

**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 921-26B2S		
<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 <input type="checkbox"/> Coalbed Methane Well: NO <input type="checkbox"/>				<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> NATURAL BUTTES		
<b>6. NAME OF OPERATOR</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.				<b>7. OPERATOR PHONE</b> 720 929-6587		
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217				<b>9. OPERATOR E-MAIL</b> mary.mondragon@anadarko.com		
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UO 01194		<b>11. MINERAL OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>		<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>		
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>		
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>		
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>		<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		<b>19. SLANT</b> VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>		
<b>20. LOCATION OF WELL</b>	<b>FOOTAGES</b>	<b>QTR-QTR</b>	<b>SECTION</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>MERIDIAN</b>
<b>LOCATION AT SURFACE</b>	788 FNL 1685 FWL	NENW	26	9.0 S	21.0 E	S
<b>Top of Uppermost Producing Zone</b>	460 FNL 2360 FEL	NWNE	26	9.0 S	21.0 E	S
<b>At Total Depth</b>	460 FNL 2360 FEL	NWNE	26	9.0 S	21.0 E	S
<b>21. COUNTY</b> UINTAH		<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 460		<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 203		
		<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 500		<b>26. PROPOSED DEPTH</b> MD: 10106 TVD: 9750		
<b>27. ELEVATION - GROUND LEVEL</b> 4970		<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> Kathy Schneebeck-Dulnoan	<b>TITLE</b> Staff Regulatory Analyst	<b>PHONE</b> 720 929-6007
<b>SIGNATURE</b>	<b>DATE</b> 04/22/2009	<b>EMAIL</b> Kathy.SchneebeckDulnoan@anadarko.com
<b>API NUMBER ASSIGNED</b> 43047503650000	<b>APPROVAL</b>  Permit Manager	

**Proposed Hole, Casing, and Cement**

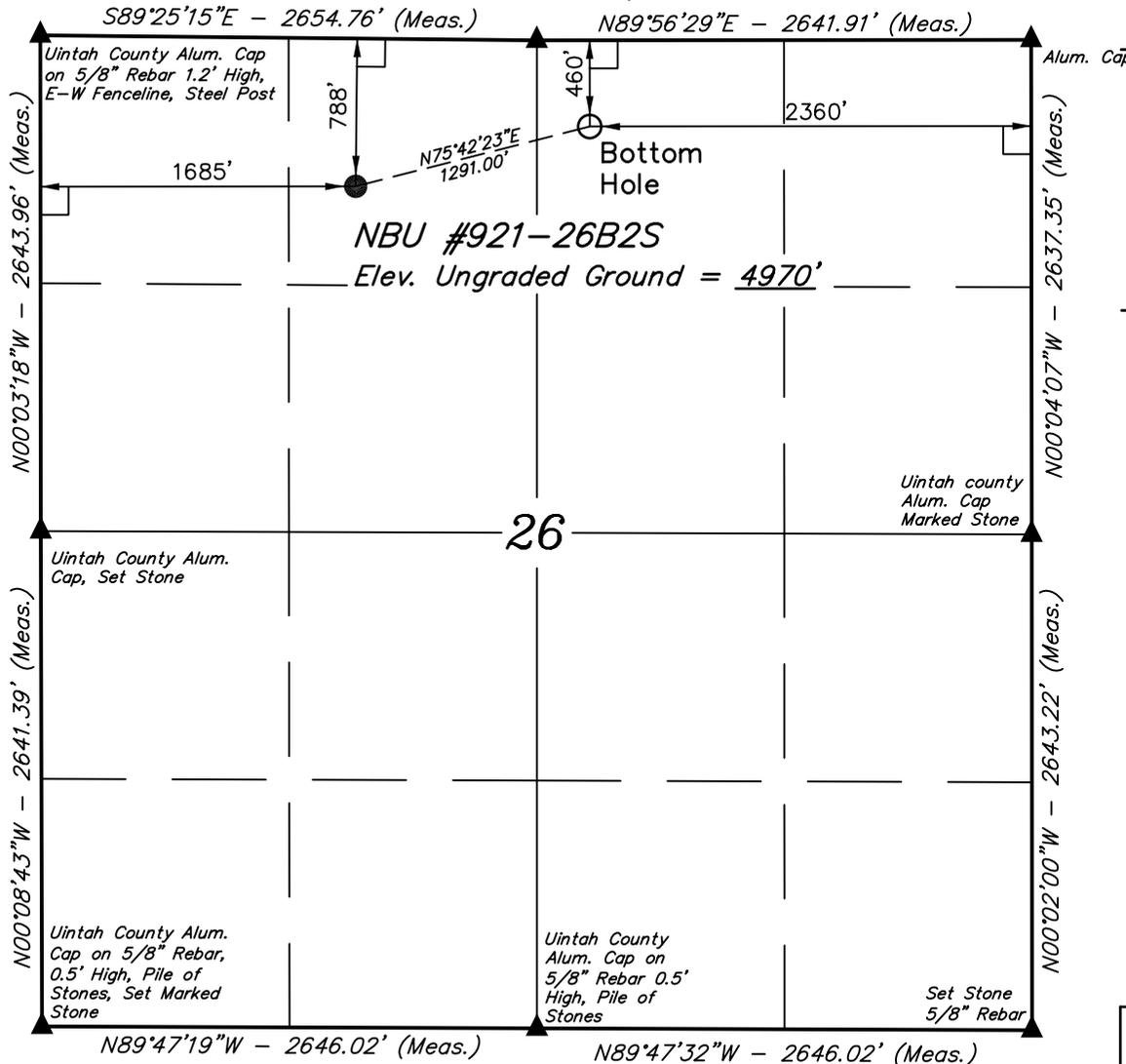
<b>String</b>	<b>Hole Size</b>	<b>Casing Size</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>		
Prod	7.875	4.5	0	10106		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade N-80 LT&C	10106	11.6			

**Proposed Hole, Casing, and Cement**

<b>String</b>	<b>Hole Size</b>	<b>Casing Size</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>		
Surf	12.25	9.625	0	2550		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade J-55 LT&C	2550	36.0			

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

Uintah County Alum. Cap Marked (#2) on SW Edge on 1/2" Rebar, 5/8" Rebar 0.1' East, Steel Post in Center of Pile of Stones, E-W Fenceline 0.2' South, Loose Marked Stone



## Kerr-McGee Oil & Gas Onshore LP

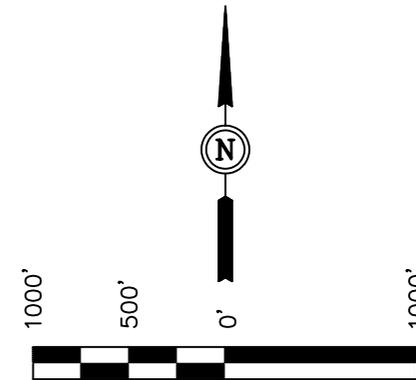
Well location, NBU #921-26B2S, located as shown in the NE 1/4 NW 1/4 of Section 26, T9S, R21E, S.L.B.&M., Uintah County, Utah.

### BASIS OF ELEVATION

TWO WATER TRIANGULATION STATION LOCATED IN THE NW 1/4 OF SECTION 1, T10S, R21E, S.L.B.&M. TAKEN FROM THE BIG PACK MTN NE QUADRANGLE, UTAH, UTAH COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5238 FEET.

### BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



SCALE

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.



**UINTAH ENGINEERING & LAND SURVEYING**  
 85 SOUTH 200 EAST - VERNAL, UTAH 84078  
 (435) 789-1017

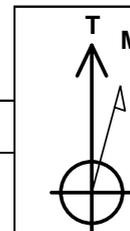
### LEGEND:

- └─┘ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

NAD 83 (TARGET BOTTOM HOLE)	NAD 83 (SURFACE LOCATION)
LATITUDE = 40°00'46.67" (40.012964)	LATITUDE = 40°00'43.51" (40.012086)
LONGITUDE = 109°31'04.56" (109.517933)	LONGITUDE = 109°31'20.64" (109.522400)
NAD 27 (TARGET BOTTOM HOLE)	NAD 27 (SURFACE LOCATION)
LATITUDE = 40°00'46.80" (40.013000)	LATITUDE = 40°00'43.64" (40.012122)
LONGITUDE = 109°31'02.09" (109.517247)	LONGITUDE = 109°31'18.16" (109.521711)

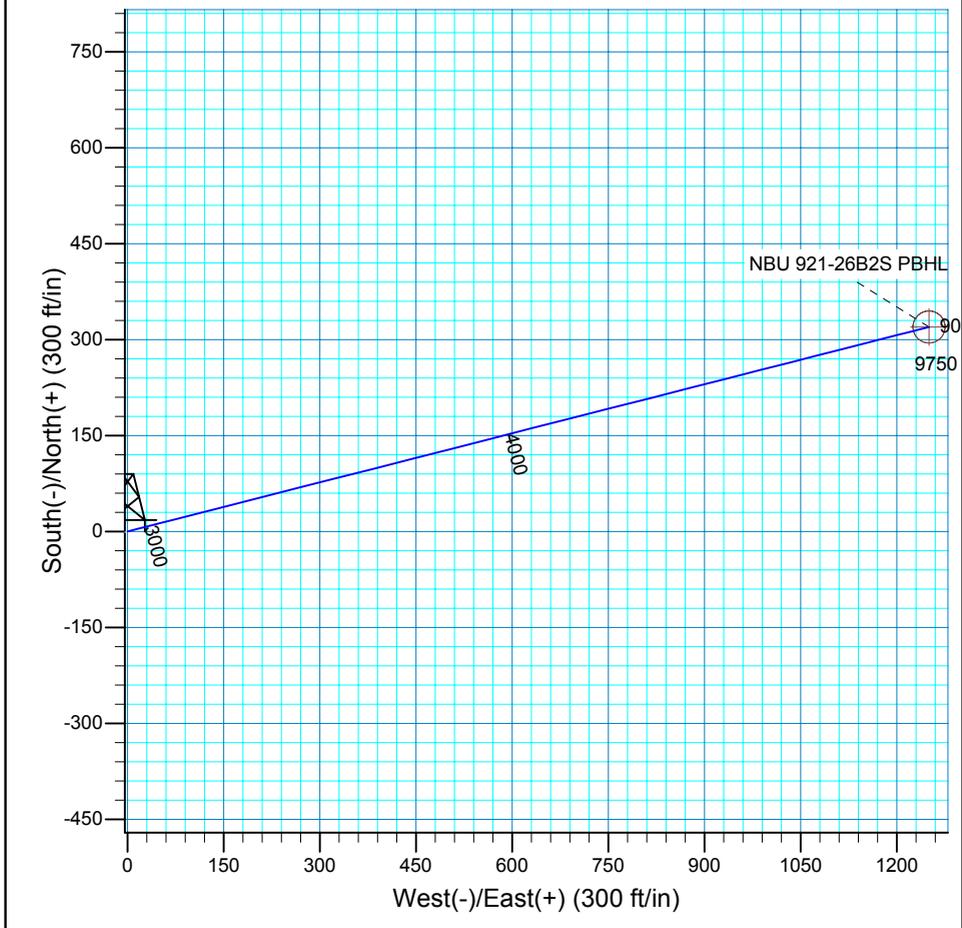
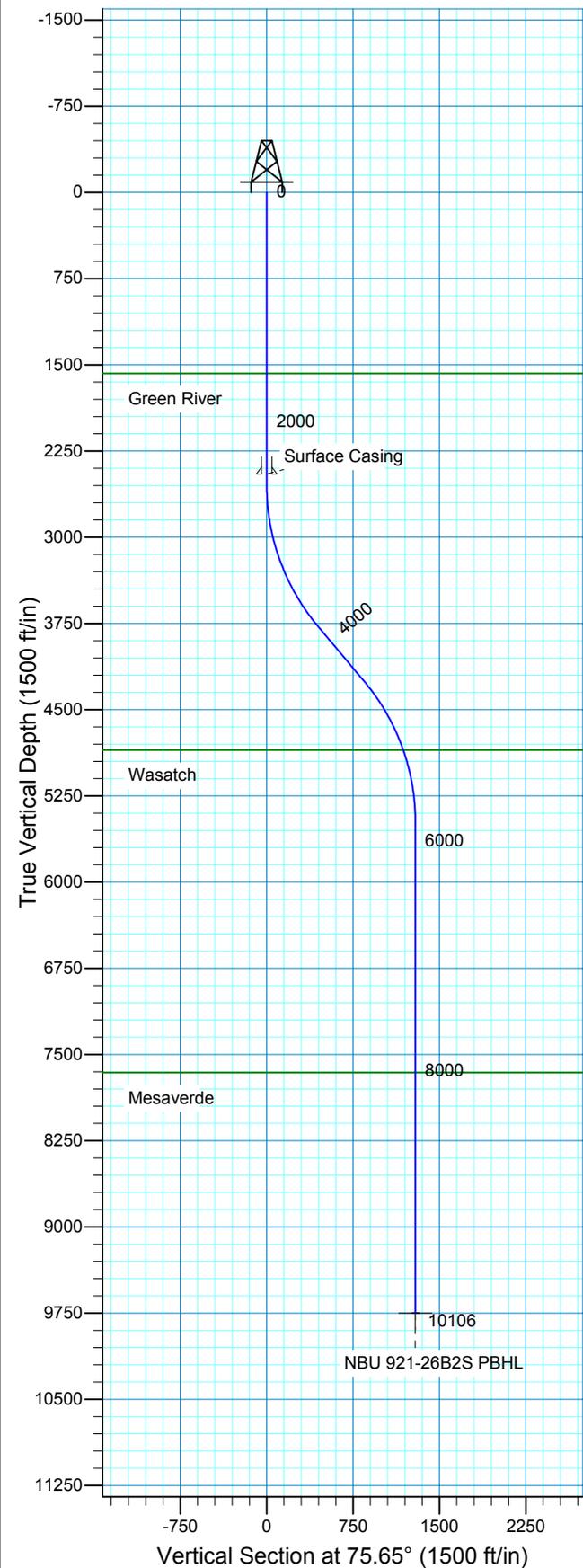
SCALE 1" = 1000'	DATE SURVEYED: 10-31-08	DATE DRAWN: 11-03-08
PARTY D.K. D.S. D.P.	REFERENCES G.L.O. PLAT	
WEATHER COOL	FILE Kerr-McGee Oil & Gas Onshore LP	

APIWellNo:43047503650000



WELL DETAILS: NBU 921-26B2S

		GL 4969' & RKB 18' @ 4987.00ft		4969.00		
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	617589.47	2554066.42	40° 0' 43.640 N	109° 31' 18.160 W	



Plan: Plan #1 (NBU 921-26B2S/OH)
Created By: Julie Cruse Date: 2009-02-06
PROJECT DETAILS: Uintah County, UT NAD27
Geodetic System: US State Plane 1927 (Exact solution) Datum: NAD 1927 (NADCON CONUS) Ellipsoid: Clarke 1866 Zone: Utah Central 4302 Location: Sec 26 T9S R21E System Datum: Mean Sea Level Local North: True

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2550.00	0.00	0.00	2550.00	0.00	0.00	0.00	0.00	0.00	
3883.33	40.00	75.65	3777.63	110.71	432.89	3.00	75.65	446.82	
4500.79	40.00	75.65	4250.63	209.05	817.41	0.00	0.00	843.71	
5834.12	0.00	0.00	5478.27	319.76	1250.29	3.00	180.001	290.54	
10105.86	0.00	0.00	9750.00	319.76	1250.29	0.00	0.001	290.54	NBU 921-26B2S PBHL



**Scientific Drilling**  
Rocky Mountain Operations

# **Kerr McGee Oil and Gas Onshore**

## **LP**

**Uintah County, UT NAD27**

**NBU 921-26C Pad**

**NBU 921-26B2S**

**OH**

**Plan: Plan #1**

# **Standard Planning Report**

**06 February, 2009**



## Scientific Drilling Planning Report

<b>Database:</b> EDM 2003.16 Multi User DB	<b>Local Co-ordinate Reference:</b> Well NBU 921-26B2S
<b>Company:</b> Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b> GL 4969' & RKB 18' @ 4987.00ft
<b>Project:</b> Uintah County, UT NAD27	<b>MD Reference:</b> GL 4969' & RKB 18' @ 4987.00ft
<b>Site:</b> NBU 921-26C Pad	<b>North Reference:</b> True
<b>Well:</b> NBU 921-26B2S	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Wellbore:</b> OH	
<b>Design:</b> Plan #1	

<b>Project</b> Uintah County, UT NAD27
<b>Map System:</b> US State Plane 1927 (Exact solution) <b>System Datum:</b> Mean Sea Level
<b>Geo Datum:</b> NAD 1927 (NADCON CONUS)
<b>Map Zone:</b> Utah Central 4302

<b>Site</b> NBU 921-26C Pad, Sec 26 T9S R21E		
<b>Site Position:</b>	<b>Northing:</b> 617,589.47 ft	<b>Latitude:</b> 40° 0' 43.640 N
<b>From:</b> Lat/Long	<b>Easting:</b> 2,554,066.42 ft	<b>Longitude:</b> 109° 31' 18.160 W
<b>Position Uncertainty:</b> 0.00 ft	<b>Slot Radius:</b> in	<b>Grid Convergence:</b> 1.27 °

<b>Well</b> NBU 921-26B2S, 788' FNL 1685' FWL			
<b>Well Position</b>	<b>+N/-S</b> 0.00 ft	<b>Northing:</b> 617,589.47 ft	<b>Latitude:</b> 40° 0' 43.640 N
	<b>+E/-W</b> 0.00 ft	<b>Easting:</b> 2,554,066.42 ft	<b>Longitude:</b> 109° 31' 18.160 W
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b> ft	<b>Ground Level:</b> 4,969.00 ft

<b>Wellbore</b> OH					
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
	IGRF2005-10	2009/02/06	(°) 11.37	(°) 65.94	(nT) 52,593

<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)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	75.65

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	
2,550.00	0.00	0.00	2,550.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,883.33	40.00	75.65	3,777.63	110.71	432.89	3.00	3.00	0.00	75.65	
4,500.79	40.00	75.65	4,250.63	209.05	817.41	0.00	0.00	0.00	0.00	
5,834.12	0.00	0.00	5,478.27	319.76	1,250.29	3.00	-3.00	0.00	180.00	
10,105.86	0.00	0.00	9,750.00	319.76	1,250.29	0.00	0.00	0.00	0.00	NBU 921-26B2S PBH



### Scientific Drilling

#### Planning Report

<b>Database:</b>	EDM 2003.16 Multi User DB	<b>Local Co-ordinate Reference:</b>	Well NBU 921-26B2S
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4969' & RKB 18' @ 4987.00ft
<b>Project:</b>	Uintah County, UT NAD27	<b>MD Reference:</b>	GL 4969' & RKB 18' @ 4987.00ft
<b>Site:</b>	NBU 921-26C Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-26B2S	<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	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,575.00	0.00	0.00	1,575.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Green River</b>										
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,450.00	0.00	0.00	2,450.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Surface Casing</b>										
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,550.00	0.00	0.00	2,550.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	1.50	75.65	2,599.99	0.16	0.63	0.65	3.00	3.00	0.00	0.00
2,700.00	4.50	75.65	2,699.85	1.46	5.70	5.89	3.00	3.00	0.00	0.00
2,800.00	7.50	75.65	2,799.29	4.05	15.83	16.34	3.00	3.00	0.00	0.00
2,900.00	10.50	75.65	2,898.04	7.92	30.98	31.98	3.00	3.00	0.00	0.00
3,000.00	13.50	75.65	2,995.85	13.07	51.12	52.77	3.00	3.00	0.00	0.00
3,100.00	16.50	75.65	3,092.43	19.49	76.20	78.65	3.00	3.00	0.00	0.00
3,200.00	19.50	75.65	3,187.52	27.14	106.13	109.55	3.00	3.00	0.00	0.00
3,300.00	22.50	75.65	3,280.87	36.02	140.85	145.38	3.00	3.00	0.00	0.00
3,400.00	25.50	75.65	3,372.22	46.10	180.25	186.05	3.00	3.00	0.00	0.00
3,500.00	28.50	75.65	3,461.31	57.35	224.23	231.44	3.00	3.00	0.00	0.00
3,600.00	31.50	75.65	3,547.90	69.73	272.66	281.44	3.00	3.00	0.00	0.00
3,700.00	34.50	75.65	3,631.76	83.23	325.42	335.89	3.00	3.00	0.00	0.00
3,800.00	37.50	75.65	3,712.65	97.79	382.36	394.67	3.00	3.00	0.00	0.00
3,883.33	40.00	75.65	3,777.63	110.71	432.89	446.82	3.00	3.00	0.00	0.00
3,900.00	40.00	75.65	3,790.40	113.37	443.27	457.54	0.00	0.00	0.00	0.00
4,000.00	40.00	75.65	3,867.01	129.29	505.54	521.81	0.00	0.00	0.00	0.00
4,100.00	40.00	75.65	3,943.61	145.22	567.82	586.09	0.00	0.00	0.00	0.00
4,200.00	40.00	75.65	4,020.21	161.15	630.09	650.37	0.00	0.00	0.00	0.00
4,300.00	40.00	75.65	4,096.82	177.07	692.37	714.65	0.00	0.00	0.00	0.00
4,400.00	40.00	75.65	4,173.42	193.00	754.64	778.93	0.00	0.00	0.00	0.00
4,500.00	40.00	75.65	4,250.03	208.93	816.91	843.21	0.00	0.00	0.00	0.00
4,500.79	40.00	75.65	4,250.63	209.05	817.41	843.71	0.00	0.00	0.00	0.00

### Scientific Drilling

#### Planning Report



<b>Database:</b>	EDM 2003.16 Multi User DB	<b>Local Co-ordinate Reference:</b>	Well NBU 921-26B2S
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4969' & RKB 18' @ 4987.00ft
<b>Project:</b>	Uintah County, UT NAD27	<b>MD Reference:</b>	GL 4969' & RKB 18' @ 4987.00ft
<b>Site:</b>	NBU 921-26C Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-26B2S	<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)
4,600.00	37.02	75.65	4,328.25	224.36	877.25	905.48	3.00	-3.00	0.00
4,700.00	34.02	75.65	4,409.63	238.75	933.53	963.58	3.00	-3.00	0.00
4,800.00	31.02	75.65	4,493.94	252.07	985.62	1,017.34	3.00	-3.00	0.00
4,900.00	28.02	75.65	4,580.95	264.28	1,033.35	1,066.61	3.00	-3.00	0.00
5,000.00	25.02	75.65	4,670.41	275.34	1,076.61	1,111.26	3.00	-3.00	0.00
5,100.00	22.02	75.65	4,762.09	285.23	1,115.28	1,151.17	3.00	-3.00	0.00
5,196.05	19.14	75.65	4,852.00	293.60	1,147.99	1,184.94	3.00	-3.00	0.00
<b>Wasatch</b>									
5,200.00	19.02	75.65	4,855.73	293.92	1,149.24	1,186.23	3.00	-3.00	0.00
5,300.00	16.02	75.65	4,951.08	301.38	1,178.41	1,216.33	3.00	-3.00	0.00
5,400.00	13.02	75.65	5,047.87	307.59	1,202.70	1,241.41	3.00	-3.00	0.00
5,500.00	10.02	75.65	5,145.85	312.54	1,222.05	1,261.38	3.00	-3.00	0.00
5,600.00	7.02	75.65	5,244.73	316.21	1,236.41	1,276.20	3.00	-3.00	0.00
5,700.00	4.02	75.65	5,344.25	318.60	1,245.73	1,285.83	3.00	-3.00	0.00
5,800.00	1.02	75.65	5,444.15	319.69	1,250.00	1,290.23	3.00	-3.00	0.00
5,834.12	0.00	0.00	5,478.27	319.76	1,250.29	1,290.54	3.00	-3.00	0.00
5,900.00	0.00	0.00	5,544.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
6,000.00	0.00	0.00	5,644.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
6,100.00	0.00	0.00	5,744.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
6,200.00	0.00	0.00	5,844.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
6,300.00	0.00	0.00	5,944.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
6,400.00	0.00	0.00	6,044.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
6,500.00	0.00	0.00	6,144.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
6,600.00	0.00	0.00	6,244.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
6,700.00	0.00	0.00	6,344.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
6,800.00	0.00	0.00	6,444.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
6,900.00	0.00	0.00	6,544.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
7,000.00	0.00	0.00	6,644.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
7,100.00	0.00	0.00	6,744.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
7,200.00	0.00	0.00	6,844.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
7,300.00	0.00	0.00	6,944.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
7,400.00	0.00	0.00	7,044.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
7,500.00	0.00	0.00	7,144.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
7,600.00	0.00	0.00	7,244.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
7,700.00	0.00	0.00	7,344.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
7,800.00	0.00	0.00	7,444.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
7,900.00	0.00	0.00	7,544.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
8,000.00	0.00	0.00	7,644.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
8,013.86	0.00	0.00	7,658.00	319.76	1,250.29	1,290.54	0.00	0.00	0.00
<b>Mesaverde</b>									
8,100.00	0.00	0.00	7,744.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
8,200.00	0.00	0.00	7,844.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
8,300.00	0.00	0.00	7,944.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
8,400.00	0.00	0.00	8,044.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
8,500.00	0.00	0.00	8,144.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
8,600.00	0.00	0.00	8,244.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
8,700.00	0.00	0.00	8,344.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
8,800.00	0.00	0.00	8,444.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
8,900.00	0.00	0.00	8,544.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
9,000.00	0.00	0.00	8,644.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
9,100.00	0.00	0.00	8,744.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
9,200.00	0.00	0.00	8,844.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00
9,300.00	0.00	0.00	8,944.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00



**Scientific Drilling**  
Planning Report

<b>Database:</b>	EDM 2003.16 Multi User DB	<b>Local Co-ordinate Reference:</b>	Well NBU 921-26B2S
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4969' & RKB 18' @ 4987.00ft
<b>Project:</b>	Uintah County, UT NAD27	<b>MD Reference:</b>	GL 4969' & RKB 18' @ 4987.00ft
<b>Site:</b>	NBU 921-26C Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-26B2S	<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)	
9,400.00	0.00	0.00	9,044.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,144.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,244.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,344.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,444.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,544.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00	
10,000.00	0.00	0.00	9,644.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00	
10,100.00	0.00	0.00	9,744.14	319.76	1,250.29	1,290.54	0.00	0.00	0.00	
10,105.86	0.00	0.00	9,750.00	319.76	1,250.29	1,290.54	0.00	0.00	0.00	

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
NBU 921-26B2S PBHL - hit/miss target - Shape - plan hits target center - Circle (radius 25.00)	0.00	0.00	9,750.00	319.76	1,250.29	617,936.81	2,555,309.34	40° 0' 46.800 N	109° 31' 2.090 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,450.00	2,450.00	Surface Casing	9.625	13.500	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,575.00	1,575.00	Green River		0.00		
5,196.05	4,852.00	Wasatch		0.00		
8,013.86	7,658.00	Mesaverde		0.00		

**NBU 921-26B2S**

Pad: NBU 921-26C

Surface: 788' FNL, 1,685' FWL (NE/4NW/4)

BHL: 460' FNL 2,360' FEL (NW/4NE/4)

Sec. 26 T9S R21E

Uintah, Utah

Mineral Lease: UO 01194

**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	1,575'	
Birds Nest	1,860'	Water
Mahogany	2,357'	Water
Wasatch	4,852'	Gas
Mesaverde	7,658'	Gas
MVU2	8,627'	Gas
MVL1	9,206'	Gas
TVD	9,750'	
TD	10,106'	

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

*Please refer to the attached Drilling Program.*

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

*Please refer to the attached Drilling Program.*

5. **Drilling Fluids Program:**

*Please refer to the attached Drilling Program.*

6. **Evaluation Program:**

*Please refer to the attached Drilling Program.*

7. **Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 10,106' TD, approximately equals 6,191 psi (calculated at 0.61 psi/foot).

Maximum anticipated surface pressure equals approximately 3,828 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. Variations:**

*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.*

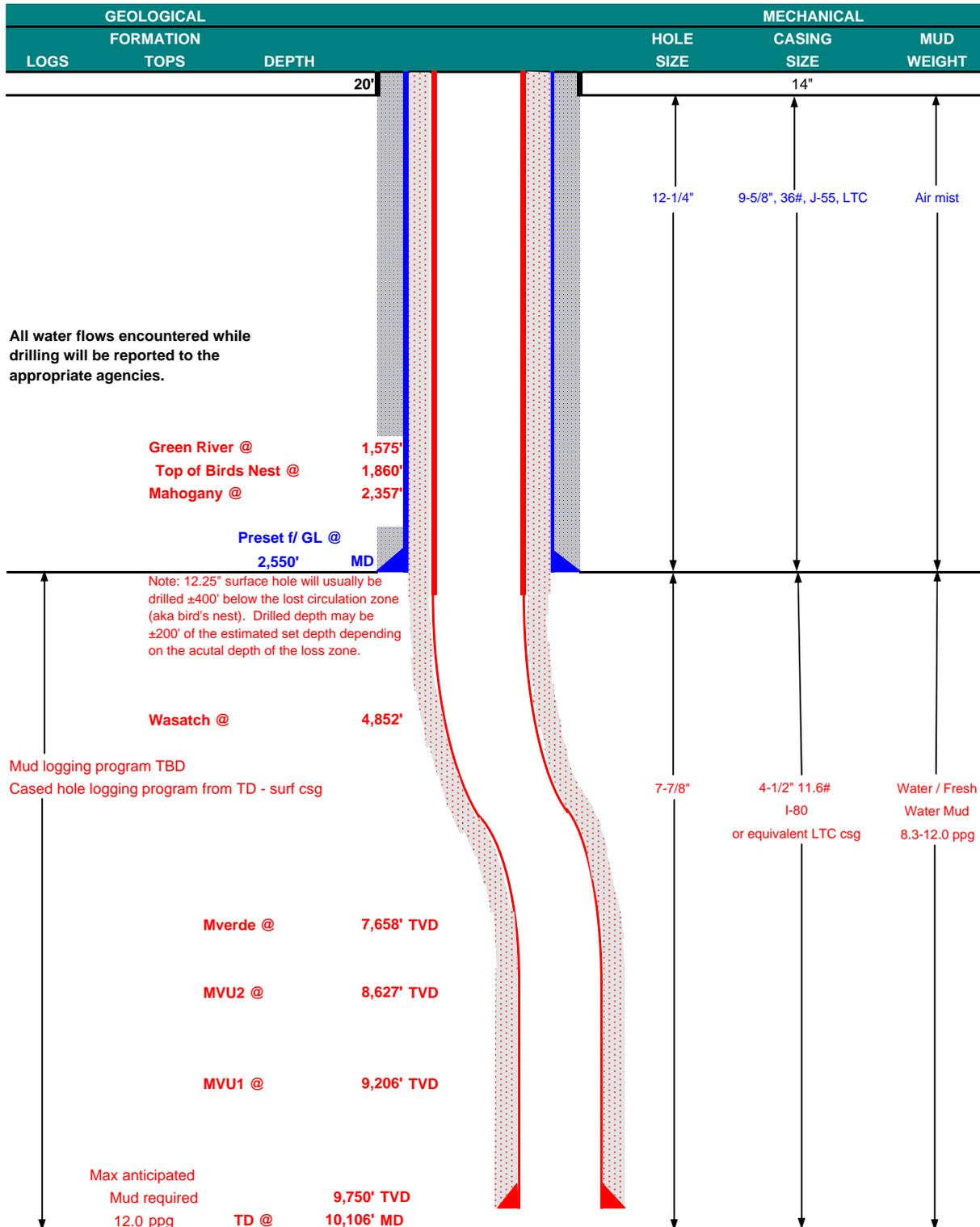
**10. Other Information:**

*Please refer to the attached Drilling Program.*



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

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	June 10, 2009			
WELL NAME	<b>NBU 921-26B2S</b>		TD	9,750'	TVD	10,106' MD	
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	ELEVATION	4,970' GL KB 4,985'
SURFACE LOCATION	NW/4 NE/4	788' FNL	1,685' FEL	Sec 26	T 9S	R 21E	
	Latitude:	40.012122	Longitude:	-109.521711		NAD 27	
BTM HOLE LOCATION	NW/4 NE/4	460' FNL	2,360' FEL	Sec 26	T 9S	R 21E	
	Latitude:	40.013000	Longitude:	-109.517247		NAD 27	
OBJECTIVE ZONE(S)	Wasatch/Mesaverde						
ADDITIONAL INFO	Regulatory Agencies: SITLA (Minerals), UDOGM (Surface), Tri-County Health Dept.						





