

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

FORM 3

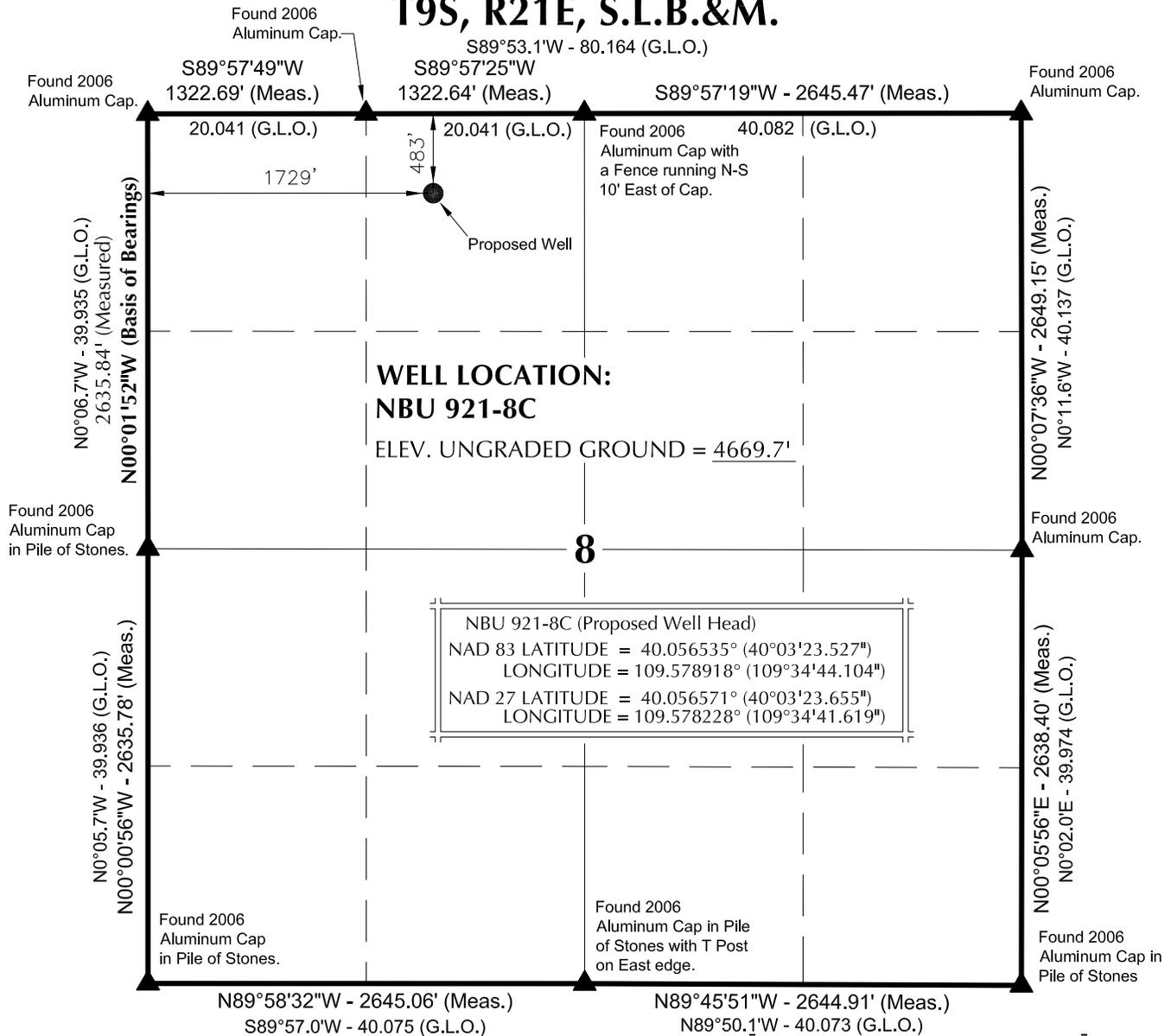
AMENDED REPORT 

<b>APPLICATION FOR PERMIT TO DRILL</b>						<b>1. WELL NAME and NUMBER</b> NBU 921-8C	
<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>	483 FNL 1729 FWL	NENW	8	9.0 S	21.0 E	S	
<b>Top of Uppermost Producing Zone</b>	483 FNL 1729 FWL	NENW	8	9.0 S	21.0 E	S	
<b>At Total Depth</b>	483 FNL 1729 FWL	NENW	8	9.0 S	21.0 E	S	
<b>21. COUNTY</b> UINTAH			<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 483			<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> 1000			<b>26. PROPOSED DEPTH</b> MD: 10700 TVD: 10700	
<b>27. ELEVATION - GROUND LEVEL</b> 4670			<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> 43047507360000			<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	10700		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade HCP-110 LT&C	1100	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	2845		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade J-55 LT&C	2845	36.0			

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



## WELL LOCATION:

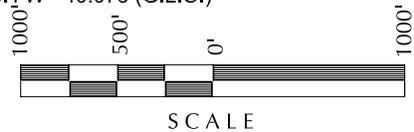
**NBU 921-8C**

ELEV. UNGRADED GROUND = 4669.7'

NBU 921-8C (Proposed Well Head)  
 NAD 83 LATITUDE = 40.056535° (40°03'23.527")  
 LONGITUDE = 109.578918° (109°34'44.104")  
 NAD 27 LATITUDE = 40.056571° (40°03'23.655")  
 LONGITUDE = 109.578228° (109°34'41.619")

**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'.



**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.

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

**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: 04-13-09	SURVEYED BY: D.J.S.	SHEET NO: <b>1</b>
DATE DRAWN: 04-14-09	DRAWN BY: K.K.O.	
SCALE: 1" = 1000'	Date Last Revised:	1 OF 9

**WELL PAD - NBU 921-8C**

**NBU 921-8C  
 WELL PLAT  
 483' FNL, 1729' FWL  
 NE ¼ NW ¼ OF SECTION 8, T9S, R21E,  
 S.L.B.&M., UTAH COUNTY, UTAH.**

**NBU 921-8C**

Surface: 483' FNL 1,729' FWL (NE/4NW/4)  
Sec. 8 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	1,814'	
Birds Nest	2,142'	Water
Mahogany	2,645'	Water
Wasatch	5,294'	Gas
Mesaverde	8,432'	Gas
MVU2	9,446'	Gas
MVL1	9,970'	Gas
TD	10,700'	

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 10,700' TD, approximately equals 6,666 psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 4,312 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.*

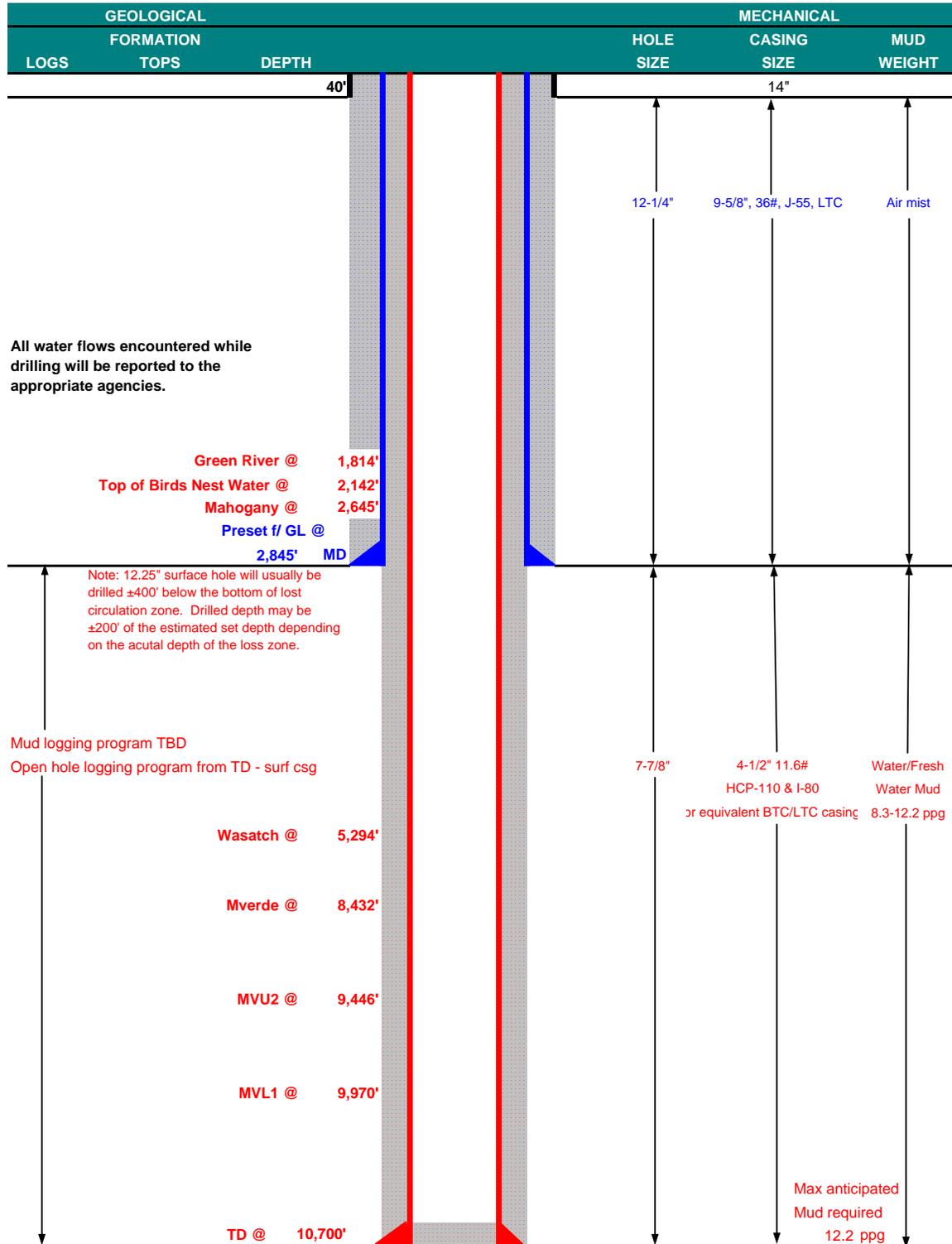
**10. Other Information:**

*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 10, 2009	
WELL NAME	NBU 921-8C		TD	10,700' MD/TVD	
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
				FINISHED ELEVATION	4,669'
SURFACE LOCATION	NE/4 NW/4	483' FNL	1,729' FWL	Sec 8 T 9S R 21E	BHL Straight Hole
	Latitude:	40.056535	Longitude:	-109.578918	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 2845	36.00	J-55	LTC	0.79*	1.52	4.42
PRODUCTION	4-1/2"	0 to 9600	11.60	I-80	BTC	1.75	1.04	2.75
		9600 to 10700	11.60	HCP-110	LTC	2.41	1.27	26.88

\*Burst on surface casing is controlled by fracture gradient as shoe with gas gradient above. D.F. = 1.96

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 4,312 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 6,666 psi**

**CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE Option 1 TOP OUT CMT (6 jobs)	LEAD 500'	Premium cmt + 2% CaCl + 0.25 pps flocele	215	60%	15.60	1.18
	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele Premium cmt + 2% CaCl	380	0%	15.60	1.18
	<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>					
SURFACE Option 2	LEAD 2,345'	Prem cmt + 16% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOC	260	35%	11.00	3.82
	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 4,790'	Premium Lite II + 0.25 pps celloflake + 5 pps gilsonite + 10% gel ' + 1% Retarder	460	40%	11.00	3.38
	TAIL 5,910'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1450	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**

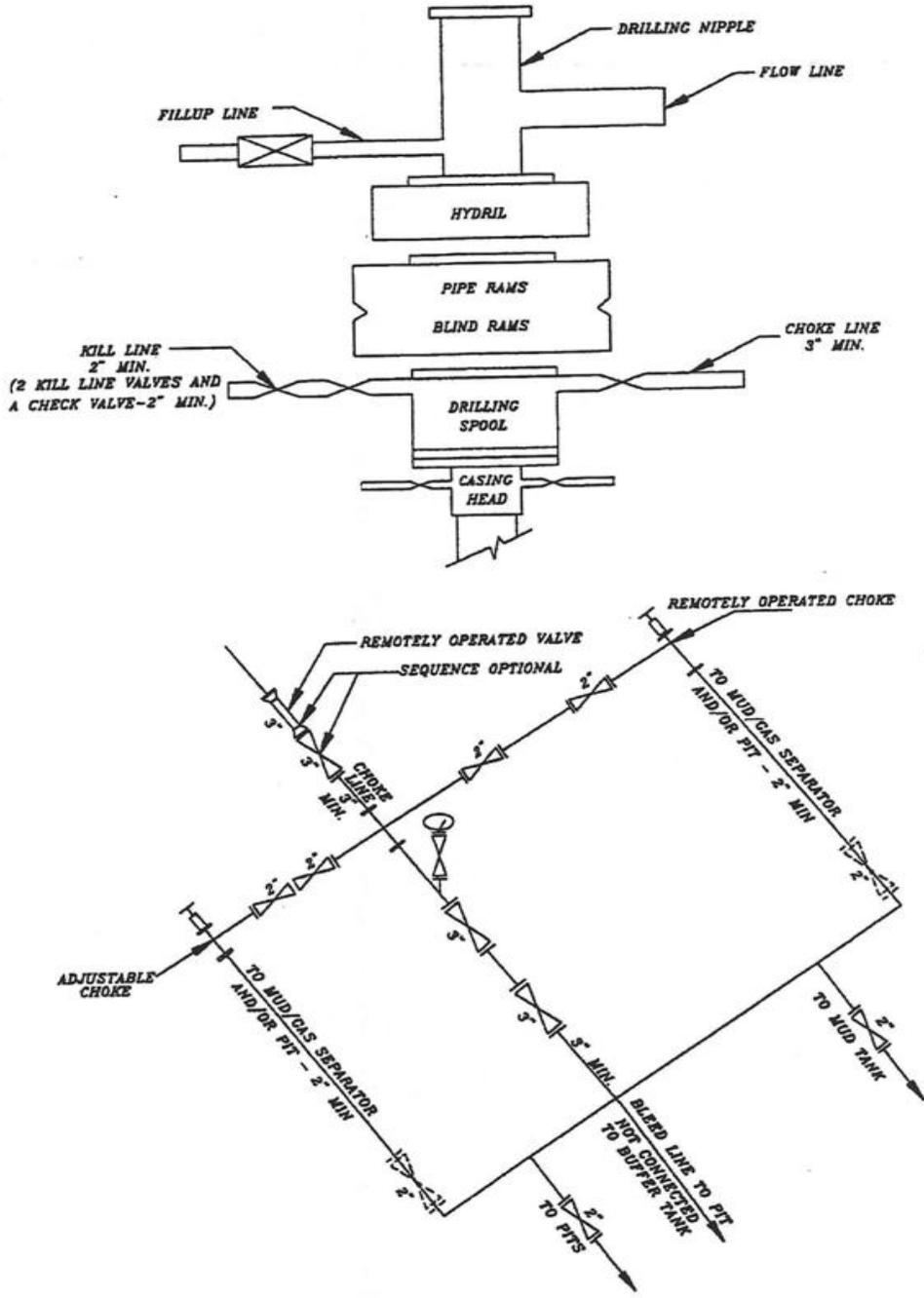
SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint for a total of 15 bow spring centralizers.

**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 921-8C



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

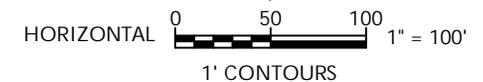
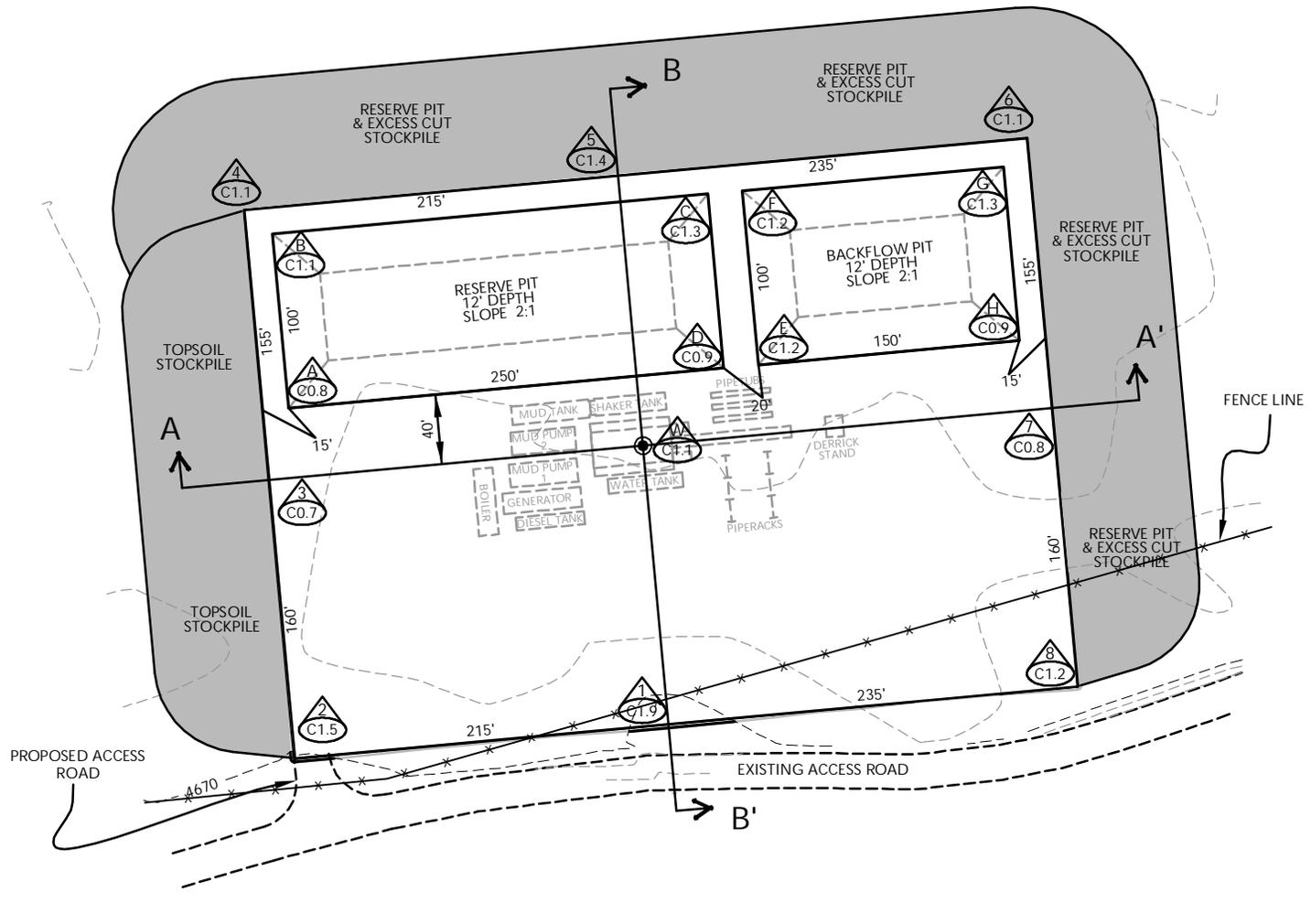
**WELL PAD LEGEND**

- WELL LOCATION
- - - EXISTING CONTOURS (1' INTERVAL)
- PROPOSED CONTOURS (1' INTERVAL)

**WELL PAD NBU 921-8C QUANTITIES**

EXISTING GRADE @ LOC. STAKE = 4669.7'  
 FINISHED GRADE ELEVATION = 4668.6'  
 CUT SLOPES = 1.5:1  
 FILL SLOPES = 1.5:1

TOTAL CUT FOR WELL PAD = 472 C.Y.  
 TOTAL FILL FOR WELL PAD = 0 C.Y.  
 TOPSOIL @ 6" DEPTH = 2,663 C.Y.  
 EXCESS MATERIAL = 472 C.Y.  
 TOTAL DISTURBANCE = 3.30 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 921-8C

WELL PAD - LOCATION LAYOUT  
 NBU 921-8C

483' FNL, 1729' FWL  
 NE1/4 NW1/4 OF SECTION 8, T.9S., R.21E.  
 S.L.B.&M., Uintah County, Utah

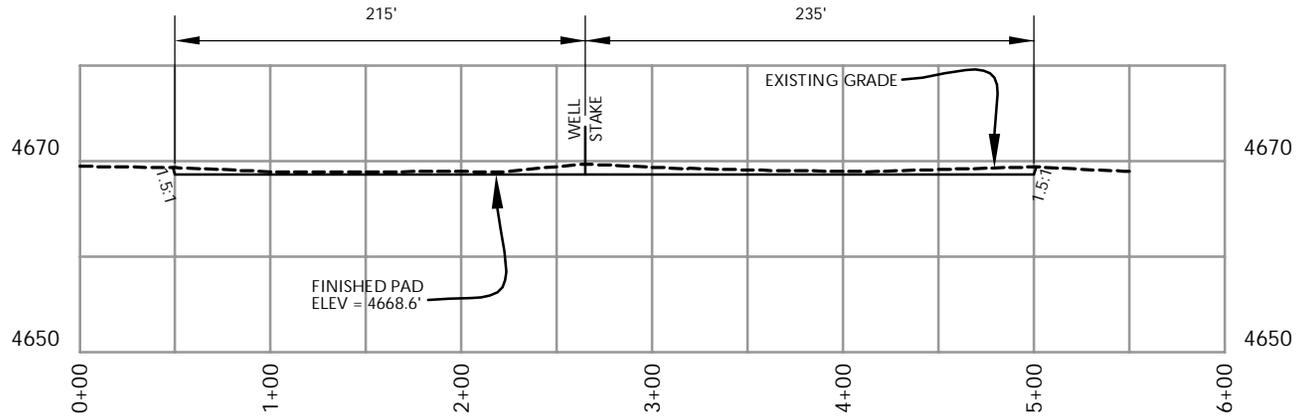


CONSULTING, LLC  
 371 Coffeen Avenue  
 Sheridan WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

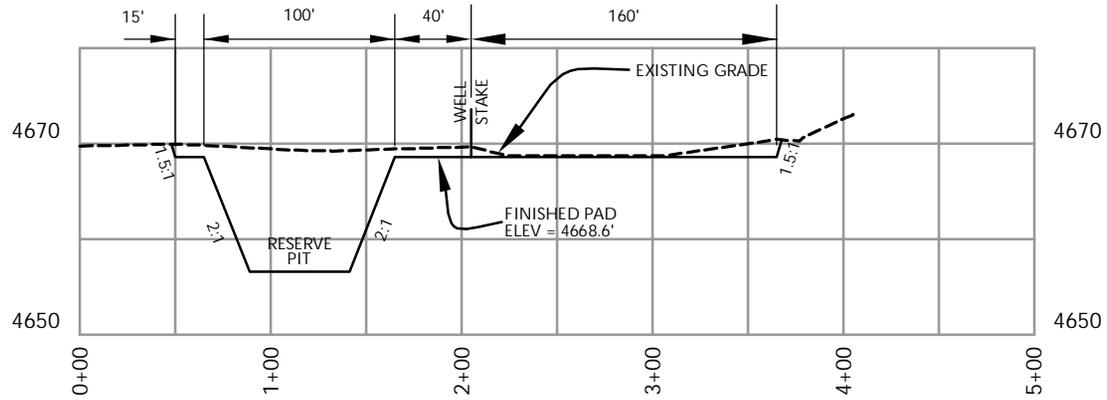
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**TIMBERLINE** (435) 789-1365  
**ENGINEERING & LAND SURVEYING, INC.**  
 209 NORTH 300 WEST - VERNAL, UTAH 84078

