

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING				FORM 3 AMENDED REPORT <input checked="" type="checkbox"/>		
<b>APPLICATION FOR PERMIT TO DRILL</b>				<b>1. WELL NAME and NUMBER</b> NBU 921-35L1BS		
<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> 720 929-6007		
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217				<b>9. OPERATOR E-MAIL</b> Kathy.SchneebeckDulnoan@anadarko.com		
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UO 01194 ST		<b>11. MINERAL OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>		<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>		
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>		
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>		
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>		<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		<b>19. SLANT</b> VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>		
<b>20. LOCATION OF WELL</b>	<b>FOOTAGES</b>	<b>QTR-QTR</b>	<b>SECTION</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>MERIDIAN</b>
<b>LOCATION AT SURFACE</b>	2013 FSL 778 FWL	NWSW	35	9.0 S	21.0 E	S
<b>Top of Uppermost Producing Zone</b>	2658 FSL 826 FWL	NWSW	35	9.0 S	21.0 E	S
<b>At Total Depth</b>	2658 FSL 826 FWL	NWSW	35	9.0 S	21.0 E	S
<b>21. COUNTY</b> UINTAH		<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 826		<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 1083		
		<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 664		<b>26. PROPOSED DEPTH</b> MD: 9812 TVD: 9736		
<b>27. ELEVATION - GROUND LEVEL</b> 5065		<b>28. BOND NUMBER</b> 22013542		<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 checked="" 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> 11/23/2010		<b>EMAIL</b> gnbregulatory@anadarko.com		
<b>API NUMBER ASSIGNED</b> 4304751386000		 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	9812		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade I-80 Buttress	9812	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	11	8.625	0	2590		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade J-55 LT&C	2590	28.0			

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

### NBU 921-35L1BS

Surface: 2013 FSL / 778 FWL NWSW  
BHL: 2658 FSL / 826 FWL NWSW

Section 35 T9S R21E

Unitah County, Utah  
Mineral Lease: ST UT UO 01194 ST

### 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	1466	
Birds Nest	1751	Water
Mahogany	2135	Water
Wasatch	4744	Gas
Mesaverde	7486	Gas
MVU2	8389	Gas
MVL1	8950	Gas
TVD	9736	
TD	9812	

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 9,736' TVD, approximately equals 5,965 psi (calculated at 0.61 psi/foot).

Maximum anticipated surface pressure equals approximately 3,823 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

**8. Anticipated Starting Dates:****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 11 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 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.*

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

***Variance for BOPE Requirements***

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

***Variance for Mud Material Requirements***

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

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

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

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

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

*Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie*

line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations. 8 of 16

***Conclusion***

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

**10. Other Information:**

*Please refer to the attached Drilling Program.*





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

### CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3,390	1,880	348,000
SURFACE	8-5/8"	0 to 2,590	28.00	IJ-55	LTC	0.86	1.55	4.75
PRODUCTION	4-1/2"	0 to 9,726	11.60	I-80	BTC	2.01	1.05	2.80
PRODUCTION	4-1/2"	9,726 to 9,812	11.60	HCP-110	BTC	2.72	1.42	3.69

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

D.F. = 2.08

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

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.0 ppg)

0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MASP 3,823 psi**

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

(Burst Assumptions: TD = 12.0 ppg)

0.61 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MABHP 5,965 psi**

### CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
<b>Option 1</b>							
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
SURFACE			<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>				
<b>Option 2</b>	LEAD	2,090'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	190	35%	11.00	3.82
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,242'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	310	10%	11.00	3.38
	TAIL	5,570'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,070	10%	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.

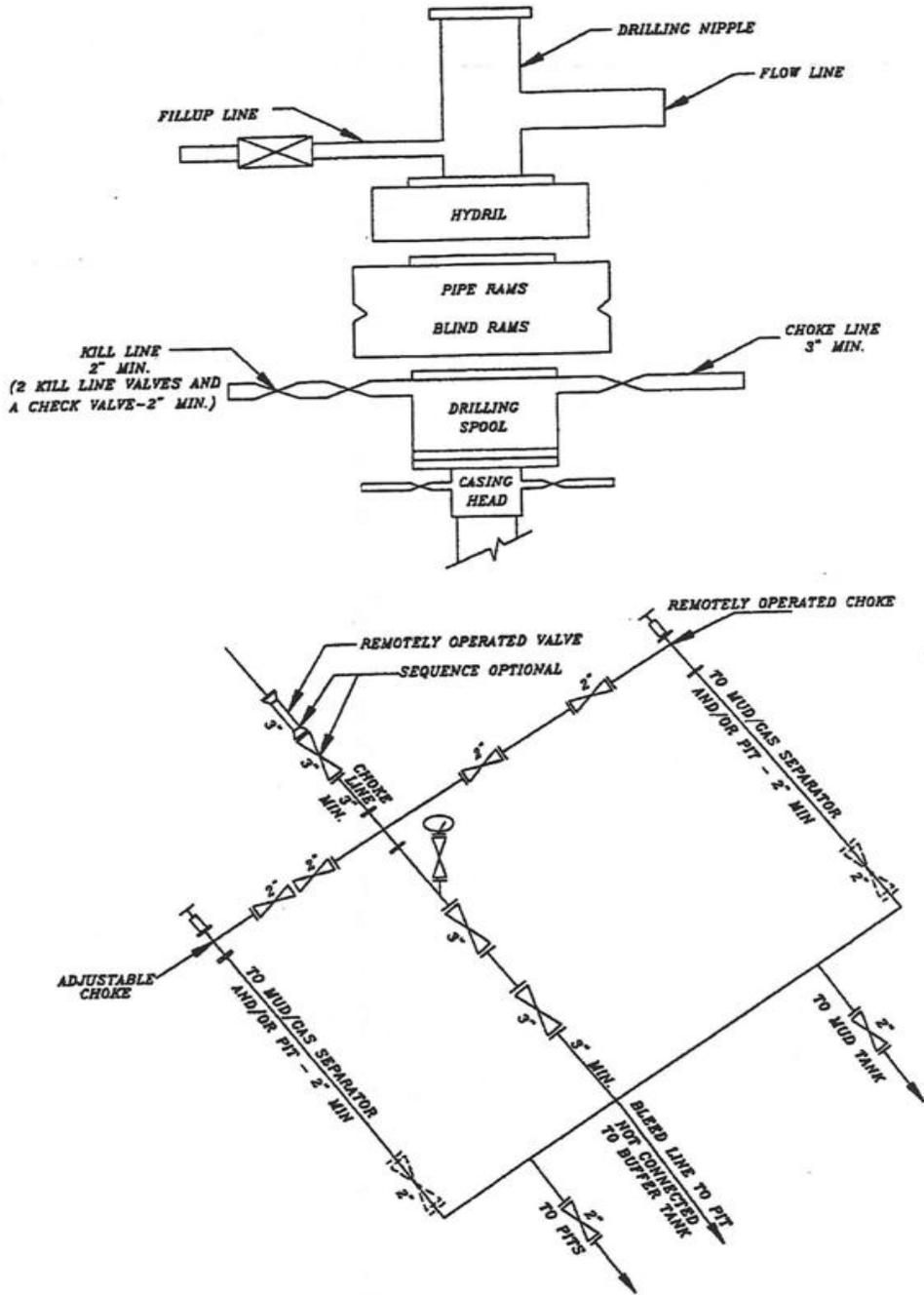
DRILLING ENGINEER: \_\_\_\_\_  
John Huycke / Emile Goodwin

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

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

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

### EXHIBIT A NBU 921-35L1BS



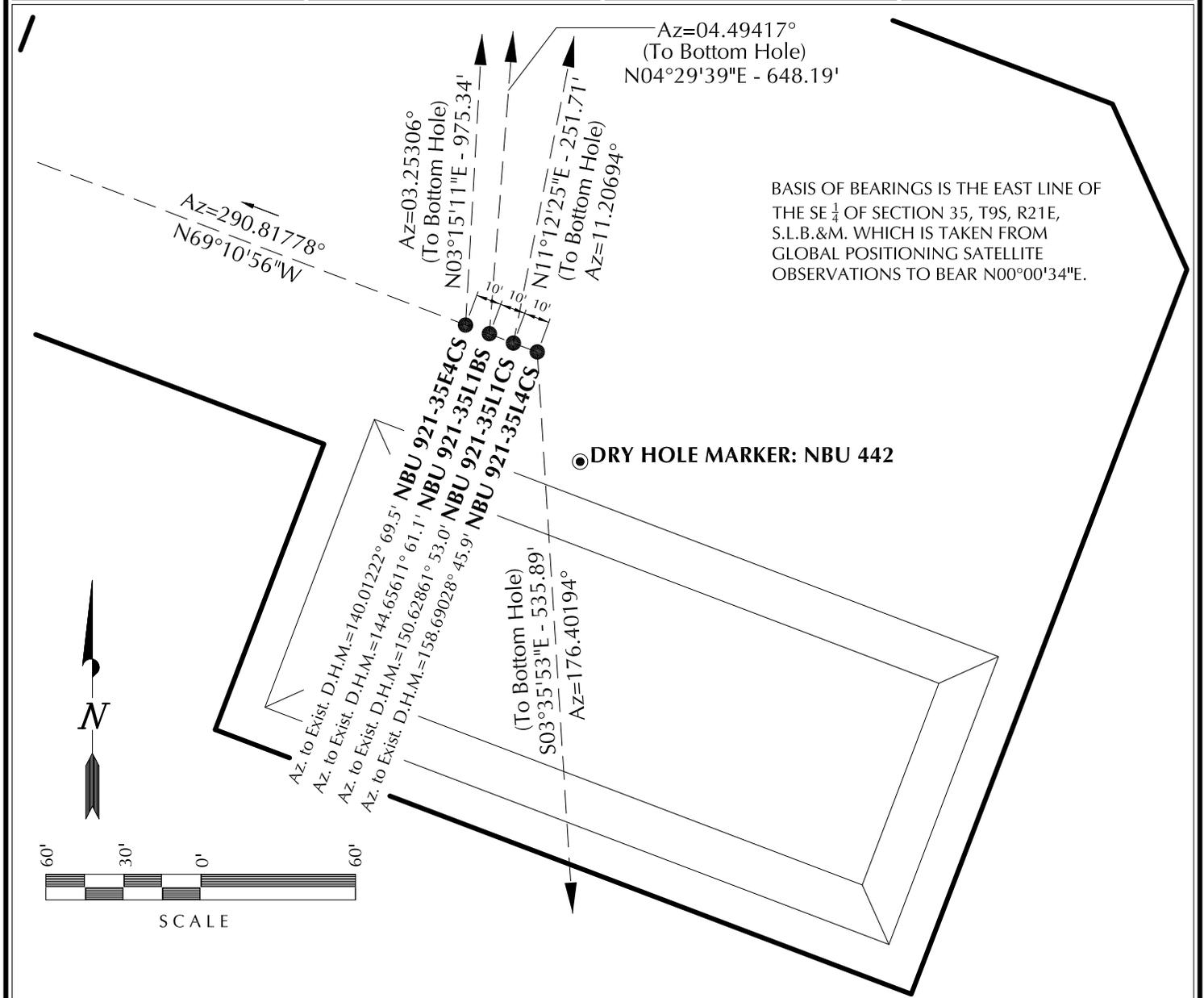
**SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK**



WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 921-35E4CS	39°59'26.443"	109°31'32.061"	39°59'26.569"	109°31'29.586"	2016' FSL 768' FWL	39°59'36.064"	109°31'31.358"	39°59'36.191"	109°31'28.884"	2343' FNL 823' FWL
NBU 921-35L1BS	39°59'26.410"	109°31'31.941"	39°59'26.536"	109°31'29.467"	2013' FSL 778' FWL	39°59'32.795"	109°31'31.295"	39°59'32.921"	109°31'28.820"	2658' FSL 826' FWL
NBU 921-35L1CS	39°59'26.374"	109°31'31.821"	39°59'26.500"	109°31'29.347"	2009' FSL 787' FWL	39°59'28.814"	109°31'31.195"	39°59'28.940"	109°31'28.721"	2255' FSL 835' FWL
NBU 921-35L4CS	39°59'26.340"	109°31'31.701"	39°59'26.466"	109°31'29.227"	2005' FSL 796' FWL	39°59'21.056"	109°31'31.265"	39°59'21.182"	109°31'28.791"	1470' FSL 832' FWL
NBU 442	39°59'25.918"	109°31'31.487"	39°59'26.044"	109°31'29.013"	1962' FSL 813' FWL					

RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 921-35E4CS	973.8'	55.3'	NBU 921-35L1BS	646.2'	50.8'	NBU 921-35L1CS	246.9'	48.9'	NBU 921-35L4CS	-534.8'	33.6'



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

**WELL PAD - NBU 921-35L**

**WELL PAD INTERFERENCE PLAT**  
WELLS - NBU 921-35E4CS, NBU 921-35L1BS,  
NBU 921-35L1CS & NBU 921-35L4CS  
LOCATED IN SECTION 35, T9S, R21E,  
S.L.B.&M., Uintah County, Utah.



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

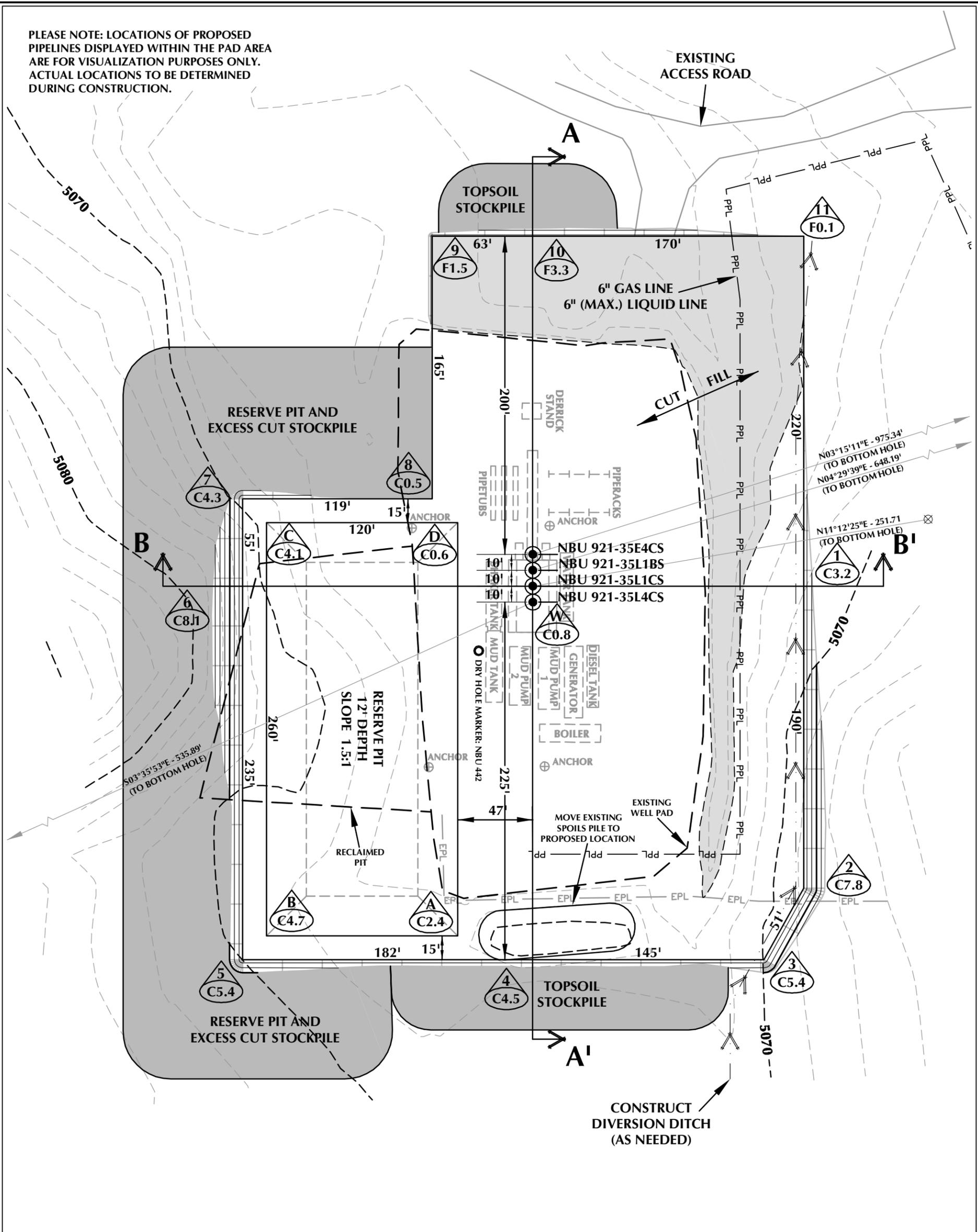
**TIMBERLINE**

(435) 789-1365

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

DATE SURVEYED: 09-30-10	SURVEYED BY: D.J.S.	SHEET NO: <b>5</b> 5 OF 16
DATE DRAWN: 10-05-10	DRAWN BY: B.M.	
SCALE: 1" = 60'	Date Last Revised: 12-03-10 M.W.W.	

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



**WELL PAD - NBU 921-35L DESIGN SUMMARY**

EXISTING GRADE @ CENTER OF WELL PAD = 5065.4'  
 FINISHED GRADE ELEVATION = 5064.6'  
 CUT SLOPES = 1.5:1  
 FILL SLOPES = 1.5:1  
 TOTAL WELL PAD AREA = 3.44 ACRES  
 TOTAL DAMAGE AREA = 6.28 ACRES  
 SHRINKAGE FACTOR = 1.10  
 SWELL FACTOR = 1.00

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

WELL PAD - NBU 921-35L

WELL PAD - LOCATION LAYOUT  
 NBU 921-35E4CS, NBU 921-35L1BS,  
 NBU 921-35L1CS & NBU 921-35L4CS  
 LOCATED IN SECTION 35, T9S, R21E,  
 S.L.B.&M., UINTAH COUNTY, UTAH



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

**WELL PAD QUANTITIES**

TOTAL CUT FOR WELL PAD = 7,562 C.Y.  
 TOTAL FILL FOR WELL PAD = 2,236 C.Y.  
 TOPSOIL @ 6" DEPTH = 1,690 C.Y.  
 EXCESS MATERIAL = 5,326 C.Y.

**RESERVE PIT QUANTITIES**

TOTAL CUT FOR RESERVE PIT  
 +/- 11,020 CY  
 RESERVE PIT CAPACITY (2' OF FREEBOARD)  
 +/- 42,290 BARRELS

**WELL PAD LEGEND**

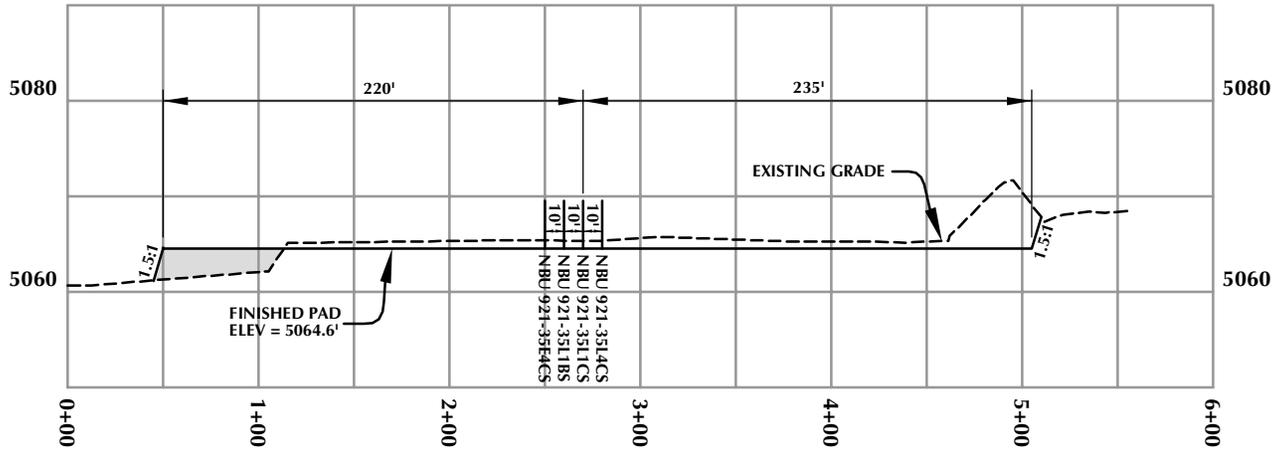
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PROPOSED PIPELINE
- EXISTING PIPELINE



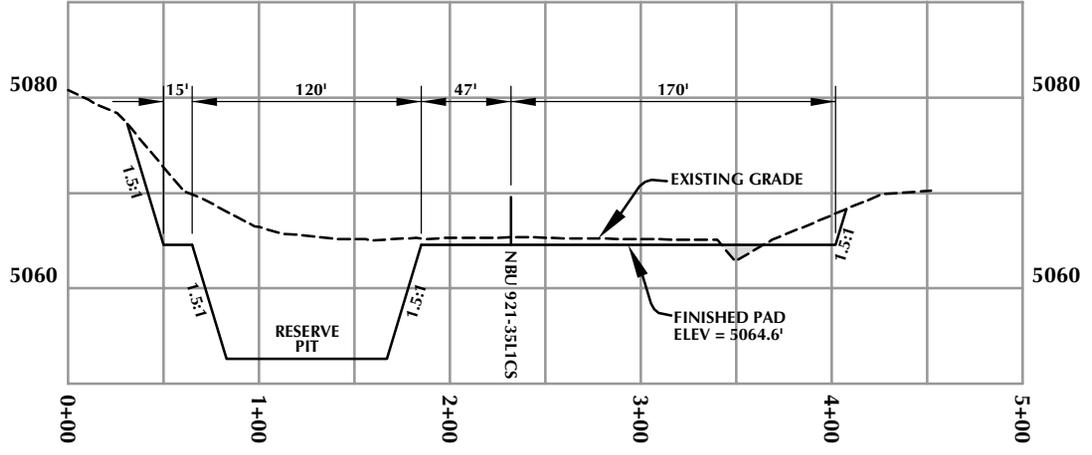
HORIZONTAL 0 30 60 1" = 60'  
 2' CONTOURS

Scale: 1"=60' Date: 10/15/10 SHEET NO:  
 REVISED: GRB 12/9/10 **6** 6 OF 16

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



**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

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

**WELL PAD - NBU 921-35L**

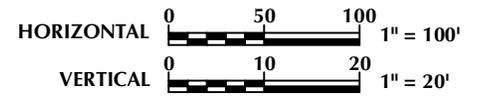
**WELL PAD - CROSS SECTIONS**  
 NBU 921-35E4CS, NBU 921-35L1BS,  
 NBU 921-35L1CS & NBU 921-35L4CS  
 LOCATED IN SECTION 35, T9S, R21E,  
 S.L.B.&M., Uintah County, Utah



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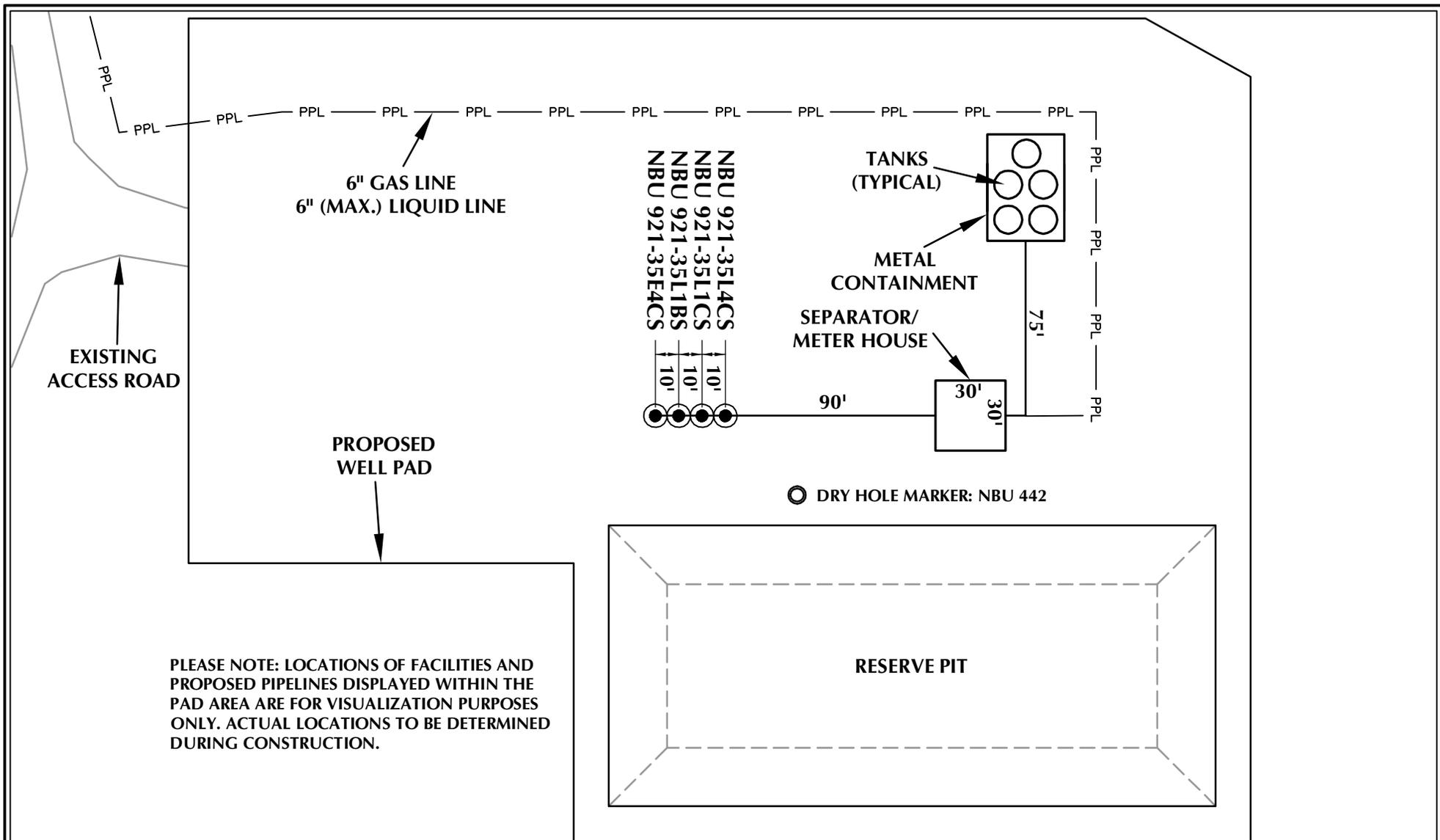


Scale: 1"=100' Date: 10/15/10  
 REVISED: TAR 12/9/10

SHEET NO:  
**7**  
 7 OF 16

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

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

WELL PAD - NBU 921-35L

WELL PAD - FACILITIES DIAGRAM  
 NBU 921-35E4CS, NBU 921-35L1BS,  
 NBU 921-35L1CS & NBU 921-35L4CS  
 LOCATED IN SECTION 35, T9S, R21E,  
 S.L.B.&M., Uintah County, Utah



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**WELL PAD LEGEND**

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE



HORIZONTAL 0 30' 60' 1" = 60'

