

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

FORM 3

AMENDED REPORT

<b>APPLICATION FOR PERMIT TO DRILL</b>				<b>1. WELL NAME and NUMBER</b> NBU 921-25L2AS		
<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 1194 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>
LOCATION AT SURFACE	1848 FSL 1402 FWL	NESW	25	9.0 S	21.0 E	S
Top of Uppermost Producing Zone	2423 FSL 465 FWL	NWSW	25	9.0 S	21.0 E	S
At Total Depth	2423 FSL 465 FWL	NWSW	25	9.0 S	21.0 E	S
<b>21. COUNTY</b> UINTAH		<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 465		<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> 505		<b>26. PROPOSED DEPTH</b> MD: 9873 TVD: 9700		
<b>27. ELEVATION - GROUND LEVEL</b> 4978		<b>28. BOND NUMBER</b> 22013542		<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> Permit #43-8496		

**ATTACHMENTS**

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

<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> 08/13/2010	<b>EMAIL</b> gnbregulatory@anadarko.com
<b>API NUMBER ASSIGNED</b> 43047512580000	<b>APPROVAL</b>   Permit Manager	

<b>Proposed Hole, Casing, and Cement</b>						
<b>String</b>	<b>Hole Size</b>	<b>Casing Size</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>		
Prod	7.875	4.5	0	9873		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade I-80 Buttress	9873	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	2410		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade I-80 LT&C	2410	28.0			

**NBU 921-25L2AS**

Pad: NBU 921-25K

Surface: 1,848' FSL 1,402' FWL (NE/4SW/4)

BHL: 2,423' FSL 465' FWL (NW/4SW/4)

Section 25 T9S R21E

Uintah County, Utah

Mineral Lease: UO 1194 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	1,475'	
Birds Nest	1,789'	Water
Mahogany	2,162'	Water
Wasatch	4,756'	Gas
Mesaverde	7,473'	Gas
MVU2	8,363'	Gas
MVL1	8,943'	Gas
TVD	9,700'	
TD	9,873'	

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

*Please refer to the attached Drilling Program.*

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

*Please refer to the attached Drilling Program.*

5. **Drilling Fluids Program:**

*Please refer to the attached Drilling Program.*

6. **Evaluation Program:**

*Please refer to the attached Drilling Program.*

**7. Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 9,700' TVD, approximately equals 5,943 psi (calculated at 0.61 psi/foot).

Maximum anticipated surface pressure equals approximately 3,809 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

**8. Anticipated Starting Dates:**

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

**9. Variances:**

*Please refer to the attached Drilling Program.*

*Onshore Order #2 – Air Drilling Variance*

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

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

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

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

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

***Background***

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

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

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

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

***Variance for BOPE Requirements***

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

***Variance for Mud Material Requirements***

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

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

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

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

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

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

***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 2,410	28.00	IJ-55	LTC	0.85	1.67	5.11
						7,780	6,350	278,000
PRODUCTION	4-1/2"	0 to 9,873	11.60	I-80	BTC	1.99	1.05	2.78

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

D.F. = 2.23

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 3,809 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 5,943 psi**

### CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
	<b>Option 1</b>		+ 0.25 pps flocele				
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE		<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>					
	<b>Option 2</b>						
	LEAD	1,910'	65/35 Poz + 6% Gel + 10 pps gilsonite	180	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,253'	Premium Lite II +0.25 pps	310	10%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	5,620'	50/50 Poz/G + 10% salt + 2% gel	1,080	10%	14.30	1.31
			+ 0.1% R-3				

\*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

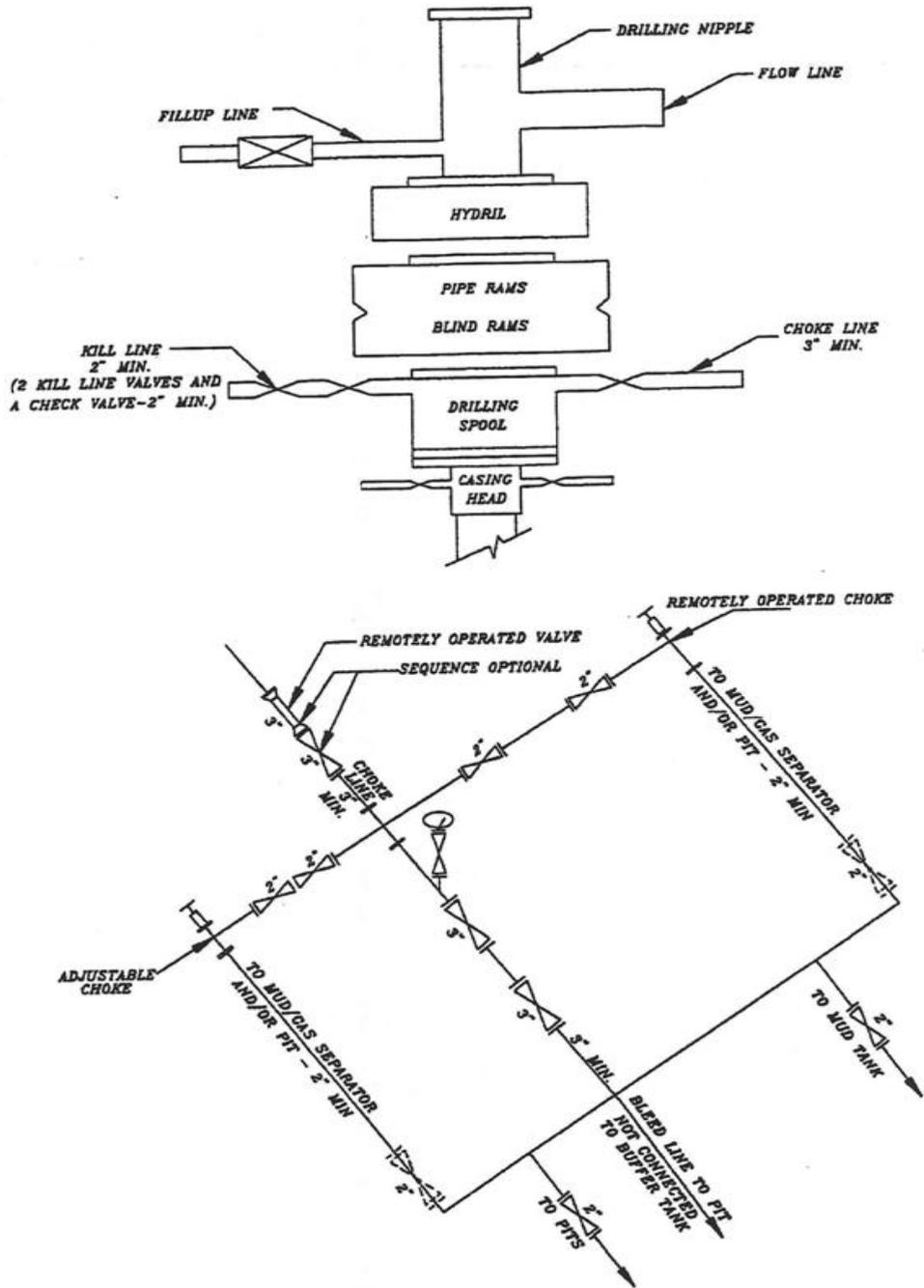
DATE:

DRILLING SUPERINTENDENT:

John Merkel / Lovel Young

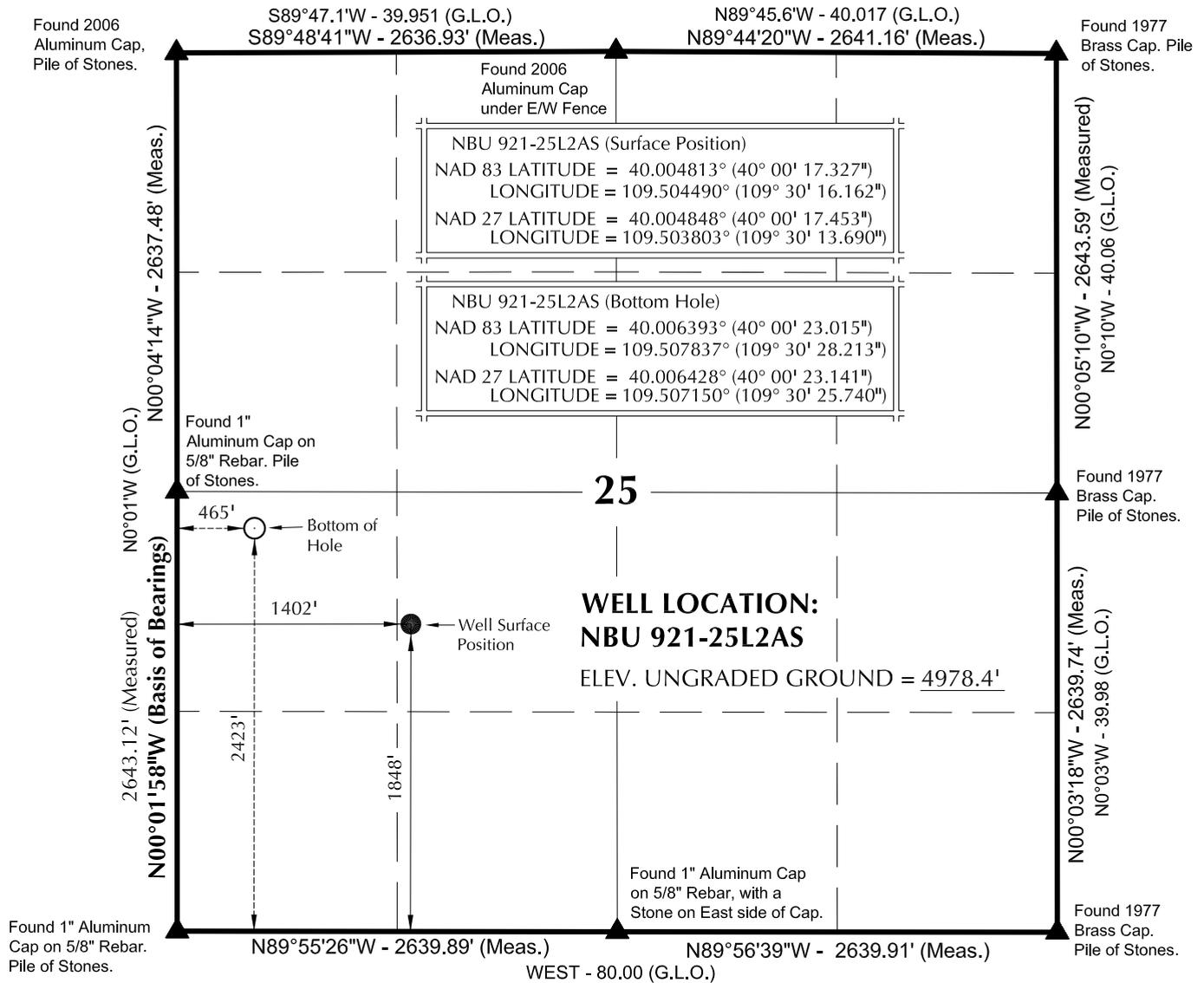
DATE:

### EXHIBIT A NBU 921-25L2AS



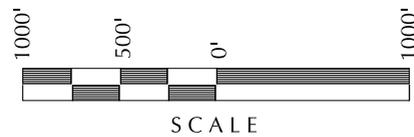
SCHMATIC DIAGRAM OF 5,000 PSI BOP STACK

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



**NOTES:**

- ▲ = Section Corners Located
- 1. Well footages are measured at right angles to the Section Lines.
- 2. G.L.O. distances are shown in feet or chains. 1 chain = 66 feet.
- 3. The Bottom of hole bears N58°26'02"W 1100.57' from the Surface Position.
- 4. Bearings are based on Global Positioning Satellite observations.
- 5. Basis of elevation is Tri-Sta "Two Water" located in the NW ¼ of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.



**SURVEYOR'S CERTIFICATE**

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

PROF. SEAL  
 No. 6028691  
 JOHN R. SLUGH  
 PROFESSIONAL LAND SURVEYOR  
 REGISTRATION No. 6028691  
 STATE OF UTAH

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



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

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

DATE SURVEYED: 04-08-10	SURVEYED BY: D.J.S.	SHEET NO: <b>1</b>
DATE DRAWN: 04-12-10	DRAWN BY: E.M.S.	
SCALE: 1" = 1000'		1 OF 16

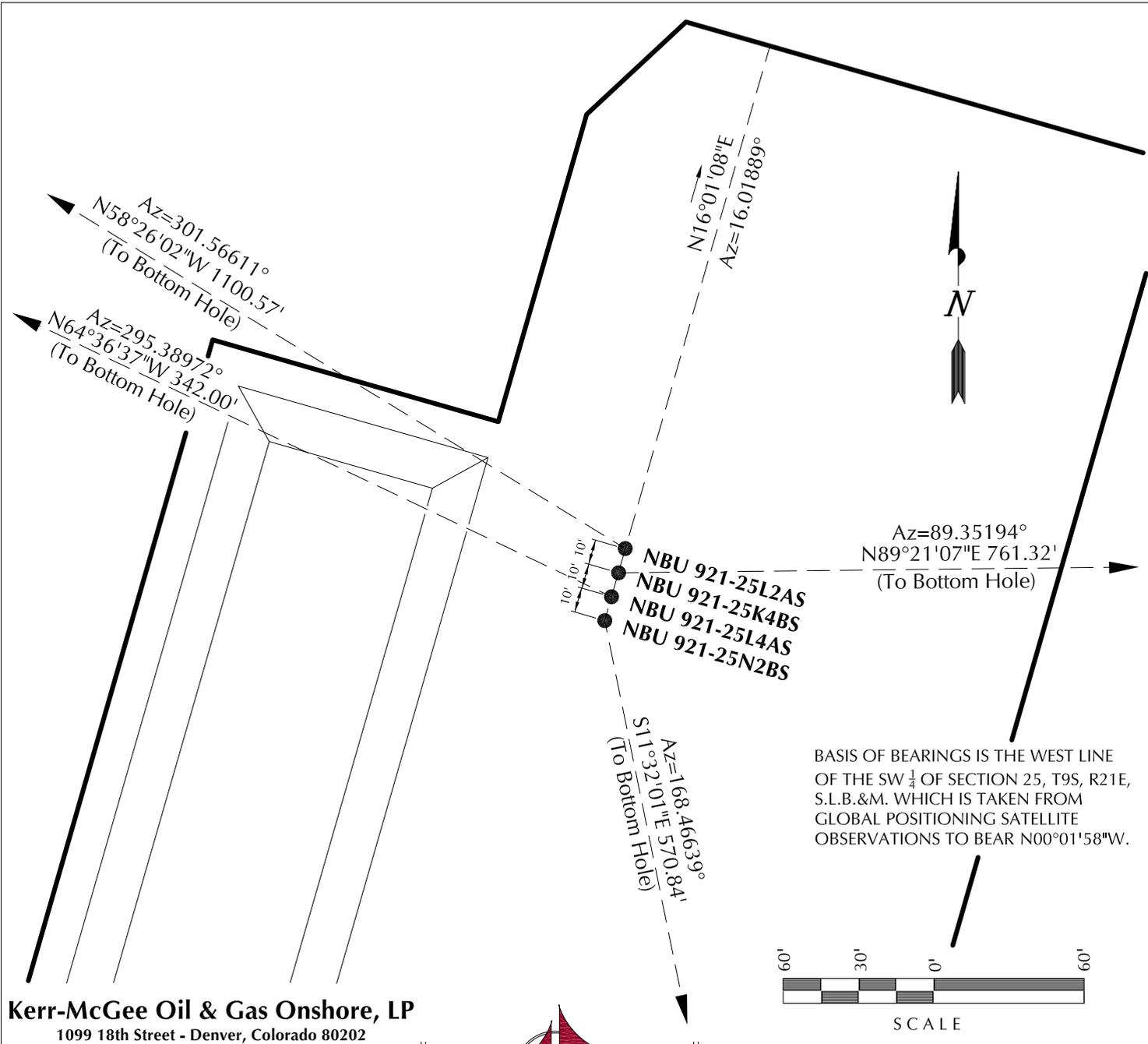
**WELL PAD: NBU 921-25K**

**NBU 921-25L2AS**  
**WELL PLAT**  
**2423' FSL, 465' FWL (Bottom Hole)**  
**NW ¼ SW ¼ OF SECTION 25, T9S, R21E,**  
**S.L.B.&M., UTAH COUNTY, UTAH.**

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 921-25L2AS	40°00'17.327" 40.004813°	109°30'16.162" 109.504490°	40°00'17.453" 40.004848°	109°30'13.690" 109.503803°	1848' FSL 1402' FWL	40°00'23.015" 40.006393°	109°30'28.213" 109.507837°	40°00'23.141" 40.006428°	109°30'25.740" 109.507150°	2423' FSL 465' FWL
NBU 921-25K4BS	40°00'17.231" 40.004786°	109°30'16.197" 109.504499°	40°00'17.357" 40.004821°	109°30'13.724" 109.503812°	1838' FSL 1400' FWL	40°00'17.319" 40.004811°	109°30'06.416" 109.501782°	40°00'17.446" 40.004846°	109°30'03.944" 109.501096°	1848' FSL 2161' FWL
NBU 921-25L4AS	40°00'17.136" 40.004760°	109°30'16.233" 109.504509°	40°00'17.262" 40.004795°	109°30'13.761" 109.503822°	1829' FSL 1397' FWL	40°00'18.583" 40.005162°	109°30'20.203" 109.505612°	40°00'18.710" 40.005197°	109°30'17.731" 109.504925°	1975' FSL 1088' FWL
NBU 921-25N2BS	40°00'17.041" 40.004734°	109°30'16.267" 109.504519°	40°00'17.167" 40.004769°	109°30'13.795" 109.503832°	1819' FSL 1394' FWL	40°00'11.516" 40.003199°	109°30'14.798" 109.504111°	40°00'11.642" 40.003234°	109°30'12.326" 109.503424°	1260' FSL 1508' 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 921-25L2AS	576.1'	-937.7'	NBU 921-25K4BS	8.6'	761.3'	NBU 921-25L4AS	146.6'	-309.0'	NBU 921-25N2BS	-559.3'	114.1'



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

**WELL PAD - NBU 921-25K**

**WELL PAD INTERFERENCE PLAT**  
WELLS - NBU 921-25L2AS, NBU 921-25K4BS,  
NBU 921-25L4AS & NBU 921-25N2BS  
LOCATED IN SECTION 25, T9S, R21E,  
S.L.B.&M., UTAH COUNTY, UTAH.



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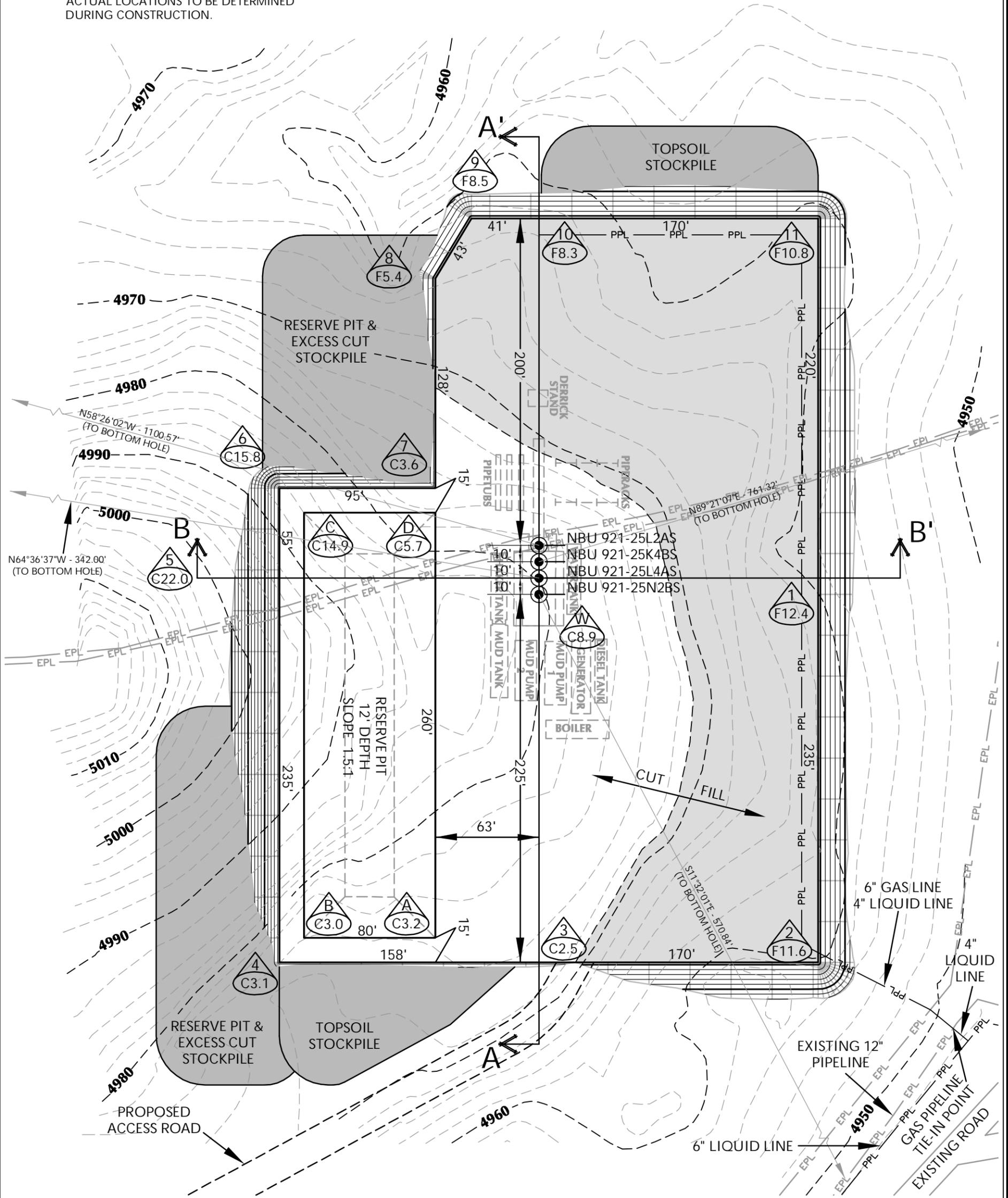


BASIS OF BEARINGS IS THE WEST LINE  
OF THE SW 1/4 OF SECTION 25, T9S, R21E,  
S.L.B.&M. WHICH IS TAKEN FROM  
GLOBAL POSITIONING SATELLITE  
OBSERVATIONS TO BEAR N00°01'58"W.

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DATE SURVEYED: 04-08-10	SURVEYED BY: D.J.S.	SHEET NO: <b>5</b> 5 OF 16
DATE DRAWN: 04-12-10	DRAWN BY: E.M.S.	
SCALE: 1" = 60'		Date Last Revised: 06-09-10 K.O.B.

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 921-25K DESIGN SUMMARY**

EXISTING GRADE @ CENTER OF WELL PAD = 4979.9'  
 FINISHED GRADE ELEVATION = 4971.0'  
 CUT SLOPES = 1.0:1  
 FILL SLOPES = 1.5:1  
 TOTAL WELL PAD AREA = 3.62 ACRES  
 TOTAL DAMAGE AREA = 5.90 ACRES  
 SHRINKAGE FACTOR = 1.10  
 SWELL FACTOR = 1.00

**WELL PAD QUANTITIES**

TOTAL CUT FOR WELL PAD = 23,757 C.Y.  
 TOTAL FILL FOR WELL PAD = 21,309 C.Y.  
 TOPSOIL @ 6" DEPTH = 2,921 C.Y.  
 EXCESS MATERIAL = 2,448 C.Y.

**RESERVE PIT QUANTITIES**

TOTAL CUT FOR RESERVE PIT +/- 6,720 CY  
 RESERVE PIT CAPACITY (2' OF FREEBOARD) +/- 25,260 BARRELS

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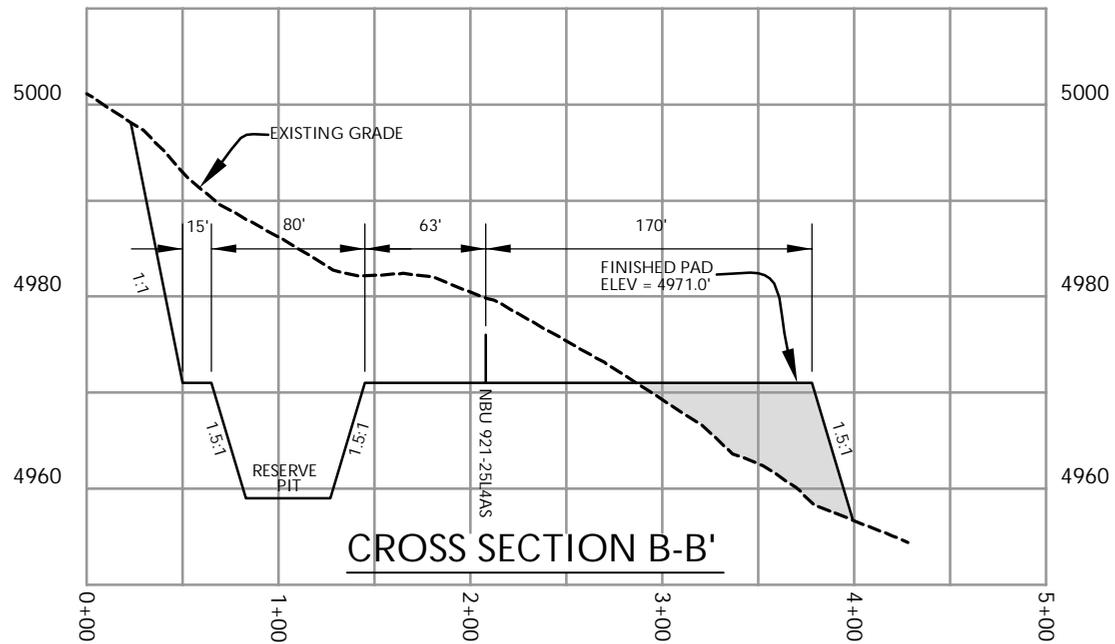
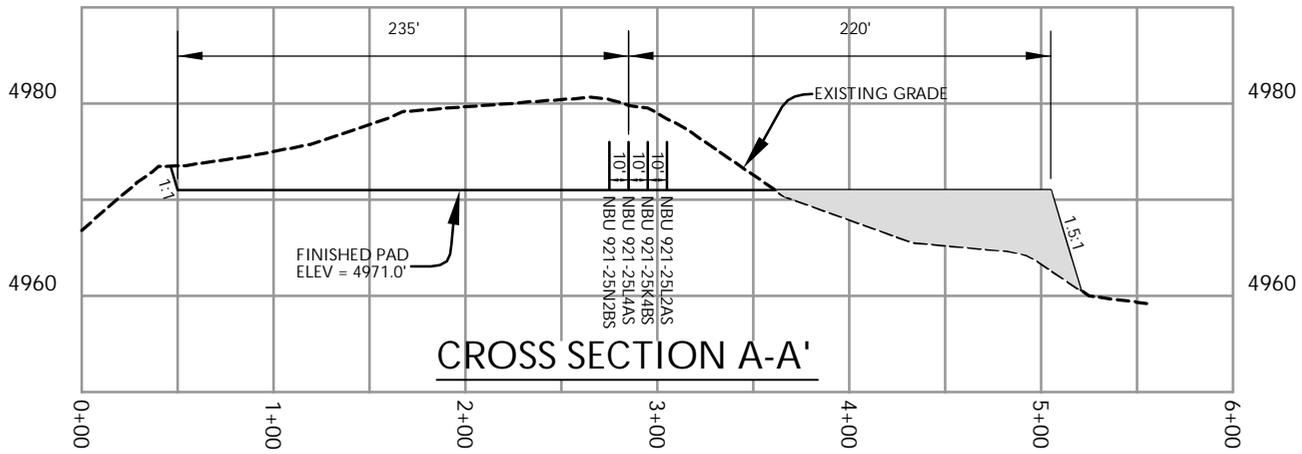
**WELL PAD LEGEND**

- 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: 5/12/10 SHEET NO: 6 OF 16  
 REVISED: GRB 8/30/10



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WELL PAD - NBU 921-25K

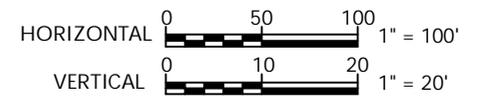
WELL PAD - CROSS SECTIONS  
NBU 921-25L2AS, NBU 921-25K4BS,  
NBU 921-25L4AS & NBU 921-25N2BS  
LOCATED IN SECTION 25, T9S, R21E,  
S.L.B.&M., UINTAH COUNTY, UTAH



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

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

(435) 789-1365



Scale: 1"=100'

Date: 5/12/10

SHEET NO:

REVISED:

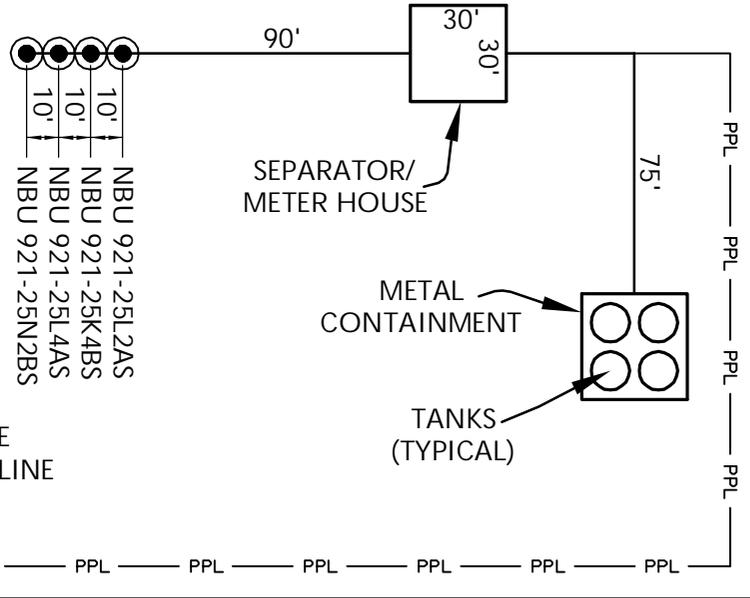
GRB  
8/30/10

**7**  
7 OF 16

PROPOSED ACCESS ROAD

RESERVE PIT

PROPOSED WELL PAD



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.

6" GAS LINE  
4' LIQUID LINE

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

WELL PAD - NBU 921-25K

WELL PAD - FACILITIES DIAGRAM  
NBU 921-25L2AS, NBU 921-25K4BS,  
NBU 921-25L4AS & NBU 921-25N2BS  
LOCATED IN SECTION 25, T9S, R21E,  
S.L.B.&M., UINTAH COUNTY, UTAH



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

WELL PAD LEGEND

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



HORIZONTAL 0 30' 60' 1" = 60'

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

(435) 789-1365

Scale: 1"=60'

Date: 5/12/10

SHEET NO:

REVISED:

GRB  
8/30/10

8

8 OF 16

'APIWellNo:43047512580000'

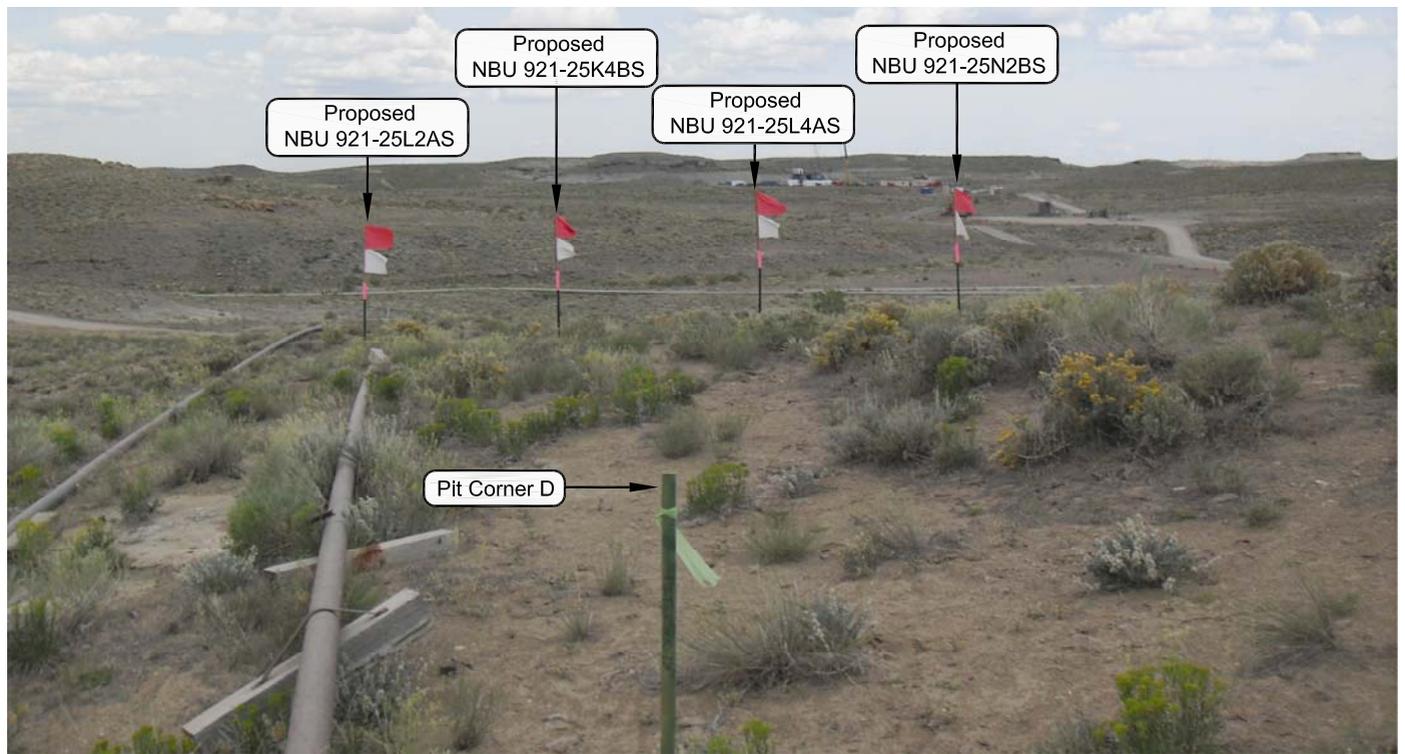


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: SOUTHEASTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHEASTERLY

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

**WELL PAD - NBU 921-25K**

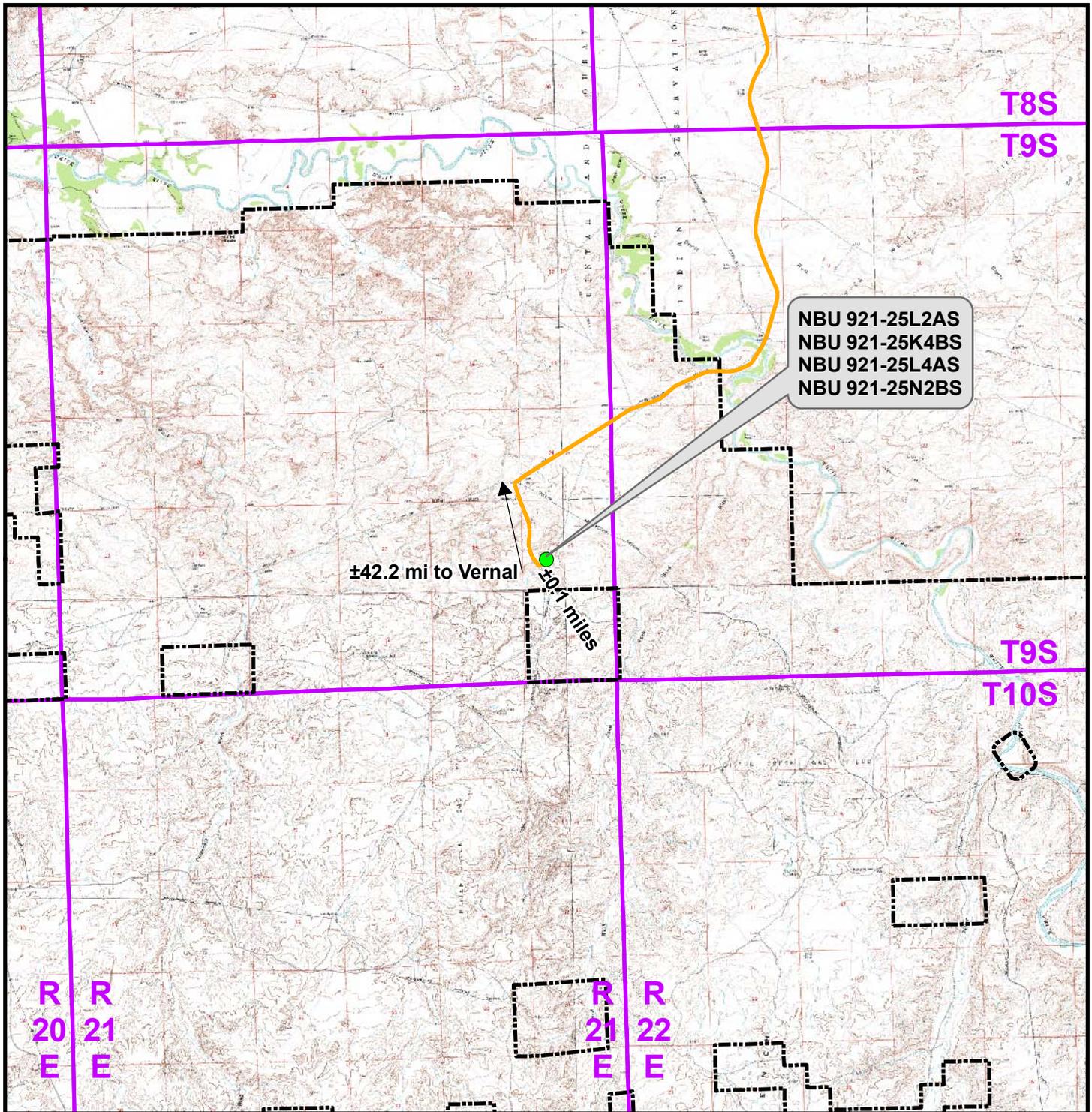
**LOCATION PHOTOS**  
 NBU 921-25L2AS, NBU 921-25K4BS,  
 NBU 921-25L4AS & NBU 921-25N2BS  
 LOCATED IN SECTION 25, T9S, R21E,  
 S.L.B.&M., UINTAH COUNTY, UTAH.



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

DATE PHOTOS TAKEN: 04-08-10	PHOTOS TAKEN BY: D.J.S.	SHEET NO: <b>9</b> 9 OF 16
DATE DRAWN: 04-12-10	DRAWN BY: E.M.S.	
Date Last Revised: 06-09-10 K.O.B.		