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

**CASING PROGRAM**

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3,520	2,020	453,000
SURFACE	9-5/8"	0 to 2,550	36.00	J-55	LTC	0.86	1.69	6.28
PRODUCTION	4-1/2"	0 to 10,106	11.60	I-80	LTC	1.98	1.04	1.96

- 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 3,828 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 6,191 psi**

**CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	215	60%	15.60	1.18
<b>Option 1</b>	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele Premium cmt + 2% CaCl	380	0%	15.60	1.18
SURFACE		<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>					
<b>Option 2</b>	LEAD	2,050'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	480	35%	12.60	1.81
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	35%	15.60	1.18
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	4,346'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	410	40%	11.00	3.38
	TAIL	5,760'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,410	40%	14.30	1.31

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

**FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

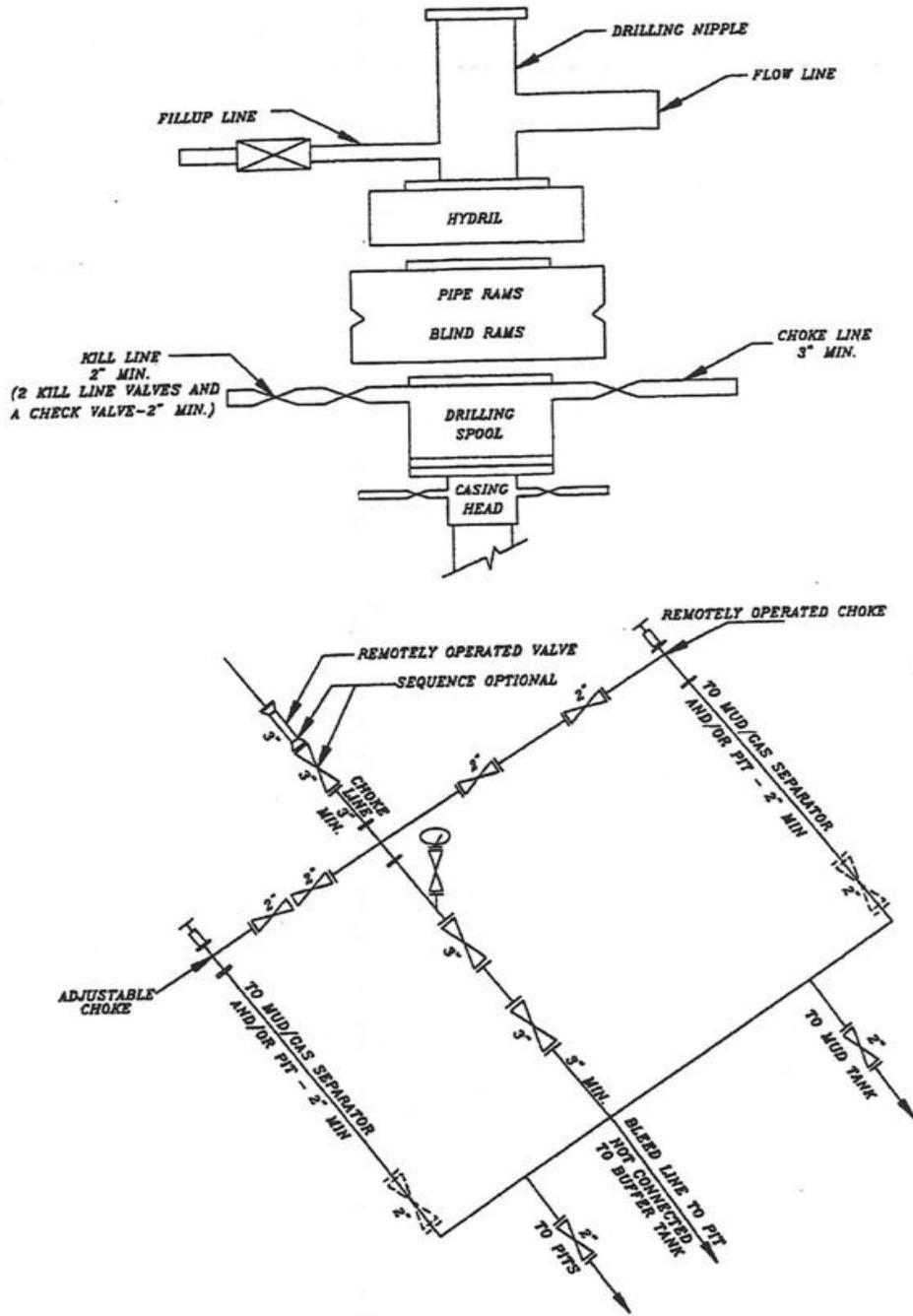
**ADDITIONAL INFORMATION**

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:** \_\_\_\_\_ **DATE:** \_\_\_\_\_  
 John Huycke / Emile Goodwin

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

### EXHIBIT A NBU 921-26B2S



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



### Kerr-McGee Oil & Gas Onshore LP

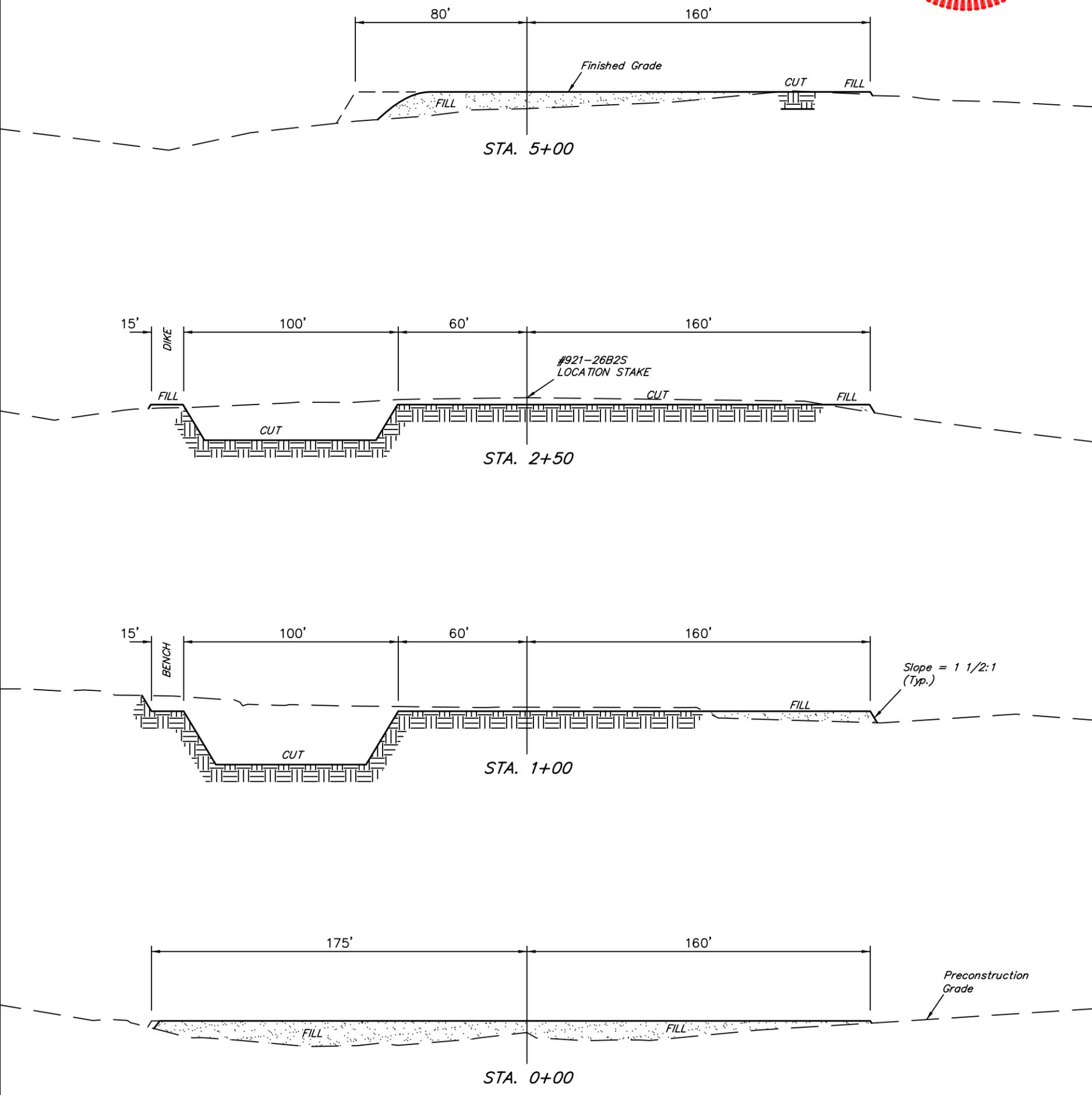
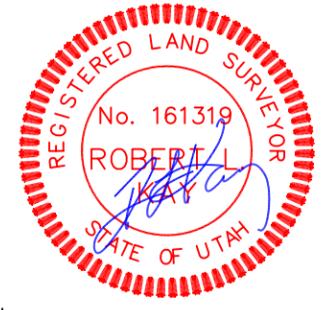
FIGURE #2

#### TYPICAL CROSS SECTIONS FOR

NBU #921-26B2S, #921-26B3S, #921-26D1BS & #921-26D1CS  
SECTION 26, T9S, R21E, S.L.B.&M.  
NE 1/4 NW 1/4

1" = 20'  
X-Section Scale  
1" = 50'

DATE: 11-01-08  
Drawn By: D.P.



**APPROXIMATE ACREAGES**

NEW CONSTRUCTION WELL SITE DISTURBANCE	= ± 1.816 ACRES
EXISTING WELL SITE DISTURBANCE	= ± 3.105 ACRES
ACCESS ROAD DISTURBANCE	= ± 0.126 ACRES
PIPELINE DISTURBANCE	= ± 0.018 ACRES
<b>TOTAL</b>	<b>= ± 5.065 ACRES</b>

**NOTE:**

Topsoil should not be Stripped Below Finished Grade on Substructure Area.

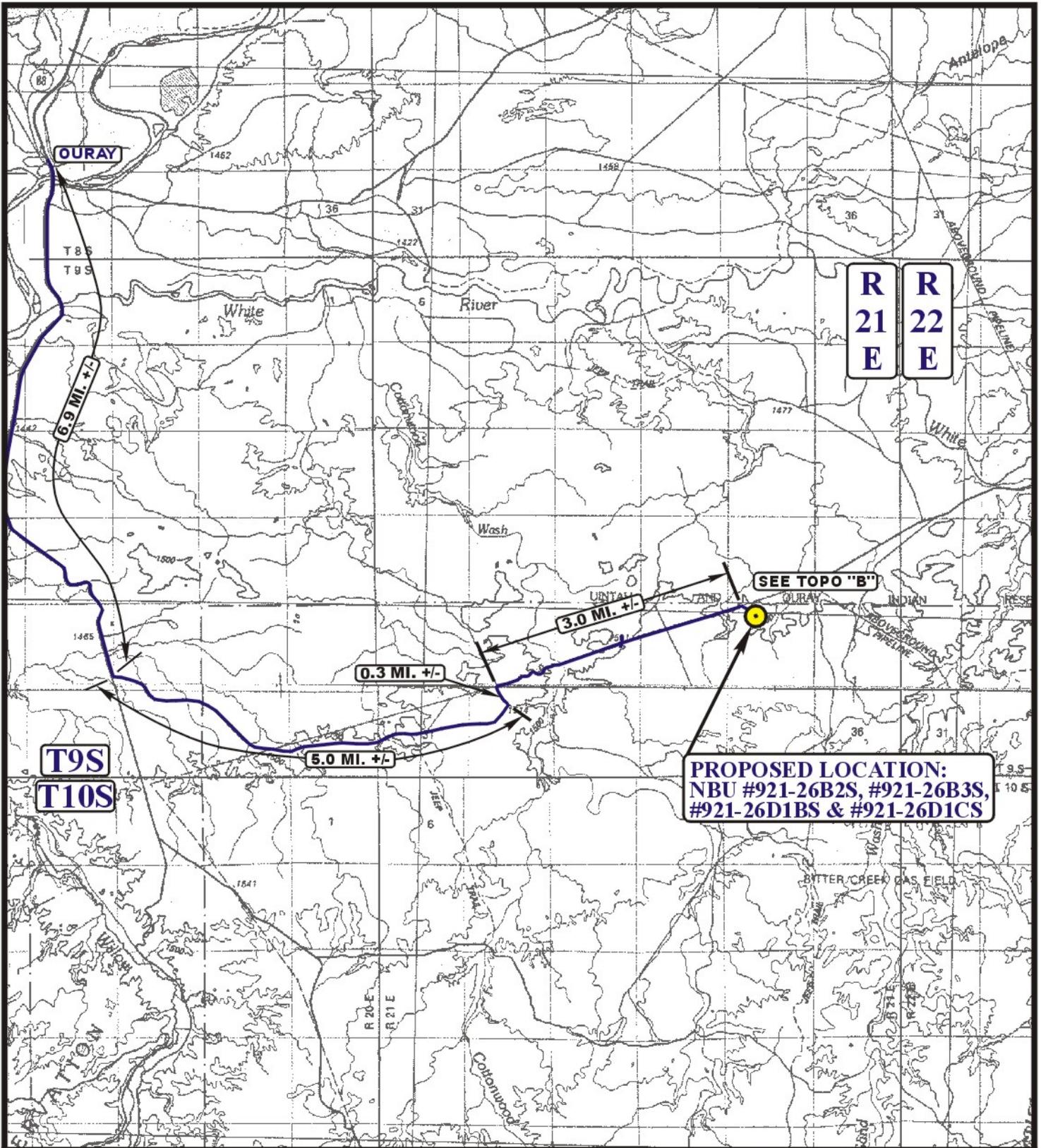
**\* NOTE:**

FILL QUANTITY INCLUDES 5% FOR COMPACTION

**APPROXIMATE YARDAGES**

(6") Topsoil Stripping	= 2,900 Cu. Yds.
Remaining Location	= 8,100 Cu. Yds.
<b>TOTAL CUT</b>	<b>= 11,000 CU.YDS.</b>
<b>FILL</b>	<b>= 4,550 CU.YDS.</b>

EXCESS MATERIAL	= 6,450 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	= 6,450 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	= 0 Cu. Yds.



R	R
21	22
E	E

**SEE TOPO "B"**

**PROPOSED LOCATION:  
NBU #921-26B2S, #921-26B3S,  
#921-26D1BS & #921-26D1CS**

**LEGEND:**

PROPOSED LOCATION

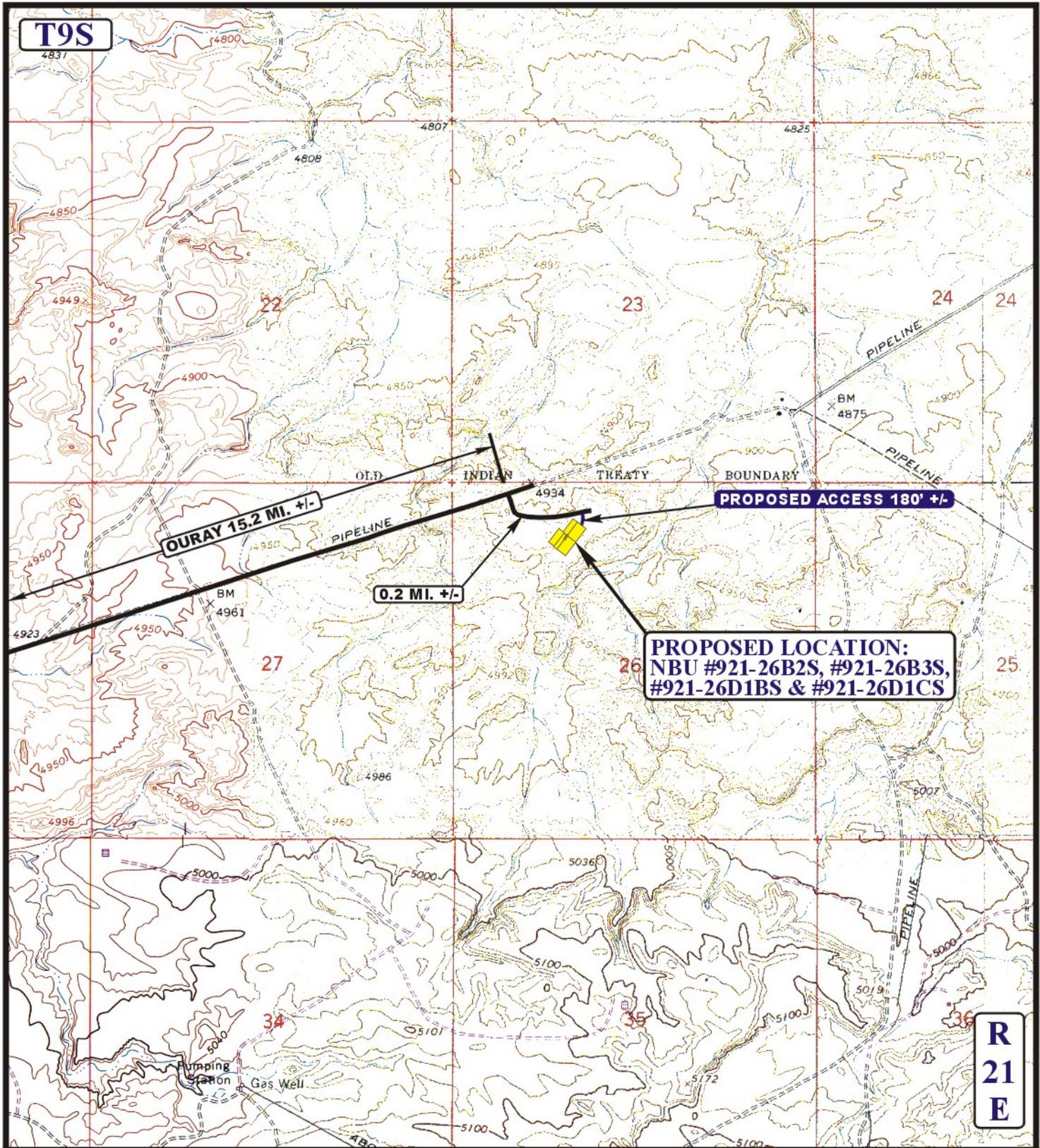


**Kerr-McGee Oil & Gas Onshore LP**

**NBU #921-26B2S, #921-26B3S,  
#921-26D1BS & #921-26D1CS  
SECTION 26, T9S, R21E, S.L.B.&M.  
NE 1/4 NW 1/4**

	<b>Utah Engineering &amp; Land Surveying</b>
	85 South 200 East Vernal, Utah 84078 (435) 789-1017 * FAX (435) 789-1813

<b>TOPOGRAPHIC</b>	<b>11</b>	<b>04</b>	<b>08</b>	
<b>MAP</b>	MONTH	DAY	YEAR	
SCALE: 1:100,000	DRAWN BY: D.P.		REVISED: 00-00-00	



**LEGEND:**

- EXISTING ROAD
- PROPOSED ACCESS ROAD

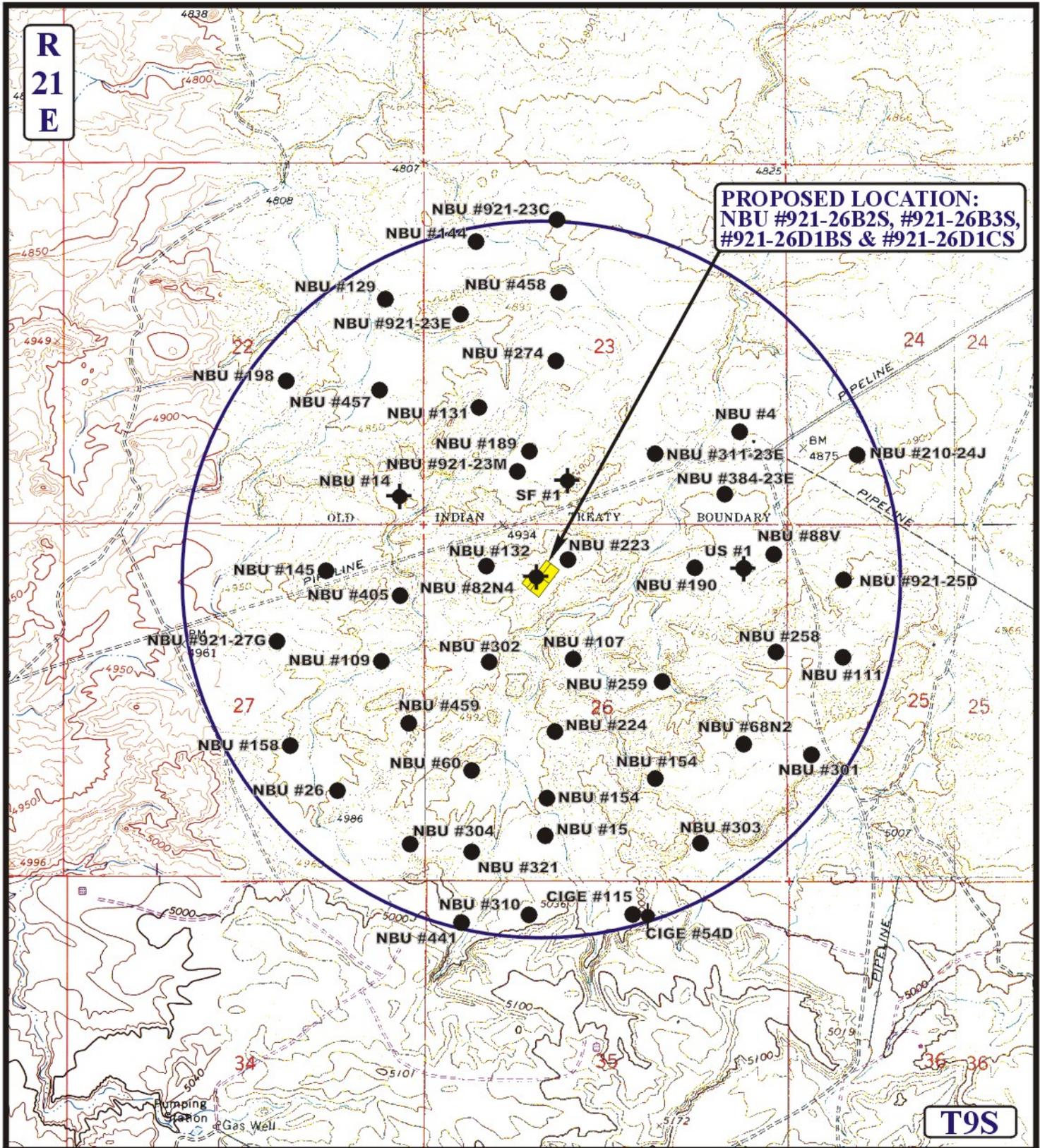
**Kerr-McGee Oil & Gas Onshore LP**

**NBU #921-26B2S, #921-26B3S,  
#921-26D1BS & #921-26D1CS  
SECTION 26, T9S, R21E, S.L.B.&M.  
NE 1/4 NW 1/4**

**U&L S** Utah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813



**TOPOGRAPHIC MAP** **11 04 08**  
MONTH DAY YEAR  
SCALE: 1" = 2000' DRAWN BY: D.P. REVISED: 00-00-00 **B TOPO**



**LEGEND:**

- ⊗ DISPOSAL WELLS
- PRODUCING WELLS
- ⬮ SHUT IN WELLS
- ⊗ WATER WELLS
- ⬮ ABANDONED WELLS
- ⬮ TEMPORARILY ABANDONED

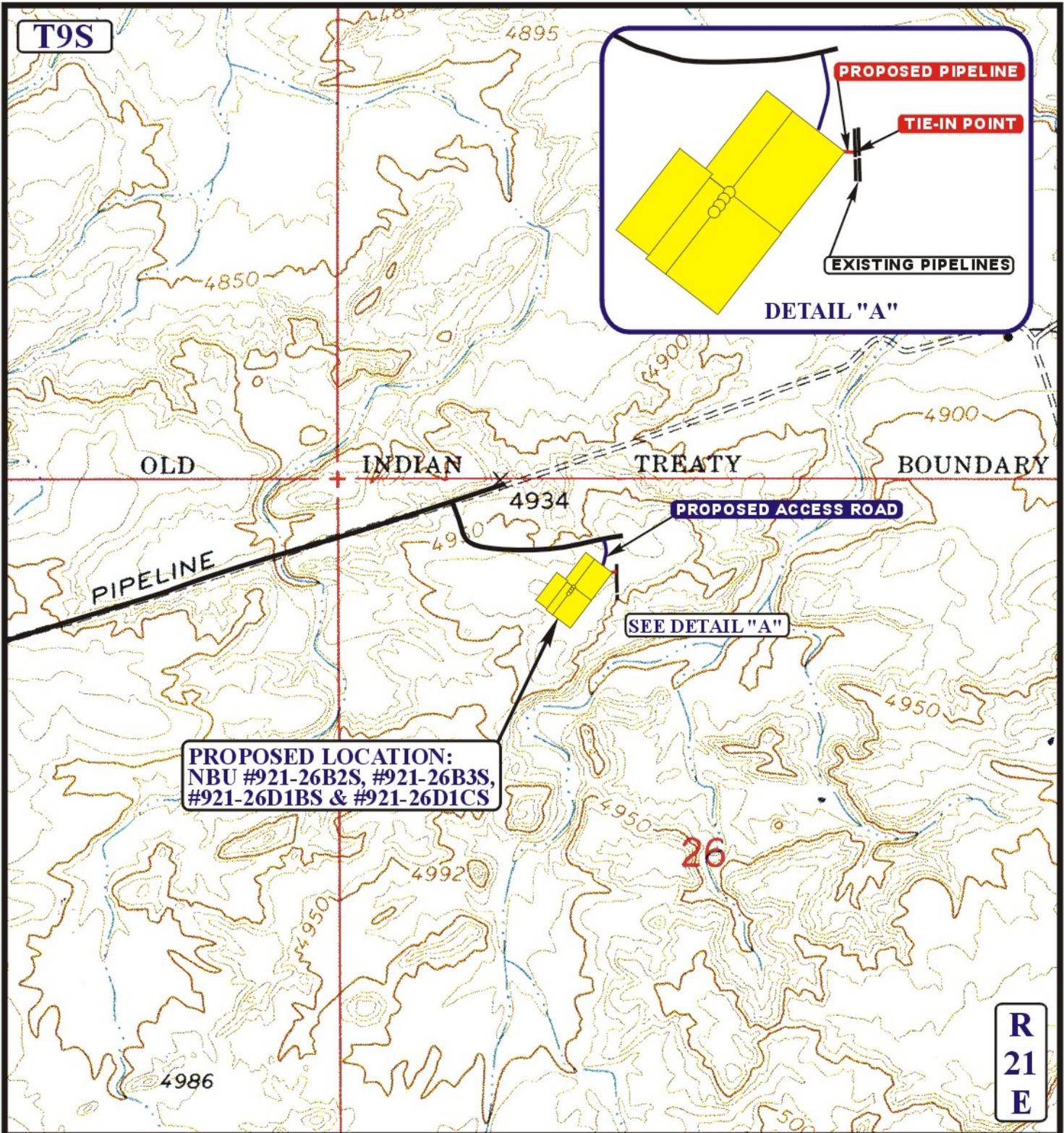
**Kerr-McGee Oil & Gas Onshore LP**

**NBU #921-26B2S, #921-26B3S,  
#921-26D1BS & #921-26D1CS  
SECTION 26, T9S, R21E, S.L.B.&M.  
NE 1/4 NW 1/4**

**U&L S** Utah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813



**TOPOGRAPHIC MAP** **11 04 08**  
MONTH DAY YEAR  
SCALE: 1" = 2000' DRAWN BY: D.P. REVISED: 00-00-00 **C TOPO**



**APPROXIMATE TOTAL PIPELINE DISTANCE = 26' +/-**

**LEGEND:**

-  PROPOSED ACCESS ROAD
-  EXISTING PIPELINE
-  PROPOSED PIPELINE



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

NBU #921-26B2S, #921-26B3S,  
 #921-26D1BS & #921-26D1CS  
 SECTION 26, T9S, R21E, S.L.B.&M.  
 NE 1/4 NW 1/4

**UES** Utah Engineering & Land Surveying  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC MAP** 11 04 08  
 MONTH DAY YEAR  
 SCALE: 1" = 1000' DRAWN BY: D.P. REVISED: 00-00-00 **D TOPO**

**Kerr-McGee Oil & Gas Onshore LP**  
**NBU #921-26B2S, #921-26B3S, #921-26D1BS &**  
**#921-26D1CS**  
**SECTION 26, T9S, R21E, S.L.B.&M.**

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 14.0 MILES TO THE JUNCTION OF STATE HIGHWAY 88; EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.0 MILES TO OURAY, UTAH; PROCEED IN A SOUTHERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 6.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN LEFT AND PROCEED IN A SOUTHEASTERLY, THEN EASTERLY, THEN NORTHEASTERLY DIRECTION APPROXIMATELY 5.0 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHWEST; TURN LEFT AND PROCEED IN A NORTHWESTERLY DIRECTION APPROXIMATELY 0.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN RIGHT AND PROCEED IN A NORTHEASTERLY DIRECTION APPROXIMATELY 3.0 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN RIGHT AND PROCEED IN SOUTHEASTERLY, THEN EASTERLY DIRECTION APPROXIMATELY 0.2 MILES TO THE BEGINNING OF THE PROPOSED ACCESS ROAD TO THE SOUTH; FOLLOW ROAD FLAGS IN A SOUTHERLY DIRECTION APPROXIMATELY 180' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 46.4 MILES.

# Kerr-McGee Oil & Gas Onshore LP

NBU #921-26B2S, #921-26B3S, #921-26D1BS & #921-26D1CS  
LOCATED IN UINTAH COUNTY, UTAH  
SECTION 26, T9S, R21E, S.L.B.&M.

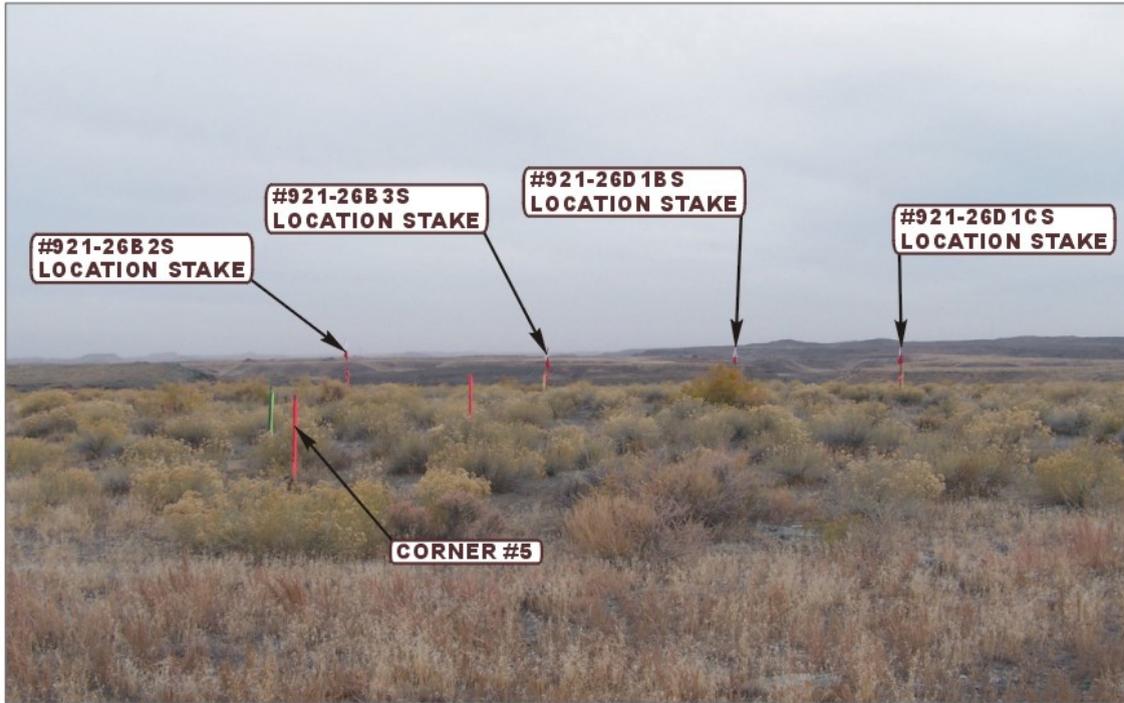


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: SOUTHEASTERLY



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: SOUTHERLY



**UELS** Uintah Engineering & Land Surveying  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813

- Since 1964 -

LOCATION PHOTOS	11	04	08	PHOTO
	MONTH	DAY	YEAR	
TAKEN BY: D.K.	DRAWN BY: D.P.		REVISED: 00-00-00	

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

**NBU 921-26B2S**

Surface: 788' FNL, 1,685' FWL (NE/4NW/4)  
BHL: 460' FNL 2,360' FEL (NW/4NE/4)

**NBU 921-26B3S**

Surface: 804' FNL, 1,673' FWL (NE/4NW/4)  
BHL: 950' FNL 2,360' FEL (NW/4NE/4)

**NBU 921-26D1BS**

Surface: 820' FNL, 1,661' FWL (NE/4NW/4)  
BHL: 110' FNL 980' FWL (NW/4NW/4)

**NBU 921-26D1CS**

Surface: 836' FNL, 1,648' FWL (NE/4NW/4)  
BHL: 600' FNL 980' FWL (NW/4NW/4)

Section 26 Township 9 South Range 21 East  
Pad: NBU 921-26C  
Uintah, Utah  
Surface: State  
Minerals: State – UO 01194

**ONSHORE ORDER NO. 1**

***MULTI-POINT SURFACE USE & OPERATIONS PLAN***

**Directional Drilling:**

In accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, this well will be directionally drilled in order to access portions of our lease which are otherwise inaccessible due to topography.

**1. Existing Roads:**

Refer to Topo Map A for directions to the location.

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

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

All existing roads will be maintained and kept in good repair during all drilling and completion operations associated with this well.

**2. Planned Access Roads:**

Approximately  $\pm 0.03$  mi. ( $\pm 180'$ ) of new access road is proposed. Please refer to the attached Topo Map B.

The upgraded and new portions of the access road will be crowned and ditched with a running surface of 18 feet and a maximum disturbed width of 30 feet. Appropriate water control will be installed to control erosion.