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

Scale: 1"=60' Date: 10/19/10  
 REVISED: TAR 12/9/10

SHEET NO:  
**8** 8 OF 16

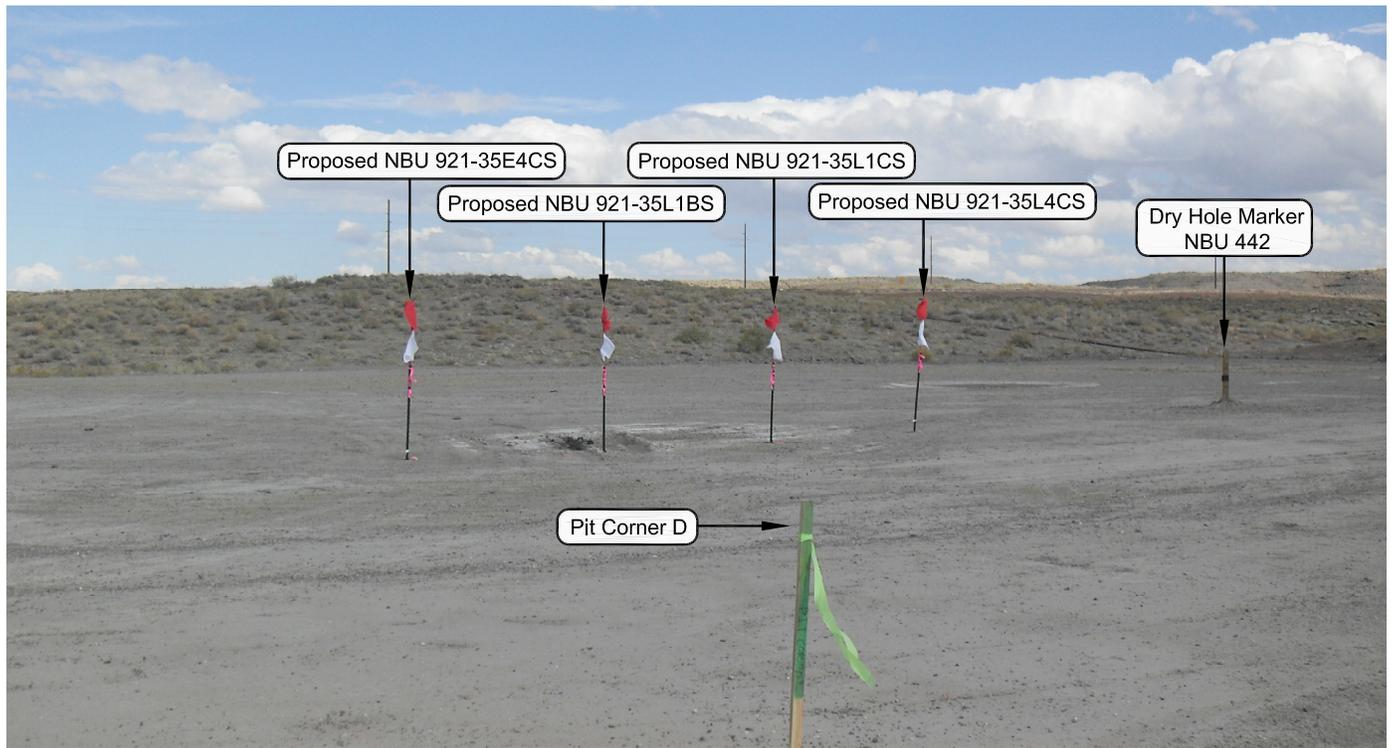


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: SOUTHEASTERLY

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

**WELL PAD - NBU 921-35L**

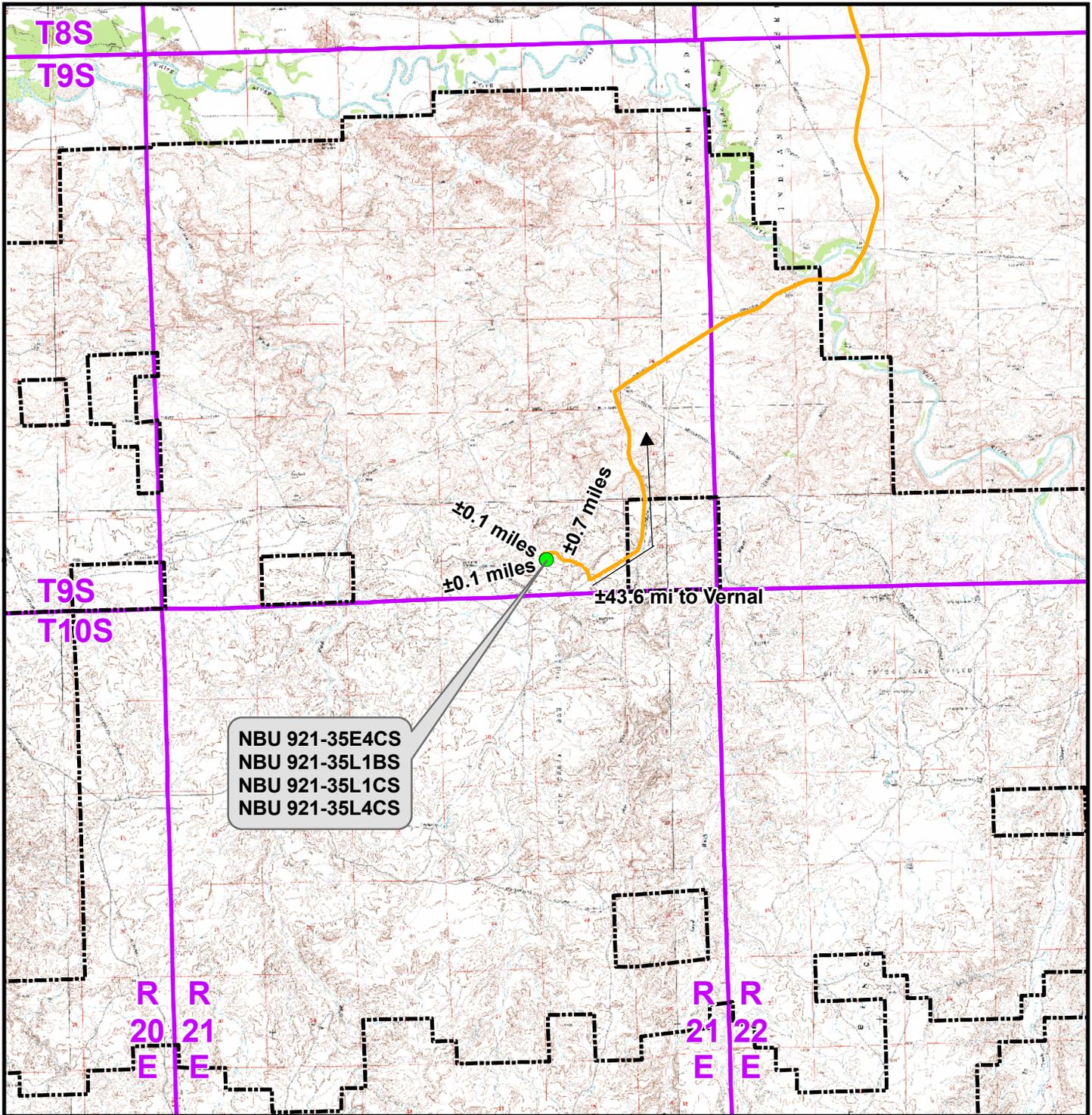
**LOCATION PHOTOS**  
 NBU 921-35E4CS, NBU 921-35L1BS,  
 NBU 921-35L1CS & NBU 921-35L4CS  
 LOCATED IN SECTION 35, T9S, R21E,  
 S.L.B.&M., UINTAH COUNTY, UTAH.



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

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

DATE PHOTOS TAKEN: 10-05-10	PHOTOS TAKEN BY: M.S.B.	SHEET NO: <b>9</b> 9 OF 16
DATE DRAWN: 10-05-10	DRAWN BY: B.M.	
Date Last Revised:		



**Legend**

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

Distance From Well Pad - NBU 921-35L To Unit Boundary: ±4,513ft

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

**WELL PAD - NBU 921-35L**

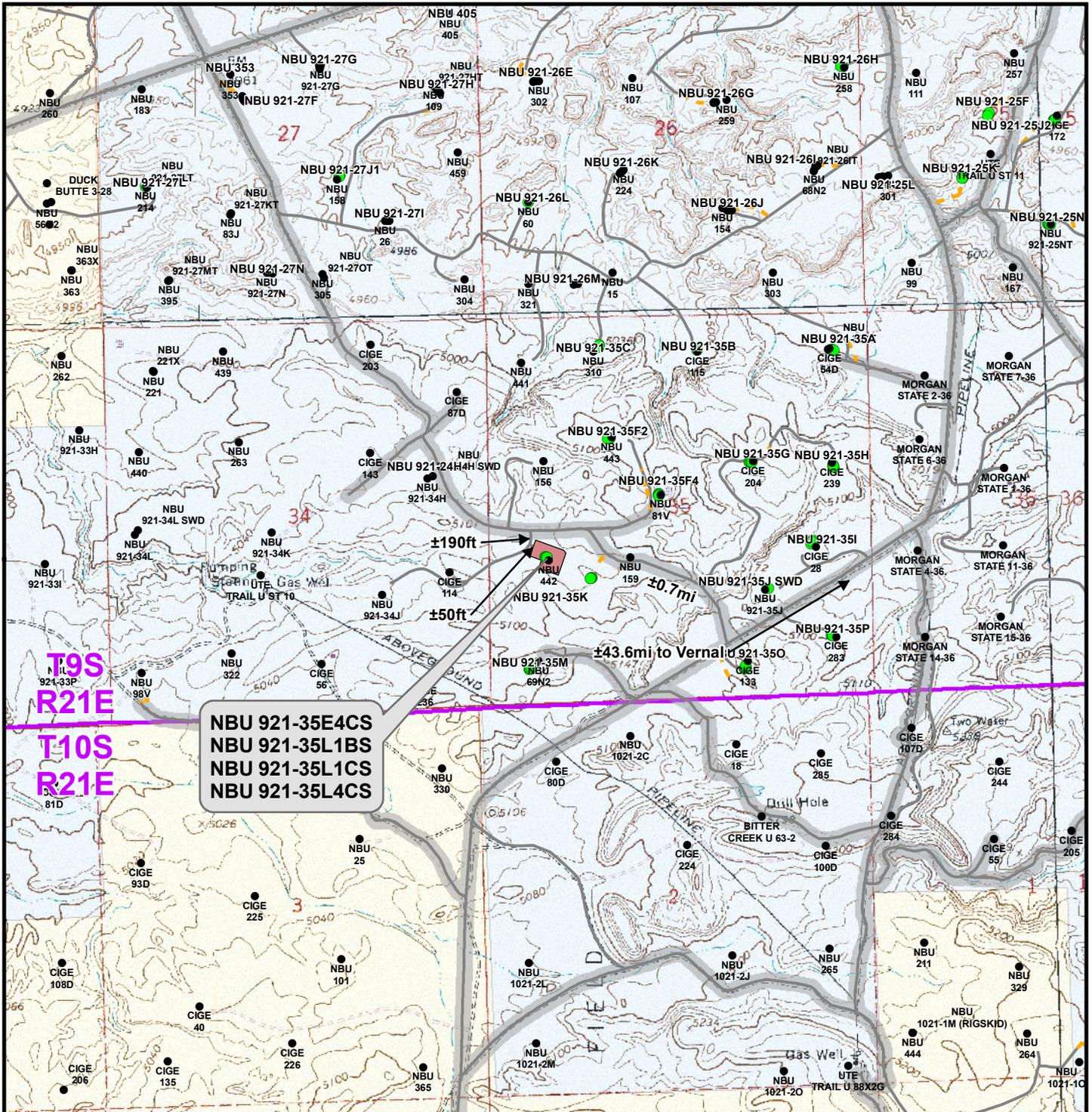
**TOPO A**  
 NBU 921-35E4CS, NBU 921-35L1BS,  
 NBU 921-35L1CS & NBU 921-35L4CS  
 LOCATED IN SECTION 35, T9S, R21E,  
 S.L.B.&M., UINTAH COUNTY, UTAH



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



Scale: 1:100,000	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 19 Oct 2010	10
Revised:	Date:	



**Legend**

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

Total Proposed Road Length: ±0ft

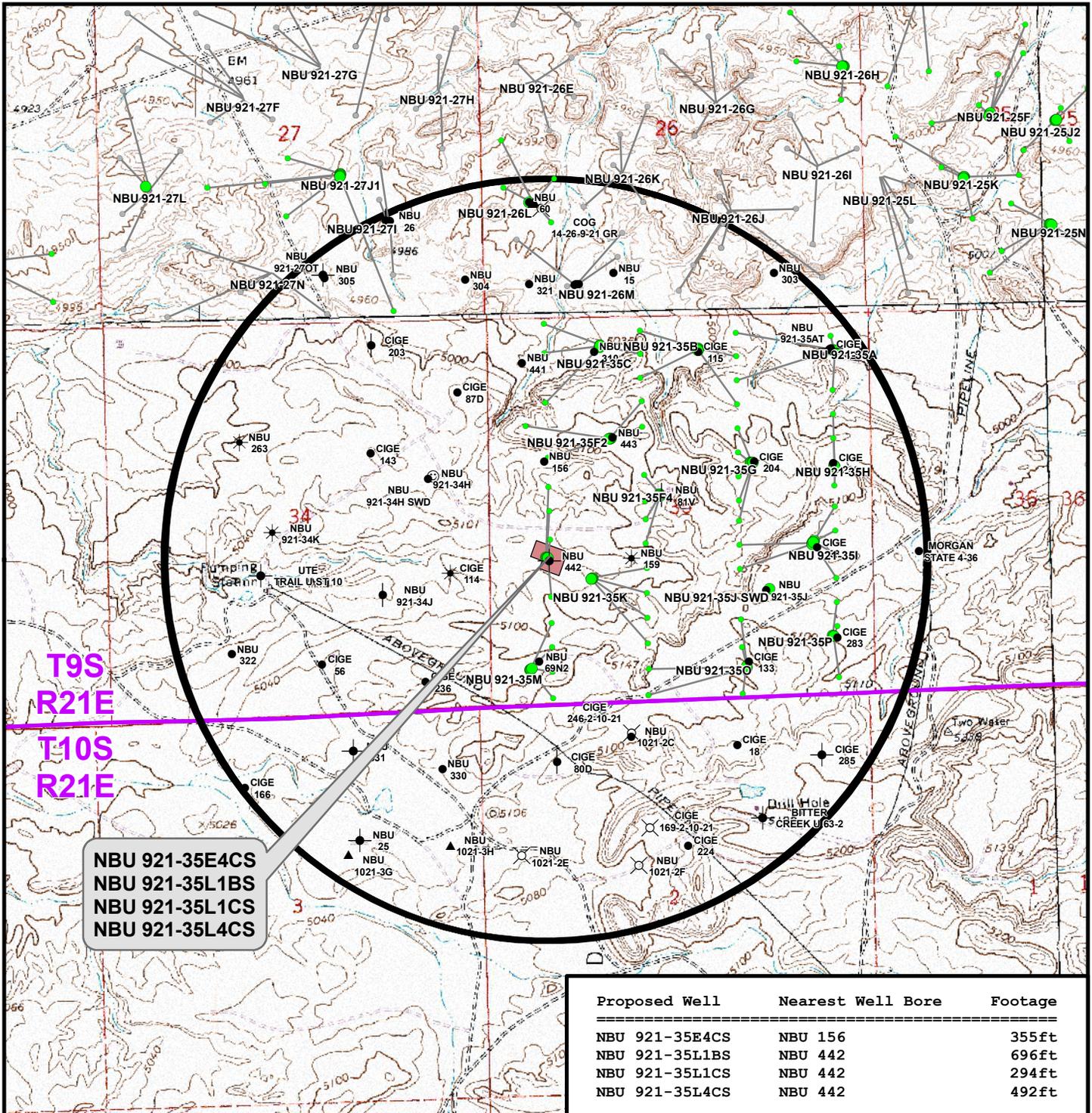
**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

**WELL PAD - NBU 921-35L**

**TOPO B**  
NBU 921-35E4CS, NBU 921-35L1BS,  
NBU 921-35L1CS & NBU 921-35L4CS  
LOCATED IN SECTION 35, T9S, R21E,  
S.L.B.&M., UTAH COUNTY, UTAH

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

Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: <b>11</b>
Drawn: TL	Date: 19 Oct 2010	<b>11</b> of 16
Revised: TL	Date: 9 Dec 2010	



Proposed Well	Nearest Well Bore	Footage
NBU 921-35E4CS	NBU 156	355ft
NBU 921-35L1BS	NBU 442	696ft
NBU 921-35L1CS	NBU 442	294ft
NBU 921-35L4CS	NBU 442	492ft

**Legend**

- Well - Proposed
- Bottom Hole - Proposed
- Well Pad
- Well Path
- Bottom Hole - Existing
- Well - 1 Mile Radius
- Producing
- Temporarily-Abandoned
- ★ Active
- Shut-In
- ⊙ Spudded (Drilling commenced; Not yet completed)
- ▲ Approved permit (APD); not yet spudded
- Plugged and Abandoned
- New Permit (Not yet approved or drilled)
- ⊕ Inactive
- ⊗ Location Abandoned
- ⊗ Drilling Operations Suspended
- ⊗ Dry hole marker, buried
- ⊗ Returned APD (Unapproved)

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

**WELL PAD - NBU 921-35L**

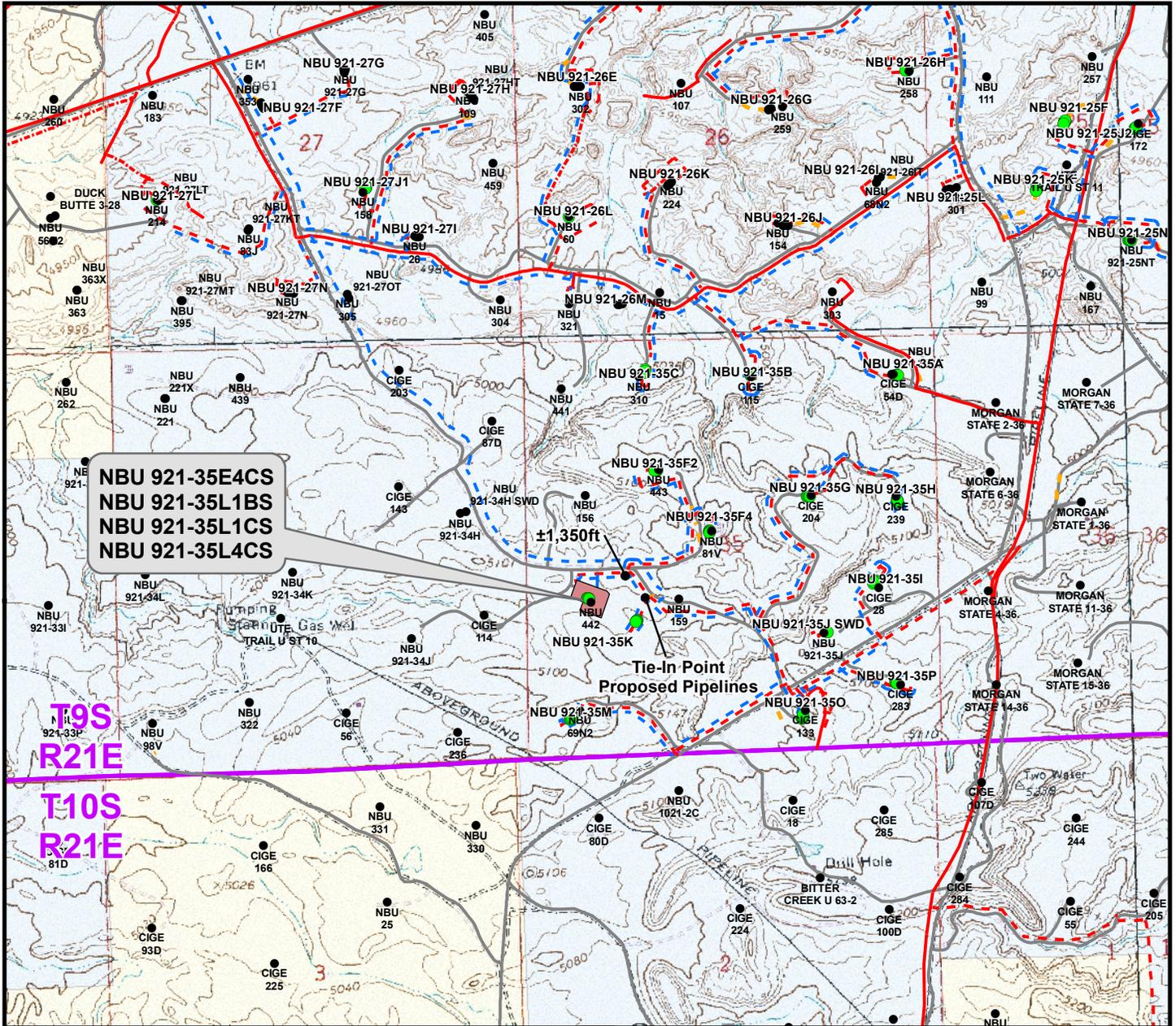
**TOPO C**  
NBU 921-35E4CS, NBU 921-35L1BS,  
NBU 921-35L1CS & NBU 921-35L4CS  
LOCATED IN SECTION 35, T9S, R21E,  
S.L.B.&M., UINTAH COUNTY, UTAH

**609**

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



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 19 Oct 2010	<b>12</b>
Revised: TL	Date: 9 Dec 2010	



Proposed Liquid Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±575ft
Proposed 6" (Max.) (Edge of Pad to 35F4 Intersection)	±880ft
Proposed 6" (Max.) (35F4 Intersection to 35K Intersection)	±470ft
<b>TOTAL PROPOSED LIQUID PIPELINE =</b>	<b>±1,925ft</b>

Proposed Gas Pipeline	Length
Proposed 6" (Meter House to Edge of Pad)	±575ft
Proposed 6" (Edge of Pad to 35F4 Intersection)	±880ft
Proposed 10" (35F4 Intersection to 35K Intersection)	±470ft
<b>TOTAL PROPOSED GAS PIPELINE =</b>	<b>±1,925ft</b>

**Legend**

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

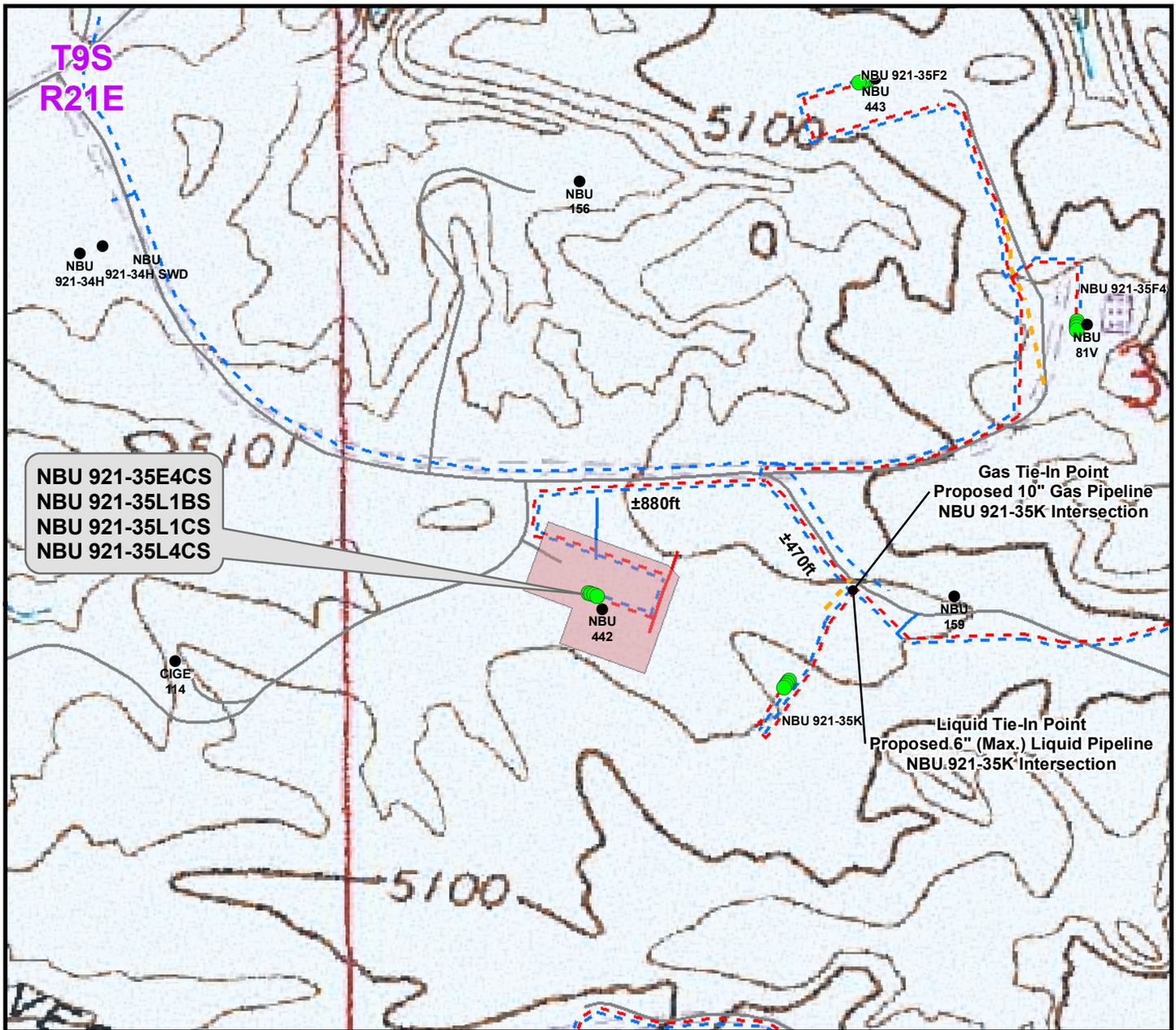
**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

**WELL PAD - NBU 921-35L**

**TOPO D**  
NBU 921-35E4CS, NBU 921-35L1BS,  
NBU 921-35L1CS & NBU 921-35L4CS  
LOCATED IN SECTION 35, T9S, R21E,  
S.L.B.&M., UINTAH COUNTY, UTAH

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

Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 19 Oct 2010	<b>13</b> 13 of 16
Revised: TL	Date: 9 Dec 2010	



Proposed Liquid Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±575ft
Proposed 6" (Max.) (Edge of Pad to 35F4 Intersection)	±880ft
Proposed 6" (Max.) (35F4 Intersection to 35K Intersection)	±470ft
<b>TOTAL PROPOSED LIQUID PIPELINE =</b>	<b>±1,925ft</b>

Proposed Gas Pipeline	Length
Proposed 6" (Meter House to Edge of Pad)	±575ft
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Proposed 10" (35F4 Intersection to 35K Intersection)	±470ft
<b>TOTAL PROPOSED GAS PIPELINE =</b>	<b>±1,925ft</b>