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**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

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

WELL PAD - NBU 921-8C

WELL PAD - LOCATION LAYOUT  
NBU 921-8C

483' FNL, 1729' FWL

NE1/4 NW1/4 OF SECTION 8, 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'

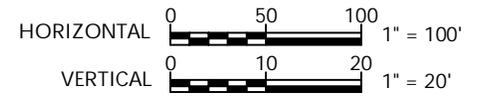
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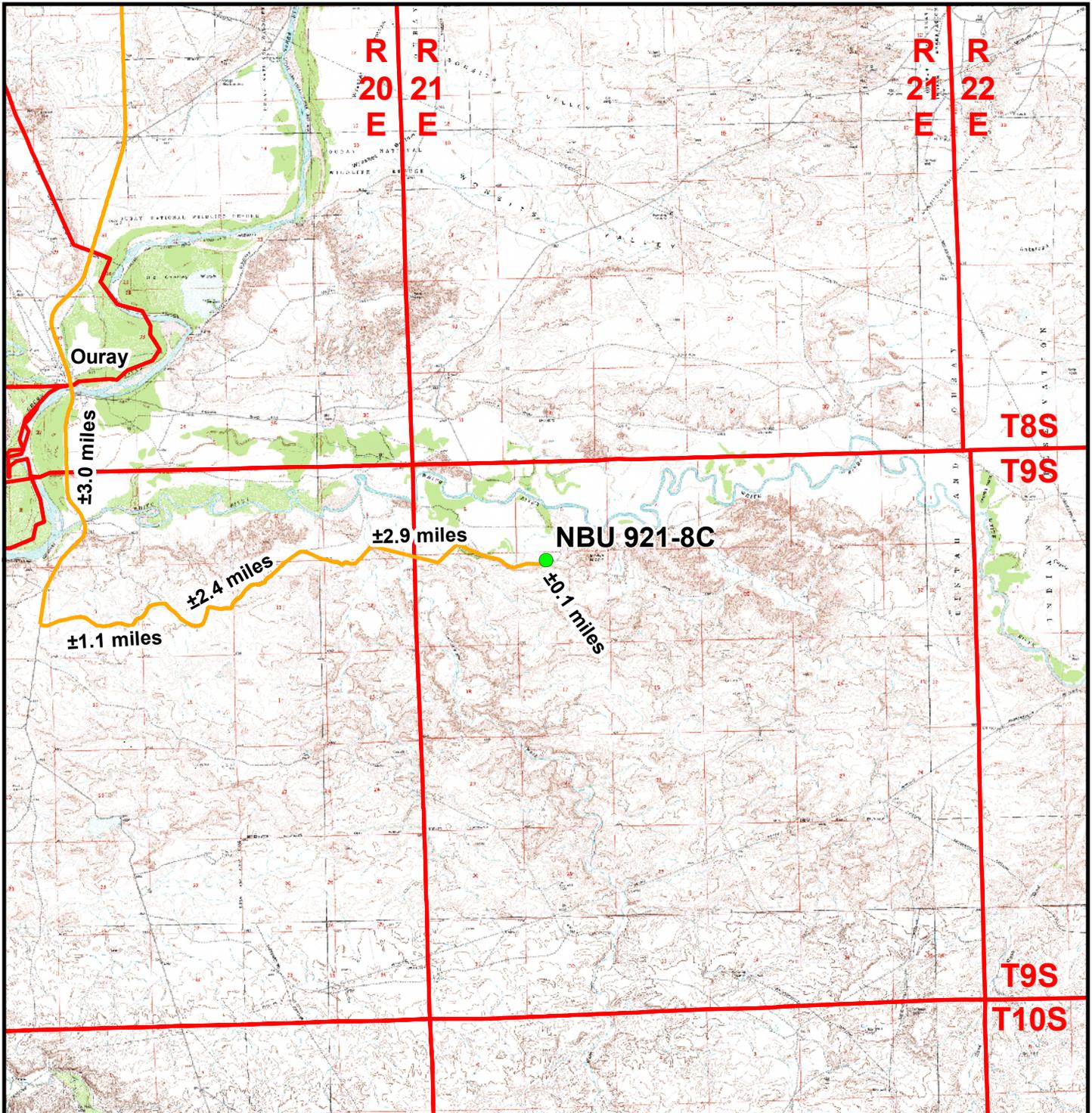
3 OF 9

REVISED:



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

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**Legend**

- Proposed NBU 921-8C Well Location
- Access Route - Proposed

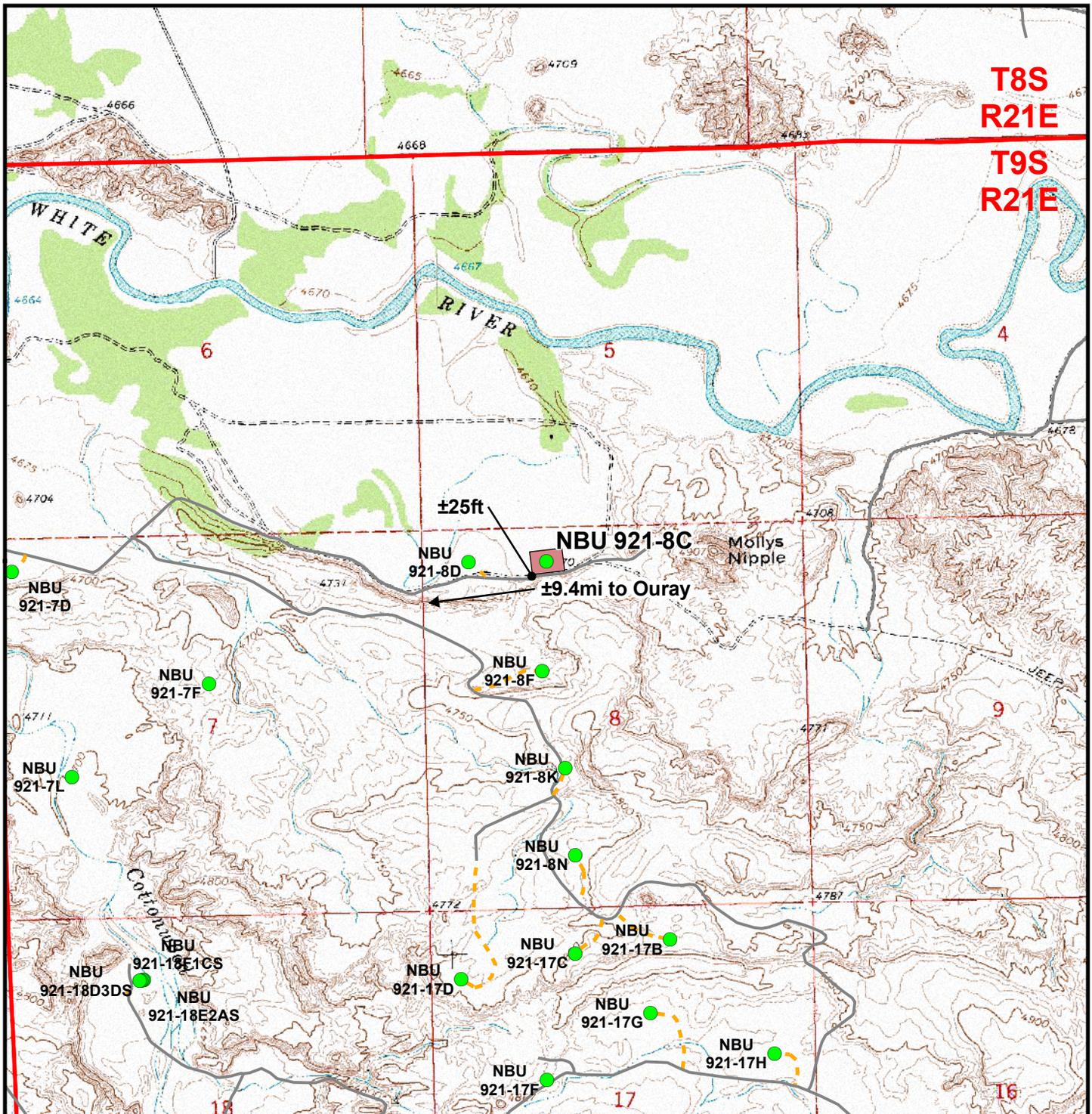
**Kerr-McGee Oil & Gas Onshore, LP**  
 1099 18th Street, Denver, Colorado 80202

**Well Pad - NBU 921-8C**  
**NBU 921-8C**

**Topo A**  
 483' FNL, 1729' FWL  
 NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub>, Section 8, T9S, R21E  
 S.L.B.&M., Uintah County, Utah



Scale: 1:100,000	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 20 April 2009	<b>5</b> 5 of 9
Revised:	Date:	



**Legend**

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

Total Proposed Road Length: ±25ft

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

**Well Pad - NBU 921-8C**

**NBU 921-8C**

**Topo B**

**483' FNL, 1729' FWL**

**NE¼ NW¼, Section 8, T9S, R21E**

**S.L.B.&M., Uintah County, Utah**

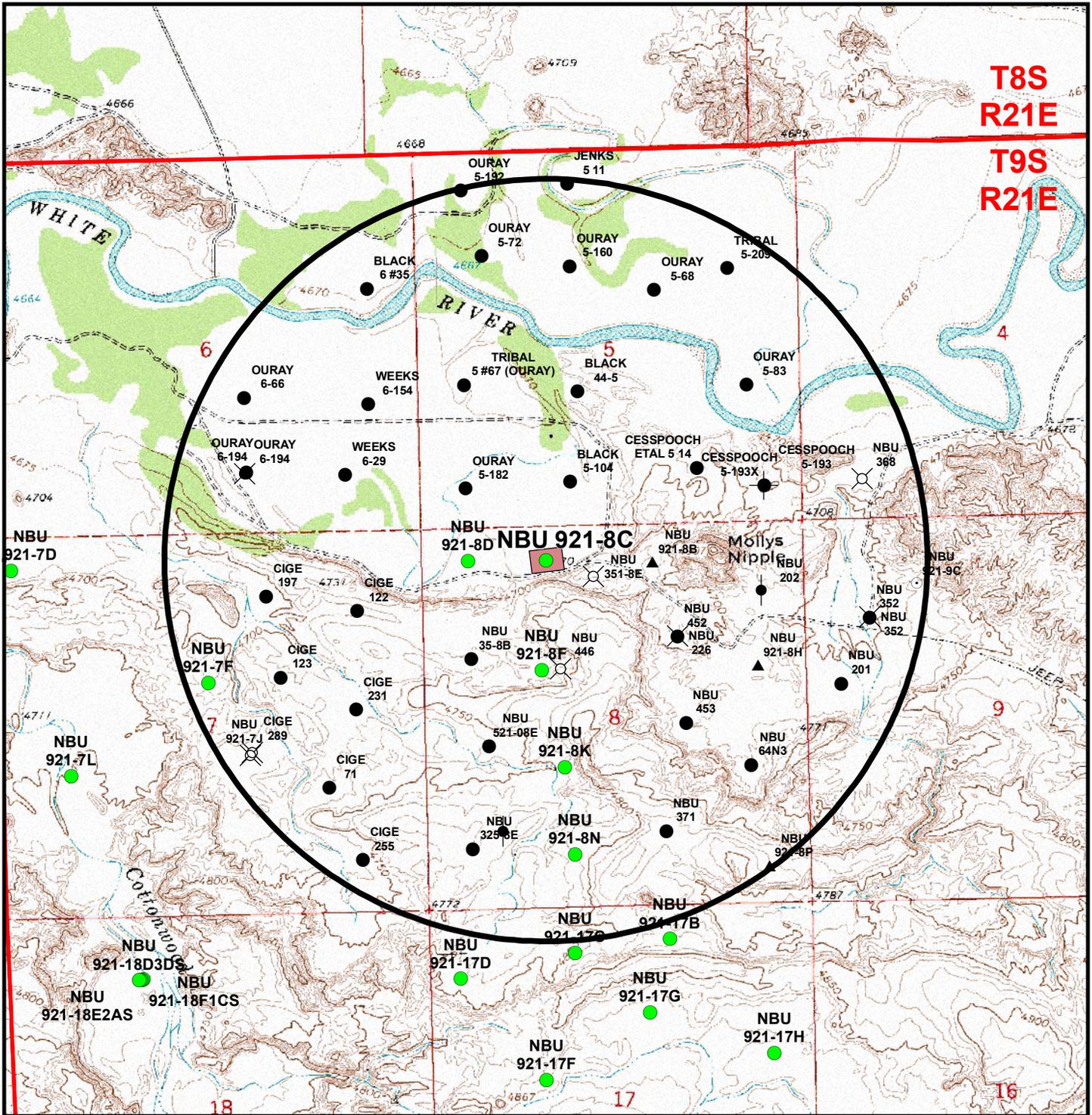


**CONSULTING, LLC**  
 371 Coffeen Avenue  
 Sheridan, WY 82801  
 Phone (307) 674-0609  
 Fax (307) 674-0182



Scale: 1" = 2,000ft	NAD83 USP Central
Drawn: JELO	Date: 20 April 2009
Revised:	Date:

Sheet No: <b>6</b>	6 of 9
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**T8S  
R21E**  
**T9S  
R21E**

**Legend**

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

Well locations derived from State of Utah, Dept. of Natural Resources, Division of Oil, Gas and Mining

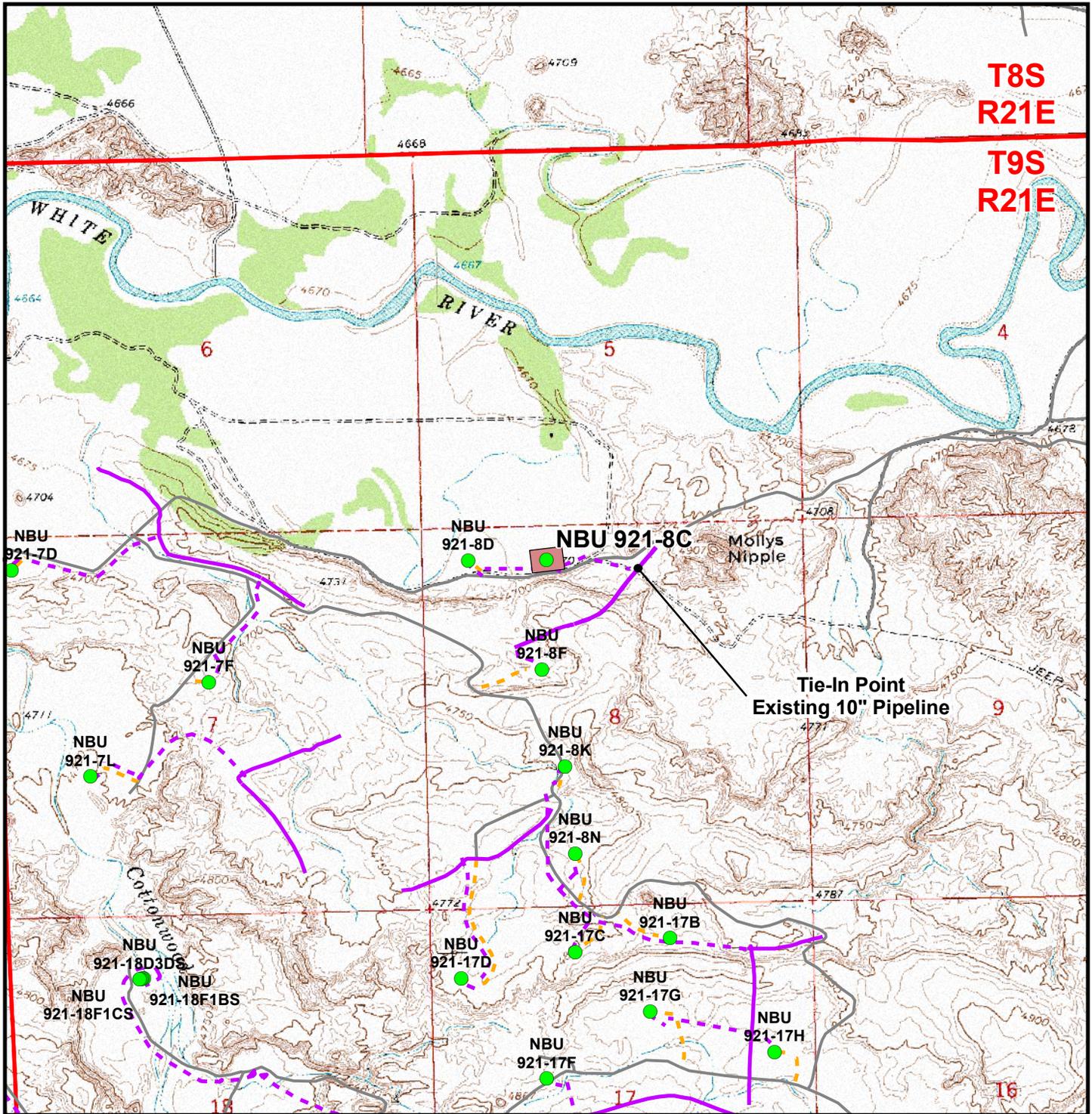
**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

**Well Pad - NBU 921-8C**  
**NBU 921-8C**  
**Topo C**  
**483' FNL, 1729' FWL**  
**NE¼ NW¼, Section 8, T9S, R21E**  
**S.L.B.&M., Uintah County, Utah**

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



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: <b>7</b>
Drawn: JELO	Date: 20 April 2009	<b>7</b> of 9
Revised:	Date:	



**Legend**

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

Proposed Pipeline Length From Tie-In Point To Edge Of Pad: ±960ft  
 Proposed Pipeline Length Around Pad: ±660ft

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

**Well Pad - NBU 921-8C**

**NBU 921-8C**

**Topo D**

**483' FNL, 1729' FWL**

**NE¼ NW¼, Section 8, T9S, R21E**

**S.L.B.&M., Uintah County, Utah**

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



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: JELo	Date: 20 April 2009	<b>8</b>
Revised: JELo	Date: 24 Aug 2009	

8 of 9

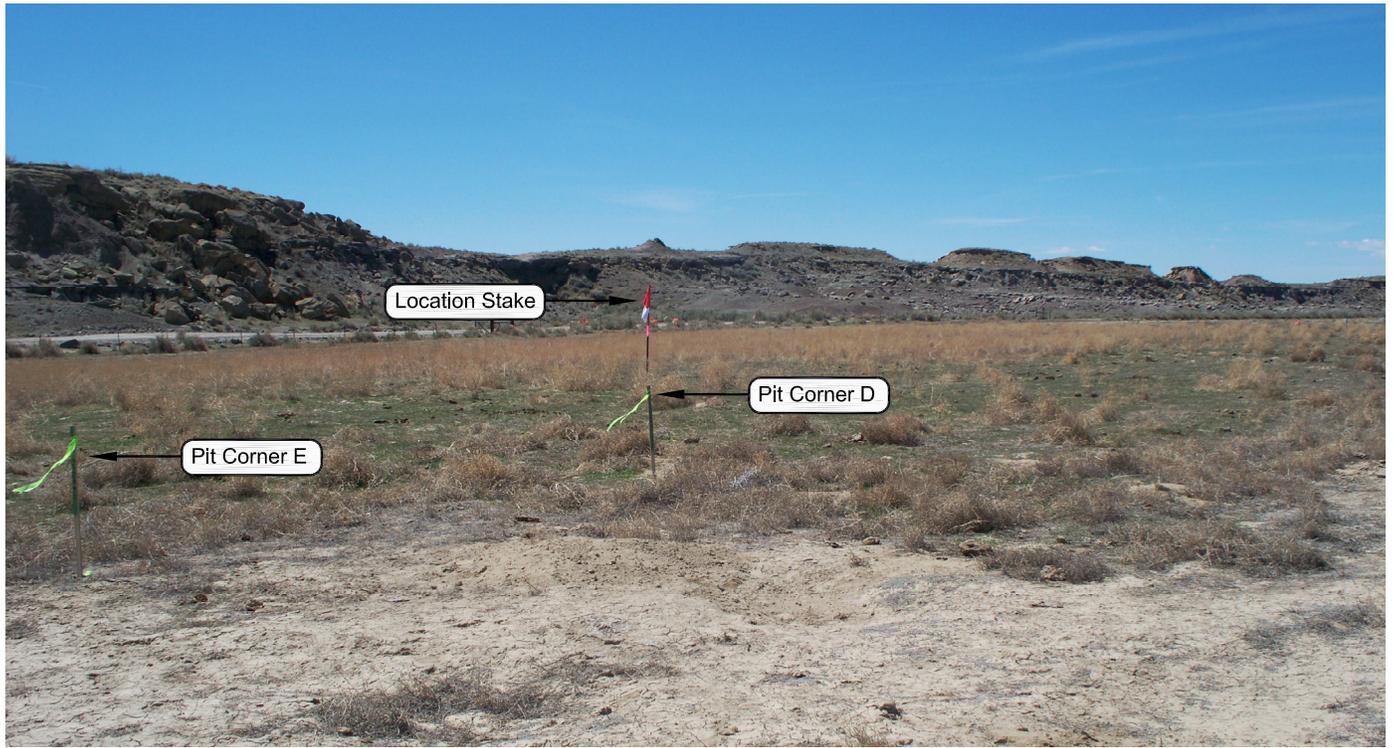


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: SOUTHWESTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHERLY

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

**Well Pad - NBU 921-8C**

**NBU 921-8C  
 LOCATION PHOTOS  
 483' FNL, 1729' FWL  
 NE 1/4 NW 1/4 OF SECTION 8, T9S, R21E,  
 S.L.B.&M., UINTAH COUNTY, UTAH.**



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

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

DATE PHOTOS TAKEN: 04-13-09	PHOTOS TAKEN BY: D.J.S.	SHEET NO: <b>4</b> 4 OF 9
DATE DRAWN: 04-14-09	DRAWN BY: K.K.O.	
Date Last Revised:		

**Kerr-McGee Oil & Gas Onshore, LP**  
**WELL PAD – NBU 921-8C**  
**WELL - NBU 921-8C**  
**Section 8, 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 2.9 MILES TO THE PROPOSED ACCESS ROAD. FOLLOW ROAD FLAGS IN A NORTHERLY DIRECTION APPROXIMATELY 25 FEET TO THE PROPOSED WELL LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 40.1 MILES IN A SOUTHERLY DIRECTION.

**NBU 921-8C**

Surface: 483' FNL 1,729' FWL (NE/4NW/4)  
Sec. 8 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 NE/4 NW/4 of Section 8 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  $\pm 25'$  ( $\pm 0.01$  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  $\pm 1,620'$  ( $\pm 0.31$  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:**

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

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

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

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

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

Bond coverage 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.