**Legend**

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

Distance From Well Pad - NBU 921-25K To Unit Boundary: ±1,819ft

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

**WELL PAD - NBU 921-25K**

**TOPO A**

**NBU 921-25L2AS, NBU 921-25K4BS,  
 NBU 921-25L4AS & NBU 921-25N2BS  
 LOCATED IN SECTION 25, T9S, R21E  
 S.L.B.&M., Uintah County, Utah**



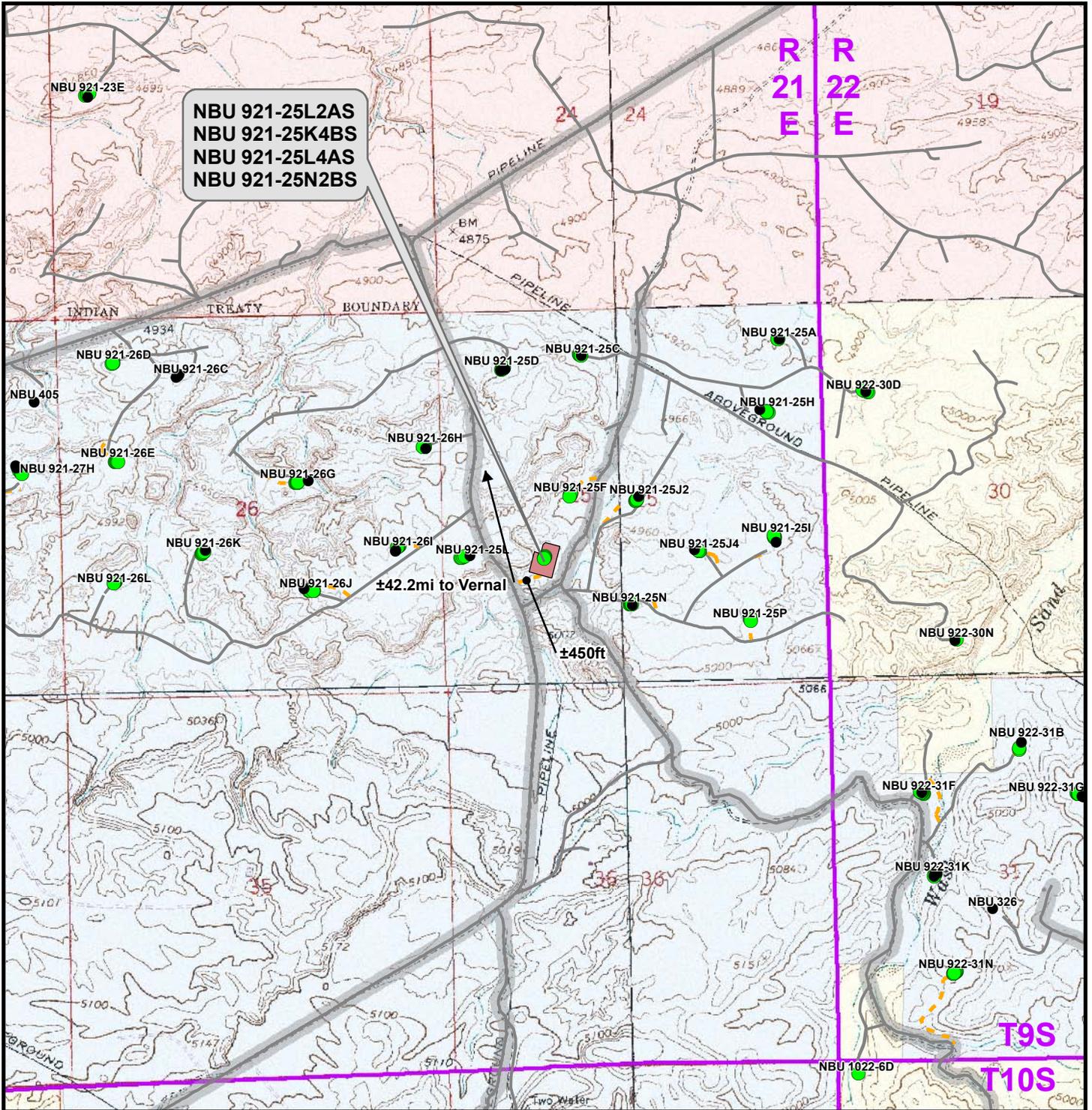
**CONSULTING, LLC**  
 371 Coffeen Avenue  
 Sheridan, WY 82801  
 Phone (307) 674-0609  
 Fax (307) 674-0182



Scale: 1:100,000	NAD83 USP Central
Drawn: CPS	Date: 14 May 2010
Revised: CPS	Date: 7 July 2010

Sheet No:

**10** 10 of 16



**Legend**

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

Total Proposed Road Length: ±450ft

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

**WELL PAD - NBU 921-25K**

**TOPO B**  
 NBU 921-25L2AS, NBU 921-25K4BS,  
 NBU 921-25L4AS & NBU 921-25N2BS  
 LOCATED IN SECTION 25, T9S, R21E  
 S.L.B.&M., Uintah County, Utah

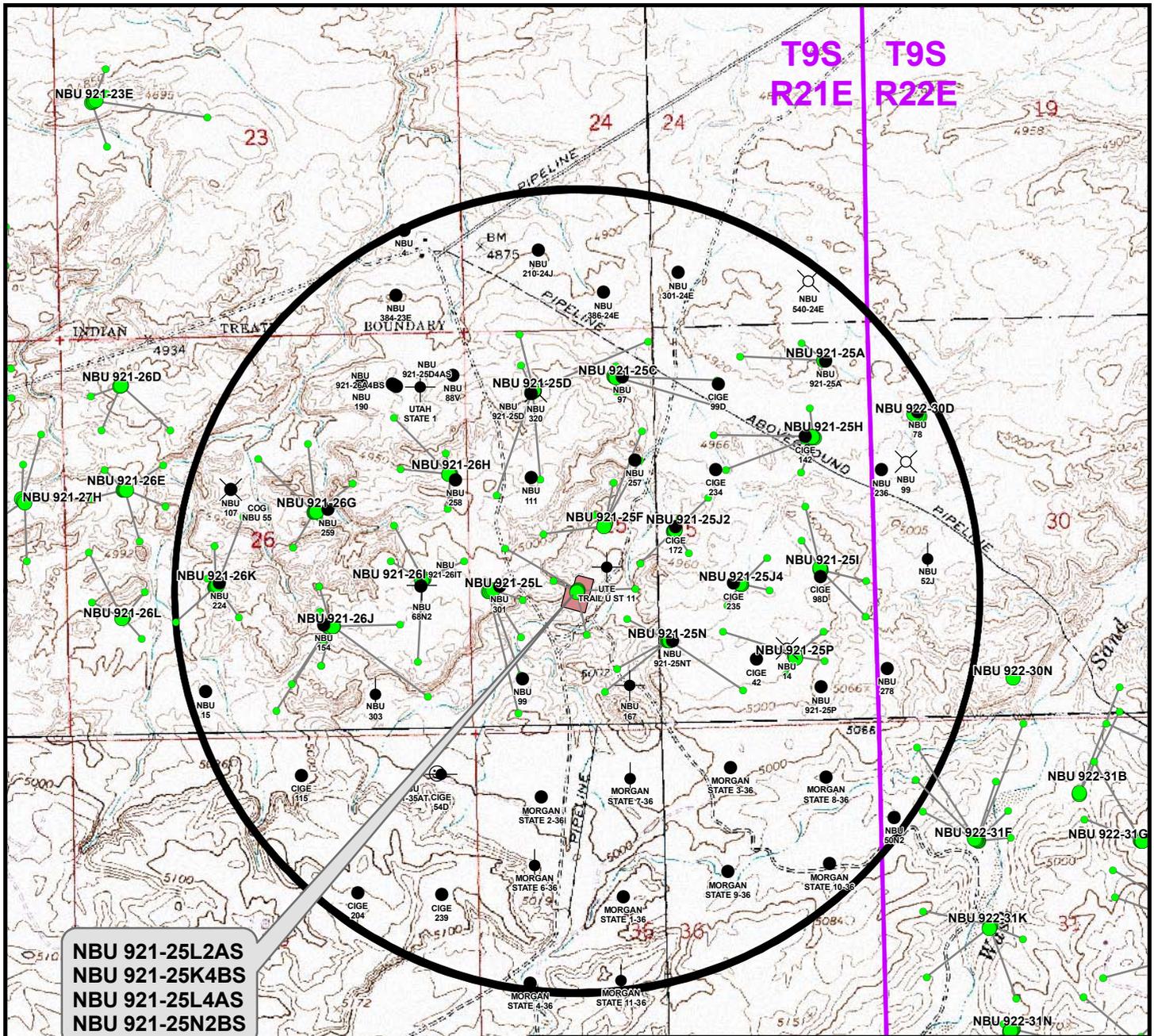


**CONSULTING, LLC**  
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 Phone (307) 674-0609  
 Fax (307) 674-0182



Scale: 1" = 2,000ft	NAD83 USP Central
Drawn: CPS	Date: 14 May 2010
Revised: JFE	Date: 31 Aug 2010

Sheet No:  
11 11 of 16



NBU 921-25L2AS  
 NBU 921-25K4BS  
 NBU 921-25L4AS  
 NBU 921-25N2BS

Proposed Well	Nearest Well Bore	Footage
NBU 921-25L2AS	NBU 301	505ft
NBU 921-25K4BS	UTE TRAIL U ST 11	473ft
NBU 921-25L4AS	NBU 301	709ft
NBU 921-25N2BS	NBU 167	867ft

**Legend**

- Well - Proposed
- Bottom Hole - Proposed
- Well Path
- Well Pad
- Well - 1 Mile Radius

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

- Producing
- Temporarily-Abandoned
- Shut-In
- Plugged and Abandoned
- Location Abandoned
- Dry hole marker, buried
- Returned APD (Unapproved)
- Active
- Spudded (Drilling commenced; Not yet completed)
- Approved permit (APD); not yet spudded
- New Permit (Not yet approved or drilled)
- Inactive
- Drilling Operations Suspended

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

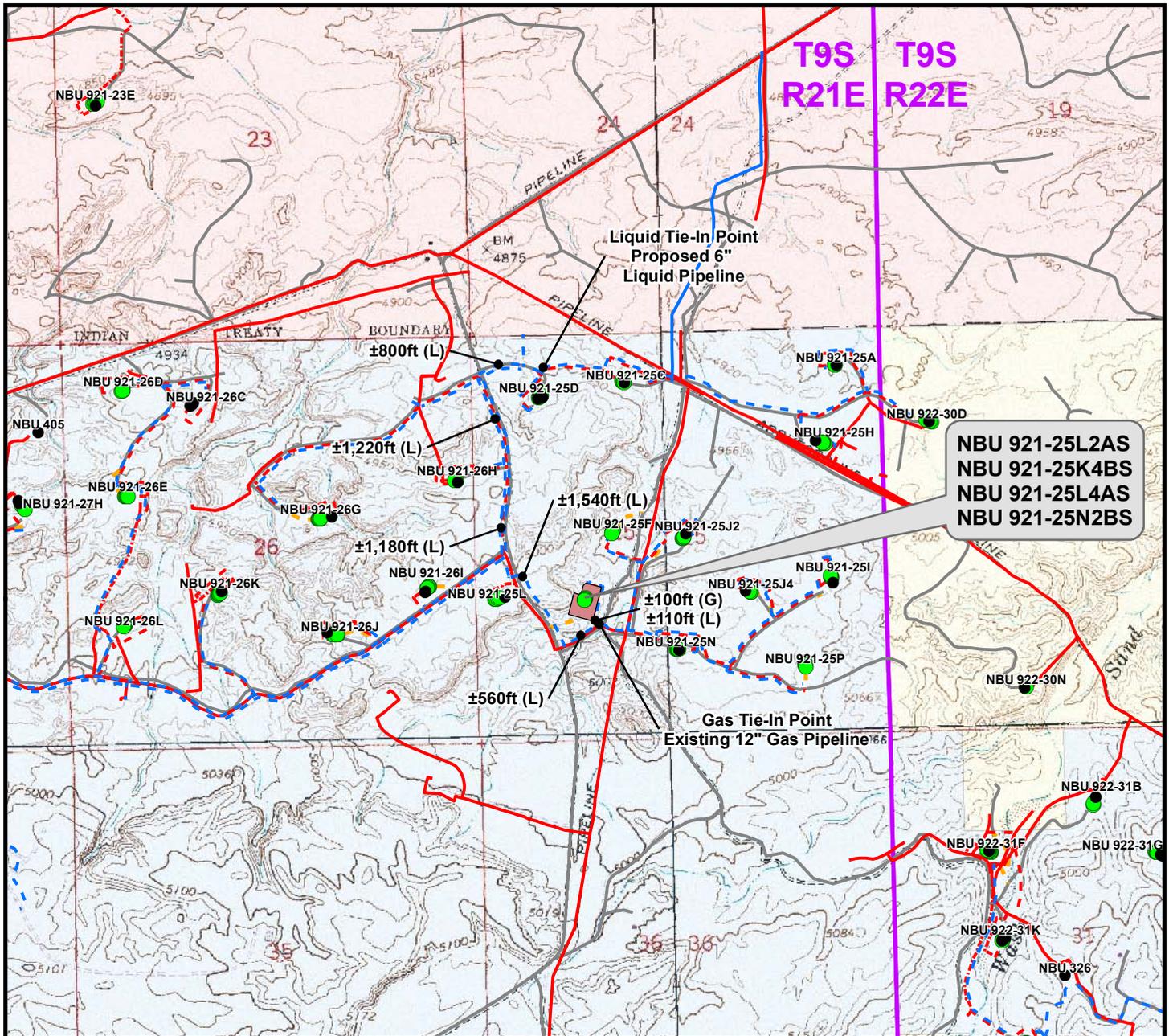
**WELL PAD - NBU 921-25K**

**TOPO C**  
 NBU 921-25L2AS, NBU 921-25K4BS,  
 NBU 921-25L4AS & NBU 921-25N2BS  
 LOCATED IN SECTION 25, T9S, R21E  
 S.L.B.&M., Uintah County, Utah

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



Scale: 1" = 2,000ft | NAD83 USP Central | Sheet No: **12** of 16  
 Drawn: CPS | Date: 14 May 2010  
 Revised: JFE | Date: 31 Aug 2010



**NBU 921-25L2AS  
NBU 921-25K4BS  
NBU 921-25L4AS  
NBU 921-25N2BS**

Proposed Liquid Pipeline	Length
Proposed 4" (Meter House to Edge of Pad)	±670ft
Proposed 4" (Edge of Pad to 25N Intersection)	±110ft
Proposed 6" (25N Intersection to 25D Intersection)	±5,300ft
<b>TOTAL PROPOSED LIQUID PIPELINE =</b>	<b>± 6,080ft</b>

Proposed Gas Pipeline	Length
Proposed 6" (Meter House to Edge of Pad)	±670ft
Proposed 6" (Edge of Pad to Existing 12" Pipeline)	±100ft
<b>TOTAL PROPOSED GAS PIPELINE =</b>	<b>±770ft</b>

**Legend**

- Well - Proposed      - - - 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
- Well Pad      - - - Gas Pipeline - Existing      - - - Liquid Pipeline - Existing      - - - Private

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

**WELL PAD - NBU 921-25K**

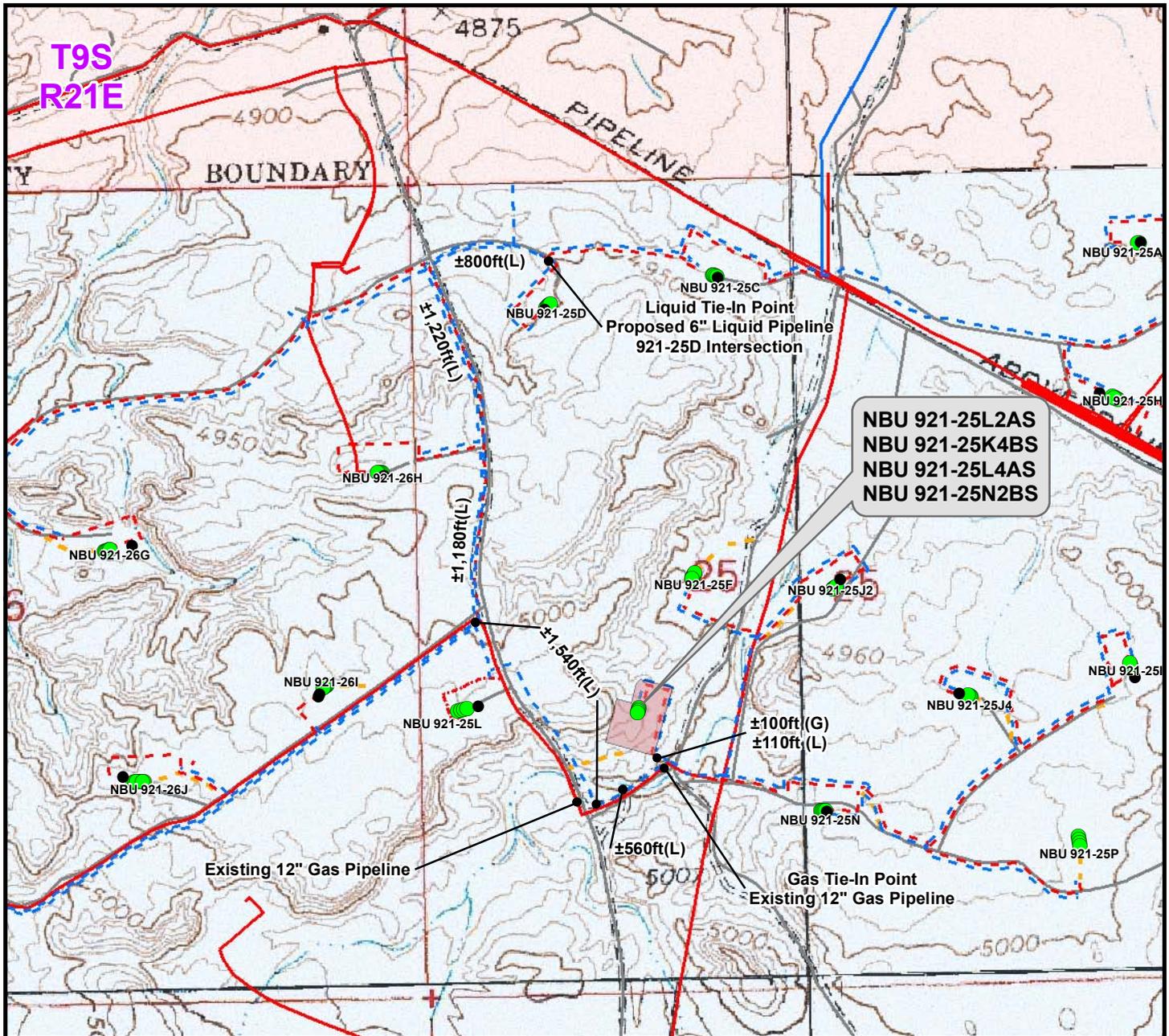
**TOPO D**  
**NBU 921-25L2AS, NBU 921-25K4BS,**  
**NBU 921-25L4AS & NBU 921-25N2BS**  
**LOCATED IN SECTION 25, T9S, R21E**  
**S.L.B.&M., Uintah County, Utah**

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



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: CPS	Date: 14 May 2010	<b>13</b>
Revised: JFE	Date: 31 Aug 2010	

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Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Proposed 4" (Meter House to Edge of Pad)	±670ft	Proposed 6" (Meter House to Edge of Pad)	±670ft
Proposed 4" (Edge of Pad to 25N Intersection)	±110ft	Proposed 6" (Edge of Pad to Existing 12" Pipeline)	±100ft
Proposed 6" (25N Intersection to 25D Intersection)	±5,300ft		
<b>TOTAL PROPOSED LIQUID PIPELINE =</b>	<b>± 6,080ft</b>	<b>TOTAL PROPOSED GAS PIPELINE =</b>	<b>±770ft</b>

**Legend**

- Well - Proposed    - - - 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
- Well Pad    - - - Gas Pipeline - Existing    - - - Liquid Pipeline - Existing
- State
- Private

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

**WELL PAD - NBU 921-25K**

**TOPO D2 (PAD & PIPELINE DETAIL)**  
 NBU 921-25L2AS, NBU 921-25K4BS,  
 NBU 921-25L4AS & NBU 921-25N2BS  
 LOCATED IN SECTION 25, T9S, R21E  
 S.L.B.&M., UINAH COUNTY, UTAH

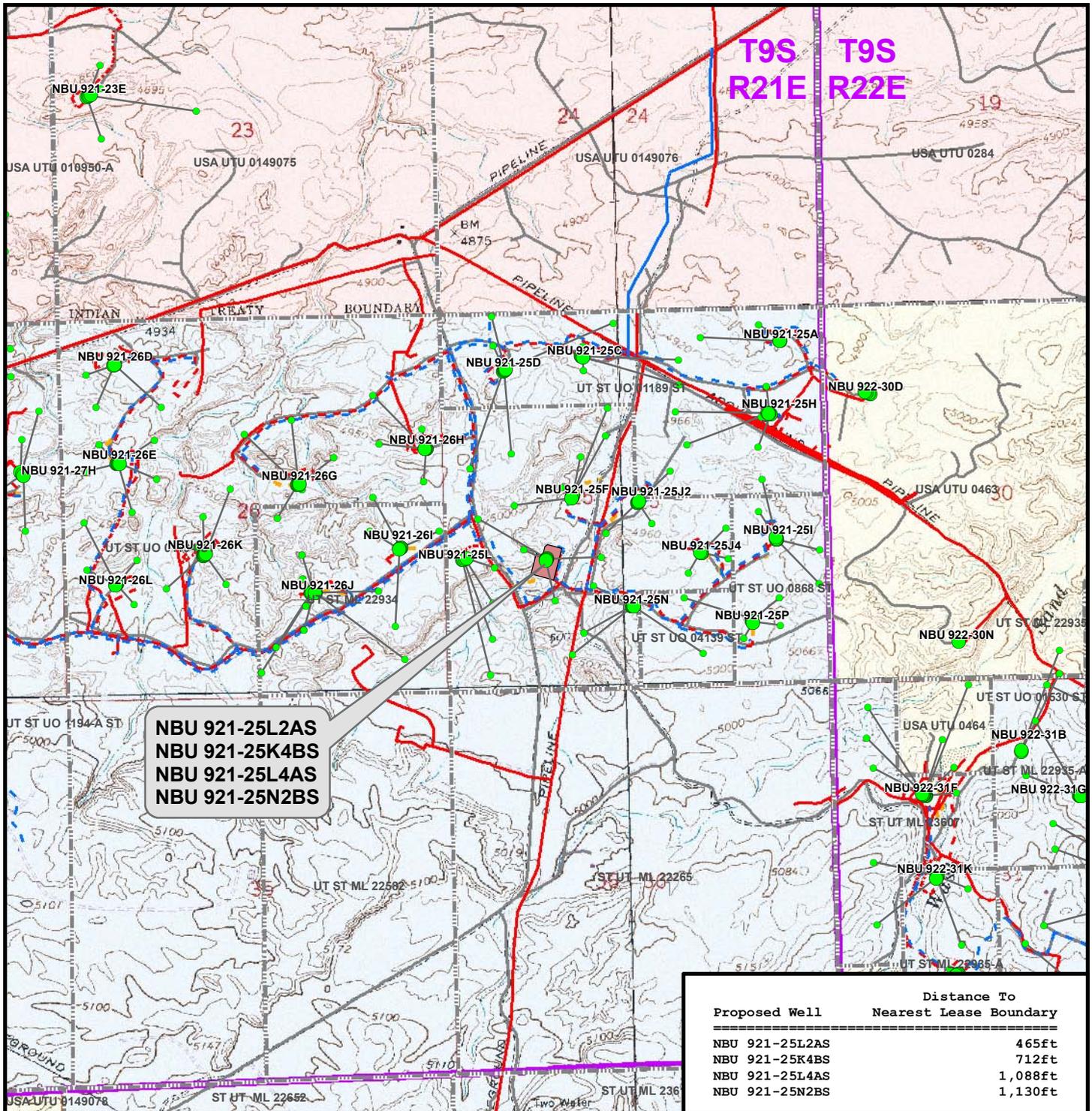
**CONSULTING, LLC**  
 371 Coffeen Avenue  
 Sheridan, WY 82801  
 Phone (307) 674-0609  
 Fax (307) 674-0182

Scale: 1" = 1,000ft    NAD83 USP Central    Sheet No:

Drawn: CPS    Date: 14 May 2010

Revised: JFE    Date: 31 Aug 2010

**14** 14 of 16



**NBU 921-25L2AS  
NBU 921-25K4BS  
NBU 921-25L4AS  
NBU 921-25N2BS**

Proposed Well	Distance To Nearest Lease Boundary
NBU 921-25L2AS	465ft
NBU 921-25K4BS	712ft
NBU 921-25L4AS	1,088ft
NBU 921-25N2BS	1,130ft

**Legend**

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

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

**WELL PAD - NBU 921-25K**

**TOPO E**  
NBU 921-25L2AS, NBU 921-25K4BS,  
NBU 921-25L4AS & NBU 921-25N2BS  
LOCATED IN SECTION 25, T9S, R21E  
S.L.B.&M., Uintah County, Utah

**609**  
CONSULTING, LLC  
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Sheridan, WY 82801  
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Scale: 1" = 2,000ft | NAD83 USP Central  
Drawn: CPS | Date: 14 May 2010  
Revised: JFE | Date: 31 Aug 2010

Sheet No:  
**15** 15 of 16

**Kerr-McGee Oil & Gas Onshore, LP**  
**WELL PAD – NBU 921-25K**  
**WELLS – NBU 921-25L2AS, NBU 921-25K4BS,**  
**NBU 921-25L4AS & NBU 921-25N2BS**  
**Section 25, 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 18.7 miles to the proposed access road to the northeast. Exit left and follow road flags in a northeasterly direction approximately 450 feet to the proposed well pad.

Total distance from Vernal, Utah to the proposed well location is approximately 42.3 miles in a southerly direction.

Kerr McGee Oil and Gas Onshore LP

WELL DETAILS: NBU 921-25L2AS

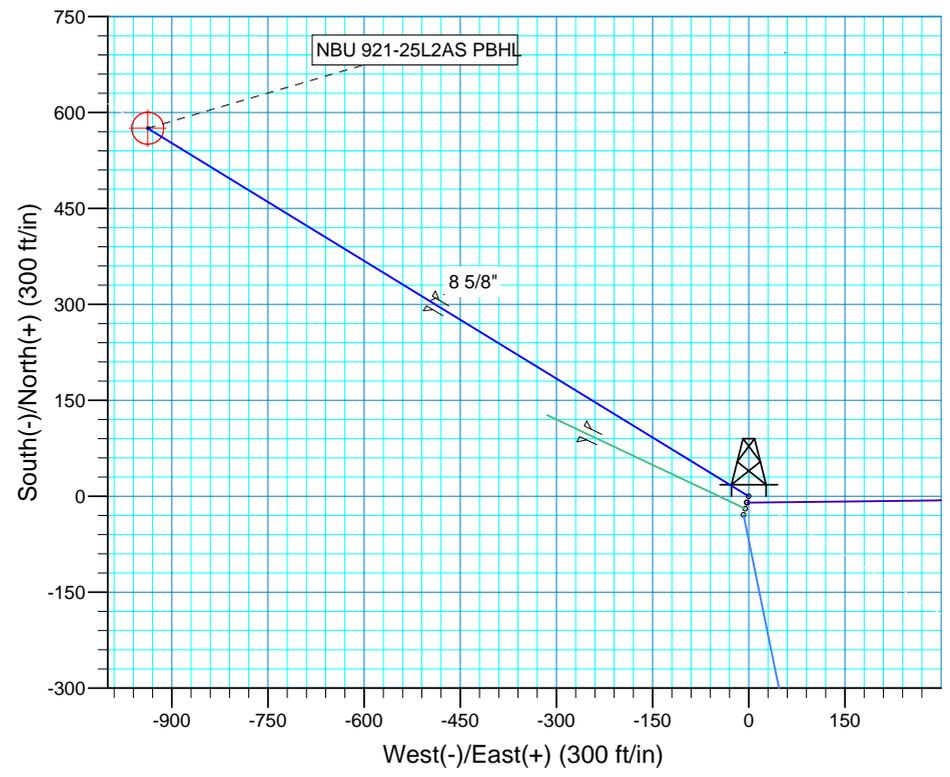
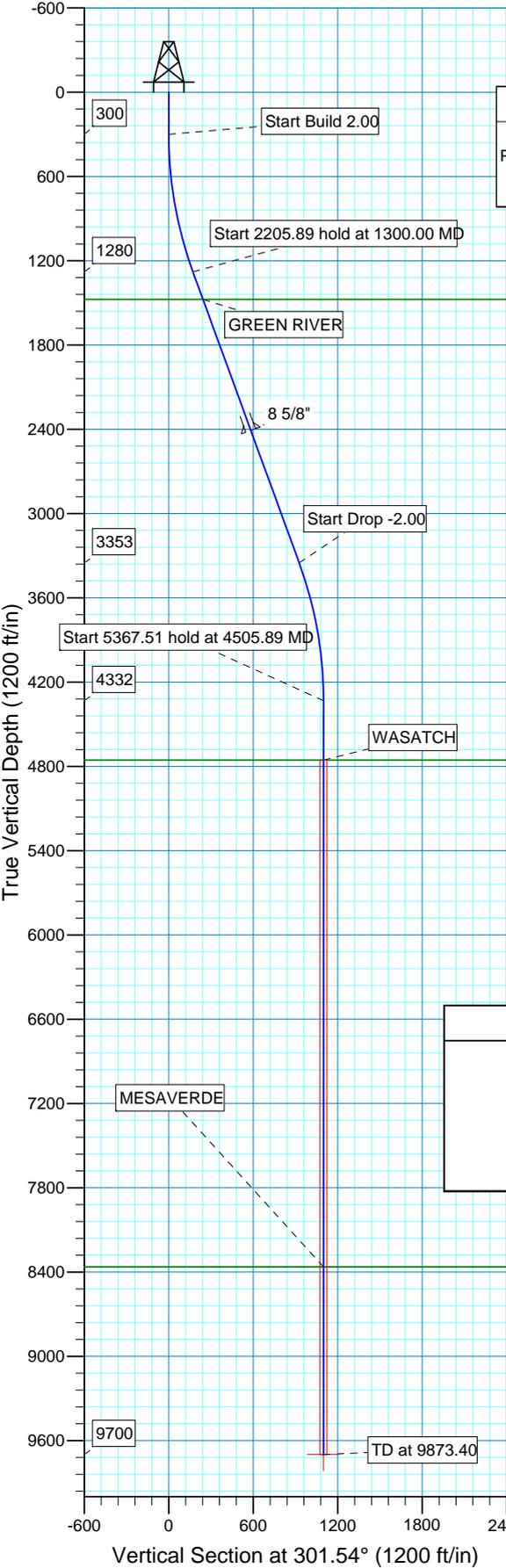
		GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)		4971.00	
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14531327.06	2059417.80	40° 0' 17.453 N	109° 30' 13.691 W

**T M** Azimuths to True North  
 Magnetic North: 11.19°

Magnetic Field  
 Strength: 52418.3snT  
 Dip Angle: 65.89°  
 Date: 07/30/2010  
 Model: IGRF2010

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	9700.00	575.47	-937.46	14531886.70	2058470.81	40° 0' 23.141 N	109° 30' 25.740 W	Circle (Radius: 25.0)



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	1300.00	20.00	301.54	1279.82	90.38	-147.24	2.00	301.54	172.77	
4	3505.89	20.00	301.54	3352.67	485.08	-790.22	0.00	0.00	927.23	
5	4505.89	0.00	0.00	4332.49	575.47	-937.46	2.00	180.00	1099.99	
6	9873.40	0.00	0.00	9700.00	575.47	-937.46	0.00	0.00	1099.99	NBU 921-25L2AS PBHL

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1475.00	1507.71	GREEN RIVER
4756.00	4929.40	WASATCH
8363.00	8536.40	MESAVERDE

PROJECT DETAILS: Uintah County, UT UTM12

Geodetic System: Universal Transverse Mercator (US Survey Feet)  
 Datum: NAD 1927 - Western US  
 Ellipsoid: Clarke 1866  
 Zone: Zone 12N (114 W to 108 W)  
 Location: SEC 25 T9S R21E  
 System Datum: Mean Sea Level  
 Local North: No north reference data is available



**Scientific Drilling**  
Rocky Mountain Operations

# **Kerr McGee Oil and Gas Onshore LP**

**Uintah County, UT UTM12  
NBU 921-25K Pad  
NBU 921-25L2AS  
OH**

**Plan: Plan #1**

## **Standard Planning Report**

**30 July, 2010**



**SDI**  
Planning Report



<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 921-25L2AS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)
<b>Site:</b>	NBU 921-25K Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-25L2AS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

<b>Project</b>	Uintah County, UT UTM12		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Fee	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 - Western US		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

<b>Site</b>	NBU 921-25K Pad, SEC 25 T9S R21E				
<b>Site Position:</b>		<b>Northing:</b>	14,531,298.01 ft	<b>Latitude:</b>	40° 0' 17.167 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,059,410.16 ft	<b>Longitude:</b>	109° 30' 13.795 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	in	<b>Grid Convergence:</b>	0.96 °

<b>Well</b>	NBU 921-25L2AS, 1848' FSL 1402' FWL					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,531,327.06 ft	<b>Latitude:</b>	40° 0' 17.453 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,059,417.80 ft	<b>Longitude:</b>	109° 30' 13.691 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,971.00 ft

<b>Wellbore</b>	OH
-----------------	----

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	07/30/2010	11.19	65.89	52,418

<b>Design</b>	Plan #1
---------------	---------

<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 0.00 301.54

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	20.00	301.54	1,279.82	90.38	-147.24	2.00	2.00	0.00	301.54	
3,505.89	20.00	301.54	3,352.67	485.08	-790.22	0.00	0.00	0.00	0.00	
4,505.89	0.00	0.00	4,332.49	575.47	-937.46	2.00	-2.00	0.00	180.00	
9,873.40	0.00	0.00	9,700.00	575.47	-937.46	0.00	0.00	0.00	0.00	NBU 921-25L2AS F



<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 921-25L2AS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)
<b>Site:</b>	NBU 921-25K Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-25L2AS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

**Planned Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
400.00	2.00	301.54	399.98	0.91	-1.49	1.75	2.00	2.00	0.00
500.00	4.00	301.54	499.84	3.65	-5.95	6.98	2.00	2.00	0.00
600.00	6.00	301.54	599.45	8.21	-13.37	15.69	2.00	2.00	0.00
700.00	8.00	301.54	698.70	14.59	-23.76	27.88	2.00	2.00	0.00
800.00	10.00	301.54	797.47	22.77	-37.09	43.52	2.00	2.00	0.00
900.00	12.00	301.54	895.62	32.75	-53.35	62.60	2.00	2.00	0.00
1,000.00	14.00	301.54	993.06	44.52	-72.52	85.10	2.00	2.00	0.00
1,100.00	16.00	301.54	1,089.64	58.06	-94.58	110.98	2.00	2.00	0.00
1,200.00	18.00	301.54	1,185.27	73.35	-119.49	140.21	2.00	2.00	0.00
1,300.00	20.00	301.54	1,279.82	90.38	-147.24	172.77	2.00	2.00	0.00
<b>Start 2205.89 hold at 1300.00 MD</b>									
1,400.00	20.00	301.54	1,373.78	108.28	-176.39	206.97	0.00	0.00	0.00
1,500.00	20.00	301.54	1,467.75	126.17	-205.54	241.17	0.00	0.00	0.00
1,507.71	20.00	301.54	1,475.00	127.55	-207.78	243.81	0.00	0.00	0.00
<b>GREEN RIVER</b>									
1,600.00	20.00	301.54	1,561.72	144.06	-234.68	275.37	0.00	0.00	0.00
1,700.00	20.00	301.54	1,655.69	161.96	-263.83	309.58	0.00	0.00	0.00
1,800.00	20.00	301.54	1,749.66	179.85	-292.98	343.78	0.00	0.00	0.00
1,900.00	20.00	301.54	1,843.63	197.74	-322.13	377.98	0.00	0.00	0.00
2,000.00	20.00	301.54	1,937.60	215.63	-351.28	412.18	0.00	0.00	0.00
2,100.00	20.00	301.54	2,031.57	233.53	-380.43	446.38	0.00	0.00	0.00
2,200.00	20.00	301.54	2,125.54	251.42	-409.57	480.59	0.00	0.00	0.00
2,300.00	20.00	301.54	2,219.51	269.31	-438.72	514.79	0.00	0.00	0.00
2,400.00	20.00	301.54	2,313.48	287.21	-467.87	548.99	0.00	0.00	0.00
2,500.00	20.00	301.54	2,407.45	305.10	-497.02	583.19	0.00	0.00	0.00
2,502.72	20.00	301.54	2,410.00	305.59	-497.81	584.12	0.00	0.00	0.00
<b>8 5/8"</b>									
2,600.00	20.00	301.54	2,501.42	322.99	-526.17	617.39	0.00	0.00	0.00
2,700.00	20.00	301.54	2,595.39	340.89	-555.31	651.60	0.00	0.00	0.00
2,800.00	20.00	301.54	2,689.35	358.78	-584.46	685.80	0.00	0.00	0.00
2,900.00	20.00	301.54	2,783.32	376.67	-613.61	720.00	0.00	0.00	0.00
3,000.00	20.00	301.54	2,877.29	394.56	-642.76	754.20	0.00	0.00	0.00
3,100.00	20.00	301.54	2,971.26	412.46	-671.91	788.40	0.00	0.00	0.00
3,200.00	20.00	301.54	3,065.23	430.35	-701.06	822.61	0.00	0.00	0.00
3,300.00	20.00	301.54	3,159.20	448.24	-730.20	856.81	0.00	0.00	0.00
3,400.00	20.00	301.54	3,253.17	466.14	-759.35	891.01	0.00	0.00	0.00
3,500.00	20.00	301.54	3,347.14	484.03	-788.50	925.21	0.00	0.00	0.00
3,505.89	20.00	301.54	3,352.67	485.08	-790.22	927.23	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
3,600.00	18.12	301.54	3,441.62	501.16	-816.41	957.96	2.00	-2.00	0.00
3,700.00	16.12	301.54	3,537.19	516.56	-841.49	987.39	2.00	-2.00	0.00
3,800.00	14.12	301.54	3,633.72	530.20	-863.72	1,013.47	2.00	-2.00	0.00
3,900.00	12.12	301.54	3,731.11	542.07	-883.06	1,036.16	2.00	-2.00	0.00
4,000.00	10.12	301.54	3,829.22	552.16	-899.49	1,055.44	2.00	-2.00	0.00
4,100.00	8.12	301.54	3,927.96	560.45	-912.99	1,071.29	2.00	-2.00	0.00
4,200.00	6.12	301.54	4,027.18	566.93	-923.55	1,083.68	2.00	-2.00	0.00
4,300.00	4.12	301.54	4,126.78	571.60	-931.15	1,092.60	2.00	-2.00	0.00
4,400.00	2.12	301.54	4,226.62	574.44	-935.79	1,098.04	2.00	-2.00	0.00



<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 921-25L2AS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)
<b>Site:</b>	NBU 921-25K Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-25L2AS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

**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)
4,500.00	0.12	301.54	4,326.60	575.46	-937.45	1,099.99	2.00	-2.00	0.00
4,505.89	0.00	0.00	4,332.49	575.47	-937.46	1,099.99	2.00	-2.00	0.00
<b>Start 5367.51 hold at 4505.89 MD</b>									
4,600.00	0.00	0.00	4,426.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
4,700.00	0.00	0.00	4,526.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
4,800.00	0.00	0.00	4,626.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
4,900.00	0.00	0.00	4,726.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
4,929.40	0.00	0.00	4,756.00	575.47	-937.46	1,099.99	0.00	0.00	0.00
<b>WASATCH</b>									
5,000.00	0.00	0.00	4,826.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
5,100.00	0.00	0.00	4,926.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
5,200.00	0.00	0.00	5,026.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
5,300.00	0.00	0.00	5,126.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
5,400.00	0.00	0.00	5,226.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
5,500.00	0.00	0.00	5,326.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
5,600.00	0.00	0.00	5,426.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
5,700.00	0.00	0.00	5,526.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
5,800.00	0.00	0.00	5,626.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
5,900.00	0.00	0.00	5,726.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
6,000.00	0.00	0.00	5,826.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
6,100.00	0.00	0.00	5,926.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
6,200.00	0.00	0.00	6,026.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
6,300.00	0.00	0.00	6,126.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
6,400.00	0.00	0.00	6,226.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
6,500.00	0.00	0.00	6,326.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
6,600.00	0.00	0.00	6,426.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
6,700.00	0.00	0.00	6,526.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
6,800.00	0.00	0.00	6,626.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
6,900.00	0.00	0.00	6,726.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
7,000.00	0.00	0.00	6,826.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
7,100.00	0.00	0.00	6,926.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
7,200.00	0.00	0.00	7,026.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
7,300.00	0.00	0.00	7,126.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
7,400.00	0.00	0.00	7,226.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
7,500.00	0.00	0.00	7,326.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
7,600.00	0.00	0.00	7,426.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
7,700.00	0.00	0.00	7,526.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
7,800.00	0.00	0.00	7,626.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
7,900.00	0.00	0.00	7,726.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
8,000.00	0.00	0.00	7,826.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
8,100.00	0.00	0.00	7,926.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
8,200.00	0.00	0.00	8,026.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
8,300.00	0.00	0.00	8,126.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
8,400.00	0.00	0.00	8,226.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
8,500.00	0.00	0.00	8,326.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
8,536.40	0.00	0.00	8,363.00	575.47	-937.46	1,099.99	0.00	0.00	0.00
<b>MESAVERDE</b>									
8,600.00	0.00	0.00	8,426.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
8,700.00	0.00	0.00	8,526.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
8,800.00	0.00	0.00	8,626.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
8,900.00	0.00	0.00	8,726.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
9,000.00	0.00	0.00	8,826.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
9,100.00	0.00	0.00	8,926.60	575.47	-937.46	1,099.99	0.00	0.00	0.00