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

The access road was centerline flagged during time of staking.

Surfacing material may be necessary, depending upon weather conditions.

Surface disturbance and vehicular traffic will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.

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

Please refer to Topo Map C.

**4. Location of Existing & Proposed Facilities:**

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

All production facilities will be located on the disturbed portion of the well pad and at a minimum of 25 feet from the toe of the back slope or the top of the fill slope.

A dike will be constructed completely around those production facilities which contain fluids (i.e., production tanks, produced water tanks, and/or heater/treater). These dikes will be constructed of compacted subsoil, be impervious, hold 100% of the capacity of the largest tank, and be independent of the back cut.

All permanent (on-site six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earthtone color to match one of the standard environmental colors, as determined by the five state Rocky Mountain Inter-Agency Committee.

All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The required color is Shadow Gray, a non-reflective earthtone.

Any necessary pits will be properly fenced to protect livestock and prevent wildlife entry.

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

Water for drilling purposes will be obtained from Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim #43-8496, Application #53617.

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.

**6. Source of Construction Materials:**

Surface and subsoil materials in the immediate area will be utilized.

Any gravel will be obtained from a commercial source.

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

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids, including salts and chemicals, will be contained in the reserve pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be removed and disposed of at an approved waste disposal facility within 120 days after drilling is terminated.

The reserve pit will be constructed on the location and will not be located within natural drainage, where a flood hazard exists or surface runoff will destroy or damage the pit walls. The reserve pit will be constructed so that it will not leak, break, or allow discharge of liquids.

A plastic reinforced liner and felt will be used; it will be a minimum of 20 mil thick, with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the liner will be disposed of in the pit. Any spills of oil, gas, salt water, or other noxious fluids will be immediately cleaned up and removed to an approved disposal site.

A chemical porta-toilet will be furnished with the drilling rig.

Garbage, trash, and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. No trash will be burned on location.

All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig.

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

**Kerr-McGee Oil & Gas Onshore LP**  
NBU 921-26B2S/ 26B3S/ 26D1BS/ 26D1CS

Page 4  
Surface Use and Operations Plan

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling of this well.

Any produced water from the proposed well will be contained in a water tank and will then be hauled By truck to one of the pre-approved disposal sites: RNI in Sec. 5 T9S R22E, NBU #159 in Sec. 35 T9S R21E, Ace Oilfield in Sec. 2 T6S R20E, MC&MC in Sec. 12 T6S R19E, Pipeline Facility in Sec. 36 T9S R20E, Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E, Bonanza Evaporation Pond in Sec. 2 T10S R23E.

**8. Ancillary Facilities:**

None are anticipated.

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

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills, and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

The reserve pit will be lined, and when the reserve pit is closed, the pit liner will be buried below plow depth.

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

39 inch net wire will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.

The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.

Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

The reserve pit fencing will be on three sides during drilling operations, and on the fourth side when the rig moves off location. Pits will be fenced and maintained until cleanup.

Location size may change prior to the drilling of the well due to current rig availability. If the proposed location is not large enough to accommodate the drilling rig the location will be re-surveyed and a Form 9 shall be submitted.

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

*Producing Location:*

Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, materials, trash, and debris not required for production.

Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1.

A plastic, nylon reinforced liner will be used, it shall be torn and perforated before backfilling of the reserve pit.

Before any dirt work associated with location restoration takes place, the reserve pit shall be as dry as possible. All debris in it will be removed. Other waste and spoil materials will be disposed of immediately upon completion of operations.

The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours. The reserve pit will be reclaimed within 90 days from the date of well completion, weather permitting.

To prevent surface water(s) from standing (ponding) on the reclaimed reserve pit area, final reclamation of the reserve pit will consist of "mounding" the surface three feet above surrounding ground surface to allow the reclaimed pit area to drain effectively.

Upon completion of backfilling, leveling, and recontouring, the stockpiled topsoil will be spread evenly over the reclaimed area(s).

*Dry Hole/Abandoned Location:*

Abandoned well sites, roads, and other disturbed areas will be restored as near as practical to their original condition. Where applicable, these conditions include the re-establishment of irrigation systems, the re-establishment of appropriate soil conditions, and re-establishment of vegetation as specified.

All disturbed surfaces will be recontoured to the approximate natural contours, with reclamation of the well pad and access road to be performed as soon as practical after final abandonment. Reseeding operations will be performed after completion of other reclamation operations.

**Kerr-McGee Oil & Gas Onshore LP**  
NBU 921-26B2S/ 26B3S/ 26D1BS/ 26D1CS

Page 6  
Surface Use and Operations Plan

**11. Surface/Mineral Ownership:**

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

**12. Other Information:**

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, the approved Plan of Operations, and any applicable Notice of Lessees. The Operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

The Operator will control noxious weeds along Rights-Of-Way for roads, pipelines, well sites, or other applicable facilities.

A Class III archaeological survey report and paleontological survey report is attached.

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

Kathy Schneebeck Dulnoan  
Staff Regulatory Analyst  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6226

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

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

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

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

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by State Surety Bond 22013542.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

  
Kathy Schneebeck Dulnoan

April 8, 2009  
Date



# Kerr-McGee Oil & Gas Onshore LP

1099 18th Street, Suite 1800  
Denver, CO 80202-1918  
P.O. Box 173779  
Denver, CO 80217-3779  
720-929-6000

April 6, 2009

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 921-26B2S  
T9S-R21E  
Section 26: NENW (Surf), NWNE (Bottom)  
Surface: 788' FNL, 1685; FWL  
Bottom Hole: 460' FNL, 2360' FEL  
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 921-26B2S 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**

  
Lynn Padgett  
Staff Landman

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS  
ONSHORE LP'S 25 PROPOSED WELL LOCATIONS  
IN T9S, R21E SECS. 10, 13, 25, 26, 27, 29 AND 33  
UINTAH COUNTY, UTAH

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS  
ONSHORE LP'S 25 PROPOSED WELL LOCATIONS  
IN T9S, R21E SECS. 10, 13, 25, 26, 27, 29 AND 33  
UINTAH COUNTY, UTAH

By:

Jacki A. Montgomery

Prepared For:

Ute Tribal Land  
Uintah and Ouray Agency

Bureau of Land Management  
Vernal Field Office

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. 08-320

November 26, 2008

United States Department of Interior (FLPMA)  
Permit No. 08-UT-60122

Public Lands Policy Coordination Office  
Archaeological Survey Permit No. 117

Ute Tribal Permit No. A08-363

'APIWellNo:43047503650000'

## INTRODUCTION

A Class I literature review was completed by Montgomery Archaeological Consultants, Inc. (MOAC) in November 2008 of Kerr-McGee Onshore's 25 proposed well locations in Township 9S, Range 21E. The project area is situated south of the White River and southeast of Ouray, Uintah County, Utah. The wells are designated NBU 921-10E3S, NBU 921-10F2S, NBU 921-10F3T, NBU 921-10G4S, NBU 921-13B2S, NBU 921-13CT, NBU 921-13D4S, NBU 921-13G2S, NBU 921-25F4S, NBU 921-25G4S, NBU 921-25I4BS, NBU 921-25I1CS, NBU 921-25J1S, NBU 921-25K1S, NBU 921-26B2S, NBU 921-26B3S, NBU 921-26D1BS, NBU 921-26D1CS, NBU 921-26M2AS, NBU 921-26M4AS, NBU 921-26N2AS, NBU 921-26N2DS, State 921-27E1D, Federal 921-2901D, and NBU 921-33K. This document was implemented at the request of Ms. Raleen White, Kerr-McGee Onshore LP, Denver, Colorado.

The purpose of this Class I review is to identify, classify, and evaluate the previously conducted cultural resource inventories and archaeological sites in the project area in order to comply with Section 106 of 36 CFR 800, the National Historic Preservation Act of 1966 (as amended). Also, the inventory was implemented to attain compliance with a number of federal and state mandates, including the National Environmental Policy Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979, the American Indian Religious Freedom Act of 1978, and the Utah State Antiquities Act of 1973 (amended 1990).

The project area in which Kerr-McGee Onshore's 25 proposed well locations occur was previously inventoried by MOAC in 2007 for the Class III inventory of Township 9 South, Range 21 East (Montgomery and Roberts 2007; U-07-MQ-U-07-MQ-1437). A file search was completed by consulting MOAC's Class I existing data review of 459 square miles (293,805 acres) covering the Greater NBU study area between Bonanza and Ouray in Uintah County, northeastern Utah (Patterson et al. 2008). Kerr-McGee Oil & Gas Onshore LP proposes to explore and develop oil and natural gas resources throughout the area. Record searches were performed for this Class I project by Marty Thomas at the Utah State Historic Preservation Office (SHPO) on various dates between June 14, 2006 and January 27, 2007. The results of this Class I data review and Class III inventory indicated that two previously recorded prehistoric sites (42Un1056 and 42Un1857) occur in or near to the current project area.

## DESCRIPTION OF THE PROJECT AREA

The project area is situated south of the White River and on both sides of Cottonwood Wash in the Uinta Basin. The legal description is Township 9S, Range 21E, Sections 10, 13, 25, 26, 27, 29 and 33 (Figures 1 and 2, Table 1). Land status is public land administered by the Bureau of Land Management (BLM) Vernal Field Office, Ute Tribal land (Uintah and Ouray Agency), and School and Institutional Trust Lands Administration (SITLA) property.

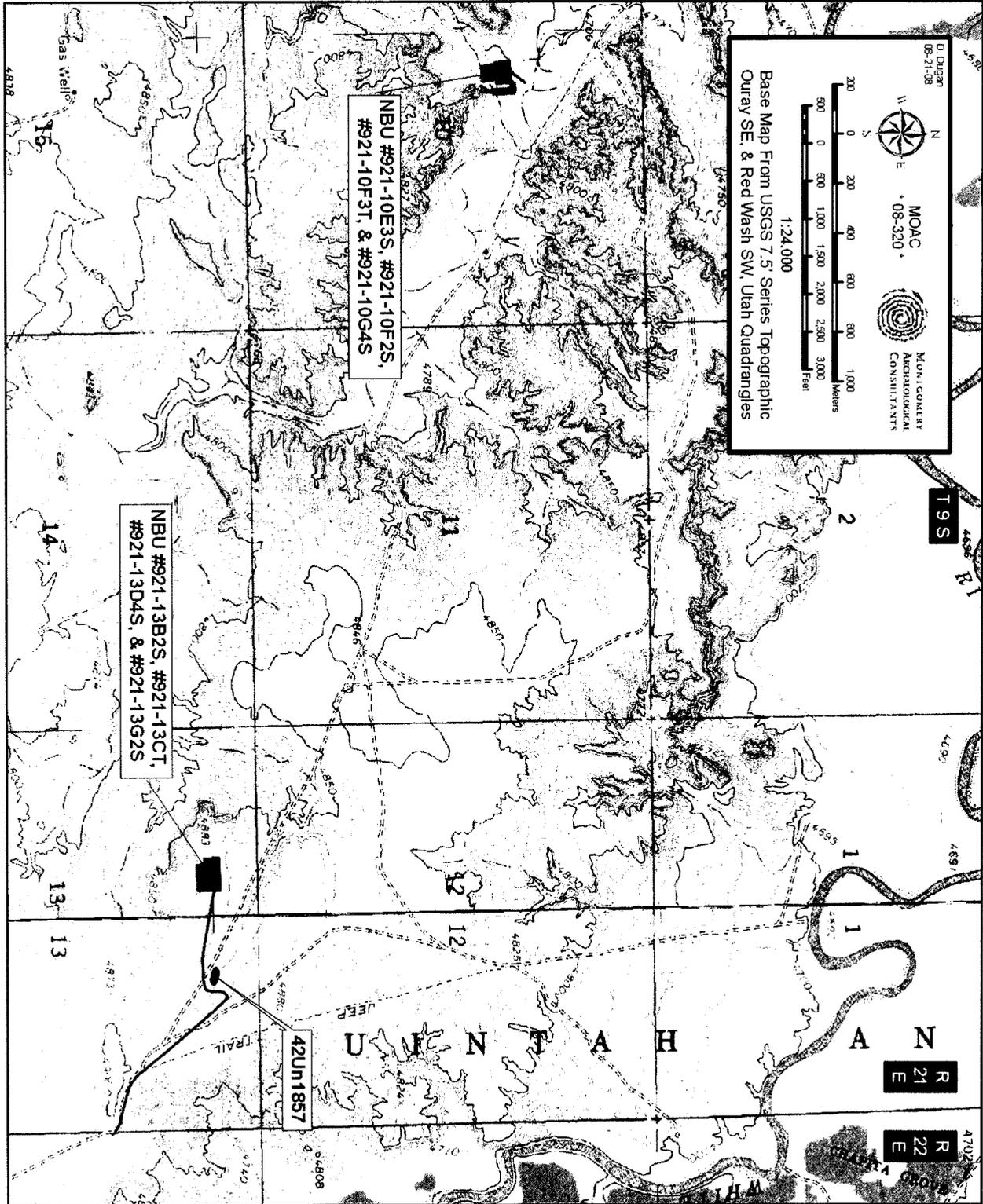


Figure 1. Location of Kerr-McGee Onshore's Proposed Well Pads.

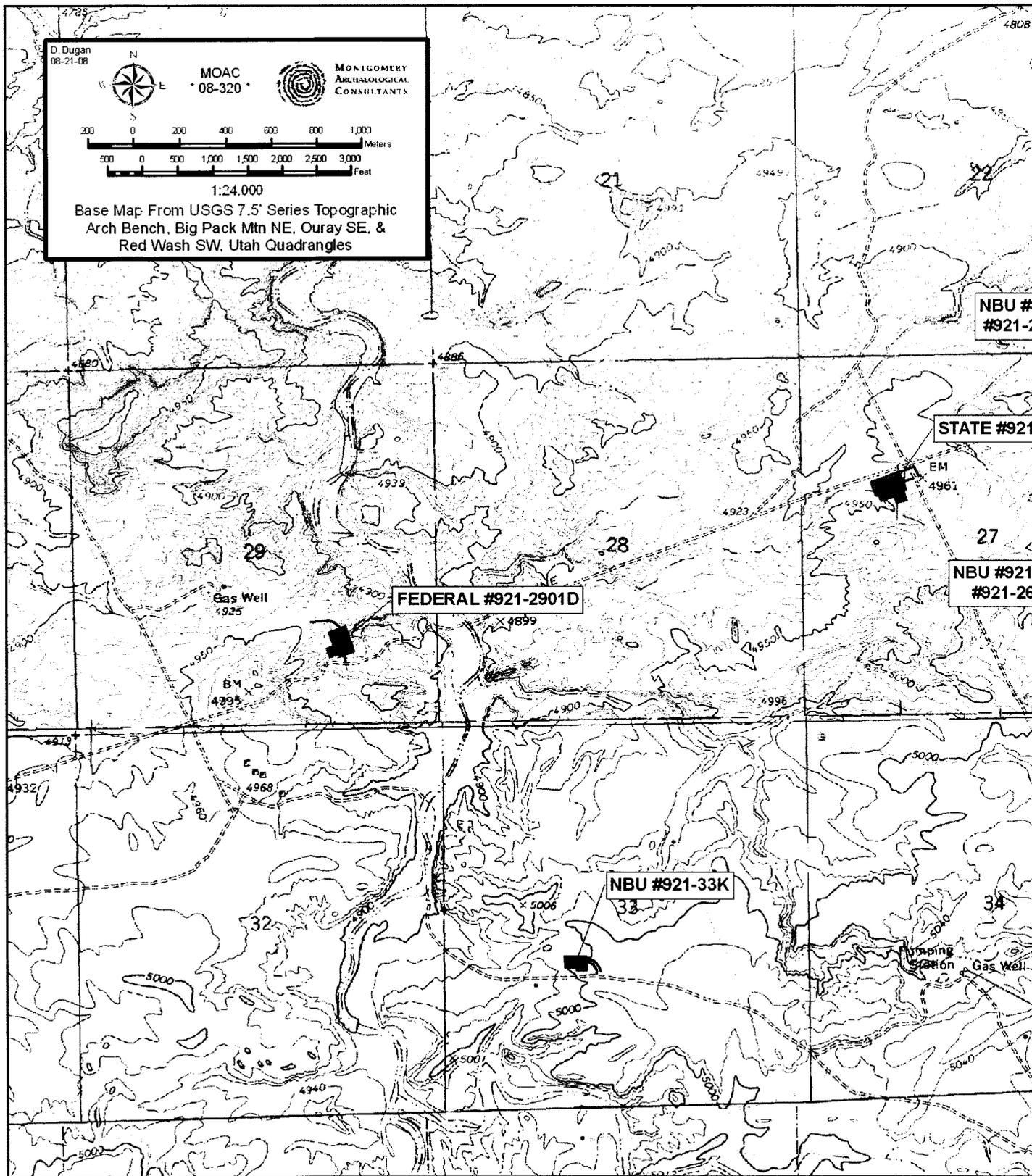


Figure 2. Location of Kerr-McGee Onshore's Proposed Well Pads.

Table 1. Kerr-McGee Onshore's 25 NBU Well Locations.

Well Designation	Legal Description Land Status	Access/Pipeline Corridor	Cultural Resources
NBU 921-10E3S, 921-10F2S 921-10F3T, 921-10G4S	T9S, R21E, Sec. 10 SE/NW (Tribal)	Access: 300 ft Pipeline: 550 ft	None
NBU 921-13B2S, 921-13CT 921-13D4S, 921-13G2S	T9S, R21E, Sec. 13 NE/NW (Tribal)	Pipeline: 4100 ft	42Un1857
NBU 921-25F4S, 921-25G4S 921-25I4BS, 921-25I1CS, 921- 25J1S, 921-25K1S	T9S, R21E, Sec. 25 NW/SE (SITLA)	Access: 300 ft Pipeline: 2000 ft	None
NBU 921-26B2S, 921-26B3S 921-26D1BS, 921-26D1CS	T9S, R21E, Sec. 26 NE/NW (SITLA)	Access: 150 ft Pipeline: 75 ft	42Un1056
NBU 921-26M2AS, 921-26M4AS 921-26N2AS, 921-26N2DS	T9S, R21E, Sec. 26 SE/SW (SITLA)	Access: 150 ft Pipeline: 100 ft	None
STATE 921-27E1D	T9S, R21E, Sec. 27 SW/NW and SE/NW (SITLA)	Access: 100 ft Pipeline: 700 ft	None
FEDERAL 921-2901D	T9S, R21E, Sec. 29 CT/SE (BLM)	Access: 500 ft Pipeline: 100 ft	None
NBU 921-33K	T9S, R21E, Sec. 33 NE/SW (SITLA)	Pipeline: 150 ft Access: 150 ft	None

The study area lies within the Uinta Basin physiographic unit, a distinctly bowl-shaped geologic structure (Stokes 1986:231). The Uinta Basin ecosystem is within the Green River drainage, considered to be the northernmost extension of the Colorado Plateau. The geology is comprised of Tertiary age deposits, which include Paleocene age deposits and Eocene age fluvial and lacustrine sedimentary rocks. The Uinta Formation, which is predominate in the project area, occurs as eroded outcrops (formed by fluvial deposited, stream laid interbedded sandstone and mudstone), and is known for its prolific paleontological localities. Specifically, the inventory area is situated south of the White River and on both sides of Cottonwood Wash. Elevation ranges from 4680 to 5000 ft asl. The project occurs within the Upper Sonoran Desert Shrub Association which includes sagebrush, shadscale, greasewood, mat saltbush, snakeweed, rabbitbrush, and prickly pear cactus. Modern disturbances include livestock grazing, roads, and oil/gas development.

#### CLASS I RESULTS AND RECOMMENDATIONS

The Class I literature review of Kerr-McGee Onshore's 25 proposed well locations and associated pipeline corridors in Township 9S, Range 21E resulted in the location of two previously documented prehistoric sites (42Un1056 and 42Un1857) which are evaluated not eligible to the NRHP. Site 42Un1857 is situated on Ute Tribal land and will not be disturbed by the undertaking. Based on the findings, a determination of "no historic properties affected" is recommended for the undertaking pursuant to Section 106, CFR 800.

11/24/08  
08-320

## REFERENCES CITED

- Montgomery, J. A., and C. G. Roberts  
2007 Cultural Resource Management Report for Kerr-McGee Oil and Gas Onshore LP's Greater NBU Blocks in Township 9 South, Range 21 East, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-07-MQ-1437.
- Patterson, J. J., J. Fritz, K. Lower-Eskelson, R. Stash and A. Thomas  
2008 NBU Class I Existing Data Review for Kerr-McGee Oil & Gas Onshore LP, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah.
- Stokes, W. L.  
1986 *Geology of Utah*. Utah Museum of Natural History and Utah Geological and Mineral Survey, Salt Lake City.

**IPC #08-316**

## **Paleontological Reconnaissance Survey Report**

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**Survey of Kerr McGee's Proposed Multi-Well Pads, Access Roads,  
Pipelines & Pipeline Upgrade for "NBU #921-26B2S, B3S, D1BS  
& D1CS" (Sec. 26, T 9 S, R 21 E) & "NBU #922-34D3BS,  
D2CS & C3BS" (Sec. 33 & 34, T 9 S, R 22 E) &  
(Sec. 4, T 10 S, R 22 E)**

Archy Bench & Ouray SE  
Topographic Quadrangle  
Uintah County, Utah

December 3, 2008

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

## INTRODUCTION

At the request of Raleen White of Kerr McGee Onshore LP and authorized by the BLM Vernal Field Office and James Kirkland of the Office of the State Paleontologist, a paleontological reconnaissance survey of Kerr McGee's proposed multi-well pads, access roads, pipelines & pipeline upgrade for "NBU #921-26B2S, B3S, D1BS & D1CS" (Sec. 26, T 9 S, R 21 E) & "NBU #922-34D3BS, D2CS & C3BS" (Sec. 33 & 34, T 9 S, R 22 E) & (Sec. 4, T 10 S, R 22 E) was conducted by Simon Masters on November 6, 2008. The reconnaissance survey was conducted under the Utah BLM Paleontological Resources Use Permit #UT08-006C and Utah Paleontological Investigations Permit #07-356. This survey to locate, identify and evaluate paleontological resources was done to meet requirements of the National Environmental Policy Act of 1969 and other State and Federal laws and regulations that protect paleontological resources.

## FEDERAL AND STATE REQUIREMENTS

As mandated by the Federal and State government, paleontologically sensitive geologic formations on State lands that are considered for exchange or may be impacted due to ground disturbance require paleontological evaluation. This requirement complies with:

- 1) The National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321.et. Seq., P.L. 91-190);
- 2) The Federal Land Policy and Management Act (FLPMA) of 1976 (90 Stat. 2743, 43 U.S.C. § 1701-1785, et. Seq., P.L. 94-579);
- 3) The National Historic Preservation Act. 16 U.S.C. § 470-1, P.L. 102-575 in conjunction with 42 U.S.C. § 5320; and
- 4) The Utah Geological Survey. S. C. A.: 63-73-1. (1-21) and U.C.A.: 53B-17-603

The new Potential Fossil Yield Classification (PFYC) System (October, 2007) replaces the Condition Classification System from Handbook H-8270-1. Geologic units are classified based on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts, with a higher class number indicating a higher potential.

- **Class 1 – Very Low.** Geologic units (igneous, metamorphic, or Precambrian) not likely to contain recognizable fossil remains.
- **Class 2 – Low.** Sedimentary geologic units not likely to contain vertebrate fossils or scientifically significant non-vertebrate fossils. (Including modern eolian, fluvial, and colluvial deposits etc...)
- **Class 3 – Moderate or Unknown.** Fossiliferous sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence; or sedimentary units of unknown fossil potential.
  - **Class 3a – Moderate Potential.** The potential for a project to be sited on or impact a significant fossil locality is low, but is somewhat higher for common fossils.

- **Class 3b – Unknown Potential.** Units exhibit geologic features and preservational conditions that suggest significant fossils could be present, but little information about the paleontological resources of the unit or the area is known.
- **Class 4 – High.** Geologic units containing a high occurrence of vertebrate fossils or scientifically significant invertebrate or plant fossils, but may vary in abundance and predictability.
  - **Class 4a** – Outcrop areas with high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
  - **Class 4b** – Areas underlain by geologic units with high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.
- **Class 5 – Very High.** Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils.
  - **Class 5a** - Outcrop areas with very high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
  - **Class 5b** - Areas underlain by geologic units with very high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.

It should be noted that many fossils, though common and unimpressive in and of themselves, can be important paleo-environmental, depositional, and chronostratigraphic indicators.

## LOCATION

Kerr McGee's proposed multi-well pads, access roads, pipelines & pipeline upgrade for "NBU #921-26B2S, B3S, D1BS & D1CS" (Sec. 26, T 9 S, R 21 E) & "NBU #922-34D3BS, D2CS & C3BS" (Sec. 33 & 34, T 9 S, R 22 E) & (Sec. 4, T 10 S, R 22 E) are on lands managed by the BLM and the State of Utah Trust Lands Administration (SITLA), approximately 1-3 mile west of the White River and some 11-20 miles southeast of Ouray, UT. The project area can be found on the Archy Bench and Ouray SE 7.5 minute U. S. Geological Survey Quadrangle Maps, Uintah County, Utah.

## PREVIOUS WORK

The basins of western North America have long produced some of the richest fossil collections in the world. Early Cenozoic sediments are especially well represented throughout the western interior. Paleontologists started field work in Utah's Uinta Basin as early as 1870 (Betts, 1871; Marsh, 1871, 1875a, 1875b). The Uinta Basin is located in the northeastern corner of Utah and covers approximately 31,000 sq. km (12,000 sq. miles) ranging in elevation from 1,465 to 2,130 m (4,800 to 7,000 ft) (Marsell, 1964; Hamblin et al., 1987). Middle to late Eocene time marked a period of dramatic change in the climate, flora, (Stucky, 1992) and fauna (Black and Dawson, 1966) of North America.

## GEOLOGICAL AND PALEONTOLOGICAL OVERVIEW

Early in the geologic history of Utah, some 1,000 to 600 Ma, an east-west trending basin developed creating accommodation for 25,000 feet of siliclastics. Uplift of that filled-basin during the early Cenozoic formed the Uinta Mountains (Rasmussen et al., 1999). With the rise of the Uinta Mountains the asymmetrical synclinal Uinta Basin is thought to have formed through the effects of down warping in connection with the uplift. Throughout the Paleozoic and Mesozoic deposition fluctuated between marine and non-marine environments laying down a thick succession of sediments in the area now occupied by the Uinta Basin. Portions of these beds crop out on the margins of the basin due to tectonic events during the late Mesozoic.

Early Tertiary Uinta Basin sediments were deposited in alternating lacustrine and fluvial environments. Large shallow lakes periodically covered most of the basin and surrounding areas during early to mid Eocene time (Abbott, 1957). These lacustrine sediments show up in the western part of the basin, dipping 2-3 degrees to the northeast and are lost in the subsurface on the east side. The increase of cross-bedded, coarse-grained sandstone and conglomerates preserved in paleo-channels indicates a transition to a fluvial environment toward the end of the epoch.

Four Eocene formations are recognized in the Uinta Basin: the Wasatch, Green River, Uinta and Duchesne River, respectively (Wood, 1941). The Uinta Formation is subdivided into two lithostratigraphic units namely: the Wagonhound Member (Wood, 1934), formerly known as Uinta A and B (Osborn, 1895, 1929) and the Myton Member previously regarded as the Uinta C.

Within the Uinta Basin in northeast Utah, the Uinta Formation in the western part of the basin is composed primarily of lacustrine sediments inter-fingering with over-bank deposits of silt and mudstone and westward flowing channel sands and fluvial clays, muds, and sands in the east (Bryant et al, 1990; Ryder et al, 1976). Stratigraphic work done by early geologists and paleontologists within the Uinta Formation focused on the definition of rock units and attempted to define a distinction between early and late Uintan faunas (Riggs, 1912; Peterson and Kay, 1931; Kay 1934). More recent work focused on magnetostratigraphy, radioscopic chronology and continental biostratigraphy (Flynn, 1986; Prothero, 1996). Well-known for its fossiliferous nature and distinctive mammalian fauna of mid-Eocene Age, the Uinta Formation is the type formation for the Uintan Land Mammal Age (Wood et al, 1941).

The Duchesne River Formation of the Uinta Basin in northeastern Utah is composed of a succession of fluvial and flood plain deposits composed of mud, silt and sandstone. The source area for these late Eocene deposits is from the Uinta Mountains indicated by paleocurrent data (Anderson and Picard, 1972). In Peterson's (1931c) paper, the name "Duchesne Formation" was applied to the formation and it was later changed to the "Duchesne River Formation" by Kay (1934). The formation is divided up into four members: the Brennan Basin, Dry Gulch Creek, LaPoint and Starr Flat (Anderson and Picard, 1972). Debates concerning the Duchesne River Formation, as to whether its age was late Eocene or early Oligocene, have surfaced throughout the literature of the last century (Wood et al., 1941; Scott 1945). Recent paleo-magnetostratigraphic work (Prothero, 1996) shows that the Duchesne River Formation is late Eocene in time.

## **FIELD METHODS**

In order to determine if the proposed project area contained any paleontological resources, a reconnaissance survey was performed. An on-site observation of the proposed areas undergoing surficial disturbance is necessary because judgments made from topographic maps alone are often unreliable. Areas of low relief have potential to be erosional surfaces with the possibility of bearing fossil materials rather than surfaces covered by unconsolidated sediment or soils.

When found within the proposed construction areas, outcrops and erosional surfaces were checked to determine if fossils were present and to assess needs. Careful effort is made during surveys to identify and evaluate significant fossil materials or fossil horizons when they are found. Microvertebrates, although rare, are occasionally found in anthills or upon erosional surfaces and are of particular importance.

## **PROJECT AREA**

The project area is situated in the Wagonhound Member (Uinta A & B) of the Uinta Formation. The following list provides a description of the individual wells and their associated pipelines and access roads.

### **NBU #921-26B2S, B3S, D1BS & D1CS**

The proposed well pad, access road, and pipeline are located in the NE/NW quarter-quarter section of Sec. 26, T 9 S, R 21 E (Figure 1). The staked well pad, access road, and pipeline are located on a thin layer of colluvium covering a flat of the fluvial purple-green, massive, medium-grained sandstone and a well indurated purple siltstone. No fossil resources were discovered.

### **NBU #922-34D3BS, D2CS & C3BS**

The proposed multi well pad is located in the SW/NW quarter-quarter section of Sec. 34, T 9 S, R 22 E (Figure 2). A portion of the well pad is staked within the existing well pad "CIGE 117". The proposed pipeline upgrade begins in the NW/SW quarter-quarter section of Sec. 34, T 9 S, R 22 E and heads west-southwest for approximately 0.75 mile along existing, well established

roads and terminates at an existing tie-in. The staked well pad is located on low, rolling, colluvium covered hills of the fluvial sediments. On the tops of the hills and along the drainages, outcrops green siltstone and a well indurated purple siltstone are exposed. The pipeline upgrade is located exclusively on thick colluvium or previously disturbed sediments of the Wagonhound Member (Uinta A and B) of the Uinta Formation. No fossil resources were discovered.