Danielle Piernot

September 10, 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 #70

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

**Wells:** NBU 921-8C, NBU 921-8D, NBU 921-8F, NBU 921-8K, NBU 921-8N

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

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

**Location:** Section 08, Township 9 South, Range 21 East; Uintah County, Utah

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

**Date:** 07/02/2009

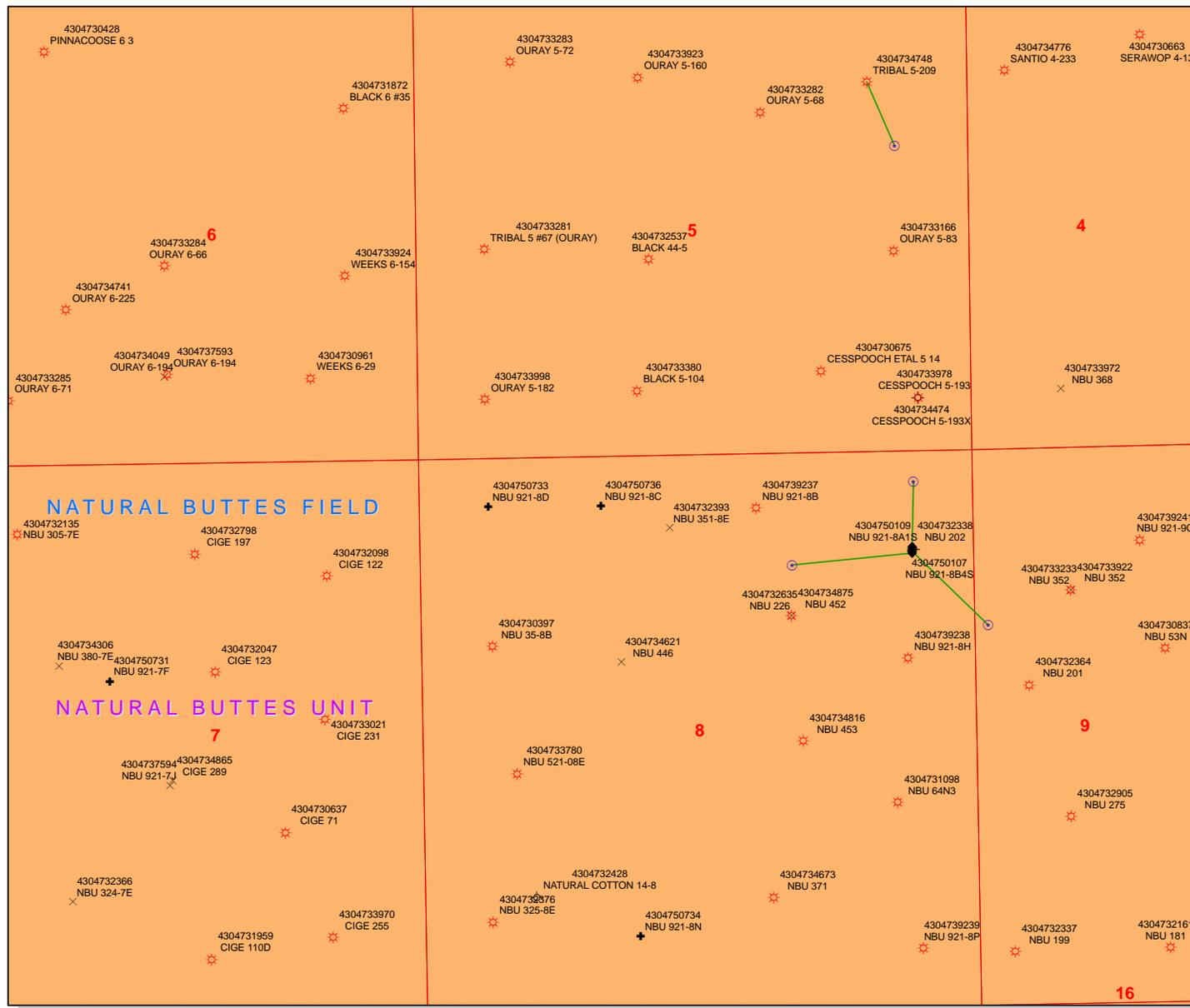
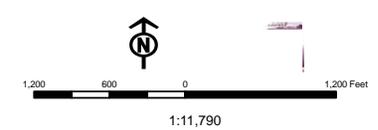
**Observers:** Grasslands Consulting, Inc. Biologists: Chris Gayer, Dan Hamilton, Nick Hall, and Jonathan Sexauer. Technicians: Chad Johnson, Dane Bartlett, and Daniel Ortiz.

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

**API Number: 4304750736**  
**Well Name: NBU 921-8C**  
**Township 09.0 S Range 21.0 E Section 8**  
**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	<call other values>
EXPLORATORY	<n>Nub
GAS STORAGE	APD
NF PP OIL	DRL
NF SECONDARY	GI
PI OIL	GS
PP GAS	LA
PP GEOTHERM	NEW
PP OIL	OPS
SECONDARY	PA
TERMINATED	PGW
<b>Fields</b>	POW
<b>STATUS</b>	RET
ACTIVE	SGW
COMBINED	SOW
Sections	TA
	TW
	WD
	WI
	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:** 43047507360000

**WELL NAME:** NBU 921-8C

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

**PHONE NUMBER:** 720 929-6156

**CONTACT:** Danielle Piernot

**PROPOSED LOCATION:** NENW 8 090S 210E

**Permit Tech Review:**

**SURFACE:** 0483 FNL 1729 FWL

**Engineering Review:**

**BOTTOM:** 0483 FNL 1729 FWL

**Geology Review:**

**COUNTY:** UINTAH

**LATITUDE:** 40.05652

**LONGITUDE:** -109.57824

**UTM SURF EASTINGS:** 621266.00

**NORTHINGS:** 4434789.00

**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

---

**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**

**Commingle Approved**

**LOCATION AND SITING:**

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

**Comments:** Presite Completed

**Stipulations:** 3 - Commingle - ddoucet  
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 921-8C  
**API Well Number:** 43047507360000  
**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

**Commingle:**

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

**General:**

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

**Conditions of Approval:**

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

In accordance with 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

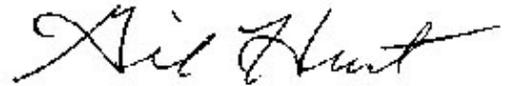
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <https://oilgas.ogm.utah.gov>

**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 921-8C
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>9. API NUMBER:</b> 43047507360000
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0483 FNL 1729 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 08 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 43047507360000**

**API:** 43047507360000

**Well Name:** NBU 921-8C

**Location:** 0483 FNL 1729 FWL QTR NENW SEC 08 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:** 

**RECEIVED**

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR **SEP 19 2009**  
BUREAU OF LAND MANAGEMENT

**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 921-8C
3b. Phone No. (include area code) Ph: 720-929-6156 Fx: 720-929-7156		9. API Well No. <b>43-047-50736</b>
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NENW 483FNL 1729FWL 40.05653 N Lat, 109.57892 W Lon At proposed prod. zone NENW 483FNL 1729FWL 40.05653 N Lat, 109.57892 W Lon		10. Field and Pool, or Exploratory NATURAL BUTTES
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 10 MILES SOUTHEAST OF OURAY, UTAH		11. Sec., T., R., M., or Blk. and Survey or Area Sec 8 T9S R21E Mer SLB
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 483 FEET	16. No. of Acres in Lease 777.33	12. County or Parish UINTAH
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. APPROXIMATELY 1000 FEET	19. Proposed Depth 10700 MD 10700 TVD	13. State UT
21. Elevations (Show whether DF, KB, RT, GL, etc.) 4670 GL	22. Approximate date work will start 09/28/2009	17. Spacing Unit dedicated to this well
20. BLM/BIA Bond No. on file WYB000291		23. Estimated duration 60-90 DAYS

24. Attachments

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

- 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) <i>Wanni Hatch</i>	Name (Printed/Typed) <i>Wanni Hatch</i>	Date JUL 20 2010
Title <i>acting</i> 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.

**RECEIVED**

Additional Operator Remarks (see next page)

JUL 26 2011

Electronic Submission #74106 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 DIV. OF OIL, GAS & MINING

**UDOGM**

**NOTICE OF APPROVAL**

**NOS** *apd posted 9-21-09*

CONDITIONS OF APPROVAL ATTACHED

**AFMSS#**

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

09RRH0261AE



**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**

<b>Company:</b>	Kerr McGee Oil & Gas Onshore LP	<b>Location:</b>	NENW, Sec. 8, T9S R21E
<b>Well No:</b>	NBU 921-8C	<b>Lease No:</b>	UTU-0149767
<b>API No:</b>	43-047-50736	<b>Agreement:</b>	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**

- Pain facilities "Shadow Gray."
- Construct well pad using pit run gravel for support
- Monitor construction operations by a permitted archaeologist.
- Monitor construction operations by a permitted paleontologist.
- In accordance with the guidelines specified in the Utah BLM Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002 (See Appendix D), 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 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 y 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.

## **DOWNHOLE PROGRAM**

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

#### **SITE SPECIFIC DOWNHOLE COAs:**

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

#### Variances 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 well know 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. 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.

STATE OF UTAH 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>		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> Ute Tr
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>1. TYPE OF WELL</b> Gas Well		<b>8. WELL NAME and NUMBER:</b> NBU 921-8C
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>9. API NUMBER:</b> 43047507360000
<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> 0483 FNL 1729 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 08 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 checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 8/22/2011  <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 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 checked="" 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>Kerr-McGee Oil &amp; 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.</p>		
		<p><b>Approved by the Utah Division of Oil, Gas and Mining</b></p> <p><b>Date:</b> <u>08/22/2011</u></p> <p><b>By:</b> <u></u></p>
<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 43047507360000**

**API:** 43047507360000

**Well Name:** NBU 921-8C

**Location:** 0483 FNL 1729 FWL QTR NENW SEC 08 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.

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> 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 921-8C	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047507360000	
<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 FOOTAGES AT SURFACE:</b> 0483 FNL 1729 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 08 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"/> <b>NOTICE OF INTENT</b> Approximate date work will start:  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input checked="" type="checkbox"/> <b>DRILLING REPORT</b> Report Date: 9/27/2011	<input type="checkbox"/> <b>ACIDIZE</b> <input type="checkbox"/> <b>CHANGE TO PREVIOUS PLANS</b> <input type="checkbox"/> <b>CHANGE WELL STATUS</b> <input type="checkbox"/> <b>DEEPEN</b> <input type="checkbox"/> <b>OPERATOR CHANGE</b> <input type="checkbox"/> <b>PRODUCTION START OR RESUME</b> <input type="checkbox"/> <b>REPERFORATE CURRENT FORMATION</b> <input type="checkbox"/> <b>TUBING REPAIR</b> <input type="checkbox"/> <b>WATER SHUTOFF</b> <input type="checkbox"/> <b>WILDCAT WELL DETERMINATION</b>	
	<input type="checkbox"/> <b>ALTER CASING</b> <input type="checkbox"/> <b>CHANGE TUBING</b> <input type="checkbox"/> <b>COMMINGLE PRODUCING FORMATIONS</b> <input type="checkbox"/> <b>FRACTURE TREAT</b> <input type="checkbox"/> <b>PLUG AND ABANDON</b> <input type="checkbox"/> <b>RECLAMATION OF WELL SITE</b> <input type="checkbox"/> <b>SIDETRACK TO REPAIR WELL</b> <input type="checkbox"/> <b>VENT OR FLARE</b> <input type="checkbox"/> <b>SI TA STATUS EXTENSION</b> <input type="checkbox"/> <b>OTHER</b>	<input type="checkbox"/> <b>CASING REPAIR</b> <input type="checkbox"/> <b>CHANGE WELL NAME</b> <input type="checkbox"/> <b>CONVERT WELL TYPE</b> <input type="checkbox"/> <b>NEW CONSTRUCTION</b> <input type="checkbox"/> <b>PLUG BACK</b> <input type="checkbox"/> <b>RECOMPLETE DIFFERENT FORMATION</b> <input type="checkbox"/> <b>TEMPORARY ABANDON</b> <input type="checkbox"/> <b>WATER DISPOSAL</b> <input type="checkbox"/> <b>APD EXTENSION</b> <b>OTHER:</b> <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 SEPT 24, 2011. DRILLED SURFACE HOLE TO 2717'. 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</b>		
<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> 9/28/2011	

## BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG  
 Submitted By SHEILA WOPSOCK Phone Number 435.781.7024  
 Well Name/Number NBU 921-8C  
 Qtr/Qtr NE/NW Section 8 Township 9S Range 21E  
 Lease Serial Number UTU-0149767  
 API Number 4304750736

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

Date/Time 09/16/2011 0800 HRS AM  PM

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

- Surface Casing  
 Intermediate Casing  
 Production Casing  
 Liner  
 Other

RECEIVED

SEP 15 2011

DIV. OF OIL, GAS &amp; MINING

Date/Time 09/27/2011 0800 HRS AM  PM

BOPE

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

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

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT  
LOVEL YOUNG AT 435.781.7051 FOR MORE

<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  <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 921-8C
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047507360000
<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>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0483 FNL 1729 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 08 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: 10/4/2011  <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 type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input checked="" 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 checked="" 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 authorization to deepen this well to the Blackhawk formation which resides in the Mesaverde formation. This request also includes a change in the production casing program to Ultra DQX/LTC casing. Please see the attached drilling program. Thank you.

Approved by the  
 Utah Division of  
 Oil, Gas and Mining

Date: 10/13/2011

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> 10/4/2011	

**Kerr-McGee Oil & Gas Onshore. L.P.****NBU 921-8C**

Surface: 483 FNL / 1729 FWL NENW  
 BHL: 483 FNL / 1729 FWL NENW

Section 8 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	1793	Water
Birds Nest	2080	Water
Mahogany	2654	Water
Wasatch	5248	Gas
Mesaverde	8291	Gas
Sego	10592	Gas
Castlegate	10682	Gas
MN5	11069	Gas
TVD	11669	
TD	11669	

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 11669' TVD, approximately equals  
7,702 psi (0.66 psi/ft = actual bottomhole gradient)

---

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

Maximum anticipated surface pressure equals approximately 5,188 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 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)). 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.

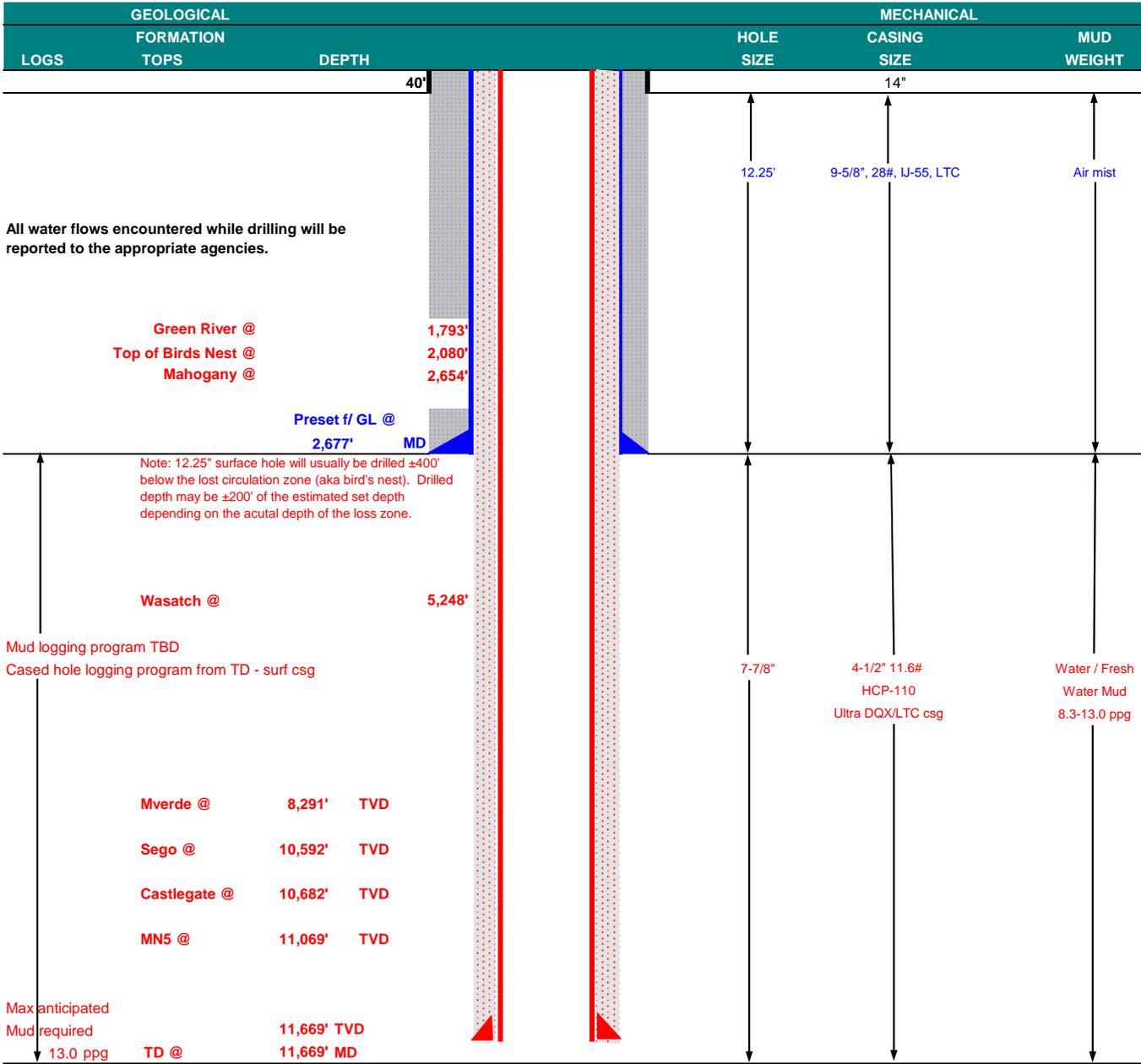
10. **Other Information:**

Please refer to the attached Drilling Program.



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

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP			DATE	October 4, 2011		
WELL NAME	<b>NBU 921-8C</b>			TD	11,669'	TVD	11,669' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION	4,670'
SURFACE LOCATION	NENW	483 FNL	1729 FWL	Sec 8	T 9S	R 21E	
	Latitude:	40.056535	Longitude:	-109.578918		NAD 83	
BTM HOLE LOCATION	NENW	483 FNL	1729 FWL	Sec 8	T 9S	R 21E	
	Latitude:	40.056535	Longitude:	-109.578918		NAD 83	
OBJECTIVE ZONE(S)	Blackhawk						
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), Tribal (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	
								LTC	DQX
CONDUCTOR	14"	0-40'							
						3,390	1,880	348,000	N/A
SURFACE	9-5/8"	0 to 2,677'	28.00	IJ-55	LTC	2.02	1.50	5.30	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	1.10		3.38
	4-1/2"	5,000 to 11,669'	11.6	HCP-110	LTC	1.19	1.10	3.61	

**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	220	60%	15.80	1.15
Option 1	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	330	0%	15.80	1.15
<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>							
SURFACE	LEAD	2,177'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	250	35%	11.00	3.82
Option 2	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	190	35%	15.80	1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,739'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	380	35%	11.00	3.38
	TAIL	6,930'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,640	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. No centralizers will be used.

**ADDITIONAL INFORMATION**

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

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

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

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

**DRILLING ENGINEER:**

Nick Spence / Emile Goodwin

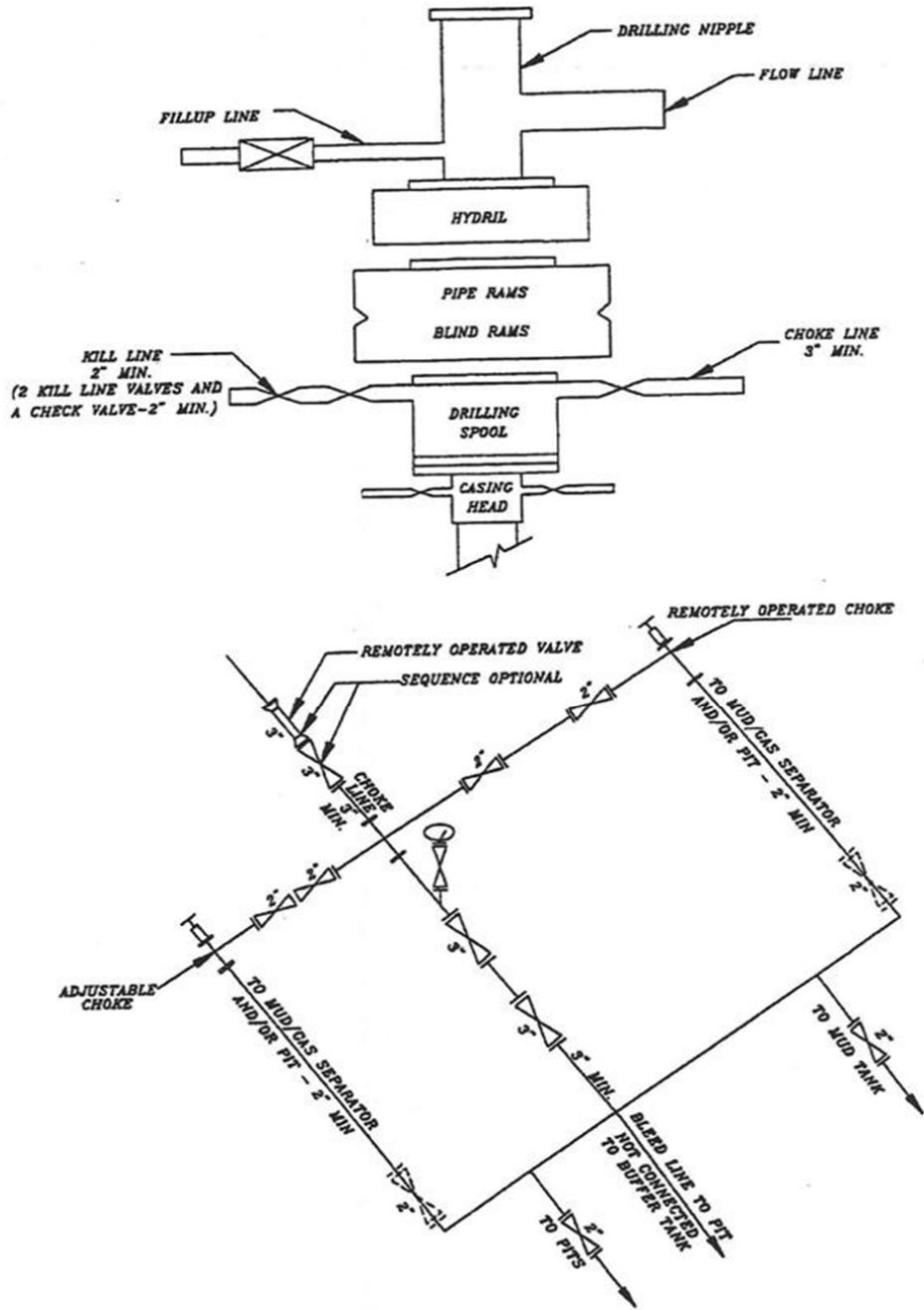
**DATE:**

**DRILLING SUPERINTENDENT:**

Kenny Gathings / Lovel Young

**DATE:**

### EXHIBIT A NBU 921-8C



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

<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>1. TYPE OF WELL</b> Gas Well		<b>8. WELL NAME and NUMBER:</b> NBU 921-8C
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>9. API NUMBER:</b> 43047507360000
<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> 0483 FNL 1729 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 08 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"/> ACIDIZE	<input type="checkbox"/> ALTER CASING
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 11/13/2011	<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="text"/>
		<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
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
MIRU ROTARY RIG. FINISHED DRILLING FROM 2719' TO 11,700' ON NOV. 10, 2011. RAN 4-1/2" 11.6# P-110 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED SST RIG 54 ON NOV. 13, 2011 @ 19:00 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES.		
<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> 11/14/2011

<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
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>1. TYPE OF WELL</b> Gas Well		<b>8. WELL NAME and NUMBER:</b> NBU 921-8C
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>9. API NUMBER:</b> 43047507360000
<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> 0483 FNL 1729 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 08 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"/> ACIDIZE	<input type="checkbox"/> ALTER CASING
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 11/13/2011	<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="text"/>
		<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
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
MIRU ROTARY RIG. FINISHED DRILLING FROM 2719' TO 11,700' ON NOV. 10, 2011. RAN 4-1/2" 11.6# P-110 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED SST RIG 54 ON NOV. 13, 2011 @ 19:00 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES.		
<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> 11/14/2011