**Scientific Drilling**  
Rocky Mountain Operations

# **Kerr McGee Oil and Gas Onshore LP**

**Uintah County, UT UTM12  
NBU 921-25K Pad  
NBU 921-25L2AS  
OH**

**Plan: Plan #1**

## **Standard Planning Report - Geographic**

**30 July, 2010**



**SDI**  
Planning Report - Geographic



<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 921-25L2AS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)
<b>Site:</b>	NBU 921-25K Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-25L2AS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

<b>Project</b>	Uintah County, UT UTM12		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Fee	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 - Western US		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

<b>Site</b>	NBU 921-25K Pad, SEC 25 T9S R21E				
<b>Site Position:</b>		<b>Northing:</b>	14,531,298.01 ft	<b>Latitude:</b>	40° 0' 17.167 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,059,410.16 ft	<b>Longitude:</b>	109° 30' 13.795 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	in	<b>Grid Convergence:</b>	0.96 °

<b>Well</b>	NBU 921-25L2AS, 1848' FSL 1402' FWL					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,531,327.06 ft	<b>Latitude:</b>	40° 0' 17.453 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,059,417.80 ft	<b>Longitude:</b>	109° 30' 13.691 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,971.00 ft

<b>Wellbore</b>	OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	07/30/2010	11.19	65.89	52,418

<b>Design</b>	Plan #1
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<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 0.00 301.54

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	20.00	301.54	1,279.82	90.38	-147.24	2.00	2.00	0.00	301.54	
3,505.89	20.00	301.54	3,352.67	485.08	-790.22	0.00	0.00	0.00	0.00	
4,505.89	0.00	0.00	4,332.49	575.47	-937.46	2.00	-2.00	0.00	180.00	
9,873.40	0.00	0.00	9,700.00	575.47	-937.46	0.00	0.00	0.00	0.00	NBU 921-25L2AS F



<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 921-25L2AS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)
<b>Site:</b>	NBU 921-25K Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-25L2AS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

**Planned Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,531,327.06	2,059,417.80	40° 0' 17.453 N	109° 30' 13.691 W
100.00	0.00	0.00	100.00	0.00	0.00	14,531,327.06	2,059,417.80	40° 0' 17.453 N	109° 30' 13.691 W
200.00	0.00	0.00	200.00	0.00	0.00	14,531,327.06	2,059,417.80	40° 0' 17.453 N	109° 30' 13.691 W
300.00	0.00	0.00	300.00	0.00	0.00	14,531,327.06	2,059,417.80	40° 0' 17.453 N	109° 30' 13.691 W
<b>Start Build 2.00</b>									
400.00	2.00	301.54	399.98	0.91	-1.49	14,531,327.94	2,059,416.29	40° 0' 17.462 N	109° 30' 13.710 W
500.00	4.00	301.54	499.84	3.65	-5.95	14,531,330.61	2,059,411.79	40° 0' 17.489 N	109° 30' 13.767 W
600.00	6.00	301.54	599.45	8.21	-13.37	14,531,335.04	2,059,404.29	40° 0' 17.534 N	109° 30' 13.863 W
700.00	8.00	301.54	698.70	14.59	-23.76	14,531,341.24	2,059,393.79	40° 0' 17.597 N	109° 30' 13.996 W
800.00	10.00	301.54	797.47	22.77	-37.09	14,531,349.20	2,059,380.33	40° 0' 17.678 N	109° 30' 14.168 W
900.00	12.00	301.54	895.62	32.75	-53.35	14,531,358.91	2,059,363.90	40° 0' 17.777 N	109° 30' 14.377 W
1,000.00	14.00	301.54	993.06	44.52	-72.52	14,531,370.35	2,059,344.54	40° 0' 17.893 N	109° 30' 14.623 W
1,100.00	16.00	301.54	1,089.64	58.06	-94.58	14,531,383.52	2,059,322.26	40° 0' 18.027 N	109° 30' 14.906 W
1,200.00	18.00	301.54	1,185.27	73.35	-119.49	14,531,398.39	2,059,297.09	40° 0' 18.178 N	109° 30' 15.227 W
1,300.00	20.00	301.54	1,279.82	90.38	-147.24	14,531,414.95	2,059,269.06	40° 0' 18.346 N	109° 30' 15.583 W
<b>Start 2205.89 hold at 1300.00 MD</b>									
1,400.00	20.00	301.54	1,373.78	108.28	-176.39	14,531,432.36	2,059,239.62	40° 0' 18.523 N	109° 30' 15.958 W
1,500.00	20.00	301.54	1,467.75	126.17	-205.54	14,531,449.76	2,059,210.17	40° 0' 18.700 N	109° 30' 16.333 W
1,507.71	20.00	301.54	1,475.00	127.55	-207.78	14,531,451.10	2,059,207.90	40° 0' 18.714 N	109° 30' 16.361 W
<b>GREEN RIVER</b>									
1,600.00	20.00	301.54	1,561.72	144.06	-234.68	14,531,467.16	2,059,180.73	40° 0' 18.877 N	109° 30' 16.707 W
1,700.00	20.00	301.54	1,655.69	161.96	-263.83	14,531,484.56	2,059,151.28	40° 0' 19.054 N	109° 30' 17.082 W
1,800.00	20.00	301.54	1,749.66	179.85	-292.98	14,531,501.96	2,059,121.84	40° 0' 19.230 N	109° 30' 17.456 W
1,900.00	20.00	301.54	1,843.63	197.74	-322.13	14,531,519.36	2,059,092.39	40° 0' 19.407 N	109° 30' 17.831 W
2,000.00	20.00	301.54	1,937.60	215.63	-351.28	14,531,536.76	2,059,062.95	40° 0' 19.584 N	109° 30' 18.206 W
2,100.00	20.00	301.54	2,031.57	233.53	-380.43	14,531,554.16	2,059,033.50	40° 0' 19.761 N	109° 30' 18.580 W
2,200.00	20.00	301.54	2,125.54	251.42	-409.57	14,531,571.56	2,059,004.06	40° 0' 19.938 N	109° 30' 18.955 W
2,300.00	20.00	301.54	2,219.51	269.31	-438.72	14,531,588.96	2,058,974.62	40° 0' 20.115 N	109° 30' 19.330 W
2,400.00	20.00	301.54	2,313.48	287.21	-467.87	14,531,606.37	2,058,945.17	40° 0' 20.292 N	109° 30' 19.704 W
2,500.00	20.00	301.54	2,407.45	305.10	-497.02	14,531,623.77	2,058,915.73	40° 0' 20.468 N	109° 30' 20.079 W
2,502.72	20.00	301.54	2,410.00	305.59	-497.81	14,531,624.24	2,058,914.93	40° 0' 20.473 N	109° 30' 20.089 W
<b>8 5/8"</b>									
2,600.00	20.00	301.54	2,501.42	322.99	-526.17	14,531,641.17	2,058,886.28	40° 0' 20.645 N	109° 30' 20.454 W
2,700.00	20.00	301.54	2,595.39	340.89	-555.31	14,531,658.57	2,058,856.84	40° 0' 20.822 N	109° 30' 20.828 W
2,800.00	20.00	301.54	2,689.35	358.78	-584.46	14,531,675.97	2,058,827.39	40° 0' 20.999 N	109° 30' 21.203 W
2,900.00	20.00	301.54	2,783.32	376.67	-613.61	14,531,693.37	2,058,797.95	40° 0' 21.176 N	109° 30' 21.578 W
3,000.00	20.00	301.54	2,877.29	394.56	-642.76	14,531,710.77	2,058,768.50	40° 0' 21.353 N	109° 30' 21.952 W
3,100.00	20.00	301.54	2,971.26	412.46	-671.91	14,531,728.17	2,058,739.06	40° 0' 21.530 N	109° 30' 22.327 W
3,200.00	20.00	301.54	3,065.23	430.35	-701.06	14,531,745.57	2,058,709.61	40° 0' 21.706 N	109° 30' 22.701 W
3,300.00	20.00	301.54	3,159.20	448.24	-730.20	14,531,762.97	2,058,680.17	40° 0' 21.883 N	109° 30' 23.076 W
3,400.00	20.00	301.54	3,253.17	466.14	-759.35	14,531,780.38	2,058,650.73	40° 0' 22.060 N	109° 30' 23.451 W
3,500.00	20.00	301.54	3,347.14	484.03	-788.50	14,531,797.78	2,058,621.28	40° 0' 22.237 N	109° 30' 23.825 W
3,505.89	20.00	301.54	3,352.67	485.08	-790.22	14,531,798.80	2,058,619.55	40° 0' 22.247 N	109° 30' 23.847 W
<b>Start Drop -2.00</b>									
3,600.00	18.12	301.54	3,441.62	501.16	-816.41	14,531,814.44	2,058,593.09	40° 0' 22.406 N	109° 30' 24.184 W
3,700.00	16.12	301.54	3,537.19	516.56	-841.49	14,531,829.41	2,058,567.75	40° 0' 22.559 N	109° 30' 24.507 W
3,800.00	14.12	301.54	3,633.72	530.20	-863.72	14,531,842.68	2,058,545.30	40° 0' 22.693 N	109° 30' 24.792 W
3,900.00	12.12	301.54	3,731.11	542.07	-883.06	14,531,854.22	2,058,525.77	40° 0' 22.811 N	109° 30' 25.041 W
4,000.00	10.12	301.54	3,829.22	552.16	-899.49	14,531,864.03	2,058,509.17	40° 0' 22.910 N	109° 30' 25.252 W
4,100.00	8.12	301.54	3,927.96	560.45	-912.99	14,531,872.10	2,058,495.52	40° 0' 22.992 N	109° 30' 25.426 W
4,200.00	6.12	301.54	4,027.18	566.93	-923.55	14,531,878.40	2,058,484.86	40° 0' 23.056 N	109° 30' 25.561 W
4,300.00	4.12	301.54	4,126.78	571.60	-931.15	14,531,882.94	2,058,477.18	40° 0' 23.103 N	109° 30' 25.659 W
4,400.00	2.12	301.54	4,226.62	574.44	-935.79	14,531,885.70	2,058,472.50	40° 0' 23.131 N	109° 30' 25.719 W



<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 921-25L2AS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)
<b>Site:</b>	NBU 921-25K Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-25L2AS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

**Planned Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
4,500.00	0.12	301.54	4,326.60	575.46	-937.45	14,531,886.70	2,058,470.82	40° 0' 23.141 N	109° 30' 25.740 W
4,505.89	0.00	0.00	4,332.49	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
<b>Start 5367.51 hold at 4505.89 MD</b>									
4,600.00	0.00	0.00	4,426.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
4,700.00	0.00	0.00	4,526.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
4,800.00	0.00	0.00	4,626.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
4,900.00	0.00	0.00	4,726.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
4,929.40	0.00	0.00	4,756.00	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
<b>WASATCH</b>									
5,000.00	0.00	0.00	4,826.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
5,100.00	0.00	0.00	4,926.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
5,200.00	0.00	0.00	5,026.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
5,300.00	0.00	0.00	5,126.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
5,400.00	0.00	0.00	5,226.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
5,500.00	0.00	0.00	5,326.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
5,600.00	0.00	0.00	5,426.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
5,700.00	0.00	0.00	5,526.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
5,800.00	0.00	0.00	5,626.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
5,900.00	0.00	0.00	5,726.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
6,000.00	0.00	0.00	5,826.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
6,100.00	0.00	0.00	5,926.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
6,200.00	0.00	0.00	6,026.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
6,300.00	0.00	0.00	6,126.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
6,400.00	0.00	0.00	6,226.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
6,500.00	0.00	0.00	6,326.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
6,600.00	0.00	0.00	6,426.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
6,700.00	0.00	0.00	6,526.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
6,800.00	0.00	0.00	6,626.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
6,900.00	0.00	0.00	6,726.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
7,000.00	0.00	0.00	6,826.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
7,100.00	0.00	0.00	6,926.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
7,200.00	0.00	0.00	7,026.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
7,300.00	0.00	0.00	7,126.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
7,400.00	0.00	0.00	7,226.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
7,500.00	0.00	0.00	7,326.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
7,600.00	0.00	0.00	7,426.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
7,700.00	0.00	0.00	7,526.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
7,800.00	0.00	0.00	7,626.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
7,900.00	0.00	0.00	7,726.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
8,000.00	0.00	0.00	7,826.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
8,100.00	0.00	0.00	7,926.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
8,200.00	0.00	0.00	8,026.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
8,300.00	0.00	0.00	8,126.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
8,400.00	0.00	0.00	8,226.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
8,500.00	0.00	0.00	8,326.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
8,536.40	0.00	0.00	8,363.00	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
<b>MESAVERDE</b>									
8,600.00	0.00	0.00	8,426.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
8,700.00	0.00	0.00	8,526.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
8,800.00	0.00	0.00	8,626.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
8,900.00	0.00	0.00	8,726.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
9,000.00	0.00	0.00	8,826.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
9,100.00	0.00	0.00	8,926.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
9,200.00	0.00	0.00	9,026.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W



<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 921-25L2AS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)
<b>Site:</b>	NBU 921-25K Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-25L2AS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

**Planned Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
9,300.00	0.00	0.00	9,126.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
9,400.00	0.00	0.00	9,226.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
9,500.00	0.00	0.00	9,326.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
9,600.00	0.00	0.00	9,426.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
9,700.00	0.00	0.00	9,526.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
9,800.00	0.00	0.00	9,626.60	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
9,873.40	0.00	0.00	9,700.00	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W

TD at 9873.40 - NBU 921-25L2AS PBHL

**Targets**

Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
NBU 921-25L2AS PB	- plan hits target center	0.00	0.00	9,700.00	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
	- Circle (radius 25.00)									

**Casing Points**

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,502.72	2,410.00	8 5/8"	8.625	11.000

**Formations**

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,507.71	1,475.00	GREEN RIVER			
4,929.40	4,756.00	WASATCH			
8,536.40	8,363.00	MESAVERDE			

**Plan Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
300.00	300.00	0.00	0.00	Start Build 2.00
1,300.00	1,279.82	90.38	-147.24	Start 2205.89 hold at 1300.00 MD
3,505.89	3,352.67	485.08	-790.22	Start Drop -2.00
4,505.89	4,332.49	575.47	-937.46	Start 5367.51 hold at 4505.89 MD
9,873.40	9,700.00	575.47	-937.46	TD at 9873.40



**SDI**  
Planning Report



<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 921-25L2AS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)
<b>Site:</b>	NBU 921-25K Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-25L2AS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

**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	9,026.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
9,300.00	0.00	0.00	9,126.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
9,400.00	0.00	0.00	9,226.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
9,500.00	0.00	0.00	9,326.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
9,600.00	0.00	0.00	9,426.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
9,700.00	0.00	0.00	9,526.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
9,800.00	0.00	0.00	9,626.60	575.47	-937.46	1,099.99	0.00	0.00	0.00
9,873.40	0.00	0.00	9,700.00	575.47	-937.46	1,099.99	0.00	0.00	0.00
<b>TD at 9873.40 - NBU 921-25L2AS PBHL</b>									

**Targets**

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
NBU 921-25L2AS PB - hit/miss target - Shape	0.00	0.00	9,700.00	575.47	-937.46	14,531,886.70	2,058,470.81	40° 0' 23.141 N	109° 30' 25.740 W
- plan hits target center - Circle (radius 25.00)									

**Casing Points**

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,502.72	2,410.00	8 5/8"	8.625	11.000

**Formations**

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,507.71	1,475.00	GREEN RIVER			
4,929.40	4,756.00	WASATCH			
8,536.40	8,363.00	MESAVERDE			

**Plan Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
1,300.00	1,279.82	90.38	-147.24	Start 2205.89 hold at 1300.00 MD
3,505.89	3,352.67	485.08	-790.22	Start Drop -2.00
4,505.89	4,332.49	575.47	-937.46	Start 5367.51 hold at 4505.89 MD
9,873.40	9,700.00	575.47	-937.46	TD at 9873.40

**NBU 921-25K4BS**

Surface: 1,838' FSL 1,400' FWL (NE/4SW/4)  
BHL: 1,848' FSL 2,161' FWL (NE/4SW/4)

**NBU 921-25L2AS**

Surface: 1,848' FSL 1,402' FWL (NE/4SW/4)  
BHL: 2,423' FSL 465' FWL (NW/4SW/4)

**NBU 921-25L4AS**

Surface: 1,829' FSL 1,397' FWL (NE/4SW/4)  
BHL: 1,975' FSL 1,088' FWL (NW/4SW/4)

**NBU 921-25N2BS**

Surface: 1,819' FSL 1,394' FWL (NE/4SW/4)  
BHL: 1,260' FSL 1,508' FWL (SE/4SW/4)

Pad: NBU 921-25K  
Section 25 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:**

Approximately  $\pm 450'$  (0.1 miles) of new access road to this pad location 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:**

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  $\pm 790'$  and the individual segments are broken up as follows:

$\pm 690'$  (0.1 miles) –New 6" buried gas pipeline from the meter to the edge of the pad.

$\pm 100'$  (0.02 miles) –New 6" buried gas pipeline from the edge of pad to the existing 12" gas pipeline.

The total liquid gathering pipeline distance from the meter to the tie in point is  $\pm 6,100'$  and the individual segments are broken up as follows:

$\pm 690'$  (0.1 miles) –New 4" buried liquid pipeline from the meter to the edge of the pad.

$\pm 110'$  (0.02 miles) –New 4" buried liquid pipeline from the edge of pad to the NBU 921-25N pad intersection.

±5,300' (1.01 miles) –New 6" buried liquid pipeline from the NBU 921-25N pad intersection to the NBU 921-25D 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:**

A Class I literature survey has been conducted by Montgomery Archaeological Consultants, Inc. (MOAC). For additional details please refer to report MOAC 10-125.

A paleontological reconnaissance has been completed by Intermountain Paleo-Consulting (IPC) and a report will be provided under separate cover.

A biological field survey was completed by Grasslands Consulting, Inc. on July 13, 2010. For additional details please refer to report GCI-293.

**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

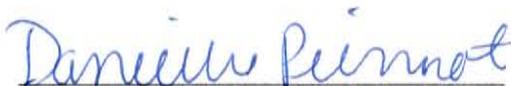
Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

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

August 13, 2010

Date

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS  
ONSHORE LP'S 36 PROPOSED WELL LOCATIONS  
IN T9S, R21E, SECTION 25  
(MOAC Report No. 10-125)  
UINTAH COUNTY, UTAH

By:

Nicole Shelnut

Prepared For:

State of Utah  
School and Institutional Trust Lands Administration

Prepared Under Contract With:

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

Prepared By:

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

MOAC Report No. 10-125

July 26, 2010

State of Utah Public Lands Policy Coordination Office  
Permit No. 117

United States Department of Interior (FLPMA)  
Permit No. 10-UT-60122



# Grasslands Consulting, Inc.

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

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

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

**Report Number:** GCI #293

**Report Date:** August 03, 2010

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

**Well:** NBU 921-25K well pad (Bores: NBU 921-25K4BS, NBU 921-25L4AS, NBU 921-25L2AS, & NBU 921-25N2BS)

**Pipeline:** Associated pipeline leading to proposed well pad

**Access Road:** Associated road leading to proposed well pad

**Location:** Section 25, Township 9 South, Range 21 East; Uintah County, Utah

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

**Survey Date:** July 13, 2010

**Observers:** Grasslands Consulting, Inc. Biologists: Brad Snopek, Jennie Sinclair, Jonathan Sexauer, Adrienne Cunningham, Garrett Peterson and field technicians.



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

July 15, 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 921-25L2AS  
T9S-R21E  
Section 25: NESW surface, NWSW bottom hole  
Surface: 1848' FSL, 1402' FWL  
Bottom Hole: 2423' FSL, 465' 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 921-25L2AS 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,

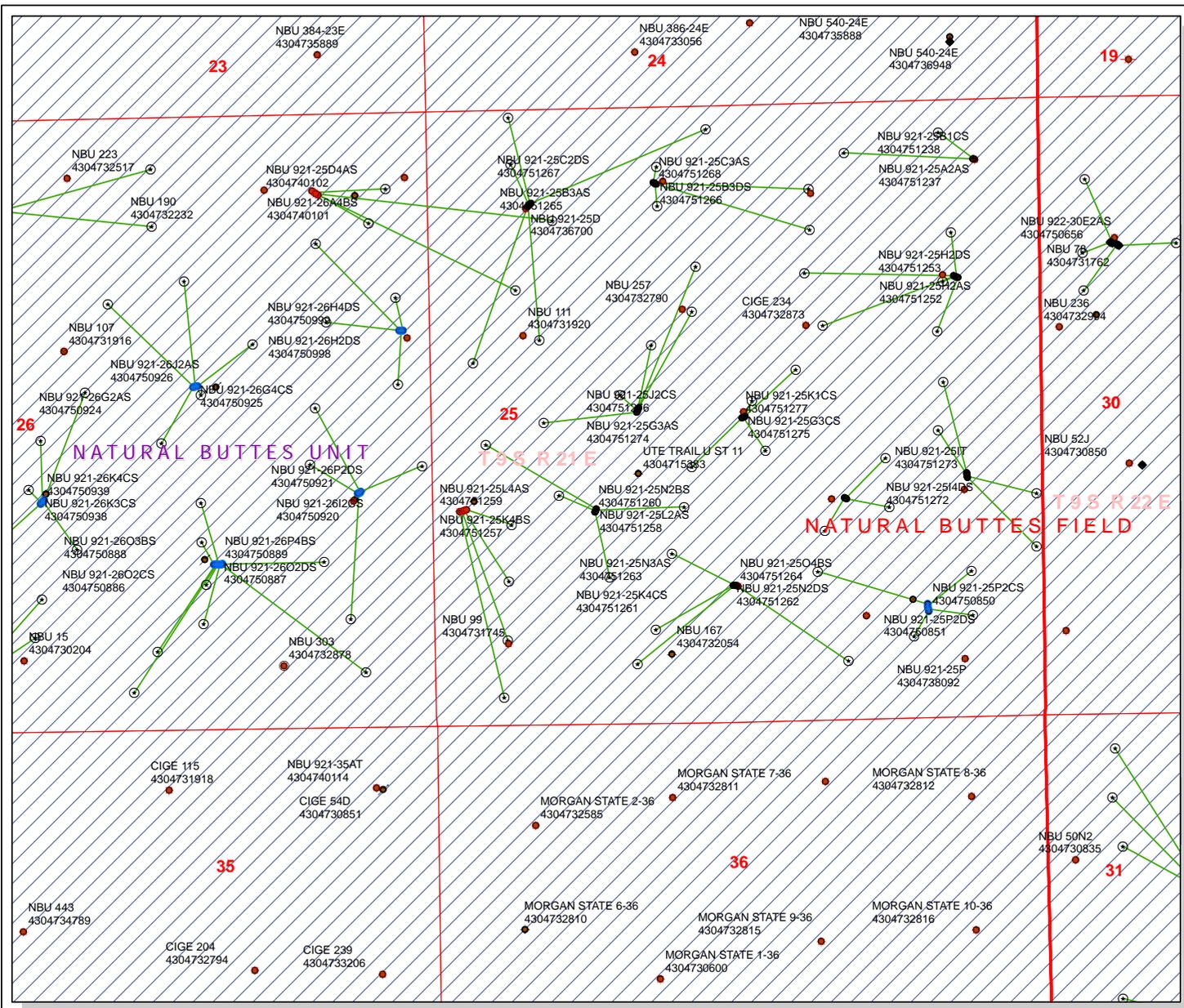
KERR-MCGEE OIL & GAS ONSHORE LP

Joe Matney  
Sr. Staff Landman

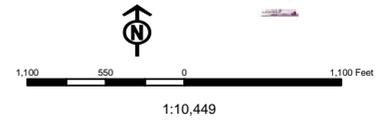
'APIWellNo:43047512580000'

**API Number: 4304751258**  
**Well Name: NBU 921-25L2AS**  
**Township 09.0 S Range 21.0 E Section 25**  
**Meridian: SLBM**  
 Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:  
 Map Produced by Diana Mason



<b>Units</b>	<b>Wells Query</b>
STATUS	✕ -all other values-
ACTIVE	APD - Approved Permit
EXPLORATORY	DRIL - Spudded (Drilling Commenced)
GAS STORAGE	GIW - Gas Injection
NF PP OIL	GS - Gas Storage
NF SECONDARY	LA - Location Abandoned
PI OIL	LOC - New Location
PP GAS	OPS - Operation Suspended
PP GEOTHERMAL	PA - Plugged Abandoned
PP OIL	PGW - Producing Gas Well
SECONDARY	POW - Producing Oil Well
TERMINATED	RET - Returned APD
Fields	SGW - Shut-in Gas Well
Sections	SDW - Shut-in Oil Well
Township	TA - Temp. Abandoned
Bottom Hole Location - AGRG	TW - Test Well
	WDW - Water Disposal
	WIW - Water Injection Well
	WSW - Water Supply Well



# 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)

August 17, 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 921-25A Pad

43-047-51237	NBU 921-25A2AS	Sec 25 T09S R21E 0489 FNL 0565 FEL
	BHL	Sec 25 T09S R21E 0252 FNL 0865 FEL

43-047-51238	NBU 921-25B1CS	Sec 25 T09S R21E 0489 FNL 0575 FEL
	BHL	Sec 25 T09S R21E 0416 FNL 1676 FEL

### NBU 921-25D Pad

43-047-51239	NBU 921-25C1AS	Sec 25 T09S R21E 0800 FNL 0893 FWL
	BHL	Sec 25 T09S R21E 0190 FNL 2405 FWL

43-047-51240	NBU 921-25D1BS	Sec 25 T09S R21E 0807 FNL 0885 FWL
	BHL	Sec 25 T09S R21E 0060 FNL 0716 FWL

43-047-51241	NBU 921-25E1CS	Sec 25 T09S R21E 0821 FNL 0871 FWL
	BHL	Sec 25 T09S R21E 1976 FNL 0947 FWL

43-047-51242	NBU 921-25E3AS	Sec 25 T09S R21E 0828 FNL 0864 FWL
	BHL	Sec 25 T09S R21E 2162 FNL 0371 FWL

43-047-51251	NBU 921-25D1CS	Sec 25 T09S R21E 0814 FNL 0878 FWL
	BHL	Sec 25 T09S R21E 0460 FNL 0726 FWL

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

**NBU 921-25F Pad**

43-047-51243	NBU 921-25F1BS	Sec 25 T09S R21E 2580 FNL 1780 FWL
	BHL	Sec 25 T09S R21E 1366 FNL 2296 FWL
43-047-51244	NBU 921-25F1CS	Sec 25 T09S R21E 2571 FNL 1784 FWL
	BHL	Sec 25 T09S R21E 1754 FNL 2259 FWL
43-047-51245	NBU 921-25F3AS	Sec 25 T09S R21E 2589 FNL 1776 FWL
	BHL	Sec 25 T09S R21E 2034 FNL 1905 FWL
43-047-51246	NBU 921-25F3CS	Sec 25 T09S R21E 2598 FNL 1772 FWL
	BHL	Sec 25 T09S R21E 2461 FNL 1628 FWL
43-047-51247	NBU 921-25L1BS	Sec 25 T09S R21E 2607 FNL 1768 FWL
	BHL	Sec 25 T09S R21E 2597 FSL 0969 FWL

**NBU 921-25H Pad**

43-047-51248	NBU 921-25A3DS	Sec 25 T09S R21E 1498 FNL 0736 FEL
	BHL	Sec 25 T09S R21E 1110 FNL 0776 FEL
43-047-51249	NBU 921-25G1CS	Sec 25 T09S R21E 1489 FNL 0754 FEL
	BHL	Sec 25 T09S R21E 1895 FNL 1893 FEL
43-047-51250	NBU 921-25G2AS	Sec 25 T09S R21E 1484 FNL 0763 FEL
	BHL	Sec 25 T09S R21E 1439 FNL 2042 FEL
43-047-51252	NBU 921-25H2AS	Sec 25 T09S R21E 1493 FNL 0745 FEL
	BHL	Sec 25 T09S R21E 1538 FNL 0857 FEL
43-047-51253	NBU 921-25H2DS	Sec 25 T09S R21E 1502 FNL 0727 FEL
	BHL	Sec 25 T09S R21E 1958 FNL 0913 FEL

**NBU 921-25J Pad**

43-047-51254	NBU 921-25J4AS	Sec 25 T09S R21E 1878 FSL 1725 FEL
	BHL	Sec 25 T09S R21E 1795 FSL 1360 FEL
43-047-51255	NBU 921-25J4CS	Sec 25 T09S R21E 1886 FSL 1743 FEL
	BHL	Sec 25 T09S R21E 1604 FSL 1920 FEL
43-047-51256	NBU 921-25J1DS	Sec 25 T09S R21E 1882 FSL 1734 FEL
	BHL	Sec 25 T09S R21E 2218 FSL 1381 FEL

**NBU 921-25K Pad**

43-047-51257	NBU 921-25K4BS	Sec 25 T09S R21E 1838 FSL 1400 FWL
	BHL	Sec 25 T09S R21E 1848 FSL 2161 FWL
43-047-51258	NBU 921-25L2AS	Sec 25 T09S R21E 1848 FSL 1402 FWL
	BHL	Sec 25 T09S R21E 2423 FSL 0465 FWL

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-51259	NBU 921-25L4AS	Sec 25 T09S R21E 1829 FSL 1397 FWL
	BHL	Sec 25 T09S R21E 1975 FSL 1088 FWL
43-047-51260	NBU 921-25N2BS	Sec 25 T09S R21E 1819 FSL 1394 FWL
	BHL	Sec 25 T09S R21E 1260 FSL 1508 FWL
<b>NBU 921-25N Pad</b>		
43-047-51261	NBU 921-25K4CS	Sec 25 T09S R21E 1157 FSL 2585 FWL
	BHL	Sec 25 T09S R21E 1450 FSL 2045 FWL
43-047-51262	NBU 921-25N2DS	Sec 25 T09S R21E 1159 FSL 2565 FWL
	BHL	Sec 25 T09S R21E 0800 FSL 1896 FWL
43-047-51263	NBU 921-25N3AS	Sec 25 T09S R21E 1158 FSL 2575 FWL
	BHL	Sec 25 T09S R21E 0508 FSL 1729 FWL
43-047-51264	NBU 921-25O4BS	Sec 25 T09S R21E 1156 FSL 2595 FWL
	BHL	Sec 25 T09S R21E 0485 FSL 1741 FEL
<b>NBU 921-25C Pad</b>		
43-047-51265	NBU 921-25B3AS	Sec 25 T09S R21E 0645 FNL 1955 FWL
	BHL	Sec 25 T09S R21E 0720 FNL 1985 FEL
43-047-51266	NBU 921-25B3DS	Sec 25 T09S R21E 0654 FNL 1972 FWL
	BHL	Sec 25 T09S R21E 1070 FNL 1985 FEL
43-047-51267	NBU 921-25C2DS	Sec 25 T09S R21E 0640 FNL 1946 FWL
	BHL	Sec 25 T09S R21E 0504 FNL 1975 FWL
43-047-51268	NBU 921-25C3AS	Sec 25 T09S R21E 0650 FNL 1964 FWL
	BHL	Sec 25 T09S R21E 0841 FNL 1975 FWL
<b>NBU 921-25I Pad</b>		
43-047-51269	NBU 921-25H3DS	Sec 25 T09S R21E 2074 FSL 0690 FEL
	BHL	Sec 25 T09S R21E 2395 FNL 0870 FEL
43-047-51270	NBU 921-25I2AS	Sec 25 T09S R21E 2054 FSL 0687 FEL
	BHL	Sec 25 T09S R21E 2445 FSL 0924 FEL
43-047-51271	NBU 921-25I4AS	Sec 25 T09S R21E 2045 FSL 0686 FEL
	BHL	Sec 25 T09S R21E 1882 FSL 0091 FEL
43-047-51272	NBU 921-25I4DS	Sec 25 T09S R21E 2035 FSL 0684 FEL
	BHL	Sec 25 T09S R21E 1420 FSL 0105 FEL
43-047-51273	NBU 921-25IT	Sec 25 T09S R21E 2064 FSL 0689 FEL
	BHL	Sec 25 T09S R21E 2064 FSL 0689 FEL

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

**NBU 921-25J2 Pad**

43-047-51274	NBU	921-25G3AS	Sec 25	T09S	R21E	2611	FSL	2578	FEL
		BHL	Sec 25	T09S	R21E	2265	FNL	2136	FEL
43-047-51275	NBU	921-25G3CS	Sec 25	T09S	R21E	2606	FSL	2587	FEL
		BHL	Sec 25	T09S	R21E	2530	FNL	2518	FEL
43-047-51276	NBU	921-25J2CS	Sec 25	T09S	R21E	2601	FSL	2596	FEL
		BHL	Sec 25	T09S	R21E	2310	FSL	2410	FEL
43-047-51277	NBU	921-25K1CS	Sec 25	T09S	R21E	2596	FSL	2605	FEL
		BHL	Sec 25	T09S	R21E	2186	FSL	2231	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: 2010.08.17 14:58:46 -0600

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

MCoulthard:mc:8-17-10

**From:** Jim Davis  
**To:** Bonner, Ed; Garrison, LaVonne; Hill, Brad; Mason, Diana  
**CC:** Bartlett, Floyd; Laura.Gianakos@anadarko.com; Piernot, Danielle; Upch...  
**Date:** 9/2/2010 9:13 AM  
**Subject:** SITLA approval of Kerr McGee wells  
**Attachments:** KMG approvals and paleo 9.1.2010.xlsx

The following wells have been approved by SITLA including arch clearance. Paleo clearance is also granted with stipulations as noted.

Full Paleo monitoring: All ground-disturbing activities must be monitored by a permitted paleontologist.

NBU 922-29F4DS [API #4304751207]	Full Monitoring	IPC 10-08
NBU 922-29G4CS [API #4304751208]	Full Monitoring	IPC 10-08
NBU 922-29J4BS [API #4304751209]	Full Monitoring	IPC 10-08
NBU 922-29K1DS [API #4304751210]	Full Monitoring	IPC 10-08
NBU 922-29G1AS [API #4304751194]	Full Monitoring	IPC 10-06
NBU 922-29G1DS [API #4304751195]	Full Monitoring	IPC 10-06
NBU 922-29G2BS [API #4304751196]	Full Monitoring	IPC 10-06
NBU 922-29G3BS [API #4304751197]	Full Monitoring	IPC 10-06
NBU 921-25A3DS [API 4304751248]	Full Monitoring	IPC 10-21
NBU 921-25G1CS [API 4304751249]	Full Monitoring	IPC 10-21
NBU 921-25G2AS [API 4304751250]	Full Monitoring	IPC 10-21
NBU 921-25H2AS [API 4304751252]	Full Monitoring	IPC 10-21
NBU 921-25H2DS [API 4304751253]	Full Monitoring	IPC 10-21
NBU 921-25G3AS [API 4304751274]	Full Monitoring	IPC 10-23
NBU 921-25G3CS [API 4304751275]	Full Monitoring	IPC 10-23
NBU 921-25J2CS [API 4304751276]	Full Monitoring	IPC 10-23
NBU 921-25K1CS [API 4304751277]	Full Monitoring	IPC 10-23
NBU 921-25A2AS [API 4304751237]	Full Monitoring	IPC 10-21
NBU 921-25B1CS [API 4304751238]	Full Monitoring	IPC 10-21

Spot Paleo Monitoring: All ground-disturbing activities must be monitored by a permitted paleontologist at the beginning of construction and thereafter spot-monitored as paleontological conditions merit.

NBU 921-25C1AS [API 4304751239]	Spot Monitoring	IPC 10-20
NBU 921-25D1BS [API 4304751240]	Spot Monitoring	IPC 10-20
NBU 921-25D1CS [API 4304751251]	Spot Monitoring	IPC 10-20
NBU 921-25E1CS [API 4304751241]	Spot Monitoring	IPC 10-20
NBU 921-25E3AS [API 4304751242]	Spot Monitoring	IPC 10-20
NBU 921-25F1BS [API 4304751243]	Spot Monitoring	IPC 10-21
NBU 921-25F1CS [API 4304751244]	Spot Monitoring	IPC 10-21
NBU 921-25F3AS [API 4304751245]	Spot Monitoring	IPC 10-21
NBU 921-25F3CS [API 4304751246]	Spot Monitoring	IPC 10-21
NBU 921-25L1BS [API 4304751247]	Spot Monitoring	IPC 10-21
NBU 921-25J1DS [API 4304751256]	Spot Monitoring	IPC 10-23
NBU 921-25J4AS [API 4304751254]	Spot Monitoring	IPC 10-23
NBU 921-25J4CS [API 4304751255]	Spot Monitoring	IPC 10-23
NBU 921-25K4BS [API 4304751257]	Spot Monitoring	IPC 10-22
NBU 921-25L2AS [API 4304751258]	Spot Monitoring	IPC 10-22
NBU 921-25L4AS [API 4304751259]	Spot Monitoring	IPC 10-22
NBU 921-25N2BS [API 4304751260]	Spot Monitoring	IPC 10-22
NBU 921-25K4CS [API 4304751261]	Spot Monitoring	IPC 10-23
NBU 921-25N2DS [API 4304751262]	Spot Monitoring	IPC 10-23
NBU 921-25N3AS [API 4304751263]	Spot Monitoring	IPC 10-23

NBU 921-25O4BS [API 4304751264]	Spot Monitoring	IPC 10-23	
NBU 921-25B3AS [API 4304751265]	Spot Monitoring	IPC 10-20	
NBU 921-25B3DS [API 4304751266]	Spot Monitoring	IPC 10-20	
NBU 921-25C2DS [API 4304751267]	Spot Monitoring	IPC 10-20	
NBU 921-25C3AS [API 4304751268]	Spot Monitoring	IPC 10-20	
NBU 921-25IT [API 4304751273]	Spot Monitoring	IPC 10-23	
NBU 921-25H3DS [API 4304751269]	Spot Monitoring	IPC 10-23	
NBU 921-25I2AS [API 4304751270]	Spot Monitoring	IPC 10-23	
NBU 921-25I4AS [API 4304751271]	Spot Monitoring	IPC 10-23	
NBU 921-25I4DS [API 4304751272]	Spot Monitoring	IPC 10-23	
NBU 922-29A1BS [API #4304751183]	Spot Monitoring	IPC 10-06	
NBU 922-29A1CS [API #4304751184]	Spot Monitoring	IPC 10-06	
NBU 922-29A4CS [API #4304751185]	Spot Monitoring	IPC 10-06	
NBU 922-29H1BS [API #4304751186]	Spot Monitoring	IPC 10-06	
NBU 922-29B2CS [API #4304751187]	Spot Monitoring	IPC 10-06	
NBU 922-29B4AS [API #4304751188]	Spot Monitoring	IPC 10-06	(SITLA surf/ Fed Min)
NBU 922-29C2AS [API #4304751189]	Spot Monitoring	IPC 10-06	(SITLA surf/ Fed Min)
NBU 922-29C4AS [API #4304751190]	Spot Monitoring	IPC 10-06	
NBU 922-29B1AS [API #4304751191]	Spot Monitoring	IPC 10-06	
NBU 922-29B1DS [API #4304751192]	Spot Monitoring	IPC 10-06	
NBU 922-29B2BS [API #4304751193]	Spot Monitoring	IPC 10-06	
NBU 922-29D4DS [API #4304751198]	Spot Monitoring	IPC 10-05	
NBU 922-29E3BS [API #4304751199]	Spot Monitoring	IPC 10-05	
NBU 922-29F3AS [API #4304751200]	Spot Monitoring	IPC 10-05	
NBU 922-29F3BS [API #4304751201]	Spot Monitoring	IPC 10-05	
NBU 922-29G4AS [API #4304751202]	Spot Monitoring	IPC 10-06	
NBU 922-29H1CS [API #4304751203]	Spot Monitoring	IPC 10-06	
NBU 922-29H4CS [API #4304751204]	Spot Monitoring	IPC 10-06	
NBU 922-29I1BS [API #4304751205]	Spot Monitoring	IPC 10-06	
NBU 922-29I1CS [API #4304751206]	Spot Monitoring	IPC 10-06	
NBU 922-29K2CS [API #4304751211]	Spot Monitoring	IPC 10-07	
NBU 922-29K4AS [API #4304751212]	Spot Monitoring	IPC 10-07	
NBU 922-29L1AS [API #4304751213]	Spot Monitoring	IPC 10-07	
NBU 922-29L2BS [API #4304751214]	Spot Monitoring	IPC 10-07	
NBU 922-29L2CS [API #4304751215]	Spot Monitoring	IPC 10-07	
NBU 922-29L3CS [API #4304751216]	Spot Monitoring	IPC 10-07	
NBU 922-29M2AS [API #4304751217]	Spot Monitoring	IPC 10-07	
NBU 922-29N2BS [API #4304751218]	Spot Monitoring	IPC 10-07	
NBU 922-29N3BS [API #4304751219]	Spot Monitoring	IPC 10-07	
NBU 922-30I4BS [API #4304751220]	Spot Monitoring	IPC 10-07	(SITLA surf/ Fed Min)
NBU 922-30I4CS [API #4304751221]	Spot Monitoring	IPC 10-07	(SITLA surf/Fed Min)
NBU 922-29J4CS [API #4304751222]	Spot Monitoring	IPC 10-08	
NBU 922-29N1BS [API #4304751223]	Spot Monitoring	IPC 10-08	
NBU 922-29O1CS [API #4304751224]	Spot Monitoring	IPC 10-08	

That's quite a list, so I'm attaching a quick-and-dirty spreadsheet of the same data. This may be helpful to some of you.