**SURVEY RESULTS**

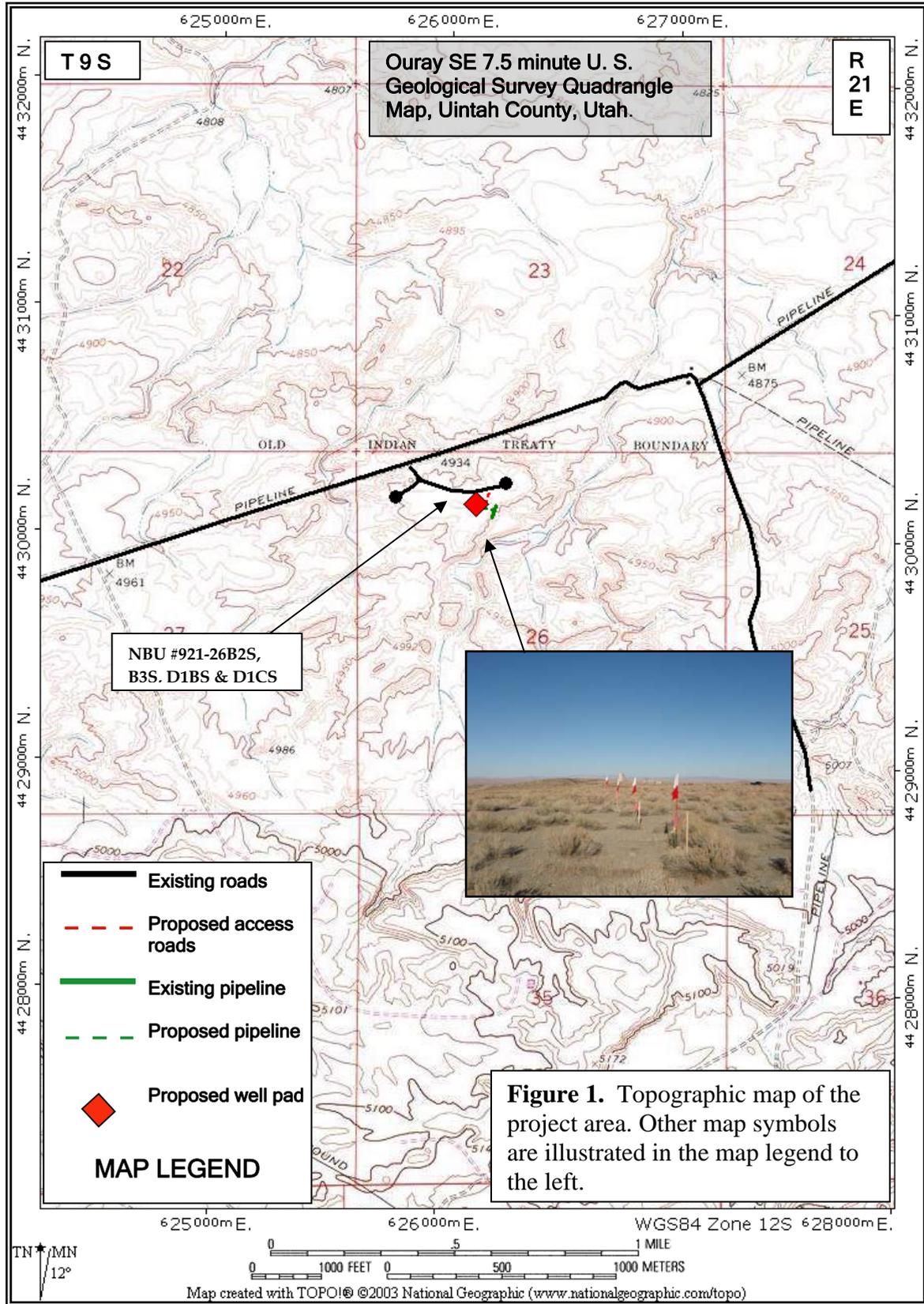
<b>PROJECT</b>	<b>GEOLOGY</b>	<b>PALEONTOLOGY</b>
<p><b>“NBU #921-26B2S, B3S, D1BS &amp; D1CS”</b> (Sec. 26, T 9 S, R 21 E)</p>	<p>The staked well pad, access road, and pipeline are located on a thin layer of colluvium covering a flat of the fluvial purple-green, massive, medium-grained sandstone and a well indurated purple siltstone.</p>	<p>No fossil resources were discovered. <b>Class 3a</b></p>
<p><b>“NBU #922-34D3BS, D2CS &amp; C3BS”</b> (Sec. 33 &amp; 34, T 9 S, R 22 E) &amp; (Sec. 4, T 10 S, R 22 E)</p>	<p>The staked well pad is located on low, rolling, colluvium covered hills of the fluvial sediments. On the tops of the hills and along the drainages, outcrops green siltstone and a well indurated purple siltstone are exposed. The pipeline upgrade is located exclusively on thick colluvium or previously disturbed sediments of the Wagonhound Member (Uinta A and B) of the Uinta Formation.</p>	<p>No fossil resources were discovered. <b>Class 3a</b></p>

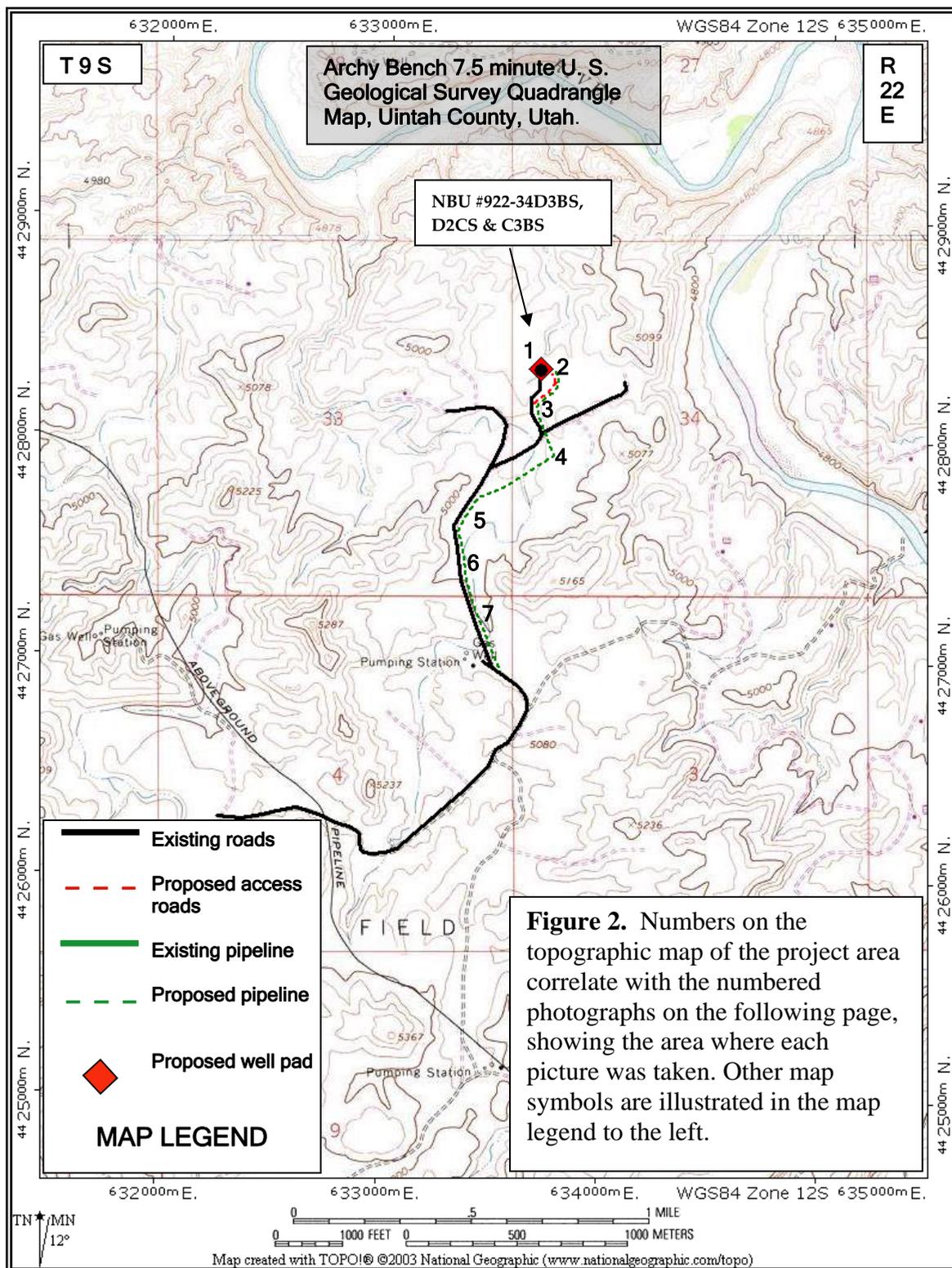
## RECOMMENDATIONS

A reconnaissance survey was conducted for Kerr McGee's proposed "NBU #921-26B2S, B3S, D1BS & D1CS" (Sec. 26, T 9 S, R 21 E) & "NBU #922-34D3BS, D2CS & C3BS" (Sec. 33 & 34, T 9 S, R 22 E) & (Sec. 4, T 10 S, R 22 E). The multi-well pads along with the associated access roads, pipelines & pipeline upgrades covered in this report showed no signs of vertebrate fossils. Therefore, we recommend that no paleontological restrictions should be placed on the development of the projects included in this report.

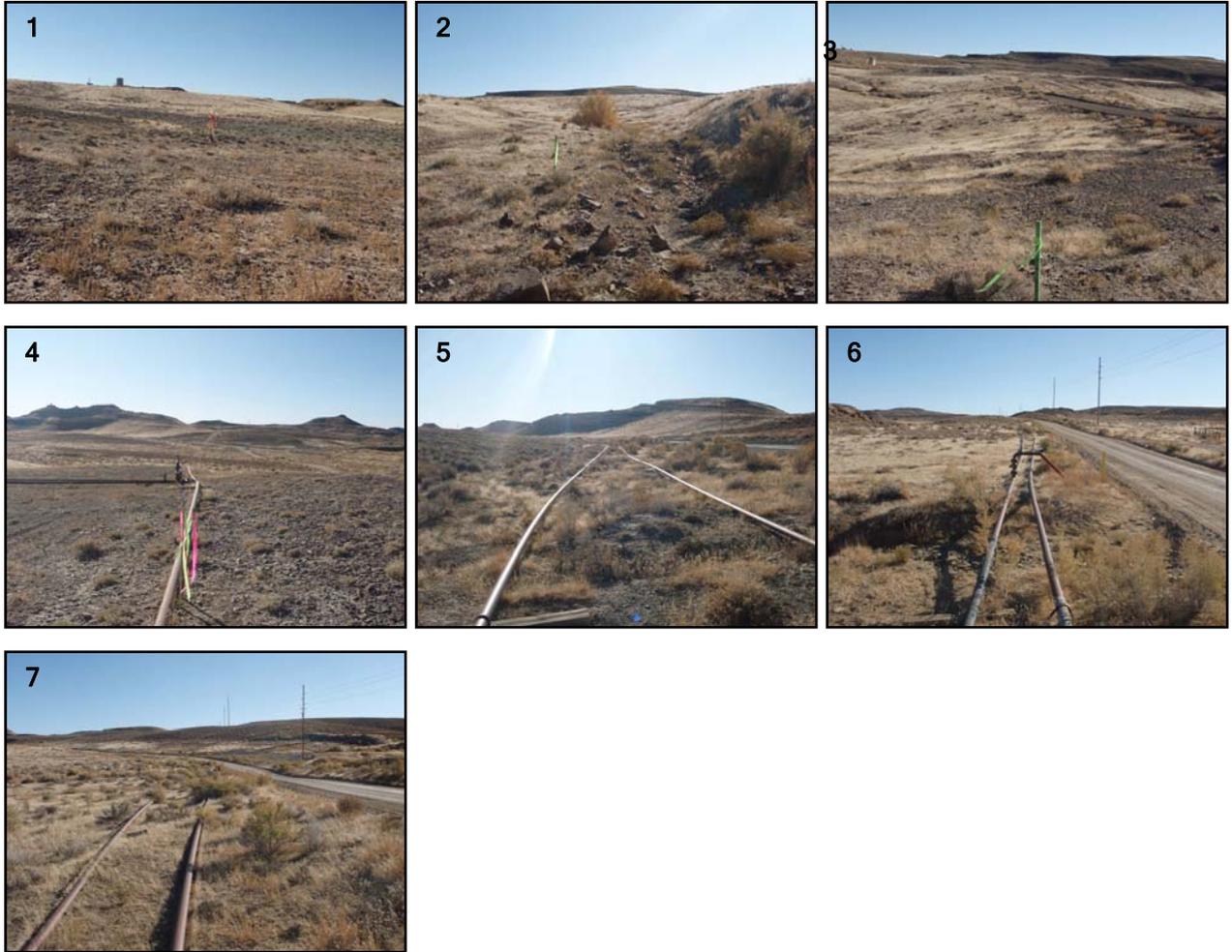
Buried pipeline will encounter Uinta formational sediments along most of the staked pipeline corridors yet indications from surface fossils predict that little if any vertebrate fossils will be disturbed.

**Nevertheless, if any vertebrate fossil(s) are found during construction within the project area, Operator (Lease Holder) will report all occurrences of paleontological resources discovered to a geologist with the Vernal Field Office of the BLM and the Office of the State Paleontologist. The operator is responsible for informing all persons in the areas who are associated with this project of the requirements for protecting paleontological resources. Paleontological resources found on the public lands are recognized by the BLM and State as constituting a fragile and nonrenewable scientific record of the history of life on earth, and so represent an important and critical component of America's natural heritage. These resources are afforded protection under 43 CFR 3802 and 3809, and penalties possible for the collection of vertebrate fossils are under 43 CFR 8365.1-5.**





**Figure 2.** *continued...*



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# 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)

May 1, 2009

Memorandum

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

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

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-50362	NBU 921-26D1CS	Sec 26 T09S R21E 0836 FNL 1648 FWL
	BHL	Sec 26 T09S R21E 0600 FNL 0980 FWL
43-047-50363	NBU 921-26D1BS	Sec 26 T09S R21E 0820 FNL 1661 FWL
	BHL	Sec 26 T09S R21E 0110 FNL 0980 FWL
43-047-50364	NBU 921-26B3S	Sec 26 T09S R21E 0804 FNL 1673 FWL
	BHL	Sec 26 T09S R21E 0950 FNL 2360 FEL
43-047-50365	NBU 921-26B2S	Sec 26 T09S R21E 0788 FNL 1685 FWL
	BHL	Sec 26 T09S R21E 0460 FNL 2360 FEL
43-047-50366	NBU 922-36M3T	Sec 36 T09S R22E 0538 FSL 0433 FWL
43-047-50367	NBU 922-36N4BS	Sec 36 T09S R22E 0538 FSL 0453 FWL
	BHL	Sec 36 T09S R22E 0510 FSL 2095 FWL
43-047-50368	NBU 922-36L4BS	Sec 36 T09S R22E 0539 FSL 0413 FWL
	BHL	Sec 36 T09S R22E 1925 FSL 0930 FWL
43-047-50369	NBU 922-36L3DS	Sec 36 T09S R22E 0539 FSL 0393 FWL
	BHL	Sec 36 T09S R22E 1380 FSL 0385 FWL

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

/s/ Michael L. Coulthard

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

MCoulthard:mc:5-1-09

**From:** Jim Davis  
**To:** Bonner, Ed; Mason, Diana  
**Date:** 5/7/2009 11:25 AM  
**Subject:** Another Kerr McGee approval

**CC:** Garrison, LaVonne  
The following well has been approved by SITLA including arch and paleo clearance.  
NBU 921-26B2S (4304750365)

-Jim

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

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 921-26B2S 43047503650		
String	Surf	Prod	
Casing Size(")	9.625	4.500	
Setting Depth (TVD)	2550	10106	
Previous Shoe Setting Depth (TVD)	40	2550	
Max Mud Weight (ppg)	8.3	11.6	
BOPE Proposed (psi)	500	5000	
Casing Internal Yield (psi)	3520	7780	
Operators Max Anticipated Pressure (psi)	5981	11.4	

Calculations	Surf String	9.625	"
Max BPH (psi)	$.052 * \text{Setting Depth} * \text{MW} =$	1101	
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$	795	NO
MASP (Gas/Mud) (psi)	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$	540	NO OK
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$	549	NO Reasonable depth in area, no expected pressures
Required Casing/BOPE Test Pressure=		2464	psi
*Max Pressure Allowed @ Previous Casing Shoe=		40	psi *Assumes 1psi/ft frac gradient

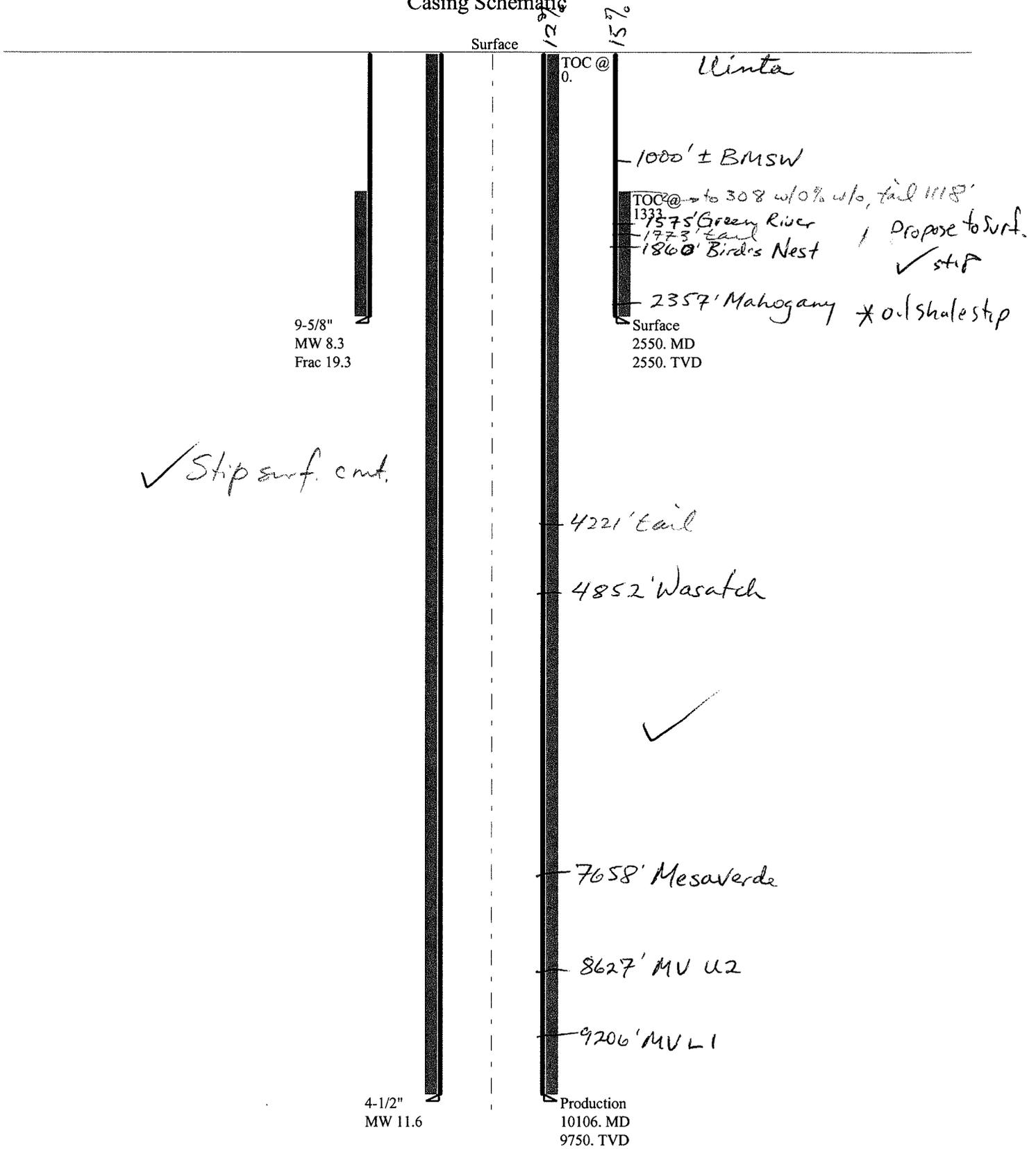
Calculations	Prod String	4.500	"
Max BPH (psi)	$.052 * \text{Setting Depth} * \text{MW} =$	6096	
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$	4883	YES
MASP (Gas/Mud) (psi)	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$	3873	YES OK
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$	4434	NO Reasonable
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2550	psi *Assumes 1psi/ft frac gradient

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

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

# 43047503650000 NBU 921-26B2S

## Casing Schematic



Well name:	<b>43047503650000 NBU 921-26B2S</b>		
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>		
String type:	Surface	Project ID:	43-047-50365
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: 110 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 100 ft

Cement top: 1,333 ft

**Burst**

Max anticipated surface pressure: 2,244 psi  
 Internal gradient: 0.120 psi/ft  
 Calculated BHP 2,550 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: 2,236 ft

**Non-directional string.**

**Re subsequent strings:**

Next setting depth: 9,750 ft  
 Next mud weight: 11.600 ppg  
 Next setting BHP: 5,875 psi  
 Fracture mud wt: 19.250 ppg  
 Fracture depth: 2,550 ft  
 Injection pressure: 2,550 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	2550	9.625	36.00	J-55	LT&C	2550	2550	8.796	20852
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	1103	2020	1.831	2550	3520	1.38	91.8	453	4.93 J

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

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

Date: June 10, 2009  
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2550 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.

Well name:	<b>43047503650000 NBU 921-26B2S</b>		
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>		
String type:	Production	Project ID:	43-047-50365
Location:	UINTAH	COUNTY	

**Design parameters:**

**Collapse**

Mud weight: 11.600 ppg  
 Internal fluid density: 1.000 ppg

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Environment:**

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

**Burst:**

Design factor 1.00

Cement top: Surface

**Burst**

Max anticipated surface pressure: 3,730 psi  
 Internal gradient: 0.220 psi/ft  
 Calculated BHP 5,875 psi

No backup mud specified.

**Tension:**

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

**Directional Info - Build & Drop**

Kick-off point 2550 ft  
 Departure at shoe: 1291 ft  
 Maximum dogleg: 3 °/100ft  
 Inclination at shoe: 0 °

Tension is based on air weight.  
 Neutral point: 8,415 ft

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	10106	4.5	11.60	I-80	LT&C	9750	10106	3.875	133399
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	5369	6360	1.185	5875	7780	1.32	113.1	212	1.87 J

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

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

Date: June 10, 2009  
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 9750 ft, a mud weight of 11.6 ppg. An internal gradient of .052 psi/ft was used for collapse from 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 921-26B2S  
**API Number** 43047503650000      **APD No** 1434      **Field/Unit** NATURAL BUTTES  
**Location: 1/4,1/4** NENW      **Sec** 26      **Tw** 9.0S      **Rng** 21.0E      788      **FNL** 1685      **FWL**  
**GPS Coord (UTM)** 626169 4429944      **Surface Owner**

**Participants**

Floyd Bartlett (DOGM), Ed Bonner (SITLA), Ramie Hoopes, Clay Einerson, Griz Oleen, Tony Kzneck, Charles Chase (Kerr McGee), Ben Williams (UDWR) and Kolby Kay (Timberline Engineering and Land Surveying).

**Regional/Local Setting & Topography**

This location is in the Natural Buttes Unit approximately 15.0 miles southeast of Ouray, Ut.. It is accessed by the Seep Ridge Road to the Uintah County Middle Road then by existing or planned oil field development roads to within 180 feet of the site, which will require new construction.

The general area is within the head of a long unnamed drainage about 3 miles east of Cottonwood Wash. Both washes enter the White River in the same general area, approximately six miles below the site. The area is characterized by rolling hills, which are frequently divided by somewhat gentle draws that drain northerly. This unnamed wash is an ephemeral drainage. No springs, seeps or streams exist in the area. An occasional pond constructed to supply water for cattle and antelope exists. The washes are sometimes rimmed with steep side hills, which have exposed sand stone bedrock cliffs along the rims.

The proposed pad encompasses a pad of the NBU 84N4 gas well which has been plugged and the site abandoned. The original pad will be significantly enlarged on all sides. Four gas wells are proposed to be directionally drilled from this pad. The location is on a flat-topped bench which drops off on the east and northwest beyond the proposed pad into broad valleys. The location itself and a bench beyond the location to the north have exposed light brown sandstone bedrock. No drainages will be intersected and no diversions are needed. The selected site has no apparent concerns for constructing a pad, drilling and operating the planned wells and is the best location in the immediate area.

Both the surface and minerals are owned by SITLA.

**Surface Use Plan**

**Current Surface Use**

- Grazing
- Recreational
- Wildlife Habitat
- Existing Well Pad

<b>New Road Miles</b>	<b>Well Pad</b>	<b>Src Const Material</b>	<b>Surface Formation</b>
0.25	<b>Width</b> 345 <b>Length</b> 500	Onsite	UNTA

**Ancillary Facilities** N

**Waste Management Plan Adequate?**

**Environmental Parameters**

**Affected Floodplains and/or Wetlands** N

**Flora / Fauna**

Poorly vegetated with cheatgrass, black sagebrush, broom snakeweed, shadscale, Indian Ricegrass, greasewood, rabbitbrush, horsebrush, pepper weed, halogeton and annuals.

Sheep, deer, antelope, coyote, and other small mammals and birds.

**Soil Type and Characteristics**

Shallow sandy loam with significant with exposed sandstone bedrock.

**Erosion Issues** N

**Sedimentation Issues** N

**Site Stability Issues** N

**Drainage Diverson Required?** N

**Berm Required?** N

**Erosion Sedimentation Control Required?** N

**Paleo Survey Run?** Y **Paleo Potential Observed?** N **Cultural Survey Run?** N **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 reserve pit is planned in an area of cut in the southwest corner of the location. Dimensions are 100' x 220' x 12' deep with 2' of freeboard. A liner with a minimum thickness of 16 mils. and a felt sub-liner are required. Kerr McGee proposes to use a 30 mil liner with 2 layers of felt.

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

**Other Observations / Comments**

Floyd Bartlett

4/28/2009

**Evaluator**

**Date / Time**

# Application for Permit to Drill Statement of Basis

6/17/2009

**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>
1434	43047503650000	LOCKED	GW	S	No
<b>Operator</b>	KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>Surface Owner-APD</b>		
<b>Well Name</b>	NBU 921-26B2S		<b>Unit</b>	NATURAL BUTTES	
<b>Field</b>	NATURAL BUTTES		<b>Type of Work</b>	DRILL	
<b>Location</b>	NENW 26 9S 21E S 788 FNL 1685 FWL GPS Coord (UTM)			626173E	4429938N

**Geologic Statement of Basis**

Kerr McGee proposes to set 2,550' 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 1,000'. A search of Division of Water Rights records shows one water wells within a 10,000 foot radius of the center of Section 26. The well is listed as 2,640 feet deep and used for oilfield drilling water. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed casing and cement should adequately protect. Any usable ground water.

Brad Hill  
**APD Evaluator**

4/30/2009  
**Date / Time**

**Surface Statement of Basis**

This location is in the Natural Buttes Unit approximately 15.0 miles southeast of Ouray, Ut.. It is accessed by the Seep Ridge Road to the Uintah County Middle Road then by existing or planned oil field development roads to within 180 feet of the site, which will require new construction.

The general area is within the head of a long unnamed drainage about 3 miles east of Cottonwood Wash. Both washes enter the White River in the same general area, approximately six miles below the site. The area is characterized by rolling hills, which are frequently divided by somewhat gentle draws that drain northerly. This unnamed wash is an ephemeral drainage. No springs, seeps or streams exist in the area. An occasional pond constructed to supply water for cattle and antelope exists. The washes are sometimes rimmed with steep side hills, which have exposed sand stone bedrock cliffs along the rims.

The proposed pad encompasses a pad of the NBU 84N4 gas well which has been plugged and the site abandoned. The original pad will be significantly enlarged on all sides. Four gas wells are proposed to be directionally drilled from this pad. The location is on a flat-topped bench which drops off on the east and northwest beyond the proposed pad into broad valleys. The location itself and a bench beyond the location to the north have exposed light brown sandstone bedrock. No drainages will be intersected and no diversions are needed. The selected site has no apparent concerns for constructing a pad, drilling and operating the planned wells and is the best location in the immediate area.

Both the surface and minerals are owned by SITLA. Ed Bonner of SITLA reviewed the site and had no concerns regarding the proposal.

Ben Williams of the Utah Division of Wildlife Resources also attended the pre-site. Mr. Williams stated no wildlife values would be significantly affected by drilling and operating the wells at this location. He provided Ed Bonner of SITLA and Ramie Hoopes of Kerr McGee a written wildlife evaluation and a copy of a recommended seed mix to be used for re-vegetating the disturbed area.

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# Application for Permit to Drill Statement of Basis

6/17/2009

Utah Division of Oil, Gas and Mining

Page 2

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Floyd Bartlett  
Onsite Evaluator

4/28/2009  
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 felt subliner shall be properly installed and maintained in the reserve pit.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

# WORKSHEET APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 4/22/2009

**API NO. ASSIGNED:** 43047503650000

**WELL NAME:** NBU 921-26B2S

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

**PHONE NUMBER:** 720 929-6007

**CONTACT:** Kathy Schneebeck-Dulnoan

**PROPOSED LOCATION:** NENW 26 090S 210E

**Permit Tech Review:**

**SURFACE:** 0788 FNL 1685 FWL

**Engineering Review:**

**BOTTOM:** 0460 FNL 2360 FEL

**Geology Review:**

**COUNTY:** UINTAH

**LATITUDE:** 40.01211

**LONGITUDE:** -109.52167

**UTM SURF EASTINGS:** 626173.00

**NORTHINGS:** 4429938.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 3 - State

**LEASE NUMBER:** UO 01194

**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:** 460' fr u bdry & uncomm. tract
- 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



JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

## Permit To Drill

\*\*\*\*\*

**Well Name:** NBU 921-26B2S  
**API Well Number:** 43047503650000  
**Lease Number:** UO 01194  
**Surface Owner:** STATE  
**Approval Date:** 6/17/2009

### Issued to:

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

### Authority:

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

### Duration:

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

### Commingle:

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

### General:

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

### Conditions of Approval:

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.

**Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following action during drilling of this well:

- 24 hours prior to cementing or testing casing - contact Dan Jarvis
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to spudding the well - contact Carol Daniels
- Within 24 hours of any emergency changes made to the approved drilling program - contact

Dustin Doucet

- Prior to commencing operations to plug and abandon the well - contact Dan Jarvis

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

- Plugging and abandonment or significant plug back of this well - contact Dustin Doucet
- Any changes to the approved drilling plan - contact Dustin Doucet

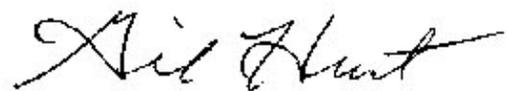
The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at: (801) 538-5338 office  
(801) 942-0871 home
- Carol Daniels at: (801) 538-5284 office
- Dustin Doucet at: (801) 538-5281 office  
(801) 733-0983 home

**Reporting Requirements:**

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

**Approved By:**



Gil Hunt  
Associate Director, Oil & Gas

**DIVISION OF OIL, GAS AND MINING**

**SPUDDING INFORMATION**

Name of Company: KERR-McGEE OIL & GAS ONSHORE, L.P.

Well Name: NBU 921-26B2S

Api No: 43-047-50365 Lease Type: STATE

Section 26 Township 09S Range 21E County UINTAH

Drilling Contractor PETE MARTIN DRLG RIG # BUCKET

**SPUDDED:**

Date 08/22/2009

Time 3:00 PM

How DRY

**Drilling will Commence:** \_\_\_\_\_

Reported by JAMES GOBER

Telephone # (435) 828-7024

Date 08/24/2009 Signed CHD

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

FORM 6

ENTITY ACTION FORM

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

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750365	NBU 921-26B2S		NENW	26	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<b>B</b>	99999	<i>2900</i>	8/22/2009			<i>8/25/09</i>	
Comments: MIRU PETE MARTIN BUCKET RIG. <i>WSMVA</i> SPUD WELL LOCATION ON 08/22/2009 AT 1500 HRS <i>BHL = NUNE</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	
Comments:							

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	
Comments:							

ACTION CODES:

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

SHEILA WOPSOCK

Name (Please Print)

Signature

REGULATORY ANALYST

8/24/2009

Title

Date

RECEIVED

AUG 24 2009

(5/2000)

DIV. OF OIL, GAS & MINING

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UO 01194
	<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 921-26B2S
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047503650000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6007 Ext
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0788 FNL 1685 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 26 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 checked="" type="checkbox"/> <b>SPUD REPORT</b> Date of Spud: 8/22/2009	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER:

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

MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'.  
 RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL LOCATION ON 08/22/2009 AT 1500 HRS.

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**  
**FOR RECORD ONLY**  
 August 24, 2009

<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> 8/24/2009	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UO 01194
<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 921-26B2S
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047503650000
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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
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<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: 9/1/2009	<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:

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

MIRU PROPETRO AIR RIG ON 08/30/2009. DRILLED 12-1/4" SURFACE HOLE TO 2560'. RAN 9-5/8" 40# J-55 SURFACE CSG. PUMP 30 BBLS H2O AND CATCH CIRC. PUMP 20 BBLS GEL WATER. LEAD CMT W/250 SX CLASS G FILL @ 11.0 PPG, 3.82 YIELD. TAILED CMT W/200 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YIELD. DROP PLUG ON FLY, DISPLACE W/192.6 BBLS OF H2O, 450 PSI OF LIFT, NO CMT RETURNS. FLUID FELL. FINAL PSI 450, BUMP PLUG 980 PSI, FLOAT HELD. PUMP 100 SX CLASS G PREM LITE @15.8 PPG, 1.15 YIELD DOWN 1". WAIT 2 HRS AND PUMP 100 SX TOP OUT @ 15.8 PPG, 1.15 YIELD. CMT TO SURFACE AND FELL. WAIT 2 HRS AND PUMP 100 MORE SX @ 15.8 PPG, 1.15 YIELD. RIG DOWN CEMENTERS. WORT.

Accepted by the  
 Utah Division of  
 Oil, Gas and Mining  
**FOR RECORD ONLY**  
 September 02, 2009

<b>NAME (PLEASE PRINT)</b> Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 9/2/2009	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UO 01194
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<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
--	--

<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> NBU 921-26B2S
------------------------------------	--

<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047503650000
---	---

<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6007 Ext	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
---	--	--

<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0788 FNL 1685 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 26 Township: 09.0S Range: 21.0E Meridian: S	<b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH
---	---

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input 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: 1/2/2010	<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:

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

FINISHED DRILLING FROM 2560' TO 10,062' ON 12/31/2009. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. LEAD CMT W/360 SX CLASS G PREM LITE @ 12.2 PPG, 2.19 YIELD. TAILED CMT W/1450 SX CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.25 YIELD. DISPLACE W/155 BBLs, BUMP PLUG, FINAL LIFT 2700 PSI, HELD 500 OVER, FLOATS HELD. 10 BBLs SPACER BACK TO PIT. LAND CSG, NDBOP, CLEAN PITS. RELEASE ENSIGN 139 RIG ON 1/2/2010 AT 06:00 HRS.