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

**FORM 9**

**5. LEASE DESIGNATION AND SERIAL NUMBER:**  
UTU 0149767

**SUNDRY NOTICES AND REPORTS ON WELLS**

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

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

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

**1. TYPE OF WELL**  
Gas Well

**8. WELL NAME and NUMBER:**  
NBU 921-8C

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

**9. API NUMBER:**  
43047507360000

**3. ADDRESS OF OPERATOR:** P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779  
**PHONE NUMBER:** 720 929-6515 Ext

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

**4. LOCATION OF WELL**  
**FOOTAGES AT SURFACE:**  
0483 FNL 1729 FWL  
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:**  
Qtr/Qtr: NENW Section: 08 Township: 09.0S Range: 21.0E Meridian: S

**COUNTY:**  
UINTAH

**STATE:**  
UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<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"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input checked="" type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 12/22/2011	<input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<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.  
THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 12/22/2011 AT 1430 HRS. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

<b>NAME (PLEASE PRINT)</b> Sheila Wopsock	<b>PHONE NUMBER</b> 435 781-7024	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 12/22/2011	

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 \_\_\_\_\_

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.  
UTU63047A

2. Name of Operator **KERR MCGEE OIL & GAS ONSHORE** Contact: **JAIME L. SCHARNOWSKE**  
Email: **JAIME.SCHARNOWSKE@ANADARKO.COM**

8. Lease Name and Well No.  
NBU 921-8C

3. Address **PO BOX 173779**  
**DENVER, CO 80217**

3a. Phone No. (include area code)  
Ph: **720-929-6304**

9. API Well No.  
**43-047-50736**

4. Location of Well (Report location clearly and in accordance with Federal requirements)\*  
At surface **NENW 483FNL 1729FWL**  
At top prod interval reported below **NENW 483FNL 1729FWL**  
At total depth **NENW 483FNL 1729FWL**

10. Field and Pool, or Exploratory  
**NATURAL BUTTES**

11. Sec., T., R., M., or Block and Survey  
or Area **Sec 8 T9S R21E Mer SLB**

12. County or Parish  
**UINTAH**

13. State  
**UT**

14. Date Spudded  
**09/16/2011**

15. Date T.D. Reached  
**11/10/2011**

16. Date Completed  
 D & A  Ready to Prod.  
**12/22/2011**

17. Elevations (DF, KB, RT, GL)\*  
**4669 GL**

18. Total Depth: MD **11700** TVD **11697**

19. Plug Back T.D.: MD **11647** TVD **11644**

20. Depth Bridge Plug Set: MD **TVD**

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)  
**HDIL/ZDL/CNGR-CBL/CM/GR/CCL**

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 Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20.000	14.000 STL	36.7	0	40		28			
12.250	9.625 J-55	36.0	0	2695		685		0	
7.875	4.500 P-110	11.6	0	11687		2675		2980	

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	11255							

25. Producing Intervals

26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) WASATCH	8312	8314	8312 TO 8314	0.360	8	OPEN
B) MESAVERDE	8450	11612	8450 TO 11612	0.360	233	OPEN
C)						
D)						

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

Depth Interval	Amount and Type of Material
8312 TO 11612	PUMP 18,418 BBLs SLICK H2O & 271,971 LBS TLC; 116,514 LBS 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
12/22/2011	12/27/2011	24	→	0.0	3066.0	720.0			FLows FROM WELL
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
20/64	2422	3266.0	→	0	3066	720		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. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #130730 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

RECEIVED

FEB 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	1898
				BIRD'S NEST	2142
				MAHOGANY	2710
				WASATCH	5309
				MESAVERDE	8441

32. Additional remarks (include plugging procedure):  
Attached is the chronological well history, perforation report & final survey.  
DQX Csg was run from 18'-5034'  
LTC Csg was run from 5034'-11,687'

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 #130730 Verified by the BLM Well Information System.  
For KERR MCGEE OIL & GAS ONSHORE,L, sent to the Vernal**

Name (please print) JAIME L. SCHARNOWSKE Title REGULATORY ANALYST

Signature (Electronic Submission) Date 02/13/2012

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 921-8C		Spud Date: 9/24/2011	
Project: UTAH-UINTAH		Site: NBU 921-8C	Rig Name No: PROPETRO 11/11, SST 54/54
Event: DRILLING		Start Date: 9/14/2011	End Date: 9/13/2011
Active Datum: RKB @4,687.00usft (above Mean Sea Level)		UWI: NE/NW/0/9/S/21/E/8/0/0/26/PM/N/483/W/0/1729/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
9/23/2011	18:30 - 0:00	5.50	RDMO	01	A	P		LOAD OUT MOVE SOME LOADS TO THE NBU 921-8C / WAIT ON DAY LIGHT.
9/24/2011	0:00 - 6:00	6.00	RDMO	01	A	P		MOVE LOADS,PIT PUMP,AIR PACKAGE,BOB CAT,TOW TRUCKS. TO THE NBU 921-8C
	6:00 - 16:00	10.00	MIRU	01	A	P		MIRU ,DRESS CONDUCTOR, INSTALL BLOOIE LINE,CENTER RIG OVER HOLE,R/U & PRIME MUD PUMP & RESERVE PIT PUMP
	16:00 - 21:00	5.00	DRLSUR	08	A	Z		REPLACE TEGRA LINE ON RIG AIR COMPRESSOR.
	21:00 - 21:30	0.50	MIRU	06	A	P		P/U 1.83 BENT HOUSING HUNTING MTR SN 8005. 7/8 LOBE .16 RPM. M/U O506 SN 7016458 1ST RUN, W/ 6-18'S. INSTALL RUBBER.
	21:30 - 23:30	2.00	DRLSUR	02	B	P		SPUD SURFACE 09/24/2011 @ 21:30 HRS. DRILL 12 1/4" SURFACE HOLE F/40'-210' (170' @ 113'/HR) PSI ON/ OFF 850/600, UP/ DOWN/ ROT 27/22/25. 532 GPM, 45 RPM ON TOP DRIVE, 15-18K WOB
	23:30 - 0:00	0.50	DRLSUR	06	A	P		TOOH FOR DIR TOOLS.
9/25/2011	0:00 - 3:00	3.00	DRLSUR	06	A	P		TRIP IN HOLE WITH DIR TOOLS.
	3:00 - 10:00	7.00	DRLSUR	02	B	P		DRILL 12 1/4" SURFACE HOLE F/210' (650' @ 62'/HR) PSI ON/ OFF 1130/950, UP/ DOWN/ ROT 27/22/25. 532 GPM, 45 RPM ON TOP DRIVE, 15-18K WOB
	10:00 - 13:00	3.00	DRLSUR	06	A	P		TOOH FOUND BAD M.M/ MUD MOTOR WAS BROKE IN TWO SPOTS ABOVE AND BELOW THE BEND. ATTEMPT TO BREAK BIT WITH NO SUCCESS LAYED M.M AND BIT DOWN.
	13:00 - 15:30	2.50	DRLSUR	06	A	P		TIH W/ NEW MOTOR & BIT
	15:30 - 20:00	4.50	DRLSUR	02	B	P		DRILL 12 1/4" SURFACE HOLE F/ 650' / 830' @ 40'/HR) PSI ON/ OFF 1130/950, UP/ DOWN/ ROT 55/45/50. 532 GPM, 45 RPM ON TOP DRIVE, 15-18K WOB
	20:00 - 23:30	3.50	DRLSUR	06	A	P		POOH FOR M.M, WAS UN SCREWED AT BEND / LOCKED UP.LD M.M
9/26/2011	23:30 - 0:00	0.50	DRLSUR	06	A	P		P/U NEW MUD M.M SCRIB TIH.
	0:00 - 4:30	4.50	DRLSUR	06	A	P		TIH WITH NEW MOTOR REAM 700' TO 750' TIH TO 830'
	4:30 - 8:00	3.50	DRLSUR	02	B	P		DRILL 12 1/4" SURFACE HOLE F/ 830' / 1250 / 420' @120'/HR) PSI ON/ OFF 1350/1200, UP/ DOWN/ ROT 65/53/58. 532 GPM, 45 RPM ON TOP DRIVE, 15-18K WOB
	8:00 - 17:00	9.00	DRLSUR	02	B	P		DRILL 12 1/4" SURFACE HOLE F/ 1250 / 1760 / 510' @56'/HR) PSI ON/ OFF 1530/1400, UP/ DOWN/ ROT 69/59/62. 532 GPM, 45 RPM ON TOP DRIVE, 15-18K WOB
	17:00 - 0:00	7.00	DRLSUR	02	B	P		DRILL 12 1/4" SURFACE HOLE F/ 1760 / 2210/ 450' @64'/HR) PSI ON/ OFF 1520/1320, UP/ DOWN/ ROT 70/60/68. 532 GPM, 45 RPM ON TOP DRIVE, 15-18K
	9/27/2011	0:00 - 4:30	4.50	DRLSUR	02	B	P	DRILL 12 1/4" SURFACE HOLE F/ 2210 /2480 (270' @60'/HR) PSI ON/ OFF 1550/1350, UP/ DOWN/ ROT 72/61/70. 532 GPM, 45 RPM ON TOP DRIVE, 15-18K

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-8C

Spud Date: 9/24/2011

Project: UTAH-UINTAH

Site: NBU 921-8C

Rig Name No: PROPETRO 11/11, SST 54/54

Event: DRILLING

Start Date: 9/14/2011

End Date: 9/13/2011

Active Datum: RKB @4,687.00usft (above Mean Sea Level)

UWI: NE/NW/0/9/S/21/E/8/0/0/26/PM/N/483/W/0/1729/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	4:30 - 9:00	4.50	DRLSUR	02	B	P		DRILL 12 1/4" SURFACE HOLE F/ 2210 / 2717 507' @112'/HR) PSI ON/ OFF 1550/1350, UP/ DOWN/ ROT 72/61/70. 532 GPM, 45 RPM ON TOP DRIVE, 15-18K
	9:00 - 10:30	1.50	DRLSUR	05	C	P		CIRC & COND HOLE F/LD & 9 5/8" 36# SURF. CSG RUN
	10:30 - 14:30	4.00	DRLSUR	06	A	P		POOH FOR 36# J55 CASING. RUN,
	14:30 - 15:30	1.00	DRLSUR	06	A	P		LAY DOWN BHA & DIR TOOLS
	15:30 - 16:30	1.00	DRLSUR	12	A	P		MOVE CATWALK AND PIPE RACKS,MOVE CSG OVER TO WORK AREA,R/U T/RUN 9 5/8" 40# SURF. CSG
	16:30 - 20:30	4.00	DRLSUR	12	C	P		HOLD SAFTEY MEETING,RUN FLOAT SHOE ,SHOE JNT,BAFFLE & 64 JNTS 9 5/8" 36# LT&C CSG W/THE SHOE SET @2677' & THE BAFFLE @2632
	20:30 - 21:30	1.00	DRLSUR	12	A	P		RUN 200' OF 1" PIPE DN BACKSIDE, RIG DN & MOVE RIG OFF WELL
	21:30 - 0:00	2.50	DRLSUR	12	E	P		HOLD SAFETY MEETING. INSTALL CEMENT HEAD. PSI TEST TO 2000 PSI. PUMP 190 BBLs OF 8.3# H2O AHEAD. PUMP 20 BBLs OF 8.4# GEL WATER AHEAD. PUMP 260 SX(176.8 BBLs) 11# 3.82 YIELD LEAD CEMENT, PUMP 200 SX (42 BBLs) OF 15.8# 1.15 YIELD TAIL(2% CALC, 1/4# /SK OF FLOCELE).DROP PLUG ON FLY AND DISPLACE W/176.8 BBLs OF 8.3# H2O. LIFT PRESSURE WAS 590 PSI, BUMP PLUG AND HOLD 1200 PSI FOR 5 MIN. FLOAT HELD,FULL RETURNS THRU OUT JOB, 32 BBL'S CMT TO SURFACE
								PUMP 1" TOP OUT W/125 SKS 15.8 PPG CLASS "G" CEMENT W/4% CAL2 & 1/4#/SK FLOCELE PUMP 100 SKS DOWN BACK SIDE / CMT TO SURFACE STAYED RELEASE RIG@ 00:00 9/27/2011
								CONDUCTOR CASING: Cond. Depth set:40' Cement sx used:28
								SPUD DATE/TIME:9/24/2011 21:30
								SURFACE HOLE: Surface From depth:40' Surface To depth:2717' Total SURFACE hours:101.5 Surface Casing size:9 5/8" 36# # of casing joints ran:64 Casing set MD:2677 # sx of cement:260/200/125/100 Cement blend (ppg.):11.0/15.8/15.8 Cement yield (ft3/sk):3.82/1.15/1.15 # of bbls to surface:32 Describe cement issues:NONE
10/26/2011	8:00 - 20:00	12.00	DRLPRO	01	A	P		RIG DOWN & MOVE RIG
	20:00 - 0:00	4.00	DRLPRO	21	C	P		WAIT ON DAYLIGHT
10/27/2011	0:00 - 7:00	7.00	DRLPRO	21	C	P		WAIT ON DAYLIGHT

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

Well: NBU 921-8C

Spud Date: 9/24/2011

Project: UTAH-UINTAH

Site: NBU 921-8C

Rig Name No: PROPETRO 11/11, SST 54/54

Event: DRILLING

Start Date: 9/14/2011

End Date: 9/13/2011

Active Datum: RKB @4,687.00usft (above Mean Sea Level)

UWI: NE/NW/0/9/S/21/E/8/0/0/26/PM/N/483/W/0/1729/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/28/2011	7:00 - 19:00	12.00	DRLPRO	01	A	P		MIRU. SUB SET, DERRICK ON FLOOR, BACK YARD SET IN.
	19:00 - 0:00	5.00	DRLPRO	21	C	P		WAIT ON DAYLIGHT
	0:00 - 7:00	7.00	DRLPRO	21	C	P		WAIT ON DAY LIGHT
	7:00 - 0:00	17.00	DRLPRO	01	B	P		MIRU. STOOD DERRICK @ 10:00. HOOK UP PUMPS, FILL MUD TANKS WITH PIT WATER. RIG UP FLOOR. PUT UP WINTER SHED.
10/29/2011	0:00 - 2:00	2.00	DRLPRO	01	B	P		RIG UP
	2:00 - 2:30	0.50	DRLPRO	23		P		SAFETY MEEETING & RIG INSPECTION
	2:30 - 6:00	3.50	DRLPRO	14	A	P		NIPPLE UP BOPE
	6:00 - 11:30	5.50	DRLPRO	15	A	P		TEST BOPE. PICK UP TEST ASSEMBLY & SET TEST PLUG. OPEN WELL HEAD VALVE. 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 T O 1500 PSI FOR 30 MINUTES. FUNCTION TEST BOTH CHOKES WTH PRESSURE. LAY DOWN TEST ASSEMBLY.
10/30/2011	11:30 - 12:00	0.50	DRLPRO	24	A	P		SET WEAR BUSHING
	12:00 - 14:00	2.00	DRLPRO	06	A	P		PICK UP MUD MOTOR, MWD, MONEL DC. SCRIBE MWD.
	14:00 - 17:00	3.00	DRLPRO	06	A	P		TRIP IN HOLE PICKING UP DRILL PIPE. TAG CEMENT @ 2640'
	17:00 - 0:00	7.00	DRLPRO	08	B	Z		FINISH FLARE LINES, FIX MUD LINE, AND REPACK SWVEL.
	0:00 - 1:00	1.00	DRLPRO	02	F	P		DRLG CEMENT 2640' TO 2647' CLEAN OUT TO 2731'.
	1:00 - 6:00	5.00	DRLPRO	02	B	P		DIR DRLG. ROTATE/SLIDE/SURVEY. 2731' TO 3471'. 740' @ 148' FPH. WOB 10 TO 15K. TD RPM 55 TO 60. MM RPM 129. PUMPING 539 GPM. PSI ON/OFF 1950/1710. TORQUE ON/OFF 7120/4310. 4 TO 6' FLARE FROM 3670'
	6:00 - 6:30	0.50	DRLPRO	07	A	P		RIG SERVICE. FUNCTION BOP. WORK ON AUTO DRILLER.
	6:30 - 0:00	17.50	DRLPRO	02	B	P		DIR DRLG. ROTATE/SLIDE/SURVEY. 3471' TO 5156'. 1685' @ 96.3 FPH. WOB 10 TO 15K. TD RPM 60. MM RPM 129. PUMPING 539 GPM. PSI ON/OFF 2050/1810. TORQUE ON/OFF 8140/5380. 4 TO 6' FLARE
	0:00 - 15:30	15.50	DRLPRO	02	B	P		DIR DRLG. ROTATE/SLIDE/SURVEY. 5156' TO 6714'. 1558' @ 100.5 FPH. WOB 15 TO 18K. TD RPM 60. MM RPM 126. PUMPING 524 GPM. PSI ON/OFF 2580/2300. TORQUE ON/OFF 7240/5250 2 TO 4' FLARE.
	15:30 - 16:00	0.50	DRLPRO	07	A	P		RIG SERVICE. FUNCTION BOP.
16:00 - 0:00	8.00	DRLPRO	02	B	P		DIR DRLG. ROTATE/SLIDE/SURVEY. 6714' TO 7270'. 556' @ 69.5 FPH. WOB 20K. TD RPM 60. MM RPM 129. PUMPING 539 GPM. PSI ON/OFF 2750/2440. TORQUE ON/OFF 7250/5780. 4 TO 6' FLARE.	

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-8C

Spud Date: 9/24/2011

Project: UTAH-UINTAH

Site: NBU 921-8C

Rig Name No: PROPETRO 11/11, SST 54/54

Event: DRILLING

Start Date: 9/14/2011

End Date: 9/13/2011

Active Datum: RKB @4,687.00usft (above Mean Sea Level)

UWI: NE/NW0/9/S/21/E/8/0/0/26/PM/N/483/NW0/1729/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
11/1/2011	0:00 - 17:30	17.50	DRLPRO	02	B	P		DIR DRLG. ROTATE/SLIDE/SURVEY. 7270' TO 8047'. 777' @ 44.4 FPH. WOB 16 TO 20K. TD RPM 60. MM RPM 124. PUMPING 519 GPM. PSI ON/OFF 2580/2360. TORQUE ON/OFF 7560/5700. START MUD UP @7760'. NO FLARE AFTER MUD UP. RIG SERVICE. FUNCTION BOP
	17:30 - 18:00	0.50	DRLPRO	07	A	P		
	18:00 - 0:00	6.00	DRLPRO	02	B	P		DIR DRLG. ROTATE/SLIDE/SURVEY. 8047' TO 8243'. 196' @ 32.7 FPH. WOB. 18 TO 20K. TD RPM 60. MM RPM 121. PUMPING 504 GPM. PAI ON/OFF 2580/2375. TORQUE ON/OFF 8250/5800. OCCASIONAL 4' FLARE.
11/2/2011	0:00 - 14:00	14.00	DRLIN1	02	B	P		DRILL F/ 8243 TO 8811 - 568' @ 40.5 FPH W/ 10.3 MW VIS 38 - WOB 18/22 MRPM 112 - RPM 45 - GPM 467 - TORQ 8/6 - PP 2400 - DIFF 300 - OFF BTM - ROT 100% SLIDE 0% OF FT DRILL OF 568' SER RIG
	14:00 - 14:30	0.50	DRLIN1	07	A	P		
	14:30 - 16:00	1.50	DRLIN1	02	B	P		DRILL F/ 8811 TO 8874 - 63' @ 42 FPH W/ 10.5 MW VIS 38 - WOB 18/22 MRPM 112 - RPM 45 - GPM 467 - TORQ 8/6 - PP 2400 - DIFF 300 - OFF BTM - ROT 100% SLIDE 0% OF FT DRILL OF 63'
	16:00 - 16:30	0.50	DRLIN1	22	G	P		LOST 115 BBLS MUD @ 8874 & PUMP LCM SWEEP & RAISE SYSTEM TO 5% LCM REGAIN FULL RETURNS
	16:30 - 0:00	7.50	DRLIN1	02	B	P		DRILL F/ 8874 TO 9034 - 160' @ 21.3' FPH W/ 10.9 MW VIS 39 LCM 5% - WOB 18/22 MRPM 112 - RPM 45 - GPM 467 - TORQ 8/6 - PP 2400 - DIFF 2150 - OFF BTM - ROT 100% SLIDE 0% OF FT DRILL OF 160'
11/3/2011	0:00 - 2:30	2.50	DRLPRO	02	B	P		DRILL F/ 9034 TO 9109 - 75' @ 30.0' FPH W/ 10.9 MW VIS 39 LCM 5% - WOB 18/22 MRPM 112 - RPM 45 - GPM 467 - TORQ 8/6 - PP 2400 - DIFF 2150 - OFF BTM - ROT 100% SLIDE 0% OF FT DRILL OF 75'
	2:30 - 3:30	1.00	DRLPRO	05	B	P		LOST DIFF ON MUD MOTOR - CKECK MTR & BIULD PILL
	3:30 - 8:00	4.50	DRLPRO	06	A	P		PUMP DRY JOB & T.O.H F/ MUD MOTOR
	8:00 - 14:30	6.50	DRLPRO	06	A	P		C/O MOTOR & BIT & T.I.H & WASH 90' TO BTM ( NO FILL )
	14:30 - 0:00	9.50	DRLPRO	02	D	P		DRILL F/ 9109 TO 9610 - 501' @ 52.7' FPH W/ 11.3 MW VIS 39 LCM 7% - WOB 18/22 MRPM 75 - RPM 45 - GPM 467 - TORQ 8/6 - PP 2600 - DIFF 2350 - OFF BTM - ROT 100% SLIDE 0% OF FT DRILL 501'
11/4/2011	0:00 - 3:00	3.00	DRLPRO	22	G	P		LOST RETURNS @ 9610 - LOST 250 BBLS & RAISE LCM TO 15% IN SYSTEM & REGAIN RETURNS
	3:00 - 9:30	6.50	DRLPRO	02	B	X		DRILL F/ 9610 TO 9820 - 210' @ 32.3' FPH W/ 11.6 MW VIS 38 LCM 15% - WOB 18/22 MRPM 75 - RPM 45 - GPM 467 - TORQ 8/6 - PP 2600 - DIFF 2350 - OFF BTM - ROT 100% SLIDE 0% OF FT DRILL 210'
	9:30 - 15:00	5.50	DRLPRO	22	G	X		LOST RETURNS @ 9820 & LOST 650 BBLS & RAISE LCM 35% TO REGAIN CIRC