Thanks.  
-Jim

Jim Davis  
Utah Trust Lands Administration  
jimdavis1@utah.gov  
Phone: (801) 538-5156

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 921-25L2AS 4304751258			
String	Surf	Prod		
Casing Size(")	8.625	4.500		
Setting Depth (TVD)	2410	9700		
Previous Shoe Setting Depth (TVD)	40	2410		
Max Mud Weight (ppg)	8.3	12.0		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	7780		
Operators Max Anticipated Pressure (psi)	5917	11.7		

Calculations	Surf String	8.625	"
Max BHP (psi)	.052*Setting Depth*MW=	1044	
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	755	NO <input type="text" value="air drill"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	514	NO <input type="text" value="OK"/>
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	523	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

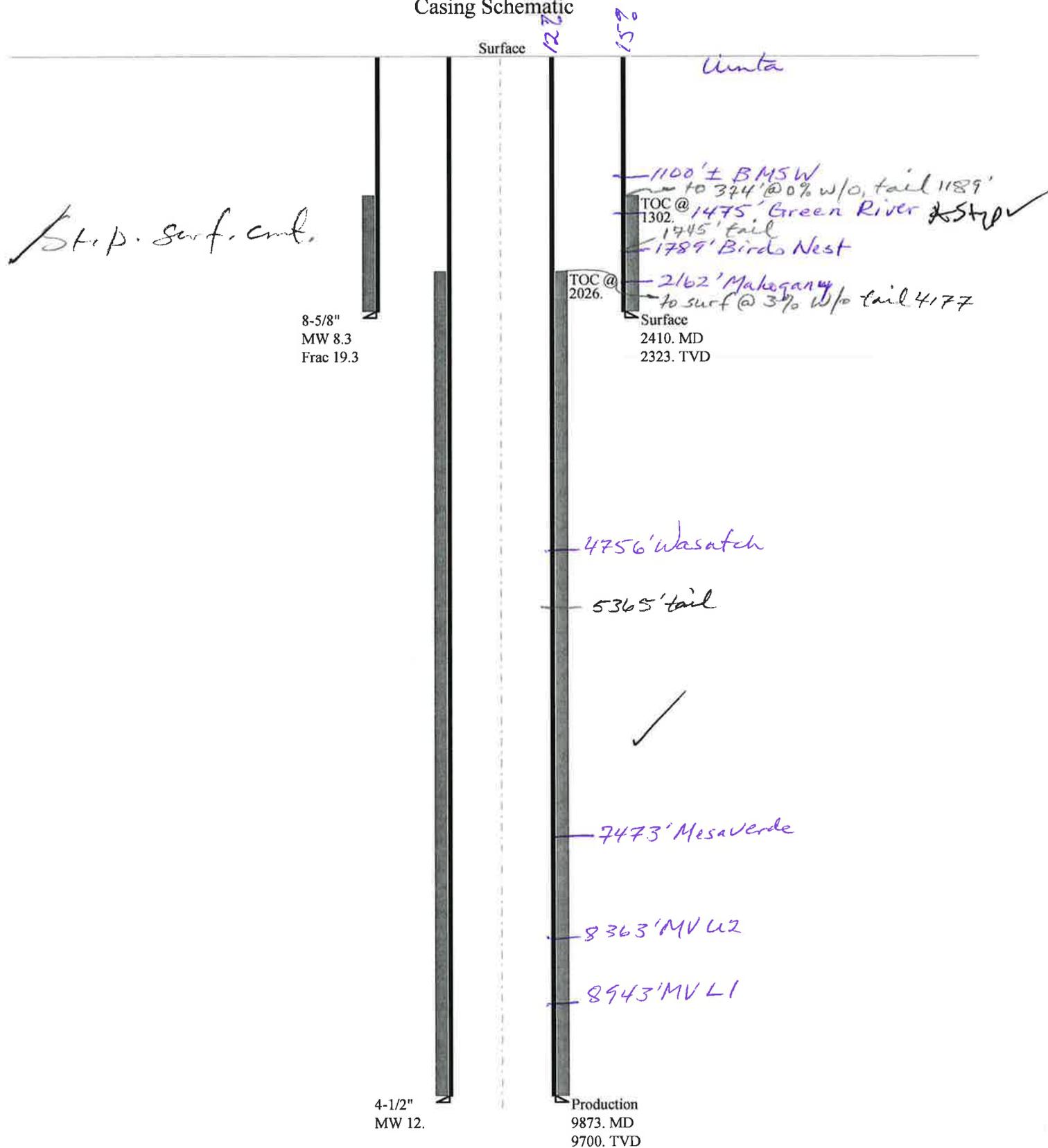
Calculations	Prod String	4.500	"
Max BHP (psi)	.052*Setting Depth*MW=	6053	
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4889	YES <input type="text"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3919	YES <input type="text" value="OK"/>
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	4449	NO <input type="text" value="Reasonable"/>
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2410	psi *Assumes 1psi/ft frac gradient

Calculations	String		"
Max BHP (psi)	.052*Setting Depth*MW=		
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO <input type="text"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO <input type="text"/>
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - 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*Setting Depth*MW=		
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO <input type="text"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO <input type="text"/>
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - 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

# 43047512580000 NBU 921-25L2AS

## Casing Schematic



Well name:	<b>43047512580000 NBU 921-25L2AS</b>		
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>		
String type:	Surface	Project ID:	43-047-51258
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: 107 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft  
Cement top: 1,302 ft

**Burst**

Max anticipated surface pressure: 2,121 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 2,400 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: 2,106 ft

**Directional Info - Build & Drop**

Kick-off point 300 ft  
Departure at shoe: 552 ft  
Maximum dogleg: 2 °/100ft  
Inclination at shoe: 20 °

**Re subsequent strings:**

Next setting depth: 9,700 ft  
Next mud weight: 12,000 ppg  
Next setting BHP: 6,047 psi  
Fracture mud wt: 19,250 ppg  
Fracture depth: 2,410 ft  
Injection pressure: 2,410 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	2410	8.625	28.00	I-55	LT&C	2323	2410	7.892	95436
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	1005	1880	1.870	2400	3390	1.41	65	348	5.35 J

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

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

Date: October 7, 2010  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 2323 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>43047512580000 NBU 921-25L2AS</b>		
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>		
String type:	Production	Project ID:	43-047-51258
Location:	UINTAH	COUNTY	

**Design parameters:**

**Collapse**

Mud weight: 12.000 ppg  
 Internal fluid density: 1.000 ppg

**Burst**

Max anticipated surface pressure: 3,913 psi  
 Internal gradient: 0.220 psi/ft  
 Calculated BHP: 6,047 psi

No backup mud specified.

**Minimum design factors:**

**Collapse:**

Design factor: 1.125

**Burst:**

Design factor: 1.00

**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)

Tension is based on air weight.  
 Neutral point: 8,133 ft

**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: 2,026 ft

**Directional Info - Build & Drop**

Kick-off point: 300 ft  
 Departure at shoe: 1100 ft  
 Maximum dogleg: 2 °/100ft  
 Inclination at shoe: 0 °

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	9873	4.5	11.60	I-80	LT&C	9700	9873	3.875	130324
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	5543	6360	1.147	6047	7780	1.29	112.5	212	1.88 J

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

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

Date: October 7, 2010  
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 9700 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

# ON-SITE PREDRILL EVALUATION

## Utah Division of Oil, Gas and Mining

**Operator** KERR-MCGEE OIL & GAS ONSHORE, L.P.  
**Well Name** NBU 921-25L2AS  
**API Number** 43047512580000      **APD No** 2943      **Field/Unit** NATURAL BUTTES  
**Location: 1/4,1/4** NESW      **Sec** 25      **Tw** 9.0S      **Rng** 21.0E      1848      **FSL** 1402      **FWL**  
**GPS Coord (UTM)** 627712 4429149      **Surface Owner**

**Participants**

Floyd Bartlett (DOGM), Sheila Wopsock, Clay Einerson, Roger Perry, Laura Gianokas, Lovel Young, Grizz Oleen, (Kerr McGee), Mitch.Batty, John Slaugh, (Timberline Engineering and Land Surveying), Ed Bonner (SITLA), Ben Williams (UDWR).

**Regional/Local Setting & Topography**

The general area is the Natural Buttes Unit in a major un-named drainage west of the lower portion of the Sand Wash drainage of Uintah, County, approximately 34 air miles and 42.3 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Approximately 450 feet of new construction will be needed. Topography of the area is characterized by open flats bordered or 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 921-25K pad will be a new location oriented in a north-southerly direction on a side-hill which ends beyond the west side of the reserve pit area. It would be desirable to reduce the amount of cut for the reserve pit into this hill. The width of the reserve pit will be reduced 20 feet if the drilling schedule permits the use of the Ensign rig to drill these wells. Excess spoils stockpiled on the outside of the location in the pit area will keep any overland flows off the location. When the pit is closed, a diversion could be constructed on the side-slope above and next to the pad. The surface, in much of the pit area, is exposed sandstone or bedrock. Rocky outcrops occur throughout the general area. A swale or draw to the north has been avoided. The pad extends to the east and approaches the main north-south road in the area. Four gas wells will be directionally drilled from this pad. They are the NBU 921-25L2AS, 921-25K4BS, 921-25L4AS and 921-25N2BS. The White River is approximately 3 miles down drainage. The selected site appears to be suitable for constructing a pad, drilling and operating the proposed wells and is the best 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

<b>New Road Miles</b>	<b>Well Pad</b>	<b>Src Const Material</b>	<b>Surface Formation</b>
0	<b>Width</b> 352 <b>Length</b> 455	Onsite	UNTA

**Ancillary Facilities** N

**Waste Management Plan Adequate?**

**Environmental Parameters**

**Affected Floodplains and/or Wetlands** N

**Flora / Fauna**

Vegetation is a desert shrub type, which includes shadscale, curly mesquite, broom snakeweed, herbaceous sage, globemallow, greasewood 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** N

**Sedimentation Issues** Y

**Site Stability Issues** N

**Drainage Diversion Required?** Y

When the pit is closed, a diversion could be constructed on the side-slope above and next to the pad.

**Berm Required?** N

**Erosion Sedimentation Control Required?** Y

Excess spoils stockpiled on the outside of the location in the pit area will keep any overland flows off the location. When the pit is closed, a diversion could be constructed on the side-slope above and next to the pad.

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

**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 104' x 260' x 12' deep located in a cut on the southwest side 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  
**Evaluator**

8/26/2010  
**Date / Time**

# Application for Permit to Drill

## Statement of Basis

10/13/2010

### 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>
2943	43047512580000	LOCKED	GW	S	No
<b>Operator</b>	KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>Surface Owner-APD</b>		
<b>Well Name</b>	NBU 921-25L2AS		<b>Unit</b>	NATURAL BUTTES	
<b>Field</b>	NATURAL BUTTES		<b>Type of Work</b>	DRILL	
<b>Location</b>	NESW 25 9S 21E S 1848 FSL 1402 FWL GPS Coord (UTM)			627719E	4429156N

#### Geologic Statement of Basis

Kerr McGee proposes to set 2,410' 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 1,100'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 25. 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. The proposed casing and cement should adequately protect any usable ground water.

Brad Hill  
APD Evaluator

9/29/2010  
Date / Time

#### Surface Statement of Basis

The general area is the Natural Buttes Unit in a major un-named drainage west of the lower portion of the Sand Wash drainage of Uintah, County, approximately 34 air miles and 42.3 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Approximately 450 feet of new construction will be needed. Topography of the area is characterized by open flats bordered or 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 921-25K pad will be a new location oriented in a north-southerly direction on a side-hill which ends beyond the west side of the reserve pit area. It would be desirable to reduce the amount of cut for the reserve pit into this hill. The width of the reserve pit will be reduced 20 feet if the drilling schedule permits the use of the Ensign rig to drill these wells. Excess spoils stockpiled on the outside of the location in the pit area will keep any overland flows off the location. When the pit is closed, a diversion could be constructed on the side-slope above and next to the pad. The surface, in much of the pit area, is exposed sandstone or bedrock. Rocky outcrops occur throughout the general area. A swale or draw to the north has been avoided. The pad extends to the east and approaches the main north-south road in the area. Four gas wells will be directionally drilled from this pad. They are the NBU 921-25L2AS, 921-25K4BS, 921-25L4AS and 921-25N2BS. The White River is approximately 3 miles down drainage. The selected site appears to be suitable for constructing a pad, drilling and operating the proposed wells and is the best site in the immediate area.

Both the surface and minerals are owned by SITLA. Ed Bonner represented SITLA at the pre-site investigation. Mr. Bonner had no concerns pertaining to this location. SITLA will provide site reclamation standards and a seed mix.

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.

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# Application for Permit to Drill Statement of Basis

10/13/2010

Utah Division of Oil, Gas and Mining

Page 2

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Floyd Bartlett  
Onsite Evaluator

8/26/2010  
Date / Time

**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:** 8/13/2010

**API NO. ASSIGNED:** 43047512580000

**WELL NAME:** NBU 921-25L2AS

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

**PHONE NUMBER:** 720 929-6156

**CONTACT:** Danielle Piernot

**PROPOSED LOCATION:** NESW 25 090S 210E

**Permit Tech Review:**

**SURFACE:** 1848 FSL 1402 FWL

**Engineering Review:**

**BOTTOM:** 2423 FSL 0465 FWL

**Geology Review:**

**COUNTY:** UINTAH

**LATITUDE:** 40.00483

**LONGITUDE:** -109.50372

**UTM SURF EASTINGS:** 627719.00

**NORTHINGS:** 4429156.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 3 - State

**LEASE NUMBER:** UO 1194 ST

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

**SURFACE OWNER:** 3 - State

**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

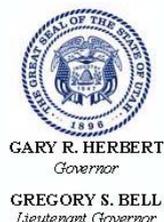
Commingle Approved

## LOCATION AND SITING:

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

**Comments:** Presite Completed

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



# 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 921-25L2AS  
**API Well Number:** 43047512580000  
**Lease Number:** UO 1194 ST  
**Surface Owner:** STATE  
**Approval Date:** 10/13/2010

### 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

## 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 921-25L2AS  
 Qtr/Qtr NESW Section 25 Township 9S Range 21E  
 Lease Serial Number UO 1194 ST  
 API Number 4304751258

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

Date/Time 12/16/2010 15:30 HRS AM  PM

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

- Surface Casing  
 Intermediate Casing  
 Production Casing  
 Liner  
 Other

RECEIVED

DEC 16 2010

DIV. OF OIL, GAS &amp; MINING

Date/Time 02/25/2011 08:00 HRS AM  PM

BOPE

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

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
4304751258	NBU 921-25L2AS		NESW	25	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<i>B</i>	99999	<i>2900</i>	12/17/2010			<i>12/29/10</i>	
<b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <i>WSMVD</i> SPUD WELL LOCATION ON 12/17/2010 AT 08:30 HRS. <i>BHL = NWSW</i>							

**Well 2**

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

**Well 3**

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

**ACTION CODES:**

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

Gina Becker

Name (Please Print)

Signature

REGULATORY ANALYST

Title

12/20/2010

Date

**RECEIVED**  
**DEC 21 2010**

<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 1194 ST
<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
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> NBU 921-25L2AS
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047512580000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6515 Ext
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1848 FSL 1402 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NESW Section: 25 Township: 09.0S Range: 21.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES  <b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> <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 type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> <b>DRILLING REPORT</b> Report Date: 1/31/2011	<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 CAPSTAR AIR RIG #310 ON JANUARY 29, 2011. DRILLED 11" SURFACE HOLE TO 2695'. RAN 8 5/8" 28# IJ-55 SURFACE CSG. PUMP 25 BBLS FRESH WATER. LEAD CEMENT W/ 200 SX CLASS G PREM @ 11.0 PPG, 3.83 YD. TAILED CEMENT W/ 225 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YD. DROP PLUG AND DISPLACED W/ 155 BBLS WATER. BUMP PLUG @ 835 PSI - FINAL PSI 550. 90% RETURNS THROUGH OUT JOB. 25 BBLS CEMENT BACK TO SURFACE. FLOATS HELD W/ 2 BBLS BACK. PUMP 1" TOP OUT W/ 60 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YD. CEMENT TO SURFACE, BUT FELL BACK. WOC. TOP OFF #2 W/ 60 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YD. CEMENT TO SURFACE & STAYED. WORT.

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> 2/1/2011

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UO 1194 ST
<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
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> NBU 921-25L2AS
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047512580000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6515 Ext
<b>4. LOCATION OF WELL FOOTAGES AT SURFACE:</b> 1848 FSL 1402 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NESW Section: 25 Township: 09.0S Range: 21.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES  <b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH

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

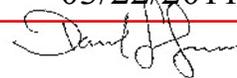
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 3/17/2011	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT 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 checked="" type="checkbox"/> OTHER	OTHER: <span style="border: 1px solid black; padding: 2px;">RIG REL.- ACTS PIT</span>

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

FINISHED DRILLING FROM 2695' TO 9893' ON MARCH 16, 2011. RAN 4 1/2" 11.6# I-80 PRODUCTION CSG. PUMP 40 BBLS SPACER, LEAD CEMENT W/ 452 SX CLASS G PREM LITE II @ 12.0 PPG, 2.30 YD. TAILED CEMENT W/ 1042 SX CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.31 YD. DISPLACED W/ 153 BBLS WATER + ADDITIVES. FLOATS HELD W/ 1.5 BBLS H2O RETURNED TO INVENTORY; LIFT PRESSURE @ 2650 PSI. BUMP PRESSURE TO 3100 PSI - GOOD RETURNS THROUGHOUT JOB W/ 10 BBLS CEMENT TO PIT. TOP OF TAIL CALC @ 3909'. RD CEMENTERS AND CLEANED PITS. RELEASED H&P RIG #298 ON MARCH 17, 2011 @ 23:59 HRS. THE PIT ON THIS LOCATION WILL BE REFURBISHED AND UTILIZED AS PART OF THE ACTS SYSTEM.

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

Date: 03/22/2011

By: 

<b>NAME (PLEASE PRINT)</b> Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 3/18/2011	



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

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices**

**Sundry Conditions of Approval Well Number 43047512580000**

**A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the pit.**

<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 1194 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 921-25L2AS	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047512580000	
<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> 1848 FSL 1402 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NESW Section: 25 Township: 09.0S Range: 21.0E Meridian: S	<b>COUNTY:</b> UINTAH	
		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 5/13/2011	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON
	<input checked="" type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER
		OTHER: <input type="text"/>
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 05/13/2011 AT 1:00 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> 5/17/2011	

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

AMENDED REPORT  FORM 8  
(highlight changes)

5. LEASE DESIGNATION AND SERIAL NUMBER:  
**UO 1194 ST**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

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

8. WELL NAME and NUMBER:  
**NBU 921-25L2AS**

9. API NUMBER:  
**4304751258**

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

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:  
**NESW 25 9S 21E S**

12. COUNTY  
**UINTAH**

13. STATE  
**UTAH**

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

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: **NESW 1848 FSL 1402 FWL S25, T9S, R21E**  
*BHL Reviewed by HSM*  
AT TOP PRODUCING INTERVAL REPORTED BELOW: **NWSW 2441 FSL 451 FWL S25, T9S, R21E**  
AT TOTAL DEPTH: **NWSW 2408 FSL 462 FWL S25, T9S, R21E**

14. DATE SPUDDED: **12/17/2010** 15. DATE T.D. REACHED: **3/16/2011** 16. DATE COMPLETED: **5/13/2011** ABANDONED  READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL):  
**4971 GL**

18. TOTAL DEPTH: MD **9,893** TVD **9,733** 19. PLUG BACK T.D.: MD **9,842** TVD **9,682** 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)  
**CBL-CHI TRIPLE COMBO-RMTE**

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#		2,693		625		0	
7 7/8"	4 1/2" I-80	11.6#		9,886		1,494		1230	

**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"	9,089							

**26. PRODUCING INTERVALS**      **27. PERFORATION RECORD**

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS	
(A) WASATCH	7,018	7,683			7,018 7,683	0.36	47	Open <input checked="" type="checkbox"/>	Squeezed <input type="checkbox"/>
(B) MESAVERDE	7,734	9,637			7,734 9,637	0.36	160	Open <input checked="" 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
7018 - 9637	PUMP 8,113 BBLs SLICK H2O & 180,239 LBS SAND

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DIV. OF OIL, GAS & MINING

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**

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 5/13/2011		TEST DATE: 5/16/2011		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 2,390	WATER – BBL: 705	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 1,922	CSG. PRESS. 2,625	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 2,390	WATER – BBL: 705	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	1,460				
BIRD'S NEST	1,866				
MAHOGANY	2,085				
WASATCH	4,984	7,710			
MESAVERDE	7,710	9,893	TD		

34. FORMATION (Log) MARKERS:

36. ADDITIONAL REMARKS (Include plugging procedure)

Attached is the chronological well history, perforation report and final survey. Completion chrono details individual frac stages.

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

NAME (PLEASE PRINT) ANDREW LYTLE

TITLE REGULATORY ANALYST

SIGNATURE 

DATE 6/13/2011

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

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**DIV. OF OIL, GAS & MINING**

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-JINTAH Site: NBU 921-25K PAD Rig Name No: H&P 298/298, CAPSTAR 310/310  
 Event: DRILLING Start Date: 1/18/2011 End Date: 3/18/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
1/29/2011	16:00 - 19:00	3.00	MIRU	01	C	P		SKID RIG & RIG UP
	19:00 - 20:30	1.50	PRSPD	14	A	P		WELD ON CONDUCTOR & RIG UP FLOW LINE
	20:30 - 21:00	0.50	PRSPD	06	A	P		PU 11" BIT & MUD MOTOR
	21:00 - 23:00	2.00	DRLSUR	02	B	P		SPUD 11" SURFACE HOLE F/ 40'- 233' // ROP=92 FPH // WOB= 16-18K // RPM= 55/96 // SPP=600/430 // GPM=600
	23:00 - 0:00	1.00	DRLSUR	06	A	P		TOOH
1/30/2011	0:00 - 2:00	2.00	DRLSUR	06	A	P		PU DIR TOOLS, SCRIBE, & TIH
	2:00 - 6:00	4.00	DRLSUR	02	D	P		DIR DRLG 11" SURFACE HOLE F/ 233'- 675' // ROP= 110 FPH // WOB=18-22K // RPM=55/96 // SPP=1000/870 // GPM= 600 // NO LOSSES
	6:00 - 18:00	12.00	DRLSUR	02	D	P		DIR DRLG 11" SURFACE HOLE F/ 675'-1814' // ROP= 95 FPH // WOB=18-22K // RPM=55/96 // SPP=1050/870 // GPM= 600 // NO LOSSES
	18:00 - 0:00	6.00	DRLSUR	02	D	P		DIR DRLG 11" SURFACE HOLE F/ 1814'-2291' // ROP= 94 FPH // WOB=18-22K // RPM=55/96 // SPP=1050/870 // GPM= 600 // RETURNS 75% // LAST SURVEY @ 2199'=20.25- AZ=300.66
1/31/2011	-		RDMO				CONDUCTOR CASING: Cond. Depth set: 40 Cement sx used: 28	
							SPUD DATE/TIME: 1/29/2011 21:00	
							SURFACE HOLE: Surface From depth: 40 Surface To depth: 2,695 Total SURFACE hours: 29.50 Surface Casing size: 8 5/8 # of casing joints ran: 60 Casing set MD: 2,675.0 # sx of cement: 200/225/200 Cement blend (ppg): 11.0/15.8/15.8 Cement yield (ft3/sk): 3.83/1.15/1.15 # of bbls to surface: 25 Describe cement issues: 90% RETURNS Describe hole issues: 50% RETURN F/ 1900'-2695'	
	0:00 - 5:30	5.50	DRLSUR	02	D	P		DIR DRLG 11" SURFACE HOLE F/ 2291'-2695' // ROP= 73 FPH // WOB=18-22K // RPM=55/96 // SPP=1250/1030 // GPM= 600 // RETURNS 60% // LAST SURVEY @ 2635'= 19.02 DEG- 302.08 AZ 302.08 // 19' ABOVE & 1' LEFT OF LINE // 85.8% ROTATEING- 14.2% SLIDEING
	5:30 - 6:00	0.50	DRLSUR	05	A	P		CIRC & COND HOLE FOR 8.625" CSG
	6:00 - 10:00	4.00	DRLSUR	06	A	P		LD DRILL STRING & DIR TOOLS
	10:00 - 13:30	3.50	CSG	12	C	P		PJSM // RUN 60 JT'S, 8-5/8", 28#, J-55, LT&C CSG // SHOE SET @ 2675' // BAFFLE @ 2628'
	13:30 - 14:00	0.50	CSG	05	A	P		CIRC 8.625" CSG @ 2675'

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**JUN 23 2011**

**DIV. OF OIL, GAS & MINING**

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: H&P 298/298, CAPSTAR 310/310  
 Event: DRILLING Start Date: 1/18/2011 End Date: 3/18/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	14:00 - 15:30	1.50	CSG	12	E	P		PJSM // PUMP 25 BBL SPACER // LEAD= 200 SX CLASS G CMT ( YIELD= 3.83 CUFT/SK, WT= 11 PPG) TAIL= 225 SX CLASS G CMT (YIELD= 1.15 CUFT/SK, WT= 15.8 PPG) DROP PLUG & DISPLACE W/ 155 BBL'S WATER // PLUG DN @ 15:28 01/31/2011 // BUMP PLUG @ 835 PSI // FINAL= 550 PSI // 90% RETURNS THRU OUT JOB // 25 BBL'S CMT TO SURFACE // CHECK FLOATS-HELD W/ 2 BBL'S BACK.
	15:30 - 16:00	0.50	CSG	14	A	P		CUT OFF CONDUCTOR & HANG 8.625" CSG
	16:00 - 17:00	1.00	CSG	12	E	P		PUMP 1" TOP OUT W/ 60 SX CLASS G CMT @ 1.15 YIELD & 15.8 WT // CMT TO SURFACE BUT FELL BACK
	17:00 - 18:30	1.50	CSG	13	A	P		WAIT ON CMT
	18:30 - 19:00	0.50	CSG	12	E	P		TOP OFF W/ 60SX CLASS G CMT @ 1.15 YIELD & 15.8 WT // CMT TO SURFACE & STAYED
	19:00 - 20:00	1.00	RDMO	01	E	P		RIG DN & CLEAN PITS // RELEASE RIG @ 20:00 01/31/2011
3/8/2011	13:00 - 16:30	3.50	MIRU	01	C	P		PREPARE & SKID RIG CENTER RIG OVER HOLE
	16:30 - 17:00	0.50	MIRU	01	B	P		RU RT
	17:00 - 17:30	0.50	PRSPD	14	A	P		NU BOP'S
	17:30 - 19:30	2.00	PRSPD	01	B	P		CHANGE OUT BAILS / PREPARE DRILL FLOOR / P/U MU TEST ASSY / FILL BOP W/ WATER
	19:30 - 20:00	0.50	PRSPD	23	A	P		INSTALL FLOW LINE
	20:00 - 20:30	0.50	PRSPD	15	A	P		PRE SPUD INSPECTION & MEETING W/ CREW
	20:30 - 0:00	3.50	PRSPD	15	A	P		HOLD PJSM W/ TESTER & TEST CSG TO 1500 PSI TEST -OK
3/9/2011	0:00 - 0:30	0.50	PRSPD	15	A	P		TEST BOP'S & EQUIPMENT AS PER PROGRAM 250/5000 PSI ANNULAR 250/2500
	0:30 - 1:00	0.50	PRSPD	14	B	P		CONTINUE TO TEST BOP'S AS PER PROGRAM 250 PSI LOW / 5,000 PSI HIGH / RD TESTER
	1:00 - 3:00	2.00	PRSPD	06	A	P		INSTALL WEAR BUSHING
	3:00 - 4:30	1.50	PRSPD	07	B	P		PU & MU DIRECTIONAL BHA #1 W/ WEATHERFORD ORIENTATE ,SCRIBE & TEST SAME / TIH TO 1,100'
	4:30 - 5:30	1.00	PRSPD	06	A	P		LEVEL DRK
	5:30 - 6:00	0.50	PRSPD	07	A	P		TIH F/ 1,100' TO 2,536' TAG CEMENT
	6:00 - 7:00	1.00	PRSPD	02	F	P		SERVICE RIG @ 2,536'
	7:00 - 0:00	17.00	DRLPRO	02	D	P		DRILL CEMENT & SHOE TRACK F/ 2,536' TO 2,692' CLEAN OUT RATHOLE TO 2,712'
3/10/2011	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 2,712' TO 4,175' = 1,463' =86' FPH / WOB 15K-21K / TOP DRIVE RPM 35-60 / PUMP 120 SPM = 540 GPM / PUMP PRESSURE ON/OFF BOTTOM 1900/1600 PSI / MUD MOTOR RPM 114 / PU/SO/ROT WT 125/95/110/ TORQUE ON/OFF BOTTOM 8K/6K / H2O + POLYMER W/ WEIGHTED SWEEPS +/- 1 PPG OVER / SLIDE 315' IN 390 MIN =22% OF FOOTAGE DRILLED & 54% OF HOURS DRILLED / BOP DRILL / 8.9 PPG MUD WT / 27 VIS
								DRILL/ SURVEY F/ 4,175' TO 4,820' = 645' =107.5' FPH / WOB 15K-21K / TOP DRIVE RPM 35-60 / PUMP 120 SPM = 540 GPM / PUMP PRESSURE ON/OFF BOTTOM 1900/1600 PSI / MUD MOTOR RPM 114 / PU/SO/ROT WT 125/95/110/ TORQUE ON/OFF BOTTOM 8K/6K / H2O + POLYMER W/ WEIGHTED SWEEPS +/- 1 PPG OVER / SLIDE 102' IN 95 MIN =16% OF FOOTAGE DRILLED & 26% OF HOURS DRILLED / 8.9 PPG MUD WT / 27 VIS

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**JUN 23 2011**

**DIV. OF OIL, GAS & MINING**

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

Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: H&P 298/298, CAPSTAR 310/310  
 Event: DRILLING Start Date: 1/18/2011 End Date: 3/18/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	6:00 - 15:30	9.50	DRLPRO	02	D	P		DRILL/ SURVEY F/ 4,820' TO 5,836' = 1016' = 107' FPH / WOB 15K-21K / TOP DRIVE RPM 35-60 / PUMP 120 SPM = 540 GPM / PUMP PRESSURE ON/OFF BOTTOM 1900/1600 PSI / MUD MOTOR RPM 114 / PU/SO/ROT WT 152/117/134/ TORQUE ON/OFF BOTTOM 8K/6K / H2O + POLYMER W/ WEIGHTED SWEEPS +/- 1 PPG OVER / SLIDE 59' IN 95X MIN =4% OF FOOTAGE DRILLED & 16% OF HOURS DRILLED / 8.9 PPG MUD WT / 27 VIS
	15:30 - 16:00	0.50	DRLPRO	07	A	P		SERVICE RIG @ 5,836'
	16:00 - 18:00	2.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 5,836' TO 6,002' = 166' =83' FPH / WOB 15K-21K / TOP DRIVE RPM 35-60 / PUMP 120 SPM = 540 GPM / PUMP PRESSURE ON/OFF BOTTOM 1900/1600 PSI / MUD MOTOR RPM 114 / PU/SO/ROT WT 152/117/134/ TORQUE ON/OFF BOTTOM 8K/6K / H2O + POLYMER W/ WEIGHTED SWEEPS +/- 1 PPG OVER / 8.9 PPG MUD WT / 27 VIS
	18:00 - 19:30	1.50	DRLPRO	22	G	X		LOST TOTAL RETURNS @ 6,002' PU & PUMP LCM SWEEPS REGAIN RETURNS 450 BBL LOSE / CONTINUE TO RAISE LCM CONTENT TO 15% W/ 20' FLARE
	19:30 - 0:00	4.50	DRLPRO	02	D	P		DRILL/ SURVEY F/ 6,002' TO 6,250' =248' =55' FPH / WOB 15K-20K / TOP DRIVE RPM 35-60 / PUMP 90 SPM = 405 GPM / PUMP PRESSURE ON/OFF BOTTOM 1700/1500 PSI / MUD MOTOR RPM 85 / PU/SO/ROT WT 168/126/140/ TORQUE ON/OFF BOTTOM 8K/6K / SLIDE 15' IN 45 MIN =3.6% OF FOOTAGE DRILLED & 9% OF HOURS DRILLED / 9.2 PPG MUD WT / 35 VIS LCM 15% / HOLE SEEPING 350 BBL LOSE / CONTINUE TO RAISE LCM CONTENT
3/11/2011	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 6,250' TO 6,562' =312' =52' FPH / WOB 15K-20K / TOP DRIVE RPM 35-60 / PUMP 90 SPM = 405 GPM / PUMP PRESSURE ON/OFF BOTTOM 1700/1500 PSI / MUD MOTOR RPM 85 / PU/SO/ROT WT 168/126/140/ TORQUE ON/OFF BOTTOM 8K/6K / SLIDE 13' IN 45 MIN = 4 % OF FOOTAGE DRILLED & 12% OF HOURS DRILLED / 9.3 PPG MUD WT / 36 VIS LCM 18% 150 BBL LOSE
	6:00 - 15:30	9.50	DRLPRO	02	D	P		DRILL/ SURVEY F/ 6,562' TO 6,976' =414' =43.57' FPH / WOB 15K-20K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2200/1950 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 175/140/150/ TORQUE ON/OFF BOTTOM 8K/7K / SLIDE 14' IN 70 MIN = 3 % OF FOOTAGE DRILLED & 11% OF HOURS DRILLED / 9.4 PPG MUD WT / 38 VIS LCM 22% / NO MUD LOSE
	15:30 - 16:00	0.50	DRLPRO	07	A	P		SERVICE RIG @ 6,976'
	16:00 - 0:00	8.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 6,976' TO 7,280' =304' =38' FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2200/1950 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 190/140/155/ TORQUE ON/OFF BOTTOM 8K/7K / 9.8 PPG MUD WT / 41 VIS LCM 25% / NO MUD LOSE

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**JUN 23 2011**

DIV. OF OIL, GAS & MINING

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

Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: H&P 298/298, CAPSTAR 310/310  
 Event: DRILLING Start Date: 1/18/2011 End Date: 3/18/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/12/2011	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 7,280' TO 7,430' =150' =25' FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2150/1950 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 190/140/155/ TORQUE ON/OFF BOTTOM 8K/7K / SLIDE 10' IN 70 MIN = 6 % OF FOOTAGE DRILLED & 19% OF HOURS DRILLED / 9.9 PPG MUD WT / 41 VIS LCM 26% / 150 BBL MUD LOSE
	6:00 - 13:30	7.50	DRLPRO	02	D	P		DRILL/ SURVEY F/ 7,430' TO 7,636' =206' =27.46' FPH / WOB 18K-22K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2250/2050 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 190/140/155/ TORQUE ON/OFF BOTTOM 8K/7K / 10.3 PPG MUD WT / 48 VIS LCM 30% / 175 BBL MUD LOSE
	13:30 - 14:00	0.50	DRLPRO	07	A	P		SERVICE RIG @ 7,636'
	14:00 - 0:00	10.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 7,636' TO 7,850' =214' =21.4' FPH / WOB 18K-22K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2250/2050 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 192/140/160/ TORQUE ON/OFF BOTTOM 9K/9K/ SLIDE 21' IN 155 MIN =21 % OF FOOTAGE DRILLED & 42% OF HOURS DRILLED / 10.4 PPG MUD WT / 48 VIS LCM 30% / NO MUD LOSE
3/13/2011	0:00 - 7:00	6.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 7,850' TO 7,970' =120' =20' FPH / WOB 18K-22K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2250/2050 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 192/140/160/ TORQUE ON/OFF BOTTOM 9K/9K/ SLIDE 5' IN 60 MIN = 4 % OF FOOTAGE DRILLED & 17% OF HOURS DRILLED / 10.4 PPG MUD WT / 48 VIS LCM 30% / NO MUD LOSE
	7:00 - 8:00	1.00	DRLPRO	05	C	P		CIRC BTM'S UP @ 7,970'
	8:00 - 13:30	5.50	DRLPRO	06	A	P		TOOH F/ 7,970' TO BIT W/ NO PROBLEMS / CHECK PIPE FOR CENTER OF HOLE -OK / FUNCTION BOP'S
	13:30 - 14:30	1.00	DRLPRO	06	A	P		C/O BIT & MUD MTR / ORIENTATE / SCRIBE & TEST SAME W/ WEATHERFORD / TIH W/ BHA# 2 TO 1,005'
	14:30 - 15:00	0.50	DRLPRO	07	A	P		SERVICE RIG @ 1,005'
	15:00 - 19:30	4.50	DRLPRO	06	A	P		TIH W/ BHA & BIT # 2 F/ 1,005' TO 7,850' / WASH 120' TO BTM @ 7,970' NO FILL / BOP DRILL
	19:30 - 0:00	4.50	DRLPRO	02	D	P		DRILL/ SURVEY F/ 7,970' TO 8,235' =265' =58.88' FPH / WOB 18K-22K / TOP DRIVE RPM 35-50 / PUMP 90 SPM = 405 GPM / PUMP PRESSURE ON/OFF BOTTOM 2000/1750 PSI / MUD MOTOR RPM 65 / PU/SO/ROT WT 200/145/165/ TORQUE ON/OFF BOTTOM 9K/9K/ SLIDE 37' IN 70 MIN = 14% OF FOOTAGE DRILLED & 32% OF HOURS DRILLED / 10.5 PPG MUD WT / 48 VIS LCM 30% / 240 BBL LOSE
3/14/2011	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 8,235' TO 8,570' =335' =55.83' FPH / WOB 18K-22K / TOP DRIVE RPM 35-50 / PUMP 90 SPM = 405 GPM / PUMP PRESSURE ON/OFF BOTTOM 2000/1750 PSI / MUD MOTOR RPM 65 / PU/SO/ROT WT 200/145/165/ TORQUE ON/OFF BOTTOM 9K/9K/ SLIDE 11' IN 95 MIN = 14% OF FOOTAGE DRILLED & 26% OF HOURS DRILLED / 10.9 PPG MUD WT / 48 VIS LCM 30% / 40 BBL LOSE