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**  
**FOR RECORD ONLY**  
 January 05, 2010

<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> 1/4/2010	

<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 01194
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<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
--	--

<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> NBU 921-26B25
------------------------------------	--

<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047503650000
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<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6007 Ext	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
---	--	--

<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0788 FNL 1685 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 26 Township: 09.0S Range: 21.0E Meridian: S	<b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH
---	---

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input 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: 2/9/2010	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input checked="" type="checkbox"/> <b>PRODUCTION START OR RESUME</b>	<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: _____

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
 THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 2/9/2010 AT 12:00 A.M. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

Accepted by the  
 Utah Division of  
 Oil, Gas and Mining  
**FOR RECORD ONLY**  
 February 10, 2010

<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> 2/9/2010

**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-01194**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

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

8. WELL NAME and NUMBER:  
**NBU 921-26B2S**

9. API NUMBER:  
**4304750365**

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

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:  
**NENW 26 9S 21E**

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 LP**

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: **NENW 788 FNL & 1685 FWL**

AT TOP PRODUCING INTERVAL REPORTED BELOW: **NWNE 484 FNL & 2368 FEL SEC.26-9S-21E**

AT TOTAL DEPTH: **NWNE 486 FNL & 2370 FEL SEC.26-9S-21E**

14. DATE SPURRED: 8/22/2009 15. DATE T.D. REACHED: 12/31/2009 16. DATE COMPLETED: 2/9/2010  
ABANDONED  READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL):  
**4970' GL**

18. TOTAL DEPTH: MD 10,062 TVD 9,864 19. PLUG BACK T.D.: MD 10,004 TVD 9,806

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/GR-SDL/DSN/ACTR-BHV**

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			
12 1/4"	9 5/8 J-55	40#		2,543		750			
7 7/8"	4 1/2 I-80	11.6#		10,047		1810		854	

**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"	9,334							

**26. PRODUCING INTERVALS**

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A) MESAVERDE	7,874	9,866			7,874 9,866	0.36	285	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(B)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

**27. PERFORATION RECORD**

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
7,874 9,866	0.36	285	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>

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

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
7874-9866	PMP 12,827 BBLs SLICK H2O & 502,599 LBS 30/50 SD.

**29. ENCLOSED ATTACHMENTS:**

ELECTRICAL/MECHANICAL LOGS  GEOLOGIC REPORT  DST REPORT  DIRECTIONAL SURVEY  
 SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION  CORE ANALYSIS  OTHER: \_\_\_\_\_

30. WELL STATUS:  
**PROD**

**RECEIVED**  
**MAR 23 2010**

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 2/9/2010		TEST DATE: 2/18/2010		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 2,316	WATER – BBL: 400	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 1,513	CSG. PRESS. 2,346	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 2,316	WATER – BBL: 400	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.)

SOLD

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.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
GREEN RIVER	1,540				
MAHOGANY	2,228				
WASATCH	5,056	7,852			
MESAVERDE	7,852	10,062			

35. ADDITIONAL REMARKS (Include plugging procedure)

ATTACHED TO THIS COMPLETION REPORT IS THE CHRONOLOGICAL WELL HISTORY AND FINAL SURVEY.

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

NAME (PLEASE PRINT) ANDY LYTLE

TITLE REGULATORY ANALYST

SIGNATURE 

DATE 3/18/2010

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



## **END OF WELL REPORT**

**Prepared For:**

**Kerr McGee Oil & Gas Onshore LP**  
**NBU 921-26B2S**  
**NBU 921-26C Pad**  
**Ensign 139**  
**Uintah County, UT**

***Prepared By:***

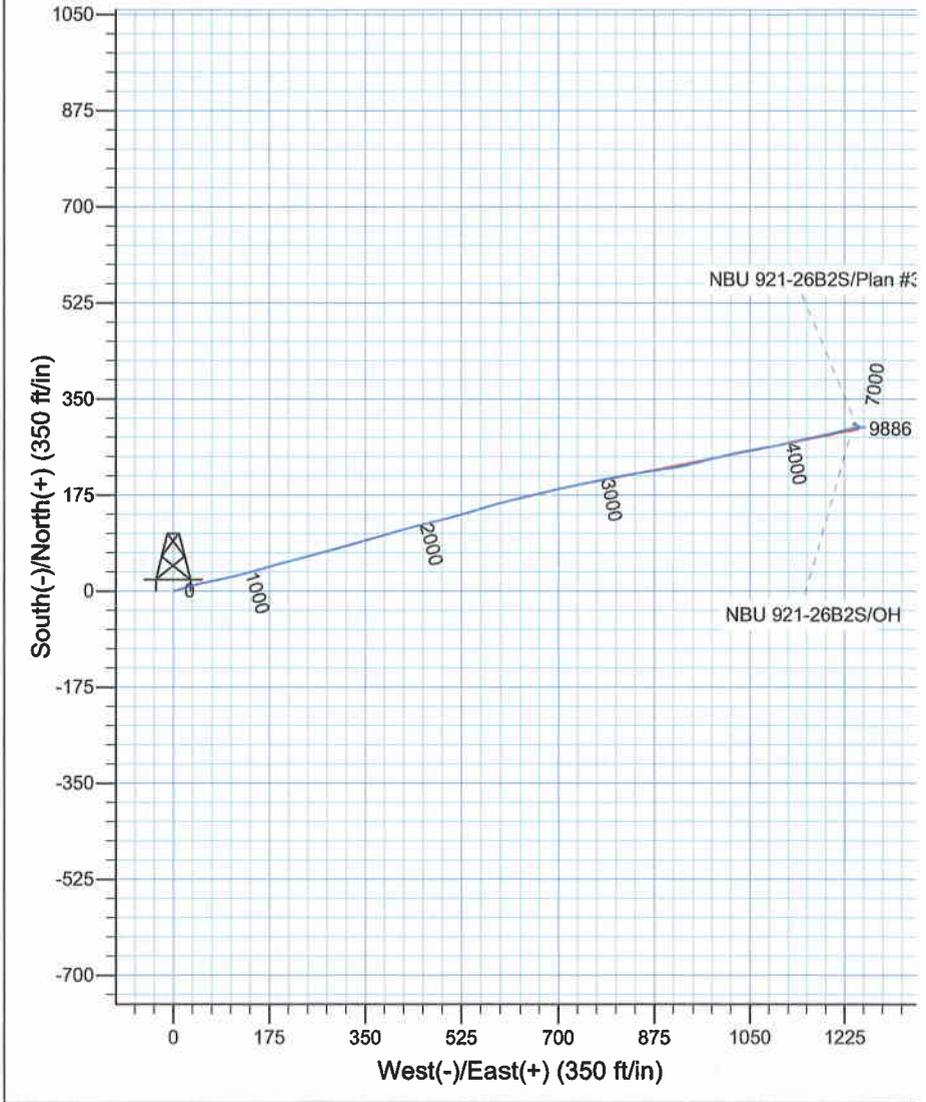
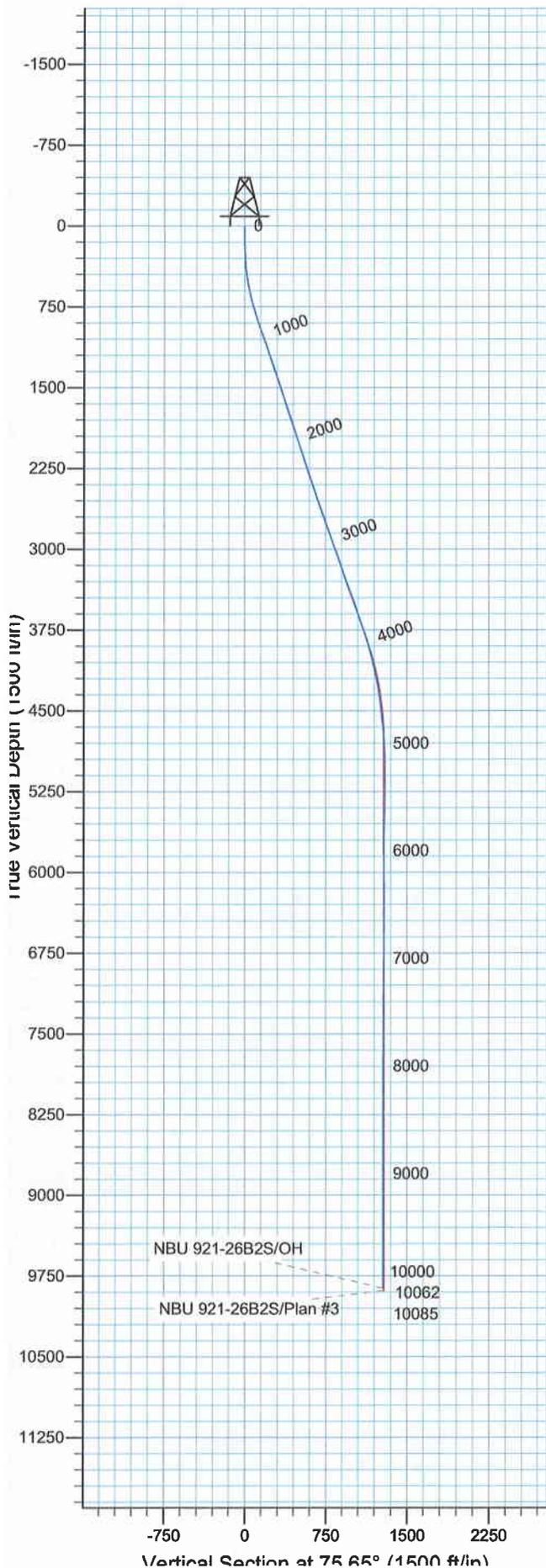
***Rex Hall, Grand Junction D.E.***  
***Scientific Drilling***  
***Rocky Mountain Region***

Scientific Drilling International  
7237 W. Barton Rd., Casper, WY 82604  
P.O. Box 1600, Mills, WY 82644  
(307) 472-6621  
[rex.hall@scientificdrilling.com](mailto:rex.hall@scientificdrilling.com)



## **TABLE OF CONTENTS**

- 1. Directional Plot and Surveys**
- 2. Daily Drilling Reports**
- 3. BHA Summary Reports and Slide Sheets**
- 4. Graphical Job History**
- 5. Support Staff**



**WELL DETAILS: NBU 921-26B2S**

Ground Level: GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	617588.23	2554061.31	40° 0' 43.640 N	109° 31' 18.160 W

**REFERENCE INFORMATION**

Co-ordinate (N/E) Reference: Well NBU 921-26B2S, True North  
 Vertical (TVD) Reference: GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)  
 Section (VS) Reference: Slot - (0.00N, 0.00E)  
 Measured Depth Reference: GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)  
 Calculation Method: Minimum Curvature  
 Local North: True  
 Location: Sec 26 T9S R21E

**PROJECT DETAILS: Uintah County, UT NAD27**

Geodetic System: US State Plane 1927 (Exact solution)  
 Datum: NAD 1927 (NADCON CONUS)  
 Ellipsoid: Clarke 1866  
 Zone: Utah Central 4302

**Design: OH (NBU 921-26B2S/OH)**

Created By: Rex Hall Date: 2010-01-11



**Scientific Drilling**  
Rocky Mountain Operations

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

Uintah County, UT NAD27  
NBU 921-26C Pad  
NBU 921-26B2S  
OH

Design: OH

## **Standard Survey Report**

11 January, 2010

**Anadarko**   
Petroleum Corporation

Company: Kerr McGee Oil and Gas Onshore LP  
 Project: Uintah County, UT NAD27  
 Site: NBU 921-26C Pad  
 Well: NBU 921-26B2S  
 Wellbore: OH  
 Design: OH

Local Co-ordinate Reference: Well NBU 921-26B2S  
 TVD Reference: GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)  
 MD Reference: GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)  
 North Reference: True  
 Survey Calculation Method: Minimum Curvature  
 Database: EDM 2003.16 Multi-User Db

<b>Project</b>	Uintah County, UT NAD27		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Utah Central 4302		

<b>Site</b>	NBU 921-26C Pad, Sec 26 T9S R21E				
<b>Site Position:</b>		<b>Northing:</b>	617,588.24ft	<b>Latitude:</b>	40° 0' 43.640 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,554,061.31ft	<b>Longitude:</b>	109° 31' 18.160 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	in	<b>Grid Convergence:</b>	1.27 °

<b>Well</b>	NBU 921-26B2S, 788' FNL 1685' FWL					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	617,588.23 ft	<b>Latitude:</b>	40° 0' 43.640 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,554,061.31 ft	<b>Longitude:</b>	109° 31' 18.160 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,969.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2005-10	2/6/2009	11.37	65.94	52,593

<b>Design</b>	OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	75.65	

<b>Survey Program</b>	<b>Date</b>	1/11/2010			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
170.00	2,570.00	Survey #1 (OH)	MWD	MWD - Standard	
2,614.00	10,062.00	Survey #2 - Production (OH)	MWD SDI	MWD - Standard ver 1.0.1	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170.00	0.17	154.22	170.00	-0.23	0.11	0.05	0.10	0.10	0.00
260.00	2.21	76.15	259.98	0.07	1.85	1.81	2.42	2.27	-86.74
350.00	4.87	75.59	349.80	1.43	7.24	7.37	2.96	2.96	-0.62
440.00	7.13	71.35	439.30	4.17	16.23	16.76	2.56	2.51	-4.71
530.00	9.63	74.48	528.33	7.97	28.78	29.86	2.82	2.78	3.48
620.00	12.31	76.35	616.68	12.25	45.36	46.98	3.00	2.98	2.08
710.00	15.00	78.60	704.13	16.82	66.10	68.21	3.05	2.99	2.50
800.00	17.63	77.48	790.50	22.08	90.83	93.47	2.94	2.92	-1.24
890.00	18.94	76.73	875.95	28.38	118.35	121.69	1.48	1.46	-0.83
980.00	19.56	73.10	960.92	36.12	146.98	151.35	1.50	0.69	-4.03
1,070.00	18.88	74.35	1,045.90	44.42	175.42	180.96	0.88	-0.76	1.39

Company: Kerr McGee Oil and Gas Onshore LP  
 Project: Uintah County, UT NAD27  
 Site: NBU 921-26C Pad  
 Well: NBU 921-26B2S  
 Wellbore: OH  
 Design: OH

Local Co-ordinate Reference: Well NBU 921-26B2S  
 TVD Reference: GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)  
 MD Reference: GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)  
 North Reference: True  
 Survey Calculation Method: Minimum Curvature  
 Database: EDM 2003.16 Multi-User Db

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)
1,160.00	19.38	74.73	1,130.93	52.29	203.85	210.45	0.57	0.56	0.42
1,250.00	18.06	75.85	1,216.17	59.63	231.78	239.33	1.52	-1.47	1.24
1,340.00	17.94	75.35	1,301.77	66.54	258.72	267.14	0.22	-0.13	-0.56
1,430.00	17.75	74.60	1,387.44	73.69	285.36	294.72	0.33	-0.21	-0.83
1,520.00	18.00	74.60	1,473.09	81.03	311.99	322.34	0.28	0.28	0.00
1,610.00	18.31	73.98	1,558.61	88.62	338.98	350.37	0.41	0.34	-0.69
1,700.00	17.94	74.23	1,644.15	96.29	365.91	378.36	0.42	-0.41	0.28
1,790.00	18.56	73.10	1,729.62	104.22	392.96	406.53	0.79	0.69	-1.26
1,880.00	19.25	74.85	1,814.76	112.26	420.98	435.67	0.99	0.77	1.94
1,970.00	17.88	76.48	1,900.08	119.37	448.74	464.32	1.63	-1.52	1.81
2,060.00	18.31	75.73	1,985.63	126.09	475.87	492.27	0.54	0.48	-0.83
2,150.00	18.25	75.60	2,071.09	133.08	503.22	520.50	0.08	-0.07	-0.14
2,240.00	17.81	74.23	2,156.67	140.32	530.12	548.36	0.68	-0.49	-1.52
2,330.00	17.38	72.60	2,242.46	148.08	556.19	575.54	0.73	-0.48	-1.81
2,420.00	18.00	73.85	2,328.20	155.97	582.37	602.86	0.81	0.69	1.39
2,510.00	18.83	75.27	2,413.59	163.53	609.78	631.28	1.05	0.92	1.58
2,570.00	19.38	76.22	2,470.29	168.36	628.81	650.92	1.05	0.92	1.58
2,614.00	18.50	75.43	2,511.90	171.86	642.66	665.20	2.08	-2.00	-1.80
2,704.00	19.07	76.70	2,597.11	178.83	670.79	694.18	0.78	0.63	1.41
2,795.00	19.30	77.72	2,683.06	185.45	699.95	724.07	0.45	0.25	1.12
2,885.00	20.05	78.88	2,767.80	191.59	729.62	754.34	0.94	0.83	1.29
2,976.00	19.90	78.23	2,853.33	197.76	760.09	785.39	0.29	-0.16	-0.71
3,066.00	19.74	76.56	2,938.00	204.42	789.87	815.89	0.65	-0.18	-1.86
3,157.00	19.14	81.25	3,023.81	210.26	819.56	846.10	1.84	-0.66	5.15
3,247.00	18.35	80.81	3,109.04	214.76	848.13	874.89	0.89	-0.88	-0.49
3,338.00	19.83	82.01	3,195.03	219.20	877.56	904.50	1.68	1.63	1.32
3,429.00	21.17	80.21	3,280.27	224.14	909.03	936.22	1.63	1.47	-1.98
3,519.00	20.25	77.04	3,364.46	230.39	940.23	968.00	1.61	-1.02	-3.52
3,610.00	19.87	75.38	3,449.94	237.83	970.54	999.21	0.75	-0.42	-1.82
3,700.00	18.42	74.17	3,534.96	245.57	999.02	1,028.72	1.67	-1.61	-1.34
3,791.00	18.42	80.27	3,621.30	251.92	1,027.03	1,057.42	2.12	0.00	6.70
3,881.00	19.12	80.25	3,706.51	256.82	1,055.57	1,086.29	0.78	0.78	-0.02
3,972.00	18.99	79.83	3,792.53	261.96	1,084.83	1,115.91	0.21	-0.14	-0.46
4,063.00	15.86	76.05	3,879.34	267.57	1,111.48	1,143.12	3.66	-3.44	-4.15
4,153.00	14.91	77.73	3,966.12	273.00	1,134.73	1,166.99	1.17	-1.06	1.87
4,244.00	12.69	76.68	4,054.49	277.79	1,155.90	1,188.68	2.45	-2.44	-1.15
4,334.00	11.48	78.02	4,142.49	281.93	1,174.28	1,207.52	1.38	-1.34	1.49
4,425.00	9.82	77.69	4,231.92	285.46	1,190.72	1,224.32	1.83	-1.82	-0.36
4,515.00	9.18	77.58	4,320.68	288.64	1,205.23	1,239.17	0.71	-0.71	-0.12
4,606.00	7.76	77.51	4,410.69	291.53	1,218.32	1,252.56	1.56	-1.56	-0.08
4,697.00	6.19	73.75	4,501.01	294.23	1,229.03	1,263.61	1.80	-1.73	-4.13
4,787.00	6.17	81.33	4,590.49	296.32	1,238.47	1,273.27	0.91	-0.02	8.42
4,878.00	4.74	81.06	4,681.08	297.64	1,247.02	1,281.88	1.57	-1.57	-0.30
4,969.00	3.48	85.12	4,771.84	298.46	1,253.48	1,288.35	1.42	-1.38	4.46
5,059.00	2.58	96.82	4,861.72	298.45	1,258.22	1,292.93	1.21	-1.00	13.00
5,150.00	1.18	101.28	4,952.67	298.03	1,261.17	1,295.68	1.55	-1.54	4.90
5,240.00	0.07	280.06	5,042.66	297.85	1,262.02	1,296.47	1.39	-1.23	198.64
5,331.00	0.12	347.95	5,133.66	297.96	1,261.95	1,296.42	0.13	0.05	74.60
5,421.00	1.29	287.36	5,223.65	298.35	1,260.96	1,295.57	1.37	1.30	-67.32
5,512.00	1.18	272.72	5,314.63	298.70	1,259.05	1,293.80	0.37	-0.12	-16.09
5,602.00	1.05	265.55	5,404.61	298.68	1,257.30	1,292.10	0.21	-0.14	-7.97
5,693.00	1.14	258.67	5,495.60	298.44	1,255.58	1,290.37	0.17	0.10	-7.56
5,783.00	0.93	243.66	5,585.58	297.94	1,254.05	1,288.77	0.38	-0.23	-16.68
5,874.00	1.10	239.11	5,676.57	297.16	1,252.64	1,287.21	0.21	0.19	-5.00

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT NAD27  
**Site:** NBU 921-26C Pad  
**Well:** NBU 921-26B2S  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-26B2S  
**TVD Reference:** GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)  
**MD Reference:** GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Multi-User Db

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)
5,965.00	0.45	275.62	5,767.56	296.75	1,251.53	1,286.03	0.86	-0.71	40.12
6,055.00	0.66	52.90	5,857.56	297.10	1,251.59	1,286.18	1.15	0.23	152.53
6,146.00	0.32	36.13	5,948.55	297.62	1,252.16	1,286.86	0.40	-0.37	-18.43
6,237.00	0.37	111.81	6,039.55	297.71	1,252.58	1,287.29	0.47	0.05	83.16
6,327.00	0.44	7.60	6,129.55	297.95	1,252.90	1,287.66	0.71	0.08	-115.79
6,418.00	0.14	234.77	6,220.55	298.23	1,252.85	1,287.68	0.60	-0.33	-145.97
6,508.00	0.83	346.36	6,310.55	298.80	1,252.61	1,287.59	0.99	0.77	123.99
6,599.00	0.54	330.75	6,401.54	299.82	1,252.25	1,287.49	0.38	-0.32	-17.15
6,689.00	0.20	220.82	6,491.54	300.07	1,251.94	1,287.25	0.71	-0.38	-122.14
6,780.00	1.03	303.46	6,582.53	300.40	1,251.15	1,286.57	1.13	0.91	90.81
6,871.00	0.93	302.19	6,673.52	301.24	1,249.84	1,285.51	0.11	-0.11	-1.40
6,961.00	0.65	282.36	6,763.51	301.74	1,248.73	1,284.55	0.43	-0.31	-22.03
7,052.00	0.58	250.93	6,854.51	301.70	1,247.79	1,283.63	0.37	-0.08	-34.54
7,142.00	0.60	221.88	6,944.50	301.20	1,247.04	1,282.79	0.33	0.02	-32.28
7,233.00	0.39	331.49	7,035.50	301.12	1,246.58	1,282.31	0.90	-0.23	120.45
7,323.00	0.17	42.75	7,125.50	301.49	1,246.52	1,282.35	0.41	-0.24	79.18
7,414.00	0.27	142.74	7,216.50	301.41	1,246.74	1,282.55	0.38	0.11	109.88
7,504.00	0.91	340.83	7,306.50	301.92	1,246.64	1,282.57	1.30	0.71	-179.90
7,595.00	0.78	341.81	7,397.49	303.19	1,246.20	1,282.47	0.14	-0.14	1.08
7,685.00	0.63	301.39	7,487.48	304.03	1,245.59	1,282.08	0.56	-0.17	-44.91
7,776.00	0.58	286.48	7,578.48	304.42	1,244.72	1,281.34	0.18	-0.05	-16.38
7,866.00	0.53	241.42	7,668.47	-304.35	-1,243.92	1,280.54	0.48	-0.06	-50.07
7,957.00	0.79	286.05	7,759.47	304.32	1,242.95	1,279.59	0.61	0.29	49.04
8,048.00	0.50	327.16	7,850.46	304.83	1,242.13	1,278.93	0.58	-0.32	45.18
8,138.00	0.11	15.92	7,940.46	305.24	1,241.94	1,278.85	0.48	-0.43	54.18
8,229.00	0.34	356.86	8,031.46	305.60	1,241.95	1,278.94	0.26	0.25	-20.95
8,312.00	0.12	191.19	8,114.46	305.76	1,241.92	1,278.95	0.55	-0.27	-199.60
10,062.00	0.12	191.19	9,864.45	302.16	1,241.21	1,277.37	0.00	0.00	0.00

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT NAD27  
**Site:** NBU 921-26C Pad  
**Well:** NBU 921-26B2S  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-26B2S  
**TVD Reference:** GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)  
**MD Reference:** GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Multi-User Db

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
NBU 921-26B2S Right S	0.00	0.00	9,886.00	294.77	1,275.29	617,911.13	2,555,329.77	40° 0' 46.553 N	109° 31' 1.769 W
- actual wellpath misses target center by 40.99ft at 10062.00ft MD (9864.45 TVD, 302.16 N, 1241.21 E)									
- Rectangle (sides W25.00 H0.01 D0.00)									
NBU 921-26B2S Left Six	0.00	0.00	9,886.00	294.77	1,225.29	617,910.03	2,555,279.78	40° 0' 46.553 N	109° 31' 2.411 W
- actual wellpath misses target center by 27.79ft at 10062.00ft MD (9864.45 TVD, 302.16 N, 1241.21 E)									
- Rectangle (sides W25.00 H0.01 D0.00)									
NBU 921-26B2S NHalf	0.00	0.00	9,886.00	294.77	1,250.29	617,910.58	2,555,304.78	40° 0' 46.553 N	109° 31' 2.090 W
- actual wellpath misses target center by 24.52ft at 10062.00ft MD (9864.45 TVD, 302.16 N, 1241.21 E)									
- Circle (radius 25.00)									
NBU 921-26B2S Hard Li	0.00	0.00	9,886.00	319.77	1,250.29	617,935.57	2,555,304.23	40° 0' 46.800 N	109° 31' 2.090 W
- actual wellpath misses target center by 29.27ft at 10062.00ft MD (9864.45 TVD, 302.16 N, 1241.21 E)									
- Rectangle (sides W0.01 H100.00 D0.00)									
NBU 921-26B2S PBHL :	0.00	0.00	9,886.00	294.77	1,250.29	617,910.58	2,555,304.78	40° 0' 46.553 N	109° 31' 2.090 W
- actual wellpath misses target center by 24.52ft at 10062.00ft MD (9864.45 TVD, 302.16 N, 1241.21 E)									
- Circle (radius 25.00)									
NBU 921-26B2S PBHL	0.00	0.00	9,886.00	319.77	1,250.29	617,935.57	2,555,304.23	40° 0' 46.800 N	109° 31' 2.090 W
- actual wellpath misses target center by 29.27ft at 10062.00ft MD (9864.45 TVD, 302.16 N, 1241.21 E)									
- Circle (radius 25.00)									

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
170.00	170.00	-0.23	0.11	First Anadarko MWD Survey
2,570.00	2,470.29	168.36	628.81	Last Anadarko MWD Survey
2,614.00	2,511.90	171.86	642.66	First SDI Production MWD Survey
8,312.00	8,114.46	305.76	1,241.92	Last SDI Production MWD Survey
10,062.00	9,864.45	302.16	1,241.21	Projection To TD

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



**Scientific Drilling**  
Rocky Mountain Operations

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

Uintah County, UT NAD27  
NBU 921-26C Pad  
NBU 921-26B2S  
OH

Design: OH

## **Survey Report - Geographic**

11 January, 2010

**Anadarko**   
Petroleum Corporation

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT NAD27  
**Site:** NBU 921-26C Pad  
**Well:** NBU 921-26B2S  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-26B2S  
**TVD Reference:** GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)  
**MD Reference:** GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Multi-User Db

<b>Project</b>	Uintah County, UT NAD27		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Utah Central 4302		

<b>Site</b>	NBU 921-26C Pad, Sec 26 T9S R21E				
<b>Site Position:</b>		<b>Northing:</b>	617,588.24 ft	<b>Latitude:</b>	40° 0' 43.640 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,554,061.31 ft	<b>Longitude:</b>	109° 31' 18.160 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	in	<b>Grid Convergence:</b>	1.27 °

<b>Well</b>	NBU 921-26B2S, 788' FNL 1685' FWL					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	617,588.23 ft	<b>Latitude:</b>	40° 0' 43.640 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,554,061.31 ft	<b>Longitude:</b>	109° 31' 18.160 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,969.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2005-10	2/6/2009	11.37	65.94	52,593

<b>Design</b>	OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	75.65	

<b>Survey Program</b>	<b>Date</b>	1/11/2010			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
170.00	2,570.00	Survey #1 (OH)	MWD	MWD - Standard	
2,614.00	10,062.00	Survey #2 - Production (OH)	MWD SDI	MWD - Standard ver 1.0.1	

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT NAD27  
**Site:** NBU 921-26C Pad  
**Well:** NBU 921-26B2S  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-26B2S  
**TVD Reference:** GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)  
**MD Reference:** GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Multi-User Db

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	617,588.23	2,554,061.31	40° 0' 43.640 N	109° 31' 18.160 W	
170.00	0.17	154.22	170.00	-0.23	0.11	617,588.01	2,554,061.43	40° 0' 43.638 N	109° 31' 18.159 W	
260.00	2.21	76.15	259.98	0.07	1.85	617,588.34	2,554,063.16	40° 0' 43.641 N	109° 31' 18.136 W	
350.00	4.87	75.59	349.80	1.43	7.24	617,589.83	2,554,068.52	40° 0' 43.654 N	109° 31' 18.067 W	
440.00	7.13	71.35	439.30	4.17	16.23	617,592.76	2,554,077.45	40° 0' 43.681 N	109° 31' 17.951 W	
530.00	9.63	74.48	528.33	7.97	28.78	617,596.84	2,554,089.91	40° 0' 43.719 N	109° 31' 17.790 W	
620.00	12.31	76.35	616.68	12.25	45.36	617,601.48	2,554,106.39	40° 0' 43.761 N	109° 31' 17.577 W	
710.00	15.00	78.60	704.13	16.82	66.10	617,606.51	2,554,127.03	40° 0' 43.806 N	109° 31' 17.310 W	
800.00	17.63	77.48	790.50	22.08	90.83	617,612.31	2,554,151.63	40° 0' 43.858 N	109° 31' 16.993 W	
890.00	18.94	76.73	875.95	28.38	118.35	617,619.23	2,554,179.01	40° 0' 43.920 N	109° 31' 16.639 W	
980.00	19.56	73.10	960.92	36.12	146.98	617,627.59	2,554,207.46	40° 0' 43.997 N	109° 31' 16.271 W	
1,070.00	18.88	74.35	1,045.90	44.42	175.42	617,636.52	2,554,235.71	40° 0' 44.079 N	109° 31' 15.905 W	
1,160.00	19.38	74.73	1,130.93	52.29	203.85	617,645.01	2,554,263.95	40° 0' 44.157 N	109° 31' 15.540 W	
1,250.00	18.06	75.85	1,216.17	59.63	231.78	617,652.97	2,554,291.72	40° 0' 44.229 N	109° 31' 15.181 W	
1,340.00	17.94	75.35	1,301.77	66.54	258.72	617,660.48	2,554,318.50	40° 0' 44.298 N	109° 31' 14.835 W	
1,430.00	17.75	74.60	1,387.44	73.69	285.36	617,668.22	2,554,344.97	40° 0' 44.368 N	109° 31' 14.492 W	
1,520.00	18.00	74.60	1,473.09	81.03	311.99	617,676.14	2,554,371.43	40° 0' 44.441 N	109° 31' 14.150 W	
1,610.00	18.31	73.98	1,558.61	88.62	338.98	617,684.33	2,554,398.25	40° 0' 44.516 N	109° 31' 13.803 W	
1,700.00	17.94	74.23	1,644.15	96.29	365.91	617,692.59	2,554,425.00	40° 0' 44.592 N	109° 31' 13.457 W	
1,790.00	18.56	73.10	1,729.62	104.22	392.96	617,701.12	2,554,451.87	40° 0' 44.670 N	109° 31' 13.109 W	
1,880.00	19.25	74.85	1,814.76	112.26	420.98	617,709.78	2,554,479.71	40° 0' 44.749 N	109° 31' 12.749 W	
1,970.00	17.88	76.48	1,900.08	119.37	448.74	617,717.50	2,554,507.30	40° 0' 44.820 N	109° 31' 12.392 W	
2,060.00	18.31	75.73	1,985.63	126.09	475.87	617,724.81	2,554,534.28	40° 0' 44.886 N	109° 31' 12.044 W	
2,150.00	18.25	75.60	2,071.09	133.08	503.22	617,732.40	2,554,561.47	40° 0' 44.955 N	109° 31' 11.692 W	
2,240.00	17.81	74.23	2,156.67	140.32	530.12	617,740.24	2,554,588.20	40° 0' 45.027 N	109° 31' 11.346 W	
2,330.00	17.38	72.60	2,242.46	148.08	556.19	617,748.58	2,554,614.09	40° 0' 45.103 N	109° 31' 11.011 W	
2,420.00	18.00	73.85	2,328.20	155.97	582.37	617,757.04	2,554,640.09	40° 0' 45.181 N	109° 31' 10.675 W	
2,510.00	18.83	75.27	2,413.59	163.53	609.78	617,765.21	2,554,667.32	40° 0' 45.256 N	109° 31' 10.323 W	
2,570.00	19.38	76.22	2,470.29	168.36	628.81	617,770.46	2,554,686.25	40° 0' 45.304 N	109° 31' 10.078 W	
2,614.00	18.50	75.43	2,511.90	171.86	642.66	617,774.26	2,554,700.01	40° 0' 45.338 N	109° 31' 9.900 W	
2,704.00	19.07	76.70	2,597.11	178.83	670.79	617,781.86	2,554,727.98	40° 0' 45.407 N	109° 31' 9.538 W	
2,795.00	19.30	77.72	2,683.06	185.45	699.95	617,789.12	2,554,756.99	40° 0' 45.473 N	109° 31' 9.164 W	
2,885.00	20.05	78.88	2,767.80	191.59	729.62	617,795.91	2,554,786.52	40° 0' 45.533 N	109° 31' 8.782 W	
2,976.00	19.90	78.23	2,853.33	197.76	760.09	617,802.75	2,554,816.84	40° 0' 45.594 N	109° 31' 8.391 W	
3,066.00	19.74	76.56	2,938.00	204.42	789.87	617,810.06	2,554,846.46	40° 0' 45.660 N	109° 31' 8.008 W	
3,157.00	19.14	81.25	3,023.81	210.26	819.56	617,816.56	2,554,876.02	40° 0' 45.718 N	109° 31' 7.626 W	
3,247.00	18.35	80.81	3,109.04	214.76	848.13	617,821.70	2,554,904.48	40° 0' 45.762 N	109° 31' 7.259 W	
3,338.00	19.83	82.01	3,195.03	219.20	877.56	617,826.78	2,554,933.80	40° 0' 45.806 N	109° 31' 6.881 W	
3,429.00	21.17	80.21	3,280.27	224.14	909.03	617,832.42	2,554,965.17	40° 0' 45.855 N	109° 31' 6.476 W	
3,519.00	20.25	77.04	3,364.46	230.39	940.23	617,839.36	2,554,996.21	40° 0' 45.917 N	109° 31' 6.075 W	
3,610.00	19.87	75.38	3,449.94	237.83	970.54	617,847.47	2,555,026.35	40° 0' 45.990 N	109° 31' 5.686 W	
3,700.00	18.42	74.17	3,534.96	245.57	999.02	617,855.83	2,555,054.66	40° 0' 46.067 N	109° 31' 5.320 W	
3,791.00	18.42	80.27	3,621.30	251.92	1,027.03	617,862.80	2,555,082.52	40° 0' 46.130 N	109° 31' 4.960 W	
3,881.00	19.12	80.25	3,706.51	256.82	1,055.57	617,868.33	2,555,110.94	40° 0' 46.178 N	109° 31' 4.593 W	
3,972.00	18.99	79.83	3,792.53	261.96	1,084.83	617,874.12	2,555,140.08	40° 0' 46.229 N	109° 31' 4.217 W	
4,063.00	15.86	76.05	3,879.34	267.57	1,111.48	617,880.32	2,555,166.60	40° 0' 46.284 N	109° 31' 3.874 W	
4,153.00	14.91	77.73	3,966.12	273.00	1,134.73	617,886.26	2,555,189.72	40° 0' 46.338 N	109° 31' 3.575 W	
4,244.00	12.69	76.68	4,054.49	277.79	1,155.90	617,891.52	2,555,210.78	40° 0' 46.385 N	109° 31' 3.203 W	
4,334.00	11.48	78.02	4,142.49	281.93	1,174.28	617,896.06	2,555,229.07	40° 0' 46.426 N	109° 31' 3.067 W	
4,425.00	9.82	77.69	4,231.92	285.46	1,190.72	617,899.96	2,555,245.43	40° 0' 46.461 N	109° 31' 2.856 W	
4,515.00	9.18	77.58	4,320.68	288.64	1,205.23	617,903.46	2,555,259.86	40° 0' 46.492 N	109° 31' 2.669 W	
4,606.00	7.76	77.51	4,410.69	291.53	1,218.32	617,906.63	2,555,272.88	40° 0' 46.521 N	109° 31' 2.501 W	
4,697.00	6.19	73.75	4,501.01	294.23	1,229.03	617,909.57	2,555,283.53	40° 0' 46.548 N	109° 31' 2.363 W	
4,787.00	6.17	81.33	4,590.49	296.32	1,238.47	617,911.87	2,555,292.92	40° 0' 46.568 N	109° 31' 2.242 W	
4,878.00	4.74	81.06	4,681.08	297.64	1,247.02	617,913.38	2,555,301.44	40° 0' 46.581 N	109° 31' 2.132 W	