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-8C Spud Date: 9/24/2011  
 Project: UTAH-UINTAH Site: NBU 921-8C Rig Name No: PROPETRO 11/11, SST 54/54  
 Event: DRILLING Start Date: 9/14/2011 End Date: 9/13/2011  
 Active Datum: RKB @4,687.00usft (above Mean Sea Level) UWI: NE/NW0/9/S/21/E/8/0/0/26/PM/N/483/W/0/1729/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	15:00 - 20:30	5.50	DRLPRO	02	B	P		DRILL F/ 9820 TO 10,015 -195' @ 35.4' FPH W/ 11.8 MW VIS 42 LCM 30% - WOB 18/22 MRPM 75 - RPM 45 - GPM 418 - TORQ 8/6 - PP 2500 - DIFF 2350 - OFF BTM - ROT 100% SLIDE 0% OF FT DRILL 195'
	20:30 - 22:00	1.50	DRLPRO	22	G	X		LOST RETURNS @ 10,015 & LOST 90 BBLS & RAISE LCM TO 40% TO REGAIN CIRC
	22:00 - 0:00	2.00	DRLPRO	02	B	P		DRILL F/ 10,015 TO 10,064 - 49' @ 24.5' FPH W/ 11.8 MW VIS 42 LCM 35% - WOB 18/22 MRPM 75 - RPM 45 - GPM 418 - TORQ 8/6 - PP 2500 - DIFF 2350 - OFF BTM - ROT 100% SLIDE 0% OF FT DRILL 49'
11/5/2011	0:00 - 8:30	8.50	DRLPRO	02	B	P		DRILL F/ 10,064 TO 10317 - 253' @ 29.7' FPH W/ 12.0 MW VIS 42 LCM 40% - WOB 18/22 MRPM 75 - RPM 45 - GPM 418 - TORQ 8/6 - PP 2500 - DIFF 2350 - OFF BTM - ROT 100% SLIDE 0% OF FT DRILL 253'
	8:30 - 9:30	1.00	DRLPRO	22	G	X		LOST RETURNS @ 10317 - LOST 160 BBLS RAISE LCM TO 45%
	9:30 - 14:30	5.00	DRLPRO	02	B	P		DRILL F/ 10317 TO 10436 - 119' @ 23.8' FPH W/ 12.0 MW VIS 42 LCM 45% - WOB 18/22 MRPM 63 - RPM 45 - GPM 395 - TORQ 8/6 - PP 2350 - DIFF 2150 - OFF BTM - ROT 100% SLIDE 0% OF FT DRILL 119'
	14:30 - 15:00	0.50	DRLPRO	07	A	P		RIG SER
	15:00 - 16:30	1.50	DRLPRO	02	B	P		DRILL F/ 10436 TO 10481 - 45' @ 30.0' FPH W/ 12.0 MW VIS 42 LCM 45% - WOB 18/22 MRPM 63 - RPM 45 - GPM 395 - TORQ 8/6 - PP 2350 - DIFF 2150 - OFF BTM - ROT 100% SLIDE 0% OF FT DRILL 119'
	16:30 - 22:30	6.00	DRLPRO	22	G	X		LOST RETURNS @ 10,481 MIX LCM LOST TOTAL OF 580 BBLS - COULDN'T ESTABLISHED ANY RETURNS & T.O.H TO @ 5000 TO ESTABLISH CIRC CIRC & BUILD VOLUME
11/6/2011	22:30 - 0:00	1.50	DRLPRO	22	O	X		CIRC & BUILD VOLUME @ 5,000 & STAGE BACK IN THE HOLE 10 STANDS AT TIME & CIRC OUT
	0:00 - 9:00	10.00	DRLPRO	22	G	X		WASH F/ 8063 TO 10481 ( NO FILL - NO LOSSES
	9:00 - 16:00	7.00	DRLPRO	03	E	X		DRILL F/ 10481 TO 10641 - 160' @ 20.0' FPH W/ 11.9 MW VIS 42 LCM 40% - WOB 18/22 MRPM 63 - RPM 45 - GPM 395 - TORQ 8/6 - PP 2400 - DIFF 2250 - OFF BTM - ROT 100% SLIDE 0% OF FT DRILL 160'
	16:00 - 0:00	8.00	DRLPRO	02	B	P		DRILL F/ 10641 TO 10665 - 24' @ 4.0' FPH W/ 11.9 MW VIS 42 LCM 35% - WOB 18/25 MRPM 63 - RPM 45 - GPM 418 - TORQ 8/6 - PP 2400 - DIFF 2250 - OFF BTM - ROT 100% SLIDE 0% OF FT DRILL 24'
11/7/2011	0:00 - 6:00	6.00	DRLPRO	02	B	P		PUM DRY JOB & T.O.H F/ NEW BIT & WELL FLOWING @ SHOE SPOT PILL 14.3 PPG
	6:00 - 14:30	8.50	DRLPRO	06	A	P		C/O MOTOR & BIT & T.I.H
	14:30 - 17:30	3.00	DRLPRO	06	A	P		T.O.H W/ PLUGGED DRILL STRING & PLUG W/ LCM AROUND MWD TOOL CARRIER & PUMP DOWN
	17:30 - 22:00	4.50	DRLPRO	06	G	X		MOTOR & OUT THE BIT WAS CLEAN & C/O EMISSY SUB & MWD TOOL
	22:00 - 0:00	2.00	DRLPRO	06	A	P		CONT T.I.H BREAKING CIRC

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

Well: NBU 921-8C

Spud Date: 9/24/2011

Project: UTAH-UINTAH

Site: NBU 921-8C

Rig Name No: PROPETRO 11/11, SST 54/54

Event: DRILLING

Start Date: 9/14/2011

End Date: 9/13/2011

Active Datum: RKB @4,687.00usft (above Mean Sea Level)

UWI: NE/NW0/9/S/21/E/8/0/0/26/PM/N/483/W/0/1729/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
11/8/2011	0:00 - 1:00	1.00	DRLPRO	06	A	P		T.I.H TO SHOE & BREAK CIRC
	1:00 - 2:00	1.00	DRLPRO	09	A	P		SLIP & CUT DRILL LINE
	2:00 - 7:00	5.00	DRLPRO	06	A	P		CONT T.I.H & BREAKING CIRC
	7:00 - 8:00	1.00	DRLPRO	03	E	P		WASH TO BTM ( NO FILL )
	8:00 - 14:00	6.00	DRLPRO	02	B	P		DRILL F/ 10,665 TO 10,912 - 247' @ 41.1' FPH W/ 11.9 MW VIS 42 LCM 40% - WOB 18/25 MRPM 67 - RPM 45 - GPM 418 - TORQ 8/6 - PP 2400 - DIFF 2250 - OFF BTM - ROT 100% SLIDE 0% OF 247 FT RIG SER
	14:00 - 14:30	0.50	DRLPRO	07	A	P		
	14:30 - 0:00	9.50	DRLPRO	02	B	P		DRILL F/ 10,912 TO 11,124 - 212' @ 22.3' FPH W/ 12.0 MW VIS 42 LCM 40% - WOB 18/25 MRPM 67 - RPM 45 - GPM 418 - TORQ 8/6 - PP 2400 - DIFF 2250 - OFF BTM - ROT 100% SLIDE 0% OF 212 FT
11/9/2011	0:00 - 15:00	15.00	DRLPRO	02	B	P		DRILL F/ 11,124 TO 11,358' - 230' @ 15.3' FPH W/ 12.1 MW VIS 48 LCM 40% - WOB 18/20 MRPM 68 - RPM 45 - GPM 427 - TORQ 8/6 - PP 2500 - DIFF 2300 - OFF BTM - ROT 100% SLIDE 0%
	15:00 - 15:30	0.50	DRLPRO	07	A	P		SERVICE RIG
	15:30 - 16:00	0.50	DRLPRO	02	B	P		DRILL F/ 11,358 TO 11,361' - 3' @ 6' FPH W/ 12.1 MW VIS 48 LCM 40% - WOB 18/20 MRPM 68 - RPM 45 - GPM 427 - TORQ 5/4 - PP 2740 - DIFF 2740 - OFF BTM - ROT 100% SLIDE 0%
	16:00 - 17:00	1.00	DRLPRO	05	C	P		CIRC & COND HOLE,BUILD SLUG
	17:00 - 0:00	7.00	DRLPRO	06	A	P		PUMP 40 BBL 13.6 PPG SLUG, TOH F/MM & BIT
11/10/2011	0:00 - 3:00	3.00	DRLPRO	06	A	P		CONT TOH,L/D DIR TOOLS & BIT #4
	3:00 - 4:00	1.00	DRLPRO	06	A	P		P/U HUNTING STRAIGHT 6 1/2" .16 RPG MM,M/U MI 616 SMITH BIT W/6 & 16S JETS
	4:00 - 11:30	7.50	DRLPRO	06	A	P		TIH T/10,650'(BREAK CIRC EVERY 1000' T/PREVENT PLUGGING OFF MM OR BIT W/LCM)
	11:30 - 13:30	2.00	DRLPRO	03	D	P		FILL PIPE,WASH & REAM F/10,650' T/11,361'
	13:30 - 14:00	0.50	DRLPRO	07	A	P		SERVICE RIG
	14:00 - 0:00	10.00	DRLPRO	02	B	P		DRILL 77/8" PROD HOLE F/ 11,361T/ 11,700' 339'@ 34' FPH W/ 12.2 MW VIS 50 LCM 40% - WOB 18/20 MRPM 67 - RPM 45 - GPM 418 - TORQ 8/6 - PP 2550 - DIFF 2350 - OFF BTM - ROT 100%(TD 77/8" PROD HOLE)
11/11/2011	0:00 - 1:30	1.50	DRLPRO	05	C	P		CIRC & COND HOLE F/WPER TRIP
	1:30 - 3:00	1.50	DRLPRO	06	E	P		WIPER TRIP 10 STDs
	3:00 - 4:30	1.50	DRLPRO	05	C	P		CIRC & COND HOLE F/TOH & OPEN HOLE LOGS
	4:30 - 11:00	6.50	DRLPRO	06	B	P		CHECK FLOW,PUMP 40 BB 13.8 PPG SLUG ,TOH/F LOGS
	11:00 - 12:00	1.00	DRLPRO	06	B	P		BREAK & L/D BIT & MM
	12:00 - 20:00	8.00	DRLPRO	11	D	P		HOLD SAFTEY MEETING W/BAKER HUGHES WIRELINE,R/U LOGGING TOOLS,LOG WELL W/TRIPLE COMBO SUITE F/11,690' T/2672'(LOGGERS TD 11,690',DRILLERS TD 11,700')R/D LOGGERS
	20:00 - 22:30	2.50	DRLPRO	06	A	P		M/U BIT & BIT SUB.TIH T/2450'
	22:30 - 23:00	0.50	DRLPRO	07	A	P		SERVICE RIG
	23:00 - 0:00	1.00	ALL	08	B	Z		REPLACE HYDRAULIC HOSE IN SERVICE LOOP T/TOPDRIVE

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-8C

Spud Date: 9/24/2011

Project: UTAH-UINTAH

Site: NBU 921-8C

Rig Name No: PROPETRO 11/11, SST 54/54

Event: DRILLING

Start Date: 9/14/2011

End Date: 9/13/2011

Active Datum: RKB @4,687.00usft (above Mean Sea Level)

UWI: NE/NW0/9/S/21/E/8/0/0/26/PM/N/483/W/0/1729/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
11/12/2011	0:00 - 1:30	1.50	ALL	08	B	Z		CONT REPLACING HYDRAULIC HOSE IN SERVICE LOOP T/ TOPDRIVE
	1:30 - 6:30	5.00	DRLPRO	06	A	P		CONT TRIPPING IN HOLE T/11,700'
	6:30 - 8:00	1.50	DRLPRO	05	C	P		CIRC & COND HOLE F/LAY DOWN & 4 1/2" PROD CSG RUN
	8:00 - 16:00	8.00	DRLPRO	06	D	P		HOLD SAFTEY MEETING W/FRANKS WESTATES LAY DOWN CREW,CHECK FLOW,PUMP SLUG.L/D DP & BHA
	16:00 - 17:30	1.50	CSG	12	A	P		PULL WEAR BUSHING,HOLD SAFTEY MEETING,R/U FRANKS WESTATES CSG EQUIP
	17:30 - 0:00	6.50	CSG	12	C	P		RUN FLOAT SHOE,SHOE JNT,FLOAT COLLAR & 161 JNTS 4 1/2" P-110 11.6# 8RD CSG & 120 JNTS 4 1/2" P-110 11.6# DQX CSG W/THE FLOAT SHOE @11,687' & THE FLOAT COLLAR @ 11,646',CSG SHOE @6653' @ 00:00
11/13/2011	0:00 - 4:30	4.50	CSG	12	C	P		CONT T/RUN FLOAT SHOE,SHOE JNT FLOAT COLLAR & 161 JNTS 4 1/2" P-110 11.6# LT&C CSG & 120 JNTS 4 1/2" P-110 11.6# DQX CSG W/THE FLOAT SHOE SET @11,687' & THE FLOAT COLLAR SET @ 11,646',TORQUE TURN 120 JNTS 4 1/2" 11.6# DQX PROD CSG,THREAD REPS WITNESSED CSG RUN
	4:30 - 8:00	3.50	CSG	05	D	P		CIRC OUT GAS,COND HOLE F/CEMENT
	8:00 - 9:30	1.50	ALL	21	D	Z		CIRC DOWN CSG,WAIT ON BJ TO REPAIR OR REPLACE CEMENT PUMP TRUCK,ONLY 1CEMENTING PUMP MOTOR OPERATING (REPAIR CEMENT PUMP MOTOR)
	9:30 - 10:30	1.00	CSG	12	E	P		HOLD SAFTEY MEETING W/BJ CEMENT CREWS ,INSTALL CEMENTING HEAD
	10:30 - 14:00	3.50	CSG	12	E	P		PRESS TEST LINES T/ 7500 PSI. PUMP 28 BBLS OF ULTRA FLUSH II @ 12.3PPG. PUMP (830SKS) 234 BBLS OF 12.8# 1.85 YD 9.45 GAL/SK LEAD CEMENT. PUMP (1845 SKS) 430 BBLS 14.3# 1.31 YD 5.9 GAL/SK TAIL CEMENT. SHUT DOWN. CLEAN UP LINES. DROP PLUG AND DISPLACE W/ 181 BBLS OF FRESH WATER.W/CLAYCARE,LOST ALL RETURNS AFTER DROPPING PLUG HAD A FINAL LIFT PSI OF 3905 PSI. BUMP PLUG. HELD 4480 PSI FOR 5 MINS.BLEED OFF CHECKED FLOATS AND FLOATS HELD,2 BBLS BACK T/TRUCK,EST. TOP OF LEAD @ 2600',EST TOP OF TAIL 4500' RIG DOWN BJ CEMENTERS
	14:00 - 16:00	2.00	CSG	14	A	P		SET C-22 CSG SLIPS W/110K ON SLIPS,P/U STACK & CUT OFF,L/D CUT OFF JNT
	16:00 - 19:00	3.00	CSG	14	A	P		NIPPLE DOWN BOPE EQUIP,CLEAN MUD TANKS,RELEASE RIG @19:00 11/13/2011

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 921-8C	Wellbore No.	OH
Well Name	NBU 921-8C	Wellbore Name	NBU 921-8C
Report No.	1	Report Date	12/16/2011
Project	UTAH-UINTAH	Site	NBU 921-8C
Rig Name/No.	MILES 3/3	Event	COMPLETION
Start Date	12/15/2011	End Date	12/22/2011
Spud Date	9/24/2011	Active Datum	RKB @4,687.00usft (above Mean Sea Level)
UWI	NE/NW/0/9/S/21/E/8/0/0/26/PM/N/483/W/0/1729/0/0		

1.3 General

Contractor	JW WIRELINE	Job Method	PERFORATE	Supervisor	FRANK WINN
Perforated Assembly	PRODUCTION CASING	Conveyed Method	WIRELINE		

1.4 Initial Conditions

Fluid Type	KCL WATER	Fluid Density	8.40 (ppg)
Surface Press	0.00 (psi)	Estimate Res Press	
TVD Fluid Top	0.0 (usft)	Fluid Head	11,612.0 (usft)
Hydrostatic Press	5,067.06 (psi)	Press Difference	5,067.06 (psi)
Balance Cond	OVER BALANCED		

1.5 Summary

Gross Interval	8,312.0 (usft)-11,612.0 (usft)	Start Date/Time	12/16/2011 12:00AM
No. of Intervals	53	End Date/Time	12/16/2011 12:00AM
Total Shots	241	Net Perforation Interval	72.00 (usft)
Avg Shot Density	3.35 (shot/ft)	Final Surface Pressure	
		Final Press Date	

2 Intervals

2.1 Perforated Interval

Date	Formation/Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/Add. Shot	Diameter (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
	WASATCH/			8,312.0	8,314.0	4.00		0.360		3.125	90.00		23.00		
	MESAVERDE/			8,450.0	8,451.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			8,464.0	8,466.0	4.00		0.360		3.125	90.00		23.00		

2.1 Perforated Interval (Continued)

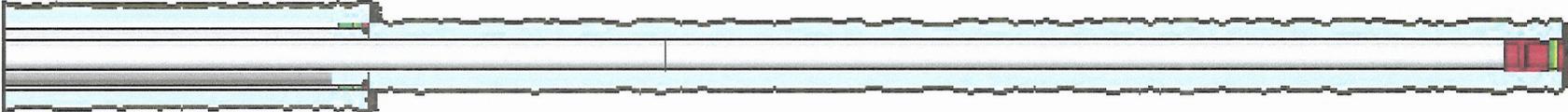
Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
	MESAVERDE/			8,479.0	8,480.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			8,531.0	8,532.0	4.00		0.360		3.125	90.00		23.00		
	MESAVERDE/			8,566.0	8,567.0	4.00		0.360		3.125	90.00		23.00		
	MESAVERDE/			8,604.0	8,606.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			8,649.0	8,650.0	4.00		0.360		3.125	90.00		23.00		
	MESAVERDE/			8,679.0	8,681.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			9,030.0	9,032.0	4.00		0.360		3.125	90.00		23.00		
	MESAVERDE/			9,070.0	9,072.0	4.00		0.360		3.125	90.00		23.00		
	MESAVERDE/			9,186.0	9,188.0	4.00		0.360		3.125	90.00		23.00		
	MESAVERDE/			9,268.0	9,270.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			9,289.0	9,290.0	4.00		0.360		3.125	90.00		23.00		
	MESAVERDE/			9,317.0	9,319.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			9,465.0	9,466.0	4.00		0.360		3.125	90.00		23.00		
	MESAVERDE/			9,490.0	9,491.0	4.00		0.360		3.125	90.00		23.00		
	MESAVERDE/			9,566.0	9,567.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			9,582.0	9,583.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			9,614.0	9,615.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			9,641.0	9,642.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			9,679.0	9,680.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			9,689.0	9,690.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			9,724.0	9,725.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			9,749.0	9,750.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			9,848.0	9,850.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			9,923.0	9,924.0	4.00		0.360		3.125	90.00		23.00		
	MESAVERDE/			9,968.0	9,970.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			10,009.0	10,010.0	4.00		0.360		3.125	90.00		23.00		
	MESAVERDE/			10,103.0	10,104.0	4.00		0.360		3.125	90.00		23.00		
	MESAVERDE/			10,365.0	10,366.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			10,428.0	10,430.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			10,461.0	10,462.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			10,515.0	10,516.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			10,539.0	10,540.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			10,554.0	10,556.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			11,215.0	11,217.0	4.00		0.360		3.125	90.00		23.00		
	MESAVERDE/			11,236.0	11,238.0	4.00		0.360		3.125	90.00		23.00		
	MESAVERDE/			11,254.0	11,256.0	4.00		0.360		3.125	90.00		23.00		
	MESAVERDE/			11,290.0	11,291.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			11,298.0	11,300.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			11,319.0	11,320.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			11,337.0	11,338.0	3.00		0.360		3.125	120.00		23.00		

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 /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
	MESAVERDE/			11,381.0	11,382.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			11,388.0	11,389.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			11,397.0	11,398.0	3.00		0.360		3.125	120.00		23.00		
	MESAVERDE/			11,417.0	11,418.0	3.00		0.360		3.125	120.00		23.00		
12/16/2011	MESAVERDE/			11,500.0	11,501.0	3.00		0.360		3.125	120.00		23.00		
12:00AM															
12/16/2011	MESAVERDE/			11,513.0	11,514.0	3.00		0.360		3.125	120.00		23.00		
12:00AM															
12/16/2011	MESAVERDE/			11,524.0	11,525.0	3.00		0.360		3.125	120.00		23.00		
12:00AM															
12/16/2011	MESAVERDE/			11,531.0	11,533.0	3.00		0.360		3.125	120.00		23.00		
12:00AM															
12/16/2011	MESAVERDE/			11,549.0	11,550.0	3.00		0.360		3.125	120.00		23.00		
12:00AM															
12/16/2011	MESAVERDE/			11,610.0	11,612.0	3.00		0.360		3.125	120.00		23.00		
12:00AM															

3 Plots

3.1 Wellbore Schematic



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

Well: NBU 921-8C

Spud Date: 9/24/2011

Project: UTAH-UINTAH

Site: NBU 921-8C

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 12/15/2011

End Date: 12/22/2011

Active Datum: RKB @4,687.00usft (above Mean Sea Level)

UWI: NE/NW/0/9/S/21/E/8/0/0/26/PM/N/483/W/0/1729/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/14/2011	7:00 - 7:15	0.25	COMP	48		P		JSA- RDSU. ROAD RIG. RUSU. PU TBG.
	7:15 - 11:30	4.25	COMP	30	A	P		RDSU. ROAD RIG FROM NBU 922-34D-3. SPOT AND RUSU. SPOT EQUIP. SPOT TBG. ND WH. NU BOP. RU FLOOR.
	11:30 - 17:00	5.50	COMP	31	I	P		MU 3-7/8" BIT (RR) AND BIT SUB. RIH AS MEAS AND PU 2-3/8" L-80 TBG. RUN 314-JTS. EOT AT 9965'. WINTERIZE WH. SDFN
12/15/2011	7:00 - 7:15	0.25	COMP	48		P		JSA- PU TBG. PWR SWMVEL. POOH.
	7:15 - 9:30	2.25	COMP	31	I	P		SICP 0. CONT RIH W/ BIT AS MEAS AND PU TBG. RU DRLG EQUIP W/ 364-JTS IN AT 11,557'.
	9:30 - 10:45	1.25	COMP	44	D	P		EST CIRC. PRES TEST TO 2500#. GOOD. CIRC AS WASH DOWN FROM 11,557' TO 11,621' W/ 366-JTS IN. CIRC CLEAN. HAD ROCKS AND RUBBER AND DRLG MUD IN RETURNS. RD PWR SWMVEL.
	10:45 - 16:00	5.25	COMP	31	I	P		POOH AS LD 59-JTS AND SB 307-JTS. RD FLOOR. ND BOP. NU FRAC VALVES. RU FLOOR. FILL CSG. P-TEST W/ RIG PMP TO 2500#. GOOD. FILL SURFACE CSG W/ 1 BBL. P-TEST SURFACE TO 900#. GOOD. DRAIN EQUIP. SDFN
12/16/2011	7:00 - 7:15	0.25	COMP	48		P		JSA- PRES TEST. EWL.
	7:15 - 8:45	1.50	COMP	33	C	P		RU B&C. PRES TEST AS PER PROCEDURE.
	8:45 - 12:00	3.25	COMP	37	B	P		TEST TO 1019# FOR 15 MIN. END 1000#. LOST 19#. TEST TO 3520# FOR 15 MIN. END 3483#. LOST 25 #. TEST TO 9136# FOR 30 MIN. END 9043#. LOST 93#. BLEED OFF AND RD B&C. MIRU JW EWL. RIH W/ 3-1/8" EXP PERF GUN (23-GR, 40" PENT, .36" EOD, 3 SPF ON 120"). PERF LOWER MESA VERDE AS PER PROCEDURE.
12/19/2011	7:00 - 7:15	0.25	COMP	48		P		READY TO FRAC. JSA- FRAC AND PERF.