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**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: H&P 298/298, CAPSTAR 310/310  
 Event: DRILLING Start Date: 1/18/2011 End Date: 3/18/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	6:00 - 15:00	9.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 8,570' TO 8,965' =395' =43.88' FPH / WOB 18K-22K / TOP DRIVE RPM 35-50 / PUMP 90/75 SPM = 405/338 GPM / PUMP PRESSURE ON/OFF BOTTOM 1750/1550/ PSI / MUD MOTOR RPM 65/54 / PU/SO/ROT WT 206/155/1180/ TORQUE ON/OFF BOTTOM 11K/10K/ SLIDE 78' IN 170 MIN = 16% OF FOOTAGE DRILLED & 37% OF HOURS DRILLED / 11.3 PPG MUD WT / 48 VIS LCM 30% / 390 BBL LOSE
	15:00 - 15:30	0.50	DRLPRO	07	A	P		SERVICE RIG @ 8,965'
	15:30 - 0:00	8.50	DRLPRO	02	D	P		DRILL/ SURVEY F/ 8,965' TO 9,300' =335' =39.41' FPH / WOB 15K-18K / TOP DRIVE RPM 35-50 / PUMP 75 SPM = 338 GPM / PUMP PRESSURE ON/OFF BOTTOM 1750/1550/ PSI / MUD MOTOR RPM 54 / PU/SO/ROT WT 216/155/180/ TORQUE ON/OFF BOTTOM 12K/11K/ SLIDE 50' IN 90 MIN = 15% OF FOOTAGE DRILLED & 18% OF HOURS DRILLED/ 11.7 PPG MUD WT / 48 VIS LCM 30% / 230 BBL LOSE
3/15/2011	0:00 - 3:00	3.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 9,300' TO 9,370' =70' =23.3' FPH / WOB 15K-18K / TOP DRIVE RPM 50 / PUMP 70 SPM = 315 GPM / PUMP PRESSURE ON/OFF BOTTOM 1700/1550/ PSI / MUD MOTOR RPM 50/ PU/SO/ROT WT 216/155/180/ TORQUE ON/OFF BOTTOM 12K/11K/ 11.8 PPG MUD WT / 48 VIS LCM 30% / 230 BBL LOSE 3/10 MUD CUT
	3:00 - 3:30	0.50	DRLPRO	22	O	Z		200 PSI PRESSURE DROP / CHECK SURFACE EQUIPMENT / PUMP FLAG / NO PRESSURE INCREASE
	3:30 - 4:00	0.50	DRLPRO	02	D	P		DRILL F/ 9,370' TO 9,386' LOST TOTAL RETURNS 355 BBL LOSE / 60 BPH STATIC LOSSES / 3/10 MUD CUT/ NO FLARE
	4:00 - 19:00	15.00	DRLPRO	22	G	X		LOST TOTAL RETURNS PULL BACK 2 STDS / KEEP PIPE MOVING / BUILD VOLUME SPOT 12.8 PPG HVP 50 BBL PEEL ON BTM / BUILD VOLUME & TOOH TO 5,000' BUILD VOLUME & LCM CONTENT/ TIH TO BTM / STAGE IN HOLE/ 300 MUD LOSE
	19:00 - 0:00	5.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 9,386' TO 9,600' =214' =42.8' FPH / WOB 18K-23K / TOP DRIVE RPM 76 / PUMP 105 SPM = 473 GPM / PUMP PRESSURE ON/OFF BOTTOM 2650/2400/ PSI / MUD MOTOR RPM 50/ PU/SO/ROT WT 215/150/180/ TORQUE ON/OFF BOTTOM 11K/11K/ 12.0 PPG MUD WT / 48 VIS LCM 30% / 40 BBL LOSE
3/16/2011	0:00 - 8:00	8.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 9,600' TO 9,893' =293' =36.62' FPH / WOB 18K-23K / TOP DRIVE RPM 76 / PUMP 105 SPM = 473 GPM / PUMP PRESSURE ON/OFF BOTTOM 2650/2400/ PSI / MUD MOTOR RPM 50/ PU/SO/ROT WT 215/150/180/ TORQUE ON/OFF BOTTOM 11K/11K/ 12.0 PPG MUD WT / 48 VIS LCM 30% / 40 BBL LOSE
	8:00 - 9:30	1.50	DRLPRO	06	E	P		SURVEY / WIPER TRIP F/ 9,893' TO 9,200'
	9:30 - 12:00	2.50	DRLPRO	05	C	P		CIRC & CLEAN HOLE @ 9,893'/RU TO LDDS
	12:00 - 0:00	12.00	DRLPRO	06	D	P		TOH / SPOT 50 BBLs 12.6 MUD ON BTM/ TOH 20 STDS PUMP SLUG/ LDDS / RUN 28 STDS DP OUT OF DERRICK/ LDDS BHA
3/17/2011	0:00 - 0:30	0.50	EVALPR	06	A	P		PULL MWD / LD DIRECTIONAL TOOLS / M MTR
	0:30 - 1:30	1.00	EVALPR	14	B	P		PULL WEAR BUSHING / CHANGE OUT BAILS
	1:30 - 2:30	1.00	CSG	12	A	P		HSM REVIEW JSA RU WEATHERFORD TRS TO RUN 41/2 CASING

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**DIV. OF OIL, GAS & MINING**

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

Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: H&P 298/298, CAPSTAR 310/310  
 Event: DRILLING Start Date: 1/18/2011 End Date: 3/18/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	2:30 - 13:00	10.50	CSG	12	C	P		RUN 236 JTS I-80 #11.6 BT&C 4.5 CASING + RELATED TOOLS / BREAKING CIRCULATION @ SELECTED INTERVALS / HOLDING CASING @9885' TO CIRC & CMT
	13:00 - 14:30	1.50	CSG	05	D	P		CIRC AND COND HOLE FOR CMT / REVIEW JSA RIG DOWN CASERS
	14:30 - 17:30	3.00	CSG	12	E	P		SAFETY MEETING (REVIEW J.S.A.) M.I.R.U. BJ EQUIPMENT / TEST PUMPS & LINES TO 4500 PSI / PUMP 40 BBLS H2O + 452 SX LEAD CEMENT @ 12.0 ppg (PREM LITE II + .25 pps CELLO FLAKE + 5 pps KOL SEAL + .05 lb/sx STATIC FREE + 10% bwoc BENTONITE + .2% bwoc SODIUM META SILICATE + .4 % R-3 + 1147.9 BBLS FRESH WATER / (12.7 gal/sx, 2.30 yield) + 1042 SX TAIL @ 14.3 ppg (CLS G 50/50 POZ + 10% SALT + .05llbs/sx STATIC FREE + .2% R3 + .002 GPS FP-6L + 2% BENTONITE + 207.96 BBLS H2O / (5.90 gal/sx, 1.31 yield) / DROP PLUG & DISPLACE W/ 153 BBLS H2O + ADDITIVES / PLUG DOWN @ 1656 HOURS / FLOATS HELD W/ 1.5 BBLS H2O RETURNED TO INVENTORY / LIFT PRESSURE @2650 PSI/BUMP PRESSURE TO 3100 PSI /GOOD RETURNS THROUGHTOUT JOB WITH 10 BBLS CMT TO PIT/TOP OF TAIL CEMENT CALC @ 3909'
	17:30 - 18:30	1.00	CSG	12	E	P		FLUSH OUT & PICK UP BOP STACK, JOSHUA PIERCE W/ WEATHERFORD SET C-22 11X 41/2 CSG SLIPS W/ 110K / SHOE @ 9885' FC @ 9843 / WASATCH MARKER @4946 / MV MARKER @ 7656/ CUT OFF CSG / LD LANDING JOINT.

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**Operation Summary Report**

Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: H&P 298/298, CAPSTAR 310/310  
 Event: DRILLING Start Date: 1/18/2011 End Date: 3/18/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
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18:30 - 0:00 5.50 RDMO 14 A P

NIPPLE DOWN BOP/ FLOWLINE ROT HEAD /CHOKE LINES / PREP FOR RIG MOVE / CLEAN PITS / RIG RELEASED TO NBU 920-12I @ 2359 HRS 03/17/2011

**CONDUCTOR CASING:**

Cond. Depth set: 40  
Cement sx used: 28

SPUD DATE/TIME: 1/29/2011 21:00

**SURFACE HOLE:**

Surface From depth: 40  
Surface To depth: 2,695  
Total SURFACE hours: 29.50  
Surface Casing size: 8 5/8  
# of casing joints ran: 60  
Casing set MD: 2,675.0  
# sx of cement: 200/225/200  
Cement blend (ppg): 11/15.8/15.8  
Cement yield (ft3/sk): 3.83/1.15/1.15  
# of bbls to surface: 25 BBLs  
Describe cement issues: FULL RETURNS  
Describe hole issues: 50% RETURNS F/1,900-2695

**PRODUCTION:**

Rig Move/Skid start date/time: 3/8/2011 13:00  
Rig Move/Skid finish date/time: 3/8/2011 17:00  
Total MOVE hours: 4.0  
Prod Rig Spud date/time: 3/9/2011 7:00  
Rig Release date/time: 3/17/2011 23:59  
Total SPUD to RR hours: 209.0  
Planned depth MD 9,886  
Planned depth TVD 9,716  
Actual MD: 9,893  
Actual TVD: 9,733  
Open Wells \$:  
AFE \$:  
Open wells \$/ft:

**PRODUCTION HOLE:**

Prod. From depth: 2,712  
Prod. To depth: 9,893  
Total PROD hours: 136.5  
Log Depth: NO LOGS  
Production Casing size: 4 1/2  
# of casing joints ran: 236  
Casing set MD: 9,885.0  
# sx of cement: 1,494  
Cement blend (ppg): 12.0 / 14.3  
Cement yield (ft3/sk): 2.30 / 1.31  
Est. TOC (Lead & Tail) or 2 Stage : 3909  
Describe cement issues: 10 BBLs LEAD CMT TO PIT  
Describe hole issues: 30% LCM

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**DIRECTIONAL INFO: DIRECTIONAL**

KOP: 206  
Max angle: 21.06  
Departure: 619.66  
Max dogleg MD: 2.70/584

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1 General

1.1 Customer Information

Company	US ROCKIES REGION		
Representative			
Address			

1.2 Well Information

Well	NBU 921-25L2AS [GREEN]		
Common Name	NBU 921-25L2AS		
Well Name	NBU 921-25L2AS	Wellbore No.	OH
Report No.	1	Report Date	4/26/2011
Project	UTAH-UINTAH	Site	NBU 921-25K PAD
Rig Name/No.		Event	COMPLETION
Start Date	4/26/2011	End Date	5/13/2011
Spud Date	1/29/2011	Active Datum	RKB @4,997.00ft (above Mean Sea Level)
UWI	NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0		

1.3 General

Contractor	CASEDHOLE SOLUTIONS	Job Method	PERFORATE	Supervisor	DAVE DANIELS
Perforated Assembly	PRODUCTION CASING	Conveyed Method	WIRELINE		

1.4 Initial Conditions

Fluid Type		Fluid Density		Gross Interval	7,018.0 (ft)-9,637.0 (ft)	Start Date/Time	5/2/2011 12:00AM
Surface Press		Estimate Res Press		No. of Intervals	31	End Date/Time	5/2/2011 12:00AM
TVD Fluid Top		Fluid Head		Total Shots	207	Net Perforation Interval	56.00 (ft)
Hydrostatic Press		Press Difference		Avg Shot Density	3.70 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL					Final Press Date	

1.5 Summary

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
12:00AM	WASATCH/			7,018.0	7,020.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	

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2.1 Perforated Interval (Continued)

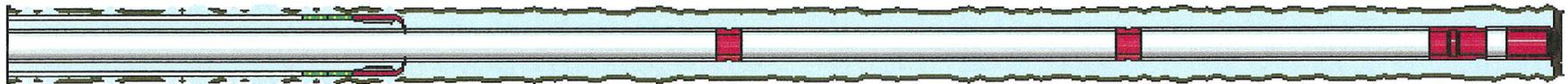
Date	Formation/ Reservoir	CCL@ (ft)	CCL-T S (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12:00AM	WASATCH/			7,052.0	7,053.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	WASATCH/			7,068.0	7,069.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	WASATCH/			7,135.0	7,136.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	WASATCH/			7,150.0	7,151.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	WASATCH/			7,578.0	7,580.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			7,639.0	7,641.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			7,680.0	7,683.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			7,734.0	7,736.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			7,741.0	7,742.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			7,780.0	7,781.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			7,810.0	7,812.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			7,831.0	7,832.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			7,917.0	7,920.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			8,024.0	8,027.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			8,096.0	8,097.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			8,130.0	8,131.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			8,198.0	8,200.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			8,241.0	8,243.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			8,528.0	8,529.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			8,624.0	8,625.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			8,695.0	8,697.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

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	Diameter (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12:00AM	MESAVERDE/			8,747.0	8,749.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12:00AM	MESAVERDE/			8,954.0	8,957.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AM	MESAVERDE/			9,049.0	9,052.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AM	MESAVERDE/			9,105.0	9,107.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AM	MESAVERDE/			9,214.0	9,216.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AM	MESAVERDE/			9,284.0	9,286.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AM	MESAVERDE/			9,439.0	9,441.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AM	MESAVERDE/			9,553.0	9,555.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12:00AM	MESAVERDE/			9,635.0	9,637.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	

3 Plots

3.1 Wellbore Schematic



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**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UJINTAH Site: NBU 921-25K PAD Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3  
 Event: COMPLETION Start Date: 4/26/2011 End Date: 5/13/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
4/29/2011	7:00 - 16:00	9.00	COMP	47	B	P		HSM, PRESSURE TESTING, MIRU B&C TESTERS, PRESSURE UP TO 1,000# W/ 15# LOSS IN 15 MIN. BUMP UP TO 3,500# W/ 50# LOSS IN 15 MIN. BUMP UP TO 7000# W/ 85# LOSS IN 30 MIN. BUMP BACK UP TO 7,000# W/ 30# LOSS IN 30 MIN. [GOOD TEST]
5/2/2011	6:15 - 6:30	0.25	COMP	48	E	P		HSM, RIGGING UP
	6:30 - 6:30	0.00	COMP	36	E	P		MIRU CASED HOLE SOLUTIONS & SUPERIOR FRAC EQUIP.,  P/U RIH PERF MESAVERDE W/ 3-1/8 EXPEND, 23 GRM 0.36" HOLE, 9,439'-9,637' [22 HOLES] AS PERSAY IN PROCEDURE.  FRAC STG #1] WHP=1,197#, BRK DN PERFS=3,060#, @=4.6 BPM, INJ RT=47.6, INJ PSI=5,583#, ISIP=2,504#, FG=70, PUMP'D 910 BBLS SLK WTR W/ 10,043# 30/50 MESH W/ 4,340# RESIN COAT IN TAIL W/ 14,383# TOTAL PROP PUMP'D, ISIP=2,724#, FG=72, AR=47.7, AP=5,762#, MR=50.5, MP=6,619#, NPI=220#, 21/22 CALC PERFS OPEN. 94%  PERF STG #2] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=9,336', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. 9,105'-9,286' [24 HOLES] PERSAY I PROCEDURE.  FRAC STG #2] WHP=1,866#, BRK DN PERFS=2,891#, @=4.3 BPM, INJ RT=41.4, INJ PSI=6,062#, ISIP=2,561#, FG=72, PUMP'D 600 BBLS SLK WTR W/ 6,295# 30/50 MESH W/ 4,746# RESIN COAT IN TAIL W/ 11,041# TOTAL PROP PUMP'D, ISIP=2,795#, FG=74, AR=48.3, AP=5,974#, MR=49.8, MP=6,345#, NPI=234#, 15/24 CALC PERFS OPEN. 62%.  PERF STG #3] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=9,082', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. 8,954'-9,052' [24 HOLES] AS PERSAY IN PROCEDURE.  FRAC STG #3] WHP=2,183#, BRK DN PERFS=2,657#, @=4.1 BPM, INJ RT=42.7, INJ PSI=6,453#, ISIP=2,315#, FG=70, PUMP'D 687 BBLS SLK WTR W/ 7,791# 30/50 MESH W/ 5,201# RESIN COAT IN TAIL W/ 12,992# TOTAL PROP PUMP'D, ISIP=2,513#, FG=72, AR=45.5, AP=6,158#, MR=50.3, MP=6,648#, NPI=163#, 14/24 CALC PERFS OPEN. 50%.  PERF STG #4] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8,799', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. 8,528'-8,749' [22 HOLES] AS PERSAY IN PROCEDURE. SWIFN.
5/3/2011	6:45 - 7:00	0.25	COMP	48		P		HSM,

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

Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3  
 Event: COMPLETION Start Date: 4/26/2011 End Date: 5/13/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
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7:00 - 7:00 0.00 COMP 36 E P FRAC STG #4 8,528'-8,749' [22 HOLES]

FRAC STG #4] WHP=1,789#, BRK DN  
 PERFS=2,529#, @=2.2 BPM, INJ RT=42.5, INJ  
 PSI=5,775#, ISIP=1,897#, FG=.66, PUMP'D 608  
 BBLS SLK WTR W/ 6,524# 30/50 MESH W/ 4,996#  
 RESIN COAT IN TAIL W/ 11,520# TOTAL PROP  
 PUMP'D, ISIP=2,475#, FG=.73, AR=48.8,  
 AP=6,158#, MR=50.3, MP=6,398#, NPI=578#, 15/22  
 CALC PERFS OPEN. 60%.

PERF STG #5] P/U RIH W/ HALIBURTON 8K CBP &  
 PERF GUN, SET CBP @=8,293', PERF  
 MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36"  
 HOLE. 8,096'-8,243' [24 HOLES] AS PERSAY IN  
 PROCEDURE.

FRAC STG #5] WHP=1,175#, BRK DN  
 PERFS=2,916#, @=4 BPM, INJ RT=49.6, INJ  
 PSI=5,935#, ISIP=1,939#, FG=.68, PUMP'D 929  
 BBLS SLK WTR W/ 14,091# 30/50 MESH W/ 5,087#  
 RESIN COAT IN TAIL W/ 19,178# TOTAL PROP  
 PUMP'D, ISIP=2,476#, FG=.74, AR=50.7,  
 AP=5,684#, MR=52.9, MP=6,506#, NPI=537#, 17/24  
 CALC PERFS OPEN. 70%

PERF STG #6] P/U RIH W/ HALIBURTON 8K CBP &  
 PERF GUN, SET CBP @=8,057', PERF  
 MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36"  
 HOLE. 7,917'-8,027' [21 HOLES] AS PERSAY IN  
 PROCEDURE.

FRAC STG #6] WHP=891#, BRK DN  
 PERFS=3,816#, @=4.7 BPM, INJ RT=47.2, INJ  
 PSI=5,926#, ISIP=2,180#, FG=.71, PUMP'D 724  
 BBLS SLK WTR W/ 9,511# 30/50 MESH W/ 4,600#  
 RESIN COAT IN TAIL W/ 14,111# TOTAL PROP  
 PUMP'D, ISIP=2,132#, FG=.71, AR=50.4,  
 AP=5,403#, MR=51, MP=6,181#, NPI=-48# 16/21  
 CALC PERFS OPEN. 68%

CHANGE OUT FRAC VALVES AFTER STG #6  
 APROX. 1-1/2 HRS DOWN TIME.

PERF STG #7] P/U RIH W/ HALIBURTON 8K CBP &  
 PERF GUN, SET CBP @=7,862', PERF  
 MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36"  
 HOLE. 7,734'-7,832' [23 HOLES] AS PERSAY IN  
 PROCEDURE.

FRAC STG #7] WHP=591#, BRK DN  
 PERFS=3,319#, @=4.2 BPM, INJ RT=47.7, INJ  
 PSI=6,019#, ISIP=2,302#, FG=.73, PUMP'D 1,079  
 BBLS SLK WTR W/ 18,423# 30/50 MESH W/ 4,870#  
 RESIN COAT IN TAIL W/ 23,302# TOTAL PROP  
 PUMP'D, ISIP=2,283#, FG=.73, AR=48.9,  
 AP=5,294#, MR=50.2, MP=6,412#, NPI=-19#, 17/23  
 CALC PERFS OPEN. 69%

PERF STG #8] P/U RIH W/ HALIBURTON 8K CBP &  
 PERF GUN, SET CBP @=6,968', PERF WASATCH  
 USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE.  
 7,578'-7,683' [23 HOLES] AS PERSAY IN  
 PROCEDURE. SWIFN.

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**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3  
 Event: COMPLETION Start Date: 4/26/2011 End Date: 5/13/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
5/4/2011	6:30 - 6:45	0.25	COMP	48		P		HSM, FRACING / RIGGING DOWN
	6:45 - 6:45	0.00	COMP	36	E	P		FRAC WASATCH STG #8 7,578'-7,683' [23 HOLES]  FRAC STG #8] WHP=1,060#, BRK DN PERFS=1,629# @=4.4 BPM, INJ RT=50.5, INJ PSI=4,489#, ISIP=1,220#, FG=.60, PUMP'D 1,895 BBLs SLK WTR W/ 52,474# 30/50 MESH W/ 5,461# RESIN COAT IN TAIL W/ 57,935# TOTAL PROP PUMP'D, ISIP=2,317#, FG=.74, AR=50.3, AP=4,573#, MR=51.5, MP=51.5#, NPI=1,098#, 20/23 CALC PERFS OPEN. 82%  PERF STG #9] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=6,968', PERF WASATCH USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. 7,018'-7,151' [24 HOLES] AS PERSAY IN PROCEDURE. [MISS RUN PLUG SET, BOTTOM GUN SHOT AND WENT SHORT, POOH FIXED PROBLEM, SHOT REMAINING GUNS]  FRAC STG #9] WHP=298#, BRK DN PERFS=1,574#, @=4.4 BPM, INJ RT=50.3, INJ PSI=5,188#, ISIP=891#, FG=.56, PUMP'D 681 BBLs SLK WTR W/ 12,633# 30/50 MESH W/ 3,144# RESIN COAT IN TAIL W/ 15,777# TOTAL PROP PUMP'D, ISIP=1,773#, FG=.69, AR=50, AP=4,398#, MR=50.6, MP=5,480#, NPI=882#, 16/24 CALC PERFS OPEN. 65%.  P/U RIH W/ HALIBURTON 8K CBP SET FOR TOP KILL @=6,968'  8,113 TOTAL BBLs 180,239# TOTAL SAND 945 GALS SCALE INHIB 165 GALS BIOCID 7AM [DAY 4] JSA-- P/U TBG, SWVLS, OVERHEAD EQUIP, DRLG PLUGS, PSI.  MIRU LAST NIGHT & NDWH, NUBOP, R/U FLOOR & TBG EQUIPMENT.  P/U 3-7/8" SEALED BRG BIT, POBS W/ XN, NEW 2-3/8" L-80 TBG & RIH. [SLM & DRIFTED] TAG SAND @ 6938'. R/U SWVL & RIG PUMP. ESTABLISH CIRCULATION. P.T. SURFACE LINE & BOP TO 3000#. 0# LOSS IN 15 MINUTES. C/O 30' SAND TO CBP#1.  [DRLG CBP#1] @ 6968'. D/O HALL 8K CBP IN 5 MIN. 20# INC. RIH & C/O 30' SAND TO CBP#2. FCP=20#.  [DRLG CBP#2] @ 7201'. D/O HALL 8K CBP IN 4 MIN. 90# INC. RIH & C/O 30' SAND TO CBP#3. FCP=200#.  [DRLG CBP#3] @ 7713'. D/O HALL 8K CBP IN 5 MIN. 100# INC. RIH & C/O 25' SAND TO CBP#4. CIRC WELL CLN, PUH W/ EOT @ 7821'.  4PM SWL-SDFN. PREP TO FINISH D/O 6 PLUGS AND LAND TBG IN AM.
5/12/2011	7:00 - 16:00	9.00	COMP	30		P		

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Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3  
 Event: COMPLETION Start Date: 4/26/2011 End Date: 5/13/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
5/13/2011	7:00 - 15:00	8.00	COMP	30		P		<p>7AM [DAY 6] JSA-- BLEED PSI, DRLG PLUGS, LAND TBG, NDBOP, NUWH, R/D RIG, PIPE RAMS IN BOP.</p> <p>EOT @ 7831'. SICP=1125#, SITP=0#. OPEN WELL TO PIT. BLEED OFF PSI TO 250# IN 10 MIN. ESTABLISH CIRC. CONTINUE DRLG PLUGS. FCP=200#</p> <p>[DRLG CBP#4] @ 7860'. D/O HALL 8K CBP IN 4 MIN. 500# INC. RIH &amp; C/O 30' SAND TO CBP#5. FCP=700#.</p> <p>[DRLG CBP#5] @ 8057'. D/O HALL 8K CBP IN 4 MIN. 400# INC. RIH &amp; C/O 30' SAND TO CBP#6. FCP=800#.</p> <p>[DRLG CBP#6] @ 8293'. D/O HALL 8K CBP IN 5 MIN. 200# INC. RIH &amp; C/O 30' SAND TO CBP#7. FCP=900#.</p> <p>[DRLG CBP#7] @ 8799'. D/O HALL 8K CBP IN 6 MIN. 100# INC. RIH &amp; C/O 30' SAND TO CBP#8. FCP=1000#.</p> <p>[DRLG CBP#8] @ 9082'. D/O HALL 8K CBP IN 4 MIN. 200# INC. RIH &amp; C/O 25' SAND TO CBP#9. FCP=800#.</p> <p>[DRLG CBP#9] @ 9336'. D/O HALL 8K CBP IN 5 MIN. 200# INC. RIH, TAG SAND @ 9760'. C/O 81' SAND TO PBTD @ 9841'. B.P. @ 9637'. 204' RATHOLE. CIRCULATE WELL CLEAN. R/D SWVL. POOH &amp; L/D 24 JTS ON FLOAT. LAND TBG ON HANGER W/ 286 JTS NEW 2-3/8" L-80 TBG. EOT @ 9088.71', POBS W/ XN @ 9086.51'. R/D FLOOR &amp; TBG EQUIPMENT. NDBOP, DROP BALL DOWN TBG, NUWH. PUMP OFF THE BIT @ 2100#. OPEN WELL TO FBT ON OPEN CHOKE &amp; UNLOAD TBG VOLUME IN 8 MINUTES.</p> <p>1 PM TURN WELL OVER TO DELSCO FBC &amp; APC MAINT CREW. FTP=2150#, SICP=2200#. SELLING GAS @ 2.3 MCF RATE. RIG PMP'D 225 BBLs. LTR=6163 BBLs.</p> <p>RACK EQUIPMENT, RDMO. ROAD RIG TO CIGE 172. SPOT RIG &amp; EQUIPMENT.</p> <p>3 PM SDF-WE</p> <p>315 JTS DELIVERED 286 JTS LANDED 29 JTS RETURNED</p> <p>WELL TURNED TO SALES @ 1300 HR ON 5/13/11 - 2300 MCFD, 1800 BWPF, CP 2200#, FTP 650#, CK 20/64"</p>
5/14/2011	7:00 -			33				<p>7 AM FLBK REPORT: CP 2950#, TP 2175#, 20/64" CK, 45 BWPH, hvy SAND, - GAS TTL BBLs RECOVERED: 2810 BBLs LEFT TO RECOVER: 5303</p>

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

Well: NBU 921-25L2AS [GREEN]		Spud Conductor: 12/17/2010	Spud Date: 1/29/2011
Project: UTAH-UINTAH		Site: NBU 921-25K PAD	Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: COMPLETION		Start Date: 4/26/2011	End Date: 5/13/2011
Active Datum: RKB @4,997.00ft (above Mean Sea Level)		UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
5/15/2011	7:00 -			33	A			7 AM FLBK REPORT: CP 2850#, TP 2050#, 20/64" CK, 35 BWPH, LIGHT SAND, - GAS TTL BBLs RECOVERED: 3660 BBLs LEFT TO RECOVER: 4453
5/16/2011	7:00 -			33	A			7 AM FLBK REPORT: CP 2625#, TP 1925#, 20/64" CK, 30 BWPH, TRACE SAND, - GAS TTL BBLs RECOVERED: 4415 BBLs LEFT TO RECOVER: 3698
5/17/2011	7:00 -			33	A			7 AM FLBK REPORT: CP 2500#, TP 1800#, 20/64" CK, 25 BWPH, TRACE SAND, - GAS TTL BBLs RECOVERED: 5120 BBLs LEFT TO RECOVER: 2993
5/18/2011	7:00 -			33	A			7 AM FLBK REPORT: CP 2400#, TP 1725#, 20/64" CK, 20 BWPH, TRACE SAND, - GAS TTL BBLs RECOVERED: 5676 BBLs LEFT TO RECOVER: 2437

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Site: UINAH, NBU 921-25K Pad  
 Well: NBU 921-25L2AS  
 Wellbore: NBU 921-25L2AS  
 Section:  
 SHL:  
 Design: NBU 921-25L2AS (wp02) Rig: H&P 298  
 Latitude: 40.004848  
 Longitude: -109.503803  
 GL: 4971.00  
 KB: (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)

TVDPath	MDPath	Formation
4781.00	4950.92	Top Wasatch
7495.00	7665.08	Top Mesaverde (Top of cylinder)
8389.00	8559.13	MVU21
8969.00	9139.17	MVL1

# Weatherford®



Azimuths to True North  
 Magnetic North: 11.13°

Magnetic Field  
 Strength: 52371.3snT  
 Dip Angle: 65.88°  
 Date: 1/19/2011  
 Model: IGRF2010

### WELL DETAILS: NBU 921-25L2AS

+N/-S	+E/-W	Northing	Ground Level: Easting	4971.00 Latitude	Longitude	Slot
0.00	0.00	14531327.06	2059417.80	40.004848	-109.503803	

### CASING DETAILS

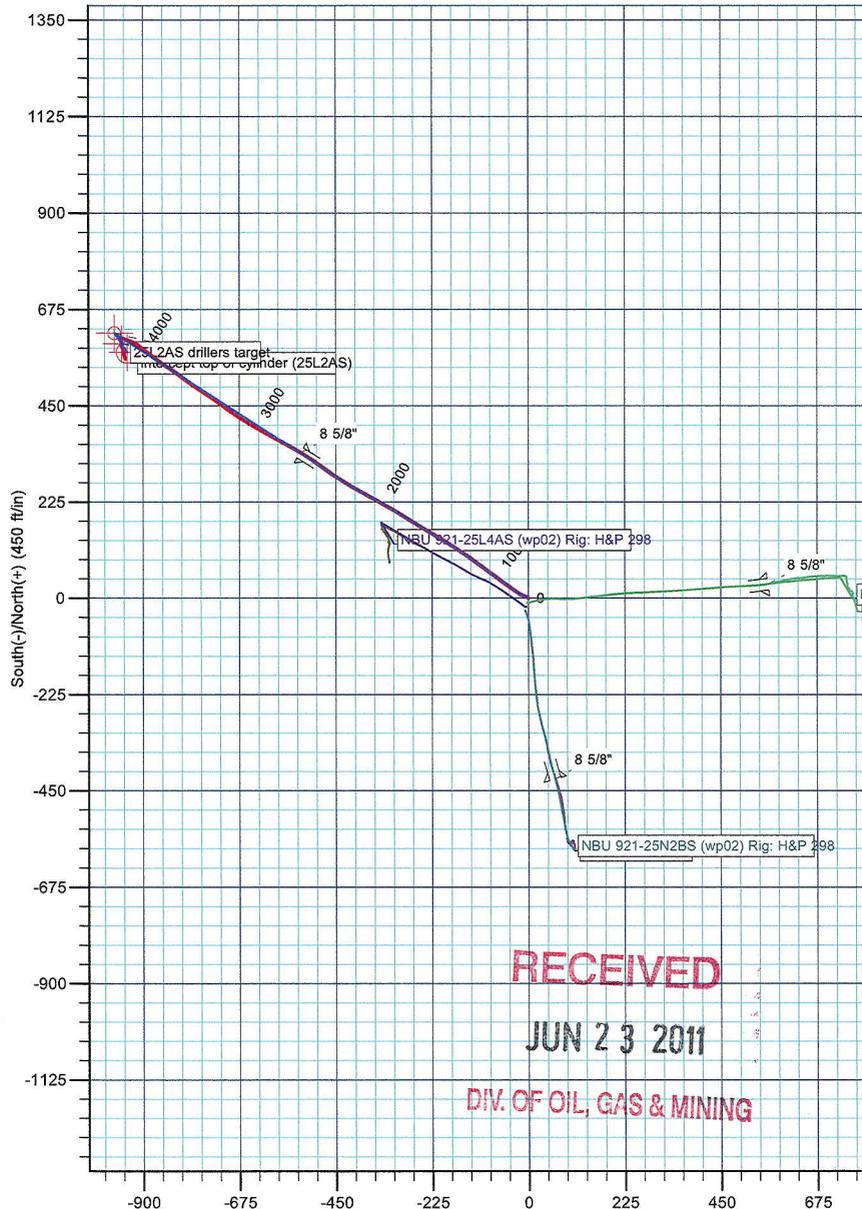
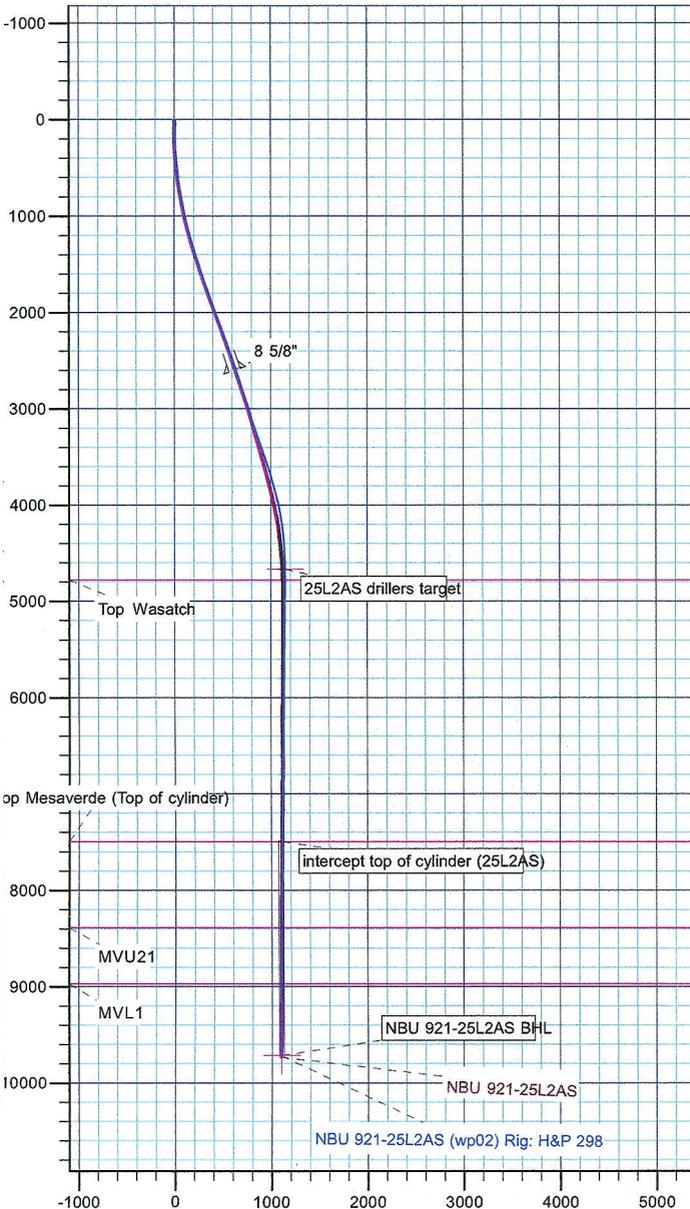
TVD	MD	Name	Size
2597.58	2692.00	8 5/8"	8-5/8

### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
25L2AS drillers target	4667.00	620.47	-967.45	14531931.19	2058440.07	40.006552	-109.507257	Circle (Radius: 15.00)
Intercept top of cylinder (25L2AS)	7495.00	595.69	-950.93	14531906.69	2058457.00	40.006484	-109.507198	Point
NBU 921-25L2AS BHL	9716.00	575.47	-937.45	14531886.70	2058470.81	40.006428	-109.507150	Circle (Radius: 25.00)

### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
2652.00	19.02	302.08	2559.77	333.35	-521.50	0.00	0.00	618.83
2692.00	19.02	302.08	2597.58	340.27	-532.55	0.00	0.00	631.87
2792.00	19.02	302.08	2692.12	357.58	-560.16	0.00	0.00	664.46
2815.20	18.63	302.85	2714.08	361.60	-566.48	2.00	148.15	671.94
3772.50	18.63	302.85	3621.23	527.45	-823.36	0.00	0.00	977.64
4836.92	0.00	149.04	4667.00	620.47	-967.45	1.75	180.00	1149.10
5045.81	0.63	146.32	4875.89	619.52	-966.82	0.30	146.32	1148.06
9886.21	0.63	146.32	9716.00	575.47	-937.45	0.00	0.00	1099.99



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<b>Company:</b> US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b> Well NBU 921-25L2AS
<b>Project:</b> UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b> (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)
<b>Site:</b> UINTAH_NBU 921-25K Pad	<b>MD Reference:</b> (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)
<b>Well:</b> NBU 921-25L2AS	<b>North Reference:</b> True
<b>Wellbore:</b> NBU 921-25L2AS	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> NBU 921-25L2AS	<b>Database:</b> edm5000p

<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 921-25K Pad		
<b>Site Position:</b>	<b>Northing:</b> 14,531,298.16 ft	<b>Latitude:</b> 40.004769
<b>From:</b> Lat/Long	<b>Easting:</b> 2,059,410.15 ft	<b>Longitude:</b> -109.503832
<b>Position Uncertainty:</b> 0.00 ft	<b>Slot Radius:</b> 0 "	<b>Grid Convergence:</b> 0.96 °

<b>Well</b> NBU 921-25L2AS		
<b>Well Position</b> <b>+N/-S</b> 0.00 ft	<b>Northing:</b> 14,531,327.06 ft	<b>Latitude:</b> 40.004848
<b>+E/-W</b> 0.00 ft	<b>Easting:</b> 2,059,417.79 ft	<b>Longitude:</b> -109.503803
<b>Position Uncertainty</b> 0.00 ft	<b>Wellhead Elevation:</b> ft	<b>Ground Level:</b> 4,971.00 ft

<b>Wellbore</b> NBU 921-25L2AS					
<b>Magnetics</b>	<b>Model Name</b> IGRF2010	<b>Sample Date</b> 1/19/2011	<b>Declination (°)</b> 11.13	<b>Dip Angle (°)</b> 65.88	<b>Field Strength (nT)</b> 52,371

<b>Design</b> NBU 921-25L2AS				
<b>Audit Notes:</b>				
<b>Version:</b> 1.0	<b>Phase:</b> ACTUAL	<b>Tie On Depth:</b> 17.00		
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b> 17.00	<b>+N/-S (ft)</b> 0.00	<b>+E/-W (ft)</b> 0.00	<b>Direction (°)</b> 302.59