**Legend**

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

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

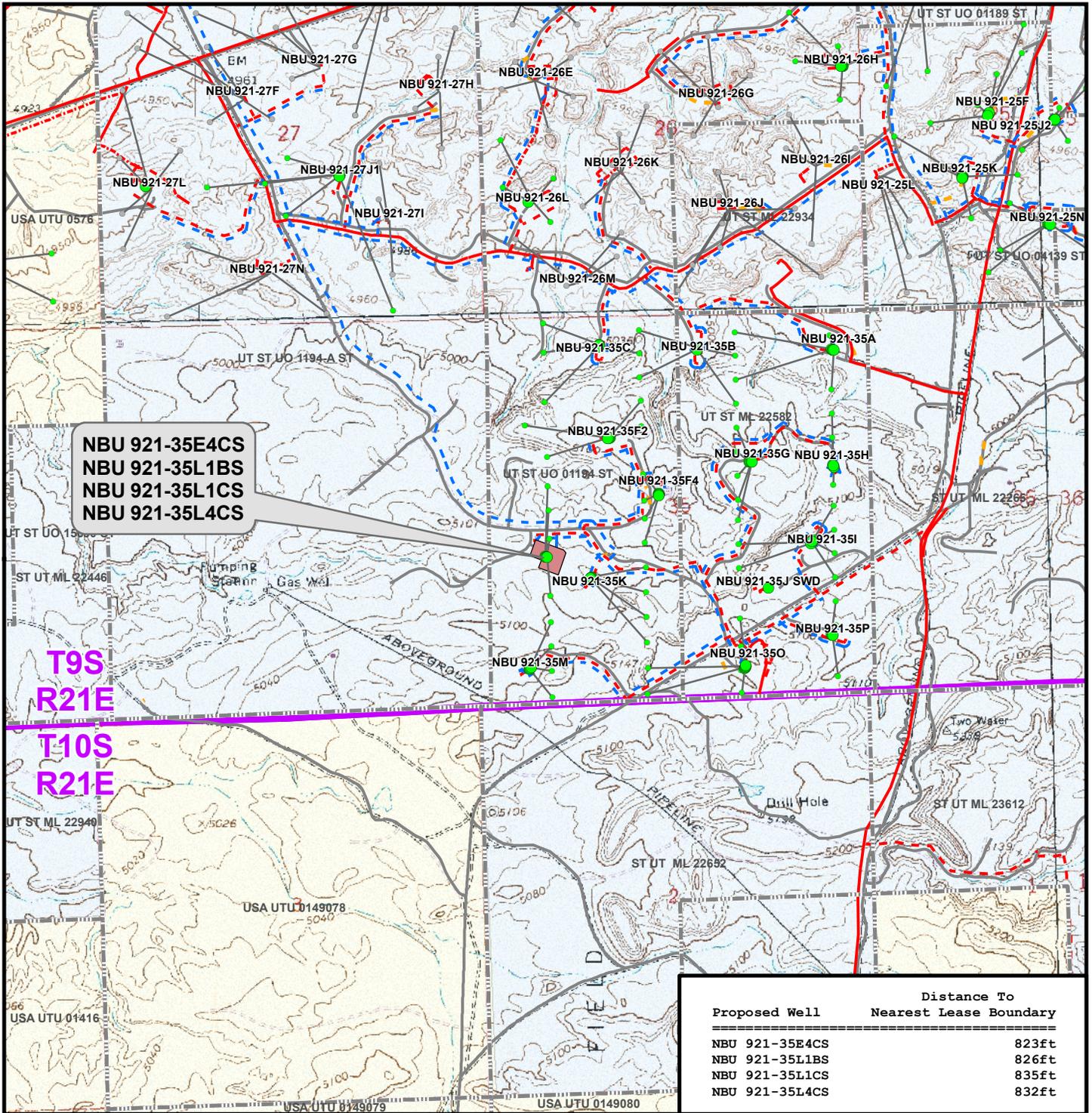
**WELL PAD - NBU 921-35L**

**TOPO D2 (PAD & PIPELINE DETAIL)**  
NBU 921-35E4CS, NBU 921-35L1BS,  
NBU 921-35L1CS & NBU 921-35L4CS  
LOCATED IN SECTION 35, T9S, R21E,  
S.L.B.&M., UINTAH COUNTY, UTAH

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



Scale: 1" = 500ft	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 19 Oct 2010	<b>14</b> 14 of 16
Revised: TL	Date: 9 Dec 2010	



**Legend**

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

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

**WELL PAD - NBU 921-35L**

**TOPO E**  
 NBU 921-35E4CS, NBU 921-35L1BS,  
 NBU 921-35L1CS & NBU 921-35L4CS  
 LOCATED IN SECTION 35, T9S, R21E,  
 S.L.B.&M., UINTAH COUNTY, UTAH



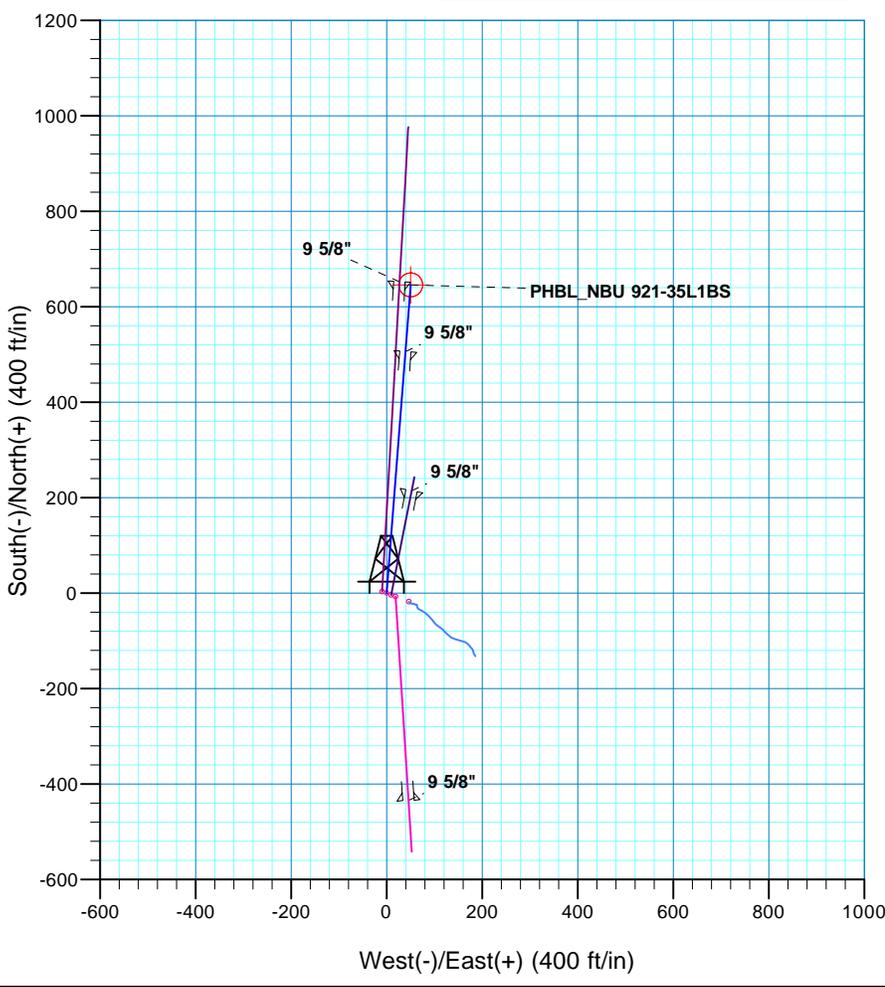
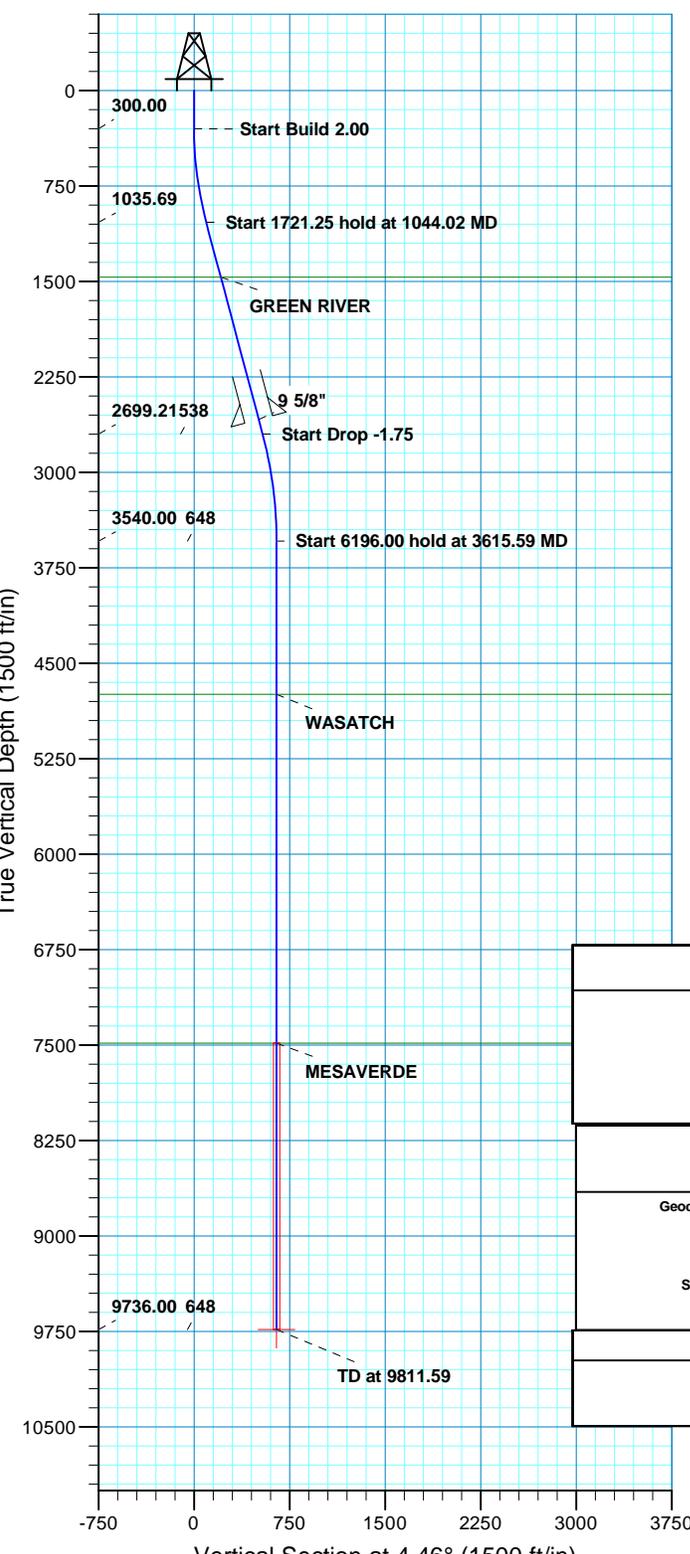
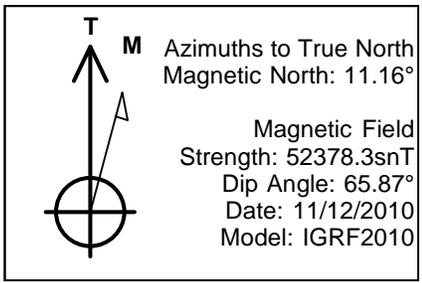
Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 19 Oct 2010	<b>15</b>
Revised: TL	Date: 9 Dec 2010	

**Kerr-McGee Oil & Gas Onshore, LP  
WELL PAD – NBU 921-35L  
WELLS – NBU 921-35E4CS, NBU 921-35L1BS,  
NBU 921-35L1CS & NBU 921-35L4CS  
Section 35, T9S, R21E, S.L.B.&M.**

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 20.1 miles to a Class D County Road to the northwest. Exit right and proceed in a northwesterly direction along the Class D County Road approximately 0.7 miles to a service road to the south. Exit left and proceed in a southerly direction along the service road approximately 190 feet to a second service road to the southeast. Exit left and proceed in a southeasterly direction along the second service road approximately 50 feet to the proposed well pad.

Total distance from Vernal, Utah to the proposed well location is approximately 44.3 miles in a southerly direction.

WELL DETAILS: P_NBU 921-35L1BS						
GL 5065 & RKB 14 @ 5079.00ft (ASSUMED)						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	14526078.32	2053608.18	39° 59' 26.536 N	109° 31' 29.467 W	
DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude
PHBL	9736.00	645.94	50.35	14526725.01	2053647.84	39° 59' 32.921 N
	- plan hits target center					
						Shape
						Circle (Radius: 25.00)



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1044.02	14.88	4.46	1035.69	95.78	7.47	2.00	4.46	96.07	
2765.27	14.88	4.46	2699.21	536.47	41.82	0.00	0.00	538.10	
3615.59	0.00	0.00	3540.00	645.94	50.35	1.75	180.00	647.90	
9811.59	0.00	0.00	9736.00	645.94	50.35	0.00	0.00	647.90	PHBL_NBU 921-35L1BS
PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N							FORMATION TOP DETAILS		
Geodetic System: Universal Transverse Mercator (US Survey Feet) Datum: NAD 1927 (NADCON CONUS) Ellipsoid: Clarke 1866 Zone: Zone 12N (114 W to 108 W) Location: SECTION 35 T9S R21E System Datum: Mean Sea Level							TVDPath	MDPath	Formation
							1466.00	1489.27	GREEN RIVER
							4744.00	4819.59	WASATCH
	7486.00	7561.59	MESAVERDE						
CASING DETAILS									
	TVD	MD	Name	Size					
	2585.00	2647.10	9 5/8"	9.625					



**Scientific Drilling**  
Rocky Mountain Operations

# **US ROCKIES REGION PLANNING**

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

**UINTAH\_NBU 921-35L PAD**

**P\_NBU 921-35L1BS**

**P\_NBU 921-35L1BS**

**Plan: PLAN #1 11-12-10 RHS**

## **Standard Planning Report**

**12 November, 2010**



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_NBU 921-35L1BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5065 & RKB 14 @ 5079.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5065 & RKB 14 @ 5079.00ft (ASSUMED)
<b>Site:</b>	UINTAH_NBU 921-35L PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_NBU 921-35L1BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_NBU 921-35L1BS		
<b>Design:</b>	PLAN #1 11-12-10 RHS		

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

<b>Site</b>	UINTAH_NBU 921-35L PAD, SECTION 35 T9S R21E				
<b>Site Position:</b>	<b>Northing:</b>	14,526,071.56 usft	<b>Latitude:</b>	39° 59' 26.466 N	
<b>From:</b> Lat/Long	<b>Easting:</b>	2,053,627.05 usft	<b>Longitude:</b>	109° 31' 29.226 W	
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.95 °

<b>Well</b>	P_NBU 921-35L1BS, 2013 FSL 778 FWL					
<b>Well Position</b>	<b>+N/-S</b>	7.08 ft	<b>Northing:</b>	14,526,078.33 usft	<b>Latitude:</b>	39° 59' 26.536 N
	<b>+E/-W</b>	-18.75 ft	<b>Easting:</b>	2,053,608.18 usft	<b>Longitude:</b>	109° 31' 29.467 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	5,065.00 ft

<b>Wellbore</b>	P_NBU 921-35L1BS				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	11/12/2010	11.16	65.87	52,378

<b>Design</b>	PLAN #1 11-12-10 RHS			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	4.46

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,044.02	14.88	4.46	1,035.69	95.78	7.47	2.00	2.00	0.00	4.46	
2,765.27	14.88	4.46	2,699.21	536.47	41.82	0.00	0.00	0.00	0.00	
3,615.59	0.00	0.00	3,540.00	645.94	50.35	1.75	-1.75	0.00	180.00	
9,811.59	0.00	0.00	9,736.00	645.94	50.35	0.00	0.00	0.00	0.00	PHBL_NBU 921-35L1

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_NBU 921-35L1BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5065 & RKB 14 @ 5079.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5065 & RKB 14 @ 5079.00ft (ASSUMED)
<b>Site:</b>	UINTAH_NBU 921-35L PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_NBU 921-35L1BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_NBU 921-35L1BS		
<b>Design:</b>	PLAN #1 11-12-10 RHS		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>										
400.00	2.00	4.46	399.98	1.74	0.14	1.75	2.00	2.00	0.00	
500.00	4.00	4.46	499.84	6.96	0.54	6.98	2.00	2.00	0.00	
600.00	6.00	4.46	599.45	15.65	1.22	15.69	2.00	2.00	0.00	
700.00	8.00	4.46	698.70	27.80	2.17	27.88	2.00	2.00	0.00	
800.00	10.00	4.46	797.47	43.39	3.38	43.52	2.00	2.00	0.00	
900.00	12.00	4.46	895.62	62.41	4.86	62.60	2.00	2.00	0.00	
1,000.00	14.00	4.46	993.06	84.84	6.61	85.10	2.00	2.00	0.00	
1,044.02	14.88	4.46	1,035.69	95.78	7.47	96.07	2.00	2.00	0.00	
<b>Start 1721.25 hold at 1044.02 MD</b>										
1,100.00	14.88	4.46	1,089.79	110.12	8.58	110.45	0.00	0.00	0.00	
1,200.00	14.88	4.46	1,186.43	135.72	10.58	136.13	0.00	0.00	0.00	
1,300.00	14.88	4.46	1,283.08	161.32	12.57	161.81	0.00	0.00	0.00	
1,400.00	14.88	4.46	1,379.73	186.92	14.57	187.49	0.00	0.00	0.00	
1,489.27	14.88	4.46	1,466.00	209.78	16.35	210.41	0.00	0.00	0.00	
<b>GREEN RIVER</b>										
1,500.00	14.88	4.46	1,476.37	212.53	16.57	213.17	0.00	0.00	0.00	
1,600.00	14.88	4.46	1,573.02	238.13	18.56	238.85	0.00	0.00	0.00	
1,700.00	14.88	4.46	1,669.66	263.73	20.56	264.53	0.00	0.00	0.00	
1,800.00	14.88	4.46	1,766.31	289.33	22.55	290.21	0.00	0.00	0.00	
1,900.00	14.88	4.46	1,862.96	314.94	24.55	315.89	0.00	0.00	0.00	
2,000.00	14.88	4.46	1,959.60	340.54	26.54	341.57	0.00	0.00	0.00	
2,100.00	14.88	4.46	2,056.25	366.14	28.54	367.25	0.00	0.00	0.00	
2,200.00	14.88	4.46	2,152.90	391.75	30.54	392.93	0.00	0.00	0.00	
2,300.00	14.88	4.46	2,249.54	417.35	32.53	418.61	0.00	0.00	0.00	
2,400.00	14.88	4.46	2,346.19	442.95	34.53	444.29	0.00	0.00	0.00	
2,500.00	14.88	4.46	2,442.84	468.55	36.52	469.97	0.00	0.00	0.00	
2,600.00	14.88	4.46	2,539.48	494.16	38.52	495.65	0.00	0.00	0.00	
2,647.10	14.88	4.46	2,585.00	506.21	39.46	507.75	0.00	0.00	0.00	
<b>9 5/8"</b>										
2,700.00	14.88	4.46	2,636.13	519.76	40.51	521.34	0.00	0.00	0.00	
2,765.27	14.88	4.46	2,699.21	536.47	41.82	538.10	0.00	0.00	0.00	
<b>Start Drop -1.75</b>										
2,800.00	14.27	4.46	2,732.82	545.18	42.50	546.84	1.75	-1.75	0.00	
2,900.00	12.52	4.46	2,830.10	568.28	44.30	570.01	1.75	-1.75	0.00	
3,000.00	10.77	4.46	2,928.03	588.41	45.86	590.20	1.75	-1.75	0.00	
3,100.00	9.02	4.46	3,026.54	605.55	47.20	607.38	1.75	-1.75	0.00	
3,200.00	7.27	4.46	3,125.53	619.68	48.30	621.56	1.75	-1.75	0.00	
3,300.00	5.52	4.46	3,224.90	630.79	49.17	632.70	1.75	-1.75	0.00	
3,400.00	3.77	4.46	3,324.57	638.86	49.80	640.80	1.75	-1.75	0.00	
3,500.00	2.02	4.46	3,424.44	643.90	50.19	645.86	1.75	-1.75	0.00	
3,600.00	0.27	4.46	3,524.41	645.90	50.35	647.86	1.75	-1.75	0.00	
3,615.59	0.00	0.00	3,540.00	645.94	50.35	647.90	1.75	-1.75	-28.59	
<b>Start 6196.00 hold at 3615.59 MD</b>										
3,700.00	0.00	0.00	3,624.41	645.94	50.35	647.90	0.00	0.00	0.00	
3,800.00	0.00	0.00	3,724.41	645.94	50.35	647.90	0.00	0.00	0.00	
3,900.00	0.00	0.00	3,824.41	645.94	50.35	647.90	0.00	0.00	0.00	
4,000.00	0.00	0.00	3,924.41	645.94	50.35	647.90	0.00	0.00	0.00	
4,100.00	0.00	0.00	4,024.41	645.94	50.35	647.90	0.00	0.00	0.00	

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_NBU 921-35L1BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5065 & RKB 14 @ 5079.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5065 & RKB 14 @ 5079.00ft (ASSUMED)
<b>Site:</b>	UINTAH_NBU 921-35L PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_NBU 921-35L1BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_NBU 921-35L1BS		
<b>Design:</b>	PLAN #1 11-12-10 RHS		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,200.00	0.00	0.00	4,124.41	645.94	50.35	647.90	0.00	0.00	0.00
4,300.00	0.00	0.00	4,224.41	645.94	50.35	647.90	0.00	0.00	0.00
4,400.00	0.00	0.00	4,324.41	645.94	50.35	647.90	0.00	0.00	0.00
4,500.00	0.00	0.00	4,424.41	645.94	50.35	647.90	0.00	0.00	0.00
4,600.00	0.00	0.00	4,524.41	645.94	50.35	647.90	0.00	0.00	0.00
4,700.00	0.00	0.00	4,624.41	645.94	50.35	647.90	0.00	0.00	0.00
4,800.00	0.00	0.00	4,724.41	645.94	50.35	647.90	0.00	0.00	0.00
4,819.59	0.00	0.00	4,744.00	645.94	50.35	647.90	0.00	0.00	0.00
<b>WASATCH</b>									
4,900.00	0.00	0.00	4,824.41	645.94	50.35	647.90	0.00	0.00	0.00
5,000.00	0.00	0.00	4,924.41	645.94	50.35	647.90	0.00	0.00	0.00
5,100.00	0.00	0.00	5,024.41	645.94	50.35	647.90	0.00	0.00	0.00
5,200.00	0.00	0.00	5,124.41	645.94	50.35	647.90	0.00	0.00	0.00
5,300.00	0.00	0.00	5,224.41	645.94	50.35	647.90	0.00	0.00	0.00
5,400.00	0.00	0.00	5,324.41	645.94	50.35	647.90	0.00	0.00	0.00
5,500.00	0.00	0.00	5,424.41	645.94	50.35	647.90	0.00	0.00	0.00
5,600.00	0.00	0.00	5,524.41	645.94	50.35	647.90	0.00	0.00	0.00
5,700.00	0.00	0.00	5,624.41	645.94	50.35	647.90	0.00	0.00	0.00
5,800.00	0.00	0.00	5,724.41	645.94	50.35	647.90	0.00	0.00	0.00
5,900.00	0.00	0.00	5,824.41	645.94	50.35	647.90	0.00	0.00	0.00
6,000.00	0.00	0.00	5,924.41	645.94	50.35	647.90	0.00	0.00	0.00
6,100.00	0.00	0.00	6,024.41	645.94	50.35	647.90	0.00	0.00	0.00
6,200.00	0.00	0.00	6,124.41	645.94	50.35	647.90	0.00	0.00	0.00
6,300.00	0.00	0.00	6,224.41	645.94	50.35	647.90	0.00	0.00	0.00
6,400.00	0.00	0.00	6,324.41	645.94	50.35	647.90	0.00	0.00	0.00
6,500.00	0.00	0.00	6,424.41	645.94	50.35	647.90	0.00	0.00	0.00
6,600.00	0.00	0.00	6,524.41	645.94	50.35	647.90	0.00	0.00	0.00
6,700.00	0.00	0.00	6,624.41	645.94	50.35	647.90	0.00	0.00	0.00
6,800.00	0.00	0.00	6,724.41	645.94	50.35	647.90	0.00	0.00	0.00
6,900.00	0.00	0.00	6,824.41	645.94	50.35	647.90	0.00	0.00	0.00
7,000.00	0.00	0.00	6,924.41	645.94	50.35	647.90	0.00	0.00	0.00
7,100.00	0.00	0.00	7,024.41	645.94	50.35	647.90	0.00	0.00	0.00
7,200.00	0.00	0.00	7,124.41	645.94	50.35	647.90	0.00	0.00	0.00
7,300.00	0.00	0.00	7,224.41	645.94	50.35	647.90	0.00	0.00	0.00
7,400.00	0.00	0.00	7,324.41	645.94	50.35	647.90	0.00	0.00	0.00
7,500.00	0.00	0.00	7,424.41	645.94	50.35	647.90	0.00	0.00	0.00
7,561.59	0.00	0.00	7,486.00	645.94	50.35	647.90	0.00	0.00	0.00
<b>MESAVERDE</b>									
7,600.00	0.00	0.00	7,524.41	645.94	50.35	647.90	0.00	0.00	0.00
7,700.00	0.00	0.00	7,624.41	645.94	50.35	647.90	0.00	0.00	0.00
7,800.00	0.00	0.00	7,724.41	645.94	50.35	647.90	0.00	0.00	0.00
7,900.00	0.00	0.00	7,824.41	645.94	50.35	647.90	0.00	0.00	0.00
8,000.00	0.00	0.00	7,924.41	645.94	50.35	647.90	0.00	0.00	0.00
8,100.00	0.00	0.00	8,024.41	645.94	50.35	647.90	0.00	0.00	0.00
8,200.00	0.00	0.00	8,124.41	645.94	50.35	647.90	0.00	0.00	0.00
8,300.00	0.00	0.00	8,224.41	645.94	50.35	647.90	0.00	0.00	0.00
8,400.00	0.00	0.00	8,324.41	645.94	50.35	647.90	0.00	0.00	0.00
8,500.00	0.00	0.00	8,424.41	645.94	50.35	647.90	0.00	0.00	0.00
8,600.00	0.00	0.00	8,524.41	645.94	50.35	647.90	0.00	0.00	0.00
8,700.00	0.00	0.00	8,624.41	645.94	50.35	647.90	0.00	0.00	0.00
8,800.00	0.00	0.00	8,724.41	645.94	50.35	647.90	0.00	0.00	0.00
8,900.00	0.00	0.00	8,824.41	645.94	50.35	647.90	0.00	0.00	0.00
9,000.00	0.00	0.00	8,924.41	645.94	50.35	647.90	0.00	0.00	0.00
9,100.00	0.00	0.00	9,024.41	645.94	50.35	647.90	0.00	0.00	0.00

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_NBU 921-35L1BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5065 & RKB 14 @ 5079.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5065 & RKB 14 @ 5079.00ft (ASSUMED)
<b>Site:</b>	UINTAH_NBU 921-35L PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_NBU 921-35L1BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_NBU 921-35L1BS		
<b>Design:</b>	PLAN #1 11-12-10 RHS		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,200.00	0.00	0.00	9,124.41	645.94	50.35	647.90	0.00	0.00	0.00
9,300.00	0.00	0.00	9,224.41	645.94	50.35	647.90	0.00	0.00	0.00
9,400.00	0.00	0.00	9,324.41	645.94	50.35	647.90	0.00	0.00	0.00
9,500.00	0.00	0.00	9,424.41	645.94	50.35	647.90	0.00	0.00	0.00
9,600.00	0.00	0.00	9,524.41	645.94	50.35	647.90	0.00	0.00	0.00
9,700.00	0.00	0.00	9,624.41	645.94	50.35	647.90	0.00	0.00	0.00
9,800.00	0.00	0.00	9,724.41	645.94	50.35	647.90	0.00	0.00	0.00
9,811.59	0.00	0.00	9,736.00	645.94	50.35	647.90	0.00	0.00	0.00
PHBL_NBU 921-35L1BS									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PHBL_NBU 921-35L1BS - hit/miss target - Shape - plan hits target center - Circle (radius 25.00)	0.00	0.00	9,736.00	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,647.10	2,585.00	9 5/8"	9.625	12.250	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,489.27	1,466.00	GREEN RIVER			
4,819.59	4,744.00	WASATCH			
7,561.59	7,486.00	MESAVERDE			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
300.00	300.00	0.00	0.00	Start Build 2.00	
1,044.02	1,035.69	95.78	7.47	Start 1721.25 hold at 1044.02 MD	
2,765.27	2,699.21	536.47	41.82	Start Drop -1.75	
3,615.59	3,540.00	645.94	50.35	Start 6196.00 hold at 3615.59 MD	
9,811.59	9,736.00	645.94	50.35	TD at 9811.59	