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-8C		Spud Date: 9/24/2011	
Project: UTAH-UINTAH		Site: NBU 921-8C	Rig Name No: MILES 3/3
Event: COMPLETION		Start Date: 12/15/2011	End Date: 12/22/2011
Active Datum: RKB @4,687.00usft (above Mean Sea Level)		UWI: NE/NW0/9/S/21/E/8/0/0/26/PM/N/483/W/0/1729/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:15 - 19:30	12.25	COMP	36	B	P		<p>PRES TEST SURFACE LINES TO 8500 PSI. GOOD.            STAGE #1- OPEN WELL- SICP 2190 PSI. BRK 5500 PSI AT 3.5 BPM, ISIP 4556, FG .83.            PMP 600 BBLS SLK WTR, 52.1 BPM @ 8176 PSI = 88% PERFS OPEN.            MP 8833, MR 53.0, AP 7811, AR 50.0, FG .82, ISIP 4431, NPI -125.            BBLS PMP 2576 SLK WTR, 53,787# TLC 30/50.</p> <p>-----</p> <p>STAGE #2- PU 4-1/2" HAL CO 10K CBP AND 3-1/8" EXP GUNS, 23 GM, .36 HOLES ON 120* PHASING.            SET CBP AT 11,448'. PULL UP AND PERF LOWER MESA VERDE AS PER PROCEDURE.</p> <p>OPEN WELL- SICP 4266 PSI. BRK 5268 PSI AT 3.3 BPM, ISIP 4659, FG .85.            PMP 1000 BBLS SLK WTR, 50.2 BPM @ 7264 PSI = 100% PERFS OPEN.            MP 8804, MR 51.6, AP 7279, AR 48.4, FG .83, ISIP 4486, NPI -173.            BBLS PMP 5846 SLK WTR, 148,038# 30/50 TLC PROP.</p> <p>-----</p> <p>STAGE #3- PU 4-1/2" HAL CO 10K CBP AND 3-1/8" EXP GUNS, 23 GM, .36 HOLES ON 90* PHASING.            SET CBP AT 11,276'. PULL UP AND PERF LOWER MESA VERDE AS PER PROCEDURE.</p> <p>OPEN WELL- SICP 4365 PSI. BRK 5165 PSI AT 3.5 BPM, ISIP 4618, FG .85.            PMP 900 BBLS SLK WTR, 35.2 BPM @ 8092 PSI = 70% PERFS OPEN.            MP 9177, MR 48.8, AP 8122, AR 41.8, FG .83, ISIP 4424, NPI -194.            BBLS PMP 3246 SLK WTR, 70,146# 30/50 TLC PROP.</p> <p>-----</p> <p>STAGE #4- PU 4-1/2" HAL CO 8K CBP AND 3-1/8" EXP GUNS, 23 GM, .36 HOLES ON 120* PHASING.            SET CBP AT 10,586'. PULL UP AND PERF MESA VERDE AS PER PROCEDURE.            JSA- FRAC AND PERF.</p>
12/20/2011	7:00 - 7:15	0.25	COMP	48		P		

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

Well: NBU 921-8C		Spud Date: 9/24/2011	
Project: UTAH-UINTAH		Site: NBU 921-8C	Rig Name No: MILES 3/3
Event: COMPLETION		Start Date: 12/15/2011	End Date: 12/22/2011
Active Datum: RKB @4,687.00usft (above Mean Sea Level)		UWI: NE/NW/0/9/S/21/E/8/0/0/26/PM/N/483/W/0/1729/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:15 - 20:30	13.25	COMP	36	B	P		<p>STAGE #4- OPEN WELL- SICP 2833 PSI. BRK 4633 PSI AT 10.8 BPM, ISIP 4618, FG .80. PMP 60 BBLS SLK WTR, 39.2 BPM @ 6854 PSI = 61% PERFS OPEN. MP 7476, MR 50.6, AP 6868, AR 44.6, FG .77, ISIP 3427, NPI -349. BBLS PMP 714 SLK WTR, 10,743# WHITE 30/50 PROP.</p> <p>-----</p> <p>STAGE #5- PU 4-1/2" HAL CO 8K CBP AND 3-1/8" EXP GUNS, 23 GM, .36 HOLES ON 90* AND 120* PHASING. SET CBP AT 10,134'. PULL UP AND PERF MESA VERDE AS PER PROCEDURE.</p> <p>OPEN WELL- SICP 2588 PSI. BRK 4188 PSI AT 6.3 BPM, ISIP 2990, FG .74. PMP 150 BBLS SLK WTR, 42.8 BPM @ 8069 PSI = 69% PERFS OPEN. MP 8779, MR 51.8, AP 7305, AR 49.0, FG .77, ISIP 3287, NPI 297. BBLS PMP 2169 SLK WTR, 39,685# 30/50 WHITE PROP.</p> <p>-----</p> <p>STAGE #6- PU 4-1/2" HAL CO 8K CBP AND 3-1/8" EXP GUNS, 23 GM, .36 HOLES ON 120* PHASING. SET CBP AT 10,134'. PULL UP AND PERF MESA VERDE AS PER PROCEDURE.</p> <p>OPEN WELL- SICP 2492 PSI. BRK 5160 PSI AT 5.8 BPM, ISIP 4063, FG .86. PMP 70 BBLS SLK WTR, 48.0 BPM @ 7685 PSI = 70% PERFS OPEN. MP 8226, MR 51.2, AP 7685, AR 49.4, FG .76, ISIP 3102, NPI -961. BBLS PMP 718 SLK WTR, 10,718# 30/50 WHITE PROP.</p> <p>-----</p> <p>STAGE #7- PU 4-1/2" HAL CO 8K CBP AND 3-1/8" EXP GUNS, 23 GM, .36 HOLES ON 90* AND 120* PHASING. SET CBP AT 9,521'. PULL UP AND PERF MESA VERDE AS PER PROCEDURE.</p> <p>OPEN WELL- SICP 2191 PSI. BRK 3742 PSI AT 5.9 BPM, ISIP 3115, FG .77. PMP 70 BBLS SLK WTR, 45.9 BPM @ 7354 PSI = 66% PERFS OPEN. MP 7406, MR 52.1, AP 6630, AR 51.2, FG .79, ISIP 3260, NPI 145. BBLS PMP 707 SLK WTR, 11,113# 30/50 WHITE PROP</p>

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

Well: NBU 921-8C

Spud Date: 9/24/2011

Project: UTAH-UINTAH

Site: NBU 921-8C

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 12/15/2011

End Date: 12/22/2011

Active Datum: RKB @4,687.00usft (above Mean Sea Level)

UWI: NE/NW0/9/S/21/E/8/0/0/26/PM/N/483/W/0/1729/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
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 STAGE #8- PU 4-1/2" HAL CO 8K CBP AND 3-1/8" EXP GUNS, 23 GM, .36 HOLES ON 90\* PHASING.  
 SET CBP AT 9218'. PULL UP AND PERF MESA VERDE AS PER PROCEDURE.

OPEN WELL- SICP 2336 PSI. BRK 3970 PSI AT 6.9 BPM, ISIP 3454, FG .82.  
 PMP 70 BBLS SLK WTR, 47.3 BPM @ 6806 PSI = 72% PERFS OPEN.  
 MP 7082, MR 51.7, AP 6869, AR 50.4, FG .81, ISIP 3380, NPI -74.  
 BBLS PMP 662 SLK WTR, 10,931# 30/50 WHITE PROP.

-----  
 STAGE #9- PU 4-1/2" HAL CO 8K CBP AND 3-1/8" EXP GUNS, 23 GM, .36 HOLES ON 90\* AND 120\* PHASING.  
 SET CBP AT 8,711'. PULL UP AND PERF MESA VERDE AS PER PROCEDURE.

OPEN WELL- SICP 1566 PSI. BRK 3668 PSI AT 5.6 BPM, ISIP 2990, FG .79.  
 PMP 150 BBLS SLK WTR, 48.6 BPM @ 6704 PSI = 67% PERFS OPEN.  
 MP 6685, MR 50.6, AP 5392, AR 49.9, FG .77, ISIP 2828, NPI -162.  
 BBLS PMP 1254 SLK WTR, 24,369# 30/50 WHITE PROP

-----  
 STAGE #10- PU 4-1/2" HAL CO 8K CBP AND 3-1/8" EXP GUNS, 23 GM, .36 HOLES ON 90\* AND 120\* PHASING.  
 SET CBP AT 8510'. PULL UP AND PERF MESA VERDE AS PER PROCEDURE.

OPEN WELL- SICP 1510 PSI. BRK 3307 PSI AT 6.3 BPM, ISIP 2029, FG .69.  
 PMP 80 BBLS SLK WTR, 48.5 BPM @ 6759 PSI = 61% PERFS OPEN.  
 MP 7203, MR 50.3, AP 6167, AR 48.7, FG .82, ISIP 3160, NPI 1131.  
 BBLS PMP 527 SLK WTR, 8,955# 30/50 WHITE PROP. RAN OUT OF SAND-- 9608# SHORT.

CUMM TOTALS 18,418 BBLS SLK WTR  
 271,971# TLC, 116,514# WHITE, TOTAL  
 388,485# PROP.  
 990 GAL SCALE INHIB, 675 GAL BIOCID.

RIH AND SET KILL PLUG AT 8250'. RD SUPERIOR AND JW WIRELINE. SDFN

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

Well: NBU 921-8C

Spud Date: 9/24/2011

Project: UTAH-UINTAH

Site: NBU 921-8C

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 12/15/2011

End Date: 12/22/2011

Active Datum: RKB @4,687.00usft (above Mean Sea Level)

UWI: NE/NW0/9/S/21/E/8/0/0/26/PM/N/483/W/0/1729/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/21/2011	7:00 - 7:15	0.25	COMP	48		P		JSA- ND/NU. RIH. PRES TEST. D/O PLUGS.
	7:15 - 10:00	2.75	COMP	30	F	P		RD FLOOR. ND FRAC VALVES. NU BOP. RU FLOOR AND TBG EQUIP. FUNCTION TEST BOP. X-OUT PIPE RAMS.
	10:00 - 12:30	2.50	COMP	31	I	P		MU 3-7/8" BIT, POBS, AND 1.87" XN. RIH ON 2-3/8" L-80 TBG. RU DRLG EQUIP. FILL TBG AND PRES TEST TO 3000#. EST CIRC AND D/O PLUGS.
	12:30 - 17:00	4.50	COMP	44	C	P		#1- NO SAND. D/O CBP AT 8250' IN 12 MIN. 300# INC. FCP 50#. RIH. #2- C/O 5' SAND TO CBP AT 8510'. D/O IN 6 MIN. 400# INC. FCP 200#. RIH. #3- C/O 20' SAND TO CBP AT 8711'. D/O IN 6 MIN. 300# INC. FCP 200#. RIH. #4- C/O 10' SAND TO CBP AT 9218'. D/O IN 9 MIN. 700# INC. FCP 300#. RIH. #5- C/O 15' SAND TO CBP AT 9521'. D/O IN 8 MIN. 700# INC. FCP 400#. RIH 30'. CIRC CLEAN. DRAIN EQUIP. SDFN
12/22/2011	7:00 - 7:15	0.25	COMP	48		P		JSA- D/O PLUGS. LD TBG. LAND HANGER. ND/NU.
	7:15 - 15:30	8.25	COMP	44	C	P		SITP 0, SICP 2300, SURFACE OPEN. OPEN CSG TO PIT TILL FCP 400. CONT RIH AS D/O PLUGS.  #6- C/O ' SAND TO CBP AT 9780'. D/O IN MIN. # INC. # CP. RIH. #7- C/O ' SAND TO CBP AT 10,134'. D/O IN MIN. # INC. # CP. RIH. #8- C/O ' SAND TO CBP AT 10,586'. D/O IN MIN. # INC. # CP. RIH. #9- C/O ' SAND TO CBP AT 11,276'. D/O IN MIN. # INC. # CP. RIH. #10- C/O ' SAND TO CBP AT 11,448'. D/O IN MIN. # INC. # CP. RIH. PBTD- C/O TO 11,645' ( ' RATHOLE) W/ 367-JTS IN. CIRC CLEAN. RD PWR SWIVEL.  POOH AS LD 13-JTS. PU 4" 10K HANGER. LUB IN AND LAND 354-JTS 2-3/8" L-80 TBG W/ EOT AT ' RD FLOOR. ND BOP. NU WH. POBS AT 2600#. HOOK UP TO HAL 9000. PRES TEST FLOW BACK LINES TO 3500# W/ B&C. SITP 1850#, SICP 3000#. SURFACE LOCKED OPEN W/ POP OFF INSTALLED. TURN OVER TO FBC AND SALES. RDSU.  TBG DETAIL KB 18.00 4" 10K HANGER .83 354-JTS 2-3/8" L-80 TBG 11,233.95 1.87" XN POBS 2.20 EOT 11,254.95  371-JTS DELIVERED, 15-JTS RETURNED, 2-JT BAD.  TWTR 18,418 BBLs, TWR 3250 BBLs, LTR 15,168 BBLs.

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

Well: NBU 921-8C		Spud Date: 9/24/2011	
Project: UTAH-UINTAH		Site: NBU 921-8C	Rig Name No: MILES 3/3
Event: COMPLETION		Start Date: 12/15/2011	End Date: 12/22/2011
Active Datum: RKB @4,687.00usft (above Mean Sea Level)		UWI: NE/NW0/9/S/21/E/8/0/0/26/PM/N/483/NW0/1729/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	14:30 -		PROD	50				WELL TURNED TO SALES @ 1430 HR ON 12/22/2011 - 1600 MCFD, 2640 BWPD, FCP 3000#, FTP 1850#, 20/64" CK
12/27/2011	7:00 -		PROD	50				WELL IP'D ON 12/27/11 - 3066 MCFD, 0 BOPD, 720 BWPD, CP 3266 #, FTP 2422#, CK 20/64", LP 291#, 24 HRS

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well Information

Well	NBU 921-8C	Wellbore No.	OH
Well Name	NBU 921-8C	Common Name	NBU 921-8C
Project	UTAH-UINTAH	Site	NBU 921-8C
Vertical Section	0.00 (°)	North Reference	True
Azimuth		Origin E/W	
Origin N/S		UWI	NE/NW/0/9/S/21/E/8/0/0/26/PM/N/483/W/0/1729/0/0
Spud Date	9/24/2011	Active Datum	RKB @4,687.00usft (above Mean Sea Level)

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	WETHERFORD
Started	9/14/2011	Ended	
Tool Name	MWD	Engineer	Anadarko Employee

2.1.1 Tie On Point

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)
14.00	0.00	0.00	14.00	0.00	0.00

2.1.2 Survey Stations

Date	Type	MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	TFace (°)
9/14/2011	Tie On	14.00	0.00	0.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/25/2011	NORMAL	192.00	0.80	5.32	191.99	1.24	0.12	1.24	0.45	0.45	0.00	5.32
	NORMAL	454.00	0.50	36.00	453.98	3.98	0.96	3.98	0.17	-0.11	11.71	145.41
	NORMAL	754.00	3.25	3.25	753.79	13.53	2.21	13.53	0.95	0.92	-10.92	-38.21
9/26/2011	NORMAL	1,054.00	2.19	171.25	1,053.66	16.36	3.56	16.36	1.80	-0.35	56.00	175.17
	NORMAL	1,354.00	0.81	47.12	1,353.60	12.14	5.99	12.14	0.91	-0.46	-41.38	-165.77
	NORMAL	1,654.00	0.50	66.75	1,653.58	14.10	8.75	14.10	0.13	-0.10	6.54	153.65
	NORMAL	1,954.00	0.69	348.75	1,953.56	16.39	9.60	16.39	0.25	0.06	-26.00	-117.84
	NORMAL	2,254.00	0.44	29.75	2,253.55	19.16	9.82	19.16	0.15	-0.08	13.67	141.11
	NORMAL	2,404.00	0.25	111.62	2,403.55	19.54	10.41	19.54	0.32	-0.13	54.58	148.55

2.2 Survey Name: Survey #2

Survey Name	Survey #2	Company	LEAM
Started	10/30/2011	Ended	
Tool Name	MWD	Engineer	JED WARNER

2.2.1 Tie On Point

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)
14.00	0.00	219.63	14.00	0.00	0.00

2.2.2 Survey Stations

Date	Type	MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (%/100usft)	Build (%/100usft)	Turn (%/100usft)	TFace (°)
10/30/2011	NORMAL	2,754.00	1.14	219.63	2,753.82	-20.96	-17.36	-20.96	0.04	0.04	0.00	219.63
	NORMAL	2,850.00	1.71	281.69	2,849.79	-21.41	-19.37	-21.41	1.61	0.59	64.65	102.63
	NORMAL	2,945.00	1.76	302.25	2,944.75	-20.34	-21.99	-20.34	0.65	0.05	21.64	95.73
	NORMAL	3,040.00	2.20	322.47	3,039.70	-18.12	-24.34	-18.12	0.86	0.46	21.28	68.17
	NORMAL	3,136.00	1.93	317.28	3,135.63	-15.47	-26.56	-15.47	0.34	-0.28	-5.41	-147.87
	NORMAL	3,231.00	1.36	305.33	3,230.59	-13.64	-28.56	-13.64	0.70	-0.60	-12.58	-154.84
	NORMAL	3,327.00	1.19	283.97	3,326.57	-12.74	-30.46	-12.74	0.52	-0.18	-22.25	-120.15
	NORMAL	3,423.00	2.11	302.25	3,422.53	-11.56	-32.92	-11.56	1.09	0.96	19.04	39.12
	NORMAL	3,519.00	2.42	310.95	3,518.46	-9.29	-35.95	-9.29	0.48	0.32	9.06	52.36
	NORMAL	3,614.00	2.37	304.89	3,613.37	-6.85	-39.07	-6.85	0.27	-0.05	-6.38	-104.19
	NORMAL	3,708.00	2.37	323.08	3,707.29	-4.18	-41.84	-4.18	0.80	0.00	19.35	99.09
	NORMAL	3,804.00	1.89	313.94	3,803.23	-1.50	-44.17	-1.50	0.61	-0.50	-9.52	-149.22
	NORMAL	3,899.00	1.80	297.33	3,898.18	0.27	-46.62	0.27	0.57	-0.09	-17.48	-107.79
	NORMAL	3,995.00	1.32	320.45	3,994.14	1.82	-48.66	1.82	0.81	-0.50	24.08	138.51
	NORMAL	4,090.00	1.32	320.97	4,089.12	3.51	-50.05	3.51	0.01	0.00	0.55	90.26
	NORMAL	4,186.00	0.88	310.16	4,185.10	4.85	-51.31	4.85	0.50	-0.46	-11.26	-160.09
	NORMAL	4,281.00	1.80	304.63	4,280.07	6.17	-53.10	6.17	0.98	0.97	-5.82	-10.77
	NORMAL	4,375.00	1.80	303.48	4,374.03	7.82	-55.54	7.82	0.04	0.00	-1.22	-90.57
	NORMAL	4,471.00	1.58	288.89	4,469.99	9.08	-58.05	9.08	0.50	-0.23	-15.20	-124.25
	NORMAL	4,566.00	1.85	287.40	4,564.94	9.96	-60.75	9.96	0.29	0.28	-1.57	-10.12
	NORMAL	4,662.00	1.89	321.06	4,660.90	11.66	-63.23	11.66	1.13	0.04	35.06	104.80
	NORMAL	4,758.00	1.49	314.91	4,756.85	13.77	-65.11	13.77	0.46	-0.42	-6.41	-158.66
	NORMAL	4,853.00	1.27	302.96	4,851.83	15.21	-66.86	15.21	0.38	-0.23	-12.58	-133.27
	NORMAL	4,949.00	1.23	297.15	4,947.80	16.26	-68.67	16.26	0.14	-0.04	-6.05	-110.41
	NORMAL	5,044.00	1.10	286.17	5,042.78	16.98	-70.46	16.98	0.27	-0.14	-11.56	-125.63
10/30/2011	Tie On	18.00	0.00	0.00	18.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/31/2011	NORMAL	5,139.00	1.10	318.42	5,137.77	17.92	-71.94	17.92	0.64	0.00	33.95	106.12
	NORMAL	5,235.00	0.75	299.09	5,233.76	18.91	-73.10	18.91	0.48	-0.36	-20.14	-147.67
	NORMAL	5,328.00	0.97	265.87	5,326.75	19.15	-74.42	19.15	0.58	0.24	-35.72	-83.40
	NORMAL	5,424.00	1.27	299.18	5,422.73	19.61	-76.15	19.61	0.73	0.31	34.70	82.53
	NORMAL	5,519.00	1.23	288.54	5,517.71	20.45	-78.04	20.45	0.25	-0.04	-11.20	-105.07
	NORMAL	5,615.00	1.05	279.84	5,613.69	20.93	-79.88	20.93	0.26	-0.19	-9.06	-140.42
	NORMAL	5,710.00	1.10	262.79	5,708.67	20.96	-81.65	20.96	0.34	0.05	-17.95	-89.70
	NORMAL	5,806.00	0.88	246.27	5,804.66	20.55	-83.24	20.55	0.37	-0.23	-17.21	-135.69
	NORMAL	5,901.00	0.79	220.43	5,899.65	19.76	-84.33	19.76	0.40	-0.09	-27.20	-116.14
	NORMAL	5,996.00	0.79	223.50	5,994.64	18.78	-85.20	18.78	0.04	0.00	3.23	91.53
	NORMAL	6,092.00	0.97	204.69	6,090.63	17.57	-86.00	17.57	0.35	0.19	-19.59	-67.71
	NORMAL	6,187.00	0.97	219.02	6,185.61	16.21	-86.84	16.21	0.25	0.00	15.08	97.16
	NORMAL	6,283.00	0.31	254.97	6,281.61	15.51	-87.60	15.51	0.77	-0.69	37.45	165.80
	NORMAL	6,379.00	0.31	199.68	6,377.60	15.20	-87.94	15.20	0.30	0.00	-57.59	-117.64
	NORMAL	6,474.00	0.44	199.16	6,472.60	14.61	-88.15	14.61	0.14	0.14	-0.55	-1.76
	NORMAL	6,570.00	0.62	170.86	6,568.60	13.75	-88.19	13.75	0.33	0.19	-29.48	-70.19
	NORMAL	6,666.00	0.62	172.88	6,664.59	12.72	-88.04	12.72	0.02	0.00	2.10	91.01
	NORMAL	6,761.00	0.66	178.24	6,759.59	11.67	-87.96	11.67	0.08	0.04	5.64	58.95
	NORMAL	6,856.00	0.87	175.78	6,854.58	10.40	-87.89	10.40	0.22	0.22	-2.59	-10.12
	NORMAL	6,951.00	1.23	182.46	6,949.56	8.66	-87.88	8.66	0.40	0.38	7.03	22.14
	NORMAL	7,046.00	1.41	180.26	7,044.54	6.48	-87.93	6.48	0.20	0.19	-2.32	-16.83
	NORMAL	7,140.00	1.23	165.23	7,138.51	4.34	-87.68	4.34	0.41	-0.19	-15.99	-124.85
11/1/2011	NORMAL	7,235.00	0.70	144.66	7,233.50	2.88	-87.08	2.88	0.66	-0.56	-21.65	-156.83