<b>Survey Program</b>	<b>Date</b> 3/22/2011			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
223.00	2,652.00	Survey #1 (NBU 921-25L2AS)	MWD	MWD - Standard
2,754.00	9,893.00	Survey #2 (NBU 921-25L2AS)	MWD	MWD - Standard

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)
17.00	0.00	0.00	17.00	0.00	0.00	0.00	0.00	0.00	0.00
223.00	0.88	336.70	222.99	1.45	-0.63	1.31	0.43	0.43	0.00
316.00	2.88	288.29	315.94	2.84	-3.13	4.17	2.57	2.15	-52.05
410.00	4.31	291.54	409.75	4.88	-8.65	9.92	1.54	1.52	3.46
505.00	6.44	294.79	504.33	8.43	-16.81	18.70	2.26	2.24	3.42
601.00	8.69	304.66	599.49	14.81	-27.67	31.29	2.70	2.34	10.28
696.00	9.06	306.91	693.36	23.38	-39.55	45.92	0.53	0.39	2.37
791.00	9.38	307.66	787.13	32.60	-51.66	61.09	0.36	0.34	0.79
887.00	10.88	303.16	881.63	42.34	-65.44	77.94	1.77	1.56	-4.69
981.00	12.75	308.04	973.64	53.59	-81.04	97.14	2.25	1.99	5.19

Company: US ROCKIES REGION PLANNING  
 Project: UTAH - UTM (feet), NAD27, Zone 12N  
 Site: UINTAH\_NBU 921-25K Pad  
 Well: NBU 921-25L2AS  
 Wellbore: NBU 921-25L2AS  
 Design: NBU 921-25L2AS

Local Co-ordinate Reference: Well NBU 921-25L2AS  
 TVD Reference: (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)  
 MD Reference: (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)  
 North Reference: True  
 Survey Calculation Method: Minimum Curvature  
 Database: edm5000p

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)
1,076.00	14.32	307.43	1,066.00	67.19	-98.62	119.28	1.66	1.65	-0.64
1,171.00	14.81	307.29	1,157.94	81.68	-117.61	143.09	0.52	0.52	-0.15
1,266.00	15.50	303.79	1,249.64	96.10	-137.82	167.88	1.21	0.73	-3.68
1,361.00	16.94	302.66	1,340.86	110.63	-160.03	194.42	1.55	1.52	-1.19
1,457.00	17.19	302.54	1,432.63	125.81	-183.76	222.59	0.26	0.26	-0.13
1,551.00	18.06	301.79	1,522.22	140.95	-207.86	251.05	0.96	0.93	-0.80
1,645.00	19.44	301.29	1,611.23	156.76	-233.61	281.26	1.48	1.47	-0.53
1,740.00	19.88	301.04	1,700.69	173.30	-260.96	313.21	0.47	0.46	-0.26
1,835.00	19.38	301.16	1,790.17	189.78	-288.29	345.11	0.53	-0.53	0.13
1,930.00	18.81	301.04	1,879.94	205.83	-314.90	376.18	0.60	-0.60	-0.13
2,025.00	19.94	300.04	1,969.56	221.84	-342.04	407.67	1.24	1.19	-1.05
2,121.00	21.06	298.16	2,059.48	238.18	-371.42	441.23	1.35	1.17	-1.96
2,216.00	20.25	299.91	2,148.37	254.43	-400.72	474.67	1.07	-0.85	1.84
2,310.00	19.88	300.66	2,236.67	270.69	-428.57	506.89	0.48	-0.39	0.80
2,404.00	19.00	305.41	2,325.31	287.71	-454.79	538.15	1.92	-0.94	5.05
2,500.00	19.06	305.41	2,416.07	305.85	-480.30	569.41	0.06	0.06	0.00
2,595.00	19.00	303.29	2,505.87	323.32	-505.87	600.37	0.73	-0.06	-2.23
2,652.00	19.02	302.08	2,559.77	333.35	-521.50	618.94	0.69	0.04	-2.12
2,754.00	18.63	301.60	2,656.31	350.71	-549.46	651.85	0.41	-0.38	-0.47
2,848.00	18.63	299.53	2,745.39	365.98	-575.31	681.85	0.70	0.00	-2.20
2,943.00	17.81	297.78	2,835.62	380.23	-601.37	711.48	1.04	-0.86	-1.84
3,038.00	17.44	298.77	2,926.16	393.85	-626.70	740.17	0.50	-0.39	1.04
3,133.00	15.56	301.65	3,017.25	407.39	-650.03	767.11	2.16	-1.98	3.03
3,228.00	16.13	303.28	3,108.64	421.32	-671.91	793.05	0.76	0.60	1.72
3,322.00	16.81	305.78	3,198.78	436.43	-693.85	819.68	1.04	0.72	2.66
3,417.00	17.25	306.65	3,289.62	452.87	-716.30	847.44	0.54	0.46	0.92
3,512.00	16.44	303.15	3,380.54	468.63	-738.86	874.94	1.37	-0.85	-3.68
3,606.00	15.63	304.28	3,470.88	483.04	-760.46	900.90	0.92	-0.86	1.20
3,700.00	15.31	303.40	3,561.48	497.00	-781.28	925.96	0.42	-0.34	-0.94
3,795.00	15.50	306.15	3,653.07	511.40	-802.00	951.17	0.79	0.20	2.89
3,890.00	14.94	308.53	3,744.74	526.51	-821.83	976.02	0.88	-0.59	2.51
3,985.00	13.38	302.90	3,836.85	540.11	-840.64	999.20	2.19	-1.64	-5.93
4,079.00	12.63	302.78	3,928.44	551.58	-858.41	1,020.35	0.80	-0.80	-0.13
4,174.00	11.50	306.15	4,021.34	562.79	-874.79	1,040.19	1.40	-1.19	3.55
4,269.00	10.44	308.90	4,114.60	573.79	-889.14	1,058.20	1.24	-1.12	2.89
4,364.00	10.00	310.90	4,208.10	584.59	-902.07	1,074.91	0.59	-0.46	2.11
4,459.00	8.00	300.65	4,301.93	593.36	-914.00	1,089.68	2.69	-2.11	-10.79
4,553.00	6.94	295.90	4,395.13	599.18	-924.73	1,101.86	1.30	-1.13	-5.05
4,648.00	5.44	292.53	4,489.57	603.41	-934.06	1,112.00	1.62	-1.58	-3.55
4,743.00	4.56	281.53	4,584.21	605.89	-941.92	1,119.95	1.37	-0.93	-11.58
4,838.00	3.00	290.15	4,679.00	607.50	-947.95	1,125.91	1.74	-1.64	9.07
4,933.00	1.00	301.90	4,773.94	608.80	-950.99	1,129.16	2.14	-2.11	12.37
4,995.00	0.56	165.03	4,835.94	608.79	-951.37	1,129.48	2.35	-0.71	-220.76

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**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-25K Pad  
**Well:** NBU 921-25L2AS  
**Wellbore:** NBU 921-25L2AS  
**Design:** NBU 921-25L2AS

**Local Co-ordinate Reference:** Well NBU 921-25L2AS  
**TVD Reference:** (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)  
**MD Reference:** (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** edm5000p

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)
5,122.00	0.63	162.15	4,962.93	607.53	-950.99	1,128.49	0.06	0.06	-2.27
5,217.00	0.81	171.28	5,057.92	606.37	-950.73	1,127.64	0.22	0.19	9.61
5,312.00	0.81	185.03	5,152.91	605.03	-950.69	1,126.89	0.20	0.00	14.47
5,407.00	0.61	347.78	5,247.91	604.86	-950.86	1,126.93	1.48	-0.21	171.32
5,501.00	0.19	314.53	5,341.91	605.46	-951.07	1,127.44	0.49	-0.45	-35.37
5,596.00	0.19	163.03	5,436.91	605.42	-951.14	1,127.47	0.39	0.00	-159.47
5,691.00	0.44	170.78	5,531.91	604.91	-951.03	1,127.11	0.27	0.26	8.16
5,786.00	0.63	185.90	5,626.90	604.03	-951.03	1,126.63	0.25	0.20	15.92
5,880.00	0.94	185.03	5,720.90	602.74	-951.15	1,126.04	0.33	0.33	-0.93
5,975.00	1.00	184.78	5,815.88	601.14	-951.29	1,125.29	0.06	0.06	-0.26
6,070.00	0.56	153.90	5,910.87	599.90	-951.15	1,124.51	0.62	-0.46	-32.51
6,165.00	0.69	145.90	6,005.87	599.01	-950.63	1,123.59	0.16	0.14	-8.42
6,259.00	0.56	168.90	6,099.86	598.09	-950.22	1,122.75	0.30	-0.14	24.47
6,354.00	0.88	174.03	6,194.85	596.91	-950.06	1,121.98	0.34	0.34	5.40
6,449.00	1.06	160.78	6,289.84	595.35	-949.69	1,120.83	0.30	0.19	-13.95
6,544.00	0.63	218.15	6,384.83	594.11	-949.72	1,120.19	0.94	-0.45	60.39
6,639.00	0.81	214.15	6,479.82	593.15	-950.42	1,120.26	0.20	0.19	-4.21
6,733.00	0.38	348.40	6,573.82	592.90	-950.86	1,120.49	1.18	-0.46	142.82
6,828.00	0.13	12.28	6,668.82	593.31	-950.90	1,120.75	0.28	-0.26	25.14
6,923.00	0.25	190.40	6,763.82	593.22	-950.91	1,120.71	0.40	0.13	187.49
7,017.00	0.48	168.33	6,857.82	592.63	-950.87	1,120.36	0.28	0.24	-23.48
7,112.00	0.38	169.03	6,952.82	591.93	-950.73	1,119.86	0.11	-0.11	0.74
7,207.00	0.44	140.90	7,047.81	591.34	-950.44	1,119.30	0.22	0.06	-29.61
7,302.00	0.69	149.03	7,142.81	590.56	-949.92	1,118.44	0.28	0.26	8.56
7,397.00	0.38	174.65	7,237.80	589.76	-949.59	1,117.74	0.40	-0.33	26.97
7,491.00	0.56	154.78	7,331.80	589.03	-949.37	1,117.16	0.26	0.19	-21.14
7,586.00	0.94	149.15	7,426.79	587.95	-948.77	1,116.07	0.41	0.40	-5.93
7,681.00	1.06	151.65	7,521.78	586.50	-947.95	1,114.60	0.13	0.13	2.63
7,776.00	1.56	141.03	7,616.75	584.72	-946.72	1,112.61	0.58	0.53	-11.18
7,871.00	1.06	134.15	7,711.73	583.11	-945.28	1,110.52	0.55	-0.53	-7.24
7,967.00	1.44	137.78	7,807.71	581.59	-943.83	1,108.48	0.40	0.40	3.78
8,062.00	0.81	148.65	7,902.69	580.14	-942.68	1,106.73	0.70	-0.66	11.44
8,156.00	0.13	179.53	7,996.68	579.46	-942.33	1,106.07	0.75	-0.72	32.85
8,251.00	0.31	183.40	8,091.68	579.10	-942.35	1,105.89	0.19	0.19	4.07
8,346.00	0.19	184.03	8,186.68	578.69	-942.38	1,105.69	0.13	-0.13	0.66
8,441.00	0.63	179.65	8,281.68	578.01	-942.38	1,105.33	0.46	0.46	-4.61
8,536.00	0.56	151.90	8,376.67	577.07	-942.16	1,104.64	0.31	-0.07	-29.21
8,631.00	0.31	141.53	8,471.67	576.46	-941.78	1,103.99	0.27	-0.26	-10.92
8,726.00	0.75	288.83	8,566.67	576.46	-942.21	1,104.35	1.08	0.46	155.05
8,820.00	0.61	278.04	8,660.66	576.73	-943.29	1,105.41	0.20	-0.15	-11.48
8,915.00	0.56	247.15	8,755.66	576.62	-944.22	1,106.13	0.33	-0.05	-32.52
9,010.00	0.56	211.03	8,850.65	576.04	-944.88	1,106.38	0.37	0.00	-38.02
9,105.00	0.94	209.53	8,945.64	574.97	-945.51	1,106.33	0.40	0.40	-1.58

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**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-25K Pad  
**Well:** NBU 921-25L2AS  
**Wellbore:** NBU 921-25L2AS  
**Design:** NBU 921-25L2AS

**Local Co-ordinate Reference:** Well NBU 921-25L2AS  
**TVD Reference:** (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)  
**MD Reference:** (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** edm5000p

**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)
9,199.00	0.44	203.40	9,039.64	573.97	-946.03	1,106.23	0.54	-0.53	-6.52
9,294.00	0.63	177.15	9,134.63	573.11	-946.15	1,105.87	0.32	0.20	-27.63
9,386.00	1.13	150.53	9,226.62	571.81	-945.68	1,104.77	0.69	0.54	-28.93
9,483.00	1.19	157.53	9,323.60	570.05	-944.82	1,103.10	0.16	0.06	7.22
9,578.00	1.19	164.78	9,418.58	568.19	-944.19	1,101.56	0.16	0.00	7.63
9,673.00	1.44	159.53	9,513.56	566.12	-943.51	1,099.88	0.29	0.26	-5.53
9,767.00	1.75	153.90	9,607.52	563.72	-942.47	1,097.71	0.37	0.33	-5.99
9,843.00	2.17	147.89	9,683.48	561.46	-941.19	1,095.42	0.61	0.55	-7.91
9,893.00	2.17	147.89	9,733.44	559.86	-940.18	1,093.70	0.00	0.00	0.00

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

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# **US ROCKIES REGION PLANNING**

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

**UINTAH\_NBU 921-25K Pad**

**NBU 921-25L2AS**

**NBU 921-25L2AS**

**Design: NBU 921-25L2AS**

## **Survey Report - Geographic**

**22 March, 2011**

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**JUN 23 2011**

**DIV. OF OIL, GAS & MINING**



**Weatherford®**

**APC**  
Survey Report - Geographic



<b>Company:</b> US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b> Well NBU 921-25L2AS
<b>Project:</b> UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b> (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)
<b>Site:</b> UINTAH_NBU 921-25K Pad	<b>MD Reference:</b> (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)
<b>Well:</b> NBU 921-25L2AS	<b>North Reference:</b> True
<b>Wellbore:</b> NBU 921-25L2AS	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> NBU 921-25L2AS	<b>Database:</b> edm5000p

<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 921-25K Pad		
<b>Site Position:</b>	<b>Northing:</b> 14,531,298.16 ft	<b>Latitude:</b> 40.004769
<b>From:</b> Lat/Long	<b>Easting:</b> 2,059,410.15 ft	<b>Longitude:</b> -109.503832
<b>Position Uncertainty:</b> 0.00 ft	<b>Spot Radius:</b> 0 "	<b>Grid Convergence:</b> 0.96 °

<b>Well</b> NBU 921-25L2AS		
<b>Well Position</b> <b>+N/-S</b> 0.00 ft	<b>Northing:</b> 14,531,327.06 ft	<b>Latitude:</b> 40.004848
<b>+E/-W</b> 0.00 ft	<b>Easting:</b> 2,059,417.79 ft	<b>Longitude:</b> -109.503803
<b>Position Uncertainty</b> 0.00 ft	<b>Wellhead Elevation:</b> ft	<b>Ground Level:</b> 4,971.00 ft

<b>Wellbore</b> NBU 921-25L2AS					
<b>Magnetics</b>	<b>Model Name</b> IGRF2010	<b>Sample Date</b> 1/19/2011	<b>Declination (°)</b> 11.13	<b>Dip Angle (°)</b> 65.88	<b>Field Strength (nT)</b> 52,371

<b>Design</b> NBU 921-25L2AS				
<b>Audit Notes:</b>				
<b>Version:</b> 1.0	<b>Phase:</b> ACTUAL	<b>Tie On Depth:</b> 17.00		
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b> 17.00	<b>+N/-S (ft)</b> 0.00	<b>+E/-W (ft)</b> 0.00	<b>Direction (°)</b> 302.59

<b>Survey Program</b>	<b>Date</b> 3/22/2011			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
223.00	2,652.00	Survey #1 (NBU 921-25L2AS)	MWD	MWD - Standard
2,754.00	9,893.00	Survey #2 (NBU 921-25L2AS)	MWD	MWD - Standard

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
17.00	0.00	0.00	17.00	0.00	0.00	14,531,327.06	2,059,417.79	40.004848	-109.503803
223.00	0.88	336.70	222.99	1.45	-0.63	14,531,328.50	2,059,417.14	40.004852	-109.503806
316.00	2.88	288.29	315.94	2.84	-3.13	14,531,329.85	2,059,414.62	40.004856	-109.503814
410.00	4.31	291.54	409.75	4.88	-8.65	14,531,331.79	2,059,409.06	40.004862	-109.503834
505.00	6.44	294.79	504.33	8.43	-16.81	14,531,335.20	2,059,400.84	40.004871	-109.503863
601.00	8.69	304.66	599.49	14.81	-27.67	14,531,341.40	2,059,389.88	40.004889	-109.503902
696.00	9.06	306.91	693.36	23.38	-39.55	14,531,349.77	2,059,377.85	40.004912	-109.503944
791.00	9.38	307.66	787.13	32.60	-51.66	14,531,358.79	2,059,365.59	40.004938	-109.503988
887.00	10.88	303.16	881.63	42.34	-65.44	14,531,368.30	2,059,351.65	40.004964	-109.504037
981.00	12.75	308.04	973.64	53.59	-81.04	14,531,379.28	2,059,335.87	40.004995	-109.504093
1,076.00	14.32	307.43	1,066.00	67.19	-98.62	14,531,392.58	2,059,318.05	40.005033	-109.504155

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-25K Pad  
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**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** edm5000p

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
1,171.00	14.81	307.29	1,157.94	81.68	-117.61	14,531,406.76	2,059,298.82	40.005072	-109.504223
1,266.00	15.50	303.79	1,249.64	96.10	-137.82	14,531,420.83	2,059,278.37	40.005112	-109.504295
1,361.00	16.94	302.66	1,340.86	110.63	-160.03	14,531,434.99	2,059,255.93	40.005152	-109.504375
1,457.00	17.19	302.54	1,432.63	125.81	-183.76	14,531,449.76	2,059,231.95	40.005194	-109.504459
1,551.00	18.06	301.79	1,522.22	140.95	-207.86	14,531,464.51	2,059,207.60	40.005235	-109.504545
1,645.00	19.44	301.29	1,611.23	156.76	-233.61	14,531,479.87	2,059,181.58	40.005278	-109.504637
1,740.00	19.88	301.04	1,700.69	173.30	-260.96	14,531,495.95	2,059,153.96	40.005324	-109.504735
1,835.00	19.38	301.16	1,790.17	189.78	-288.29	14,531,511.97	2,059,126.36	40.005369	-109.504833
1,930.00	18.81	301.04	1,879.94	205.83	-314.90	14,531,527.58	2,059,099.48	40.005413	-109.504928
2,025.00	19.94	300.04	1,969.56	221.84	-342.04	14,531,543.13	2,059,072.07	40.005457	-109.505024
2,121.00	21.06	298.16	2,059.48	238.18	-371.42	14,531,558.97	2,059,042.42	40.005502	-109.505129
2,216.00	20.25	299.91	2,148.37	254.43	-400.72	14,531,574.73	2,059,012.86	40.005547	-109.505234
2,310.00	19.88	300.66	2,236.67	270.69	-428.57	14,531,590.52	2,058,984.74	40.005591	-109.505333
2,404.00	19.00	305.41	2,325.31	287.71	-454.79	14,531,607.09	2,058,958.23	40.005638	-109.505427
2,500.00	19.06	305.41	2,416.07	305.85	-480.30	14,531,624.80	2,058,932.42	40.005688	-109.505518
2,595.00	19.00	303.29	2,505.87	323.32	-505.87	14,531,641.84	2,058,906.56	40.005736	-109.505609
2,652.00	19.02	302.08	2,559.77	333.35	-521.50	14,531,651.61	2,058,890.77	40.005783	-109.505665
2,754.00	18.63	301.60	2,656.31	350.71	-549.46	14,531,668.50	2,058,862.52	40.005811	-109.505765
2,848.00	18.63	299.53	2,745.39	365.98	-575.31	14,531,683.33	2,058,836.42	40.005853	-109.505857
2,943.00	17.81	297.78	2,835.62	380.23	-601.37	14,531,697.14	2,058,810.12	40.005892	-109.505950
3,038.00	17.44	298.77	2,926.16	393.85	-626.70	14,531,710.34	2,058,784.57	40.005929	-109.506041
3,133.00	15.56	301.65	3,017.25	407.39	-650.03	14,531,723.48	2,058,761.01	40.005967	-109.506124
3,228.00	16.13	303.28	3,108.64	421.32	-671.91	14,531,737.04	2,058,738.90	40.006005	-109.506202
3,322.00	16.81	305.78	3,198.78	436.43	-693.85	14,531,751.78	2,058,716.71	40.006046	-109.506281
3,417.00	17.25	306.65	3,289.62	452.87	-716.30	14,531,767.84	2,058,693.99	40.006092	-109.506361
3,512.00	16.44	303.15	3,380.54	468.63	-738.86	14,531,783.22	2,058,671.17	40.006135	-109.506441
3,606.00	15.63	304.28	3,470.88	483.04	-760.46	14,531,797.26	2,058,649.33	40.006174	-109.506518
3,700.00	15.31	303.40	3,561.48	497.00	-781.28	14,531,810.88	2,058,628.28	40.006213	-109.506593
3,795.00	15.50	306.15	3,653.07	511.40	-802.00	14,531,824.92	2,058,607.32	40.006252	-109.506667
3,890.00	14.94	308.53	3,744.74	526.51	-821.83	14,531,839.70	2,058,587.24	40.006294	-109.506737
3,985.00	13.38	302.90	3,836.85	540.11	-840.64	14,531,852.98	2,058,568.20	40.006331	-109.506805
4,079.00	12.63	302.78	3,928.44	551.58	-858.41	14,531,864.15	2,058,550.24	40.006363	-109.506868
4,174.00	11.50	306.15	4,021.34	562.79	-874.79	14,531,875.09	2,058,533.67	40.006393	-109.506927
4,269.00	10.44	308.90	4,114.60	573.79	-889.14	14,531,885.84	2,058,519.14	40.006423	-109.506978
4,364.00	10.00	310.90	4,208.10	584.59	-902.07	14,531,896.42	2,058,506.03	40.006453	-109.507024
4,459.00	8.00	300.65	4,301.93	593.36	-914.00	14,531,904.99	2,058,493.96	40.006477	-109.507067
4,553.00	6.94	295.90	4,395.13	599.18	-924.73	14,531,910.63	2,058,483.13	40.006493	-109.507105
4,648.00	5.44	292.53	4,489.57	603.41	-934.06	14,531,914.70	2,058,473.74	40.006505	-109.507138
4,743.00	4.56	281.53	4,584.21	605.89	-941.92	14,531,917.05	2,058,465.84	40.006512	-109.507166
4,838.00	3.00	290.15	4,679.00	607.50	-947.95	14,531,918.56	2,058,459.78	40.006516	-109.507188
4,933.00	1.00	301.90	4,773.94	608.80	-950.99	14,531,919.81	2,058,456.72	40.006520	-109.507199
4,995.00	0.56	165.03	4,835.94	608.79	-951.37	14,531,919.79	2,058,456.34	40.006520	-109.507200
5,122.00	0.63	162.15	4,962.93	607.53	-950.99	14,531,918.53	2,058,456.73	40.006516	-109.507199
5,217.00	0.81	171.28	5,057.92	606.37	-950.73	14,531,917.38	2,058,457.01	40.006513	-109.507198
5,312.00	0.81	185.03	5,152.91	605.03	-950.69	14,531,916.05	2,058,457.08	40.006509	-109.507198
5,407.00	0.61	347.78	5,247.91	604.86	-950.86	14,531,915.87	2,058,456.92	40.006509	-109.507198
5,501.00	0.19	314.53	5,341.91	605.46	-951.07	14,531,916.46	2,058,456.69	40.006510	-109.507199
5,596.00	0.19	163.03	5,436.91	605.42	-951.14	14,531,916.42	2,058,456.62	40.006510	-109.507199
5,691.00	0.44	170.78	5,531.91	604.91	-951.03	14,531,915.91	2,058,456.74	40.006509	-109.507199
5,786.00	0.63	185.90	5,626.90	604.03	-951.03	14,531,915.03	2,058,456.76	40.006507	-109.507199
5,880.00	0.94	185.03	5,720.90	602.74	-951.15	14,531,913.75	2,058,456.66	40.006503	-109.507199
5,975.00	1.00	184.78	5,815.88	601.14	-951.29	14,531,912.15	2,058,456.55	40.006499	-109.507200
6,070.00	0.56	153.90	5,910.87	599.90	-951.15	14,531,910.91	2,058,456.70	40.006495	-109.507199
6,165.00	0.69	145.90	6,005.87	599.01	-950.63	14,531,910.02	2,058,457.24	40.006493	-109.507197
6,259.00	0.56	168.90	6,099.86	598.09	-950.22	14,531,909.11	2,058,457.66	40.006490	-109.507196

**APC**  
Survey Report - Geographic



**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-25K Pad  
**Well:** NBU 921-25L2AS  
**Wellbore:** NBU 921-25L2AS  
**Design:** NBU 921-25L2AS

**Local Co-ordinate Reference:** Well NBU 921-25L2AS  
**TVD Reference:** (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)  
**MD Reference:** (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** edm5000p

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
6,354.00	0.88	174.03	6,194.85	596.91	-950.06	14,531,907.93	2,058,457.85	40.006487	-109.507195
6,449.00	1.06	160.78	6,289.84	595.35	-949.69	14,531,906.38	2,058,458.24	40.006483	-109.507194
6,544.00	0.63	218.15	6,384.83	594.11	-949.72	14,531,905.14	2,058,458.23	40.006479	-109.507194
6,639.00	0.81	214.15	6,479.82	593.15	-950.42	14,531,904.16	2,058,457.54	40.006477	-109.507197
6,733.00	0.38	348.40	6,573.82	592.90	-950.86	14,531,903.91	2,058,457.11	40.006476	-109.507198
6,828.00	0.13	12.28	6,668.82	593.31	-950.90	14,531,904.33	2,058,457.06	40.006477	-109.507198
6,923.00	0.25	190.40	6,763.82	593.22	-950.91	14,531,904.23	2,058,457.05	40.006477	-109.507198
7,017.00	0.48	168.33	6,857.82	592.63	-950.87	14,531,903.64	2,058,457.10	40.006475	-109.507198
7,112.00	0.38	169.03	6,952.82	591.93	-950.73	14,531,902.94	2,058,457.26	40.006473	-109.507198
7,207.00	0.44	140.90	7,047.81	591.34	-950.44	14,531,902.36	2,058,457.56	40.006472	-109.507197
7,302.00	0.69	149.03	7,142.81	590.56	-949.92	14,531,901.59	2,058,458.09	40.006470	-109.507195
7,397.00	0.38	174.65	7,237.80	589.76	-949.59	14,531,900.79	2,058,458.43	40.006467	-109.507194
7,491.00	0.56	154.78	7,331.80	589.03	-949.37	14,531,900.07	2,058,458.67	40.006465	-109.507193
7,586.00	0.94	149.15	7,426.79	587.95	-948.77	14,531,898.99	2,058,459.28	40.006462	-109.507191
7,681.00	1.06	151.65	7,521.78	586.50	-947.95	14,531,897.56	2,058,460.12	40.006458	-109.507188
7,776.00	1.56	141.03	7,616.75	584.72	-946.72	14,531,895.81	2,058,461.38	40.006454	-109.507183
7,871.00	1.06	134.15	7,711.73	583.11	-945.28	14,531,894.21	2,058,462.85	40.006449	-109.507178
7,967.00	1.44	137.78	7,807.71	581.59	-943.83	14,531,892.73	2,058,464.33	40.006445	-109.507173
8,062.00	0.81	148.65	7,902.69	580.14	-942.68	14,531,891.29	2,058,465.50	40.006441	-109.507169
8,156.00	0.13	179.53	7,996.68	579.46	-942.33	14,531,890.62	2,058,465.86	40.006439	-109.507168
8,251.00	0.31	183.40	8,091.68	579.10	-942.35	14,531,890.26	2,058,465.85	40.006438	-109.507168
8,346.00	0.19	184.03	8,186.68	578.69	-942.38	14,531,889.84	2,058,465.83	40.006437	-109.507168
8,441.00	0.63	179.65	8,281.68	578.01	-942.38	14,531,889.16	2,058,465.84	40.006435	-109.507168
8,536.00	0.56	151.90	8,376.67	577.07	-942.16	14,531,888.23	2,058,466.07	40.006433	-109.507167
8,631.00	0.31	141.53	8,471.67	576.46	-941.78	14,531,887.63	2,058,466.46	40.006431	-109.507166
8,726.00	0.75	288.83	8,566.67	576.46	-942.21	14,531,887.62	2,058,466.04	40.006431	-109.507167
8,820.00	0.61	278.04	8,660.66	576.73	-943.29	14,531,887.87	2,058,464.95	40.006432	-109.507171
8,915.00	0.56	247.15	8,755.66	576.62	-944.22	14,531,887.75	2,058,464.03	40.006431	-109.507174
9,010.00	0.56	211.03	8,850.65	576.04	-944.88	14,531,887.16	2,058,463.37	40.006430	-109.507177
9,105.00	0.94	209.53	8,945.64	574.97	-945.51	14,531,886.07	2,058,462.76	40.006427	-109.507179
9,199.00	0.44	203.40	9,039.64	573.97	-946.03	14,531,885.06	2,058,462.26	40.006424	-109.507181
9,294.00	0.63	177.15	9,134.63	573.11	-946.15	14,531,884.20	2,058,462.15	40.006422	-109.507181
9,386.00	1.13	150.53	9,226.62	571.81	-945.68	14,531,882.92	2,058,462.65	40.006418	-109.507180
9,483.00	1.19	157.53	9,323.60	570.05	-944.82	14,531,881.17	2,058,463.53	40.006413	-109.507177
9,578.00	1.19	164.78	9,418.58	568.19	-944.19	14,531,879.31	2,058,464.20	40.006408	-109.507174
9,673.00	1.44	159.53	9,513.56	566.12	-943.51	14,531,877.26	2,058,464.91	40.006402	-109.507172
9,767.00	1.75	153.90	9,607.52	563.72	-942.47	14,531,874.88	2,058,465.99	40.006396	-109.507168
9,843.00	2.17	147.89	9,683.48	561.46	-941.19	14,531,872.64	2,058,467.31	40.006390	-109.507164
9,893.00	2.17	147.89	9,733.44	559.86	-940.18	14,531,871.05	2,058,468.34	40.006385	-109.507160

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

**RECEIVED**  
**JUN 23 2011**  
 DIV. OF OIL, GAS & MINING

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

AMENDED REPORT  FORM 8  
(highlight changes)

5. LEASE DESIGNATION AND SERIAL NUMBER:  
**UO 1194 ST**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

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

8. WELL NAME and NUMBER:  
**NBU 921-25L2AS**

9. API NUMBER:  
**4304751258**

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

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:  
**NESW 25 9S 21E S**

12. COUNTY  
**UINTAH**

13. STATE  
**UTAH**

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

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: **NESW 1848 FSL 1402 FWL S25, T9S, R21E**  
*BHL reviewed by HSM*  
AT TOP PRODUCING INTERVAL REPORTED BELOW: **NWSW 2441 FSL 451 FWL S25, T9S, R21E**  
AT TOTAL DEPTH: **NWSW 2408 FSL 462 FWL S25, T9S, R21E**

14. DATE SPUDDED: **12/17/2010** 15. DATE T.D. REACHED: **3/16/2011** 16. DATE COMPLETED: **5/13/2011** ABANDONED  READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL):  
**4971 GL**

18. TOTAL DEPTH: MD **9,893** TVD **9,733** 19. PLUG BACK T.D.: MD **9,842** TVD **9,682** 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)  
**CBL-CHI TRIPLE COMBO-RMTE**

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#		2,693		625		0	
7 7/8"	4 1/2" I-80	11.6#		9,886		1,494		1230	

**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"	9,089							

**26. PRODUCING INTERVALS**      **27. PERFORATION RECORD**

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS	
(A) WASATCH	7,018	7,683			7,018 7,683	0.36	47	Open <input checked="" type="checkbox"/>	Squeezed <input type="checkbox"/>
(B) MESAVERDE	7,734	9,637			7,734 9,637	0.36	160	Open <input checked="" 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
7018 - 9637	PUMP 8,113 BBLs SLICK H2O & 180,239 LBS SAND

**RECEIVED**  
**JUN 23 2011**

DIV. OF OIL, GAS & MINING

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**

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 5/13/2011	TEST DATE: 5/16/2011	HOURS TESTED: 24	TEST PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 2,390	WATER - BBL: 705	PROD. METHOD: FLOWING			
CHOKE SIZE: 20/64	TBG. PRESS. 1,922	CSG. PRESS. 2,625	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 2,390	WATER - BBL: 705	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	1,460				
BIRD'S NEST	1,866				
MAHOGANY	2,085				
WASATCH	4,984	7,710			
MESAVERDE	7,710	9,893	TD		

34. FORMATION (Log) MARKERS:

36. ADDITIONAL REMARKS (Include plugging procedure)

Attached is the chronological well history, perforation report and final survey. Completion chrono details individual frac stages.

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

NAME (PLEASE PRINT) ANDREW LYTLE

TITLE REGULATORY ANALYST

SIGNATURE 

DATE 6/13/2011

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

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DIV. OF OIL, GAS & MINING

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: H&P 298/298, CAPSTAR 310/310  
 Event: DRILLING Start Date: 1/18/2011 End Date: 3/18/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
1/29/2011	16:00 - 19:00	3.00	MIRU	01	C	P		SKID RIG & RIG UP
	19:00 - 20:30	1.50	PRSPD	14	A	P		WELD ON CONDUCTOR & RIG UP FLOW LINE
	20:30 - 21:00	0.50	PRSPD	06	A	P		PU 11" BIT & MUD MOTOR
	21:00 - 23:00	2.00	DRLSUR	02	B	P		SPUD 11" SURFACE HOLE F/ 40'- 233' // ROP=92 FPH // WOB= 16-18K // RPM= 55/96 // SPP=600/430 // GPM=600
	23:00 - 0:00	1.00	DRLSUR	06	A	P		TOOH
1/30/2011	0:00 - 2:00	2.00	DRLSUR	06	A	P		PU DIR TOOLS, SCRIBE, & TIH
	2:00 - 6:00	4.00	DRLSUR	02	D	P		DIR DRLG 11" SURFACE HOLE F/ 233'- 675' // ROP= 110 FPH // WOB=18-22K // RPM=55/96 // SPP=1000/870 // GPM= 600 // NO LOSSES
	6:00 - 18:00	12.00	DRLSUR	02	D	P		DIR DRLG 11" SURFACE HOLE F/ 675'-1814' // ROP= 95 FPH // WOB=18-22K // RPM=55/96 // SPP=1050/870 // GPM= 600 // NO LOSSES
	18:00 - 0:00	6.00	DRLSUR	02	D	P		DIR DRLG 11" SURFACE HOLE F/ 1814'-2291' // ROP= 94 FPH // WOB=18-22K // RPM=55/96 // SPP=1050/870 // GPM= 600 // RETURNS 75% // LAST SURVEY @ 2199'=20.25- AZ=300.66
1/31/2011	-		RDMO				CONDUCTOR CASING: Cond. Depth set: 40 Cement sx used: 28	
							SPUD DATE/TIME: 1/29/2011 21:00	
							SURFACE HOLE: Surface From depth: 40 Surface To depth: 2,695 Total SURFACE hours: 29.50 Surface Casing size: 8 5/8 # of casing joints ran: 60 Casing set MD: 2,675.0 # sx of cement: 200/225/200 Cement blend (ppg): 11.0/15.8/15.8 Cement yield (ft3/sk): 3.83/1.15/1.15 # of bbls to surface: 25 Describe cement issues: 90% RETURNS Describe hole issues: 50% RETURN F/ 1900'-2695'	
	0:00 - 5:30	5.50	DRLSUR	02	D	P		DIR DRLG 11" SURFACE HOLE F/ 2291'-2695' // ROP= 73 FPH // WOB=18-22K // RPM=55/96 // SPP=1250/1030 // GPM= 600 // RETURNS 60% // LAST SURVEY @ 2635'= 19.02 DEG- 302.08 AZ 302.08 // 19' ABOVE & 1' LEFT OF LINE // 85.8% ROTATEING- 14.2% SLIDEING
	5:30 - 6:00	0.50	DRLSUR	05	A	P		CIRC & COND HOLE FOR 8.625" CSG
	6:00 - 10:00	4.00	DRLSUR	06	A	P		LD DRILL STRING & DIR TOOLS
	10:00 - 13:30	3.50	CSG	12	C	P		PJSM // RUN 60 JT'S, 8-5/8", 28#, J-55, LT&C CSG // SHOE SET @ 2675' // BAFFLE @ 2628'
	13:30 - 14:00	0.50	CSG	05	A	P		CIRC 8.625" CSG @ 2675'

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**US ROCKIES REGION  
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Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: H&P 298/298, CAPSTAR 310/310  
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 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	14:00 - 15:30	1.50	CSG	12	E	P		PJSM // PUMP 25 BBL SPACER // LEAD= 200 SX CLASS G CMT ( YIELD= 3.83 CUFT/SK, WT= 11 PPG) TAIL= 225 SX CLASS G CMT (YIELD= 1.15 CUFT/SK, WT= 15.8 PPG) DROP PLUG & DISPLACE W/ 155 BBL'S WATER // PLUG DN @ 15:28 01/31/2011 // BUMP PLUG @ 835 PSI // FINAL= 550 PSI // 90% RETURNS THRU OUT JOB // 25 BBL'S CMT TO SURFACE // CHECK FLOATS-HELD W/ 2 BBL'S BACK.
	15:30 - 16:00	0.50	CSG	14	A	P		CUT OFF CONDUCTOR & HANG 8.625" CSG
	16:00 - 17:00	1.00	CSG	12	E	P		PUMP 1" TOP OUT W/ 60 SX CLASS G CMT @ 1.15 YIELD & 15.8 WT // CMT TO SURFACE BUT FELL BACK
	17:00 - 18:30	1.50	CSG	13	A	P		WAIT ON CMT
	18:30 - 19:00	0.50	CSG	12	E	P		TOP OFF W/ 60SX CLASS G CMT @ 1.15 YIELD & 15.8 WT // CMT TO SURFACE & STAYED
	19:00 - 20:00	1.00	RDMO	01	E	P		RIG DN & CLEAN PITS // RELEASE RIG @ 20:00 01/31/2011
3/8/2011	13:00 - 16:30	3.50	MIRU	01	C	P		PREPARE & SKID RIG CENTER RIG OVER HOLE
	16:30 - 17:00	0.50	MIRU	01	B	P		RU RT
	17:00 - 17:30	0.50	PRSPD	14	A	P		NU BOP'S
	17:30 - 19:30	2.00	PRSPD	01	B	P		CHANGE OUT BAILS / PREPARE DRILL FLOOR / P/U MU TEST ASSY / FILL BOP W/ WATER
	19:30 - 20:00	0.50	PRSPD	23	A	P		INSTALL FLOW LINE
	20:00 - 20:30	0.50	PRSPD	15	A	P		PRE SPUD INSPECTION & MEETING W/ CREW
	20:30 - 0:00	3.50	PRSPD	15	A	P		HOLD PJSM W/ TESTER & TEST CSG TO 1500 PSI TEST -OK
3/9/2011	0:00 - 0:30	0.50	PRSPD	15	A	P		TEST BOP'S & EQUIPMENT AS PER PROGRAM 250/5000 PSI ANNULAR 250/2500
	0:30 - 1:00	0.50	PRSPD	14	B	P		CONTINUE TO TEST BOP'S AS PER PROGRAM 250 PSI LOW / 5,000 PSI HIGH / RD TESTER
	1:00 - 3:00	2.00	PRSPD	06	A	P		INSTALL WEAR BUSHING
	3:00 - 4:30	1.50	PRSPD	07	B	P		PU & MU DIRECTIONAL BHA #1 W/ WEATHERFORD ORIENTATE ,SCRIBE & TEST SAME / TIH TO 1,100'
	4:30 - 5:30	1.00	PRSPD	06	A	P		LEVEL DRK
	5:30 - 6:00	0.50	PRSPD	07	A	P		TIH F/ 1,100' TO 2,536' TAG CEMENT
	6:00 - 7:00	1.00	PRSPD	02	F	P		SERVICE RIG @ 2,536'
	7:00 - 0:00	17.00	DRLPRO	02	D	P		DRILL CEMENT & SHOE TRACK F/ 2,536' TO 2,692' CLEAN OUT RATHOLE TO 2,712'
3/10/2011	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 2,712' TO 4,175' = 1,463' =86' FPH / WOB 15K-21K / TOP DRIVE RPM 35-60 / PUMP 120 SPM = 540 GPM / PUMP PRESSURE ON/OFF BOTTOM 1900/1600 PSI / MUD MOTOR RPM 114 / PU/SO/ROT WT 125/95/110/ TORQUE ON/OFF BOTTOM 8K/6K / H2O + POLYMER W/ WEIGHTED SWEEPS +/- 1 PPG OVER / SLIDE 315' IN 390 MIN =22% OF FOOTAGE DRILLED & 54% OF HOURS DRILLED / BOP DRILL / 8.9 PPG MUD WT / 27 VIS
								DRILL/ SURVEY F/ 4,175' TO 4,820' = 645' =107.5' FPH / WOB 15K-21K / TOP DRIVE RPM 35-60 / PUMP 120 SPM = 540 GPM / PUMP PRESSURE ON/OFF BOTTOM 1900/1600 PSI / MUD MOTOR RPM 114 / PU/SO/ROT WT 125/95/110/ TORQUE ON/OFF BOTTOM 8K/6K / H2O + POLYMER W/ WEIGHTED SWEEPS +/- 1 PPG OVER / SLIDE 102' IN 95 MIN =16% OF FOOTAGE DRILLED & 26% OF HOURS DRILLED / 8.9 PPG MUD WT / 27 VIS