**Scientific Drilling**  
Rocky Mountain Operations

# **US ROCKIES REGION PLANNING**

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

**UINTAH\_NBU 921-35L PAD**

**P\_NBU 921-35L1BS**

**P\_NBU 921-35L1BS**

**Plan: PLAN #1 11-12-10 RHS**

## **Standard Planning Report - Geographic**

**12 November, 2010**

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_NBU 921-35L1BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5065 & RKB 14 @ 5079.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5065 & RKB 14 @ 5079.00ft (ASSUMED)
<b>Site:</b>	UINTAH_NBU 921-35L PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_NBU 921-35L1BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_NBU 921-35L1BS		
<b>Design:</b>	PLAN #1 11-12-10 RHS		

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

<b>Site</b>	UINTAH_NBU 921-35L PAD, SECTION 35 T9S R21E				
<b>Site Position:</b>	<b>Northing:</b>	14,526,071.56 usft	<b>Latitude:</b>	39° 59' 26.466 N	
<b>From:</b> Lat/Long	<b>Easting:</b>	2,053,627.05 usft	<b>Longitude:</b>	109° 31' 29.226 W	
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.95 °

<b>Well</b>	P_NBU 921-35L1BS, 2013 FSL 778 FWL					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,526,078.33 usft	<b>Latitude:</b>	39° 59' 26.536 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,053,608.18 usft	<b>Longitude:</b>	109° 31' 29.467 W
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	5,065.00 ft	

<b>Wellbore</b>	P_NBU 921-35L1BS				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	11/12/2010	11.16	65.87	52,378

<b>Design</b>	PLAN #1 11-12-10 RHS			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	4.46

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,044.02	14.88	4.46	1,035.69	95.78	7.47	2.00	2.00	0.00	4.46	
2,765.27	14.88	4.46	2,699.21	536.47	41.82	0.00	0.00	0.00	0.00	
3,615.59	0.00	0.00	3,540.00	645.94	50.35	1.75	-1.75	0.00	180.00	
9,811.59	0.00	0.00	9,736.00	645.94	50.35	0.00	0.00	0.00	0.00	PHBL_NBU 921-35L1

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_NBU 921-35L1BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5065 & RKB 14 @ 5079.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5065 & RKB 14 @ 5079.00ft (ASSUMED)
<b>Site:</b>	UINTAH_NBU 921-35L PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_NBU 921-35L1BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_NBU 921-35L1BS		
<b>Design:</b>	PLAN #1 11-12-10 RHS		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.00	0.00	0.00	0.00	14,526,078.33	2,053,608.18	39° 59' 26.536 N	109° 31' 29.467 W	
100.00	0.00	0.00	100.00	0.00	0.00	14,526,078.33	2,053,608.18	39° 59' 26.536 N	109° 31' 29.467 W	
200.00	0.00	0.00	200.00	0.00	0.00	14,526,078.33	2,053,608.18	39° 59' 26.536 N	109° 31' 29.467 W	
300.00	0.00	0.00	300.00	0.00	0.00	14,526,078.33	2,053,608.18	39° 59' 26.536 N	109° 31' 29.467 W	
<b>Start Build 2.00</b>										
400.00	2.00	4.46	399.98	1.74	0.14	14,526,080.07	2,053,608.29	39° 59' 26.553 N	109° 31' 29.465 W	
500.00	4.00	4.46	499.84	6.96	0.54	14,526,085.29	2,053,608.61	39° 59' 26.605 N	109° 31' 29.460 W	
600.00	6.00	4.46	599.45	15.65	1.22	14,526,093.99	2,053,609.14	39° 59' 26.691 N	109° 31' 29.451 W	
700.00	8.00	4.46	698.70	27.80	2.17	14,526,106.16	2,053,609.89	39° 59' 26.811 N	109° 31' 29.439 W	
800.00	10.00	4.46	797.47	43.39	3.38	14,526,121.77	2,053,610.84	39° 59' 26.965 N	109° 31' 29.424 W	
900.00	12.00	4.46	895.62	62.41	4.86	14,526,140.81	2,053,612.01	39° 59' 27.153 N	109° 31' 29.404 W	
1,000.00	14.00	4.46	993.06	84.84	6.61	14,526,163.27	2,053,613.39	39° 59' 27.375 N	109° 31' 29.382 W	
1,044.02	14.88	4.46	1,035.69	95.78	7.47	14,526,174.22	2,053,614.06	39° 59' 27.483 N	109° 31' 29.371 W	
<b>Start 1721.25 hold at 1044.02 MD</b>										
1,100.00	14.88	4.46	1,089.79	110.12	8.58	14,526,188.57	2,053,614.94	39° 59' 27.624 N	109° 31' 29.357 W	
1,200.00	14.88	4.46	1,186.43	135.72	10.58	14,526,214.20	2,053,616.51	39° 59' 27.878 N	109° 31' 29.331 W	
1,300.00	14.88	4.46	1,283.08	161.32	12.57	14,526,239.84	2,053,618.08	39° 59' 28.131 N	109° 31' 29.305 W	
1,400.00	14.88	4.46	1,379.73	186.92	14.57	14,526,265.47	2,053,619.66	39° 59' 28.384 N	109° 31' 29.280 W	
1,489.27	14.88	4.46	1,466.00	209.78	16.35	14,526,288.35	2,053,621.06	39° 59' 28.610 N	109° 31' 29.257 W	
<b>GREEN RIVER</b>										
1,500.00	14.88	4.46	1,476.37	212.53	16.57	14,526,291.10	2,053,621.23	39° 59' 28.637 N	109° 31' 29.254 W	
1,600.00	14.88	4.46	1,573.02	238.13	18.56	14,526,316.73	2,053,622.80	39° 59' 28.890 N	109° 31' 29.228 W	
1,700.00	14.88	4.46	1,669.66	263.73	20.56	14,526,342.36	2,053,624.37	39° 59' 29.143 N	109° 31' 29.203 W	
1,800.00	14.88	4.46	1,766.31	289.33	22.55	14,526,368.00	2,053,625.94	39° 59' 29.396 N	109° 31' 29.177 W	
1,900.00	14.88	4.46	1,862.96	314.94	24.55	14,526,393.63	2,053,627.51	39° 59' 29.649 N	109° 31' 29.152 W	
2,000.00	14.88	4.46	1,959.60	340.54	26.54	14,526,419.26	2,053,629.09	39° 59' 29.902 N	109° 31' 29.126 W	
2,100.00	14.88	4.46	2,056.25	366.14	28.54	14,526,444.89	2,053,630.66	39° 59' 30.155 N	109° 31' 29.100 W	
2,200.00	14.88	4.46	2,152.90	391.75	30.54	14,526,470.52	2,053,632.23	39° 59' 30.408 N	109° 31' 29.075 W	
2,300.00	14.88	4.46	2,249.54	417.35	32.53	14,526,496.16	2,053,633.80	39° 59' 30.661 N	109° 31' 29.049 W	
2,400.00	14.88	4.46	2,346.19	442.95	34.53	14,526,521.79	2,053,635.37	39° 59' 30.914 N	109° 31' 29.023 W	
2,500.00	14.88	4.46	2,442.84	468.55	36.52	14,526,547.42	2,053,636.94	39° 59' 31.167 N	109° 31' 28.998 W	
2,600.00	14.88	4.46	2,539.48	494.16	38.52	14,526,573.05	2,053,638.52	39° 59' 31.421 N	109° 31' 28.972 W	
2,647.10	14.88	4.46	2,585.00	506.21	39.46	14,526,585.13	2,053,639.26	39° 59' 31.540 N	109° 31' 28.960 W	
<b>9 5/8"</b>										
2,700.00	14.88	4.46	2,636.13	519.76	40.51	14,526,598.69	2,053,640.09	39° 59' 31.674 N	109° 31' 28.946 W	
2,765.27	14.88	4.46	2,699.21	536.47	41.82	14,526,615.42	2,053,641.11	39° 59' 31.839 N	109° 31' 28.930 W	
<b>Start Drop -1.75</b>										
2,800.00	14.27	4.46	2,732.82	545.18	42.50	14,526,624.14	2,053,641.65	39° 59' 31.925 N	109° 31' 28.921 W	
2,900.00	12.52	4.46	2,830.10	568.28	44.30	14,526,647.27	2,053,643.07	39° 59' 32.153 N	109° 31' 28.898 W	
3,000.00	10.77	4.46	2,928.03	588.41	45.86	14,526,667.42	2,053,644.30	39° 59' 32.352 N	109° 31' 28.878 W	
3,100.00	9.02	4.46	3,026.54	605.55	47.20	14,526,684.57	2,053,645.35	39° 59' 32.522 N	109° 31' 28.860 W	
3,200.00	7.27	4.46	3,125.53	619.68	48.30	14,526,698.72	2,053,646.22	39° 59' 32.661 N	109° 31' 28.846 W	
3,300.00	5.52	4.46	3,224.90	630.79	49.17	14,526,709.84	2,053,646.90	39° 59' 32.771 N	109° 31' 28.835 W	
3,400.00	3.77	4.46	3,324.57	638.86	49.80	14,526,717.93	2,053,647.40	39° 59' 32.851 N	109° 31' 28.827 W	
3,500.00	2.02	4.46	3,424.44	643.90	50.19	14,526,722.97	2,053,647.71	39° 59' 32.901 N	109° 31' 28.822 W	
3,600.00	0.27	4.46	3,524.41	645.90	50.35	14,526,724.97	2,053,647.83	39° 59' 32.920 N	109° 31' 28.820 W	
3,615.59	0.00	0.00	3,540.00	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
<b>Start 6196.00 hold at 3615.59 MD</b>										
3,700.00	0.00	0.00	3,624.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
3,800.00	0.00	0.00	3,724.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
3,900.00	0.00	0.00	3,824.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
4,000.00	0.00	0.00	3,924.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
4,100.00	0.00	0.00	4,024.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
4,200.00	0.00	0.00	4,124.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_NBU 921-35L1BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5065 & RKB 14 @ 5079.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5065 & RKB 14 @ 5079.00ft (ASSUMED)
<b>Site:</b>	UINTAH_NBU 921-35L PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_NBU 921-35L1BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_NBU 921-35L1BS		
<b>Design:</b>	PLAN #1 11-12-10 RHS		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
4,300.00	0.00	0.00	4,224.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
4,400.00	0.00	0.00	4,324.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
4,500.00	0.00	0.00	4,424.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
4,600.00	0.00	0.00	4,524.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
4,700.00	0.00	0.00	4,624.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
4,800.00	0.00	0.00	4,724.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
4,819.59	0.00	0.00	4,744.00	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
<b>WASATCH</b>										
4,900.00	0.00	0.00	4,824.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
5,000.00	0.00	0.00	4,924.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
5,100.00	0.00	0.00	5,024.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
5,200.00	0.00	0.00	5,124.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
5,300.00	0.00	0.00	5,224.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
5,400.00	0.00	0.00	5,324.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
5,500.00	0.00	0.00	5,424.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
5,600.00	0.00	0.00	5,524.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
5,700.00	0.00	0.00	5,624.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
5,800.00	0.00	0.00	5,724.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
5,900.00	0.00	0.00	5,824.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
6,000.00	0.00	0.00	5,924.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
6,100.00	0.00	0.00	6,024.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
6,200.00	0.00	0.00	6,124.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
6,300.00	0.00	0.00	6,224.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
6,400.00	0.00	0.00	6,324.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
6,500.00	0.00	0.00	6,424.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
6,600.00	0.00	0.00	6,524.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
6,700.00	0.00	0.00	6,624.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
6,800.00	0.00	0.00	6,724.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
6,900.00	0.00	0.00	6,824.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
7,000.00	0.00	0.00	6,924.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
7,100.00	0.00	0.00	7,024.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
7,200.00	0.00	0.00	7,124.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
7,300.00	0.00	0.00	7,224.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
7,400.00	0.00	0.00	7,324.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
7,500.00	0.00	0.00	7,424.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
7,561.59	0.00	0.00	7,486.00	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
<b>MESAVERDE</b>										
7,600.00	0.00	0.00	7,524.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
7,700.00	0.00	0.00	7,624.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
7,800.00	0.00	0.00	7,724.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
7,900.00	0.00	0.00	7,824.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
8,000.00	0.00	0.00	7,924.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
8,100.00	0.00	0.00	8,024.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
8,200.00	0.00	0.00	8,124.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
8,300.00	0.00	0.00	8,224.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
8,400.00	0.00	0.00	8,324.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
8,500.00	0.00	0.00	8,424.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
8,600.00	0.00	0.00	8,524.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
8,700.00	0.00	0.00	8,624.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
8,800.00	0.00	0.00	8,724.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
8,900.00	0.00	0.00	8,824.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
9,000.00	0.00	0.00	8,924.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
9,100.00	0.00	0.00	9,024.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
9,200.00	0.00	0.00	9,124.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_NBU 921-35L1BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5065 & RKB 14 @ 5079.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5065 & RKB 14 @ 5079.00ft (ASSUMED)
<b>Site:</b>	UINTAH_NBU 921-35L PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_NBU 921-35L1BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_NBU 921-35L1BS		
<b>Design:</b>	PLAN #1 11-12-10 RHS		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
9,300.00	0.00	0.00	9,224.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
9,400.00	0.00	0.00	9,324.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
9,500.00	0.00	0.00	9,424.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
9,600.00	0.00	0.00	9,524.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
9,700.00	0.00	0.00	9,624.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
9,800.00	0.00	0.00	9,724.41	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
9,811.59	0.00	0.00	9,736.00	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
<b>PHBL_NBU 921-35L1BS</b>										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
PHBL_NBU 921-35L1BS	0.00	0.00	9,736.00	645.94	50.35	14,526,725.01	2,053,647.83	39° 59' 32.921 N	109° 31' 28.820 W	
- hit/miss target - Shape - plan hits target center - Circle (radius 25.00)										

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)		
2,647.10	2,585.00	9 5/8"	9.625	12.250		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,489.27	1,466.00	GREEN RIVER				
4,819.59	4,744.00	WASATCH				
7,561.59	7,486.00	MESAVERDE				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
300.00	300.00	0.00	0.00	Start Build 2.00	
1,044.02	1,035.69	95.78	7.47	Start 1721.25 hold at 1044.02 MD	
2,765.27	2,699.21	536.47	41.82	Start Drop -1.75	
3,615.59	3,540.00	645.94	50.35	Start 6196.00 hold at 3615.59 MD	
9,811.59	9,736.00	645.94	50.35	TD at 9811.59	

**NBU 921-35E4CS**

Surface: 2,016' FSL 768' FWL (NW/4SW/4)  
BHL: 2,343' FNL 823' FWL (SW/4NW/4)

**NBU 921-35L1BS**

Surface: 2,013' FSL 778' FWL (NW/4SW/4)  
BHL: 2,658' FSL 826' FWL (NW/4SW/4)

**NBU 921-35L1CS**

Surface: 2,009' FSL 787' FWL (NW/4SW/4)  
BHL: 2,255' FSL 835' FWL (NW/4SW/4)

**NBU 921-35L4CS**

Surface: 2,005' FSL 796' FWL (NW/4SW/4)  
BHL: 1,470' FSL 832' FWL (NW/4SW/4)

Pad: NBU 921-35L  
Section 35 T9S R21E  
Mineral Lease: UO 1194 ST

Uintah County, Utah  
Operator: Kerr-McGee Oil & Gas Onshore LP

***MULTI-POINT SURFACE USE PLAN of OPERATIONS (SUPO)***

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to APC/KMG (including, but not limited to, APDs/SULAs/ROEs/ROWs and/or easements).

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

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

**A. Existing Roads:**

Existing roads consist of county roads and improved/unimproved lease roads. APC/KMG will maintain existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each

other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

**B. Planned Access Roads:**

No new access road is proposed (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

Where roads are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

Turnouts; major cut and fills; culverts; bridges; gates; cattle guards; low water crossings; or modifications needed to existing infrastructure/facilities were determined at the on-site and, as applicable, are typically shown on attached Exhibits and Topo maps.

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

This pad will expand the existing pad for the NBU 442. This well location is a plugged and abandoned well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of November 11, 2010.

Production facilities (see Well Pad Design Summary and Facilities Diagram):

Production facilities will be installed on the disturbed portion of each well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) aboveground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

Production tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks are not to be used for disposal of liquids from additional sources without prior approval of UDOGM.

Gathering facilities:

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is  $\pm 1,950'$  and the individual segments are broken up as follows:

$\pm 600'$  (0.1 miles) –New 6" buried gas pipeline from the meter to the edge of the pad.

$\pm 880'$  (0.2 miles) –New 6" buried gas pipeline from the edge of pad to the NBU 921-35F4 pad intersection.

$\pm 470'$  (0.1 miles) –New 10" buried gas pipeline from the NBU 921-35F4 pad intersection to the NBU 921-35K pad intersection.

The total liquid gathering pipeline distance from the separator to the tie in point is  $\pm 1,950'$  and the individual segments are broken up as follows:

- $\pm 600'$  (0.1 miles) –New 6” buried liquid pipeline from the meter to the edge of the pad.
- $\pm 880'$  (0.2 miles) –New 6” buried liquid pipeline from the edge of pad to the NBU 921-35F4 pad intersection.
- $\pm 470'$  (0.1 miles) –New 6” buried liquid pipeline from the NBU 921-35F4 pad intersection to the NBU 921-35K pad intersection.

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

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. Kerr-McGee requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, Kerr-McGee requests a temporary 45' construction right-of-way and 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.

Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

**D. 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.

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

No water well is to be drilled on this lease.

**E. Source of Construction Materials:**

Construction operations will typically be completed with native materials found on location. If needed, construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

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

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

- RNI in Sec. 5 T9S R22E
- 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
- Ouray #1 SWD in Sec. 1 T9S R21E
- NBU 159 SWD in Sec. 35 T9S R21E
- CIGE 112D SWD in Sec. 19 T9S R21E
- CIGE 114 SWD in Sec. 34 T9S R21E
- NBU 921-34K SWD in Sec. 34 T9S R21E
- NBU 921-33F SWD in Sec. 33 T9S R21E
- NBU 921-34L SWD in Sec. 34 T9S R21E

Drill cuttings and/or fluids will be contained in the reserve/frac pit. Cuttings will be buried in pit(s) upon closure. Unless otherwise approved, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions or well testing, product will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with a synthetic material 20-mil or thicker, The liner

will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. Any additional pits necessary to subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as 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.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after six (6) months from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility.

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

Any undesirable event, accidental release, or in excess of reportable quantities will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule, and, where State wells are participatory to a Federal agreement, according to NTL-3A.

### **Materials Management**

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

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

**G. Ancillary Facilities:**

None are anticipated.

**H. Well Site Layout (see Well Pad Design Summary):**

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure; proposed cuts and fills; and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1983 (NAD83) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

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

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

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

**Interim Reclamation**

Interim reclamation includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

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

### **Final Reclamation**

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

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

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

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

### **Seeding and Measures Common to Interim and Final Reclamation**

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to, erosion control blankets and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-

vegetation. The site specific seed mix will be provided by SITLA.

**J. Surface/Mineral Ownership:**

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

**K. Other Information:**

None

**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 for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, 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

November 19, 2010  
Date



Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
DENVER, CO 80217-3779

October 27, 2010

Ms. Diana Mason  
Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11  
NBU 921-35L1BS  
T9S-R21E  
Section 35: NWSW (Surf), NWSW (Bottom)  
Surface: 2013' FSL, 778' FWL  
Bottom Hole: 2658' FSL, 826' FWL  
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling.

- Kerr-McGee's NBU 921-35L1BS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information, Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink that reads 'Joe Matney'.

Joe Matney  
Sr. Staff Landman



# 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)

December 1, 2010

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2010 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 2010 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
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(Proposed PZ WASATCH-MESA VERDE)

### **NBU 921-35F2 Pad**

43-047-51355	NBU 921-35F1BS	Sec 35 T09S R21E 1684 FNL 1709 FWL
	BHL	Sec 35 T09S R21E 1531 FNL 2146 FWL

### **NBU 921-35F4 PAD**

43-047-51356	NBU 921-35F4BS	Sec 35 T09S R21E 2473 FNL 2358 FWL
	BHL	Sec 35 T09S R21E 2210 FNL 2158 FWL

43-047-51357	NBU 921-35F4CS	Sec 35 T09S R21E 2483 FNL 2358 FWL
	BHL	Sec 35 T09S R21E 2567 FNL 2159 FWL

43-047-51358	NBU 921-35K1BS	Sec 35 T09S R21E 2493 FNL 2358 FWL
	BHL	Sec 35 T09S R21E 2484 FSL 2161 FWL

43-047-51359	NBU 921-35K1CS	Sec 35 T09S R21E 2503 FNL 2357 FWL
	BHL	Sec 35 T09S R21E 2163 FSL 2155 FWL

### **NBU 921-35G Pad**

43-047-51360	NBU 921-35G1BS	Sec 35 T09S R21E 2053 FNL 1633 FEL
	BHL	Sec 35 T09S R21E 1583 FNL 1819 FEL

43-047-51361	NBU 921-35G1CS	Sec 35 T09S R21E 2053 FNL 1653 FEL
	BHL	Sec 35 T09S R21E 1916 FNL 1820 FEL

43-047-51362	NBU 921-35G4BS	Sec 35 T09S R21E 2053 FNL 1643 FEL
	BHL	Sec 35 T09S R21E 2250 FNL 1822 FEL

API #	WELL NAME			LOCATION						
(Proposed PZ WASATCH-MESA VERDE)										
43-047-51363	NBU 921-35G4CS	Sec	35	T09S	R21E	2053	FNL	1623	FEL	
	BHL	Sec	35	T09S	R21E	2583	FNL	1823	FEL	
43-047-51364	NBU 921-35J1BS	Sec	35	T09S	R21E	2053	FNL	1613	FEL	
	BHL	Sec	35	T09S	R21E	2419	FSL	1824	FEL	
<b>NBU 921-35H PAD</b>										
43-047-51365	NBU 921-35H1BS	Sec	35	T09S	R21E	2143	FNL	0486	FEL	
	BHL	Sec	35	T09S	R21E	1411	FNL	0494	FEL	
43-047-51366	NBU 921-35H1CS	Sec	35	T09S	R21E	2133	FNL	0490	FEL	
	BHL	Sec	35	T09S	R21E	1743	FNL	0495	FEL	
43-047-51367	NBU 921-35H4BS	Sec	35	T09S	R21E	2124	FNL	0493	FEL	
	BHL	Sec	35	T09S	R21E	2075	FNL	0495	FEL	
43-047-51368	NBU 921-35H4CS	Sec	35	T09S	R21E	2152	FNL	0483	FEL	
	BHL	Sec	35	T09S	R21E	2407	FNL	0495	FEL	
<b>NBU 921-35I PAD</b>										
43-047-51369	NBU 921-35I1BS	Sec	35	T09S	R21E	2106	FSL	0794	FEL	
	BHL	Sec	35	T09S	R21E	2572	FSL	0496	FEL	
43-047-51370	NBU 921-35I1CS	Sec	35	T09S	R21E	2098	FSL	0800	FEL	
	BHL	Sec	35	T09S	R21E	2240	FSL	0496	FEL	
43-047-51371	NBU 921-35I4BS	Sec	35	T09S	R21E	2090	FSL	0806	FEL	
	BHL	Sec	35	T09S	R21E	1908	FSL	0496	FEL	
43-047-51372	NBU 921-35I4CS	Sec	35	T09S	R21E	2082	FSL	0811	FEL	
	BHL	Sec	35	T09S	R21E	1577	FSL	0497	FEL	
43-047-51373	NBU 921-35J1CS	Sec	35	T09S	R21E	2074	FSL	0817	FEL	
	BHL	Sec	35	T09S	R21E	2086	FSL	1825	FEL	
43-047-51374	NBU 921-35J4BS	Sec	35	T09S	R21E	2066	FSL	0823	FEL	
	BHL	Sec	35	T09S	R21E	1752	FSL	1826	FEL	
<b>NBU 921-35K PAD</b>										
43-047-51375	NBU 921-35K4BS	Sec	35	T09S	R21E	1710	FSL	1409	FWL	
	BHL	Sec	35	T09S	R21E	1814	FSL	2165	FWL	
43-047-51376	NBU 921-35K4CS	Sec	35	T09S	R21E	1702	FSL	1403	FWL	
	BHL	Sec	35	T09S	R21E	1469	FSL	2163	FWL	
43-047-51377	NBU 921-35N1BS	Sec	35	T09S	R21E	1694	FSL	1397	FWL	
	BHL	Sec	35	T09S	R21E	1124	FSL	2161	FWL	
43-047-51378	NBU 921-35N1CS	Sec	35	T09S	R21E	1686	FSL	1392	FWL	
	BHL	Sec	35	T09S	R21E	0771	FSL	2162	FWL	

API #	WELL NAME	LOCATION									
<b>NBU 921-35L PAD</b>											
43-047-51379	NBU 921-35E4CS	Sec	35	T09S	R21E	2016	FSL	0768	FWL		
	BHL	Sec	35	T09S	R21E	2343	FNL	0823	FWL		
43-047-51386	NBU 921-35L1BS	Sec	35	T09S	R21E	2013	FSL	0778	FWL		
	BHL	Sec	35	T09S	R21E	2658	FSL	0826	FWL		
43-047-51389	NBU 921-35L1CS	Sec	35	T09S	R21E	2009	FSL	0787	FWL		
	BHL	Sec	35	T09S	R21E	2255	FSL	0835	FWL		
43-047-51390	NBU 921-35L4CS	Sec	35	T09S	R21E	2005	FSL	0796	FWL		
	BHL	Sec	35	T09S	R21E	1470	FSL	0832	FWL		
<b>NBU 921-35P PAD</b>											
43-047-51380	NBU 921-35P4CS	Sec	35	T09S	R21E	0781	FSL	0557	FEL		
	BHL	Sec	35	T09S	R21E	0208	FSL	0489	FEL		
43-047-51381	NBU 921-35P1CS	Sec	35	T09S	R21E	0778	FSL	0547	FEL		
	BHL	Sec	35	T09S	R21E	0913	FSL	0497	FEL		
43-047-51382	NBU 921-35P1BS	Sec	35	T09S	R21E	0785	FSL	0566	FEL		
	BHL	Sec	35	T09S	R21E	1245	FSL	0497	FEL		
<b>NBU 921-35O PAD</b>											
43-047-51383	NBU 921-35O4CS	Sec	35	T09S	R21E	0360	FSL	1780	FEL		
	BHL	Sec	35	T09S	R21E	0026	FSL	1826	FEL		
43-047-51384	NBU 921-35O4BS	Sec	35	T09S	R21E	0370	FSL	1777	FEL		
	BHL	Sec	35	T09S	R21E	0336	FSL	1833	FEL		
43-047-51385	NBU 921-35O1CS	Sec	35	T09S	R21E	0398	FSL	1766	FEL		
	BHL	Sec	35	T09S	R21E	0674	FSL	1828	FEL		
43-047-51387	NBU 921-35O1BS	Sec	35	T09S	R21E	0407	FSL	1763	FEL		
	BHL	Sec	35	T09S	R21E	1059	FSL	1833	FEL		
43-047-51388	NBU 921-35N4CS	Sec	35	T09S	R21E	0379	FSL	1773	FEL		
	BHL	Sec	35	T09S	R21E	0051	FSL	2153	FWL		
43-047-51395	NBU 921-35N4BS	Sec	35	T09S	R21E	0388	FSL	1770	FEL		
	BHL	Sec	35	T09S	R21E	0410	FSL	2164	FWL		
<b>NBU 921-35M PAD</b>											
43-047-51391	NBU 921-35M1BS	Sec	35	T09S	R21E	0469	FSL	0526	FWL		
	BHL	Sec	35	T09S	R21E	1096	FSL	0830	FWL		
43-047-51392	NBU 921-35M1CS	Sec	35	T09S	R21E	0474	FSL	0534	FWL		
	BHL	Sec	35	T09S	R21E	0760	FSL	0830	FWL		

API #	WELL NAME	LOCATION
43-047-51393	NBU 921-35M4BS	Sec 35 T09S R21E 0478 FSL 0543 FWL BHL Sec 35 T09S R21E 0423 FSL 0831 FWL
43-047-51394	NBU 921-35M4CS	Sec 35 T09S R21E 0464 FSL 0517 FWL BHL Sec 35 T09S R21E 0055 FSL 0834 FWL

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

Michael L. Coulthard

Digitally signed by Michael L. Coulthard  
DN: cn=Michael L. Coulthard, o=Bureau of Land Management, ou=Branch of Minerals, email=Michael\_Coulthard@blm.gov, c=US  
Date: 2010.12.01 10:03:00 -07'00'

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

MCoulthard:mc:12-1-10

**From:** Jim Davis  
**To:** Bonner, Ed; Hill, Brad; Mason, Diana  
**CC:** Curry, Kristine; Danielle Piernot; Garrison, LaVonne; Hayden, Martha;...  
**Date:** 12/22/2010 5:49 AM  
**Subject:** Kerr McGee APD approvals in 9S 21E Sec 35  
**Attachments:** KMG approvals 921-35 on 12.22.2010.xls

The following wells have been approved by SITLA under the following arch and paleo stipulations. This is a long list, so I'm attaching a spreadsheet with the same information.