2.2.2 Survey Stations (Continued)

Date	Type	MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft )	Build (°/100usft )	Turn (°/100usft )	TFace (°)
11/1/2011	NORMAL	7,330.00	0.83	115.57	7,328.49	2.11	-86.12	2.11	0.43	0.14	-30.62	-86.41
	NORMAL	7,426.00	0.88	132.18	7,424.48	1.32	-84.95	1.32	0.26	0.05	17.30	86.98
	NORMAL	7,522.00	1.01	99.84	7,520.47	0.68	-83.57	0.68	0.56	0.14	-33.69	-92.82
	NORMAL	7,617.00	0.88	83.58	7,615.46	0.62	-82.02	0.62	0.31	-0.14	-17.12	-123.84
	NORMAL	7,712.00	0.83	87.45	7,710.44	0.73	-80.61	0.73	0.08	-0.05	4.07	132.81
	NORMAL	7,808.00	1.14	86.83	7,806.43	0.81	-78.96	0.81	0.32	0.32	-0.65	-2.28
	NORMAL	7,903.00	1.93	52.73	7,901.40	1.83	-76.74	1.83	1.24	0.83	-35.89	-67.04
	NORMAL	7,999.00	1.76	59.41	7,997.35	3.56	-74.19	3.56	0.29	-0.18	6.96	131.63
	NORMAL	8,095.00	1.93	65.30	8,093.30	4.99	-71.45	4.99	0.27	0.18	6.14	51.09
11/2/2011	NORMAL	8,191.00	1.71	67.41	8,189.25	6.21	-68.66	6.21	0.24	-0.23	2.20	164.11
	NORMAL	8,287.00	1.63	73.82	8,285.21	7.15	-66.03	7.15	0.21	-0.08	6.68	116.37
	NORMAL	8,383.00	1.80	73.12	8,381.17	7.96	-63.27	7.96	0.18	0.18	-0.73	-7.38
	NORMAL	8,477.00	1.32	78.48	8,475.13	8.61	-60.80	8.61	0.53	-0.51	5.70	165.76
	NORMAL	8,572.00	1.58	83.23	8,570.10	8.98	-58.43	8.98	0.30	0.27	5.00	27.20
	NORMAL	8,668.00	1.49	86.57	8,666.07	9.21	-55.87	9.21	0.13	-0.09	3.48	136.83
	NORMAL	8,763.00	1.58	95.94	8,761.03	9.15	-53.33	9.15	0.28	0.09	9.86	75.00
	NORMAL	8,858.00	1.49	98.53	8,856.00	8.83	-50.81	8.83	0.12	-0.09	2.73	143.66
	NORMAL	8,953.00	1.56	111.79	8,950.96	8.17	-48.38	8.17	0.38	0.07	13.96	85.46
11/3/2011	NORMAL	9,049.00	1.58	119.53	9,046.93	7.03	-46.02	7.03	0.22	0.02	8.06	88.49
	NORMAL	9,145.00	1.23	134.29	9,142.90	5.66	-44.13	5.66	0.52	-0.36	15.38	141.26
	NORMAL	9,239.00	1.89	133.85	9,236.86	3.88	-42.29	3.88	0.70	0.70	-0.47	-1.26
	NORMAL	9,334.00	1.63	135.96	9,331.82	1.82	-40.22	1.82	0.28	-0.27	2.22	167.06
	NORMAL	9,430.00	1.63	135.00	9,427.78	-0.12	-38.31	-0.12	0.03	0.00	-1.00	-90.48
	NORMAL	9,525.00	1.41	144.40	9,522.75	-2.03	-36.67	-2.03	0.35	-0.23	9.89	136.06
	NORMAL	9,621.00	2.20	156.97	9,618.70	-4.68	-35.26	-4.68	0.92	0.82	13.09	32.99
	NORMAL	9,716.00	1.93	158.37	9,713.64	-7.85	-33.96	-7.85	0.29	-0.28	1.47	170.12
	NORMAL	9,812.00	1.85	152.05	9,809.59	-10.72	-32.64	-10.72	0.23	-0.08	-6.58	-114.14
11/4/2011	NORMAL	9,906.00	2.02	154.33	9,903.53	-13.55	-31.21	-13.55	0.20	0.18	2.43	25.51
	NORMAL	10,001.00	2.02	159.78	9,998.47	-16.63	-29.90	-16.63	0.20	0.00	5.74	92.72
	NORMAL	10,095.00	1.98	154.77	10,092.42	-19.66	-28.64	-19.66	0.19	-0.04	-5.33	-105.38
	NORMAL	10,191.00	1.67	134.20	10,188.37	-22.13	-26.93	-22.13	0.75	-0.32	-21.43	-125.37
	NORMAL	10,286.00	1.58	151.08	10,283.33	-24.25	-25.30	-24.25	0.51	-0.09	17.77	109.01
	NORMAL	10,382.00	1.58	156.00	10,379.29	-26.61	-24.13	-26.61	0.14	0.00	5.13	92.46
	NORMAL	10,477.00	1.14	165.23	10,474.27	-28.72	-23.35	-28.72	0.52	-0.46	9.72	158.10
	NORMAL	10,572.00	1.14	171.56	10,569.25	-30.57	-22.97	-30.57	0.13	0.00	6.66	93.16
	NORMAL	10,667.00	1.32	171.12	10,664.23	-32.59	-22.66	-32.59	0.19	0.19	-0.46	-3.22
11/5/2011	NORMAL	10,763.00	1.14	172.53	10,760.20	-34.63	-22.37	-34.63	0.19	-0.19	1.47	171.16
	NORMAL	10,858.00	1.23	171.21	10,855.18	-36.57	-22.09	-36.57	0.10	0.09	-1.39	-17.53
	NORMAL	10,954.00	1.14	162.94	10,951.16	-38.50	-21.65	-38.50	0.20	-0.09	-8.61	-121.85
	NORMAL	11,050.00	1.41	164.97	11,047.14	-40.56	-21.07	-40.56	0.29	0.28	2.11	10.51
	NORMAL	11,144.00	1.36	166.11	11,141.11	-42.76	-20.50	-42.76	0.06	-0.05	1.21	151.71
	NORMAL	11,240.00	1.67	157.50	11,237.08	-45.15	-19.69	-45.15	0.40	0.32	-8.97	-40.65
	NORMAL	11,307.00	1.54	165.76	11,304.05	-46.93	-19.10	-46.93	0.40	-0.19	12.33	123.42
	NORMAL	11,400.00	1.54	165.76	11,396.91	-48.71	-18.50	-48.71	0.00	0.00	0.00	0.00
	NORMAL	11,500.00	1.54	165.76	11,496.91	-50.49	-17.90	-50.49	0.00	0.00	0.00	0.00

43-047 50736



March 13, 2012

Division of Oil, Gas and Mining  
1594 West North Temple Suite 1210  
Salt Lake City, UT 84116

Attn: Rachel Medina

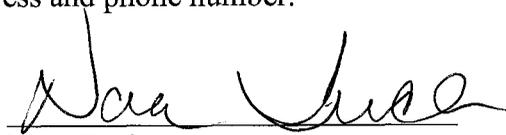
9S 21E 8

RE: Anadarko Petroleum Corporation  
NBU 921 8C  
Uintah County, Utah

Enclosed, please find the original and one copy of the survey performed on the referenced well by LEAM Drilling Systems, Inc. (P-5 No. 491646). Other information required by your office is as follows:

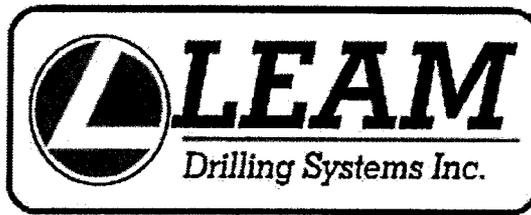
Name & Title of Surveyor	Drainhole Number	Surveyed Depths	Dates Performed	Type of Survey
Cody Baranowski	OH	2,754'-11,361'	10/29/11-11/10/11	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

  
Nora Tucker  
Well Planner

Enclosures

RECEIVED  
MAR 15 2012



## Survey Certification Form

State of Utah  
Uintah County

I, Cody Baranowski, certify that; I am employed by LEAM Drilling Systems, Inc., that I did on the day(s) of October 29, 2011 through November 10, 2011, conduct or supervise the taking of MWD Survey from a depth of 2,754' to 11,361' MD; that the data is true, correct, complete and within the limitations of the tools as set forth by LEAM Drilling Systems, Inc., that I am authorized and qualified to make this report; that this survey was conducted at the request of Anadarko for the NBU 921-8C in Uintah County, Utah; and that I reviewed this report and find that it conforms to the principals and procedures as set forth by LEAM Drilling Systems, Inc.

A handwritten signature in black ink, appearing to read 'Cody Baranowski', is written over a horizontal line.

Cody Baranowski  
MWD Operations Coordinator

# LEAM Drilling Systems, Inc

## Survey Report

<b>Company:</b> ANADARKO PETROLEUM CORP.	<b>Date:</b> 12/16/2011	<b>Time:</b> 16:09:19	<b>Page:</b> 1
<b>Field:</b> Uintah County, UT (True NAD 27)	<b>Co-ordinate(NE) Reference:</b> Well: 8C, True North		
<b>Site:</b> NBU 921	<b>Vertical (TVD) Reference:</b> GE 4668.6 + KB 14.5' 4683.1		
<b>Well:</b> 8C	<b>Section (VS) Reference:</b> Well (0.00N,0.00E,0.00Azi)		
<b>Wellpath:</b> OH	<b>Survey Calculation Method:</b> Minimum Curvature	<b>Db:</b> Adapti	

<b>Field:</b> Uintah County, UT (True NAD 27)	
<b>Map System:</b> US State Plane Coordinate System 1927	<b>Map Zone:</b> Utah, Central Zone
<b>Geo Datum:</b> NAD27 (Clarke 1866)	<b>Coordinate System:</b> Well Centre
<b>Sys Datum:</b> Mean Sea Level	<b>Geomagnetic Model:</b> IGRF2010

<b>Site:</b> NBU 921 Sec. 8, T9S, R21E (Site centered on 8C) 483' FNL & 1729' FWL of Sec. 8	
<b>Site Position:</b>	<b>Northing:</b> 633429.69 ft <b>Latitude:</b> 40 3 23.655 N
<b>From:</b> Geographic	<b>Easting:</b> 2537887.35 ft <b>Longitude:</b> 109 34 41.619 W
<b>Position Uncertainty:</b> 0.00 ft	<b>North Reference:</b> True
<b>Ground Level:</b> 4669.00 ft	<b>Grid Convergence:</b> 1.23 deg

<b>Well:</b> 8C	<b>Slot Name:</b>
<b>Well Position:</b>	<b>Latitude:</b> 40 3 23.655 N
+N/-S    0.00 ft <b>Northing:</b> 633429.69 ft	<b>Longitude:</b> 109 34 41.619 W
+E/-W    0.00 ft <b>Easting:</b> 2537887.35 ft	
<b>Position Uncertainty:</b> 0.00 ft	

<b>Wellpath:</b> OH	<b>Drilled From:</b> Surface
<b>Current Datum:</b> GE 4668.6 + KB 14.5'	<b>Tie-on Depth:</b> 0.00 ft
<b>Magnetic Data:</b> 10/21/2011	<b>Above System Datum:</b> Mean Sea Level
<b>Field Strength:</b> 52354 nT	<b>Declination:</b> 11.07 deg
<b>Vertical Section:</b> Depth From (TVD)	<b>Mag Dip Angle:</b> 65.89 deg
ft                                    +N/-S	<b>+E/-W</b> <b>Direction</b>
ft                                    ft	ft                                    deg
0.00                                    0.00	0.00                                    0.00

<b>Survey Program for Definitive Wellpath</b>			<b>Version:</b> 0	
<b>Date:</b> 11/10/2011	<b>Validated:</b> No		<b>Toolcode</b>	<b>Tool Name</b>
<b>Actual From</b>	<b>To</b>	<b>Survey</b>		
ft	ft			
10.50	2400.50	Survey #1 (10.50-2400.50)	STD. MWD	MWD - Standard
2400.50	11307.00	Survey #2 (2400.50-11307.00)	STD. MWD	MWD - Standard
11307.00	11361.00	Survey #3 (11307.00-11361.00)	Project	Projection

Survey										
MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	Tool/Comment
ft	deg	deg	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	
10.50	0.00	0.00	10.50	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
188.50	0.80	5.32	188.49	1.24	0.12	1.24	0.45	0.45	0.00	STD. MWD
450.50	0.50	36.00	450.48	3.98	0.96	3.98	0.17	-0.11	11.71	STD. MWD
750.50	3.25	3.25	750.29	13.53	2.21	13.53	0.95	0.92	-10.92	STD. MWD
1050.50	2.19	171.25	1050.16	16.36	3.56	16.36	1.80	-0.35	56.00	STD. MWD
1350.50	0.81	47.12	1350.10	12.14	5.99	12.14	0.91	-0.46	-41.38	STD. MWD
1650.50	0.50	66.75	1650.08	14.10	8.75	14.10	0.13	-0.10	6.54	STD. MWD
1950.50	0.69	348.75	1950.06	16.39	9.60	16.39	0.25	0.06	-26.00	STD. MWD
2250.50	0.44	29.75	2250.05	19.16	9.82	19.16	0.15	-0.08	13.67	STD. MWD
2400.50	0.25	111.62	2400.05	19.54	10.41	19.54	0.32	-0.13	54.58	STD. MWD
2400.50	0.25	112.85	2400.05	19.54	10.41	19.54	2685.67	0.00615523.17		STD. MWD
2754.00	1.14	220.86	2753.53	16.58	8.82	16.58	0.35	0.25	30.55	STD. MWD
2850.00	1.71	283.09	2849.50	16.18	6.80	16.18	1.62	0.59	64.82	STD. MWD
2945.00	1.76	303.48	2944.46	17.31	4.20	17.31	0.65	0.05	21.46	STD. MWD
3040.00	2.20	323.70	3039.40	19.58	1.90	19.58	0.86	0.46	21.28	STD. MWD
3136.00	1.93	318.51	3135.34	22.28	-0.26	22.28	0.34	-0.28	-5.41	STD. MWD
3231.00	1.36	306.56	3230.30	24.15	-2.22	24.15	0.70	-0.60	-12.58	STD. MWD
3327.00	1.19	285.20	3326.28	25.09	-4.10	25.09	0.52	-0.18	-22.25	STD. MWD
3423.00	2.11	303.28	3422.24	26.32	-6.54	26.32	1.09	0.96	18.83	STD. MWD
3519.00	2.42	312.18	3518.16	28.65	-9.52	28.65	0.49	0.32	9.27	STD. MWD
3614.00	2.37	306.12	3613.08	31.15	-12.59	31.15	0.27	-0.05	-6.38	STD. MWD

# LEAM Drilling Systems, Inc

## Survey Report

**Company:** ANADARKO PETROLEUM CORP.  
**Field:** Uintah County, UT (True NAD 27)  
**Site:** NBU 921  
**Well:** 8C  
**Wellpath:** OH

**Date:** 12/16/2011      **Time:** 16:09:19      **Page:** 2  
**Co-ordinate(NE) Reference:** Well: 8C, True North  
**Vertical (TVD) Reference:** GE 4668.6 + KB 14.5' 4683.1  
**Section (VS) Reference:** Well (0.00N,0.00E,0.00Azi)  
**Survey Calculation Method:** Minimum Curvature      **Db:** Adapti

### Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
3708.00	2.37	324.31	3707.00	33.88	-15.30	33.88	0.80	0.00	19.35	STD. MWD
3804.00	1.89	315.17	3802.93	36.61	-17.57	36.61	0.61	-0.50	-9.52	STD. MWD
3899.00	1.80	298.56	3897.89	38.44	-19.99	38.44	0.57	-0.09	-17.48	STD. MWD
3995.00	1.32	321.68	3993.85	40.03	-22.00	40.03	0.81	-0.50	24.08	STD. MWD
4090.00	1.32	322.20	4088.83	41.75	-23.35	41.75	0.01	0.00	0.55	STD. MWD
4186.00	0.88	311.39	4184.81	43.11	-24.58	43.11	0.50	-0.46	-11.26	STD. MWD
4281.00	1.80	305.86	4279.78	44.47	-26.33	44.47	0.98	0.97	-5.82	STD. MWD
4375.00	1.80	304.71	4373.73	46.17	-28.74	46.17	0.04	0.00	-1.22	STD. MWD
4471.00	1.58	290.12	4469.69	47.49	-31.22	47.49	0.50	-0.23	-15.20	STD. MWD
4566.00	1.85	288.63	4564.65	48.43	-33.91	48.43	0.29	0.28	-1.57	STD. MWD
4662.00	1.89	322.29	4660.60	50.17	-36.34	50.17	1.13	0.04	35.06	STD. MWD
4758.00	1.49	316.14	4756.56	52.33	-38.18	52.33	0.46	-0.42	-6.41	STD. MWD
4853.00	1.27	304.19	4851.53	53.81	-39.90	53.81	0.38	-0.23	-12.58	STD. MWD
4949.00	1.23	298.38	4947.51	54.90	-41.69	54.90	0.14	-0.04	-6.05	STD. MWD
5044.00	1.10	287.40	5042.49	55.65	-43.46	55.65	0.27	-0.14	-11.56	STD. MWD
5139.00	1.10	319.65	5137.47	56.62	-44.92	56.62	0.64	0.00	33.95	STD. MWD
5235.00	0.75	300.32	5233.46	57.64	-46.06	57.64	0.48	-0.36	-20.14	STD. MWD
5328.00	0.97	267.10	5326.45	57.91	-47.37	57.91	0.58	0.24	-35.72	STD. MWD
5424.00	1.27	300.41	5422.43	58.41	-49.10	58.41	0.73	0.31	34.70	STD. MWD
5519.00	1.23	289.77	5517.41	59.28	-50.97	59.28	0.25	-0.04	-11.20	STD. MWD
5615.00	1.05	281.07	5613.39	59.80	-52.80	59.80	0.26	-0.19	-9.06	STD. MWD
5710.00	1.10	264.02	5708.38	59.87	-54.56	59.87	0.34	0.05	-17.95	STD. MWD
5806.00	0.88	247.50	5804.36	59.49	-56.16	59.49	0.37	-0.23	-17.21	STD. MWD
5901.00	0.79	221.66	5899.35	58.73	-57.27	58.73	0.40	-0.09	-27.20	STD. MWD
5996.00	0.79	224.73	5994.34	57.77	-58.16	57.77	0.04	0.00	3.23	STD. MWD
6092.00	0.97	205.92	6090.33	56.57	-58.98	56.57	0.35	0.19	-19.59	STD. MWD
6187.00	0.97	220.25	6185.32	55.23	-59.85	55.23	0.25	0.00	15.08	STD. MWD
6283.00	0.31	256.20	6281.31	54.55	-60.63	54.55	0.77	-0.69	37.45	STD. MWD
6379.00	0.31	200.91	6377.31	54.25	-60.98	54.25	0.30	0.00	-57.59	STD. MWD
6474.00	0.44	200.39	6472.31	53.66	-61.20	53.66	0.14	0.14	-0.55	STD. MWD
6570.00	0.62	172.09	6568.31	52.80	-61.25	52.80	0.33	0.19	-29.48	STD. MWD
6666.00	0.62	174.11	6664.30	51.77	-61.13	51.77	0.02	0.00	2.10	STD. MWD
6761.00	0.66	179.47	6759.29	50.72	-61.07	50.72	0.08	0.04	5.64	STD. MWD
6856.00	0.87	177.00	6854.29	49.45	-61.03	49.45	0.22	0.22	-2.60	STD. MWD
6951.00	1.23	183.69	6949.27	47.71	-61.06	47.71	0.40	0.38	7.04	STD. MWD
7046.00	1.41	181.49	7044.24	45.52	-61.15	45.52	0.20	0.19	-2.32	STD. MWD
7140.00	1.23	166.46	7138.22	43.39	-60.95	43.39	0.41	-0.19	-15.99	STD. MWD
7235.00	0.70	145.89	7233.21	41.92	-60.38	41.92	0.66	-0.56	-21.65	STD. MWD
7330.00	0.83	116.80	7328.20	41.12	-59.44	41.12	0.43	0.14	-30.62	STD. MWD
7426.00	0.88	133.41	7424.19	40.30	-58.29	40.30	0.26	0.05	17.30	STD. MWD
7522.00	1.01	101.07	7520.17	39.64	-56.92	39.64	0.56	0.14	-33.69	STD. MWD
7617.00	0.88	84.81	7615.16	39.54	-55.37	39.54	0.31	-0.14	-17.12	STD. MWD
7712.00	0.83	88.68	7710.15	39.62	-53.96	39.62	0.08	-0.05	4.07	STD. MWD
7808.00	1.14	88.06	7806.14	39.67	-52.31	39.67	0.32	0.32	-0.65	STD. MWD
7903.00	1.93	66.53	7901.10	40.34	-49.90	40.34	1.02	0.83	-22.66	STD. MWD
7999.00	1.76	57.64	7997.05	41.77	-47.17	41.77	0.35	-0.18	-9.26	STD. MWD
8095.00	1.93	66.53	8093.00	43.21	-44.44	43.21	0.35	0.18	9.26	STD. MWD
8191.00	1.71	68.64	8188.96	44.37	-41.62	44.37	0.24	-0.23	2.20	STD. MWD
8286.00	1.63	73.82	8283.91	45.26	-39.00	45.26	0.18	-0.08	5.45	STD. MWD
8383.00	1.80	73.12	8380.87	46.09	-36.22	46.09	0.18	0.18	-0.72	STD. MWD
8477.00	1.32	78.48	8474.84	46.74	-33.75	46.74	0.53	-0.51	5.70	STD. MWD
8572.00	1.58	83.23	8569.81	47.11	-31.38	47.11	0.30	0.27	5.00	STD. MWD
8668.00	1.49	86.57	8665.77	47.34	-28.82	47.34	0.13	-0.09	3.48	STD. MWD
8763.00	1.58	95.54	8760.74	47.29	-26.28	47.29	0.27	0.09	9.44	STD. MWD

# LEAM Drilling Systems, Inc

## Survey Report

<b>Company:</b> ANADARKO PETROLEUM CORP.	<b>Date:</b> 12/16/2011	<b>Time:</b> 16:09:19	<b>Page:</b> 3
<b>Field:</b> Uintah County, UT (True NAD 27)	<b>Co-ordinate(NE) Reference:</b>	Well: 8C, True North	
<b>Site:</b> NBU 921	<b>Vertical (TVD) Reference:</b>	GE 4668.6 + KB 14.5' 4683.1	
<b>Well:</b> 8C	<b>Section (VS) Reference:</b>	Well (0.00N,0.00E,0.00Azi)	
<b>Wellpath:</b> OH	<b>Survey Calculation Method:</b>	Minimum Curvature	<b>Db:</b> Adapti