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**DIV. OF OIL, GAS & MINING**

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

Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: H&P 298/298, CAPSTAR 310/310  
 Event: DRILLING Start Date: 1/18/2011 End Date: 3/18/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	6:00 - 15:30	9.50	DRLPRO	02	D	P		DRILL/ SURVEY F/ 4,820' TO 5,836' = 1016' = 107' FPH / WOB 15K-21K / TOP DRIVE RPM 35-60 / PUMP 120 SPM = 540 GPM / PUMP PRESSURE ON/OFF BOTTOM 1900/1600 PSI / MUD MOTOR RPM 114 / PU/SO/ROT WT 152/117/134/ TORQUE ON/OFF BOTTOM 8K/6K / H2O + POLYMER W/ WEIGHTED SWEEPS +/- 1 PPG OVER / SLIDE 59' IN 95X MIN =4% OF FOOTAGE DRILLED & 16% OF HOURS DRILLED / 8.9 PPG MUD WT / 27 VIS
	15:30 - 16:00	0.50	DRLPRO	07	A	P		SERVICE RIG @ 5,836'
	16:00 - 18:00	2.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 5,836' TO 6,002' = 166' =83' FPH / WOB 15K-21K / TOP DRIVE RPM 35-60 / PUMP 120 SPM = 540 GPM / PUMP PRESSURE ON/OFF BOTTOM 1900/1600 PSI / MUD MOTOR RPM 114 / PU/SO/ROT WT 152/117/134/ TORQUE ON/OFF BOTTOM 8K/6K / H2O + POLYMER W/ WEIGHTED SWEEPS +/- 1 PPG OVER / 8.9 PPG MUD WT / 27 VIS
	18:00 - 19:30	1.50	DRLPRO	22	G	X		LOST TOTAL RETURNS @ 6,002' PU & PUMP LCM SWEEPS REGAIN RETURNS 450 BBL LOSE / CONTINUE TO RAISE LCM CONTENT TO 15% W/ 20' FLARE
	19:30 - 0:00	4.50	DRLPRO	02	D	P		DRILL/ SURVEY F/ 6,002' TO 6,250' =248' =55' FPH / WOB 15K-20K / TOP DRIVE RPM 35-60 / PUMP 90 SPM = 405 GPM / PUMP PRESSURE ON/OFF BOTTOM 1700/1500 PSI / MUD MOTOR RPM 85 / PU/SO/ROT WT 168/126/140/ TORQUE ON/OFF BOTTOM 8K/6K / SLIDE 15' IN 45 MIN =3.6% OF FOOTAGE DRILLED & 9% OF HOURS DRILLED / 9.2 PPG MUD WT / 35 VIS LCM 15% / HOLE SEEPING 350 BBL LOSE / CONTINUE TO RAISE LCM CONTENT
3/11/2011	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 6,250' TO 6,562' =312' =52' FPH / WOB 15K-20K / TOP DRIVE RPM 35-60 / PUMP 90 SPM = 405 GPM / PUMP PRESSURE ON/OFF BOTTOM 1700/1500 PSI / MUD MOTOR RPM 85 / PU/SO/ROT WT 168/126/140/ TORQUE ON/OFF BOTTOM 8K/6K / SLIDE 13' IN 45 MIN = 4 % OF FOOTAGE DRILLED & 12% OF HOURS DRILLED / 9.3 PPG MUD WT / 36 VIS LCM 18% 150 BBL LOSE
	6:00 - 15:30	9.50	DRLPRO	02	D	P		DRILL/ SURVEY F/ 6,562' TO 6,976' =414' =43.57' FPH / WOB 15K-20K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2200/1950 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 175/140/150/ TORQUE ON/OFF BOTTOM 8K/7K / SLIDE 14' IN 70 MIN = 3 % OF FOOTAGE DRILLED & 11% OF HOURS DRILLED / 9.4 PPG MUD WT / 38 VIS LCM 22% / NO MUD LOSE
	15:30 - 16:00	0.50	DRLPRO	07	A	P		SERVICE RIG @ 6,976'
	16:00 - 0:00	8.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 6,976' TO 7,280' =304' =38' FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2200/1950 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 190/140/155/ TORQUE ON/OFF BOTTOM 8K/7K / 9.8 PPG MUD WT / 41 VIS LCM 25% / NO MUD LOSE

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

Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: H&P 298/298, CAPSTAR 310/310  
 Event: DRILLING Start Date: 1/18/2011 End Date: 3/18/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/12/2011	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 7,280' TO 7,430' =150' =25' FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2150/1950 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 190/140/155/ TORQUE ON/OFF BOTTOM 8K/7K / SLIDE 10' IN 70 MIN = 6 % OF FOOTAGE DRILLED & 19% OF HOURS DRILLED / 9.9 PPG MUD WT / 41 VIS LCM 26% / 150 BBL MUD LOSE
	6:00 - 13:30	7.50	DRLPRO	02	D	P		DRILL/ SURVEY F/ 7,430' TO 7,636' =206' =27.46' FPH / WOB 18K-22K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2250/2050 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 190/140/155/ TORQUE ON/OFF BOTTOM 8K/7K / 10.3 PPG MUD WT / 48 VIS LCM 30% / 175 BBL MUD LOSE
	13:30 - 14:00	0.50	DRLPRO	07	A	P		SERVICE RIG @ 7,636'
	14:00 - 0:00	10.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 7,636' TO 7,850' =214' =21.4' FPH / WOB 18K-22K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2250/2050 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 192/140/160/ TORQUE ON/OFF BOTTOM 9K/9K/ SLIDE 21' IN 155 MIN =21 % OF FOOTAGE DRILLED & 42% OF HOURS DRILLED / 10.4 PPG MUD WT / 48 VIS LCM 30% / NO MUD LOSE
3/13/2011	0:00 - 7:00	6.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 7,850' TO 7,970' =120' =20' FPH / WOB 18K-22K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2250/2050 PSI / MUD MOTOR RPM 104 / PU/SO/ROT WT 192/140/160/ TORQUE ON/OFF BOTTOM 9K/9K/ SLIDE 5' IN 60 MIN = 4 % OF FOOTAGE DRILLED & 17% OF HOURS DRILLED / 10.4 PPG MUD WT / 48 VIS LCM 30% / NO MUD LOSE
	7:00 - 8:00	1.00	DRLPRO	05	C	P		CIRC BTM'S UP @ 7,970'
	8:00 - 13:30	5.50	DRLPRO	06	A	P		TOOH F/ 7,970' TO BIT W/ NO PROBLEMS / CHECK PIPE FOR CENTER OF HOLE -OK / FUNCTION BOP'S
	13:30 - 14:30	1.00	DRLPRO	06	A	P		C/O BIT & MUD MTR / ORIENTATE / SCRIBE & TEST SAME W/ WEATHERFORD / TIH W/ BHA# 2 TO 1,005'
	14:30 - 15:00	0.50	DRLPRO	07	A	P		SERVICE RIG @ 1,005'
	15:00 - 19:30	4.50	DRLPRO	06	A	P		TIH W/ BHA & BIT # 2 F/ 1,005' TO 7,850' / WASH 120' TO BTM @ 7,970' NO FILL / BOP DRILL
	19:30 - 0:00	4.50	DRLPRO	02	D	P		DRILL/ SURVEY F/ 7,970' TO 8,235' =265' =58.88' FPH / WOB 18K-22K / TOP DRIVE RPM 35-50 / PUMP 90 SPM = 405 GPM / PUMP PRESSURE ON/OFF BOTTOM 2000/1750 PSI / MUD MOTOR RPM 65 / PU/SO/ROT WT 200/145/165/ TORQUE ON/OFF BOTTOM 9K/9K/ SLIDE 37' IN 70 MIN = 14% OF FOOTAGE DRILLED & 32% OF HOURS DRILLED / 10.5 PPG MUD WT / 48 VIS LCM 30% / 240 BBL LOSE
3/14/2011	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 8,235' TO 8,570' =335' =55.83' FPH / WOB 18K-22K / TOP DRIVE RPM 35-50 / PUMP 90 SPM = 405 GPM / PUMP PRESSURE ON/OFF BOTTOM 2000/1750 PSI / MUD MOTOR RPM 65 / PU/SO/ROT WT 200/145/165/ TORQUE ON/OFF BOTTOM 9K/9K/ SLIDE 11' IN 95 MIN = 14% OF FOOTAGE DRILLED & 26% OF HOURS DRILLED / 10.9 PPG MUD WT / 48 VIS LCM 30% / 40 BBL LOSE

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**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: H&P 298/298, CAPSTAR 310/310  
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Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	6:00 - 15:00	9.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 8,570' TO 8,965' =395' =43.88' FPH / WOB 18K-22K / TOP DRIVE RPM 35-50 / PUMP 90/75 SPM = 405/338 GPM / PUMP PRESSURE ON/OFF BOTTOM 1750/1550/ PSI / MUD MOTOR RPM 65/54 / PU/SO/ROT WT 206/155/1180/ TORQUE ON/OFF BOTTOM 11K/10K/ SLIDE 78' IN 170 MIN = 16% OF FOOTAGE DRILLED & 37% OF HOURS DRILLED / 11.3 PPG MUD WT / 48 VIS LCM 30% / 390 BBL LOSE
	15:00 - 15:30	0.50	DRLPRO	07	A	P		SERVICE RIG @ 8,965'
	15:30 - 0:00	8.50	DRLPRO	02	D	P		DRILL/ SURVEY F/ 8,965' TO 9,300' =335' =39.41' FPH / WOB 15K-18K / TOP DRIVE RPM 35-50 / PUMP 75 SPM = 338 GPM / PUMP PRESSURE ON/OFF BOTTOM 1750/1550/ PSI / MUD MOTOR RPM 54 / PU/SO/ROT WT 216/155/180/ TORQUE ON/OFF BOTTOM 12K/11K/ SLIDE 50' IN 90 MIN = 15% OF FOOTAGE DRILLED & 18% OF HOURS DRILLED/ 11.7 PPG MUD WT / 48 VIS LCM 30% / 230 BBL LOSE
3/15/2011	0:00 - 3:00	3.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 9,300' TO 9,370' =70' =23.3' FPH / WOB 15K-18K / TOP DRIVE RPM 50 / PUMP 70 SPM = 315 GPM / PUMP PRESSURE ON/OFF BOTTOM 1700/1550/ PSI / MUD MOTOR RPM 50/ PU/SO/ROT WT 216/155/180/ TORQUE ON/OFF BOTTOM 12K/11K/ 11.8 PPG MUD WT / 48 VIS LCM 30% / 230 BBL LOSE 3/10 MUD CUT
	3:00 - 3:30	0.50	DRLPRO	22	O	Z		200 PSI PRESSURE DROP / CHECK SURFACE EQUIPMENT / PUMP FLAG / NO PRESSURE INCREASE
	3:30 - 4:00	0.50	DRLPRO	02	D	P		DRILL F/ 9,370' TO 9,386' LOST TOTAL RETURNS 355 BBL LOSE / 60 BPH STATIC LOSSES / 3/10 MUD CUT/ NO FLARE
	4:00 - 19:00	15.00	DRLPRO	22	G	X		LOST TOTAL RETURNS PULL BACK 2 STDS / KEEP PIPE MOVING / BUILD VOLUME SPOT 12.8 PPG HVP 50 BBL PEEL ON BTM / BUILD VOLUME & TOOH TO 5,000' BUILD VOLUME & LCM CONTENT/ TIH TO BTM / STAGE IN HOLE/ 300 MUD LOSE
	19:00 - 0:00	5.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 9,386' TO 9,600' =214' =42.8' FPH / WOB 18K-23K / TOP DRIVE RPM 76 / PUMP 105 SPM = 473 GPM / PUMP PRESSURE ON/OFF BOTTOM 2650/2400/ PSI / MUD MOTOR RPM 50/ PU/SO/ROT WT 215/150/180/ TORQUE ON/OFF BOTTOM 11K/11K/ 12.0 PPG MUD WT / 48 VIS LCM 30% / 40 BBL LOSE
3/16/2011	0:00 - 8:00	8.00	DRLPRO	02	D	P		DRILL/ SURVEY F/ 9,600' TO 9,893' =293' =36.62' FPH / WOB 18K-23K / TOP DRIVE RPM 76 / PUMP 105 SPM = 473 GPM / PUMP PRESSURE ON/OFF BOTTOM 2650/2400/ PSI / MUD MOTOR RPM 50/ PU/SO/ROT WT 215/150/180/ TORQUE ON/OFF BOTTOM 11K/11K/ 12.0 PPG MUD WT / 48 VIS LCM 30% / 40 BBL LOSE
	8:00 - 9:30	1.50	DRLPRO	06	E	P		SURVEY / WIPER TRIP F/ 9,893' TO 9,200'
	9:30 - 12:00	2.50	DRLPRO	05	C	P		CIRC & CLEAN HOLE @ 9,893'/RU TO LDDS
	12:00 - 0:00	12.00	DRLPRO	06	D	P		TOH / SPOT 50 BBLs 12.6 MUD ON BTM/ TOH 20 STDS PUMP SLUG/ LDDS / RUN 28 STDS DP OUT OF DERRICK/ LDDS BHA
3/17/2011	0:00 - 0:30	0.50	EVALPR	06	A	P		PULL MWD / LD DIRECTIONAL TOOLS / M MTR
	0:30 - 1:30	1.00	EVALPR	14	B	P		PULL WEAR BUSHING / CHANGE OUT BAILS
	1:30 - 2:30	1.00	CSG	12	A	P		HSM REVIEW JSA RU WEATHERFORD TRS TO RUN 41/2 CASING

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

Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: H&P 298/298, CAPSTAR 310/310  
 Event: DRILLING Start Date: 1/18/2011 End Date: 3/18/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	2:30 - 13:00	10.50	CSG	12	C	P		RUN 236 JTS I-80 #11.6 BT&C 4.5 CASING + RELATED TOOLS / BREAKING CIRCULATION @ SELECTED INTERVALS / HOLDING CASING @9885' TO CIRC & CMT
	13:00 - 14:30	1.50	CSG	05	D	P		CIRC AND COND HOLE FOR CMT / REVIEW JSA RIG DOWN CASERS
	14:30 - 17:30	3.00	CSG	12	E	P		SAFETY MEETING (REVIEW J.S.A.) M.I.R.U. BJ EQUIPMENT / TEST PUMPS & LINES TO 4500 PSI / PUMP 40 BBLS H2O + 452 SX LEAD CEMENT @ 12.0 ppg (PREM LITE II + .25 pps CELLO FLAKE + 5 pps KOL SEAL + .05 lb/sx STATIC FREE + 10% bwoc BENTONITE + .2% bwoc SODIUM META SILICATE + .4 % R-3 + 1147.9 BBLS FRESH WATER / (12.7 gal/sx, 2.30 yield) + 1042 SX TAIL @ 14.3 ppg (CLS G 50/50 POZ + 10% SALT + .05llbs/sx STATIC FREE + .2% R3 + .002 GPS FP-6L + 2% BENTONITE + 207.96 BBLS H2O / (5.90 gal/sx, 1.31 yield) / DROP PLUG & DISPLACE W/ 153 BBLS H2O + ADDITIVES / PLUG DOWN @ 1656 HOURS / FLOATS HELD W/ 1.5 BBLS H2O RETURNED TO INVENTORY / LIFT PRESSURE @2650 PSI/BUMP PRESSURE TO 3100 PSI /GOOD RETURNS THROUGHTOUT JOB WITH 10 BBLS CMT TO PIT/TOP OF TAIL CEMENT CALC @ 3909'
	17:30 - 18:30	1.00	CSG	12	E	P		FLUSH OUT & PICK UP BOP STACK, JOSHUA PIERCE W/ WEATHERFORD SET C-22 11X 41/2 CSG SLIPS W/ 110K / SHOE @ 9885' FC @ 9843 / WASATCH MARKER @4946 / MV MARKER @ 7656/ CUT OFF CSG / LD LANDING JOINT.

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Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: H&P 298/298, CAPSTAR 310/310  
 Event: DRILLING Start Date: 1/18/2011 End Date: 3/18/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
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18:30 - 0:00 5.50 RDMO 14 A P

NIPPLE DOWN BOP/ FLOWLINE ROT HEAD /CHOKE LINES / PREP FOR RIG MOVE / CLEAN PITS / RIG RELEASED TO NBU 920-12I @ 2359 HRS 03/17/2011

**CONDUCTOR CASING:**

Cond. Depth set: 40  
Cement sx used: 28

SPUD DATE/TIME: 1/29/2011 21:00

**SURFACE HOLE:**

Surface From depth: 40  
 Surface To depth: 2,695  
 Total SURFACE hours: 29.50  
 Surface Casing size: 8 5/8  
 # of casing joints ran: 60  
 Casing set MD: 2,675.0  
 # sx of cement: 200/225/200  
 Cement blend (ppg): 11/15.8/15.8  
 Cement yield (ft3/sk): 3.83/1.15/1.15  
 # of bbls to surface: 25 BBLS  
 Describe cement issues: FULL RETURNS  
 Describe hole issues: 50% RETURNS F/1,900-2695

**PRODUCTION:**

Rig Move/Skid start date/time: 3/8/2011 13:00  
 Rig Move/Skid finish date/time: 3/8/2011 17:00  
 Total MOVE hours: 4.0  
 Prod Rig Spud date/time: 3/9/2011 7:00  
 Rig Release date/time: 3/17/2011 23:59  
 Total SPUD to RR hours: 209.0  
 Planned depth MD 9,886  
 Planned depth TVD 9,716  
 Actual MD: 9,893  
 Actual TVD: 9,733  
 Open Wells \$:  
 AFE \$:  
 Open wells \$/ft:

**PRODUCTION HOLE:**

Prod. From depth: 2,712  
 Prod. To depth: 9,893  
 Total PROD hours: 136.5  
 Log Depth: NO LOGS  
 Production Casing size: 4 1/2  
 # of casing joints ran: 236  
 Casing set MD: 9,885.0  
 # sx of cement: 1,494  
 Cement blend (ppg): 12.0 / 14.3  
 Cement yield (ft3/sk): 2.30 / 1.31  
 Est. TOC (Lead & Tail) or 2 Stage : 3909  
 Describe cement issues: 10 BBLS LEAD CMT TO PIT  
 Describe hole issues: 30% LCM

**DIRECTIONAL INFO: DIRECTIONAL**

KOP: 206  
 Max angle: 21.06  
 Departure: 619.66  
 Max dogleg MD: 2.70/584

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1 General

1.1 Customer Information

Company	US ROCKIES REGION		
Representative			
Address			

1.2 Well Information

Well	NBU 921-25L2AS [GREEN]		
Common Name	NBU 921-25L2AS		
Well Name	NBU 921-25L2AS	Wellbore No.	OH
Report No.	1	Report Date	4/26/2011
Project	UTAH-UINTAH	Site	NBU 921-25K PAD
Rig Name/No.		Event	COMPLETION
Start Date	4/26/2011	End Date	5/13/2011
Spud Date	1/29/2011	Active Datum	RKB @4,997.00ft (above Mean Sea Level)
UWI	NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0		

1.3 General

Contractor	CASEDHOLE SOLUTIONS	Job Method	PERFORATE	Supervisor	DAVE DANIELS
Perforated Assembly	PRODUCTION CASING	Conveyed Method	WIRELINE		

1.4 Initial Conditions

Fluid Type		Fluid Density		Gross Interval	7,018.0 (ft)-9,637.0 (ft)	Start Date/Time	5/2/2011 12:00AM
Surface Press		Estimate Res Press		No. of Intervals	31	End Date/Time	5/2/2011 12:00AM
TVD Fluid Top		Fluid Head		Total Shots	207	Net Perforation Interval	56.00 (ft)
Hydrostatic Press		Press Difference		Avg Shot Density	3.70 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL					Final Press Date	

1.5 Summary

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
12:00AM	WASATCH/			7,018.0	7,020.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	

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2.1 Perforated Interval (Continued)

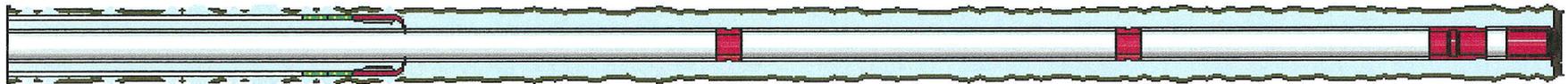
Date	Formation/ Reservoir	CCL@ (ft)	CCL-T S (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12:00AM	WASATCH/			7,052.0	7,053.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	WASATCH/			7,068.0	7,069.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	WASATCH/			7,135.0	7,136.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	WASATCH/			7,150.0	7,151.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	WASATCH/			7,578.0	7,580.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			7,639.0	7,641.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			7,680.0	7,683.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			7,734.0	7,736.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			7,741.0	7,742.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			7,780.0	7,781.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			7,810.0	7,812.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			7,831.0	7,832.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			7,917.0	7,920.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			8,024.0	8,027.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			8,096.0	8,097.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			8,130.0	8,131.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			8,198.0	8,200.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			8,241.0	8,243.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			8,528.0	8,529.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			8,624.0	8,625.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			8,695.0	8,697.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

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	Diameter (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12:00AM	MESAVERDE/			8,747.0	8,749.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12:00AM	MESAVERDE/			8,954.0	8,957.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AM	MESAVERDE/			9,049.0	9,052.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AM	MESAVERDE/			9,105.0	9,107.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AM	MESAVERDE/			9,214.0	9,216.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AM	MESAVERDE/			9,284.0	9,286.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AM	MESAVERDE/			9,439.0	9,441.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AM	MESAVERDE/			9,553.0	9,555.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12:00AM	MESAVERDE/			9,635.0	9,637.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	

3 Plots

3.1 Wellbore Schematic



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Operation Summary Report**

Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UJINTAH Site: NBU 921-25K PAD Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3  
 Event: COMPLETION Start Date: 4/26/2011 End Date: 5/13/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
4/29/2011	7:00 - 16:00	9.00	COMP	47	B	P		HSM, PRESSURE TESTING, MIRU B&C TESTERS, PRESSURE UP TO 1,000# W/ 15# LOSS IN 15 MIN. BUMP UP TO 3,500# W/ 50# LOSS IN 15 MIN. BUMP UP TO 7000# W/ 85# LOSS IN 30 MIN. BUMP BACK UP TO 7,000# W/ 30# LOSS IN 30 MIN. [GOOD TEST]
5/2/2011	6:15 - 6:30	0.25	COMP	48	E	P		HSM, RIGGING UP
	6:30 - 6:30	0.00	COMP	36	E	P		MIRU CASED HOLE SOLUTIONS & SUPERIOR FRAC EQUIP.,  P/U RIH PERF MESAVERDE W/ 3-1/8 EXPEND, 23 GRM 0.36" HOLE, 9,439'-9,637' [22 HOLES] AS PERSAY IN PROCEDURE.  FRAC STG #1] WHP=1,197#, BRK DN PERFS=3,060#, @=4.6 BPM, INJ RT=47.6, INJ PSI=5,583#, ISIP=2,504#, FG=.70, PUMP'D 910 BBLS SLK WTR W/ 10,043# 30/50 MESH W/ 4,340# RESIN COAT IN TAIL W/ 14,383# TOTAL PROP PUMP'D, ISIP=2,724#, FG=.72, AR=47.7, AP=5,762#, MR=50.5, MP=6,619#, NPI=220#, 21/22 CALC PERFS OPEN. 94%  PERF STG #2] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=9,336', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. 9,105'-9,286' [24 HOLES] PERSAY I PROCEDURE.  FRAC STG #2] WHP=1,866#, BRK DN PERFS=2,891#, @=4.3 BPM, INJ RT=41.4, INJ PSI=6,062#, ISIP=2,561#, FG=.72, PUMP'D 600 BBLS SLK WTR W/ 6,295# 30/50 MESH W/ 4,746# RESIN COAT IN TAIL W/ 11,041# TOTAL PROP PUMP'D, ISIP=2,795#, FG=.74, AR=48.3, AP=5,974#, MR=49.8, MP=6,345#, NPI=234#, 15/24 CALC PERFS OPEN. 62%.  PERF STG #3] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=9,082', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. 8,954'-9,052' [24 HOLES] AS PERSAY IN PROCEDURE.  FRAC STG #3] WHP=2,183#, BRK DN PERFS=2,657#, @=4.1 BPM, INJ RT=42.7, INJ PSI=6,453#, ISIP=2,315#, FG=.70, PUMP'D 687 BBLS SLK WTR W/ 7,791# 30/50 MESH W/ 5,201# RESIN COAT IN TAIL W/ 12,992# TOTAL PROP PUMP'D, ISIP=2,513#, FG=.72, AR=45.5, AP=6,158#, MR=50.3, MP=6,648#, NPI=163#, 14/24 CALC PERFS OPEN. 50%.  PERF STG #4] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8,799', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. 8,528'-8,749' [22 HOLES] AS PERSAY IN PROCEDURE. SWIFN.
5/3/2011	6:45 - 7:00	0.25	COMP	48		P		HSM,

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 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3  
 Event: COMPLETION Start Date: 4/26/2011 End Date: 5/13/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
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	7:00 - 7:00	0.00	COMP	36	E	P		FRAC STG #4 8,528'-8,749' [22 HOLES]
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FRAC STG #4] WHP=1,789#, BRK DN  
 PERFS=2,529#, @=2.2 BPM, INJ RT=42.5, INJ  
 PSI=5,775#, ISIP=1,897#, FG=.66, PUMP'D 608  
 BBLs SLK WTR W/ 6,524# 30/50 MESH W/ 4,996#  
 RESIN COAT IN TAIL W/ 11,520# TOTAL PROP  
 PUMP'D, ISIP=2,475#, FG=.73, AR=48.8,  
 AP=6,158#, MR=50.3, MP=6,398#, NPI=578#, 15/22  
 CALC PERFS OPEN. 60%.

PERF STG #5] P/U RIH W/ HALIBURTON 8K CBP &  
 PERF GUN, SET CBP @=8,293', PERF  
 MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36"  
 HOLE. 8,096'-8,243' [24 HOLES] AS PERSAY IN  
 PROCEDURE.

FRAC STG #5] WHP=1,175#, BRK DN  
 PERFS=2,916#, @=4 BPM, INJ RT=49.6, INJ  
 PSI=5,935#, ISIP=1,939#, FG=.68, PUMP'D 929  
 BBLs SLK WTR W/ 14,091# 30/50 MESH W/ 5,087#  
 RESIN COAT IN TAIL W/ 19,178# TOTAL PROP  
 PUMP'D, ISIP=2,476#, FG=.74, AR=50.7,  
 AP=5,684#, MR=52.9, MP=6,506#, NPI=537#, 17/24  
 CALC PERFS OPEN. 70%

PERF STG #6] P/U RIH W/ HALIBURTON 8K CBP &  
 PERF GUN, SET CBP @=8,057', PERF  
 MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36"  
 HOLE. 7,917'-8,027' [21 HOLES] AS PERSAY IN  
 PROCEDURE.

FRAC STG #6] WHP=891#, BRK DN  
 PERFS=3,816#, @=4.7 BPM, INJ RT=47.2, INJ  
 PSI=5,926#, ISIP=2,180#, FG=.71, PUMP'D 724  
 BBLs SLK WTR W/ 9,511# 30/50 MESH W/ 4,600#  
 RESIN COAT IN TAIL W/ 14,111# TOTAL PROP  
 PUMP'D, ISIP=2,132#, FG=.71, AR=50.4,  
 AP=5,403#, MR=51, MP=6,181#, NPI=-48# 16/21  
 CALC PERFS OPEN. 68%

CHANGE OUT FRAC VALVES AFTER STG #6  
 APROX. 1-1/2 HRS DOWN TIME.

PERF STG #7] P/U RIH W/ HALIBURTON 8K CBP &  
 PERF GUN, SET CBP @=7,862', PERF  
 MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36"  
 HOLE. 7,734'-7,832' [23 HOLES] AS PERSAY IN  
 PROCEDURE.

FRAC STG #7] WHP=591#, BRK DN  
 PERFS=3,319#, @=4.2 BPM, INJ RT=47.7, INJ  
 PSI=6,019#, ISIP=2,302#, FG=.73, PUMP'D 1,079  
 BBLs SLK WTR W/ 18,423# 30/50 MESH W/ 4,870#  
 RESIN COAT IN TAIL W/ 23,302# TOTAL PROP  
 PUMP'D, ISIP=2,283#, FG=.73, AR=48.9,  
 AP=5,294#, MR=50.2, MP=6,412#, NPI=-19#, 17/23  
 CALC PERFS OPEN. 69%

PERF STG #8] P/U RIH W/ HALIBURTON 8K CBP &  
 PERF GUN, SET CBP @=6,968', PERF WASATCH  
 USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE.  
 7,578'-7,683' [23 HOLES] AS PERSAY IN  
 PROCEDURE. SWIFN.

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Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
5/4/2011	6:30 - 6:45	0.25	COMP	48		P		HSM, FRACING / RIGGING DOWN
	6:45 - 6:45	0.00	COMP	36	E	P		FRAC WASATCH STG #8 7,578'-7,683' [23 HOLES]  FRAC STG #8] WHP=1,060#, BRK DN PERFS=1,629# @=4.4 BPM, INJ RT=50.5, INJ PSI=4,489#, ISIP=1,220#, FG=.60, PUMP'D 1,895 BBLs SLK WTR W/ 52,474# 30/50 MESH W/ 5,461# RESIN COAT IN TAIL W/ 57,935# TOTAL PROP PUMP'D, ISIP=2,317#, FG=.74, AR=50.3, AP=4,573#, MR=51.5, MP=51.5#, NPI=1,098#, 20/23 CALC PERFS OPEN. 82%  PERF STG #9] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=6,968', PERF WASATCH USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. 7,018'-7,151' [24 HOLES] AS PERSAY IN PROCEDURE. [MISS RUN PLUG SET, BOTTOM GUN SHOT AND WENT SHORT, POOH FIXED PROBLEM, SHOT REMAINING GUNS]  FRAC STG #9] WHP=298#, BRK DN PERFS=1,574# @=4.4 BPM, INJ RT=50.3, INJ PSI=5,188#, ISIP=891#, FG=.56, PUMP'D 681 BBLs SLK WTR W/ 12,633# 30/50 MESH W/ 3,144# RESIN COAT IN TAIL W/ 15,777# TOTAL PROP PUMP'D, ISIP=1,773#, FG=.69, AR=50, AP=4,398#, MR=50.6, MP=5,480#, NPI=882#, 16/24 CALC PERFS OPEN. 65%.  P/U RIH W/ HALIBURTON 8K CBP SET FOR TOP KILL @=6,968'  8,113 TOTAL BBLs 180,239# TOTAL SAND 945 GALS SCALE INHIB 165 GALS BIOCID 7AM [DAY 4] JSA-- P/U TBG, SWVLS, OVERHEAD EQUIP, DRLG PLUGS, PSI.  MIRU LAST NIGHT & NDWH, NUBOP, R/U FLOOR & TBG EQUIPMENT.  P/U 3-7/8" SEALED BRG BIT, POBS W/ XN, NEW 2-3/8" L-80 TBG & RIH. [SLM & DRIFTED] TAG SAND @ 6938'. R/U SWVL & RIG PUMP. ESTABLISH CIRCULATION. P.T. SURFACE LINE & BOP TO 3000#. 0# LOSS IN 15 MINUTES. C/O 30' SAND TO CBP#1.  [DRLG CBP#1] @ 6968'. D/O HALL 8K CBP IN 5 MIN. 20# INC. RIH & C/O 30' SAND TO CBP#2. FCP=20#.  [DRLG CBP#2] @ 7201'. D/O HALL 8K CBP IN 4 MIN. 90# INC. RIH & C/O 30' SAND TO CBP#3. FCP=200#.  [DRLG CBP#3] @ 7713'. D/O HALL 8K CBP IN 5 MIN. 100# INC. RIH & C/O 25' SAND TO CBP#4. CIRC WELL CLN, PUH W/ EOT @ 7821'.  4PM SWL-SDFN. PREP TO FINISH D/O 6 PLUGS AND LAND TBG IN AM.
5/12/2011	7:00 - 16:00	9.00	COMP	30		P		

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**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-25L2AS [GREEN] Spud Conductor: 12/17/2010 Spud Date: 1/29/2011  
 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3  
 Event: COMPLETION Start Date: 4/26/2011 End Date: 5/13/2011  
 Active Datum: RKB @4,997.00ft (above Mean Sea Level) UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
5/13/2011	7:00 - 15:00	8.00	COMP	30		P		7AM [DAY 6] JSA-- BLEED PSI, DRLG PLUGS, LAND TBG, NDBOP, NUWH, R/D RIG, PIPE RAMS IN BOP.  EOT @ 7831'. SICP=1125#, SITP=0#. OPEN WELL TO PIT. BLEED OFF PSI TO 250# IN 10 MIN. ESTABLISH CIRC. CONTINUE DRLG PLUGS. FCP=200#  [DRLG CBP#4] @ 7860'. D/O HALL 8K CBP IN 4 MIN. 500# INC. RIH & C/O 30' SAND TO CBP#5. FCP=700#.  [DRLG CBP#5] @ 8057'. D/O HALL 8K CBP IN 4 MIN. 400# INC. RIH & C/O 30' SAND TO CBP#6. FCP=800#.  [DRLG CBP#6] @ 8293'. D/O HALL 8K CBP IN 5 MIN. 200# INC. RIH & C/O 30' SAND TO CBP#7. FCP=900#.  [DRLG CBP#7] @ 8799'. D/O HALL 8K CBP IN 6 MIN. 100# INC. RIH & C/O 30' SAND TO CBP#8. FCP=1000#.  [DRLG CBP#8] @ 9082'. D/O HALL 8K CBP IN 4 MIN. 200# INC. RIH & C/O 25' SAND TO CBP#9. FCP=800#.  [DRLG CBP#9] @ 9336'. D/O HALL 8K CBP IN 5 MIN. 200# INC. RIH, TAG SAND @ 9760'. C/O 81' SAND TO PBD @ 9841'. B.P. @ 9637'. 204' RATHOLE. CIRCULATE WELL CLEAN. R/D SWVL. POOH & L/D 24 JTS ON FLOAT. LAND TBG ON HANGER W/ 286 JTS NEW 2-3/8" L-80 TBG. EOT @ 9088.71', POBS W/ XN @ 9086.51'. R/D FLOOR & TBG EQUIPMENT. NDBOP, DROP BALL DOWN TBG, NUWH. PUMP OFF THE BIT @ 2100#. OPEN WELL TO FBT ON OPEN CHOKE & UNLOAD TBG VOLUME IN 8 MINUTES.  1 PM TURN WELL OVER TO DELSCO FBC & APC MAINT CREW. FTP=2150#, SICP=2200#. SELLING GAS @ 2.3 MCF RATE. RIG PMP'D 225 BBLs. LTR=6163 BBLs.  RACK EQUIPMENT, RDMO. ROAD RIG TO CIGE 172. SPOT RIG & EQUIPMENT.  3 PM SDF-WE  315 JTS DELIVERED 286 JTS LANDED 29 JTS RETURNED WELL TURNED TO SALES @ 1300 HR ON 5/13/11 - 2300 MCFD, 1800 BWPF, CP 2200#, FTP 650#, CK 20/64"
5/14/2011	7:00 -			33				7 AM FLBK REPORT: CP 2950#, TP 2175#, 20/64" CK, 45 BWPH, hvy SAND, - GAS TTL BBLs RECOVERED: 2810 BBLs LEFT TO RECOVER: 5303

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**JUN 23 2011**

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

Well: NBU 921-25L2AS [GREEN]		Spud Conductor: 12/17/2010	Spud Date: 1/29/2011
Project: UTAH-UINTAH		Site: NBU 921-25K PAD	Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: COMPLETION		Start Date: 4/26/2011	End Date: 5/13/2011
Active Datum: RKB @4,997.00ft (above Mean Sea Level)		UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1848/W/0/1402/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
5/15/2011	7:00 -			33	A			7 AM FLBK REPORT: CP 2850#, TP 2050#, 20/64" CK, 35 BWPH, LIGHT SAND, - GAS TTL BBLs RECOVERED: 3660 BBLs LEFT TO RECOVER: 4453
5/16/2011	7:00 -			33	A			7 AM FLBK REPORT: CP 2625#, TP 1925#, 20/64" CK, 30 BWPH, TRACE SAND, - GAS TTL BBLs RECOVERED: 4415 BBLs LEFT TO RECOVER: 3698
5/17/2011	7:00 -			33	A			7 AM FLBK REPORT: CP 2500#, TP 1800#, 20/64" CK, 25 BWPH, TRACE SAND, - GAS TTL BBLs RECOVERED: 5120 BBLs LEFT TO RECOVER: 2993
5/18/2011	7:00 -			33	A			7 AM FLBK REPORT: CP 2400#, TP 1725#, 20/64" CK, 20 BWPH, TRACE SAND, - GAS TTL BBLs RECOVERED: 5676 BBLs LEFT TO RECOVER: 2437

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Site: UINAH, NBU 921-25K Pad  
 Well: NBU 921-25L2AS  
 Wellbore: NBU 921-25L2AS  
 Section:  
 SHL:  
 Design: NBU 921-25L2AS (wp02) Rig: H&P 298  
 Latitude: 40.004848  
 Longitude: -109.503803  
 GL: 4971.00  
 KB: (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)

TVDPath	MDPath	Formation
4781.00	4950.92	Top Wasatch
7495.00	7665.08	Top Mesaverde (Top of cylinder)
8389.00	8559.13	MVU21
8969.00	9139.17	MVL1

# Weatherford®



Azimuths to True North  
 Magnetic North: 11.13°

Magnetic Field  
 Strength: 52371.3snT  
 Dip Angle: 65.88°  
 Date: 1/19/2011  
 Model: IGRF2010

### WELL DETAILS: NBU 921-25L2AS

+N/-S	+E/-W	Northing	Ground Level: Easting	4971.00 Latitude	Longitude	Slot
0.00	0.00	14531327.06	2059417.80	40.004848	-109.503803	