A note on arch and paleo stipulations: Wells that have an arch note "non-significant site" do not need to be avoided or mitigated. Only those that say "needs to be avoided".

The paleo reports make recommendations for "spot paleo monitoring" or "full paleo monitoring". It is my understanding that Kerr McGee is taking these stipulations and doing full monitoring in either case, in an abundance of caution.

-Jim Davis

Well Name	API	Paleo Stipulations	Arch Stipulations
Kerr-McGee's NBU 921-35A1BS (U-07-MQ-1437b,i,p,s)	API #4304751339		IPC 10-98 Spot Paleo Monitoring
Kerr-McGee's NBU 921-35A4CS (U-07-MQ-1437b,i,p,s)	API #4304751340		IPC 10-98 Spot Paleo Monitoring
Kerr-McGee's NBU 921-35B1BS (U-07-MQ-1437b,i,p,s)	API #4304751341		IPC 10-98 Spot Paleo Monitoring
Kerr-McGee's NBU 921-35B4BS (U-07-MQ-1437b,i,p,s)	API #4304751342		IPC 10-98 Spot Paleo Monitoring
Kerr-McGee's NBU 921-35B1CS (U-07-MQ-1437b,i,p,s; eligible site 42Un6461, just south of proposed pipeline needs to be avoided)	API #4304751343		IPC 10-98 Spot Paleo Monitoring
Kerr-McGee's NBU 921-35B4CS (U-07-MQ-1437b,i,p,s; eligible site 42Un6461, just south of proposed pipeline needs to be avoided)	API #4304751344		IPC 10-98 Spot Paleo Monitoring
Kerr-McGee's NBU 921-35C1BS (U-07-MQ-1437b,i,p,s; eligible site 42Un6461, just south of proposed pipeline needs to be avoided)	API #4304751345		IPC 10-98 Spot Paleo Monitoring
Kerr-McGee's NBU 921-35C4BS (U-07-MQ-1437b,i,p,s; eligible site 42Un6461, just south of proposed pipeline needs to be avoided)	API #4304751346		IPC 10-98 Spot Paleo Monitoring
Kerr-McGee's NBU 921-35C1CS (U-07-MQ-1437b,i,p,s)	API #4304751347		IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35D1BS (U-07-MQ-1437b,i,p,s)	API #4304751348		IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35D1CS (U-07-MQ-1437b,i,p,s)	API #4304751349		IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35D4CS (U-07-MQ-1437b,i,p,s)	API #4304751350		IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35C4CS (U-07-MQ-1437b,i,p,s)	API #4304751351		IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35E1CS (U-07-MQ-1437b,i,p,s)	API #4304751352		IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35E2AS (U-07-MQ-1437b,i,p,s)	API #4304751353		IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35F1BS (U-07-MQ-1437b,i,p,s)	API #4304751355		IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35F4BS (U-07-MQ-1437b,i,p,s)	API #4304751356		IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35F4CS (U-07-MQ-1437b,i,p,s)	API #4304751357		IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35K1BS	API #4304751358		IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)

MQ-1437b,i,p,s)			
Kerr-McGee's NBU 921-35K1CS	API #4304751359	IPC 10-97 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35G1BS	API #4304751360	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road)
Kerr-McGee's NBU 921-35G1CS	API #4304751361	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road)
Kerr-McGee's NBU 921-35G4BS	API #4304751362	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road)
Kerr-McGee's NBU 921-35G4CS	API #4304751363	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road)
Kerr-McGee's NBU 921-35J1S	API #4304751364	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road)
Kerr-McGee's NBU 921-35H1BS	API #4304751365	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35H1CS	API #4304751366	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35H4BS	API #4304751367	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35H4CS	API #4304751368	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35I1BS	API #4304751369	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35I1CS	API #4304751370	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35I4BS	API #4304751371	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35I4CS	API #4304751372	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35J1CS	API #4304751373	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35J4BS	API #4304751374	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35K4BS	API #4304751375	IPC 10-99 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35K4CS	API #4304751376	IPC 10-99 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35N1BS	API #4304751377	IPC 10-99 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35N1CS	API #4304751378	IPC 10-99 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35E4CS	API #4304751379	IPC 10-99 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35P4CS	API #4304751380	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35P1CS	API #4304751381	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35P1BS	API #4304751382	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35O4CS	API #4304751383	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline)
Kerr-McGee's NBU 921-35O4BS	API #4304751384	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline)
Kerr-McGee's NBU 921-35O1CS	API #4304751385	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline)
Kerr-McGee's NBU 921-35L1BS	API #4304751386	IPC 10-99 Spot Paleo Monitoring	

(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35O1BS	API #4304751387	IPC 10-100 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline)		
Kerr-McGee's NBU 921-35N4CS	API #4304751388	IPC 10-100 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline)		
Kerr-McGee's NBU 921-35L1CS	API #4304751389	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35L4CS	API #4304751390	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35M1BS	API #4304751391	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35M1CS	API #4304751392	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35M4BS	API #4304751393	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35M4CS	API #4304751394	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35N4BS	API #4304751395	IPC 10-100 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline)		

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 921-35L1BS 4304751386			
String	Surf	Prod		
Casing Size(")	8.625	4.500		
Setting Depth (TVD)	2530	9736		
Previous Shoe Setting Depth (TVD)	40	2530		
Max Mud Weight (ppg)	8.3	12.0		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	7780		
Operators Max Anticipated Pressure (psi)	5939	11.7		

Calculations	Surf String	8.625	"
Max BHP (psi)	$.052 * \text{Setting Depth} * \text{MW} =$	1096	
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$	792	NO <input type="text" value="air drill"/>
MASP (Gas/Mud) (psi)	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$	539	NO <input type="text"/>
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$	548	NO <input type="text" value="Reasonable depth in area"/>
Required Casing/BOPE Test Pressure=		2373	psi
*Max Pressure Allowed @ Previous Casing Shoe=		40	psi *Assumes 1psi/ft frac gradient

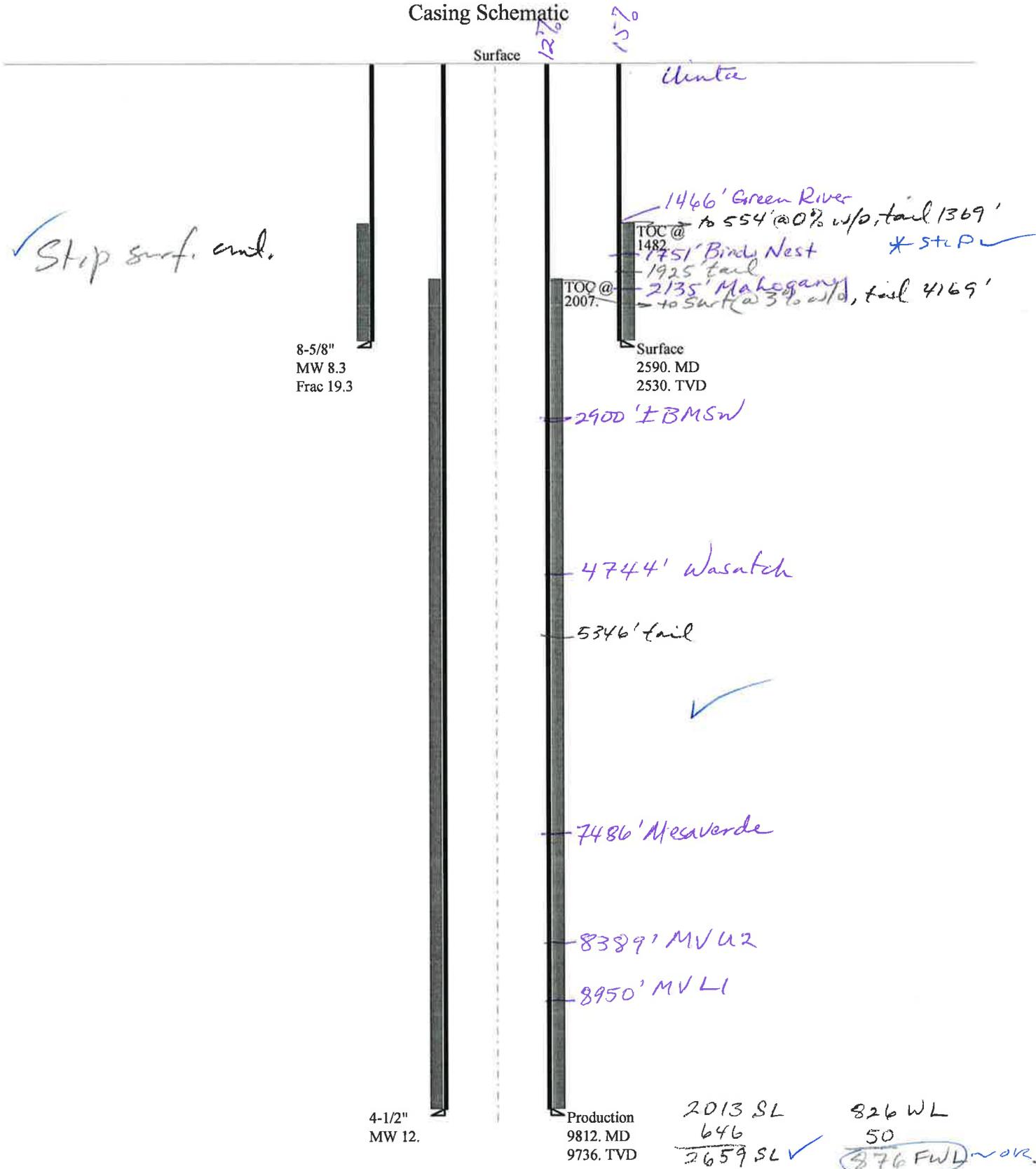
Calculations	Prod String	4.500	"
Max BHP (psi)	$.052 * \text{Setting Depth} * \text{MW} =$	6075	
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$	4907	YES <input type="text"/>
MASP (Gas/Mud) (psi)	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$	3933	YES <input type="text" value="OK"/>
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$	4490	NO <input type="text" value="Reasonable"/>
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2530	psi *Assumes 1psi/ft frac gradient

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

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

# 43047513860000 NBU 921-35L1BS

## Casing Schematic



Well name:	<b>43047513860000 NBU 921-35L1BS</b>	
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>	
String type:	Surface	Project ID: 43-047-51386
Location:	UINTAH COUNTY	

**Design parameters:**

**Collapse**

Mud weight: 8.330 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 109 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft

Cement top: 1,482 ft

**Burst**

Max anticipated surface pressure: 2,279 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 2,583 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.70 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.50 (B)

Tension is based on air weight.  
Neutral point: 2,269 ft

**Directional Info - Build & Drop**

Kick-off point 300 ft  
Departure at shoe: 493 ft  
Maximum dogleg: 2 °/100ft  
Inclination at shoe: 14.88 °

**Re subsequent strings:**

Next setting depth: 9,736 ft  
Next mud weight: 12.000 ppg  
Next setting BHP: 6,069 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 2,590 ft  
Injection pressure: 2,590 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2590	8.625	28.00	I-55	LT&C	2530	2590	7.892	102564
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	1095	1880	1.717	2583	3390	1.31	70.8	348	4.91 J

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

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

Date: December 27, 2010  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 2530 ft, a mud weight of 8.33 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

Well name:	<b>43047513860000 NBU 921-35L1BS</b>	
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>	
String type:	Production	Project ID: 43-047-51386
Location:	UINTAH COUNTY	

**Design parameters:**

**Collapse**

Mud weight: 12.000 ppg  
Internal fluid density: 1.000 ppg

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 210 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft

Cement top: 2,007 ft

**Burst**

Max anticipated surface pressure: 3,927 psi  
Internal gradient: 0.220 psi/ft  
Calculated BHP 6,069 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

**Directional Info - Build & Drop**

Kick-off point 300 ft  
Departure at shoe: 648 ft  
Maximum dogleg: 2 °/100ft  
Inclination at shoe: 0 °

Tension is based on air weight.  
Neutral point: 8,065 ft

Estimated cost: 128,617 (\$)

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
2	9700	4.5	11.60	I-80	LT&C	9624	9700	3.875	128040
1	112	4.5	11.60	HCP-110	Buttress	9736	9812	3.875	577

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
2	5500	6352	1.155	6045	7780	1.29	112.9	212	1.88 J
1	5564	8650	1.555	6069	10690	1.76	1.3	367.2	99.99 B

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

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

Date: December 27, 2010  
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 9736 ft, a mud weight of 12 ppg. An internal gradient of .052 psi/ft was used for collapse from TD to TD. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

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

# ON-SITE PREDRILL EVALUATION

## Utah Division of Oil, Gas and Mining

**Operator** KERR-MCGEE OIL & GAS ONSHORE, L.P.  
**Well Name** NBU 921-35L1BS  
**API Number** 43047513860000      **APD No** 3213      **Field/Unit** NATURAL BUTTES  
**Location: 1/4,1/4** NWSW      **Sec** 35      **Tw** 9.0S      **Rng** 21.0E      2013      **FSL** 778      **FWL**  
**GPS Coord (UTM)** 625960 4427566      **Surface Owner**

**Participants**

See other comments:

**Regional/Local Setting & Topography**

The general area is within the Natural Buttes Unit in the lower portion of the Sand Wash Drainage of Uintah, County, approximately 37 air miles and 44.3 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads to the site. Topography of the Sand Wash area is characterized by broad open flats dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs, furnishing water for antelope or livestock.

The NBU 921-35L pad will be created by significantly enlarging the existing pad of the plugged and partially re-claimed pad of the NBU-442 gas well. It will be enlarged in all directions. Four gas wells, to be directionally drilled, will be added. They are the NBU 921-35E4CS, NBU 921-35L1BS, NBU 921-35L1CS and MBU 921-35L4CS. The site slopes to the north from a gentle ridge on the south. An existing constructed drainage ditch parallels the old pad on the north. As the pad is extended to the north, a ditch and berm, if needed, will be constructed inside the outer edge as a diversion ditch. A major tributary of Sand Wash is about 1 mile to the east of the site and the White River about 3 miles down drainage. The selected site appears to be suitable for enlarging a pad, drilling and operating the proposed wells and is the only site in the immediate area.

Both the surface and minerals are owned by SITLA.

**Surface Use Plan**

**Current Surface Use**

- Grazing
- Wildlife Habitat
- Existing Well Pad

New Road Miles	Well Pad	Src Const Material	Surface Formation
0	Width 352    Length 435	Onsite	UNTA

**Ancillary Facilities** N

**Waste Management Plan Adequate?**

**Environmental Parameters**

**Affected Floodplains and/or Wetlands** N

**Flora / Fauna**

Vegetation is a poor desert shrub type, which includes rabbit brush, Indian ricegrass, stipa commata, greasewood, broom snakeweed, shadscale and halogeton.

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

**Soil Type and Characteristics**

Surface soils are a shallow rocky sandy loam.

**Erosion Issues** Y

**Sedimentation Issues** Y

**Site Stability Issues** N

**Drainage Diversion Required?** Y

An existing constructed drainage ditch parallels the old pad on the north. As the pad is extended to the north, a ditch and berm, if needed, will be constructed inside the outer edge as a diversion ditch.

**Berm Required?** N

**Erosion Sedimentation Control Required?** Y

An existing constructed drainage ditch parallels the old pad on the north. As the pad is extended to the north, a ditch and berm, if needed, will be constructed inside the outer edge as a diversion ditch.

**Paleo Survey Run?** Y **Paleo Potential Observed?** N **Cultural Survey Run?** Y **Cultural Resources?**

**Reserve Pit**

Site-Specific Factors		Site Ranking	
<b>Distance to Groundwater (feet)</b>	100 to 200	5	
<b>Distance to Surface Water (feet)</b>	>1000	0	
<b>Dist. Nearest Municipal Well (ft)</b>	>5280	0	
<b>Distance to Other Wells (feet)</b>		20	
<b>Native Soil Type</b>	Mod permeability	10	
<b>Fluid Type</b>	Fresh Water	5	
<b>Drill Cuttings</b>	Normal Rock	0	
<b>Annual Precipitation (inches)</b>		0	
<b>Affected Populations</b>			
<b>Presence Nearby Utility Conduits</b>	Not Present	0	
	<b>Final Score</b>	40	1 Sensitivity Level

**Characteristics / Requirements**

The proposed reserve pit is 120' x 260' x 12' deep located in a cut on the southeast corner of the location. Kerr McGee plans a 30-mil liner with a double felt sub-liner.

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

**Other Observations / Comments**

Floyd Bartlett (DOGM), Sheila Wopsock, Clay Einerson, Lovell Young, Grizz Oleen, Charles Chase, Colby Sutton, Doyle Holmes, Claudia Sass, (Kerr McGee), Mitch Batty, John Slaugh, (Timberline Engineering and Land Surveying), Jim Davis (SITLA) and Ben Williams, (UDWR).

Floyd Bartlett  
**Evaluator**

11/30/2010  
**Date / Time**

# Application for Permit to Drill

## Statement of Basis

12/28/2010

### Utah Division of Oil, Gas and Mining

Page 1

<b>APD No</b>	<b>API WellNo</b>	<b>Status</b>	<b>Well Type</b>	<b>Surf Owner</b>	<b>CBM</b>
3213	43047513860000	LOCKED	GW	S	No
<b>Operator</b>	KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>Surface Owner-APD</b>		
<b>Well Name</b>	NBU 921-35L1BS		<b>Unit</b>	NATURAL BUTTES	
<b>Field</b>	NATURAL BUTTES		<b>Type of Work</b>	DRILL	
<b>Location</b>	NWSW 35 9S 21E S 2013 FSL 778 FWL GPS Coord (UTM)			625941E	4427544N

#### Geologic Statement of Basis

Kerr McGee proposes to set 2,590' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 2,900'. A search of Division of Water Rights records shows one water well within a 10,000 foot radius of the center of Section 35. The well is listed as 2,640 feet deep and used for drilling water. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Production casing cement should be brought up to cover the base of the moderately saline ground water in order to isolate fresher waters uphole.

Brad Hill  
APD Evaluator

12/20/2010  
Date / Time

#### Surface Statement of Basis

The general area is within the Natural Buttes Unit in the lower portion of the Sand Wash Drainage of Uintah, County, approximately 37 air miles and 44.3 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads to the site. Topography of the Sand Wash area is characterized by broad open flats dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs, furnishing water for antelope or livestock.

The NBU 921-35L pad will be created by significantly enlarging the existing pad of the plugged and partially re-claimed pad of the NBU-442 gas well. It will be enlarged in all directions. Four gas wells, to be directionally drilled, will be added. They are the NBU 921-35E4CS, NBU 921-35L1BS, NBU 921-35L1CS and MBU 921-35L4CS. The site slopes to the north from a gentle ridge on the south. An existing constructed drainage ditch parallels the old pad on the north. As the pad is extended to the north, a ditch and berm, if needed, will be constructed inside the outer edge as a diversion ditch. A major tributary of Sand Wash is about 1 mile to the east of the site and the White River about 3 miles down drainage. The selected site appears to be suitable for enlarging a pad, drilling and operating the proposed wells and is the only site in the immediate area.

Both the surface and minerals are owned by SITLA. Jim Davis represented SITLA at the pre-site investigation. Mr. Davis had no concerns pertaining to this location excepted as covered above. SITLA provided a seed mix to be used when reclaiming the site.

Ben Williams represented the Utah Division of Wildlife Resources. Mr. Williams stated the area is classified as crucial yearlong antelope habitat but recommended no restrictions for this species. No other wildlife will be significantly affected.

Floyd Bartlett  
Onsite Evaluator

11/30/2010  
Date / Time

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# Application for Permit to Drill Statement of Basis

12/28/2010

Utah Division of Oil, Gas and Mining

Page 2

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## Conditions of Approval / Application for Permit to Drill

<b>Category</b>	<b>Condition</b>
Pits	A synthetic liner with a minimum thickness of 30 mils with a double felt subliner shall be properly installed and maintained in the reserve pit.
Surface	Drainages adjacent to the proposed pad shall be diverted around the location.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

# WORKSHEET APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 11/23/2010

**WELL NAME:** NBU 921-35L1BS

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

**CONTACT:** Danielle Piernot

**API NO. ASSIGNED:** 43047513860000

**PHONE NUMBER:** 720 929-6156

**PROPOSED LOCATION:** NWSW 35 090S 210E

**SURFACE:** 2013 FSL 0778 FWL

**BOTTOM:** 2658 FSL 0826 FWL

**COUNTY:** UINTAH

**LATITUDE:** 39.99058

**UTM SURF EASTINGS:** 625941.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 3 - State

**LEASE NUMBER:** UO 01194 ST

**SURFACE OWNER:** 3 - State

**Permit Tech Review:**

**Engineering Review:**

**Geology Review:**

**LONGITUDE:** -109.52486

**NORTHINGS:** 4427544.00

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

**COALBED METHANE:** NO

## RECEIVED AND/OR REVIEWED:

- PLAT
- Bond: STATE/FEE - 22013542
- Potash
- Oil Shale 190-5
- Oil Shale 190-3
- Oil Shale 190-13
- Water Permit: Permit #43-8496
- RDCC Review:
- Fee Surface Agreement
- Intent to Commingle

Commingling Approved

## LOCATION AND SITING:

- R649-2-3.  
Unit: NATURAL BUTTES
- R649-3-2. General
- R649-3-3. Exception
- Drilling Unit  
Board Cause No: Cause 173-14  
Effective Date: 12/2/1999  
Siting: Suspends General Siting
- R649-3-11. Directional Drill

**Comments:** Presite Completed

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



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 921-35L1BS  
**API Well Number:** 43047513860000  
**Lease Number:** UO 01194 ST  
**Surface Owner:** STATE  
**Approval Date:** 12/28/2010

**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:**

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

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

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

Surface casing shall be cemented to the surface.

**Additional Approvals:**

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

- Any changes to the approved drilling plan – contact Dustin Doucet
- Significant plug back of the well – contact Dustin Doucet
- Plug and abandonment of the well – contact Dustin Doucet

**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  
OR  
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <https://oilgas.ogm.utah.gov>
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing – contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program – contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well – contact Dan Jarvis

**Contact Information:**

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

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office  
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office  
801-231-8956 - after office hours

**Reporting Requirements:**

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

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

**Approved By:**



For John Rogers  
Associate Director, Oil & Gas

<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> UO 01194 ST
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<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>  <b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
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<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> NBU 921-35L1BS
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<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047513860000
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<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6515 Ext	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
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<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2013 FSL 0778 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 35 Township: 09.0S Range: 21.0E Meridian: S	<b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH
---	---

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input checked="" type="checkbox"/> <b>SPUD REPORT</b> Date of Spud: 3/10/2011	<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 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.

MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'.  
 RAN 14" 36.7# SCHEDULE 10 CONDUCTOR PIPE. CMT W/28 SX READY MIX  
 SPUD WELL LOCATION ON MARCH 10, 2011 AT 11:00 HRS.

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

<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> 3/11/2011

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG  
 Submitted By ANDY LYTLE Phone Number 720.929.6100  
 Well Name/Number NBU 921-35L1BS  
 Qtr/Qtr NWSW Section 35 Township 9S Range 21E  
 Lease Serial Number UO-01194ST  
 API Number 4304751386

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

Date/Time 03/10/2011 15:00 HRS AM  PM

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

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

Date/Time 04/02/2011 08:00 HRS AM  PM

BOPE

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

RECEIVED

MAR 09 2011

DIV. OF OIL, GAS & MINING

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

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

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

FORM 6

ENTITY ACTION FORM

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

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751379	NBU 921-35E4CS		NWSW	35	09S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
<u>B</u>	99999	<u>2900</u>	3/10/2011		<u>3/23/11</u>		
Comments: MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 03/10/2011 AT 8:00 HRS. <u>BHL = SWNW</u>							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751386	NBU 921-35L1BS		NWSW	35	09S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
<u>B</u>	99999	<u>2900</u>	3/10/2011		<u>3/23/11</u>		
Comments: MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 03/10/2011 AT 11:00 HRS. <u>BHL = NWSW</u>							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751389	NBU 921-35L1CS		NWSW	35	09S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
<u>B</u>	99999	<u>2900</u>	3/10/2011		<u>3/23/11</u>		
Comments: MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 03/10/2011 AT 13:00 HRS. <u>BHL = NWSW</u>							

ACTION CODES:

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

GINA BECKER

Name (Please Print)

Signature

REGULATORY ANALYST

Title

3/11/2011

Date

RECEIVED

MAR 14 2011

DIV. OF OIL, GAS & MINING

<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> UO 01194 ST
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>
		<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 921-35L1BS	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047513860000	
<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> 2013 FSL 0778 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 35 Township: 09.0S Range: 21.0E Meridian: S	<b>COUNTY:</b> UINTAH	
	<b>STATE:</b> UTAH	
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 4/7/2011	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	
	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
MIRU AIR RIG ON APRIL 5, 2011. DRILLED 11" SURAFCE HOLE TO 2695'. RAN 8 5/8" 28# IJ55 SURFACE CASING. CEMENTED SURFACE CASING. 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> 4/8/2011	

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# PIONEER 54  
Submitted By DARWYNE CADY Phone Number 435- 790-2921  
Well Name/Number NBU 921-35L1BS  
Qtr/Qtr NE/4 SW/4 Section 35 Township 9S Range 21E  
Lease Serial Number UO 01194 ST  
API Number 43047513860000

Casing – Time casing run starts, not cementing times.