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT NAD27  
**Site:** NBU 921-26C Pad  
**Well:** NBU 921-26B2S  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-26B2S  
**TVD Reference:** GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)  
**MD Reference:** GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Multi-User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
4,969.00	3.48	85.12	4,771.84	298.46	1,253.48	617,914.34	2,555,307.88	40° 0' 46.589 N	109° 31' 2.049 W
5,059.00	2.58	96.82	4,861.72	298.45	1,258.22	617,914.44	2,555,312.62	40° 0' 46.589 N	109° 31' 1.988 W
5,150.00	1.18	101.28	4,952.67	298.03	1,261.17	617,914.08	2,555,315.58	40° 0' 46.585 N	109° 31' 1.950 W
5,240.00	0.07	280.06	5,042.66	297.85	1,262.02	617,913.92	2,555,316.44	40° 0' 46.583 N	109° 31' 1.939 W
5,331.00	0.12	347.95	5,133.66	297.96	1,261.95	617,914.02	2,555,316.36	40° 0' 46.584 N	109° 31' 1.940 W
5,421.00	1.29	287.36	5,223.65	298.35	1,260.96	617,914.40	2,555,315.36	40° 0' 46.588 N	109° 31' 1.953 W
5,512.00	1.18	272.72	5,314.63	298.70	1,259.05	617,914.70	2,555,313.44	40° 0' 46.592 N	109° 31' 1.978 W
5,602.00	1.05	265.55	5,404.61	298.68	1,257.30	617,914.65	2,555,311.70	40° 0' 46.592 N	109° 31' 2.000 W
5,693.00	1.14	258.67	5,495.60	298.44	1,255.58	617,914.37	2,555,309.98	40° 0' 46.589 N	109° 31' 2.022 W
5,783.00	0.93	243.66	5,585.58	297.94	1,254.05	617,913.83	2,555,308.46	40° 0' 46.584 N	109° 31' 2.042 W
5,874.00	1.10	239.11	5,676.57	297.16	1,252.64	617,913.02	2,555,307.07	40° 0' 46.577 N	109° 31' 2.060 W
5,965.00	0.45	275.62	5,767.56	296.75	1,251.53	617,912.59	2,555,305.97	40° 0' 46.572 N	109° 31' 2.074 W
6,055.00	0.66	52.90	5,857.56	297.10	1,251.59	617,912.93	2,555,306.03	40° 0' 46.576 N	109° 31' 2.073 W
6,146.00	0.32	36.13	5,948.55	297.62	1,252.16	617,913.47	2,555,306.58	40° 0' 46.581 N	109° 31' 2.066 W
6,237.00	0.37	111.81	6,039.55	297.71	1,252.58	617,913.57	2,555,307.00	40° 0' 46.582 N	109° 31' 2.061 W
6,327.00	0.44	7.60	6,129.55	297.95	1,252.90	617,913.82	2,555,307.31	40° 0' 46.584 N	109° 31' 2.057 W
6,418.00	0.14	234.77	6,220.55	298.23	1,252.85	617,914.10	2,555,307.26	40° 0' 46.587 N	109° 31' 2.057 W
6,508.00	0.83	346.36	6,310.55	298.80	1,252.61	617,914.66	2,555,307.01	40° 0' 46.593 N	109° 31' 2.060 W
6,599.00	0.54	330.75	6,401.54	299.82	1,252.25	617,915.67	2,555,306.62	40° 0' 46.603 N	109° 31' 2.065 W
6,689.00	0.20	220.82	6,491.54	300.07	1,251.94	617,915.91	2,555,306.30	40° 0' 46.605 N	109° 31' 2.069 W
6,780.00	1.03	303.46	6,582.53	300.40	1,251.15	617,916.23	2,555,305.51	40° 0' 46.609 N	109° 31' 2.079 W
6,871.00	0.93	302.19	6,673.52	301.24	1,249.84	617,917.04	2,555,304.19	40° 0' 46.617 N	109° 31' 2.096 W
6,961.00	0.65	282.36	6,763.51	301.74	1,248.73	617,917.51	2,555,303.06	40° 0' 46.622 N	109° 31' 2.110 W
7,052.00	0.58	250.93	6,854.51	301.70	1,247.79	617,917.45	2,555,302.12	40° 0' 46.621 N	109° 31' 2.122 W
7,142.00	0.60	221.88	6,944.50	301.20	1,247.04	617,916.94	2,555,301.39	40° 0' 46.616 N	109° 31' 2.132 W
7,233.00	0.39	331.49	7,035.50	301.12	1,246.58	617,916.84	2,555,300.92	40° 0' 46.616 N	109° 31' 2.138 W
7,323.00	0.17	42.75	7,125.50	301.49	1,246.52	617,917.21	2,555,300.86	40° 0' 46.619 N	109° 31' 2.139 W
7,414.00	0.27	142.74	7,216.50	301.41	1,246.74	617,917.14	2,555,301.08	40° 0' 46.619 N	109° 31' 2.136 W
7,504.00	0.91	340.83	7,306.50	301.92	1,246.64	617,917.65	2,555,300.96	40° 0' 46.624 N	109° 31' 2.137 W
7,595.00	0.78	341.81	7,397.49	303.19	1,246.20	617,918.91	2,555,300.50	40° 0' 46.636 N	109° 31' 2.143 W
7,685.00	0.63	301.39	7,487.48	304.03	1,245.59	617,919.73	2,555,299.87	40° 0' 46.644 N	109° 31' 2.150 W
7,776.00	0.58	286.48	7,578.48	304.42	1,244.72	617,920.11	2,555,299.00	40° 0' 46.648 N	109° 31' 2.162 W
7,866.00	0.53	241.42	7,668.47	304.35	1,243.92	617,920.02	2,555,298.19	40° 0' 46.648 N	109° 31' 2.172 W
7,957.00	0.79	286.05	7,759.47	304.32	1,242.95	617,919.97	2,555,297.22	40° 0' 46.647 N	109° 31' 2.184 W
8,048.00	0.50	327.16	7,850.46	304.83	1,242.13	617,920.46	2,555,296.39	40° 0' 46.652 N	109° 31' 2.195 W
8,138.00	0.11	15.92	7,940.46	305.24	1,241.94	617,920.87	2,555,296.20	40° 0' 46.656 N	109° 31' 2.197 W
8,229.00	0.34	356.86	8,031.46	305.60	1,241.95	617,921.22	2,555,296.20	40° 0' 46.660 N	109° 31' 2.197 W
8,312.00	0.12	191.19	8,114.46	305.76	1,241.92	617,921.38	2,555,296.16	40° 0' 46.662 N	109° 31' 2.198 W
10,062.00	0.12	191.19	9,864.45	302.16	1,241.21	617,917.77	2,555,295.53	40° 0' 46.626 N	109° 31' 2.207 W

Company: Kerr McGee Oil and Gas Onshore LP  
 Project: Uintah County, UT NAD27  
 Site: NBU 921-26C Pad  
 Well: NBU 921-26B2S  
 Wellbore: OH  
 Design: OH

Local Co-ordinate Reference: Well NBU 921-26B2S  
 TVD Reference: GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)  
 MD Reference: GL 4969' & RKB 14' @ 4983.00ft (Ensign 139)  
 North Reference: True  
 Survey Calculation Method: Minimum Curvature  
 Database: EDM 2003.16 Multi-User Db

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
NBU 921-26B2S Right S - actual wellpath misses target center by 40.99ft at 10062.00ft MD (9864.45 TVD, 302.16 N, 1241.21 E) - Rectangle (sides W25.00 H0.01 D0.00)	0.00	0.00	9,886.00	294.77	1,275.29	617,911.13	2,555,329.77	40° 0' 46.553 N	109° 31' 1.769 W
NBU 921-26B2S Left Sic - actual wellpath misses target center by 27.79ft at 10062.00ft MD (9864.45 TVD, 302.16 N, 1241.21 E) - Rectangle (sides W25.00 H0.01 D0.00)	0.00	0.00	9,886.00	294.77	1,225.29	617,910.03	2,555,279.78	40° 0' 46.553 N	109° 31' 2.411 W
NBU 921-26B2S NHalf - actual wellpath misses target center by 24.52ft at 10062.00ft MD (9864.45 TVD, 302.16 N, 1241.21 E) - Circle (radius 25.00)	0.00	0.00	9,886.00	294.77	1,250.29	617,910.58	2,555,304.78	40° 0' 46.553 N	109° 31' 2.090 W
NBU 921-26B2S Hard Li - actual wellpath misses target center by 29.27ft at 10062.00ft MD (9864.45 TVD, 302.16 N, 1241.21 E) - Rectangle (sides W0.01 H100.00 D0.00)	0.00	0.00	9,886.00	319.77	1,250.29	617,935.57	2,555,304.23	40° 0' 46.800 N	109° 31' 2.090 W
NBU 921-26B2S PBHL ; - actual wellpath misses target center by 24.52ft at 10062.00ft MD (9864.45 TVD, 302.16 N, 1241.21 E) - Circle (radius 25.00)	0.00	0.00	9,886.00	294.77	1,250.29	617,910.58	2,555,304.78	40° 0' 46.553 N	109° 31' 2.090 W
NBU 921-26B2S PBHL - actual wellpath misses target center by 29.27ft at 10062.00ft MD (9864.45 TVD, 302.16 N, 1241.21 E) - Circle (radius 25.00)	0.00	0.00	9,886.00	319.77	1,250.29	617,935.57	2,555,304.23	40° 0' 46.800 N	109° 31' 2.090 W

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
170.00	170.00	-0.23	0.11	First Anadarko MWD Survey
2,570.00	2,470.29	168.36	628.81	Last Anadarko MWD Survey
2,614.00	2,511.90	171.86	642.66	First SDI Production MWD Survey
8,312.00	8,114.46	305.76	1,241.92	Last SDI Production MWD Survey
10,062.00	9,864.45	302.16	1,241.21	Projection To TD

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

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

Well: NBU 921-26B2S ( RED )      Spud Conductor: 8/22/2009      Spud Date: 8/30/2009  
 Project: UTAH-UINTAH      Site: NBU 921-26C PAD      Rig Name No: ENSIGN 139/139, PROPETRO/  
 Event: DRILLING      Start Date: 8/21/2009      End Date: 1/2/2010  
 Active Datum: RKB @4,984.00ft (above Mean Sea Level)      UWI: NE/NW/0/9/S/21/E/26/0/0/6/PM/N/788.00/W/0/1,685.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
8/30/2009	13:00 - 15:30	2.50	MIRU	01	B	P		RIG UP,INSTALL AIR BOWL AND BOWIE LINE, RIG UP COMPRESSOR AND BOOSTER.
	15:30 - 17:00	1.50	DRLSUR	02	A	P		AIR SPUD 8/30/2009 15:30, AIR HAMMER 44'- 180'. MAKE DITCH.
	17:00 - 18:30	1.50	DRLSUR	06	A	P		LD AIR HAMMER, MAKE UP 2-1/8 DEG. BENT HOUSE MOTOR, MAKE UP BIT#1 (2ND RUN) QD507Z SN 7016466, P/U DIRECTIONAL TOOLS AND SCRIBE.
	18:30 - 0:00	5.50	DRLSUR	02	D	P		DRILL SLIDE 180'-580'(400', 73'/HR) WOB 18K, RPM 45, DH RPM 94, GPM 598, ON/ OFF PSI 1400/1200, UP/DOWN/ROT 52/49/51
8/31/2009	0:00 - 0:00	24.00	DRLSUR	02	D	P		DRILL SLIDE 580'- 2170 (1590', 66'/HR) WOB 25K, RPM 45, DH RPM 94, GPM 598, ON/ OFF PSI 1700/1450, UP/DOWN/ROT 88/70/78
9/1/2009	0:00 - 9:30	9.50	DRLSUR	02	D	P		DRILL 2170'-2560' (390',41'/HR) TD 8/01/2009 09:30 WOB 25K, RPM 45, DH RPM 94, GPM 598, ON/ OFF PSI 1700/1450, UP/DOWN/ROT 88/72/78
	9:30 - 10:30	1.00	CSG	05	F	P		CLEAN HOLE W/ POLYMER SWEEP AND AERATE WATER TO ASSIST IN HOLE CLEANING 1COMPLETE CIRC, THEN CIRC W/ WATER ONLY BOTTOMS UP..
	10:30 - 15:00	4.50	CSG	06	D	P		LDDS, LAYDOWN BHA AND DIRECTIONAL TOOLS.
	15:00 - 18:00	3.00	CSG	12	C	P		RUN 58 JTS OF 9-5/8", 40#, J-55, LT&C SURFACE CSG LAND @ 2534' KB (2436' TVD) BAFFLE PLATE RAN INSIDE TOP OF SHOE JT @ 2488' KB (TVD 2392'). FILL PIPE 1000' AND 2000'. RUN 200' OF 1" PIPE DOWN BACK SIDE.
	18:00 - 18:30	0.50	RDMO	01	E	P		RIG DOWN RIG. RELEASE RIG 9/1/2009 18:30
	18:30 - 0:00	5.50	CSG	12	E	P		HOLD SAFETY MEETING W/ PROPETRO SERVICES CEMENT CREW. PUMP 30 BBLS H2O AND CATCH CIRC. PUMP 20 BBLS OF GEL WATER, PUMP 250 SX (170 BBLS) OF 11#, 3.82 YD, 23 GAL/SK HI FILL MOD LEAD CEMENT, PUMP 200 SX (41 BBLS) OF 15.8#, 1.15 YD, 5 GAL/SK PREMIUM TAIL CEMENT. DROP PLUG ON FLY, DISPLACE W/ 192.6 BBLS OF H2O, 450 PSI OF LIFT, NO CEMENT RETURNS. FLUID FELL. FINAL PSI 450 BUMP PLUG 980 PSI, FLOAT HELD. PUMP 100 SX (20 BBLS) 15.8#, 1.15 YD, 5 GAL SK PREMIUM CEMENT DOWN 1". WAIT 2 HRS PUMP 100 SX TOP OUT 15.8# 1.15 YD, 5 GAL SK PREMIUM CEMENT.CEMENT TO SURFACE AND FELL. WAIT 2 HRS PUMP 100 MORE SX SAME CEMENT. RIG DOWN CEMENTERS
12/23/2009	2:00 - 6:00	4.00	MIRU	01	C	P		R/D & SKID RIG
	6:00 - 9:00	3.00	PRPSPD	14	A	P		NUBOP FINISH CLEANING PITS
	9:00 - 13:30	4.50	PRPSPD	15	A	P		TEST RAMS,CHOKE,KILLLINE ,MANIFOLD 5K,ANNULAR 2.5K,CSG 1500
	13:30 - 14:00	0.50	PRPSPD	07	A	P		SERVICE TOPDRIVE
	14:00 - 20:30	6.50	PRPSPD	06	A	P		INSTALL WEARRING,P/U BIT #1& DIR TOOLS,TIH,LEVEL DERRICK,INSTALL ROTATING HEAD
	20:30 - 21:30	1.00	PRPSPD	02	F	P		DRILL CEMENT &FE ,F/2450-2570
	21:30 - 0:00	2.50	DRLPRO	02	D	P		DIR DRILL F/2570 TO 2760,SURVEY 90',WOB 15,GPM 480,ROT 50,PSI 1400,DIFF 250,TORQ 10800,,ST WT 145-137-130

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-26B2S ( RED )	Spud Conductor: 8/22/2009	Spud Date: 8/30/2009
Project: UTAH-UINTAH	Site: NBU 921-26C PAD	Rig Name No: ENSIGN 139/139, PROPETRO/
Event: DRILLING	Start Date: 8/21/2009	End Date: 1/2/2010
Active Datum: RKB @4,984.00ft (above Mean Sea Leve		
UWI: NE/NW/0/9/S/21/E/26/0/0/6/PM/N/788.00/W/0/1,685.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
12/24/2009	0:00 - 13:30	13.50	DRLPRO	02	D	P		DIR DRILL F/ 2760 TO 3847,AVG82,SURVEY 90',WOB 15,GPM 480,ROT 50,PSI 1400,DIFF 250,TORQ 10800,,ST WT 155-135-115
	13:30 - 14:00	0.50	DRLPRO	07	A	P		RIG SERVICE
	14:00 - 0:00	10.00	DRLPRO	02	D	P		DIR DRILL F/ 3847 TO 4600,AVG 75,SURVEY 90',WOB 17,GPM 480,ROT 50,PSI 1750,DIFF 300,TORQ 10-12K,,ST WT 160-135-115
12/25/2009	0:00 - 15:00	15.00	DRLPRO	02	D	P		DIR DRILL F/ 4600 TO 5477,AVG 58,SURVEY 90',WOB 17,GPM 480,ROT 50,PSI 1850,DIFF 300,TORQ 11-13K,,ST WT 200-150-135
	15:00 - 15:30	0.50	DRLPRO	07	A	P		CROWN,BLOCKS, TOPDRIVE
	15:30 - 20:00	4.50	DRLPRO	02	D	P		DIR DRILL F/ 5477 TO 5911,AVG 96,SURVEY 90',WOB 17,GPM 480,ROT 50,PSI 1850,DIFF 300,TORQ 11-13K,,ST WT 200-150-135
12/26/2009	0:00 - 2:00	2.00	DRLPRO	22	G	X		LOST FULL RETURNS ON WATER,PULL 10STNDS,LT MUD UP W/15% LCM,BYPASS SHAKERS
	2:00 - 13:00	11.00	DRLPRO	02	D	P		BUILD VOLUME & MIX LCM 18%,STAGE IN HOLE,9.1/44 18%LCM FULL RETURNS
	13:00 - 13:30	0.50	DRLPRO	07	A	P		DIR DRILL F/5911 TO 6564,AVG 59,SURVEY 90',WOB 18,GPM 420,ROT 45,PSI 1750,DIFF 250,TORQ 10-12K,,ST WT 220-165-140
12/27/2009	0:00 - 14:30	14.50	DRLPRO	02	D	P		DAILY SERVICE
	14:30 - 15:00	0.50	DRLPRO	07	A	P		DIR DRILL F/7055 TO 7560,AVG 47 ,SURVEY 90',WOB 18,GPM 420,ROT 45,PSI 1750,DIFF 250,TORQ 10-12K,,ST WT 220-165-140
	15:00 - 0:00	9.00	DRLPRO	02	D	P		DIR DRILL F/ 7055 TO 7560,AVG 35 ,SURVEY 90',WOB 20,GPM 480,ROT 45,PSI 1750,DIFF 250,TORQ 11-13K,,ST WT 220-165-140
12/28/2009	0:00 - 16:00	16.00	DRLPRO	02	D	P		RIG SERVICE
	16:00 - 16:30	0.50	DRLPRO	07	A	P		DIR DRILL F/ 7560 TO 7870 ,AVG 34 ,SURVEY 90',WOB 20-24,GPM 480,ROT 45,PSI 2100,DIFF 250,TORQ 13-15K,,ST WT 240-185-160
	16:30 - 0:00	7.50	DRLPRO	06	A	P		DIR DRILL F/ 7870 TO 8367 ,AVG 31 ,SURVEY 90',WOB 20-24,GPM 480,ROT 45,PSI 2100,DIFF 250,TORQ 13-15K,,ST WT 240-185-160
12/29/2009	0:00 - 2:00	2.00	DRLPRO	06	A	P		RIG SERVICE,,MIX PILL
	2:00 - 9:30	7.50	DRLPRO	06	A	P		PUMP OUT 3,PUMPPILL ,STRT PULL 275K OFF BTMS,90 K OVER,,POOH ,L/D DIR TOOLS
	9:30 - 10:00	0.50	DRLPRO	02	D	P		L/D DIR TOOLS & BIT #1
	10:00 - 13:30	3.50	DRLPRO	22	G	X		P/U BIT #2,MM,MONEL TIH,FILL@ 450-2500-5100'
	13:30 - 14:30	1.00	DRLPRO	08	A	Z		DRILL F/8367 TO 8409',AVG 84,SEEPING MUD,10.4/44 20%LCM
	14:30 - 15:00	0.50	DRLPRO	07	A	P		LOST ALL RETURNS,WORK TIGHT HOLE ,CIRC & BUILD VOLUME & LCM TO 30%,LOST175 BBLS,ST WT UP 320 DOWN 140 TORQ 21K,20 STKS 400 PSI
12/30/2009	0:00 - 12:00	12.00	DRLPRO	02	D	P		LOST RIG COMM TO CONTROLS,REPAIR PECO,RESET CHARGER PUMPS, DW CONTROLS
	12:00 - 12:30	0.50	DRLPRO	07	A	P		RESET FLOOR & CROWN SAVOR,GREASE BLOCKS AND TOPDRIVE
								DRILL F/ 8409 TO 9000',AVG 65 ,WOB 18-20,GPM 480,ROT 45,PSI 2300,DIFF 200-300,TORQ 13-15K,,ST WT 250-185-150,MUD WT 11.3/45 24%LCM

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

Well: NBU 921-26B2S ( RED )		Spud Conductor: 8/22/2009		Spud Date: 8/30/2009	
Project: UTAH-UINTAH		Site: NBU 921-26C PAD		Rig Name No: ENSIGN 139/139, PROPETRO/	
Event: DRILLING		Start Date: 8/21/2009		End Date: 1/2/2010	
Active Datum: RKB @4,984.00ft (above Mean Sea Level)		UWI: NE/NW/09/S/21/E/26/0/0/6/PM/N/788.00/W/0/1,685.00/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	12:30 - 0:00	11.50	DRLPRO	02	D	P		DRILL F/ 9586 TO9920 ,,AVG29 ,,WOB 18-20,GPM 480,ROT 45,PSI 2500,DIFF 200-300,TORQ 14-18K,,ST WT 275-200-160,MUD WT 11.4/45 24%LCM
12/31/2009	0:00 - 9:30	9.50	DRLPRO	02	D	P		DRILL F/ 9920' TO TD 10062 ,,AVG14 ,,WOB 5-8,GPM 420,ROT 60,PSI 2300,DIFF 100- 200,TORQ 16-22K,,ST WT 275-200-160,MUD WT 11.9+/45 24%LCM,MUD MOTOR STALLING & STALLING OUT TOP DRIVE,TD 26' FROM SEGO,80' EARLY PUMP & ROTATE OUT 10 STANDS F/ SHORT TRIP,
	9:30 - 12:30	3.00	DRLPRO	06	E	P		CIRC BTMS UP TWICE,BTMS UP GAS BEFORE 7,HI 2200, AFTER 3
	12:30 - 14:30	2.00	DRLPRO	05	C	P		DROP SURVEY,PUMP OUT 10 STANDS,PUMP DRY PILL,LDDP F/LOGS,SURVEY!10010'=1.6,159 AZI
	14:30 - 0:00	9.50	DRLPRO	06	B	P		REPAIR SKATE ON CATWALK
1/1/2010	0:00 - 1:00	1.00	EVALPR	08	A	Z		FINISH LDDP ,PULL WEARRING
	1:00 - 6:00	5.00	EVALPR	06	B	P		SAFETY MEET W/HALLIBURTON ,R/U RUN TRIPLE COMBO TO LOGGERS DEPTH 10050'
	6:00 - 12:00	6.00	EVALPR	11	D	P		SAFETY MEET W/KIMZEY CSG,,RUN 4.5 TO 10048' SHOE DEPTH ,FLOAT @10006'
	12:00 - 20:30	8.50	CSG	12	C	P		CIRC F/CEMENT,BTMS UP 2270 UNITS ,NO FLARE
	20:30 - 22:30	2.00	CSG	05	D	P		PUMP 360SX LEAD@12.1,1450SX TAIL@14.3, START DISPLACE 155BBLS CLAYFIX
	22:30 - 0:00	1.50	CSG	12	E	P		360 SX LEAD@12.1 2.19 yld,1450 SX TAIL@14.3 1.25 YLD,DIPLACE 155 BBLS BUMPLUGFINAL LIFT 2700 PSI HELD 500 OVER,FLOATS HELD,10 BBLS SPACER BACK
1/2/2010	0:00 - 1:00	1.00	CSG	12	E	P		LAND CSG 85K ,NDBOP
	1:00 - 3:00	2.00	RDMO	14	A	P		CLEAN PITS & RELEASE RIG@ 6AM 1/2/10,RDRT
	3:00 - 6:00	3.00	RDMO	01	E	P		

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

Well: NBU 921-26B2S ( RED )      Spud Conductor: 8/22/2009      Spud Date: 8/30/2009  
 Project: UTAH-UINTAH      Site: NBU 921-26C PAD      Rig Name No:  
 Event: COMPLETION      Start Date: 1/14/2010      End Date: 2/6/2010  
 Active Datum: RKB @4,984.00ft (above Mean Sea Level)      UWI: NE/NW/0/9/S/21/E/26/0/0/6/PM/N/788.00/W/0/1,685.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
1/29/2010	7:00 - 7:15	0.25	COMP	48		P		HSM. WL SAFTY.
	7:15 - 16:00	8.75	COMP	37	B	P		MIRU B&C QUICK TEST. PSI TEST CSG 7 BOTH FRAC VALVES T/ 7,000 PSI. GOOD TEST. BLEED OFF PSI. MIRU CUTTERS WL. PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH PERF F/ 9638'-40', 3 SPF, 6 HOLES. 9700'-04, 3 SPF, 12 HOLES. 9837'-40', 4 SPF, 12 HOLES. 9862'-66', 3 SPF, 12 HOLES. TOTAL HOLES = 42. POOH. SWI FWE.
2/1/2010	7:00 - 7:15	0.25	COMP	48		P		HSM. SIM OPS.
	7:15 - 8:15	1.00	COMP	36	B	P		MIRU FRAC TECH SERV.
	8:15 - 9:30	1.25	COMP	36	B	P		FRAC STG 1)WHP 1810 PSI, BRK 3244 PSI @ 5.6 BPM. ISIP 2672 PSI, FG .72. PUMP 100 BBLs @ 51 BPM @ 5050 PSI = 100% HOLES OPEN. ISIP 2955 PSI, FG .74, NPI 283 PSI. MP 5875 PSI, MR 51.3 BPM, AP 4670 PSI, AR 50.8 BPM, PMP 2353 BBLs SW & 78,042 LBS OF 30/50 SND & 5,000 LBS OF 20/40 RESIN SND. TOTAL PROP 82,042 LBS, SWI, X-OVER FOR WL.
	9:30 - 10:30	1.00	COMP	37	B	P		PERF STG 2)PU 4 1/2 8K BAKER CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 9604' P/U PERF F/ 9356'-58', 3 SPF, 6 HOLES. 9462'-64', 3 SPF, 6 HOLES. 9480'-84', 3 SPF, 12 HOLES. 9546'-48', 4 SPF, 8 HOLES. 9572'-74', 4 SPF, 8 HOLES. TOTAL HOLES = 40. POOH. X-OVER FOR FRAC CREW.
	11:58 - 12:49	0.85	COMP	36	B	P		FRAC STG 2)WHP 2530 PSI, BRK 3214 PSI @ 5.5 BPM. ISIP 2761 PSI, FG .72. PUMP 100 BBLs @ 47 BPM @ 5888 PSI = 63% HOLES OPEN. ISIP 2980 PSI, FG .75, NPI 219 PSI. MP 6335 PSI, MR 51 BPM, AP 5160 PSI, AR 50.5 BPM, PMP 2119 BBLs SW & 75,902 LBS OF 30/50 SND & 5,000 LBS OF 20/40 RESIN SND. TOTAL PROP 80,902 LBS, SWI, X-OVER FOR WL.
2/2/2010	7:00 - 7:15	0.25	COMP	48		P		HSM. WL & HIGH PSI LINES.
	7:15 - 8:22	1.12	COMP	36	B	P		FRAC STG 3)WHP 1550 PSI, BRK 2688 PSI @ 5.7 BPM. ISIP 2363 PSI, FG .69. PUMP 100 BBLs @ 50 BPM @ 5850 PSI = 61% HOLES OPEN. ISIP 2671 PSI, FG .72, NPI 308 PSI. MP 6240 PSI, MR 51.6 BPM, AP 5180 PSI, AR 51 BPM, PMP 2673 BBLs SW & 105,718 LBS OF 30/50 SND & 5,000 LBS OF 20/40 RESIN SND. TOTAL PROP 110,718 LBS, SWI, X-OVER FOR WL.

