-8.85	14,549,660.08	2,030,862.67	40.056451	-109.604715
6,673.00	0.75	166.69	6,671.61	-57.42	-8.67	14,549,659.05	2,030,862.87	40.056448	-109.604714
6,767.00	1.06	154.94	6,765.60	-58.80	-8.16	14,549,657.67	2,030,863.40	40.056445	-109.604712
6,863.00	0.38	197.44	6,861.59	-59.91	-7.88	14,549,656.57	2,030,863.70	40.056442	-109.604711
6,958.00	1.06	288.44	6,956.58	-59.93	-8.81	14,549,656.53	2,030,862.77	40.056442	-109.604715
7,053.00	0.81	270.19	7,051.57	-59.65	-10.31	14,549,656.79	2,030,861.26	40.056442	-109.604720
7,149.00	0.69	235.81	7,147.56	-59.98	-11.47	14,549,656.45	2,030,860.11	40.056441	-109.604724
7,244.00	0.81	205.31	7,242.56	-60.90	-12.23	14,549,655.51	2,030,859.37	40.056439	-109.604727
7,339.00	0.81	184.94	7,337.55	-62.18	-12.57	14,549,654.23	2,030,859.04	40.056435	-109.604728
7,434.00	0.56	117.31	7,432.54	-63.06	-12.22	14,549,653.35	2,030,859.41	40.056433	-109.604727
7,530.00	1.19	41.69	7,528.53	-62.53	-11.14	14,549,653.90	2,030,860.48	40.056434	-109.604723
7,625.00	1.06	42.19	7,623.51	-61.15	-9.89	14,549,655.30	2,030,861.71	40.056438	-109.604719
7,721.00	0.81	45.44	7,719.50	-60.01	-8.81	14,549,656.45	2,030,862.77	40.056441	-109.604715
7,816.00	0.81	59.19	7,814.49	-59.20	-7.76	14,549,657.29	2,030,863.81	40.056444	-109.604711
7,911.00	0.81	85.56	7,909.48	-58.80	-6.51	14,549,657.70	2,030,865.05	40.056445	-109.604707
8,007.00	0.63	103.19	8,005.47	-58.87	-5.32	14,549,657.65	2,030,866.24	40.056444	-109.604702
8,101.00	0.75	122.44	8,099.47	-59.32	-4.30	14,549,657.22	2,030,867.27	40.056443	-109.604699
8,196.00	0.25	33.94	8,194.46	-59.48	-3.66	14,549,657.07	2,030,867.91	40.056443	-109.604696
8,291.00	0.44	336.94	8,289.46	-58.97	-3.69	14,549,657.57	2,030,867.88	40.056444	-109.604696
8,387.00	0.25	285.31	8,385.46	-58.58	-4.03	14,549,657.96	2,030,867.53	40.056445	-109.604698
8,491.00	0.19	192.31	8,489.46	-58.68	-4.29	14,549,657.85	2,030,867.27	40.056445	-109.604699
8,586.00	0.44	333.69	8,584.46	-58.51	-4.48	14,549,658.02	2,030,867.07	40.056445	-109.604699
8,682.00	0.06	268.44	8,680.46	-58.18	-4.70	14,549,658.35	2,030,866.85	40.056446	-109.604700
8,777.00	0.31	193.44	8,775.46	-58.43	-4.81	14,549,658.09	2,030,866.75	40.056446	-109.604700
8,872.00	0.75	193.06	8,870.45	-59.29	-5.01	14,549,657.24	2,030,866.56	40.056443	-109.604701
8,968.00	0.69	210.69	8,966.45	-60.40	-5.44	14,549,656.12	2,030,866.14	40.056440	-109.604703
9,063.00	0.63	219.69	9,061.44	-61.29	-6.07	14,549,655.22	2,030,865.53	40.056438	-109.604705
9,157.00	0.63	201.31	9,155.44	-62.17	-6.59	14,549,654.33	2,030,865.03	40.056435	-109.604707
9,253.00	0.69	193.19	9,251.43	-63.23	-6.91	14,549,653.27	2,030,864.72	40.056433	-109.604708
9,348.00	0.94	198.44	9,346.42	-64.52	-7.29	14,549,651.97	2,030,864.36	40.056429	-109.604709
9,443.00	0.94	198.06	9,441.41	-66.00	-7.78	14,549,650.48	2,030,863.90	40.056425	-109.604711
9,537.00	1.13	180.44	9,535.39	-67.66	-8.02	14,549,648.82	2,030,863.68	40.056420	-109.604712
9,632.00	1.69	178.81	9,630.36	-70.00	-8.00	14,549,646.48	2,030,863.74	40.056414	-109.604712
9,728.00	2.19	179.44	9,726.31	-73.25	-7.95	14,549,643.23	2,030,863.84	40.056405	-109.604712
9,823.00	2.25	182.56	9,821.24	-76.93	-8.02	14,549,639.55	2,030,863.83	40.056395	-109.604712
9,918.00	2.31	189.69	9,916.16	-80.68	-8.42	14,549,635.80	2,030,863.48	40.056385	-109.604713
10,016.00	2.63	190.31	10,014.07	-84.84	-9.16	14,549,631.63	2,030,862.81	40.056373	-109.604716
10,112.00	2.81	191.19	10,109.96	-89.31	-10.01	14,549,627.14	2,030,862.03	40.056361	-109.604719
10,207.00	2.81	183.19	10,204.85	-93.92	-10.59	14,549,622.52	2,030,861.52	40.056348	-109.604721
10,302.00	2.81	178.31	10,299.73	-98.57	-10.65	14,549,617.87	2,030,861.53	40.056335	-109.604721
10,398.00	3.00	178.81	10,395.61	-103.44	-10.53	14,549,613.01	2,030,861.73	40.056322	-109.604721
10,493.00	3.06	182.34	10,490.48	-108.46	-10.58	14,549,607.99	2,030,861.76	40.056308	-109.604721
10,588.00	3.13	184.69	10,585.34	-113.57	-10.90	14,549,602.86	2,030,861.52	40.056294	-109.604722
10,683.00	3.00	187.06	10,680.20	-118.63	-11.42	14,549,597.81	2,030,861.08	40.056280	-109.604724
10,779.00	2.69	187.19	10,776.08	-123.35	-12.01	14,549,593.07	2,030,860.57	40.056267	-109.604726
10,874.00	2.25	185.94	10,871.00	-127.42	-12.48	14,549,588.99	2,030,860.16	40.056256	-109.604728
10,969.00	2.25	178.94	10,965.92	-131.14	-12.64	14,549,585.27	2,030,860.06	40.056246	-109.604728
11,159.00	2.63	175.69	11,155.75	-139.22	-12.24	14,549,577.20	2,030,860.58	40.056224	-109.604727
11,254.00	2.75	175.94	11,250.65	-143.66	-11.92	14,549,572.76	2,030,860.98	40.056212	-109.604726
11,349.00	2.63	174.06	11,345.54	-148.10	-11.53	14,549,568.33	2,030,861.43	40.056199	-109.604724
11,444.00	2.75	173.06	11,440.44	-152.53	-11.03	14,549,563.91	2,030,862.00	40.056187	-109.604723