- Production Casing  
 Other

Date/Time \_ \_ AM  PM

RECEIVED  
MAY 24 2011  
DIV. OF OIL, GAS & MINING

BOPE

- Initial BOPE test at surface casing point  
 Other

Date/Time 5/24/11 \_\_\_\_\_ AM  PM

Rig Move

Location To:

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

Remarks TEST BOPE

<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>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UO 01194 ST
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-35L1BS
<b>4. LOCATION OF WELL FOOTAGES AT SURFACE:</b> 2013 FSL 0778 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 35 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047513860000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>4. LOCATION OF WELL FOOTAGES AT SURFACE:</b> 2013 FSL 0778 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 35 Township: 09.0S Range: 21.0E Meridian: S		<b>COUNTY:</b> UINTAH
<b>4. LOCATION OF WELL FOOTAGES AT SURFACE:</b> 2013 FSL 0778 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 35 Township: 09.0S Range: 21.0E Meridian: S		<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"/> 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"/> SUBSEQUENT REPORT Date of Work Completion:	<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"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 5/31/2011		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU ROTARY RIG. FINISHED DRILLING FROM 2695' TO 9860' ON MAY 29, 2011. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING TO 9631'. RAN 4 1/2" 11.6# P110 CSG FROM 9631' TO 9850'. CEMENTED PRODUCTION CASING RELEASED PIONEER RIG 54 ON MAY 31, 2011 @ 00:00 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT WELL IS WAITING ON FINAL COMPLETION ACTIVITIES.		
<b>NAME (PLEASE PRINT)</b> Andy Lytle		<b>PHONE NUMBER</b> 720 929-6100
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst
<b>DATE</b> 5/31/2011		

**Carol Daniels - RUN CSG & B.O.P'S TEST PIONEER 54 NBU 921-35L1BS**

**From:** "Anadarko - Pioneer 54"  
**To:** , "DAVID HACKFORD"  
**Date:** 5/28/2011 9:30 AM  
**Subject:** RUN CSG & B.O.P'S TEST PIONEER 54 NBU 921-35L1BS

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# PIONEER 54  
Submitted By STUART NEILSON Phone Number 435- 790-2921  
Well Name/Number NBU 921-35L1BS  
Qtr/Qtr NE/4 SW/4 Section 35 Township 9S Range 21E  
Lease Serial Number UO 01194 ST  
API Number 43047513860000

Casing – Time casing run starts, not cementing times.

Production Casing  
Other

Date/Time 5/30/11 8 AM PM

BOPE  
Initial BOPE test at surface casing point  
Other

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

Rig Move  
Location To: \_\_\_\_\_

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

RECEIVED  
MAY 31 2011  
DIV. OF OIL, GAS & MINING

<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> UO 01194 ST
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>
<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 921-35L1BS
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>9. API NUMBER:</b> 43047513860000
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2013 FSL 0778 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 35 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		
<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"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input checked="" type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> OTHER	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> APD EXTENSION	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="text"/>	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 9/13/2011		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 09/13/2011 AT 1:30 PM. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.		
<b>Accepted by the          Utah Division of          Oil, Gas and Mining          FOR RECORD ONLY</b>		
<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> 9/14/2011	

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

AMENDED REPORT  FORM 8  
(highlight changes)

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

5. LEASE DESIGNATION AND SERIAL NUMBER:  
**UO 01194 ST**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

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

8. WELL NAME and NUMBER:  
**NBU 921-35L1BS**

9. API NUMBER:  
**4304751386**

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

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:  
**NWSW 35 9S 21E S**

12. COUNTY  
**UINTAH**

13. STATE  
**UTAH**

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

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

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

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

4. LOCATION OF WELL (FOOTAGES)  
AT SURFACE: **NWSW 2013 FSL 778 FWL S35, T9S, R21E** *Bit Level by HSM*  
AT TOP PRODUCING INTERVAL REPORTED BELOW: **NWSW 2676 FSL 830 FWL S35, T9S, R21E**  
AT TOTAL DEPTH: **NWSW 2663 FSL 839 FWL S35, T9S, R21E**

14. DATE SPURRED: **3/10/2011** 15. DATE T.D. REACHED: **5/29/2011** 16. DATE COMPLETED: **9/13/2011** ABANDONED  READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL):  
**5065 GL**

18. TOTAL DEPTH: MD **9,860** TVD **9,763** 19. PLUG BACK T.D.: MD **9,808** TVD **9,711** 20. IF MULTIPLE COMPLETIONS, HOW MANY? \*

21. DEPTH BRIDGE MD PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)  
**HDIL/ZDL/CNGR-SCBL**

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

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

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#		40		28			
11"	8 5/8" IJ-55	28#		2,673		550		0	
7 7/8"	4 1/2" I-80	11.6#		9,631		1,694		312	
7 7/8"	4 1/2" P-110	11.6#	9,631	9,850					

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	9,282							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A) MESAVERDE	7,836	9,738			7,836 9,738	0.36	120	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(B) <i>WSMVD</i>								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

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

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
7836 - 9738	PUMP 3,865 BBLs SLICK H2O & 68,291 LBS SAND

29. ENCLOSED ATTACHMENTS:

ELECTRICAL/MECHANICAL LOGS  GEOLOGIC REPORT  DST REPORT  DIRECTIONAL SURVEY

SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION  CORE ANALYSIS  OTHER: \_\_\_\_\_

30. WELL STATUS:  
**PROD**

**RECEIVED**

31. INITIAL PRODUCTION

INTERVAL A (As shown in Item #26)

DATE FIRST PRODUCED: 9/13/2011		TEST DATE: 9/15/2011		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 817	WATER - BBL: 601	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 900	CSG. PRESS. 1,650	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 817	WATER - BBL: 601	INTERVAL STATUS: PROD

INTERVAL B (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:

INTERVAL C (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:

INTERVAL D (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:

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

33. SUMMARY OF POROUS ZONES (Include Aquifers):

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

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
GREEN RIVER	1,559				
BIRD'S NEST	1,804				
MAHOGANY	2,389				
WASATCH	4,855	7,535			
MESAVERDE	7,535	9,860	TD		

34. FORMATION (Log) MARKERS:

35. ADDITIONAL REMARKS (Include plugging procedure)

The first 225' of the surface hole was drilled with a 12 1/4" bit. The remainder of surface hole was drilled with an 11" bit. Attached is the chronological well history, perforation report & final survey.

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

NAME (PLEASE PRINT) JAIME SCHARNOWSKE

TITLE REGULATORY ANALYST

SIGNATURE *Jaime Scharnowske*

DATE 10/12/2011

This report must be submitted within 30 days of

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

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top - Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340  
Fax: 801-359-3940

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-35L1BS (YELLOW) Spud Conductor: 3/10/2011 Spud Date: 4/5/2011  
 Project: UTAH-UINTAH Site: NBU 921-35L PAD Rig Name No: PIONEER 54/54, CAPSTAR 310/310  
 Event: DRILLING Start Date: 3/20/2011 End Date: 5/30/2011  
 Active Datum: RKB @5,084.01ft (above Mean Sea Level) UWI: NW/SW/0/9/S/21/E/35/0/0/26/PM/S/2013/W/0/778/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
4/5/2011	12:00 - 15:00	3.00	DRLSUR	01	C	P		SKID RIG TO NBU 921-35L1BS WELL # 3/4
	15:00 - 16:00	1.00	DRLSUR	14	A	P		WELD ON CONDUCTOR AND RIG UP FLOW LINE
	16:00 - 17:00	1.00	DRLSUR	07	A	P		WORK ON DERRICK
	17:00 - 17:30	0.50	DRLSUR	06	A	P		PICK UP MOTOR AND 12.25" BIT
	17:30 - 19:00	1.50	DRLSUR	02	C	P		SPUD WELL 12.25" BIT DRILL F/ 40' - 225' WOB
	19:00 - 21:30	2.50	DRLSUR	06	A	P		10-18 ROT 45-55 GPM 600 NO LOSSES
	21:30 - 0:00	2.50	DRLSUR	02	C	P		TOOH CHANGE BIT AND INSTALL DIRECTIONAL TOOLS ORIENT TO MUD MOTOR AND TIH
4/6/2011	0:00 - 13:30	13.50	DRLSUR	02	C	P		DRILL 11" F/ 225' - 539' AVE ROP 125 FT HR WOB 18-21 ROT 45-55 DHR 96 GPM 600 LAST SURVEY 3.06 DEG 2.64 AZI
	13:30 - 14:00	0.50	DRLSUR	07	A	P		DRILL 11" F/ 539' - 1901' AVE ROP 100 FT HR WOB 18-22 ROT 45-55 DHR 96 GPM 600 NO LOSSES
	14:00 - 23:30	9.50	DRLSUR	02	C	P		LAST SURVEY 19.16 DEG 6.87 AZI
	23:30 - 0:00	0.50	DRLSUR	05	C	P		DAILY RIG SERVICE
4/7/2011	0:00 - 0:30	0.50	DRLSUR	05	C	P		DRILL 11" F/ 1901' - 2695' T.D. AVE ROP 83 FT HR WOB 18-22 ROT 45-55 DHR 96 GPM 600 NO LOSSES LAST SURVEY 15.7 DEG 1.44 AZI 3' RIGHT 6' ABOVE
	0:30 - 4:30	4.00	DRLSUR	06	A	P		CIRCULATE AND CONDITION MUD PRIOR TO LDDS AND LOGS
	4:30 - 6:30	2.00	DRLSUR	11	D	P		CIRCULATE AND CONDITION MUD PRIOR TO LDDS AND LOGGING
	6:30 - 10:00	3.50	DRLSUR	12	C	P		TOOH LAYING DOWN DRILL STRING BREAK DOWN DIRECTIONAL TOOLS FOR INSPECTION BREAK MOTOR AND BIT
	10:00 - 12:00	2.00	DRLSUR	12	E	P		RIG UP LOGGERS AND RUN CALIPER LOG LOGGERS T.D. 2676'
5/24/2011	12:00 - 13:00	1.00	DRLSUR	14	A	P		RIG UP AND RUN 60 JTS 8.628 28# J-55 SURFACE CASING SHOE AT 2663' BAFFLE AT 2619'
	16:30 - 17:30	1.00	DRLPRO	01	C	P		HOLD SAFETY MEETING W/ SUPERIOR WELL SERVICES CEMENTERS. INSTALL CEMENT HEAD ON TOP OF LANDING JT. PRESSURE TEST LINE TO 2000 PSI. PUMP 50 BBLs OF WATER AHEAD, PUMP 20 BBLs OF GEL WATER. PUMP 200 SX OF 11#, 3.52 YD, 23 GAL/SK HI FILL LEAD, PUMP 225 SX OF 15.8# 1.15 YD, 5 GAL/SK TAIL PREM. CLASS G CEMENT . DROP PLUG ON FLY, DISPLACE W/ 144.5 BBLs OF WATER. 490 PSI OF LIFT @ 2 BBLs/MIN RATE. NO CEMENT TO SYRFACE. BUMP PLUG W/ 900 PSI. FLOAT HELD. PUMP 125 SX OF 15.8# PREMIUM 3% CALC CEMENT DOWN 1" DOWN BACK SIDE. CEMENT FELL, WAIT TILL NEXT JOB TO TOP OUT.
	17:30 - 18:00	0.50	DRLPRO	14	A	P		CUT CONDUCTOR AND RIG DOWN FLOW LINE
5/24/2011	18:00 - 21:00	3.00	DRLPRO	15	A	P		RELEASE RIG @ 13:00 4-7-2011
								SKID RIG TO NBU-921-35L1CS N/U BOPE TEST BOPE 250-5000-ANN-2500 CSG 1500 30 MIN

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-35L1BS (YELLOW)		Spud Conductor: 3/10/2011	Spud Date: 4/5/2011
Project: UTAH-UJINTAH		Site: NBU 921-35L PAD	Rig Name No: PIONEER 54/54, CAPSTAR 310/310
Event: DRILLING		Start Date: 3/20/2011	End Date: 5/30/2011
Active Datum: RKB @5,084.01ft (above Mean Sea Level)		UWI: NW/SW/0/9/S/21/E/35/0/0/26/PM/S/2013/W/0/778/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	21:00 - 21:30	0.50	DRLPRO	14	B	P		RUN WBUSHING
	21:30 - 23:00	1.50	DRLPRO	06	A	P		PICK UP MOTOR M/U BIT SCRIBE MWD RIH TAG CMT @ 2560'
	23:00 - 0:00	1.00	DRLPRO	02	F	P		DRLG CMT F/2560' TO FC @ 2626' SHOE @ 2673' AND RAT HOLE TO 2705'
5/25/2011	0:00 - 16:00	16.00	DRLPRO	02	D	P		DRLG F/2705' TO 5292' 2587' @ 161.68' PH WOB/22-RPM60-MM168-SPM160-GPM=600 PSION/OFF= 1800/1400 TRQ=8-6 PU/SO/RT=140/120/132 ROT= 14.49 HRS 2483' @ 171.35' PH SLIDE=1.51 HRS 104' 68.87 PH MW 8.4 VISC 27 LCM 0%
	16:00 - 16:30	0.50	DRLPRO	07	A	P		RIG SERVICE
	16:30 - 0:00	7.50	DRLPRO	02	D	P		DRLG F/5292' TO 6474' 1182' @ 157.6' PH WOB/22-RPM60-MM168-SPM160-GPM=600 PSION/OFF= 2000/1500 TRQ=8-6 PU/SO/RT=176/137/152 ROT= 7.5 HRS 2483' @ 171.35' PH SLIDE=0 HRS MW 8.4 VISC 27 LCM 0%
5/26/2011	0:00 - 17:00	17.00	DRLPRO	02	D	P		LOST PARTIAL RTRNS @ 5500' 10' DRILLING GAS FLAIR @ 6500' DRLG F/ 6475'TO 7663', 1188' @ 69.8' PH WOB/22 - RPM 60 - MM RPM 127 SPM 120 - GPM = 454 PU/SO/ROT 192 - 152 - 166 PSI ON/OFF= 2000 - 1600, DIFF 200-400 TRQ = ON/OFF 10-8 SLIDE = 49' IN 1.5 HRS = 32.6' PH ROT = 1139' IN 15.5 HRS = 73.48' PH MW 8.4 VISC 27 LCM 0%
	17:00 - 17:30	0.50	DRLPRO	07	A	P		SHUT IN PITS @ 7200', START MUD UP @ 7600' 20' BACKGROUND FLARE 40' CONN FLARE ON BUSTER SERVICE RIG
	17:30 - 0:00	6.50	DRLPRO	02	D	P		DRLG 7663' TO 7922', 259' @ 39.8' PH WOB / 22 - 25, RPM 50 - MM 127 SPM 111 - GPM = 420 TRQ ON/OFF = 9-7 K PU/SO/RT = 197-162-167 SLIDE = 45' IN 2.25 HRS = 20' PH ROT = 214' IN 4.25 HRS = 50.3' PH MW 11.8 VIS 40 LCM 25% 5' CONN FLARE LOST 500 BBLS TO FORMATION VENTING BUSTER

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-35L1BS (YELLOW)		Spud Conductor: 3/10/2011	Spud Date: 4/5/2011
Project: UTAH-UINTAH		Site: NBU 921-35L PAD	Rig Name No: PIONEER 54/54, CAPSTAR 310/310
Event: DRILLING		Start Date: 3/20/2011	End Date: 5/30/2011
Active Datum: RKB @5,084.01ft (above Mean Sea Level)		UWI: NW/SW/0/9/S/21/E/35/0/0/26/PM/S/2013/NW/0/778/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
5/27/2011	0:00 - 15:30	15.50	DRLPRO	02	D	P		DRLG F/ 7922 TO 8610', 688' @ 44.4' PH WOB / 22 - 25, RPM 50 - MM 127 SPM 111 - GPM = 420 TRQ ON/OFF = 9-7 K PU/SO/RT = 200-160-175 SLIDE = 0 ROT = 100% MW 12.4 VIS 43 LCM 20% 5' CONN FLARE LOST 200 BBLs TO FORMATION VENTING BUSTER
	15:30 - 16:00	0.50	DRLPRO	02	D	P		SERVICE RIG
	16:00 - 0:00	8.00	DRLPRO	02	D	P		DRLG F/ 8610 TO 8982', 372' @ 46.5' PH WOB / 22 - 25, RPM 50 - MM 127 SPM 111 - GPM = 420 TRQ ON/OFF = 11-9 K PU/SO/RT = 203-159-179 SLIDE = 26' IN 1.17 HRS = 22.2' PH ROT = 346' IN 6.83 HRS = 50.6' PH MW 12.4 VIS 43 LCM 20% 5' CONN FLARE VENTING BUSTER
5/28/2011	0:00 - 16:00	16.00	DRLPRO	02	D	P		DRLG F/ 8982 TO 9561', 579' @ 36.2' PH WOB / 22 - 25, RPM 50 - 60 MM 117 SPM 111 - GPM = 420, DIFF 300 - 600 TRQ ON/OFF = 13-9 K PSI ON/OFF 2700 - 2300 PU/SO/RT = 205 - 165 - 188 SLIDE = 0 ROT = 100% MW 12.5 VIS 43 LCM 20% 5' CONN FLARE VENTING BUSTER
	16:00 - 16:30	0.50	DRLPRO	07	A	P		10.7' N & 6.3' E OF TARGET CENTER SERVICE RIG
	16:30 - 20:30	4.00	DRLPRO	02	D	P		DRLG F/ 9561 TO 9673', 112' @ 28' PH WOB / 22 - 25, RPM 50 - 60 MM - 117 SPM 109 - GPM = 413, DIFF 300-600 TRQ ON/OFF = 13-9 K PSI ON OFF 2700 - 2300 PU/SO/RT = 206 - 166 - 188 SLIDE = 0 ROT = 100% MW 12.5 VIS 43 LCM 20% 5' CONN FLARE VENTING BUSTER
	20:30 - 21:00	0.50	DRLPRO	05	C	P		8.26 N & 7.58 E OF TARGET CENTER CIRC BOTTOMS UP
	21:00 - 0:00	3.00	DRLPRO	06	A	P		TFNB & MM SPIN BY HAND, BIT GRADE 1-4, TIGHT @ 5800 & 4800 PULLED 20 K OVER TIH TO 3500' COULD NOT BREAK CIRC
5/29/2011	0:00 - 2:30	2.50	DRLPRO	06	A	P		

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

Well: NBU 921-35L1BS (YELLOW)		Spud Conductor: 3/10/2011	Spud Date: 4/5/2011
Project: UTAH-UINTAH		Site: NBU 921-35L PAD	Rig Name No: PIONEER 54/54, CAPSTAR 310/310
Event: DRILLING		Start Date: 3/20/2011	End Date: 5/30/2011
Active Datum: RKB @5,084.01ft (above Mean Sea Level)		UWI: NW/SW/0/9/S/21/E/35/0/0/26/PM/S/2013/NW/0/778/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	2:30 - 11:00	8.50	DRLPRO	22	O	P		TOOH, CLEAN LCM OFF MWD TOOL & REPLACE ANTINA, CIRC CLEAN, TIH TO SHOE, PLUGED AGAIN, POOH PLUGED W/ LCM BOTTOM HALF OF TOOL TO FLOAT, CIRC, CHECK JETS, LEAVE OUT DIR TOOLS ( NMDC'S GAP SUBS ECT )TIH TO SHOE,
	11:00 - 11:30	0.50	DRLPRO	09	A	P		SLIP & CUT 90 DRLG LINE, CHECK RIG F/ LEVEL & CENTER - GOOD
	11:30 - 15:00	3.50	DRLPRO	06	A	P		TIH, BREAK CIRC EVERY 2000, WASH 10' TO BOTTOM W/ 5' FILL, LOST 50 BBLS ON TRIP
	15:00 - 18:30	3.50	DRLPRO	02	B	P		DRLG F/ 9673 TO 9860', 187' @53.4' PH WOB / 22, RPM 55, MM - 117 SPM 109 - GPM = 413, DIFF 150-300 TRQ ON/OFF = 13-9 K PSI ON OFF 2700 - 2400 PU/SO/RT = 206 - 166 - 188 SLIDE = 0 ROT = 100% MW 12.5 VIS 47 LCM 20% 20' TRIP GAS FLARE, 5' CONN FLARE VENTING BUSTER 10.5' N & 7.58 E OF TARGET CENTER
	18:30 - 19:00	0.50	DRLPRO	07	A	P		SERVICE RIG
	19:00 - 20:00	1.00	DRLPRO	05	C	P		PUMP HIGH VIS SWEEP, CIRC F/ SHORT TRIP
	20:00 - 21:30	1.50	DRLPRO	06	E	P		SHORT TRIP 15 STANDS, WASH TIGHT SPOT @ 9000', IN & OUT
	21:30 - 23:00	1.50	DRLPRO	05	C	P		PUMP HIGH VIS SWEEP, CIRC & BIULD PILL
	23:00 - 0:00	1.00	DRLPRO	06	B	P		POOH F/ OPEN HOLE LOGS
5/30/2011	0:00 - 2:00	2.00	DRLPRO	06	B	P		POOH F/ OPEN HOLE LOGS
	2:00 - 8:00	6.00	DRLPRO	11	C	P		HPJSM W/ RIG & LOGGERS, R/U & RUN LOGS TO 9855', DRLG DEPTH 9860, R/D PULL WEAR BUSHING
	8:00 - 8:30	0.50	DRLPRO	14	B	P		
	8:30 - 16:00	7.50	DRLPRO	12	C	P		HPJSM W/ RIG & CASING CREWS, R/U & RUN 5 JTS P-110, 228 JTS I-80, 15 CENT'S, 1st 3 & EVERY 3rd, MASA MARKER @ 7572', WASATCH MARKER @ 4860', SHOE 9850, FLOAT 9808, FILLING PIPE 1st 100 BBLS, W/ CLEAN MUD, R/D CIRC GAS OUT THROUGH CASING
	16:00 - 17:30	1.50	DRLPRO	05	D	P		
	17:30 - 20:30	3.00	DRLPRO	12	E	P		HPJSM W/ RIG & CEMENTERS, PSI LINES TO 4500, PUMP 40 BBLS WATER SPACER, LEAD 526 SKS 12.5 PPG-1.98 YLD, TAIL 1168 SKS 14.3 PPG-1.31 YLD, DROP PLUG & DISPLACE W/ 152 BBLS CLAYTREAT WATER, BUMP PLUG @ 3500 PSI 500 OVER FINAL LIFT OF 3000 PSI FULL RETURNS THOUGHOUT JOB W, 30 BBLS SPACER TO PIT 2 BBLS TO TRUCK, EST TOP OF TAIL 4300', PLUG BACK TO 9808', R/D CEMENTERS FLUSH STACK SET C-22 SLIPS W/ 115K,
	20:30 - 21:30	1.00	DRLPRO	14	B	P		
	21:30 - 0:00	2.50	DRLPRO	14	A	P		N/D P/U STACK, MAKE ROUGH CUT, CLEAN PITS, PREPARE TO SKID, RELEASE RIG @ 00:00 5/31/11

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 921-35L1BS (YELLOW)	Wellbore No.	OH
Well Name	NBU 921-35L1BS	Wellbore Name	NBU 921-35L1BS
Report No.	1	Report Date	9/6/2011
Project	UTAH-UINTAH	Site	NBU 921-35L PAD
Rig Name/No.		Event	COMPLETION
Start Date	8/29/2011	End Date	9/13/2011
Spud Date	4/5/2011	Active Datum	RKB @5,084.01ft (above Mean Sea Level)
UWI	NW/SW/0/9/S/21/E/35/0/0/26/PM/S/2013/W/0/778/0/0		

1.3 General

Contractor	CASED HOLE SOLUTIONS	Job Method	PERFORATE	Supervisor	ED GUDAC
Perforated Assembly	PRODUCTION CASING	Conveyed Method	WIRELINE		

1.4 Initial Conditions

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

1.5 Summary

Gross Interval	7,836.0 (ft)-9,738.0 (ft)	Start Date/Time	9/6/2011 12:00AM
No. of Intervals	22	End Date/Time	9/6/2011 12:00AM
Total Shots	120	Net Perforation Interval	32.00 (ft)
Avg Shot Density	3.75 (shot/ft)	Final Surface Pressure	
		Final Press Date	

2 Intervals

2.1 Perforated Interval

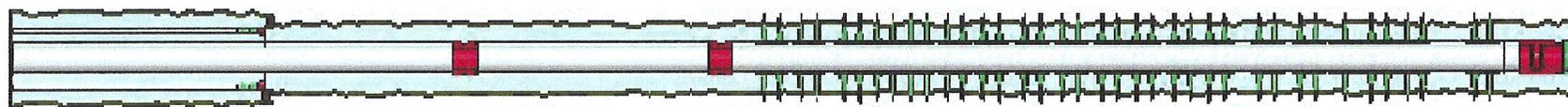
Date	Formation/Reservoir	CCL@ (ft)	CCL-T S (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/Add. Shot	Diameter (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
9/6/2011 12:00AM	MESAVERDE/			7,836.0	7,837.0	4.00		0.360	EXP/	3.135	90.00		23.00	INJECTION	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (ft)	CCL-T S (ft)	MD Top (ft)	MD Base (ft)	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
9/6/2011 12:00AM	MESAVERDE/			7,909.0	7,911.0	4.00		0.360	EXP/	3.135	90.00		23.00	INJECTION	
9/6/2011 12:00AM	MESAVERDE/			8,038.0	8,039.0	4.00		0.360	EXP/	3.135	90.00		23.00	INJECTION	
9/6/2011 12:00AM	MESAVERDE/			8,063.0	8,064.0	4.00		0.360	EXP/	3.135	90.00		23.00	INJECTION	
9/6/2011 12:00AM	MESAVERDE/			8,094.0	8,095.0	4.00		0.360	EXP/	3.135	90.00		23.00	INJECTION	
9/6/2011 12:00AM	MESAVERDE/			8,149.0	8,150.0	4.00		0.360	EXP/	3.135	90.00		23.00	INJECTION	
9/6/2011 12:00AM	MESAVERDE/			8,208.0	8,209.0	4.00		0.360	EXP/	3.135	90.00		23.00	INJECTION	
9/6/2011 12:00AM	MESAVERDE/			8,324.0	8,327.0	4.00		0.360	EXP/	3.135	90.00		23.00	INJECTION	
9/6/2011 12:00AM	MESAVERDE/			8,404.0	8,405.0	4.00		0.360	EXP/	3.135	90.00		23.00	INJECTION	
9/6/2011 12:00AM	MESAVERDE/			8,498.0	8,500.0	4.00		0.360	EXP/	3.135	90.00		23.00	INJECTION	
9/6/2011 12:00AM	MESAVERDE/			8,538.0	8,539.0	4.00		0.360	EXP/	3.135	90.00		23.00	INJECTION	
9/6/2011 12:00AM	MESAVERDE/			8,624.0	8,626.0	4.00		0.360	EXP/	3.135	90.00		23.00	INJECTION	
9/6/2011 12:00AM	MESAVERDE/			8,662.0	8,663.0	4.00		0.360	EXP/	3.135	90.00		23.00	INJECTION	
9/6/2011 12:00AM	MESAVERDE/			8,880.0	8,881.0	4.00		0.360	EXP/	3.135	90.00		23.00	INJECTION	
9/6/2011 12:00AM	MESAVERDE/			8,997.0	8,998.0	4.00		0.360	EXP/	3.135	90.00		23.00	INJECTION	
9/6/2011 12:00AM	MESAVERDE/			9,060.0	9,061.0	4.00		0.360	EXP/	3.135	90.00		23.00	INJECTION	
9/6/2011 12:00AM	MESAVERDE/			9,098.0	9,099.0	4.00		0.360	EXP/	3.135	90.00		23.00	INJECTION	
9/6/2011 12:00AM	MESAVERDE/			9,144.0	9,146.0	4.00		0.360	EXP/	3.135	90.00		23.00	INJECTION	
9/6/2011 12:00AM	MESAVERDE/			9,564.0	9,566.0	3.00		0.360	EXP/	3.135	120.00		23.00	PRODUCTIO N	
9/6/2011 12:00AM	MESAVERDE/			9,606.0	9,608.0	3.00		0.360	EXP/	3.135	120.00		23.00	PRODUCTIO N	
9/6/2011 12:00AM	MESAVERDE/			9,695.0	9,697.0	3.00		0.360	EXP/	3.135	120.00		23.00	PRODUCTIO N	
9/6/2011 12:00AM	MESAVERDE/			9,736.0	9,738.0	3.00		0.360	EXP/	3.135	120.00		23.00	INJECTION	

### 3 Plots

#### 3.1 Wellbore Schematic



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

Well: NBU 921-35L1BS (YELLOW)	Spud Conductor: 3/10/2011	Spud Date: 4/5/2011
Project: UTAH-UINTAH	Site: NBU 921-35L PAD	Rig Name No: GWS 1/1, MILES 3/3
Event: COMPLETION	Start Date: 8/29/2011	End Date: 9/13/2011
Active Datum: RKB @5,084.01ft (above Mean Sea Level)		UWI: NWSW/0/9/S/21/E/35/0/0/26/PM/S/2013/W/0/778/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
8/30/2011	7:00 - 7:15	0.25	COMP	48		P		JSA- RDSU. ROAD RIG. RUSU. PU TBG
	7:15 - 8:00	0.75	COMP	30	C	P		RDSU. RACK OUT EQUIP.
	8:00 - 11:00	3.00	COMP	30	A	P		ROAD RIG FROM STATE 1021-32J TO LOCATION. SPOT AND RUSU. ND WH. NU BOP. RU FLOOR AND TBG EQUIP. SPOT TBG TRAILER.
	11:00 - 16:00	5.00	COMP	31	I	P		MU 3-7/8" BIT, BIT SUB. RIH AS MEAS AND PU 2-3/8" L-80 TBG. PU 308-JTS. EOT AT 9739'.
	16:00 - 17:30	1.50	COMP	44	D	P		RU PWR SWIVEL. PRES TEST TO 2000#. GOOD. REV CIRC AS COME DOWN. TAG AT 9744', WASH TO 9791'. D/O CMT TO 9803' W/ 310-JTS IN. CIRC CLEAN. RD PWR SWIVEL.
	17:30 - 18:30	1.00	COMP	31	I	P		POOH AS LD 34-JTS TBG. HAVE 276-JTS IN. EOT AT 8729'. SDFN
8/31/2011	7:00 - 7:15	0.25	COMP	48		P		JSA- LD TBG. ND/NU. RDSU.
	7:15 - 10:30	3.25	COMP	31	I	P		SITP 0, SICP 0, SURFACE OPEN. CONT POOH AS LD 276-JTS 2-3/8" L-80 TBG. LD BIT AND BIT SUB.
	10:30 - 11:00	0.50	COMP	30	C	P		RD FLOOR. ND BOP. NU WH. RDSU AND MOVE OVER.
9/2/2011	12:00 - 18:00	6.00	COMP	36	B	P		OPEN WELL 0 PSI. FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 0 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 25 PSI. 1ST PSI TEST T/ 7000 PSI. HELD FOR 30 MIN LOST 62 PSI. BLEED OFF PSI. MOVE T/ NEXT WELL  PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH PERF AS PER STG 1 PERF DESIGN. POOH. SWIFWE.