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

Well: NBU 921-26B2S ( RED )	Spud Conductor: 8/22/2009	Spud Date: 8/30/2009
Project: UTAH-UINTAH	Site: NBU 921-26C PAD	Rig Name No:
Event: COMPLETION	Start Date: 1/14/2010	End Date: 2/6/2010
Active Datum: RKB @4,984.00ft (above Mean Sea Leve		
UWI: NE/NW/0/9/S/21/E/26/0/0/6/PM/N/788.00/W/0/1,685.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	8:30 - 9:30	1.00	COMP	37	B	P		PERF STG 4)PU 4 1/2 8K BAKER CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 9024' P/U PERF F/ 8890'-92', 4 SPF, 8 HOLES. 8936'-40', 4 SPF, 16 HOLES. 8990'-94', 4 SPF, 16 HOLES. TOTAL HOLES =40. POOH. X-OVER FOR FRAC CREW.
	11:10 - 11:30	0.33	COMP	36	B	P		FRAC STG 4)WHP 1940 PSI, BRK 3114 PSI @ 5.8 BPM. ISIP 2546 PSI, FG .72. PUMP 100 BBLS @ 50 BPM @ 5000 PSI = 100% HOLES OPEN. ISIP 2635 PSI, FG .73, NPI 89 PSI. MP 5330 PSI, MR 52 BPM, AP 4510 PSI, AR 50.9 BPM, PMP 782 BBLS SW & 23,582 LBS OF 30/50 SND & 5,000 LBS OF 20/40 RESIN SND. TOTAL PROP 28,582 LBS, SWI, X-OVER FOR WL.
	11:35 - 12:35	1.00	COMP	37	B	P		PERF STG 5)PU 4 1/2 8K BAKER CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 8354' P/U PERF F/ 8440'-46', 3 SPF, 18 HOLES. 8486'-88', 4 SPF, 8 HOLES. 8550'-54', 4 SPF, 16 HOLES. TOTAL HOLES = 42. POOH. X-OVER FRAC CREW.
	14:15 - 15:00	0.75	COMP	46	E	P		BEFORE FRACING STG 5 MADE REPAIRS T/ PUMP 1. ( VALVE & SEAT WAS WASHED IN THE FLUID END. 45 MIN DOWN TIME. )
	15:00 - 15:31	0.52	COMP	36	B	P		FRAC STG 5)WHP 1630 PSI, BRK 5146 PSI @ 5.4 BPM. ISIP 2635 PSI, FG .74. PUMP 100 BBLS @ 48 BPM @ 5680 PSI = 60% HOLES OPEN. ISIP 2595 PSI, FG .74, NPI -40 PSI. MP 6354 PSI, MR 52.8 BPM, AP 4420 PSI, AR 54.4 BPM, PMP 1063 BBLS SW & 35,812 LBS OF 30/50 SND & 5,000 LBS OF 20/40 RESIN SND. TOTAL PROP 40,812 LBS, SWI, X-OVER FOR WL.
	15:35 - 18:00	2.42	COMP	37	B	P		PERF STG 6)PU 4 1/2 8K BAKER CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH T/ 2394', STACK OUT. P/U FOUND WL CABLE WAS HIGH STAND. POOH. LD PLUG & GUNS. CUT OFF 3000' OF CABLE & REHEAD. PU PLUG & GUNS. RIH T/ 2900' STACK OUT AGAIN. POOH, LD GUNS & PLUG. REPLACE WL TRUCK IN THE :AM.
2/3/2010	7:00 - 7:45	0.75	COMP	37	B	P		PERF STG 6)PU 4 1/2 8K BAKER CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 8354' P/U PERF F/ 8186'-90', 3 SPF, 12 HOLES. 8282'-84', 4 SPF, 8 HOLES. 8291'-93', 4 SPF, 8 HOLES. 8320'-24', 3 SPF, 12 HOLES. TOTAL HOLES = 40. POOH.

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-26B2S ( RED )      Spud Conductor: 8/22/2009      Spud Date: 8/30/2009  
 Project: UTAH-UINTAH      Site: NBU 921-26C PAD      Rig Name No:  
 Event: COMPLETION      Start Date: 1/14/2010      End Date: 2/6/2010  
 Active Datum: RKB @4,984.00ft (above Mean Sea Leve)      UWI: NE/NW/0/9/S/21/E/26/0/0/6/PM/N/788.00/W/0/1,685.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	9:56 - 10:25	0.48	COMP	36	B	P		FRAC STG 6)WHP 1125 PSI, BRK 3647 PSI @ 5.6 BPM. ISIP 2262 PSI, FG .71. PUMP 100 BBLs @ 51 BPM @ 4730 PSI = 98% HOLES OPEN. ISIP 2612 PSI, FG .75. NPI 350 PSI. MP 5442 PSI, MR 51.5 BPM, AP 4200 PSI, AR 51.4 BPM, PMP 1185 BBLs SW & 42,690 LBS OF 30/50 SND & 5,000 LBS OF 20/40 RESIN SND. TOTAL PROP 47,690 LBS. SWI, X-OVER FOR WL.
	10:25 - 11:20	0.92	COMP	37	B	P		PERF STG 7)PU 4 1/2 8K BAKER CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 8076' P/U PERF F/ 7874'-78', 3 SPF, 12 HOLES. 7924'-26', 3 SPF, 6 HOLES. 7962'-64', 3 SPF, 6 HOLES. 7990'-92', 4 SPF, 8 HOLES. 8044'-46', 4 SPF, 8 HOLES. TOTAL HOLES = 40. POOH. X-OVER FOR FRAC CREW.
	12:20 - 13:16	0.93	COMP	36	B	P		FRAC STG 7)WHP 1225 PSI, BRK 3073 PSI @ 6.0 BPM. ISIP 1854 PSI, FG .67. PUMP 100 BBLs @ 51 BPM @ 4375 PSI = 90% HOLES OPEN. ISIP 2458 PSI, FG .74, NPI 604 PSI. MP 6330 PSI, MR 55.5 BPM, AP 4341 PSI, AR 54.1 BPM, PMP 2651 BBLs SW & 105,853 LBS OF 30/50 SND & 5,000 LBS OF 20/40 RESIN SND. TOTAL PROP 110,853 LBS. SWI, X-OVER FOR WL.
	16:30 - 18:00	1.50	COMP	34	I	P		PU 4 1/2 8K BAKER CBP. RIH SET CBP @ 7824'. POOH. SWI. THIS WELL IS DONE FRACING.
2/5/2010	7:00 - 7:15	0.25	COMP	48		P		DAY 5 - JSA & SM. NO H2S PRESENT.
	7:15 - 18:00	10.75	COMP	30	A	P		ROAD RIG FROM NBU 921-33F SWD. MIRU RIG, SPOT EQUIP., WHP = 0 PSI, ND F.V., NU BOP, RU FLOOR & TBG EQUIP., PREP & TALLY TBG., PU BIT, POBS & XN NIPPLE. RIH ON NEW 2 3/8" TBG. TAG FILL @ 7808'. LD 2 JT. EOT @ 7740'. RU PWR SWWL & PMP. SWI - SDFN. PREP TO DRLG PLGS IN AM.
2/6/2010	7:00 - 7:30	0.50	COMP	48		P		DAY 6 - JSA & SM. NO H2S PRESENT

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

Well: NBU 921-26B2S ( RED )      Spud Conductor: 8/22/2009      Spud Date: 8/30/2009  
 Project: UTAH-UINTAH      Site: NBU 921-26C PAD      Rig Name No:  
 Event: COMPLETION      Start Date: 1/14/2010      End Date: 2/6/2010  
 Active Datum: RKB @4,984.00ft (above Mean Sea Leve)      UWI: NE/NW/0/9/S/21/E/26/0/0/6/PM/N/788.00/W/0/1,685.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:30 - 17:00	9.50	COMP	44	C	P		<p>WHP = 0 PSI, EOT @ 7740'. RIH TAG FILL @ 7808'. EST CIRC., PT BOP TO 3000 PSI, C/O 30' OF SND.</p> <p>CBP #1) DRLG OUT BAKER 8K CBP @ 7824' IN 15 MIN. 700 PSI DIFF. RIH TAG FILL @ 8046'. C/O 30' OF SND. FCP = 50 PSI.</p> <p>CBP #2) DRLG OUT BAKER 8K CBP @ 8076' IN 20 MIN. 400 PSI DIFF. RIH TAG FILL @ 8324'. C/O 30' OF SND. FCP = 200 PSI.</p> <p>CBP #3) DRLG OUT BAKER 8K CBP @ 8354' IN 15 MIN. 500 PSI DIFF. RIH TAG FILL @ 8549'. C/O 35' OF SND. FCP = 150 PSI.</p> <p>CBP #4) DRLG OUT BAKER 8K CBP @ 8584' IN 15 MIN. 400 PSI DIFF. RIH TAG FILL @ 8983'. C/O 35' OF SND. FCP = 250 PSI.</p> <p>CBP #5) DRLG OUT BAKER 8K CBP @ 9018' IN 25 MIN. 700 PSI DIFF. RIH TAG FILL @ 9270'. C/O 20' OF SND. FCP = 500 PSI.</p> <p>CBP #6) DRLG OUT BAKER 8K CBP @ 9290' IN 15 MIN. 900 PSI DIFF. RIH TAG FILL @ 9576'. C/O 28' OF SND. FCP = 250 PSI.</p> <p>CBP #7) DRLG OUT BAKER 8K CBP @ 9604' IN 15 MIN. 800 PSI DIFF. RIH TAG FILL @ 9893'. PBTD @ 10003'. C/O 110' OF SND. FCP = 350 PSI. EOT @ 9697'. CIRC WELL CLEAN.</p> <p>RD PWR SWVL, RU TBG EQUIP. LD 21 JTS ON FLOAT (32 JTS TOTAL ON FLAOT). SICP = 2100 PSI. LND TBG ON HNGR W/295 JTS NEW 2 3/8" 4.7# L80 TBG. EOT @ 9334.65'. XN NIPPLE @ 9333.45'. AVG 17 MIN/PLG, C/O 318' OF SND TOTAL.</p> <p>RD FLOOR &amp; TBG EQUIP. ND BOP, DROP BALL, NUWH. PMP OFF BIT @ 3000 PSI. WAIT 30 MIN FOR BIT TO FALL TO BTM. OPEN WELL TO F.B.T. ON 20 CHOKE. FTP = 000 PSI. SICP = 2100 PSI. TURN WELL TO F.B.C. RD RIG &amp; SPOT ON NBU 921-26B3S. SDFWE.</p>
2/7/2010	7:00 -			33				<p>7 AM FLBK REPORT: CP 2600#, TP 2000#, 20/64" CK, 55 BWPH, HEAVY SAND, LIGHT GAS TTL BBLs RECOVERED: 2396 BBLs LEFT TO RECOVER: 10711</p>
2/8/2010	7:00 -			33	A			<p>7 AM FLBK REPORT: CP 3100#, TP 2025#, 20/64" CK, 45 BWPH, HEAVY SAND, LIGHT GAS TTL BBLs RECOVERED: 3606 BBLs LEFT TO RECOVER: 7089</p>
2/9/2010	7:00 -			33	A			<p>7 AM FLBK REPORT: CP 3300#, TP 2050#, 20/64" CK, 35 BWPH, MEDIUM SAND, - GAS TTL BBLs RECOVERED: 4246 BBLs LEFT TO RECOVER: 6449</p>
	12:00 -		PROD	50				<p>WELL TURNED TO SALES @ 12 AM 2/9/2010 - 1500 MCFD, 1080 BWPD, CP 3100#, FTP 2025#, CK 20/64"</p>

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

Well: NBU 921-26B2S ( RED )		Spud Conductor: 8/22/2009		Spud Date: 8/30/2009				
Project: UTAH-UINTAH		Site: NBU 921-26C PAD		Rig Name No:				
Event: COMPLETION		Start Date: 1/14/2010		End Date: 2/6/2010				
Active Datum: RKB @4,984.00ft (above Mean Sea Leve		UWI: NE/NW/0/9/S/21/E/26/0/0/6/PM/N/788.00/W/0/1,685.00/0/0						
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
2/10/2010	7:00 -			33	A			7 AM FLBK REPORT: CP 3000#, TP 1975#, 20/64" CK, 25 BWPH, LIGHT SAND, - GAS TTL BBLs RECOVERED: 4891 BBLs LEFT TO RECOVER: 5804

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UO 01194
<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 921-26B2S
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047503650000
<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> 0788 FNL 1685 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 26 Township: 09.0S Range: 21.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES  <b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 6/28/2011  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER	<input checked="" type="checkbox"/> <b>CASING REPAIR</b> <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION  OTHER: <input style="width: 100px;" type="text" value="Wellhead Repair"/>

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

The operator requests approval to conduct wellhead/casing repair operations on the subject well location. Please find the attached procedure for the proposed repair work on the subject well location.

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

Date: 07/11/2011

By: *Dark K. Quist*

<b>NAME (PLEASE PRINT)</b> Gina Becker	<b>PHONE NUMBER</b> 720 929-6086	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A	<b>DATE</b> 6/28/2011	

**WORKORDER #:**

**Name:** NBU 921-26B2S - [921-26C PAD] 6/16/2011  
**Surface Location:** NENW Sec. 26, T9S, R21E  
 Uintah County, UT

**API:** 4304750365 **LEASE#:** UO-01194

**ELEVATIONS:** 4970' GL 4984' KB

**TOTAL DEPTH:** 10,062' **PBTD:** 10,004'

**SURFACE CASING:** 9 5/8", 40# J-55 @ 2543'

**PRODUCTION CASING:** 4 1/2", 11.6#, I-80 @ 10,047'  
 TOC @ 854' per CBL

**PERFORATIONS:** Mesaverde 7874' - 9866'

Tubular/Borehole	Drift inches	Collapse psi	Burst psi	Capacities		
				Gal./ft.	Cuft/ft.	Bbl./ft.
2.375" 4.7# J-55 tbg.	1.901	8100	7700	0.1624	0.02171	0.00387
4.5" 11.6# I-80	3.875	6350	7780	0.6528	0.0872	0.0155
9.625" 40# J-55	8.679	2570	3950	3.1847	0.4257	0.0758
<b>Annular Capacities</b>						
2.375" tbg. X 4 1/2" 11.6# csg				0.4227	0.0565	0.01

**GEOLOGICAL TOPS:**

1540' Green River  
 2228' Mahogany  
 5056' Wasatch  
 7852' Mesaverde

## **NBU 921-26B2S- WELLHEAD REPAIR PROCEDURE**

### **PREP-WORK PRIOR TO MIRU:**

1. Dig out down to the 2" surface casing valve or to the valve on the riser off the surface casing.
2. Install a tee with 2 valves, with a pressure gauge and sensor on one valve.
3. Open casing valve and record pressures.
4. Install nipple and steel hose on the other valve, the relief valve,. Do not use hammer unions. No impact equipment or tools to be used for any of this installation. Extend hose and hard piping to a downwind location at least 100' from the wellhead. Consider installing a manifold so that vent area could be in two locations approx. 90 degrees apart from the wellhead.
5. Open the relief valve and blow well down to the atmosphere.
6. Make a determination of amount of gas flow, either by installation of a choke nipple, bucket test or other.
7. Shut well in. Observe for rate of build-up by utilizing sensor data. Do not build-up for more than 24 hours. Vent gas through the vent line and leave open to the atmosphere.

### **WORKOVER PROCEDURE:**

1. MIRU workover rig.
2. Kill well with 10# brine / KCL (dictated by well pressure ).
3. Remove tree, install double BOP with blind and 2 3/8" pipe rams, with accumulator closing unit and manual back-ups. Function test BOP system.
4. POOH w/ tubing laying down extra tubing.
5. Rig up wireline service. RIH and set CBP @ ~7824'. Dump bail 4 sx cement on top of plug. POOH and RD wireline service. TIH w/ tubing and seating nipple. Land tubing ±60' above cement. RDMO.
6. Monitor well pressures. If surface casing is dead. MIRU. ND WH and NU BOP. POOH w/ tubing.
7. Depending on conditions at wellsite, continue with either CUT/PATCH Procedure or BACK-OFF Procedure.

**CUT/PATCH PROCEDURE:**

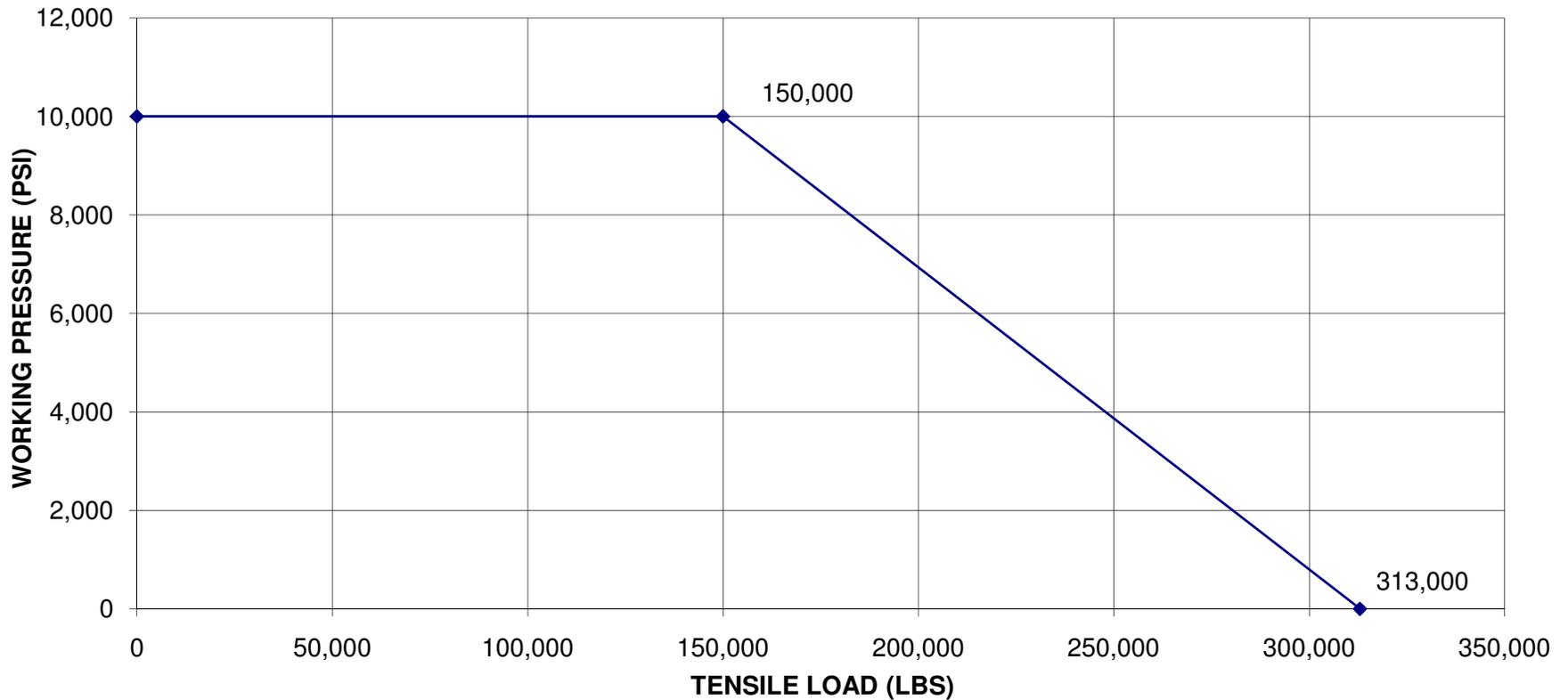
1. PU internal casing cutters and RIH. Cut casing at +/- 30' from surface.
2. POOH, LD cutters and casing.
3. PU 7 3/8" overshoot with 4 1/2" right hand standard wicker grapple, 1 - 4 3/4" drill collar with 3 1/2" IF threads, pup joint, manual bumper sub, and crossovers. If casing cut is deeper than ±30' utilize >7000 ft-lb torque pipe as needed. Pull a minimum of 10,000# to keep grapple engaged if cement top is high (<~900'). If cement top is low (>~900'), more weight will be required to put casing in neutral. Torque casing string to ±7000 ft-lbs, count number of turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place ±7000 ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out, release overshoot, POOH, and lay down.
4. TIH w/ skirted mill and dress off the fish top for approximately 1/2 hour. TOO H.
5. PU & RIH w/ 4 1/2" 10k external casing patch on 4 1/2" P-110 casing. Ensure that sliding sleeve assembly shifts ±3' and casing tags no-go portion of patch. NOTE: Shear pins will shear at 3500 to 4500 lbs.
6. Latch fish, PU to 100,000# tension. RU B&C. Cycle pressure test to 3500 psi.
7. Install slips. Land casing w/ 80,000# tension.
8. Cut-off and dress 4 1/2" casing stub.
9. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~7774'. Clean out to PBSD (10,004').
10. POOH, land tbg and pump off POBS.
11. NUWH, RDMO. Turn well over to production ops.

**BACK-OFF PROCEDURE:**

1. PU internal casing cutters and RIH. Cut casing at +/- 6' from surface.
2. POOH, LD cutters and casing.
3. PU 4 1/2" overshoot. RIH, latch fish. Pick string weight to neutral.
4. MIRU casing crew and wireline services. RIH and shoot string shot at casing collar @ ± 46'.
5. Back-off casing, POOH.

6. PU new casing joint with buttress threads and entry guide and RIH. Tag casing top. Thread into casing and torque up to  $\pm 7000$  ft-lbs, count number of additional turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place  $\pm 7000$  ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out go to step 7.
7. PU 100,000# tension string weight. RU B&C. Cycle pressure test to 3500 psi.
8. Install slips. Land casing w/ 80,000# tension.
9. Cut-off and dress 4 1/2" casing stub.
10. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~7774'. Clean out to PBTD (10,004').
11. POOH, land tbg and pump off POBS.
12. NUWH, RDMO. Turn well over to production ops.

**STRENGTH DATA FOR LOGAN 5.88" OD "L" TYPE CSG PATCH  
4-1/2 CASING, 10K PSI MAX WP 125K YIELD MAT'L  
LOGAN ASSEMBLY NO. 510L-005 -000**



COLLAPSE PRESSURE:  
11,222 PSI @ 0 TENSILE  
8,634 PSI @ 220K TENSILE

Tensile Strength @ Yield:  
Tensile Strength w/ 0 Int. Press.= 472,791lbs.  
Tensile Strength w/ 10K Int. Press.= 313,748lbs.

DATA BY SLS 11/16/2009

**RECEIVED** Jun. 28, 2011



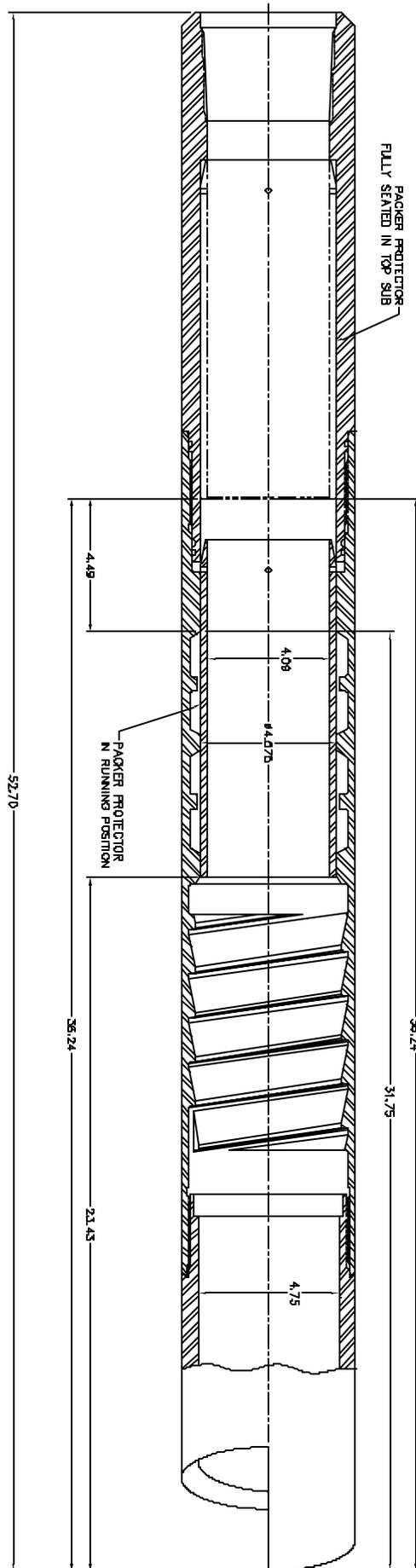
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## **Logan High Pressure Casing Patches Assembly Procedure**

All parts should be thoroughly greased before being assembled.

1. Install all four Logan Type "L" Packers in the spaces provided in the Casing Patch Bowl. Refer to diagram provided for proper installation.
2. Install Packer Protector from the Basket Grapple end of the Bowl. The beveled end of the Packer Protector goes in first. Carefully push the Packer Protector through the four Type "L" Packers.
3. Align Shear Pin Holes in Packer Protector so that the holes have just passed into the counter bore at the Top Sub end, refer to diagram. The Packer Protector is provided with four Shear Pin Holes. Use only two holes, 180 degrees apart and install the pins.
4. Screw the Basket Grapple in from the lower end of the Bowl, using left-hand rotation. The Tang Slot in the Basket Grapple must land in line with the slot in the Bowl.
5. Insert the Basket Grapple Control into the end of the Bowl. Align Tang on the Basket Grapple Control with the Tang Slot of the Bowl and Basket Grapple. This secures the Bowl and the Basket Grapple together.
6. Install the Cutlipped Guide into the lower end of the Bowl.
7. Install O-Rings on the two five-foot long Extensions. Screw the first Extension into the top end of the Bowl. Screw the second Extension into the top end of the first Extension.
8. Install O-Ring on Top Sub. Screw Top Sub into top end of second Extension.

Follow recommended Make-Up Torque as provided in chart.



510L-005-001 4-1/2" LOGAN HP CASING PATCH

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UO 01194
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 921-26B2S	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047503650000	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6515 Ext	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0788 FNL 1685 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 26 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 checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 9/1/2011  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER	
	<input checked="" type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input type="text" value="Wellhead Repair"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
THE OPERATOR HAS CONCLUDED WELLHEAD/CASING REPAIRS ON THE SUBJECT WELL LOCATION. PLEASE SEE THE ATTACHED CHRONOLOGICAL HISTORY FOR DETAILS OF THE OPERATIONS.		
<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY</b>		
<b>NAME (PLEASE PRINT)</b> Gina Becker	<b>PHONE NUMBER</b> 720 929-6086	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A	<b>DATE</b> 9/1/2011	

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

Well: NBU 921-26B2S ( RED )      Spud Conductor: 8/22/2009      Spud Date: 8/30/2009  
 Project: UTAH-UINTAH      Site: NBU 921-26C PAD      Rig Name No: LEED 698/698  
 Event: WELL WORK EXPENSE      Start Date: 8/8/2011      End Date: 8/10/2011  
 Active Datum: RKB @4,984.00ft (above Mean Sea Level)      UWI: NE/NW/0/9/S/21/E/26/0/0/6/PM/N/788.00/W/0/1,685.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
8/8/2011	12:00 - 13:30	1.50	MIRU	30	A	P		MOVE BASE BEAM, SPOT RIG, MIRU.
	13:30 - 13:45	0.25	ALL	48		P		HSM, REVIEW BOP'S, CHECK H2S MONITORS
	13:45 - 14:15	0.50	ALL	47	A	P		FCP. 119 PSI. FTP. 119 PSI. BLEW TBG DWN, CONTROL TBG W/ 10 BBLs, ND WH, NU BOP'S, RU FLOOR & TBG EQUIPMENT.
	14:15 - 16:45	2.50	ALL	31	I	P		UNLAND TBG HANGER, POOH 295 JTS. 2-3/8 L-80 TBG, LD 1.875 XN.
	16:45 - 17:30	0.75	ALL	34	I	P		RU J-W WIRELINE COMPANY, RIH 4-1/2 BAKER 10K CIBP & SET @ 7824', POOH TOOLS, RD J-W WIRELINE COMPANY.
	17:30 - 18:00	0.50	ALL	33	C	P		FILL CSG W/ T-MAC, P.T. CIBP TO 3000 PSI. HELD, SWI, SDFN.
8/9/2011	7:00 - 7:15	0.25	ALL	48		P		HSM, REVIEW BACK-OFF PROCEDURE.
	7:15 - 7:30	0.25	ALL	47	A	P		RD FLOOR & TBG EQUIPMENT, ND BOP'S, ND CSG BOWL, NU PWR SWVL.
	7:30 - 9:30	2.00	ALL	31	B	P		PU INTERNAL CSG CUTTER & RIH, CUT CSG 3' F/ SURFACE, POOH, LD CUTTER & CSG W/ MANDREL, ND PWR SWVL, PU 4-1/2 OVERSHOT, RIH LATCH FISH, MIRU CSG CREW & WIRELINE SERVICES, STRING SHOT CSG COLLAR, BACK-OFF CSG PUP JNT, RD WIRELINE SERVICES, POOH, PU NEW 10' CSG PUP JNT, TAG CSG TOP, THREAD INTO CSG, TORQUE CSG TO 7000# W/ 17 ROTATIONS ON CSG, RD CSG CREW, PU CSG TO 102,000# TENSION.
	9:30 - 11:00	1.50	ALL	33	C	P		RU B&C QUICK TEST, P.T. 4-1/2 CSG TO 1000 PSI. FOR 15 MINS, LOST 19 PSI. IN 15 MINS, P.T. 4-1/2 CSG TO 3500 PSI. LOST 27 PSI. IN 30 MINS, RD B&C QUICK TEST.
	11:00 - 13:00	2.00	ALL	47	C	P		SET C-22 SLIPS, LAND 4-1/2 CSG W/ 86,000# TENSION, CUT-OFF & DRESS 4-1/2 CSG STUB, NU CSG BOWL, HAD PROBLEM THREADING ON CSG BOWL, NU BOP'S, RU FLOOR & TBG EQUIPMENT.
	13:00 - 15:30	2.50	ALL	31	I	P		PU 3-7/8 MILL & RIH W/ 248 JTS. 2-3/8 L-80 TBG, TAG CIBP @ 7824', SWI, SDFN.
8/10/2011	7:00 - 7:30	0.50	ALL	48		P		HSM, REVIEW JSA PWR SWVL & FOAM UNIT.
	7:30 - 8:00	0.50	ALL	47	A	P		NU PWR SWVL, INSTALL TSF, RU TECH FOAM.
	8:00 - 10:30	2.50	ALL	44	C	P		BROKE CIRC IN 45 MINS, D/O CIBP @ 7824' IN 48 MINS. FELL THROUGH, NO PSI. INCREASE, RIH TBG IN DERRICK, PU 21 JTS. 2-3/8 L-80 TBG F/ TRAILER & TAG FILL @ 9972', CIRC HOLE CLEAN, RD PWR SWVL.

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-26B2S ( RED )		Spud Conductor: 8/22/2009		Spud Date: 8/30/2009	
Project: UTAH-UINTAH		Site: NBU 921-26C PAD		Rig Name No: LEED 698/698	
Event: WELL WORK EXPENSE		Start Date: 8/8/2011		End Date: 8/10/2011	
Active Datum: RKB @4,984.00ft (above Mean Sea Leve		UWI: NE/NW/0/9/S/21/E/26/0/0/6/PM/N/788.00/W/0/1,685.00/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	10:30 - 19:00	8.50	ALL	31	I			POOH & LD 21 JTS. 2-3/8 L-80 TBG ON TRAILER, REMOVE TSF, RD TECH FOAM, POOH 295 JTS. 2-3/8 L-80 TBG, LD MILL, PU 1.875 XN NOTCH & RIH 148 JTS. 2-3/8 L-80 TBG, RU SWAB EQUIPMENT, RIH & BROACH TBG W/ 1.9 TO EOT @ 4674' FINISH RIH 147 JTS. RU SWAB EQUIPMENT, RIH & BROACH TO EOT @ 4642', LAND TBG, RD FLOOR & TBG, ND BOP'S, NU WH, RDMO.  TBG DETAIL  KB-----14' HANGER-----.83" 295 JTS. 2-3/8 L-80 TBG-----9318.62' 1.875 XN HALF POBS-----2.20' EOT @-----9335.65' TOP PERF @ 7874' BTM PERF @ 9866' PBTD @ 10,004' TAG FILL @ 9972' WLTR. 80 BBLS. API # 43047503650000 CONDUCT WELL HEAD/ CSG REPAIR OPERATIONS.

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>	
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	
<b>1. TYPE OF WELL</b> Gas Well	<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UO 01194
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>PHONE NUMBER:</b> 720 929-6511	<b>8. WELL NAME and NUMBER:</b> NBU 921-26B2S
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0788 FNL 1685 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 26 Township: 09.0S Range: 21.0E Meridian: S	<b>9. API NUMBER:</b> 43047503650000
	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
	<b>COUNTY:</b> UINTAH
	<b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 4/30/2012	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" 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.

The operator requests authorization to re-complete the subject well location. This is producing from the Mesaverde formation. The operator is proposing to re-complete the Wasatch formation. The operator also requests authorization to commingle the newly Wasatch and existing Mesaverde formations. Please refer to the attached re-completion procedures.