**Survey**

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
8858.00	1.49	98.53	8855.70	46.98	-23.75	46.98	0.13	-0.09	3.15	STD. MWD
8953.00	1.58	111.79	8950.67	46.31	-21.32	46.31	0.38	0.09	13.96	STD. MWD
9049.00	1.58	119.53	9046.63	45.16	-18.94	45.16	0.22	0.00	8.06	STD. MWD
9145.00	1.23	134.29	9142.60	43.79	-17.05	43.79	0.52	-0.36	15.37	STD. MWD
9239.00	1.89	133.85	9236.57	42.01	-15.21	42.01	0.70	0.70	-0.47	STD. MWD
9334.00	1.63	135.96	9331.52	39.96	-13.14	39.96	0.28	-0.27	2.22	STD. MWD
9430.00	1.63	135.00	9427.49	38.01	-11.22	38.01	0.03	0.00	-1.00	STD. MWD
9525.00	1.41	144.40	9522.45	36.10	-9.59	36.10	0.35	-0.23	9.89	STD. MWD
9621.00	2.20	156.97	9618.40	33.45	-8.18	33.45	0.92	0.82	13.09	STD. MWD
9716.00	1.93	158.37	9713.34	30.28	-6.88	30.28	0.29	-0.28	1.47	STD. MWD
9812.00	1.85	152.05	9809.29	27.41	-5.55	27.41	0.23	-0.08	-6.58	STD. MWD
9906.00	2.02	154.33	9903.24	24.58	-4.12	24.58	0.20	0.18	2.43	STD. MWD
10001.00	2.02	159.78	9998.18	21.50	-2.82	21.50	0.20	0.00	5.74	STD. MWD
10095.00	1.98	154.77	10092.12	18.47	-1.56	18.47	0.19	-0.04	-5.33	STD. MWD
10191.00	1.67	134.20	10188.07	16.00	0.15	16.00	0.75	-0.32	-21.43	STD. MWD
10286.00	1.58	151.08	10283.03	13.89	1.78	13.89	0.51	-0.09	17.77	STD. MWD
10382.00	1.58	156.00	10379.00	11.52	2.96	11.52	0.14	0.00	5.12	STD. MWD
10477.00	1.14	165.23	10473.97	9.41	3.73	9.41	0.52	-0.46	9.72	STD. MWD
10572.00	1.14	171.56	10568.95	7.56	4.11	7.56	0.13	0.00	6.66	STD. MWD
10667.00	1.32	171.12	10663.93	5.55	4.42	5.55	0.19	0.19	-0.46	STD. MWD
10763.00	1.14	172.53	10759.91	3.51	4.71	3.51	0.19	-0.19	1.47	STD. MWD
10858.00	1.23	171.21	10854.89	1.56	4.99	1.56	0.10	0.09	-1.39	STD. MWD
10954.00	1.14	162.94	10950.87	-0.37	5.43	-0.37	0.20	-0.09	-8.61	STD. MWD
11050.00	1.41	164.97	11046.84	-2.42	6.02	-2.42	0.29	0.28	2.11	STD. MWD
11144.00	1.36	166.11	11140.82	-4.62	6.58	-4.62	0.06	-0.05	1.21	STD. MWD
11240.00	1.67	157.50	11236.78	-7.02	7.39	-7.02	0.40	0.32	-8.97	STD. MWD
11307.00	1.54	165.76	11303.76	-8.80	7.99	-8.80	0.40	-0.19	12.33	STD. MWD
11361.00	1.54	165.76	11357.74	-10.20	8.34	-10.20	0.00	0.00	0.00	Project

# LEAM Drilling Systems, Inc

## Survey Report - Geographic

<b>Company:</b> ANADARKO PETROLEUM CORP.	<b>Date:</b> 12/16/2011	<b>Time:</b> 16:09:32	<b>Page:</b> 1
<b>Field:</b> Uintah County, UT (True NAD 27)	<b>Co-ordinate(NE) Reference:</b> Well: 8C, True North		
<b>Site:</b> NBU 921	<b>Vertical (TVD) Reference:</b> GE 4668.6 + KB 14.5' 4683.1		
<b>Well:</b> 8C	<b>Section (VS) Reference:</b> Well (0.00N,0.00E,0.00Azi)		
<b>Wellpath:</b> OH	<b>Survey Calculation Method:</b> Minimum Curvature	<b>Db:</b> Adapti	

<b>Field:</b> Uintah County, UT (True NAD 27)	
<b>Map System:</b> US State Plane Coordinate System 1927	<b>Map Zone:</b> Utah, Central Zone
<b>Geo Datum:</b> NAD27 (Clarke 1866)	<b>Coordinate System:</b> Well Centre
<b>Sys Datum:</b> Mean Sea Level	<b>Geomagnetic Model:</b> IGRF2010

<b>Site:</b> NBU 921			
Sec. 8, T9S, R21E (Site centered on 8C)			
483' FNL & 1729' FWL of Sec. 8			
<b>Site Position:</b>	<b>Northing:</b> 633429.69 ft	<b>Latitude:</b> 40 3 23.655 N	
<b>From:</b> Geographic	<b>Easting:</b> 2537887.35 ft	<b>Longitude:</b> 109 34 41.619 W	
<b>Position Uncertainty:</b> 0.00 ft		<b>North Reference:</b> True	
<b>Ground Level:</b> 4669.00 ft		<b>Grid Convergence:</b> 1.23 deg	

<b>Well:</b> 8C		<b>Slot Name:</b>	
<b>Well Position:</b>	<b>+N/-S</b> 0.00 ft	<b>Northing:</b> 633429.69 ft	<b>Latitude:</b> 40 3 23.655 N
	<b>+E/-W</b> 0.00 ft	<b>Easting:</b> 2537887.35 ft	<b>Longitude:</b> 109 34 41.619 W
<b>Position Uncertainty:</b>	0.00 ft		

<b>Wellpath:</b> OH		<b>Drilled From:</b> Surface	
<b>Current Datum:</b> GE 4668.6 + KB 14.5'	<b>Height</b> 4683.10 ft	<b>Tie-on Depth:</b> 0.00 ft	
<b>Magnetic Data:</b> 10/21/2011		<b>Above System Datum:</b> Mean Sea Level	
<b>Field Strength:</b> 52354 nT		<b>Declination:</b> 11.07 deg	
<b>Vertical Section:</b>		<b>Mag Dip Angle:</b> 65.89 deg	
<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
ft	ft	ft	deg
0.00	0.00	0.00	0.00

<b>Survey Program for Definitive Wellpath</b>			
<b>Date:</b> 11/10/2011	<b>Validated:</b> No	<b>Version:</b> 0	
<b>Actual From</b>	<b>To</b>	<b>Survey</b>	<b>Tool Name</b>
ft	ft		
10.50	2400.50	Survey #1 (10.50-2400.50)	STD. MWD
2400.50	11307.00	Survey #2 (2400.50-11307.00)	STD. MWD
11307.00	11361.00	Survey #3 (11307.00-11361.00)	Project
			MWD - Standard
			MWD - Standard
			Projection

Survey													
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	Map		←--- Latitude ---→			←--- Longitude ---→		
						Map Northing ft	Map Easting ft	Deg	Min	Sec	Deg	Min	Sec
10.50	0.00	0.00	10.50	0.00	0.00	633429.69	2537887.35	40	3	23.655 N	109	34	41.619 W
188.50	0.80	5.32	188.49	1.24	0.12	633430.93	2537887.44	40	3	23.667 N	109	34	41.618 W
450.50	0.50	36.00	450.48	3.98	0.96	633433.70	2537888.22	40	3	23.694 N	109	34	41.607 W
750.50	3.25	3.25	750.29	13.53	2.21	633443.27	2537889.27	40	3	23.789 N	109	34	41.591 W
1050.50	2.19	171.25	1050.16	16.36	3.56	633446.13	2537890.56	40	3	23.817 N	109	34	41.573 W
1350.50	0.81	47.12	1350.10	12.14	5.99	633441.96	2537893.08	40	3	23.775 N	109	34	41.542 W
1650.50	0.50	66.75	1650.08	14.10	8.75	633443.98	2537895.79	40	3	23.794 N	109	34	41.507 W
1950.50	0.69	348.75	1950.06	16.39	9.60	633446.28	2537896.59	40	3	23.817 N	109	34	41.496 W
2250.50	0.44	29.75	2250.05	19.16	9.82	633449.06	2537896.75	40	3	23.844 N	109	34	41.493 W
2400.50	0.25	111.62	2400.05	19.54	10.41	633449.45	2537897.33	40	3	23.848 N	109	34	41.485 W
2400.50	0.25	112.85	2400.05	19.54	10.41	633449.45	2537897.33	40	3	23.848 N	109	34	41.485 W
2754.00	1.14	220.86	2753.53	16.58	8.82	633446.46	2537895.81	40	3	23.819 N	109	34	41.506 W
2850.00	1.71	283.09	2849.50	16.18	6.80	633446.02	2537893.80	40	3	23.815 N	109	34	41.532 W
2945.00	1.76	303.48	2944.46	17.31	4.20	633447.09	2537891.17	40	3	23.826 N	109	34	41.565 W
3040.00	2.20	323.70	3039.40	19.58	1.90	633449.31	2537888.83	40	3	23.848 N	109	34	41.595 W
3136.00	1.93	318.51	3135.34	22.28	-0.26	633451.96	2537886.61	40	3	23.875 N	109	34	41.622 W
3231.00	1.36	306.56	3230.30	24.15	-2.22	633453.79	2537884.61	40	3	23.894 N	109	34	41.648 W
3327.00	1.19	285.20	3326.28	25.09	-4.10	633454.69	2537882.71	40	3	23.903 N	109	34	41.672 W
3423.00	2.11	303.28	3422.24	26.32	-6.54	633455.86	2537880.24	40	3	23.915 N	109	34	41.703 W
3519.00	2.42	312.18	3518.16	28.65	-9.52	633458.13	2537877.21	40	3	23.938 N	109	34	41.741 W

# LEAM Drilling Systems, Inc

## Survey Report - Geographic

<b>Company:</b> ANADARKO PETROLEUM CORP.	<b>Date:</b> 12/16/2011	<b>Time:</b> 16:09:32	<b>Page:</b> 2
<b>Field:</b> Uintah County, UT (True NAD 27)	<b>Co-ordinate(NE) Reference:</b>	<b>Well:</b> 8C, True North	
<b>Site:</b> NBU 921	<b>Vertical (TVD) Reference:</b>	GE 4668.6 + KB 14.5' 4683.1	
<b>Well:</b> 8C	<b>Section (VS) Reference:</b>	Well (0.00N,0.00E,0.00Azi)	
<b>Wellpath:</b> OH	<b>Survey Calculation Method:</b>	Minimum Curvature	<b>Db:</b> Adapti

### Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	← Latitude →			← Longitude →		
								Deg	Min	Sec	Deg	Min	Sec
3614.00	2.37	306.12	3613.08	31.15	-12.59	633460.57	2537874.09	40	3	23.963 N	109	34	41.781 W
3708.00	2.37	324.31	3707.00	33.88	-15.30	633463.23	2537871.33	40	3	23.990 N	109	34	41.816 W
3804.00	1.89	315.17	3802.93	36.61	-17.57	633465.92	2537868.99	40	3	24.017 N	109	34	41.845 W
3899.00	1.80	298.56	3897.89	38.44	-19.99	633467.69	2537866.54	40	3	24.035 N	109	34	41.876 W
3995.00	1.32	321.68	3993.85	40.03	-22.00	633469.24	2537864.50	40	3	24.051 N	109	34	41.902 W
4090.00	1.32	322.20	4088.83	41.75	-23.35	633470.93	2537863.11	40	3	24.068 N	109	34	41.919 W
4186.00	0.88	311.39	4184.81	43.11	-24.58	633472.26	2537861.85	40	3	24.081 N	109	34	41.935 W
4281.00	1.80	305.86	4279.78	44.47	-26.33	633473.58	2537860.07	40	3	24.094 N	109	34	41.958 W
4375.00	1.80	304.71	4373.73	46.17	-28.74	633475.24	2537857.62	40	3	24.111 N	109	34	41.989 W
4471.00	1.58	290.12	4469.69	47.49	-31.22	633476.50	2537855.11	40	3	24.124 N	109	34	42.021 W
4566.00	1.85	288.63	4564.65	48.43	-33.91	633477.38	2537852.41	40	3	24.134 N	109	34	42.055 W
4662.00	1.89	322.29	4660.60	50.17	-36.34	633479.07	2537849.93	40	3	24.151 N	109	34	42.086 W
4758.00	1.49	316.14	4756.56	52.33	-38.18	633481.19	2537848.06	40	3	24.172 N	109	34	42.110 W
4853.00	1.27	304.19	4851.53	53.81	-39.90	633482.63	2537846.30	40	3	24.187 N	109	34	42.132 W
4949.00	1.23	298.38	4947.51	54.90	-41.69	633483.68	2537844.49	40	3	24.198 N	109	34	42.155 W
5044.00	1.10	287.40	5042.49	55.65	-43.46	633484.40	2537842.71	40	3	24.205 N	109	34	42.178 W
5139.00	1.10	319.65	5137.47	56.62	-44.92	633485.34	2537841.22	40	3	24.215 N	109	34	42.197 W
5235.00	0.75	300.32	5233.46	57.64	-46.06	633486.33	2537840.06	40	3	24.225 N	109	34	42.211 W
5328.00	0.97	267.10	5326.45	57.91	-47.37	633486.57	2537838.75	40	3	24.227 N	109	34	42.228 W
5424.00	1.27	300.41	5422.43	58.41	-49.10	633487.03	2537837.01	40	3	24.232 N	109	34	42.250 W
5519.00	1.23	289.77	5517.41	59.28	-50.97	633487.87	2537835.12	40	3	24.241 N	109	34	42.274 W
5615.00	1.05	281.07	5613.39	59.80	-52.80	633488.35	2537833.28	40	3	24.246 N	109	34	42.298 W
5710.00	1.10	264.02	5708.38	59.87	-54.56	633488.38	2537831.52	40	3	24.247 N	109	34	42.321 W
5806.00	0.88	247.50	5804.36	59.49	-56.16	633487.97	2537829.93	40	3	24.243 N	109	34	42.341 W
5901.00	0.79	221.66	5899.35	58.73	-57.27	633487.18	2537828.83	40	3	24.235 N	109	34	42.356 W
5996.00	0.79	224.73	5994.34	57.77	-58.16	633486.20	2537827.96	40	3	24.226 N	109	34	42.367 W
6092.00	0.97	205.92	6090.33	56.57	-58.98	633484.98	2537827.16	40	3	24.214 N	109	34	42.378 W
6187.00	0.97	220.25	6185.32	55.23	-59.85	633483.63	2537826.32	40	3	24.201 N	109	34	42.389 W
6283.00	0.31	256.20	6281.31	54.55	-60.63	633482.93	2537825.56	40	3	24.194 N	109	34	42.399 W
6379.00	0.31	200.91	6377.31	54.25	-60.98	633482.62	2537825.22	40	3	24.191 N	109	34	42.403 W
6474.00	0.44	200.39	6472.31	53.66	-61.20	633482.03	2537825.01	40	3	24.185 N	109	34	42.406 W
6570.00	0.62	172.09	6568.31	52.80	-61.25	633481.17	2537824.98	40	3	24.177 N	109	34	42.407 W
6666.00	0.62	174.11	6664.30	51.77	-61.13	633480.14	2537825.12	40	3	24.167 N	109	34	42.405 W
6761.00	0.66	179.47	6759.29	50.72	-61.07	633479.08	2537825.20	40	3	24.156 N	109	34	42.404 W
6856.00	0.87	177.00	6854.29	49.45	-61.03	633477.82	2537825.27	40	3	24.144 N	109	34	42.404 W
6951.00	1.23	183.69	6949.27	47.71	-61.06	633476.08	2537825.28	40	3	24.126 N	109	34	42.404 W
7046.00	1.41	181.49	7044.24	45.52	-61.15	633473.89	2537825.23	40	3	24.105 N	109	34	42.405 W
7140.00	1.23	166.46	7138.22	43.39	-60.95	633471.76	2537825.49	40	3	24.084 N	109	34	42.403 W
7235.00	0.70	145.89	7233.21	41.92	-60.38	633470.30	2537826.08	40	3	24.069 N	109	34	42.396 W
7330.00	0.83	116.80	7328.20	41.12	-59.44	633469.53	2537827.04	40	3	24.061 N	109	34	42.383 W
7426.00	0.88	133.41	7424.19	40.30	-58.29	633468.74	2537828.21	40	3	24.053 N	109	34	42.369 W
7522.00	1.01	101.07	7520.17	39.64	-56.92	633468.10	2537829.59	40	3	24.047 N	109	34	42.351 W
7617.00	0.88	84.81	7615.16	39.54	-55.37	633468.04	2537831.14	40	3	24.046 N	109	34	42.331 W
7712.00	0.83	88.68	7710.15	39.62	-53.96	633468.15	2537832.55	40	3	24.047 N	109	34	42.313 W
7808.00	1.14	88.06	7806.14	39.67	-52.31	633468.23	2537834.20	40	3	24.047 N	109	34	42.292 W
7903.00	1.93	66.53	7901.10	40.34	-49.90	633468.95	2537836.60	40	3	24.054 N	109	34	42.261 W
7999.00	1.76	57.64	7997.05	41.77	-47.17	633470.44	2537839.30	40	3	24.068 N	109	34	42.226 W
8095.00	1.93	66.53	8093.00	43.21	-44.44	633471.93	2537841.99	40	3	24.082 N	109	34	42.191 W
8191.00	1.71	68.64	8188.96	44.37	-41.62	633473.16	2537844.78	40	3	24.093 N	109	34	42.154 W
8286.00	1.63	73.82	8283.91	45.26	-39.00	633474.11	2537847.38	40	3	24.102 N	109	34	42.121 W
8383.00	1.80	73.12	8380.87	46.09	-36.22	633475.00	2537850.15	40	3	24.110 N	109	34	42.085 W
8477.00	1.32	78.48	8474.84	46.74	-33.75	633475.69	2537852.60	40	3	24.117 N	109	34	42.053 W
8572.00	1.58	83.23	8569.81	47.11	-31.38	633476.12	2537854.97	40	3	24.121 N	109	34	42.023 W

# LEAM Drilling Systems, Inc

## Survey Report - Geographic

<b>Company:</b> ANADARKO PETROLEUM CORP.	<b>Date:</b> 12/16/2011	<b>Time:</b> 16:09:32	<b>Page:</b> 3
<b>Field:</b> Uintah County, UT (True NAD 27)	<b>Co-ordinate(NE) Reference:</b>	Well: 8C, True North	
<b>Site:</b> NBU 921	<b>Vertical (TVD) Reference:</b>	GE 4668.6 + KB 14.5' 4683.1	
<b>Well:</b> 8C	<b>Section (VS) Reference:</b>	Well (0.00N,0.00E,0.00Azi)	
<b>Wellpath:</b> OH	<b>Survey Calculation Method:</b>	Minimum Curvature	<b>Db:</b> Adapti

### Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude --->			<--- Longitude --->				
								Deg	Min	Sec	Deg	Min	Sec		
8668.00	1.49	86.57	8665.77	47.34	-28.82	633476.40	2537857.52	40	3	24.123	N	109	34	41.990	W
8763.00	1.58	95.54	8760.74	47.29	-26.28	633476.40	2537860.06	40	3	24.122	N	109	34	41.957	W
8858.00	1.49	98.53	8855.70	46.98	-23.75	633476.15	2537862.59	40	3	24.119	N	109	34	41.925	W
8953.00	1.58	111.79	8950.67	46.31	-21.32	633475.53	2537865.04	40	3	24.113	N	109	34	41.893	W
9049.00	1.58	119.53	9046.63	45.16	-18.94	633474.44	2537867.45	40	3	24.101	N	109	34	41.863	W
9145.00	1.23	134.29	9142.60	43.79	-17.05	633473.11	2537869.37	40	3	24.088	N	109	34	41.838	W
9239.00	1.89	133.85	9236.57	42.01	-15.21	633471.37	2537871.24	40	3	24.070	N	109	34	41.815	W
9334.00	1.63	135.96	9331.52	39.96	-13.14	633469.36	2537873.36	40	3	24.050	N	109	34	41.788	W
9430.00	1.63	135.00	9427.49	38.01	-11.22	633467.45	2537875.31	40	3	24.031	N	109	34	41.763	W
9525.00	1.41	144.40	9522.45	36.10	-9.59	633465.58	2537876.99	40	3	24.012	N	109	34	41.742	W
9621.00	2.20	156.97	9618.40	33.45	-8.18	633462.96	2537878.45	40	3	23.986	N	109	34	41.724	W
9716.00	1.93	158.37	9713.34	30.28	-6.88	633459.82	2537879.82	40	3	23.954	N	109	34	41.707	W
9812.00	1.85	152.05	9809.29	27.41	-5.55	633456.98	2537881.21	40	3	23.926	N	109	34	41.690	W
9906.00	2.02	154.33	9903.24	24.58	-4.12	633454.18	2537882.70	40	3	23.898	N	109	34	41.672	W
10001.00	2.02	159.78	9998.18	21.50	-2.82	633451.13	2537884.07	40	3	23.867	N	109	34	41.655	W
10095.00	1.98	154.77	10092.12	18.47	-1.56	633448.13	2537885.40	40	3	23.838	N	109	34	41.639	W
10191.00	1.67	134.20	10188.07	16.00	0.15	633445.69	2537887.16	40	3	23.813	N	109	34	41.617	W
10286.00	1.58	151.08	10283.03	13.89	1.78	633443.62	2537888.83	40	3	23.792	N	109	34	41.596	W
10382.00	1.58	156.00	10379.00	11.52	2.96	633441.27	2537890.06	40	3	23.769	N	109	34	41.581	W
10477.00	1.14	165.23	10473.97	9.41	3.73	633439.18	2537890.88	40	3	23.748	N	109	34	41.571	W
10572.00	1.14	171.56	10568.95	7.56	4.11	633437.34	2537891.30	40	3	23.730	N	109	34	41.566	W
10667.00	1.32	171.12	10663.93	5.55	4.42	633435.33	2537891.65	40	3	23.710	N	109	34	41.562	W
10763.00	1.14	172.53	10759.91	3.51	4.71	633433.30	2537891.99	40	3	23.690	N	109	34	41.558	W
10858.00	1.23	171.21	10854.89	1.56	4.99	633431.36	2537892.31	40	3	23.670	N	109	34	41.555	W
10954.00	1.14	162.94	10950.87	-0.37	5.43	633429.44	2537892.79	40	3	23.651	N	109	34	41.549	W
11050.00	1.41	164.97	11046.84	-2.42	6.02	633427.40	2537893.42	40	3	23.631	N	109	34	41.542	W
11144.00	1.36	166.11	11140.82	-4.62	6.58	633425.21	2537894.03	40	3	23.609	N	109	34	41.534	W
11240.00	1.67	157.50	11236.78	-7.02	7.39	633422.83	2537894.89	40	3	23.586	N	109	34	41.524	W
11307.00	1.54	165.76	11303.76	-8.80	7.99	633421.07	2537895.52	40	3	23.568	N	109	34	41.516	W
11361.00	1.54	165.76	11357.74	-10.20	8.34	633419.67	2537895.91	40	3	23.554	N	109	34	41.512	W

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

FORM 6

ENTITY ACTION FORM

Operator: KERR MCGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995  
Address: 1368 SOUTH 1200 EAST  
city VERNAL  
state UT zip 84078 Phone Number: (435) 781-7024

Well 1

*SENW*

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751136	BONANZA 1023-8F3BS		<del>SENE</del>	8	10S	23E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
<i>A</i>	99999	<i>18227</i>	9/17/2011		<i>9/21/11</i>		
Comments: <i>MIRU PETE MARTIN BUCKET RIG. WSMVD</i> <i>SPUD WELL ON 09/17/2011 AT 0830 HRS BHL=SENW</i>							

Well 2

*SENW*

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751135	BONANZA 1023-8E2AS		<del>SENE</del>	8	10S	23E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
<i>A</i>	99999	<i>18228</i>	9/17/2011		<i>9/21/11</i>		
Comments: <i>MIRU PETE MARTIN BUCKET RIG. WSMVD</i> <i>SPUD WELL ON 09/17/2011 AT 1230 HRS. BHL=SWNW</i>							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750736	NBU 921-8C		NENW	8	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
<i>B</i>	99999	<i>2900</i>	9/16/2011		<i>9/21/11</i>		
Comments: <i>MIRU PETE MARTIN BUCKET RIG. WSMVD</i> <i>SPUD WELL ON 09/16/2011 AT 0830 HRS.</i>							

ACTION CODES:

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

SHEILA WOPSOCK

Name (Please Print)

Signature

REGULATORY ANALYST

Title

9/20/2011

Date

RECEIVED

SEP 20 2011

DIV. OF OIL, GAS & MINING