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-35L1BS (YELLOW)		Spud Conductor: 3/10/2011	Spud Date: 4/5/2011
Project: UTAH-UINTAH		Site: NBU 921-35L PAD	Rig Name No: GWS 1/1, MILES 3/3
Event: COMPLETION		Start Date: 8/29/2011	End Date: 9/13/2011
Active Datum: RKB @5,084.01ft (above Mean Sea Level)		UWI: NW/SW/0/9/S/21/E/35/0/0/26/PM/S/2013/NW/0/778/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
9/6/2011	12:00 - 18:00	6.00	COMP	36	B	P		<p>FRAC STG 1)WHP 1667 PSI, BRK 3920 PSI @ 4.8 BPM. ISIP 3144 PSI, FG .76. CALC PERFS OPEN @ 47.9 BPM @ 5766 PSI = 100% HOLES OPEN. ISIP 3320 PSI, FG .78, NPI 176 PSI. MP 6492 PSI, MR 51.3 BPM, AP 5756 PSI, AR 48.6 BPM, SWI, X-OVER FOR WL.</p> <p>PERF STG 2)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 9176' P/U PERF AS PER STG 2 PERF DESIGN. POOH. X- OVER FOR FRAC CREW.</p> <p>FRAC STG 2)WHP 1011 PSI, BRK 5690 PSI @ 4.8 BPM. ISIP 3265 PSI, FG .80. CALC PERFS OPEN @ 33.4 BPM @ 6137 PSI = 60% HOLES OPEN. ISIP 3211 PSI, FG .79, NPI -57 PSI. MP 6482 PSI, MR 51.1 BPM, AP 5787 PSI, AR 42.2 BPM, SWI, X-OVER FOR WL.</p> <p>PERF STG 3)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8693' P/U PERF AS PER STG 3 PERF DESIGN. POOH. X-OVER FOR FRAC CREW.</p> <p>FRAC STG 3)WHP 1032 PSI, BRK 3938 PSI @ 4.8 BPM. ISIP 2682 PSI, FG .75. CALC PERFS OPEN @ 47.1 BPM @ 5711 PSI = 83% HOLES OPEN. ISIP 2958 PSI, FG .78, NPI 276 PSI. MP 6389 PSI, MR 51.3 BPM, AP 5453 PSI, AR 49.3 BPM, SWI, X-OVER FOR WL.</p> <p>PERF STG 4)PU 4 1/2 8K HAL CBP &amp; 3.125 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8435' P/U PERF AS PER STG 4 PERF DESIGN. POOH. SWIFN.</p>

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

Well: NBU 921-35L1BS (YELLOW)		Spud Conductor: 3/10/2011	Spud Date: 4/5/2011
Project: UTAH-UINTAH		Site: NBU 921-35L PAD	Rig Name No: GWS 1/1, MILES 3/3
Event: COMPLETION		Start Date: 8/29/2011	End Date: 9/13/2011
Active Datum: RKB @5,084.01ft (above Mean Sea Level)		UWI: NW/SW/0/9/S/21/E/35/0/0/26/PM/S/2013/NW/0/778/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
9/7/2011	7:30 - 18:00	10.50	COMP	36	B	P		<p>FRAC STG 4)WHP 1587 PSI, BRK 3180 PSI @ 4.5 BPM. ISIP 1990 PSI, FG .68.            CALC PERFS OPEN @ 50.5 BPM @ 5941 PSI = 73% HOLES OPEN.            ISIP 2610 PSI, FG .75, NPI 619 PSI.            MP 6298 PSI, MR 51.3 BPM, AP 5281 PSI, AR 50.2 BPM,            SWI, X-OVER FOR WL.</p> <p>PERF STG 5)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8125' P/U PERF AS PER STG 5 PERF DESIGN. POOH.</p> <p>FRAC STG 5)WHP 1094 PSI, BRK 3471 PSI @ 4.8 BPM. ISIP 2153 PSI, FG .71.            CALC PERFS OPEN @ 28.6 BPM @ 5373 PSI = 60% HOLES OPEN.            ISIP 2419 PSI, FG .74, NPI 266 PSI.            MP 6397 PSI, MR 43.6 BPM, AP 6084 PSI, AR 36.9 BPM.            SWI, X-OVER FOR WL.</p> <p>PU 4 1/2 8K HAL CBP. RIH SET CBP @ 7786'. POOH.</p> <p>TOTAL SAND = 68,291 LBS            TOTAL CLFL = 3865 BBLS            HSM, SLIPS, TRIPS &amp; FALLS, PU TBG</p>
9/12/2011	7:00 - 7:15	0.25	COMP	48		P		

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

Well: NBU 921-35L1BS (YELLOW)		Spud Conductor: 3/10/2011	Spud Date: 4/5/2011
Project: UTAH-UINTAH		Site: NBU 921-35L PAD	Rig Name No: GWS 1/1, MILES 3/3
Event: COMPLETION		Start Date: 8/29/2011	End Date: 9/13/2011
Active Datum: RKB @5,084.01ft (above Mean Sea Level)		UWI: NW/SW/0/9/S/21/E/35/0/0/26/PM/S/2013/W/0/778/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 - 17:00	9.75	COMP	31	I	P		<p>MIRU, SPOT EQUIP, ND WH, NU BOP, RU FLOOR &amp; TBG EQUIP, RU HAL 9000 &amp; FLOWLINE TO PIT, SPOT TBG TRAILER, PU TBG, REMOVE THREAD PROTECTORS, TALLY &amp; DRIFT TBG, INSTAL STRIPPING RUBBER, RU POWER SWIVEL, FILL TBG BREAK CIRC, PRESS TEST BOP TO 3,000 PSI, RAM DOOR DRIPPING, BLEED OFF PRESS &amp; TIGHTEN BOLTS, PRESS TEST BOP TO 3,000 PSI, LOST 0 PSI, SURFACE CSG VALVE OPEN &amp; LOCKED, START DRLG PLUGS.</p> <p>C/O 20' SAND, TAG 1ST PLUG @ 7,786' DRL PLUG IN 9 MIN. 400 PSI INCREASE RIH, CSG PRESS 50 PSI. APPROX G/LR: 15% GAS &amp; 85% WATER.</p> <p>C/O 40' SAND, TAG 2ND PLUG @ 8,125' DRL PLUG IN 8 MIN. 800 PSI INCREASE RIH, CSG PRESS 100 PSI. APPROX G/LR: 10% / 90%</p> <p>C/O 30' SAND, TAG 3RD PLUG @ 8,435' DRL PLUG IN 9 MIN. 600 PSI INCREASE RIH, CSG PRESS 150 PSI. APPROX G/LR: 10% / 90%</p> <p>C/O 20' SAND, TAG 4TH PLUG @ 8,693' DRL PLUG IN 10 MIN. 400 PSI INCREASE RIH, CSG PRESS 150 PSI. APPROX G/LR: 20% / 80%</p> <p>FLOWLINE PLUGGED HAD TO UNPLUG.</p> <p>LET WELL CLEAN UP FOR 30 MIN, D/O REMAINING PLUG IN AM, EOT @ 8,730', SWI, SDFN.</p> <p>HSM, SLIPS, TRIPS &amp; FALLS, LOOSE CLOTHING AROUND ROTARY</p>
9/13/2011	7:00 - 7:15	0.25	COMP	48		P		

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-35L1BS (YELLOW)		Spud Conductor: 3/10/2011	Spud Date: 4/5/2011
Project: UTAH-UINTAH		Site: NBU 921-35L PAD	Rig Name No: GWS 1/1, MILES 3/3
Event: COMPLETION		Start Date: 8/29/2011	End Date: 9/13/2011
Active Datum: RKB @5,084.01ft (above Mean Sea Level)		UWI: NW/SW/0/9/S/21/E/35/0/0/26/PM/S/2013/W/0/778/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 - 14:00	6.75	COMP	44	C	P		<p>SICP 2,500 PSI, OPEN WELL BLEED OFF PRESS, BLEW GAS FOR 2 1/2 MINUTES THEN APPROX G/LR: 20% / 80%, OPEN RAMS, FINISH D/O REMAINING PLUG, SURFACE CSG VALVE OPEN &amp; LOCKED.</p> <p>AFTER WELL LEVELED OUT BEFORE DRLG 5TH PLUG, APPROX G/LR: 25% / 75%</p> <p>C/O 30' SAND, TAG 5TH PLUG @ 9,176' DRL PLUG IN 9 MIN. 1,000 PSI INCREASE RIH, CSG PRESS 250 PSI. APPROX G/LR: 35% / 65%.</p> <p>PBTD @ 9,807', BTM PERF @ 9,738', RIH TAG @ 9,790', P/U POWER SWIVEL, C/O FROM 9,790' TO 9,807' PBTD, 69' PAST BTM PERF W/ 309 JTS 2 3/8" L-80 TBG, LD 17 JTS, PU &amp; STRIP IN TBG HANGER &amp; LAND TBG W/ 292 JTS 2 3/8" L-80, EOT 9,282.12'.</p> <p>RD POWER SWIVEL, FLOOR &amp; TBG EQUIP, WELL STARTED FLOWING UP TBG SOMETHING IN FLOATS HAD TO STAB PUP JT &amp; TIW VALVE IN HANGER, BLOW CSG TO PIT &amp; PUMP DOWN TBG, ND BOPS, NU WH, DROP BALL TO SHEAR OFF BIT W/ 3,000 PSI, LET BIT FALL FOR 20 MIN.</p> <p>TURN OVER TO FLOW BACK CREW, RD &amp; MOVE TO NEXT WELL ON PAD.</p> <p>KB= 19' 4 1/16" WEATHERFORD HANGER= .83' TBG DELIVERED 315 JTS 292 JTS 2 3/8" L-80 = 9,260.09' TBG USED 292 JTS POBS= 2.20' 23 JTS TRANSFERRED TO NEXT WELL NBU 921-35L1CS EOT @ 9,282.12'</p> <p>TWTR= 3,865 BBLS TWR= 1,400 BBLS TWLTR= 2,465 BBLS</p>
9/14/2011	7:00 -			33	A			<p>7 AM FLBK REPORT: CP 1500#, TP 1300#, 20/64" CK, 45 BWPH, 45 SAND, MED GAS TTL BBLS RECOVERED: 2344 BBLS LEFT TO RECOVER: 1521</p>
9/15/2011	7:00 -			33	A			<p>7 AM FLBK REPORT: CP 1500#, TP 1100#, 20/64" CK, 31 BWPH, LIGHT SAND, - GAS TTL BBLS RECOVERED: 3227 BBLS LEFT TO RECOVER: 638</p>
9/16/2011	7:00 -			33	A			<p>7 AM FLBK REPORT: CP 1650#, TP 900#, 20/64" CK, 22 BWPH, TRACE SAND, - GAS TTL BBLS RECOVERED: 3828 BBLS LEFT TO RECOVER: 37</p>
9/17/2011	7:00 -			50				<p>WELL IP'D ON 9/15/11 - 817 MCFD, 0 BOPD, 601 BWPD, CP 1650#, FTP 900#, CK 20/64", LP 109#, 24 HRS</p>

WELL DETAILS: NBU 921-35L1BS

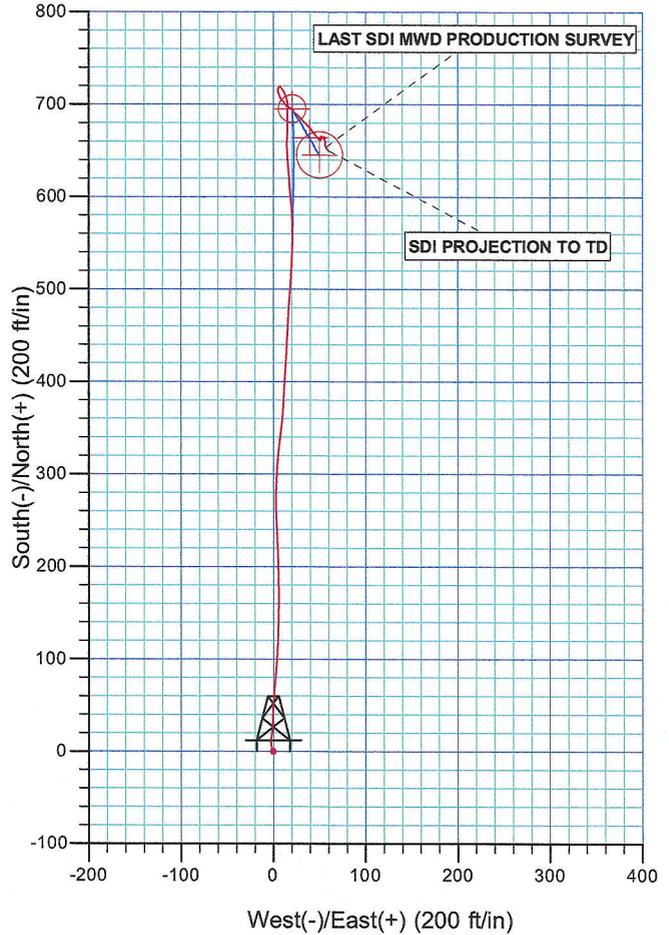
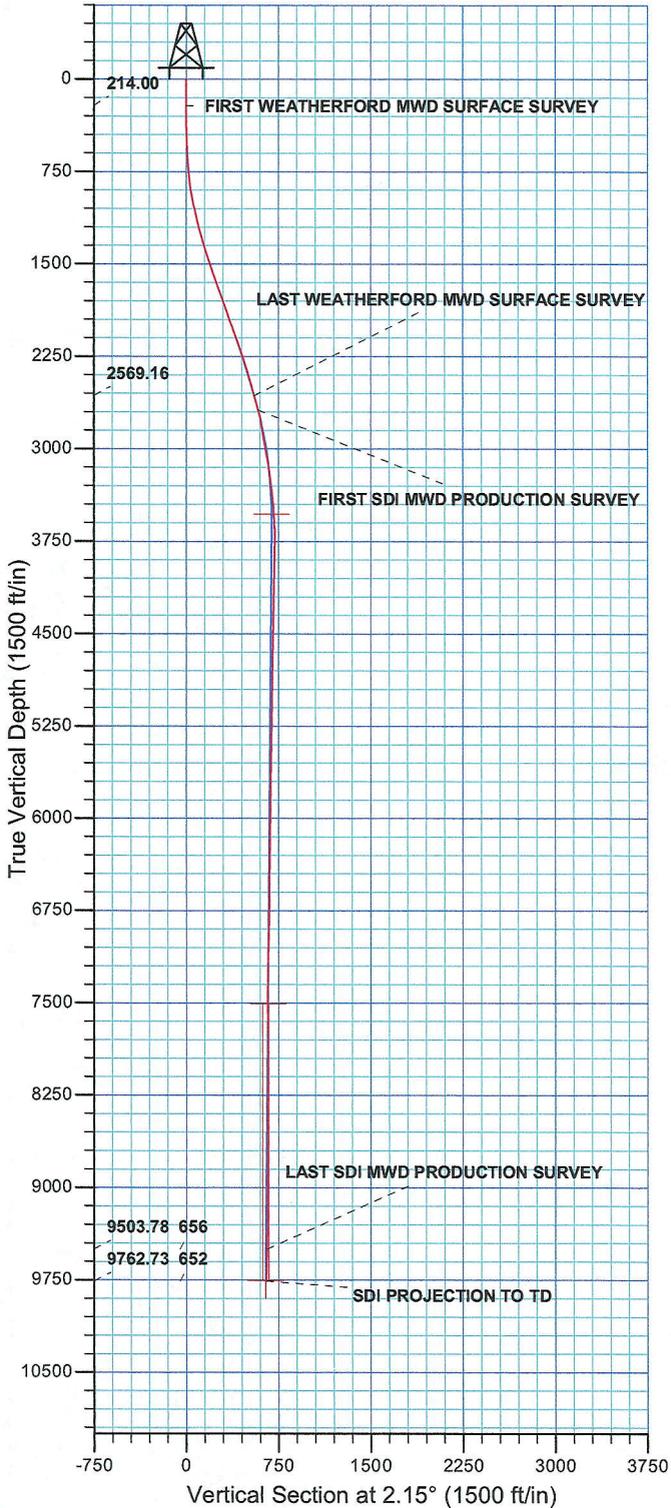
GL 5065 & RKB 19' @ 5084.00ft (PIONEER 54)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14526078.32	2053608.18	39° 59' 26.536 N	109° 31' 29.467 W



Azimuths to True North  
Magnetic North: 11.09°

Magnetic Field  
Strength: 52323.8snT  
Dip Angle: 65.86°  
Date: 05/31/2011  
Model: IGRF2010



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

Geodetic System: Universal Transverse Mercator (US Survey Feet)  
 Datum: NAD 1927 (NADCON CONUS)  
 Ellipsoid: Clarke 1866  
 Zone: Zone 12N (114 W to 108 W)  
 Location: SECTION 35 T9S R21E  
 System Datum: Mean Sea Level



**Scientific Drilling**  
Rocky Mountain Operations

## **US ROCKIES REGION PLANNING**

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

**UINTAH\_NBU 921-35L PAD**

**NBU 921-35L1BS**

**OH**

**Design: OH**

## **Standard Survey Report**

**08 June, 2011**

**Anadarko**   
Petroleum Corporation

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-35L PAD  
**Well:** NBU 921-35L1BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-35L1BS  
**TVD Reference:** GL 5065 & RKB 19' @ 5084.00ft (PIONEER 54)  
**MD Reference:** GL 5065 & RKB 19' @ 5084.00ft (PIONEER 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

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

<b>Site</b>	UINTAH_NBU 921-35L PAD, SECTION 35 T9S R21E				
<b>Site Position:</b>		<b>Northing:</b>	14,526,071.56 usft	<b>Latitude:</b>	39° 59' 26.466 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,053,627.05 usft	<b>Longitude:</b>	109° 31' 29.226 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.95 °

<b>Well</b>	NBU 921-35L1BS, 2013 FSL 778 FWL				
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,526,078.33 usft	<b>Latitude:</b> 39° 59' 26.536 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,053,608.18 usft	<b>Longitude:</b> 109° 31' 29.467 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b> 5,065.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	05/31/2011	11.09	65.86	52,324

<b>Design</b>	OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	2.15	

<b>Survey Program</b>	<b>Date</b>	06/08/2011			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
10.00	2,650.00	Survey #1 WEATHERFORD MWD SURFA	MWD	MWD - Standard	
2,771.00	9,860.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	
214.00	0.42	336.65	214.00	0.69	-0.30	0.67	0.21	0.21	0.00	
<b>FIRST WEATHERFORD MWD SURFACE SURVEY</b>										
305.00	0.27	343.34	305.00	1.20	-0.49	1.18	0.17	-0.16	7.35	
398.00	1.61	335.74	397.98	2.60	-1.09	2.56	1.44	1.44	-8.17	
494.00	2.56	352.39	493.92	5.95	-1.93	5.88	1.16	0.99	17.34	
589.00	3.06	2.64	588.80	10.59	-2.09	10.50	0.74	0.53	10.79	
684.00	4.56	6.14	683.59	16.88	-1.57	16.81	1.60	1.58	3.68	
777.00	6.31	4.64	776.17	25.65	-0.76	25.60	1.89	1.88	-1.61	

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-35L PAD  
**Well:** NBU 921-35L1BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-35L1BS  
**TVD Reference:** GL 5065 & RKB 19' @ 5084.00ft (PIONEER 54)  
**MD Reference:** GL 5065 & RKB 19' @ 5084.00ft (PIONEER 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
872.00	8.19	0.39	870.41	37.62	-0.29	37.58	2.06	1.98	-4.47
967.00	9.69	3.52	964.25	52.37	0.24	52.34	1.66	1.58	3.29
1,063.00	12.19	5.02	1,058.50	70.53	1.63	70.54	2.62	2.60	1.56
1,158.00	13.88	4.89	1,151.05	91.88	3.48	91.94	1.78	1.78	-0.14
1,254.00	15.44	3.02	1,243.92	116.11	5.13	116.22	1.70	1.63	-1.95
1,350.00	16.50	0.27	1,336.21	142.51	5.87	142.63	1.36	1.10	-2.86
1,444.00	18.06	1.77	1,425.97	170.42	6.38	170.54	1.73	1.66	1.60
1,540.00	18.56	357.39	1,517.11	200.56	6.14	200.65	1.52	0.52	-4.56
1,635.00	19.75	356.39	1,606.85	231.68	4.45	231.69	1.30	1.25	-1.05
1,730.00	19.19	358.64	1,696.42	263.31	3.06	263.24	0.99	-0.59	2.37
1,825.00	19.00	2.64	1,786.20	294.37	3.41	294.29	1.39	-0.20	4.21
1,918.00	19.16	6.87	1,874.09	324.65	5.93	324.64	1.50	0.17	4.55
2,014.00	20.00	5.39	1,964.54	356.63	9.36	356.73	1.02	0.88	-1.54
2,109.00	20.75	3.27	2,053.60	389.61	11.84	389.78	1.11	0.79	-2.23
2,202.00	19.81	2.77	2,140.83	421.80	13.54	422.01	1.03	-1.01	-0.54
2,298.00	17.44	4.02	2,231.80	452.40	15.34	452.66	2.50	-2.47	1.30
2,393.00	17.13	2.77	2,322.51	480.58	17.01	480.88	0.51	-0.33	-1.32
2,487.00	16.56	4.64	2,412.48	507.76	18.76	508.10	0.84	-0.61	1.99
2,578.00	15.81	1.77	2,499.87	533.07	20.20	533.46	1.20	-0.82	-3.15
2,650.00	15.70	1.44	2,569.16	552.62	20.74	553.00	0.20	-0.15	-0.46
<b>LAST WEATHERFORD MWD SURFACE SURVEY</b>									
2,771.00	14.48	356.81	2,685.99	584.09	20.31	584.44	1.42	-1.01	-3.83
<b>FIRST SDI MWD PRODUCTION SURVEY</b>									
2,866.00	12.66	353.00	2,778.34	606.28	18.38	606.54	2.13	-1.92	-4.01
2,961.00	11.22	357.59	2,871.28	625.85	16.73	626.04	1.81	-1.52	4.83
3,056.00	8.88	352.32	2,964.82	642.35	15.36	642.48	2.64	-2.46	-5.55
3,151.00	8.94	3.37	3,058.68	656.99	14.81	657.08	1.80	0.06	11.63
3,246.00	8.73	0.40	3,152.56	671.57	15.30	671.67	0.53	-0.22	-3.13
3,341.00	8.33	3.14	3,246.51	685.65	15.72	685.76	0.60	-0.42	2.88
3,435.00	6.66	359.62	3,339.70	697.90	16.06	698.01	1.84	-1.78	-3.74
3,530.00	5.04	339.42	3,434.21	707.32	14.56	707.36	2.73	-1.71	-21.26
3,625.00	3.75	335.07	3,528.93	714.04	11.78	713.98	1.40	-1.36	-4.58
3,720.00	2.49	318.29	3,623.79	718.40	9.10	718.23	1.62	-1.33	-17.66
3,815.00	0.57	220.36	3,718.76	719.58	7.42	719.35	2.77	-2.02	-103.08
3,910.00	1.00	230.48	3,813.75	718.69	6.47	718.43	0.47	0.45	10.65
4,005.00	0.96	208.27	3,908.74	717.46	5.46	717.16	0.40	-0.04	-23.38
4,100.00	0.55	180.65	4,003.73	716.31	5.07	715.99	0.57	-0.43	-29.07
4,194.00	1.28	176.99	4,097.72	714.81	5.12	714.50	0.78	0.78	-3.89
4,289.00	1.30	161.08	4,192.69	712.73	5.53	712.43	0.38	0.02	-16.75
4,384.00	1.26	157.12	4,287.67	710.75	6.28	710.48	0.10	-0.04	-4.17
4,479.00	1.12	155.87	4,382.65	708.94	7.07	708.70	0.15	-0.15	-1.32
4,573.00	1.12	147.47	4,476.63	707.32	7.94	707.12	0.17	0.00	-8.94
4,668.00	0.81	152.22	4,571.62	705.95	8.75	705.78	0.34	-0.33	5.00