# Anadarko Petroleum Corp

## Survey Report - Geographic

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-7D  
**Well:** NBU 921-7D  
**Wellbore:** NBU 921-7D  
**Design:** NBU 921-7D

**Local Co-ordinate Reference:** Well NBU 921-7D  
**TVD Reference:** 18' RKB + 4680' GL @ 4698.00ft (SST 54)  
**MD Reference:** 18' RKB + 4680' GL @ 4698.00ft (SST 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** edmp

### Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
11,539.00	2.81	171.31	11,535.32	-157.10	-10.40	14,549,559.35	2,030,862.70	40.056175	-109.604720
11,634.00	2.81	167.44	11,630.21	-161.67	-9.54	14,549,554.79	2,030,863.63	40.056162	-109.604717
11,729.00	3.13	165.19	11,725.08	-166.45	-8.37	14,549,550.03	2,030,864.88	40.056149	-109.604713
11,807.00	3.06	165.19	11,802.97	-170.53	-7.30	14,549,545.98	2,030,866.02	40.056138	-109.604709
<b>last mwd survey projection</b>									
11,962.00	3.06	165.19	11,957.75	-178.52	-5.18	14,549,538.01	2,030,868.26	40.056116	-109.604702

### Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
3,179.00	3,178.93	-1.87	-1.38	tie on point
11,807.00	11,802.97	-170.53	-7.30	last mwd survey
11,962.00	11,957.75	-178.52	-5.18	projection

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