### CASING DETAILS

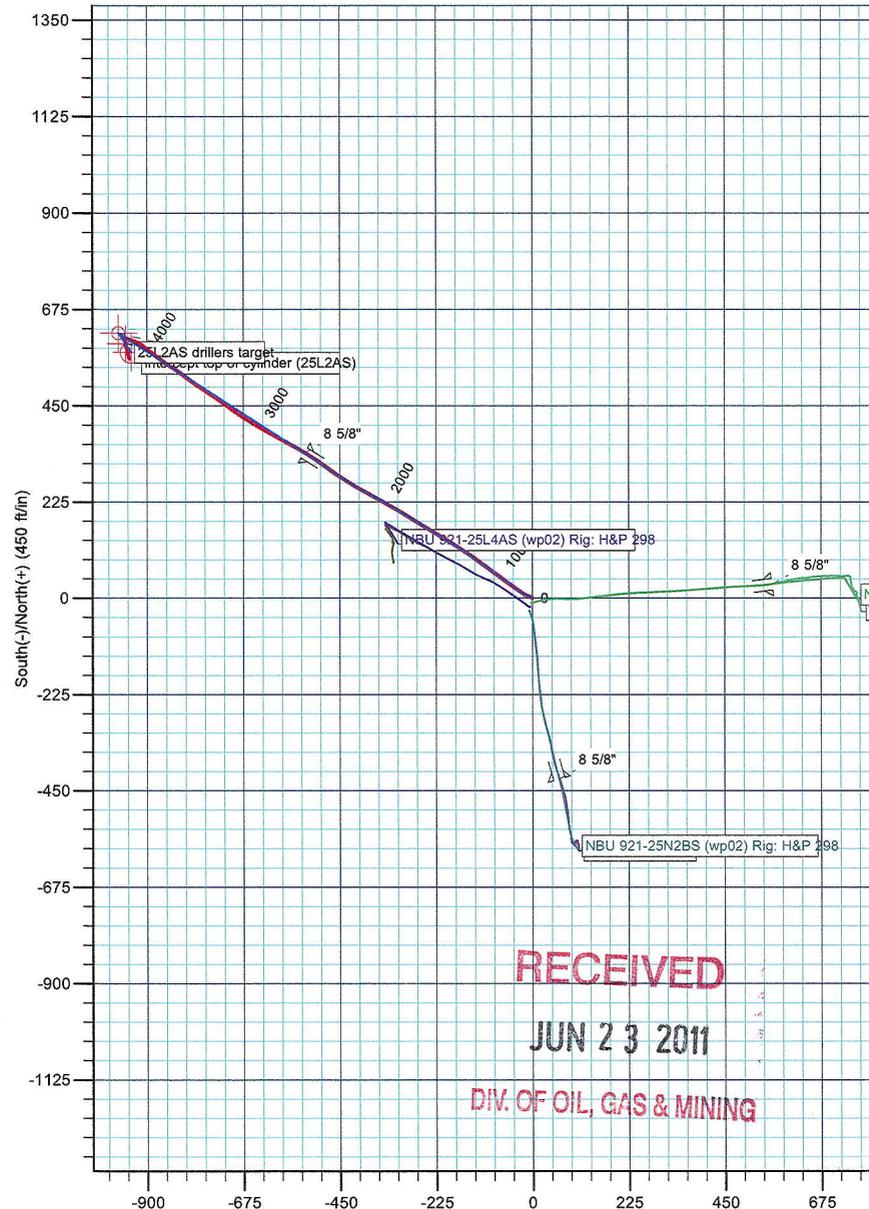
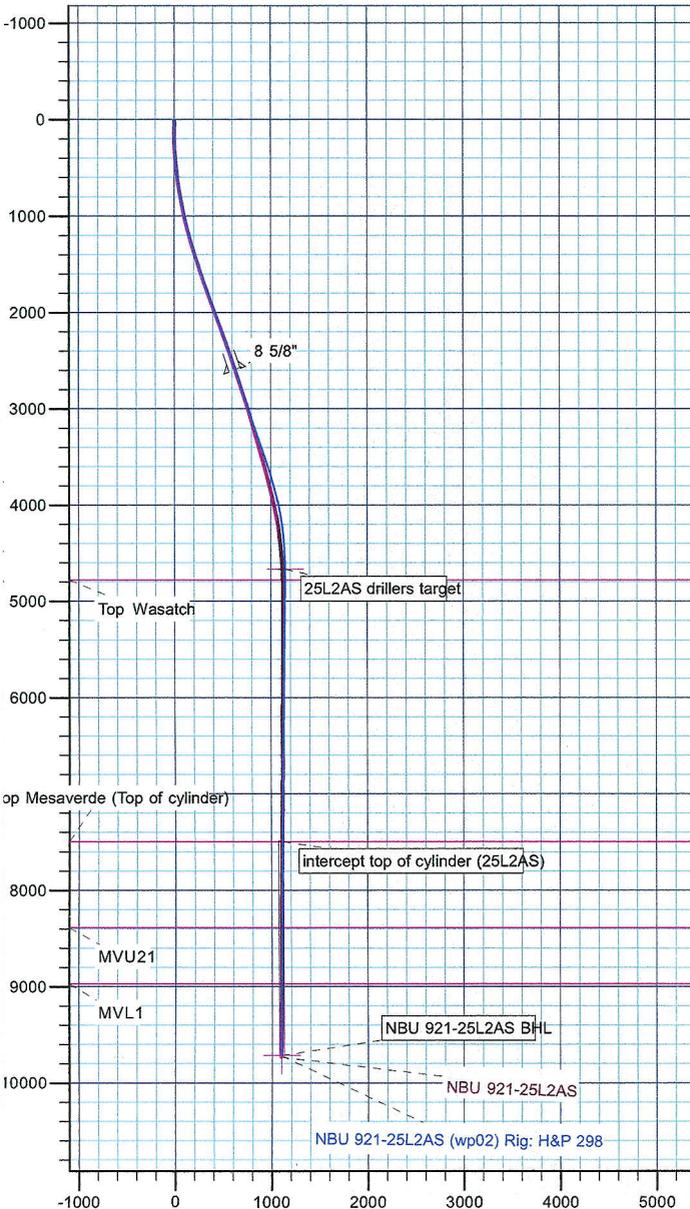
TVD	MD	Name	Size
2597.58	2692.00	8 5/8"	8-5/8

### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
25L2AS drillers target	4667.00	620.47	-967.45	14531931.19	2058440.07	40.006552	-109.507257	Circle (Radius: 15.00)
Intercept top of cylinder (25L2AS)	7495.00	595.69	-950.93	14531906.69	2058457.00	40.006484	-109.507198	Point
NBU 921-25L2AS BHL	9716.00	575.47	-937.45	14531886.70	2058470.81	40.006428	-109.507150	Circle (Radius: 25.00)

### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
2652.00	19.02	302.08	2559.77	333.35	-521.50	0.00	0.00	618.83
2692.00	19.02	302.08	2597.58	340.27	-532.55	0.00	0.00	631.87
2792.00	19.02	302.08	2692.12	357.58	-560.16	0.00	0.00	664.46
2815.20	18.63	302.85	2714.08	361.60	-566.48	2.00	148.15	671.94
3772.50	18.63	302.85	3621.23	527.45	-823.36	0.00	0.00	977.64
4836.92	0.00	149.04	4667.00	620.47	-967.45	1.75	180.00	1149.10
5045.81	0.63	146.32	4875.89	619.52	-966.82	0.30	146.32	1148.06
9886.21	0.63	146.32	9716.00	575.47	-937.45	0.00	0.00	1099.99



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<b>Company:</b> US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b> Well NBU 921-25L2AS
<b>Project:</b> UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b> (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)
<b>Site:</b> UINTAH_NBU 921-25K Pad	<b>MD Reference:</b> (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)
<b>Well:</b> NBU 921-25L2AS	<b>North Reference:</b> True
<b>Wellbore:</b> NBU 921-25L2AS	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> NBU 921-25L2AS	<b>Database:</b> edm5000p

<b>Project</b>	UTAH - UTM (feet), NAD27, Zone 12N		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Fee	<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 921-25K Pad				
<b>Site Position:</b>		<b>Northing:</b>	14,531,298.16 ft	<b>Latitude:</b>	40.004769
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,059,410.15 ft	<b>Longitude:</b>	-109.503832
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	0 "	<b>Grid Convergence:</b>	0.96 °

<b>Well</b>	NBU 921-25L2AS					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,531,327.06 ft	<b>Latitude:</b>	40.004848
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,059,417.79 ft	<b>Longitude:</b>	-109.503803
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,971.00 ft

<b>Wellbore</b>	NBU 921-25L2AS				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	1/19/2011	11.13	65.88	52,371

<b>Design</b>	NBU 921-25L2AS				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	17.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	17.00	0.00	0.00	302.59	

<b>Survey Program</b>	<b>Date</b>	3/22/2011			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
223.00	2,652.00	Survey #1 (NBU 921-25L2AS)	MWD	MWD - Standard	
2,754.00	9,893.00	Survey #2 (NBU 921-25L2AS)	MWD	MWD - Standard	

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)
17.00	0.00	0.00	17.00	0.00	0.00	0.00	0.00	0.00	0.00
223.00	0.88	336.70	222.99	1.45	-0.63	1.31	0.43	0.43	0.00
316.00	2.88	288.29	315.94	2.84	-3.13	4.17	2.57	2.15	-52.05
410.00	4.31	291.54	409.75	4.88	-8.65	9.92	1.54	1.52	3.46
505.00	6.44	294.79	504.33	8.43	-16.81	18.70	2.26	2.24	3.42
601.00	8.69	304.66	599.49	14.81	-27.67	31.29	2.70	2.34	10.28
696.00	9.06	306.91	693.36	23.38	-39.55	45.92	0.53	0.39	2.37
791.00	9.38	307.66	787.13	32.60	-51.66	61.09	0.36	0.34	0.79
887.00	10.88	303.16	881.63	42.34	-65.44	77.94	1.77	1.56	-4.69
981.00	12.75	308.04	973.64	53.59	-81.04	97.14	2.25	1.99	5.19

Company: US ROCKIES REGION PLANNING  
 Project: UTAH - UTM (feet), NAD27, Zone 12N  
 Site: UINTAH\_NBU 921-25K Pad  
 Well: NBU 921-25L2AS  
 Wellbore: NBU 921-25L2AS  
 Design: NBU 921-25L2AS

Local Co-ordinate Reference: Well NBU 921-25L2AS  
 TVD Reference: (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)  
 MD Reference: (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)  
 North Reference: True  
 Survey Calculation Method: Minimum Curvature  
 Database: edm5000p

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)
1,076.00	14.32	307.43	1,066.00	67.19	-98.62	119.28	1.66	1.65	-0.64
1,171.00	14.81	307.29	1,157.94	81.68	-117.61	143.09	0.52	0.52	-0.15
1,266.00	15.50	303.79	1,249.64	96.10	-137.82	167.88	1.21	0.73	-3.68
1,361.00	16.94	302.66	1,340.86	110.63	-160.03	194.42	1.55	1.52	-1.19
1,457.00	17.19	302.54	1,432.63	125.81	-183.76	222.59	0.26	0.26	-0.13
1,551.00	18.06	301.79	1,522.22	140.95	-207.86	251.05	0.96	0.93	-0.80
1,645.00	19.44	301.29	1,611.23	156.76	-233.61	281.26	1.48	1.47	-0.53
1,740.00	19.88	301.04	1,700.69	173.30	-260.96	313.21	0.47	0.46	-0.26
1,835.00	19.38	301.16	1,790.17	189.78	-288.29	345.11	0.53	-0.53	0.13
1,930.00	18.81	301.04	1,879.94	205.83	-314.90	376.18	0.60	-0.60	-0.13
2,025.00	19.94	300.04	1,969.56	221.84	-342.04	407.67	1.24	1.19	-1.05
2,121.00	21.06	298.16	2,059.48	238.18	-371.42	441.23	1.35	1.17	-1.96
2,216.00	20.25	299.91	2,148.37	254.43	-400.72	474.67	1.07	-0.85	1.84
2,310.00	19.88	300.66	2,236.67	270.69	-428.57	506.89	0.48	-0.39	0.80
2,404.00	19.00	305.41	2,325.31	287.71	-454.79	538.15	1.92	-0.94	5.05
2,500.00	19.06	305.41	2,416.07	305.85	-480.30	569.41	0.06	0.06	0.00
2,595.00	19.00	303.29	2,505.87	323.32	-505.87	600.37	0.73	-0.06	-2.23
2,652.00	19.02	302.08	2,559.77	333.35	-521.50	618.94	0.69	0.04	-2.12
2,754.00	18.63	301.60	2,656.31	350.71	-549.46	651.85	0.41	-0.38	-0.47
2,848.00	18.63	299.53	2,745.39	365.98	-575.31	681.85	0.70	0.00	-2.20
2,943.00	17.81	297.78	2,835.62	380.23	-601.37	711.48	1.04	-0.86	-1.84
3,038.00	17.44	298.77	2,926.16	393.85	-626.70	740.17	0.50	-0.39	1.04
3,133.00	15.56	301.65	3,017.25	407.39	-650.03	767.11	2.16	-1.98	3.03
3,228.00	16.13	303.28	3,108.64	421.32	-671.91	793.05	0.76	0.60	1.72
3,322.00	16.81	305.78	3,198.78	436.43	-693.85	819.68	1.04	0.72	2.66
3,417.00	17.25	306.65	3,289.62	452.87	-716.30	847.44	0.54	0.46	0.92
3,512.00	16.44	303.15	3,380.54	468.63	-738.86	874.94	1.37	-0.85	-3.68
3,606.00	15.63	304.28	3,470.88	483.04	-760.46	900.90	0.92	-0.86	1.20
3,700.00	15.31	303.40	3,561.48	497.00	-781.28	925.96	0.42	-0.34	-0.94
3,795.00	15.50	306.15	3,653.07	511.40	-802.00	951.17	0.79	0.20	2.89
3,890.00	14.94	308.53	3,744.74	526.51	-821.83	976.02	0.88	-0.59	2.51
3,985.00	13.38	302.90	3,836.85	540.11	-840.64	999.20	2.19	-1.64	-5.93
4,079.00	12.63	302.78	3,928.44	551.58	-858.41	1,020.35	0.80	-0.80	-0.13
4,174.00	11.50	306.15	4,021.34	562.79	-874.79	1,040.19	1.40	-1.19	3.55
4,269.00	10.44	308.90	4,114.60	573.79	-889.14	1,058.20	1.24	-1.12	2.89
4,364.00	10.00	310.90	4,208.10	584.59	-902.07	1,074.91	0.59	-0.46	2.11
4,459.00	8.00	300.65	4,301.93	593.36	-914.00	1,089.68	2.69	-2.11	-10.79
4,553.00	6.94	295.90	4,395.13	599.18	-924.73	1,101.86	1.30	-1.13	-5.05
4,648.00	5.44	292.53	4,489.57	603.41	-934.06	1,112.00	1.62	-1.58	-3.55
4,743.00	4.56	281.53	4,584.21	605.89	-941.92	1,119.95	1.37	-0.93	-11.58
4,838.00	3.00	290.15	4,679.00	607.50	-947.95	1,125.91	1.74	-1.64	9.07
4,933.00	1.00	301.90	4,773.94	608.80	-950.99	1,129.16	2.14	-2.11	12.37
4,995.00	0.56	165.03	4,835.94	608.79	-951.37	1,129.48	2.35	-0.71	-220.76

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**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-25K Pad  
**Well:** NBU 921-25L2AS  
**Wellbore:** NBU 921-25L2AS  
**Design:** NBU 921-25L2AS

**Local Co-ordinate Reference:** Well NBU 921-25L2AS  
**TVD Reference:** (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)  
**MD Reference:** (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** edm5000p

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)
5,122.00	0.63	162.15	4,962.93	607.53	-950.99	1,128.49	0.06	0.06	-2.27
5,217.00	0.81	171.28	5,057.92	606.37	-950.73	1,127.64	0.22	0.19	9.61
5,312.00	0.81	185.03	5,152.91	605.03	-950.69	1,126.89	0.20	0.00	14.47
5,407.00	0.61	347.78	5,247.91	604.86	-950.86	1,126.93	1.48	-0.21	171.32
5,501.00	0.19	314.53	5,341.91	605.46	-951.07	1,127.44	0.49	-0.45	-35.37
5,596.00	0.19	163.03	5,436.91	605.42	-951.14	1,127.47	0.39	0.00	-159.47
5,691.00	0.44	170.78	5,531.91	604.91	-951.03	1,127.11	0.27	0.26	8.16
5,786.00	0.63	185.90	5,626.90	604.03	-951.03	1,126.63	0.25	0.20	15.92
5,880.00	0.94	185.03	5,720.90	602.74	-951.15	1,126.04	0.33	0.33	-0.93
5,975.00	1.00	184.78	5,815.88	601.14	-951.29	1,125.29	0.06	0.06	-0.26
6,070.00	0.56	153.90	5,910.87	599.90	-951.15	1,124.51	0.62	-0.46	-32.51
6,165.00	0.69	145.90	6,005.87	599.01	-950.63	1,123.59	0.16	0.14	-8.42
6,259.00	0.56	168.90	6,099.86	598.09	-950.22	1,122.75	0.30	-0.14	24.47
6,354.00	0.88	174.03	6,194.85	596.91	-950.06	1,121.98	0.34	0.34	5.40
6,449.00	1.06	160.78	6,289.84	595.35	-949.69	1,120.83	0.30	0.19	-13.95
6,544.00	0.63	218.15	6,384.83	594.11	-949.72	1,120.19	0.94	-0.45	60.39
6,639.00	0.81	214.15	6,479.82	593.15	-950.42	1,120.26	0.20	0.19	-4.21
6,733.00	0.38	348.40	6,573.82	592.90	-950.86	1,120.49	1.18	-0.46	142.82
6,828.00	0.13	12.28	6,668.82	593.31	-950.90	1,120.75	0.28	-0.26	25.14
6,923.00	0.25	190.40	6,763.82	593.22	-950.91	1,120.71	0.40	0.13	187.49
7,017.00	0.48	168.33	6,857.82	592.63	-950.87	1,120.36	0.28	0.24	-23.48
7,112.00	0.38	169.03	6,952.82	591.93	-950.73	1,119.86	0.11	-0.11	0.74
7,207.00	0.44	140.90	7,047.81	591.34	-950.44	1,119.30	0.22	0.06	-29.61
7,302.00	0.69	149.03	7,142.81	590.56	-949.92	1,118.44	0.28	0.26	8.56
7,397.00	0.38	174.65	7,237.80	589.76	-949.59	1,117.74	0.40	-0.33	26.97
7,491.00	0.56	154.78	7,331.80	589.03	-949.37	1,117.16	0.26	0.19	-21.14
7,586.00	0.94	149.15	7,426.79	587.95	-948.77	1,116.07	0.41	0.40	-5.93
7,681.00	1.06	151.65	7,521.78	586.50	-947.95	1,114.60	0.13	0.13	2.63
7,776.00	1.56	141.03	7,616.75	584.72	-946.72	1,112.61	0.58	0.53	-11.18
7,871.00	1.06	134.15	7,711.73	583.11	-945.28	1,110.52	0.55	-0.53	-7.24
7,967.00	1.44	137.78	7,807.71	581.59	-943.83	1,108.48	0.40	0.40	3.78
8,062.00	0.81	148.65	7,902.69	580.14	-942.68	1,106.73	0.70	-0.66	11.44
8,156.00	0.13	179.53	7,996.68	579.46	-942.33	1,106.07	0.75	-0.72	32.85
8,251.00	0.31	183.40	8,091.68	579.10	-942.35	1,105.89	0.19	0.19	4.07
8,346.00	0.19	184.03	8,186.68	578.69	-942.38	1,105.69	0.13	-0.13	0.66
8,441.00	0.63	179.65	8,281.68	578.01	-942.38	1,105.33	0.46	0.46	-4.61
8,536.00	0.56	151.90	8,376.67	577.07	-942.16	1,104.64	0.31	-0.07	-29.21
8,631.00	0.31	141.53	8,471.67	576.46	-941.78	1,103.99	0.27	-0.26	-10.92
8,726.00	0.75	288.83	8,566.67	576.46	-942.21	1,104.35	1.08	0.46	155.05
8,820.00	0.61	278.04	8,660.66	576.73	-943.29	1,105.41	0.20	-0.15	-11.48
8,915.00	0.56	247.15	8,755.66	576.62	-944.22	1,106.13	0.33	-0.05	-32.52
9,010.00	0.56	211.03	8,850.65	576.04	-944.88	1,106.38	0.37	0.00	-38.02
9,105.00	0.94	209.53	8,945.64	574.97	-945.51	1,106.33	0.40	0.40	-1.58

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**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-25K Pad  
**Well:** NBU 921-25L2AS  
**Wellbore:** NBU 921-25L2AS  
**Design:** NBU 921-25L2AS

**Local Co-ordinate Reference:** Well NBU 921-25L2AS  
**TVD Reference:** (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)  
**MD Reference:** (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** edm5000p

**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)
9,199.00	0.44	203.40	9,039.64	573.97	-946.03	1,106.23	0.54	-0.53	-6.52
9,294.00	0.63	177.15	9,134.63	573.11	-946.15	1,105.87	0.32	0.20	-27.63
9,386.00	1.13	150.53	9,226.62	571.81	-945.68	1,104.77	0.69	0.54	-28.93
9,483.00	1.19	157.53	9,323.60	570.05	-944.82	1,103.10	0.16	0.06	7.22
9,578.00	1.19	164.78	9,418.58	568.19	-944.19	1,101.56	0.16	0.00	7.63
9,673.00	1.44	159.53	9,513.56	566.12	-943.51	1,099.88	0.29	0.26	-5.53
9,767.00	1.75	153.90	9,607.52	563.72	-942.47	1,097.71	0.37	0.33	-5.99
9,843.00	2.17	147.89	9,683.48	561.46	-941.19	1,095.42	0.61	0.55	-7.91
9,893.00	2.17	147.89	9,733.44	559.86	-940.18	1,093.70	0.00	0.00	0.00

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

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# **US ROCKIES REGION PLANNING**

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

**UINTAH\_NBU 921-25K Pad**

**NBU 921-25L2AS**

**NBU 921-25L2AS**

**Design: NBU 921-25L2AS**

## **Survey Report - Geographic**

**22 March, 2011**

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**JUN 23 2011**

**DIV. OF OIL, GAS & MINING**



**Weatherford®**

**APC**  
Survey Report - Geographic



<b>Company:</b> US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b> Well NBU 921-25L2AS
<b>Project:</b> UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b> (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)
<b>Site:</b> UINTAH_NBU 921-25K Pad	<b>MD Reference:</b> (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)
<b>Well:</b> NBU 921-25L2AS	<b>North Reference:</b> True
<b>Wellbore:</b> NBU 921-25L2AS	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> NBU 921-25L2AS	<b>Database:</b> edm5000p

<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 921-25K Pad		
<b>Site Position:</b>	<b>Northing:</b> 14,531,298.16 ft	<b>Latitude:</b> 40.004769
<b>From:</b> Lat/Long	<b>Easting:</b> 2,059,410.15 ft	<b>Longitude:</b> -109.503832
<b>Position Uncertainty:</b> 0.00 ft	<b>Spot Radius:</b> 0 "	<b>Grid Convergence:</b> 0.96 °

<b>Well</b> NBU 921-25L2AS		
<b>Well Position</b> <b>+N/-S</b> 0.00 ft	<b>Northing:</b> 14,531,327.06 ft	<b>Latitude:</b> 40.004848
<b>+E/-W</b> 0.00 ft	<b>Easting:</b> 2,059,417.79 ft	<b>Longitude:</b> -109.503803
<b>Position Uncertainty</b> 0.00 ft	<b>Wellhead Elevation:</b> ft	<b>Ground Level:</b> 4,971.00 ft

<b>Wellbore</b> NBU 921-25L2AS					
<b>Magnetics</b>	<b>Model Name</b> IGRF2010	<b>Sample Date</b> 1/19/2011	<b>Declination (°)</b> 11.13	<b>Dip Angle (°)</b> 65.88	<b>Field Strength (nT)</b> 52,371

<b>Design</b> NBU 921-25L2AS				
<b>Audit Notes:</b>				
<b>Version:</b> 1.0	<b>Phase:</b> ACTUAL	<b>Tie On Depth:</b> 17.00		
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b> 17.00	<b>+N/-S (ft)</b> 0.00	<b>+E/-W (ft)</b> 0.00	<b>Direction (°)</b> 302.59

<b>Survey Program</b>	<b>Date</b> 3/22/2011			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
223.00	2,652.00	Survey #1 (NBU 921-25L2AS)	MWD	MWD - Standard
2,754.00	9,893.00	Survey #2 (NBU 921-25L2AS)	MWD	MWD - Standard

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
17.00	0.00	0.00	17.00	0.00	0.00	14,531,327.06	2,059,417.79	40.004848	-109.503803
223.00	0.88	336.70	222.99	1.45	-0.63	14,531,328.50	2,059,417.14	40.004852	-109.503806
316.00	2.88	288.29	315.94	2.84	-3.13	14,531,329.85	2,059,414.62	40.004856	-109.503814
410.00	4.31	291.54	409.75	4.88	-8.65	14,531,331.79	2,059,409.06	40.004862	-109.503834
505.00	6.44	294.79	504.33	8.43	-16.81	14,531,335.20	2,059,400.84	40.004871	-109.503863
601.00	8.69	304.66	599.49	14.81	-27.67	14,531,341.40	2,059,389.88	40.004889	-109.503902
696.00	9.06	306.91	693.36	23.38	-39.55	14,531,349.77	2,059,377.85	40.004912	-109.503944
791.00	9.38	307.66	787.13	32.60	-51.66	14,531,358.79	2,059,365.59	40.004938	-109.503988
887.00	10.88	303.16	881.63	42.34	-65.44	14,531,368.30	2,059,351.65	40.004964	-109.504037
981.00	12.75	308.04	973.64	53.59	-81.04	14,531,379.28	2,059,335.87	40.004995	-109.504093
1,076.00	14.32	307.43	1,066.00	67.19	-98.62	14,531,392.58	2,059,318.05	40.005033	-109.504155

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 921-25K Pad  
**Well:** NBU 921-25L2AS  
**Wellbore:** NBU 921-25L2AS  
**Design:** NBU 921-25L2AS

**Local Co-ordinate Reference:** Well NBU 921-25L2AS  
**TVD Reference:** (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)  
**MD Reference:** (26' RKB + 4971' GL) @ 4997.00ft (H&P 298)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** edm5000p

## Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
1,171.00	14.81	307.29	1,157.94	81.68	-117.61	14,531,406.76	2,059,298.82	40.005072	-109.504223
1,266.00	15.50	303.79	1,249.64	96.10	-137.82	14,531,420.83	2,059,278.37	40.005112	-109.504295
1,361.00	16.94	302.66	1,340.86	110.63	-160.03	14,531,434.99	2,059,255.93	40.005152	-109.504375
1,457.00	17.19	302.54	1,432.63	125.81	-183.76	14,531,449.76	2,059,231.95	40.005194	-109.504459
1,551.00	18.06	301.79	1,522.22	140.95	-207.86	14,531,464.51	2,059,207.60	40.005235	-109.504545
1,645.00	19.44	301.29	1,611.23	156.76	-233.61	14,531,479.87	2,059,181.58	40.005278	-109.504637
1,740.00	19.88	301.04	1,700.69	173.30	-260.96	14,531,495.95	2,059,153.96	40.005324	-109.504735
1,835.00	19.38	301.16	1,790.17	189.78	-288.29	14,531,511.97	2,059,126.36	40.005369	-109.504833
1,930.00	18.81	301.04	1,879.94	205.83	-314.90	14,531,527.58	2,059,099.48	40.005413	-109.504928
2,025.00	19.94	300.04	1,969.56	221.84	-342.04	14,531,543.13	2,059,072.07	40.005457	-109.505024
2,121.00	21.06	298.16	2,059.48	238.18	-371.42	14,531,558.97	2,059,042.42	40.005502	-109.505129
2,216.00	20.25	299.91	2,148.37	254.43	-400.72	14,531,574.73	2,059,012.86	40.005547	-109.505234
2,310.00	19.88	300.66	2,236.67	270.69	-428.57	14,531,590.52	2,058,984.74	40.005591	-109.505333
2,404.00	19.00	305.41	2,325.31	287.71	-454.79	14,531,607.09	2,058,958.23	40.005638	-109.505427
2,500.00	19.06	305.41	2,416.07	305.85	-480.30	14,531,624.80	2,058,932.42	40.005688	-109.505518
2,595.00	19.00	303.29	2,505.87	323.32	-505.87	14,531,641.84	2,058,906.56	40.005736	-109.505609
2,652.00	19.02	302.08	2,559.77	333.35	-521.50	14,531,651.61	2,058,890.77	40.005783	-109.505665
2,754.00	18.63	301.60	2,656.31	350.71	-549.46	14,531,668.50	2,058,862.52	40.005811	-109.505765
2,848.00	18.63	299.53	2,745.39	365.98	-575.31	14,531,683.33	2,058,836.42	40.005853	-109.505857
2,943.00	17.81	297.78	2,835.62	380.23	-601.37	14,531,697.14	2,058,810.12	40.005892	-109.505950
3,038.00	17.44	298.77	2,926.16	393.85	-626.70	14,531,710.34	2,058,784.57	40.005929	-109.506041
3,133.00	15.56	301.65	3,017.25	407.39	-650.03	14,531,723.48	2,058,761.01	40.005967	-109.506124
3,228.00	16.13	303.28	3,108.64	421.32	-671.91	14,531,737.04	2,058,738.90	40.006005	-109.506202
3,322.00	16.81	305.78	3,198.78	436.43	-693.85	14,531,751.78	2,058,716.71	40.006046	-109.506281
3,417.00	17.25	306.65	3,289.62	452.87	-716.30	14,531,767.84	2,058,693.99	40.006092	-109.506361
3,512.00	16.44	303.15	3,380.54	468.63	-738.86	14,531,783.22	2,058,671.17	40.006135	-109.506441
3,606.00	15.63	304.28	3,470.88	483.04	-760.46	14,531,797.26	2,058,649.33	40.006174	-109.506518
3,700.00	15.31	303.40	3,561.48	497.00	-781.28	14,531,810.88	2,058,628.28	40.006213	-109.506593
3,795.00	15.50	306.15	3,653.07	511.40	-802.00	14,531,824.92	2,058,607.32	40.006252	-109.506667
3,890.00	14.94	308.53	3,744.74	526.51	-821.83	14,531,839.70	2,058,587.24	40.006294	-109.506737
3,985.00	13.38	302.90	3,836.85	540.11	-840.64	14,531,852.98	2,058,568.20	40.006331	-109.506805
4,079.00	12.63	302.78	3,928.44	551.58	-858.41	14,531,864.15	2,058,550.24	40.006363	-109.506868
4,174.00	11.50	306.15	4,021.34	562.79	-874.79	14,531,875.09	2,058,533.67	40.006393	-109.506927
4,269.00	10.44	308.90	4,114.60	573.79	-889.14	14,531,885.84	2,058,519.14	40.006423	-109.506978
4,364.00	10.00	310.90	4,208.10	584.59	-902.07	14,531,896.42	2,058,506.03	40.006453	-109.507024
4,459.00	8.00	300.65	4,301.93	593.36	-914.00	14,531,904.99	2,058,493.96	40.006477	-109.507067
4,553.00	6.94	295.90	4,395.13	599.18	-924.73	14,531,910.63	2,058,483.13	40.006493	-109.507105
4,648.00	5.44	292.53	4,489.57	603.41	-934.06	14,531,914.70	2,058,473.74	40.006505	-109.507138
4,743.00	4.56	281.53	4,584.21	605.89	-941.92	14,531,917.05	2,058,465.84	40.006512	-109.507166
4,838.00	3.00	290.15	4,679.00	607.50	-947.95	14,531,918.56	2,058,459.78	40.006516	-109.507188
4,933.00	1.00	301.90	4,773.94	608.80	-950.99	14,531,919.81	2,058,456.72	40.006520	-109.507199
4,995.00	0.56	165.03	4,835.94	608.79	-951.37	14,531,919.79	2,058,456.34	40.006520	-109.507200
5,122.00	0.63	162.15	4,962.93	607.53	-950.99	14,531,918.53	2,058,456.73	40.006516	-109.507199
5,217.00	0.81	171.28	5,057.92	606.37	-950.73	14,531,917.38	2,058,457.01	40.006513	-109.507198
5,312.00	0.81	185.03	5,152.91	605.03	-950.69	14,531,916.05	2,058,457.08	40.006509	-109.507198
5,407.00	0.61	347.78	5,247.91	604.86	-950.86	14,531,915.87	2,058,456.92	40.006509	-109.507198
5,501.00	0.19	314.53	5,341.91	605.46	-951.07	14,531,916.46	2,058,456.69	40.006510	-109.507199
5,596.00	0.19	163.03	5,436.91	605.42	-951.14	14,531,916.42	2,058,456.62	40.006510	-109.507199
5,691.00	0.44	170.78	5,531.91	604.91	-951.03	14,531,915.91	2,058,456.74	40.006509	-109.507199
5,786.00	0.63	185.90	5,626.90	604.03	-951.03	14,531,915.03	2,058,456.76	40.006507	-109.507199
5,880.00	0.94	185.03	5,720.90	602.74	-951.15	14,531,913.75	2,058,456.66	40.006503	-109.507199
5,975.00	1.00	184.78	5,815.88	601.14	-951.29	14,531,912.15	2,058,456.55	40.006499	-109.507200
6,070.00	0.56	153.90	5,910.87	599.90	-951.15	14,531,910.91	2,058,456.70	40.006495	-109.507199
6,165.00	0.69	145.90	6,005.87	599.01	-950.63	14,531,910.02	2,058,457.24	40.006493	-109.507197
6,259.00	0.56	168.90	6,099.86	598.09	-950.22	14,531,909.11	2,058,457.66	40.006490	-109.507196

**APC**  
Survey Report - Geographic



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 921-25L2AS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	(26' RKB + 4971' GL) @ 4997.00ft (H&P 298)
<b>Site:</b>	UINTAH_NBU 921-25K Pad	<b>MD Reference:</b>	(26' RKB + 4971' GL) @ 4997.00ft (H&P 298)
<b>Well:</b>	NBU 921-25L2AS	<b>North Reference:</b>	True
<b>Wellbore:</b>	NBU 921-25L2AS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	NBU 921-25L2AS	<b>Database:</b>	edm5000p

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
6,354.00	0.88	174.03	6,194.85	596.91	-950.06	14,531,907.93	2,058,457.85	40.006487	-109.507195
6,449.00	1.06	160.78	6,289.84	595.35	-949.69	14,531,906.38	2,058,458.24	40.006483	-109.507194
6,544.00	0.63	218.15	6,384.83	594.11	-949.72	14,531,905.14	2,058,458.23	40.006479	-109.507194
6,639.00	0.81	214.15	6,479.82	593.15	-950.42	14,531,904.16	2,058,457.54	40.006477	-109.507197
6,733.00	0.38	348.40	6,573.82	592.90	-950.86	14,531,903.91	2,058,457.11	40.006476	-109.507198
6,828.00	0.13	12.28	6,668.82	593.31	-950.90	14,531,904.33	2,058,457.06	40.006477	-109.507198
6,923.00	0.25	190.40	6,763.82	593.22	-950.91	14,531,904.23	2,058,457.05	40.006477	-109.507198
7,017.00	0.48	168.33	6,857.82	592.63	-950.87	14,531,903.64	2,058,457.10	40.006475	-109.507198
7,112.00	0.38	169.03	6,952.82	591.93	-950.73	14,531,902.94	2,058,457.26	40.006473	-109.507198
7,207.00	0.44	140.90	7,047.81	591.34	-950.44	14,531,902.36	2,058,457.56	40.006472	-109.507197
7,302.00	0.69	149.03	7,142.81	590.56	-949.92	14,531,901.59	2,058,458.09	40.006470	-109.507195
7,397.00	0.38	174.65	7,237.80	589.76	-949.59	14,531,900.79	2,058,458.43	40.006467	-109.507194
7,491.00	0.56	154.78	7,331.80	589.03	-949.37	14,531,900.07	2,058,458.67	40.006465	-109.507193
7,586.00	0.94	149.15	7,426.79	587.95	-948.77	14,531,898.99	2,058,459.28	40.006462	-109.507191
7,681.00	1.06	151.65	7,521.78	586.50	-947.95	14,531,897.56	2,058,460.12	40.006458	-109.507188
7,776.00	1.56	141.03	7,616.75	584.72	-946.72	14,531,895.81	2,058,461.38	40.006454	-109.507183
7,871.00	1.06	134.15	7,711.73	583.11	-945.28	14,531,894.21	2,058,462.85	40.006449	-109.507178
7,967.00	1.44	137.78	7,807.71	581.59	-943.83	14,531,892.73	2,058,464.33	40.006445	-109.507173
8,062.00	0.81	148.65	7,902.69	580.14	-942.68	14,531,891.29	2,058,465.50	40.006441	-109.507169
8,156.00	0.13	179.53	7,996.68	579.46	-942.33	14,531,890.62	2,058,465.86	40.006439	-109.507168
8,251.00	0.31	183.40	8,091.68	579.10	-942.35	14,531,890.26	2,058,465.85	40.006438	-109.507168
8,346.00	0.19	184.03	8,186.68	578.69	-942.38	14,531,889.84	2,058,465.83	40.006437	-109.507168
8,441.00	0.63	179.65	8,281.68	578.01	-942.38	14,531,889.16	2,058,465.84	40.006435	-109.507168
8,536.00	0.56	151.90	8,376.67	577.07	-942.16	14,531,888.23	2,058,466.07	40.006433	-109.507167
8,631.00	0.31	141.53	8,471.67	576.46	-941.78	14,531,887.63	2,058,466.46	40.006431	-109.507166
8,726.00	0.75	288.83	8,566.67	576.46	-942.21	14,531,887.62	2,058,466.04	40.006431	-109.507167
8,820.00	0.61	278.04	8,660.66	576.73	-943.29	14,531,887.87	2,058,464.95	40.006432	-109.507171
8,915.00	0.56	247.15	8,755.66	576.62	-944.22	14,531,887.75	2,058,464.03	40.006431	-109.507174
9,010.00	0.56	211.03	8,850.65	576.04	-944.88	14,531,887.16	2,058,463.37	40.006430	-109.507177
9,105.00	0.94	209.53	8,945.64	574.97	-945.51	14,531,886.07	2,058,462.76	40.006427	-109.507179
9,199.00	0.44	203.40	9,039.64	573.97	-946.03	14,531,885.06	2,058,462.26	40.006424	-109.507181
9,294.00	0.63	177.15	9,134.63	573.11	-946.15	14,531,884.20	2,058,462.15	40.006422	-109.507181
9,386.00	1.13	150.53	9,226.62	571.81	-945.68	14,531,882.92	2,058,462.65	40.006418	-109.507180
9,483.00	1.19	157.53	9,323.60	570.05	-944.82	14,531,881.17	2,058,463.53	40.006413	-109.507177
9,578.00	1.19	164.78	9,418.58	568.19	-944.19	14,531,879.31	2,058,464.20	40.006408	-109.507174
9,673.00	1.44	159.53	9,513.56	566.12	-943.51	14,531,877.26	2,058,464.91	40.006402	-109.507172
9,767.00	1.75	153.90	9,607.52	563.72	-942.47	14,531,874.88	2,058,465.99	40.006396	-109.507168
9,843.00	2.17	147.89	9,683.48	561.46	-941.19	14,531,872.64	2,058,467.31	40.006390	-109.507164
9,893.00	2.17	147.89	9,733.44	559.86	-940.18	14,531,871.05	2,058,468.34	40.006385	-109.507160

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

**RECEIVED**  
**JUN 23 2011**  
DIV. OF OIL, GAS & MINING