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-35L PAD  
**Well:** NBU 921-35L1BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-35L1BS  
**TVD Reference:** GL 5065 & RKB 19' @ 5084.00ft (PIONEER 54)  
**MD Reference:** GL 5065 & RKB 19' @ 5084.00ft (PIONEER 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,763.00	1.43	138.57	4,666.60	704.46	9.85	704.34	0.71	0.65	-14.37
4,858.00	1.41	140.84	4,761.57	702.67	11.37	702.60	0.06	-0.02	2.39
4,952.00	1.27	147.31	4,855.54	700.89	12.67	700.88	0.22	-0.15	6.88
5,047.00	1.08	146.77	4,950.52	699.26	13.72	699.28	0.20	-0.20	-0.57
5,142.00	0.98	115.80	5,045.51	698.16	14.95	698.23	0.59	-0.11	-32.60
5,237.00	0.81	117.16	5,140.50	697.50	16.28	697.62	0.18	-0.18	1.43
5,332.00	1.35	123.16	5,235.48	696.58	17.81	696.76	0.58	0.57	6.32
5,427.00	0.96	127.65	5,330.46	695.48	19.38	695.72	0.42	-0.41	4.73
5,521.00	0.40	138.99	5,424.45	694.75	20.22	695.02	0.61	-0.60	12.06
5,616.00	0.68	149.43	5,519.45	694.02	20.72	694.31	0.31	0.29	10.99
5,711.00	1.39	137.02	5,614.43	692.69	21.79	693.02	0.78	0.75	-13.06
5,806.00	1.44	129.46	5,709.40	691.09	23.50	691.48	0.20	0.05	-7.96
5,900.00	1.40	124.16	5,803.37	689.69	25.36	690.16	0.15	-0.04	-5.64
5,995.00	1.36	139.21	5,898.35	688.19	27.06	688.72	0.38	-0.04	15.84
6,090.00	1.43	133.48	5,993.32	686.52	28.65	687.11	0.16	0.07	-6.03
6,184.00	1.25	133.82	6,087.29	685.00	30.25	685.65	0.19	-0.19	0.36
6,279.00	1.74	139.12	6,182.26	683.19	31.94	683.91	0.54	0.52	5.58
6,374.00	1.46	140.53	6,277.22	681.17	33.65	681.95	0.30	-0.29	1.48
6,469.00	1.81	133.40	6,372.19	679.20	35.51	680.06	0.43	0.37	-7.51
6,564.00	1.85	130.53	6,467.14	677.17	37.77	678.11	0.11	0.04	-3.02
6,659.00	2.05	135.15	6,562.08	674.97	40.13	676.00	0.27	0.21	4.86
6,754.00	0.53	176.76	6,657.06	673.33	41.35	674.41	1.78	-1.60	43.80
6,849.00	0.83	132.15	6,752.05	672.43	41.89	673.53	0.62	0.32	-46.96
6,944.00	1.23	146.88	6,847.03	671.11	42.95	672.25	0.50	-0.42	15.51
7,039.00	1.06	156.81	6,942.02	669.45	43.86	670.63	0.27	-0.18	10.45
7,133.00	1.06	131.76	7,036.00	668.07	44.85	669.29	0.49	0.00	-26.65
7,228.00	0.88	141.69	7,130.99	666.92	45.96	668.17	0.26	-0.19	10.45
7,323.00	1.06	143.72	7,225.97	665.64	46.93	666.93	0.19	0.19	2.14
7,418.00	1.23	141.17	7,320.95	664.13	48.09	665.47	0.19	0.18	-2.68
7,513.00	1.73	124.99	7,415.92	662.52	49.90	663.92	0.68	0.53	-17.03
7,608.00	0.35	80.00	7,510.91	661.74	51.36	663.20	1.58	-1.45	-47.36
7,703.00	0.83	5.30	7,605.90	662.48	51.71	663.95	0.85	0.51	-78.63
7,798.00	0.36	85.89	7,700.90	663.19	52.07	664.67	0.89	-0.49	84.83
7,893.00	0.45	329.70	7,795.90	663.53	52.18	665.02	0.73	0.09	-122.31
7,988.00	0.71	306.98	7,890.89	664.21	51.52	665.67	0.36	0.27	-23.92
8,082.00	0.64	28.54	7,984.89	665.02	51.31	666.47	0.94	-0.07	86.77
8,177.00	0.36	100.91	8,079.88	665.43	51.86	666.90	0.67	-0.29	76.18
8,272.00	0.20	115.11	8,174.88	665.30	52.30	666.79	0.18	-0.17	14.95
8,366.00	0.44	17.94	8,268.88	665.57	52.56	667.08	0.54	0.26	-103.37
8,461.00	0.91	107.72	8,363.88	665.69	53.39	667.23	1.06	0.49	94.51
8,555.00	0.97	107.07	8,457.86	665.23	54.86	666.82	0.06	0.06	-0.69
8,650.00	0.36	189.63	8,552.86	664.70	55.58	666.32	1.04	-0.64	86.91
8,745.00	0.12	178.63	8,647.86	664.31	55.53	665.92	0.26	-0.25	-11.58
8,840.00	0.59	214.72	8,742.86	663.80	55.26	665.41	0.52	0.49	37.99

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-35L PAD  
**Well:** NBU 921-35L1BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-35L1BS  
**TVD Reference:** GL 5065 & RKB 19' @ 5084.00ft (PIONEER 54)  
**MD Reference:** GL 5065 & RKB 19' @ 5084.00ft (PIONEER 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,936.00	0.31	148.67	8,838.85	663.18	55.11	664.78	0.57	-0.29	-68.80
9,030.00	0.89	169.33	8,932.85	662.24	55.38	663.85	0.65	0.62	21.98
9,125.00	0.82	130.49	9,027.84	661.08	56.03	662.71	0.60	-0.07	-40.88
9,220.00	0.70	193.55	9,122.83	660.07	56.41	661.72	0.84	-0.13	66.38
9,315.00	0.88	192.41	9,217.82	658.79	56.12	660.43	0.19	0.19	-1.20
9,411.00	1.12	151.49	9,313.81	657.25	56.41	658.90	0.76	0.25	-42.63
9,506.00	0.97	158.13	9,408.79	655.69	57.15	657.37	0.20	-0.16	6.99
9,601.00	1.06	146.88	9,503.78	654.20	57.93	655.92	0.23	0.09	-11.84
<b>LAST SDI MWD PRODUCTION SURVEY</b>									
9,860.00	1.06	146.88	9,762.73	650.19	60.55	652.01	0.00	0.00	0.00
<b>SDI PROJECTION TO TD</b>									

**Design Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N-S (ft)	+E-W (ft)	
214.00	214.00	0.69	-0.30	FIRST WEATHERFORD MWD SURFACE SURVEY
2,650.00	2,569.16	552.62	20.74	LAST WEATHERFORD MWD SURFACE SURVEY
2,771.00	2,685.99	584.09	20.31	FIRST SDI MWD PRODUCTION SURVEY
9,601.00	9,503.78	654.20	57.93	LAST SDI MWD PRODUCTION SURVEY
9,860.00	9,762.73	650.19	60.55	SDI PROJECTION TO TD

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



**Scientific Drilling**  
Rocky Mountain Operations

## **US ROCKIES REGION PLANNING**

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

**UINTAH\_NBU 921-35L PAD**

**NBU 921-35L1BS**

**OH**

**Design: OH**

## **Survey Report - Geographic**

**08 June, 2011**

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 921-35L1BS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 5065 & RKB 19' @ 5084.00ft (PIONEER 54)
<b>Site:</b>	UINTAH_NBU 921-35L PAD	<b>MD Reference:</b>	GL 5065 & RKB 19' @ 5084.00ft (PIONEER 54)
<b>Well:</b>	NBU 921-35L1BS	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	EDM5000-RobertS-Local

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

<b>Site</b>	UINTAH_NBU 921-35L PAD, SECTION 35 T9S R21E				
<b>Site Position:</b>		<b>Northing:</b>	14,526,071.56 usft	<b>Latitude:</b>	39° 59' 26.466 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,053,627.05 usft	<b>Longitude:</b>	109° 31' 29.226 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.95 °

<b>Well</b>	NBU 921-35L1BS, 2013 FSL 778 FWL				
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,526,078.33 usft	<b>Latitude:</b> 39° 59' 26.536 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,053,608.18 usft	<b>Longitude:</b> 109° 31' 29.467 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b> 5,065.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	05/31/2011	11.09	65.86	52,324

<b>Design</b>	OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	2.15	

<b>Survey Program</b>	<b>Date</b>	06/08/2011			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
10.00	2,650.00	Survey #1 WEATHERFORD MWD SURFA	MWD	MWD - Standard	
2,771.00	9,860.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,526,078.33	2,053,608.18	39° 59' 26.536 N	109° 31' 29.467 W
10.00	0.00	0.00	10.00	0.00	0.00	14,526,078.33	2,053,608.18	39° 59' 26.536 N	109° 31' 29.467 W
214.00	0.42	336.65	214.00	0.69	-0.30	14,526,079.01	2,053,607.87	39° 59' 26.543 N	109° 31' 29.471 W
<b>FIRST WEATHERFORD MWD SURFACE SURVEY</b>									
305.00	0.27	343.34	305.00	1.20	-0.49	14,526,079.52	2,053,607.67	39° 59' 26.548 N	109° 31' 29.473 W
398.00	1.61	335.74	397.98	2.60	-1.09	14,526,080.91	2,053,607.05	39° 59' 26.562 N	109° 31' 29.481 W
494.00	2.56	352.39	493.92	5.95	-1.93	14,526,084.25	2,053,606.15	39° 59' 26.595 N	109° 31' 29.492 W
589.00	3.06	2.84	588.80	10.59	-2.09	14,526,088.88	2,053,605.91	39° 59' 26.641 N	109° 31' 29.494 W
684.00	4.56	6.14	683.59	16.88	-1.57	14,526,095.18	2,053,606.33	39° 59' 26.703 N	109° 31' 29.487 W
777.00	6.31	4.64	776.17	25.65	-0.76	14,526,103.96	2,053,606.99	39° 59' 26.790 N	109° 31' 29.477 W
872.00	8.19	0.39	870.41	37.62	-0.29	14,526,115.94	2,053,607.26	39° 59' 26.908 N	109° 31' 29.471 W

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-35L PAD  
**Well:** NBU 921-35L1BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-35L1BS  
**TVD Reference:** GL 5065 & RKB 19' @ 5084.00ft (PIONEER 54)  
**MD Reference:** GL 5065 & RKB 19' @ 5084.00ft (PIONEER 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
967.00	9.69	3.52	964.25	52.37	0.24	14,526,130.69	2,053,607.56	39° 59' 27.054 N	109° 31' 29.464 W
1,063.00	12.19	5.02	1,058.50	70.53	1.63	14,526,148.88	2,053,608.64	39° 59' 27.233 N	109° 31' 29.446 W
1,158.00	13.88	4.89	1,151.05	91.88	3.48	14,526,170.25	2,053,610.14	39° 59' 27.444 N	109° 31' 29.422 W
1,254.00	15.44	3.02	1,243.92	116.11	5.13	14,526,194.51	2,053,611.39	39° 59' 27.684 N	109° 31' 29.401 W
1,350.00	16.50	0.27	1,336.21	142.51	5.87	14,526,220.91	2,053,611.69	39° 59' 27.945 N	109° 31' 29.392 W
1,444.00	18.06	1.77	1,425.97	170.42	6.38	14,526,248.83	2,053,611.74	39° 59' 28.221 N	109° 31' 29.385 W
1,540.00	18.56	357.39	1,517.11	200.56	6.14	14,526,278.96	2,053,611.01	39° 59' 28.518 N	109° 31' 29.388 W
1,635.00	19.75	356.39	1,606.85	231.68	4.45	14,526,310.05	2,053,608.79	39° 59' 28.826 N	109° 31' 29.410 W
1,730.00	19.19	358.64	1,696.42	263.31	3.06	14,526,341.65	2,053,606.89	39° 59' 29.139 N	109° 31' 29.428 W
1,825.00	19.00	2.64	1,786.20	294.37	3.41	14,526,372.71	2,053,606.71	39° 59' 29.446 N	109° 31' 29.423 W
1,918.00	19.16	6.87	1,874.09	324.65	5.93	14,526,403.03	2,053,608.74	39° 59' 29.745 N	109° 31' 29.391 W
2,014.00	20.00	5.39	1,964.54	356.63	9.36	14,526,435.07	2,053,611.63	39° 59' 30.061 N	109° 31' 29.347 W
2,109.00	20.75	3.27	2,053.60	389.61	11.84	14,526,468.08	2,053,613.57	39° 59' 30.387 N	109° 31' 29.315 W
2,202.00	19.81	2.77	2,140.83	421.80	13.54	14,526,500.29	2,053,614.74	39° 59' 30.705 N	109° 31' 29.293 W
2,298.00	17.44	4.02	2,231.80	452.40	15.34	14,526,530.92	2,053,616.03	39° 59' 31.008 N	109° 31' 29.270 W
2,393.00	17.13	2.77	2,322.51	480.58	17.01	14,526,559.12	2,053,617.24	39° 59' 31.286 N	109° 31' 29.248 W
2,487.00	16.56	4.64	2,412.48	507.76	18.76	14,526,586.32	2,053,618.54	39° 59' 31.555 N	109° 31' 29.226 W
2,578.00	15.81	1.77	2,499.87	533.07	20.20	14,526,611.66	2,053,619.55	39° 59' 31.805 N	109° 31' 29.207 W
2,650.00	15.70	1.44	2,569.16	552.62	20.74	14,526,631.21	2,053,619.78	39° 59' 31.998 N	109° 31' 29.200 W
<b>LAST WEATHERFORD MWD SURFACE SURVEY</b>									
2,771.00	14.48	356.81	2,685.99	584.09	20.31	14,526,662.67	2,053,618.83	39° 59' 32.309 N	109° 31' 29.206 W
<b>FIRST SDI MWD PRODUCTION SURVEY</b>									
2,866.00	12.66	353.00	2,778.34	606.28	18.38	14,526,684.83	2,053,616.53	39° 59' 32.529 N	109° 31' 29.231 W
2,961.00	11.22	357.59	2,871.28	625.85	16.73	14,526,704.37	2,053,614.55	39° 59' 32.722 N	109° 31' 29.252 W
3,056.00	8.88	352.32	2,964.82	642.35	15.36	14,526,720.85	2,053,612.91	39° 59' 32.885 N	109° 31' 29.270 W
3,151.00	8.94	3.37	3,058.68	656.99	14.81	14,526,735.47	2,053,612.12	39° 59' 33.030 N	109° 31' 29.277 W
3,246.00	8.73	0.40	3,152.56	671.57	15.30	14,526,750.06	2,053,612.36	39° 59' 33.174 N	109° 31' 29.270 W
3,341.00	8.33	3.14	3,246.51	685.65	15.72	14,526,764.14	2,053,612.56	39° 59' 33.313 N	109° 31' 29.265 W
3,435.00	6.66	359.62	3,339.70	697.90	16.06	14,526,776.40	2,053,612.69	39° 59' 33.434 N	109° 31' 29.261 W
3,530.00	5.04	339.42	3,434.21	707.32	14.56	14,526,785.79	2,053,611.03	39° 59' 33.527 N	109° 31' 29.280 W
3,625.00	3.75	335.07	3,528.93	714.04	11.78	14,526,792.46	2,053,608.14	39° 59' 33.594 N	109° 31' 29.316 W
3,720.00	2.49	318.29	3,623.79	718.40	9.10	14,526,796.78	2,053,605.39	39° 59' 33.637 N	109° 31' 29.350 W
3,815.00	0.57	220.36	3,718.76	719.58	7.42	14,526,797.93	2,053,603.69	39° 59' 33.649 N	109° 31' 29.372 W
3,910.00	1.00	230.48	3,813.75	718.69	6.47	14,526,797.03	2,053,602.76	39° 59' 33.640 N	109° 31' 29.384 W
4,005.00	0.96	208.27	3,908.74	717.46	5.46	14,526,795.78	2,053,601.76	39° 59' 33.628 N	109° 31' 29.397 W
4,100.00	0.55	180.65	4,003.73	716.31	5.07	14,526,794.62	2,053,601.40	39° 59' 33.616 N	109° 31' 29.402 W
4,194.00	1.28	176.99	4,097.72	714.81	5.12	14,526,793.12	2,053,601.48	39° 59' 33.602 N	109° 31' 29.401 W
4,289.00	1.30	161.08	4,192.69	712.73	5.53	14,526,791.05	2,053,601.91	39° 59' 33.581 N	109° 31' 29.396 W
4,384.00	1.26	157.12	4,287.67	710.75	6.28	14,526,789.08	2,053,602.70	39° 59' 33.561 N	109° 31' 29.386 W
4,479.00	1.12	155.87	4,382.65	708.94	7.07	14,526,787.28	2,053,603.52	39° 59' 33.544 N	109° 31' 29.376 W
4,573.00	1.12	147.47	4,476.63	707.32	7.94	14,526,785.69	2,053,604.41	39° 59' 33.528 N	109° 31' 29.365 W
4,668.00	0.81	152.22	4,571.62	705.95	8.75	14,526,784.32	2,053,605.25	39° 59' 33.514 N	109° 31' 29.355 W
4,763.00	1.43	138.57	4,666.60	704.46	9.85	14,526,782.86	2,053,606.37	39° 59' 33.499 N	109° 31' 29.340 W
4,858.00	1.41	140.84	4,761.57	702.67	11.37	14,526,781.09	2,053,607.92	39° 59' 33.482 N	109° 31' 29.321 W
4,952.00	1.27	147.31	4,855.54	700.89	12.67	14,526,779.34	2,053,609.25	39° 59' 33.464 N	109° 31' 29.304 W
5,047.00	1.08	146.77	4,950.52	699.26	13.72	14,526,777.72	2,053,610.33	39° 59' 33.448 N	109° 31' 29.291 W
5,142.00	0.98	115.80	5,045.51	698.16	14.95	14,526,776.64	2,053,611.57	39° 59' 33.437 N	109° 31' 29.275 W
5,237.00	0.81	117.16	5,140.50	697.50	16.28	14,526,776.00	2,053,612.91	39° 59' 33.430 N	109° 31' 29.258 W
5,332.00	1.35	123.16	5,235.48	696.58	17.81	14,526,775.11	2,053,614.46	39° 59' 33.421 N	109° 31' 29.238 W
5,427.00	0.96	127.65	5,330.46	695.48	19.38	14,526,774.03	2,053,616.05	39° 59' 33.410 N	109° 31' 29.218 W
5,521.00	0.40	138.99	5,424.45	694.75	20.22	14,526,773.32	2,053,616.90	39° 59' 33.403 N	109° 31' 29.207 W
5,616.00	0.68	149.43	5,519.45	694.02	20.72	14,526,772.59	2,053,617.41	39° 59' 33.396 N	109° 31' 29.201 W
5,711.00	1.39	137.02	5,614.43	692.69	21.79	14,526,771.28	2,053,618.51	39° 59' 33.383 N	109° 31' 29.187 W
5,806.00	1.44	129.46	5,709.40	691.09	23.50	14,526,769.71	2,053,620.24	39° 59' 33.367 N	109° 31' 29.165 W
5,900.00	1.40	124.16	5,803.37	689.69	25.36	14,526,768.34	2,053,622.12	39° 59' 33.353 N	109° 31' 29.141 W

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-35L PAD  
**Well:** NBU 921-35L1BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-35L1BS  
**TVD Reference:** GL 5065 & RKB 19' @ 5084.00ft (PIONEER 54)  
**MD Reference:** GL 5065 & RKB 19' @ 5084.00ft (PIONEER 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,995.00	1.36	139.21	5,898.35	688.19	27.06	14,526,766.87	2,053,623.85	39° 59' 33.338 N	109° 31' 29.119 W
6,090.00	1.43	133.48	5,993.32	686.52	28.65	14,526,765.22	2,053,625.47	39° 59' 33.322 N	109° 31' 29.099 W
6,184.00	1.25	133.82	6,087.29	685.00	30.25	14,526,763.73	2,053,627.09	39° 59' 33.307 N	109° 31' 29.078 W
6,279.00	1.74	139.12	6,182.26	683.19	31.94	14,526,761.95	2,053,628.81	39° 59' 33.289 N	109° 31' 29.057 W
6,374.00	1.46	140.53	6,277.22	681.17	33.65	14,526,759.96	2,053,630.55	39° 59' 33.269 N	109° 31' 29.035 W
6,469.00	1.81	133.40	6,372.19	679.20	35.51	14,526,758.02	2,053,632.45	39° 59' 33.250 N	109° 31' 29.011 W
6,564.00	1.85	130.53	6,467.14	677.17	37.77	14,526,756.03	2,053,634.73	39° 59' 33.230 N	109° 31' 28.982 W
6,659.00	2.05	135.15	6,562.08	674.97	40.13	14,526,753.87	2,053,637.13	39° 59' 33.208 N	109° 31' 28.951 W
6,754.00	0.53	176.76	6,657.06	673.33	41.35	14,526,752.25	2,053,638.38	39° 59' 33.192 N	109° 31' 28.936 W
6,849.00	0.83	132.15	6,752.05	672.43	41.89	14,526,751.36	2,053,638.93	39° 59' 33.183 N	109° 31' 28.929 W
6,944.00	1.23	146.88	6,847.03	671.11	42.95	14,526,750.06	2,053,640.02	39° 59' 33.170 N	109° 31' 28.915 W
7,039.00	1.06	156.81	6,942.02	669.45	43.86	14,526,748.41	2,053,640.95	39° 59' 33.153 N	109° 31' 28.903 W
7,133.00	1.06	131.76	7,036.00	668.07	44.85	14,526,747.05	2,053,641.97	39° 59' 33.140 N	109° 31' 28.891 W
7,228.00	0.88	141.69	7,130.99	666.92	45.96	14,526,745.91	2,053,643.09	39° 59' 33.128 N	109° 31' 28.876 W
7,323.00	1.06	143.72	7,225.97	665.64	46.93	14,526,744.65	2,053,644.09	39° 59' 33.115 N	109° 31' 28.864 W
7,418.00	1.23	141.17	7,320.95	664.13	48.09	14,526,743.16	2,053,645.27	39° 59' 33.101 N	109° 31' 28.849 W
7,513.00	1.73	124.99	7,415.92	662.52	49.90	14,526,741.58	2,053,647.11	39° 59' 33.085 N	109° 31' 28.826 W
7,608.00	0.35	80.00	7,510.91	661.74	51.36	14,526,740.83	2,053,648.59	39° 59' 33.077 N	109° 31' 28.807 W
7,703.00	0.83	5.30	7,605.90	662.48	51.71	14,526,741.57	2,053,648.92	39° 59' 33.084 N	109° 31' 28.802 W
7,798.00	0.36	85.89	7,700.90	663.19	52.07	14,526,742.28	2,053,649.27	39° 59' 33.091 N	109° 31' 28.798 W
7,893.00	0.45	329.70	7,795.90	663.53	52.18	14,526,742.63	2,053,649.38	39° 59' 33.095 N	109° 31' 28.796 W
7,988.00	0.71	306.98	7,890.89	664.21	51.52	14,526,743.29	2,053,648.71	39° 59' 33.101 N	109° 31' 28.805 W
8,082.00	0.64	28.54	7,984.89	665.02	51.31	14,526,744.10	2,053,648.48	39° 59' 33.109 N	109° 31' 28.808 W
8,177.00	0.36	100.91	8,079.88	665.43	51.86	14,526,744.52	2,053,649.02	39° 59' 33.113 N	109° 31' 28.801 W
8,272.00	0.20	115.11	8,174.88	665.30	52.30	14,526,744.40	2,053,649.46	39° 59' 33.112 N	109° 31' 28.795 W
8,366.00	0.44	17.94	8,268.88	665.57	52.56	14,526,744.68	2,053,649.72	39° 59' 33.115 N	109° 31' 28.792 W
8,461.00	0.91	107.72	8,363.88	665.69	53.39	14,526,744.81	2,053,650.55	39° 59' 33.116 N	109° 31' 28.781 W
8,555.00	0.97	107.07	8,457.86	665.23	54.86	14,526,744.37	2,053,652.03	39° 59' 33.111 N	109° 31' 28.762 W
8,650.00	0.36	189.63	8,552.86	664.70	55.58	14,526,743.86	2,053,652.75	39° 59' 33.106 N	109° 31' 28.753 W
8,745.00	0.12	178.63	8,647.86	664.31	55.53	14,526,743.46	2,053,652.71	39° 59' 33.102 N	109° 31' 28.753 W
8,840.00	0.59	214.72	8,742.86	663.80	55.26	14,526,742.96	2,053,652.45	39° 59' 33.097 N	109° 31' 28.757 W
8,936.00	0.31	148.67	8,838.85	663.18	55.11	14,526,742.33	2,053,652.31	39° 59' 33.091 N	109° 31' 28.759 W
9,030.00	0.89	169.33	8,932.85	662.24	55.38	14,526,741.40	2,053,652.59	39° 59' 33.082 N	109° 31' 28.755 W
9,125.00	0.82	130.49	9,027.84	661.08	56.03	14,526,740.24	2,053,653.26	39° 59' 33.070 N	109° 31' 28.747 W
9,220.00	0.70	193.55	9,122.83	660.07	56.41	14,526,739.24	2,053,653.66	39° 59' 33.060 N	109° 31' 28.742 W
9,315.00	0.88	192.41	9,217.82	658.79	56.12	14,526,737.96	2,053,653.39	39° 59' 33.048 N	109° 31' 28.746 W
9,411.00	1.12	151.49	9,313.81	657.25	56.41	14,526,736.42	2,053,653.71	39° 59' 33.033 N	109° 31' 28.742 W
9,506.00	0.97	158.13	9,408.79	655.69	57.15	14,526,734.87	2,053,654.47	39° 59' 33.017 N	109° 31' 28.733 W
9,601.00	1.06	146.88	9,503.78	654.20	57.93	14,526,733.40	2,053,655.28	39° 59' 33.003 N	109° 31' 28.723 W
<b>LAST SDI MWD PRODUCTION SURVEY</b>									
9,860.00	1.06	146.88	9,762.73	650.19	60.55	14,526,729.43	2,053,657.96	39° 59' 32.963 N	109° 31' 28.689 W
<b>SDI PROJECTION TO TD</b>									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
214.00	214.00	0.69	-0.30	FIRST WEATHERFORD MWD SURFACE SURVEY
2,650.00	2,569.16	552.62	20.74	LAST WEATHERFORD MWD SURFACE SURVEY
2,771.00	2,685.99	584.09	20.31	FIRST SDI MWD PRODUCTION SURVEY
9,601.00	9,503.78	654.20	57.93	LAST SDI MWD PRODUCTION SURVEY
9,860.00	9,762.73	650.19	60.55	SDI PROJECTION TO TD



**SDI**  
Survey Report - Geographic



**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-35L PAD  
**Well:** NBU 921-35L1BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-35L1BS  
**TVD Reference:** GL 5065 & RKB 19' @ 5084.00ft (PIONEER 54)  
**MD Reference:** GL 5065 & RKB 19' @ 5084.00ft (PIONEER 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

Checked By: _____	Approved By: _____	Date: _____
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