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

**Date:** May 24, 2012

**By:**

<b>NAME (PLEASE PRINT)</b> Gina Becker	<b>PHONE NUMBER</b> 720 929-6086	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A		<b>DATE</b> 4/30/2012



**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 43047503650000**

**Authorization: Board Cause No. 173-14.**

# Greater Natural Buttes Unit



**NBU 921-26B2S**  
**RE-COMPLETIONS PROCEDURE**

**DATE:4/16/12**  
**AFE#:**  
**API#:4304750365**  
**USER ID:OOT937** (Frac Invoices Only)

**COMPLETIONS ENGINEER:** Zachary Garrity, Denver, CO  
(720)-929-6180 (Office)  
(406)-781-6427 (Cell)

**SIGNATURE:**

**ENGINEERING MANAGER: JEFF DUFRESNE**

**SIGNATURE:**

**REMEMBER SAFETY FIRST!**



- (specific details on remediation will be provided in post-job-report). Re-pressure test to 1000 and 3500 psi for 15 minutes each and to 6200 psi for 30 minutes.
- Flush volumes are the sum of slick water and acid used during displacement (include scale inhibitor as mentioned above). Stage acid and scale inhibitor if necessary to cover the next perforated interval.
  - **Call flush at 0 PPG @ inline densimeters. Slow to 5 bbl/min over last 10-20 bbls of flush. Flush to top perf.**
  - **If distance between plug and top perf of previous stage is less than 50', it is considered to be tight spacing - over flush stage by 5 bbls (from top perf)**
  - **TIGHT SPACING ON STAGE 2 and 4; OVERFLUSH BY 5 BBLs**
  - Tubing Currently Landed @~9335
  - Originally completed on 2/1/10

**Existing Perforations:**

<b><u>PERFORATIONS</u></b>						
<b><u>Formation</u></b>	<b><u>Zone</u></b>	<b><u>Top</u></b>	<b><u>Btm</u></b>	<b><u>spf</u></b>	<b><u>Shots</u></b>	<b><u>Date</u></b>
MESAVERDE		7874	7878	3	12	02/04/2010
MESAVERDE		7924	7926	3	6	02/04/2010
MESAVERDE		7962	7964	3	6	02/04/2010
MESAVERDE		7990	7992	4	8	02/04/2010
MESAVERDE		8044	8046	4	8	02/04/2010
MESAVERDE		8186	8190	3	12	02/04/2010
MESAVERDE		8282	8284	4	8	02/04/2010
MESAVERDE		8291	8293	4	8	02/04/2010
MESAVERDE		8320	8324	3	12	02/04/2010
MESAVERDE		8440	8446	3	18	02/03/2010
MESAVERDE		8486	8488	4	8	02/03/2010
MESAVERDE		8550	8554	4	16	02/03/2010
MESAVERDE		8890	8892	4	8	02/03/2010
MESAVERDE		8936	8940	4	16	02/03/2010
MESAVERDE		8990	8994	4	16	02/03/2010
MESAVERDE		9088	9092	3	12	02/02/2010
MESAVERDE		9164	9166	3	6	02/02/2010
MESAVERDE		9203	9208	3	15	02/02/2010
MESAVERDE		9258	9260	4	8	02/02/2010
MESAVERDE		9356	9358	3	6	02/02/2010
MESAVERDE		9462	9464	3	6	02/02/2010
MESAVERDE		9480	9484	3	12	02/02/2010
MESAVERDE		9546	9548	4	8	02/02/2010
MESAVERDE		9572	9574	4	8	02/02/2010
MESAVERDE		9638	9640	3	6	01/29/2010
MESAVERDE		9700	9704	3	12	01/29/2010
MESAVERDE		9837	9840	4	12	01/29/2010
MESAVERDE		9862	9866	3	12	01/29/2010

**Relevant History:**

- 2/1/10 – Original completion  
 7/27/10 – Slickline; lots of heavy barium and scale on the tubing

- 11/18/10** – Slickline; tubing, plunger, and spring were clean.  
**1/27/11** – Slickline; tubing, plunger, and spring were clean.  
**3/1/11** – Slickline; tubing had trash from 1420-1635. Tubing from 1635-TD, plunger, and spring were clean.  
**8/8/11** – Pulled tbg and set a CIBP at 7824'. Cut 4-1/2" csg 3' from surface and pull fish plus pup joint. Replaced bad casing with new; landing on slips. Reattached wellhead and milled out CIBP. RIH with 2-3/8 L-80 tubing; landing at 9335.  
**12/13/11** – Slickline; tubing, plunger, and spring were clean.

**H2S History:**

Production Date	Gas (avg mcf/day)	Water (avg bbl/day)	Oil (avg bbl/day)	LGR (bbl/Mmcf)	Max H2S Seperator (ppm)
10/31/2010	540.58	45.97	0.00	85.03	
11/30/2010	602.33	44.20	0.00	73.38	
12/31/2010	525.29	45.71	0.00	87.02	0.00
1/31/2011	485.48	45.71	0.00	94.15	0.00
2/28/2011	448.04	45.71	0.00	102.03	
3/31/2011	439.97	45.71	0.00	103.89	
4/30/2011	443.27	45.70	0.00	103.10	
5/31/2011	425.45	44.48	0.00	104.56	
6/30/2011	408.37	45.70	0.00	111.91	
7/31/2011	387.94	45.58	0.00	117.50	13.00
8/31/2011	375.87	45.39	0.00	120.75	
9/30/2011	383.70	45.63	0.00	118.93	0.00
10/31/2011	375.61	44.61	0.00	118.77	
11/30/2011	361.60	32.53	0.00	89.97	
12/31/2011	349.77	19.10	0.00	54.60	
1/31/2012	346.48	19.58	0.00	56.51	
2/29/2012	349.93	20.00	0.00	57.15	
3/31/2012	341.10	18.09	0.27	53.83	

**PROCEDURE: (If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work.)**

1. MIRU. Control well with recycled water and biocide as required. ND WH, NU BOP's and test.
2. The tubing is below the proposed CBP depth, TOO H with 2-3/8", 4.7#, J-55 (or N-80) tubing (currently landed at ~9335'). Visually inspect for scale and consider replacing if needed.
3. If tbg looks ok consider running a gauge ring to 7852 (50' below proposed CBP). Otherwise P/U a mill and C/O to 7852 (50' below proposed CBP).
4. Set 8000 psi CBP at ~ 7802'. ND BOPs and NU frac valves. Test frac valves and casing to 1000 and 3500 psi for 15 minutes each and to 6200 psi for 30 minutes; if pressure test fails contact Denver engineer and see notes. As per standard operating procedure install steel blowdown line to reserve pit from 4-1/2" X 9-5/8" annulus. Lock **OPEN** the Braden head valve. Annulus will be monitored throughout stimulation. If release occurs, stimulation will

be shut down. Well conditions will be assessed and actions taken as necessary to secure the well. UDOGM will be notified if a release to the annulus occurs.

5. Perf the following with 3-3/8" gun, 23 gm, 0.36"hole:

Zone	From	To	spf	# of shots
WASATCH	7551	7553	3	6
WASATCH	7591	7593	3	6
WASATCH	7619	7620	3	3
WASATCH	7770	7772	4	8

6. Breakdown perfs and establish injection rate (include scale inhibitor in fluid). Spot 250 gals of 15% HCL and let soak 5-10 min. Fracture as outlined in Stage 1 on attached listing. Under-displace to ~7,551' and trickle 250gal 15%HCL w/ scale inhibitor in flush .

7. Set 8000 psi CBP at ~7,449'. Perf the following 3-3/8" gun, 23 gm, 0.36"hole:

Zone	From	To	spf	# of shots
WASATCH	7194	7195	3	3
WASATCH	7253	7254	3	3
WASATCH	7281	7282	3	3
WASATCH	7358	7359	3	3
WASATCH	7365	7366	3	3
WASATCH	7396	7399	3	9

8. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 2 on attached listing. Under-displace to ~7,194' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

**NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLs**

9. Set 8000 psi CBP at ~7,178'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

Zone	From	To	spf	# of shots
WASATCH	6899	6900	3	3
WASATCH	6911	6912	3	3
WASATCH	7015	7016	3	3
WASATCH	7033	7034	3	3
WASATCH	7111	7112	3	3
WASATCH	7132	7133	3	3
WASATCH	7147	7148	3	3

10. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 3 on attached listing. Under-displace to ~6,899' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

11. Set 8000 psi CBP at ~6,843'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

Zone	From	To	spf	# of shots
WASATCH	6609	6610	3	3
WASATCH	6631	6632	4	4
WASATCH	6653	6654	4	4
WASATCH	6776	6777	3	3
WASATCH	6791	6792	3	3
WASATCH	6802	6803	4	4

12. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 4 on attached listing. Under-displace to ~6,609' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

**NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLs**

13. Set 8000 psi CBP at ~6,582'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:
- | Zone    | From | To   | spf | # of shots |
|---------|------|------|-----|------------|
| WASATCH | 6380 | 6381 | 4   | 4          |
| WASATCH | 6397 | 6398 | 4   | 4          |
| WASATCH | 6482 | 6485 | 3   | 9          |
| WASATCH | 6550 | 6552 | 3   | 6          |
14. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 5 on attached listing. Under-displace to ~6,380' and trickle 250gal 15%HCL w/ scale inhibitor in flush.
15. Set 8000 psi CBP at ~6,088'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:
- | Zone    | From | To   | spf | # of shots |
|---------|------|------|-----|------------|
| WASATCH | 5978 | 5979 | 3   | 3          |
| WASATCH | 6032 | 6038 | 3   | 18         |
16. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 6 on attached listing. Under-displace to ~5,978' and trickle 250gal 15%HCL w/ scale inhibitor in flush.
17. Set 8000 psi CBP at ~5,453'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:
- | Zone    | From | To   | spf | # of shots |
|---------|------|------|-----|------------|
| WASATCH | 5396 | 5403 | 3   | 21         |
18. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 7 on attached listing. Under-displace to ~5,396' and flush only with recycled water.
19. Set 8000 psi CBP at~5,346'.
20. ND Frac Valves, NU and Test BOPs.
21. TIH with 3 7/8" mill, pump open sub, XN nipple and tubing.
22. Mill 7 plugs and clean out to a depth of 7787'. Depending on wells performance (contact Denver Engineer) either continue with step 23 or 24.
23. Land tubing at 7521', drop ball and pump open sub. Flow back completion load. RDMO
24. MIRU, POOH tbg and mill. TIH with POBS and mill.
25. Mill last plug @ 7802' clean out to PBSD at 10003'. Land tubing at ±9335' pump off bit and bit sub. This well WILL be commingled at this time.
26. Clean out well with foam and/or swabbing unit until steady flow has been established from completion.
27. **Leave surface casing valve open.** Monitor and report any flow from surface casing. RDMO

**For design questions, please call  
Zachary Garrity, Denver, CO  
(720)-929-6180 (Office)**

**(406)-781-6427 (Cell)**

**For field implementation questions, please call  
Jeff Samuels, Vernal, UT  
(435)-781-7046 (Office)**

NOTES:

**TIGHT SPACING ON STAGE 2 and 4; OVERFLUSH BY 5 BBLs**

**If using any chemicals for pickling tubing or H<sub>2</sub>S Scavenging, have MSDS for all chemicals prior to starting work**

**Verify that the Braden head valve is locked OPEN.**

Acid Pickling and H<sub>2</sub>S Procedures (If Required)

**\*\*PROCEDURE FOR PUMPING ACID DOWN TBG**

WHEN FINDING SCALE IN TUBING THAT IS ACID SOLUBLE, ENSURE THAT PLUNGER EQUIPMENT IS REMOVED AND ABLE TO PUMP DOWN TBG. INSTALL A 'T' IN PUMP LINE W/2" VALVE THAT NALCO CAN TIE INTO. HAVE 60 BBLs 2% KCL MIXED W/ 10-15 GAL H<sub>2</sub>S SCAVENGER IN RIG FLAT TANK. (WE USED THE RIG FLAT TANK FOR MIXING CHEMICAL SO WE DIDN'T HAVE THE CHEMICAL IN ALL FLUIDS ON LOCATION, ONLY WHAT WE NEEDED TO PUMP DOWN HOLE)

1. PUMP 5-10 BBLs 2% KCL DOWN TBG (NALCO CANNOT PUMP AGAINST PRESSURE)
2. NALCO WILL PUMP 3 DRUMS HCL (31%) INTO PUMP LINE.
3. FLUSH BEHIND ACID WITH 10-15 BBL 2% KCL
4. PUMP 2—30 BBL 2% W/ H<sub>2</sub>S SCAVENGER DOWN TBG.
5. PUMP REMAINDER OF 2% W/ H<sub>2</sub>S SCAVENGER DOWN CASING AND SHUT WELL IN FOR MINIMUM OF 2 HRS.
6. OVER DISPLACE DOWN TBG AND CSG TO FLUSH ACID AND SCAVENGER INTO FORMATION
7. MONITOR TUBING FOR FLOW AND CASING FOR H<sub>2</sub>S NOW AS POOH W/ TUBING.

**\*\* PROCEDURE FOR PUMPING H<sub>2</sub>S SCAVENGER WITHOUT ACID**

PRIOR TO RIG MOVING ON OR AS RIG PULLS ONTO LOCATION. TEST CASING, TUBING AND SEPARATOR FOR H<sub>2</sub>S. IF FOUND MAKE SURE THAT PLUNGER SYSTEM IS REMOVED (IT IS POSSIBLE TO PUMP AROUND PLUNGERS BUT SOME WILL HAVE A STANDING VALVE IN SEATING NIPPLE).

1. MIX 10-15 GAL H<sub>2</sub>S SCAVENGER WITH 60-100 BBL 2% KCL IN RIG FLAT TANK.
2. PUMP 25 BBLs MIXTURE DOWN TUBING AND REST DOWN CASING. SHUT WELL IN FOR 2 HOURS.
3. IF WELL HAS PRESSURE AFTER 2 HOURS – RETEST CASING AND TUBING FOR H<sub>2</sub>S.
4. FLUSH TUBING AND CASING PUSHING H<sub>2</sub>S SCAVENGER INTO FORMATION.
5. MONITOR TUBING FOR FLOW AND CASING FOR H<sub>2</sub>S NOW AS POOH W/ TUBING.

\*\* As per APC standard operating procedure, APC foreman will verify ALL volumes pumped and record on APC Volume Report Form

Key Contact information

Completion Engineer

Zachary Garrity: 406-781-6427, 720-929-6180

Production Engineer

Brad Laney: 435/781-7031, 435/828-5469

Jordan Portillo: 435/781-9785, 435/828-6221

Laura M. Wellman: 435/781-9748, 435/322-0118

Completion Supervisor Foreman

Jeff Samuels: 435-828-6515, 435-781-7046

Completion Manager

Jeff Dufresne: 720-929-6281, 303-241-8428

Vernal Main Office

435-789-3342

Emergency Contact Information—Call 911

Vernal Regional Hospital Emergency: 435-789-3342

Police: (435) 789-5835

Fire: 435-789-4222

Name NBU 921-26B2S  
Perforation and CBP Summary

Stage	Zones	Perforations		SPF	Holes	Fracture Coverage		
		Top, ft	Bottom, ft					
1	WASATCH	7551	7553	3	6	7544.5	to	7547
	WASATCH	7591	7593	3	6	7549	to	7556.5
	WASATCH	7619	7620	3	3	7577	to	7597.5
	WASATCH	7770	7772	4	8	7615.5	to	7622
	# of Perfs/stage				23	CBP DEPTH	7,449	
2	WASATCH	7194	7195	3	3	7189.5	to	7200
	WASATCH	7253	7254	3	3	7252	to	7255.5
	WASATCH	7281	7282	3	3	7279.5	to	7285.5
	WASATCH	7358	7359	3	3	7356.5	to	7368
	WASATCH	7365	7366	3	3	7378.5	to	7410
	WASATCH	7396	7399	3	9			
# of Perfs/stage				24	CBP DEPTH	7,178		
3	WASATCH	6899	6900	3	3	6897	to	6902.5
	WASATCH	6911	6912	3	3	6904	to	6916
	WASATCH	7015	7016	3	3	7012	to	7018
	WASATCH	7033	7034	3	3	7028.5	to	7038
	WASATCH	7111	7112	3	3	7109.5	to	7115
	WASATCH	7132	7133	3	3	7131	to	7134
	WASATCH	7147	7148	3	3	7147.5	to	7151
# of Perfs/stage				21	CBP DEPTH	6,843		
4	WASATCH	6609	6610	3	3	6606.5	to	6612.5
	WASATCH	6631	6632	4	4	6627	to	6634.5
	WASATCH	6653	6654	4	4	6647	to	6656
	WASATCH	6776	6777	3	3	6775	to	6779.5
	WASATCH	6791	6792	3	3	6789.5	to	6793.5
	WASATCH	6802	6803	4	4	6800.5	to	6805.5
# of Perfs/stage				21	CBP DEPTH	6,582		
5	WASATCH	6380	6381	4	4	6376.5	to	6386.5
	WASATCH	6397	6398	4	4	6395	to	6402.5
	WASATCH	6482	6485	3	9	6472	to	6487.5
	WASATCH	6550	6552	3	6	6549	to	6554
# of Perfs/stage				23	CBP DEPTH	6,088		
6	WASATCH	5978	5979	3	3	5972	to	5983.5
	WASATCH	6032	6038	3	18	6015.5	to	6042.5
# of Perfs/stage				21	CBP DEPTH	5,453		
7	WASATCH	5396	5403	3	21	5386.5	to	5406.5
	# of Perfs/stage				21	CBP DEPTH	5,346	
Totals					154			





NBU 921-26B2S DIRECTIONAL SURVEY												
MD	TVD	EW	NS	INC	AZI		MD	TVD	EW	NS	INC	AZI
0	0	0.0	0.0	0.0	0.0		4244	4054	1155.9	277.8	12.7	76.7
170	170	0.1	-0.2	0.2	154.2		4334	4142	1174.3	281.9	11.5	78.0
260	260	1.9	0.1	2.2	76.2		4425	4232	1190.7	285.5	9.8	77.7
350	350	7.2	1.4	4.9	75.6		4515	4321	1205.2	288.6	9.2	77.6
440	439	16.2	4.2	7.1	71.4		4606	4411	1218.3	291.5	7.8	77.5
530	528	28.8	8.0	9.6	74.5		4697	4501	1229.0	294.2	6.2	73.8
620	617	45.4	12.3	12.3	76.4		4787	4590	1238.5	296.3	6.2	81.3
710	704	66.1	16.8	15.0	78.6		4878	4681	1247.0	297.6	4.7	81.1
800	791	90.8	22.1	17.6	77.5		4969	4772	1253.5	298.5	3.5	85.1
890	876	118.4	28.4	18.9	76.7		5059	4862	1258.2	298.5	2.6	96.8
980	961	147.0	36.1	19.6	73.1		5150	4953	1261.2	298.0	1.2	101.3
1070	1046	175.4	44.4	18.9	74.4		5240	5043	1262.0	297.9	0.1	280.1
1160	1131	203.9	52.3	19.4	74.7		5331	5134	1262.0	298.0	0.1	348.0
1250	1216	231.8	59.6	18.1	75.9		5421	5224	1261.0	298.4	1.3	287.4
1340	1302	258.7	66.5	17.9	75.4		5512	5315	1259.1	298.7	1.2	272.7
1430	1387	285.4	73.7	17.8	74.6		5602	5405	1257.3	298.7	1.1	265.6
1520	1473	312.0	81.0	18.0	74.6		5693	5496	1255.6	298.4	1.1	258.7
1610	1559	339.0	88.6	18.3	74.0		5783	5586	1254.1	297.9	0.9	243.7
1700	1644	365.9	96.3	17.9	74.2		5874	5677	1252.6	297.2	1.1	239.1
1790	1730	393.0	104.2	18.6	73.1		5965	5768	1251.5	296.8	0.5	275.6
1880	1815	421.0	112.3	19.3	74.9		6055	5858	1251.6	297.1	0.7	52.9
1970	1900	448.7	119.4	17.9	76.5		6146	5949	1252.2	297.6	0.3	36.1
2060	1986	475.9	126.1	18.3	75.7		6237	6040	1252.6	297.7	0.4	111.8
2150	2071	503.2	133.1	18.3	75.6		6327	6130	1252.9	298.0	0.4	7.6
2240	2157	530.1	140.3	17.8	74.2		6418	6221	1252.9	298.2	0.1	234.8
2330	2242	556.2	148.1	17.4	72.6		6508	6311	1252.6	298.8	0.8	346.4
2420	2328	582.4	156.0	18.0	73.9		6599	6402	1252.3	299.8	0.5	330.8
2510	2414	609.8	163.5	18.8	75.3		6689	6492	1251.9	300.1	0.2	220.8
2570	2470	628.8	168.4	19.4	76.2		6780	6583	1251.2	300.4	1.0	303.5
2614	2512	642.7	171.9	18.5	75.4		6871	6674	1249.8	301.2	0.9	302.2
2704	2597	670.8	178.8	19.1	76.7		6961	6764	1248.7	301.7	0.7	282.4
2795	2683	700.0	185.5	19.3	77.7		7052	6855	1247.8	301.7	0.6	250.9
2885	2768	729.6	191.6	20.1	78.9		7142	6945	1247.0	301.2	0.6	221.9
2976	2853	760.1	197.8	19.9	78.2		7233	7036	1246.6	301.1	0.4	331.5
3066	2938	789.9	204.4	19.7	76.6		7323	7126	1246.5	301.5	0.2	42.8
3157	3024	819.6	210.3	19.1	81.3		7414	7217	1246.7	301.4	0.3	142.7
3247	3109	848.1	214.8	18.4	80.8		7504	7307	1246.6	301.9	0.9	340.8
3338	3195	877.6	219.2	19.8	82.0		7595	7397	1246.2	303.2	0.8	341.8
3429	3280	909.0	224.1	21.2	80.2		7685	7487	1245.6	304.0	0.6	301.4
3519	3364	940.2	230.4	20.3	77.0		7776	7578	1244.7	304.4	0.6	286.5
3610	3450	970.5	237.8	19.9	75.4		7866	7668	1243.9	304.4	0.5	241.4
3700	3535	999.0	245.6	18.4	74.2		7957	7759	1243.0	304.3	0.8	286.1
3791	3621	1027.0	251.9	18.4	80.3		8048	7850	1242.1	304.8	0.5	327.2
3881	3707	1055.6	256.8	19.1	80.3		8138	7940	1241.9	305.2	0.1	15.9
3972	3793	1084.8	262.0	19.0	79.8		8229	8031	1242.0	305.6	0.3	356.9
4063	3879	1111.5	267.6	15.9	76.1		8312	8114	1241.9	305.8	0.1	191.2
4153	3966	1134.7	273.0	14.9	77.7		10062	9864	1241.2	302.2	0.1	191.2

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UO 01194
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</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>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 921-26B2S
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>9. API NUMBER:</b> 43047503650000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6511	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0788 FNL 1685 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 26 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 checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 2/13/2013  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input 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	
	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
<p>THE OPERATOR HAS PERFORMED A RECOMPLETION ON THE SUBJECT WELL. THE OPERATOR HAS RECOMPLETED THE WASATCH FORMATION. THE OPERATOR HAS COMMINGLED THE NEWLY WASATCH FORMATION ALONG WITH THE EXISTING MESAVERDE FORMATION. THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 02/13/2013 AT 10:35 HRS. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.</p>		<p><b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY</b></p> <p>February 26, 2013</p>
<b>NAME (PLEASE PRINT)</b> Lindsey Frazier	<b>PHONE NUMBER</b> 720 929-6857	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A		<b>DATE</b> 2/21/2013

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

RECEIVED  
MAR 19 2013  
DIV. OF OIL, GAS & MINING

AMENDED REPORT  FORM 8  
(highlight changes)

**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 **RECOMPLETION**

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) 929-6304

4. LOCATION OF WELL (FOOTAGES)  
AT SURFACE: NENW 788 FNL 1685 FWL S26,T9S,R21E  
AT TOP PRODUCING INTERVAL REPORTED BELOW: NWNW 490 FNL 2946 FEL S26,T9S,R21E  
AT TOTAL DEPTH: NWNW 486 FNL 2370 FEL S26,T9S,R21E

5. LEASE DESIGNATION AND SERIAL NUMBER:  
UO-01194

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT or CA AGREEMENT NAME  
UTU63047A

8. WELL NAME and NUMBER:  
NBU 921-26B2S

9. API NUMBER:  
4304750365

10. FIELD AND POOL, OR WILDCAT  
NATURAL BUTTES

11. QTR./QTR. SECTION, TOWNSHIP, RANGE, MERIDIAN:  
NENW 26 9S 21E S

12. COUNTY  
UINTAH

13. STATE  
UTAH

14. DATE SPUNNED: 8/22/2009 15. DATE T.D. REACHED: 12/31/2009 16. DATE COMPLETED: 2/13/2013 ABANDONED  READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL):  
4984 RKB

18. TOTAL DEPTH: MD 10,062 TVD 9,864 19. PLUG BACK T.D.: MD 10,004 TVD 9,806 20. IF MULTIPLE COMPLETIONS, HOW MANY? \*

21. DEPTH BRIDGE MD 7,810 PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)  
CBL/GR/-SD/DSN/ACTR-BHV

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#	0	40		28			
12 1/4"	9 5/8" J-55	40	0	2,543		750			
7 7/8"	4 1/2" I-80	11.6#	0	10,047		1,810		800	

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"	7,507							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A) WASATCH	5,396	7,772			5,396 7,772	0.36	154	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(B)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

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

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
5396-7772	PUMP 5185 BBLs SLICK H2O & 153,153 LBS 30/50 OTTAWA SAND
	7 STAGES

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: 2/13/2013		TEST DATE: 2/25/2013		HOURS TESTED: 24		TEST PRODUCTION RATES: →		OIL – BBL: 3	GAS – MCF: 492	WATER – BBL: 17	PROD. METHOD: FLOWING
CHOKE SIZE: 18/64	TBG. PRESS. 143	CSG. PRESS. 305	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL: 3	GAS – MCF: 492	WATER – BBL: 17	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.)

SOLD

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.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				GREEN RIVER	1,682
				BIRD'S NEST	1,963
				MAHOGANY	2,432
				WASATCH	5,056
				MESAVERDE	7,851

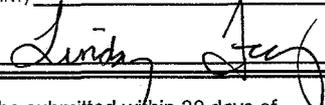
35. ADDITIONAL REMARKS (include plugging procedure)

Attached is the recompletion history and perforation report. Casing in the well is as previously reported on the original Completion Report. New recompletion perforations are: Wasatch 5396-7772'; existing perforations: Mesaverde 7874-9866'. An Iso plug is in the hole @ 7810 separating new perforations from old perforations at this time. A SN will be filed before the Iso Plug is drilled out. Test information is production from new perforations only.

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

NAME (PLEASE PRINT) LINDSEY FRAZIER

TITLE REGULATORY ANALYST

SIGNATURE 

DATE 3/12/2013

This report must be submitted within 30 days of

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

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

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

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

Phone: 801-538-5340

Fax: 801-359-3940

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

Well: NBU 921-26B2S ( GREEN )	Spud Conductor: 8/22/2009	Spud Date: 8/30/2009
Project: UTAH-UINTAH	Site: NBU 921-26C PAD	Rig Name No: SWABBCO 8/8
Event: RECOMPL/RESEREVEADD	Start Date: 1/16/2013	End Date: 2/13/2013
Active Datum: RKB @4,984.00usft (above Mean Sea Level)	UWI: NE/NW/0/9/S/21/E/26/0/0/6/PM/N/788.00/W/0/1,685.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/16/2013	7:00 - 7:30	0.50		48		P		HSM, MOVING EQUIP ON SLICK ROADS.
	7:30 - 14:00	6.50		30	A	P		MOVE IN FROM BON 5L PAD, WAIT ON BACK HOE, FIND DEAD MEN, RIG UP.
	14:00 - 17:00	3.00		31	I	P		CONTROL TBG W/ 20 BBLS, ND WH NU BOPS, CONTROL CSG W/ 20 BBLS, UNLAND TBG L/D HANGER. RU SCAN TECH, L/D & SCANNED 36 JTS 23/8 L-80 SW DRAIN EQUIP SDFN.
1/17/2013	7:00 - 7:30	0.50		48		P		HSM, LAYING DWN TBG ON FLOAT.
	7:30 - 18:00	10.50		31	I	P		- 19 DEGS, SICP 400 , SITP 400, OPEN CSG TO FB TNK, KILL TBG W/ 30 BBLS,S.L.M & L/D & SCAN REM 259 JTS 23/8 L-80 L/D POBS. HEAVEY BARIUM SCALE ON OD OF TBG F/ 7870' TO 8345 ' POBS LOOKED GOOD, HAD 2 RED JTS & 275 YELLOW, 18 BLUE. RD SCAN TECH. RU CASED HOLE. RIH W/ 41/2 GAUGE RING TAG UP @ 7868' TOP PERF @ 7874', POOH RIH W/ HAL 8K CBP & SET @ 7810' POOH RD CASED HOLE. FILL CSG TEST TO 3500 PSI, FOR 10 MIN W/ RIG PUMP OK, BLEAD OFF DRAIN EQUIP SW SDFN.
								293 JTS ARE ON SEALS @ 921-26D PAD, 9260.06' ( END OF SEALS ARE PAINTED GREEN.) 275 YELLOW 18 BLUE
1/28/2013	7:00 - 13:00	6.00	SUBSPR	37		P		2 JTS RED HAULED TO SAMEULS YARD 63.53' PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF AS PER PERF DESIGN. POOH. SWIFW

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-26B2S ( GREEN )		Spud Conductor: 8/22/2009		Spud Date: 8/30/2009	
Project: UTAH-UINTAH			Site: NBU 921-26C PAD		Rig Name No: SWABBCO 8/8
Event: RECOMPL/RESEREVEADD			Start Date: 1/16/2013		End Date: 2/13/2013
Active Datum: RKB @4,984.00usft (above Mean Sea Level)			UWI: NE/NW0/9/S/21/E/26/O/O/6/PM/N/788.00/W/O/1,685.00/O/O		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/29/2013	7:00 - 18:00	11.00	FRAC	36	B	P		<p>FRAC STG 1)WHP 344 PSI, BRK 2446 PSI @ 4.8 BPM. ISIP 1074 PSI, FG .58.  CALC HOLES OPEN @ 51.0 BPM @ 5241 PSI = 65% HOLES OPEN. (15/23 HOLES OPEN)  ISIP 2562 PSI, FG .74 NPI 1488 PSI.  MP 5471 PSI, MR 51.5 BPM, AP 4999 PSI, AR 49.5 BPM  PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR WL</p> <p>PERF STG 2)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7,449' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 2)WHP 329 PSI, BRK 0000 PSI @ 4.9 BPM. ISIP 307 PSI, FG .48.  CALC HOLES OPEN @ 51.6 BPM @ 4453 PSI = 63% HOLES OPEN. (15/24 HOLES OPEN)  ISIP 2098 PSI, FG .73, NPI 1791 PSI.  MP 4673 PSI, MR 51.7 BPM, AP 4224 PSI, AR 50.6 BPM  PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR WL</p> <p>PERF STG 3)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7178' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 3)WHP 1706 PSI, BRK 2190 PSI @ 5.6 BPM. ISIP 1954 PSI, FG .72.  CALC HOLES OPEN @ 49.2 BPM @ 4798 PSI = 91% HOLES OPEN. (19/21 HOLES OPEN)  ISIP 1897 PSI, FG .71, NPI -57 PSI.  MP 4965 PSI, MR 51.4 BPM, AP 4480 PSI, AR 49.8 BPM  PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR WL</p> <p>PERF STG 4)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 6843' P/U PERF AS PER PERF DESIGN. POOH.  SWFN</p>

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 921-26B2S ( GREEN )		Spud Conductor: 8/22/2009	Spud Date: 8/30/2009
Project: UTAH-UINTAH		Site: NBU 921-26C PAD	Rig Name No: SWABBCO 8/8
Event: RECOMPL/RESEREVEADD		Start Date: 1/16/2013	End Date: 2/13/2013
Active Datum: RKB @4,984.00usft (above Mean Sea Level)		UWI: NE/NW0/9/S/21/E/26/0/0/6/PM/N/788.00/W/0/1,685.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/30/2013	7:00 - 18:00	11.00	FRAC	36	B	P		<p>FRAC STG 4)WHP 820 PSI, BRK 1750 PSI @ 4.3 BPM. ISIP 1523 PSI, FG .67.  CALC HOLES OPEN @ 51.5 BPM @ 4908 PSI = 86% HOLES OPEN. (18/21 HOLES OPEN)  ISIP 1471 PSI, FG .66, NPI -52 PSI.  MP 5273 PSI, MR 51.6 BPM, AP 4667 PSI, AR 48.5 BPM  PUMPED 30/50 OTTAWA SAND IN THIS STAGE  X-OVER FOR WL</p> <p>PERF STG 5)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 6582' P/U PERF AS PER PERF DESIGN.  POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 5)WHP 1259 PSI, BRK 1483 PSI @ 4.2 BPM. ISIP 1286 PSI, FG .64.  CALC HOLES OPEN @ 46.0 BPM @ 3517 PSI = 91% HOLES OPEN. (21/23 HOLES OPEN)  ISIP 1226 PSI, FG .63, NPI -60 PSI.  MP 3852 PSI, MR 51.1 BPM, AP 3567 PSI, AR 48.8 BPM  PUMPED 30/50 OTTAWA SAND IN THIS STAGE  X-OVER FOR WL</p> <p>PERF STG 6)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 6088' P/U PERF AS PER PERF DESIGN.  POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 6)WHP 344 PSI, BRK 739 PSI @ 7.3 BPM. ISIP 363 PSI, FG .50.  CALC HOLES OPEN @ 49.3 BPM @ 4149 PSI = 71% HOLES OPEN. (15/21 HOLES OPEN)  ISIP 1695 PSI, FG .72, NPI 1332 PSI.  MP 4585 PSI, MR 56.7 BPM, AP 4244 PSI, AR 49.5 BPM  PUMPED 30/50 OTTAWA SAND IN THIS STAGE  X-OVER FOR WL</p> <p>PERF STG 7)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 5453' P/U PERF AS PER PERF DESIGN.  POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 7)WHP 249 PSI, BRK 2680 PSI @ 4.1 BPM. ISIP 552 PSI, FG .54.  CALC HOLES OPEN @ 50.6 BPM @ 4703 PSI = 67% HOLES OPEN. (14/21 HOLES OPEN)  ISIP 1856 PSI, FG .78, NPI 1304 PSI.  MP 4731 PSI, MR 54.5 BPM, AP 3876 PSI, AR 48.2 BPM  PUMPED 30/50 OTTAWA SAND IN THIS STAGE  X-OVER FOR WL</p> <p>RIH SET CBP @ 5346' .POOH.RD FRAC &amp; WL</p>

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

Well: NBU 921-26B2S ( GREEN )		Spud Conductor: 8/22/2009		Spud Date: 8/30/2009	
Project: UTAH-UINTAH		Site: NBU 921-26C PAD		Rig Name No: SWABBCO 8/8	
Event: RECOMPL/RESEREVEADD		Start Date: 1/16/2013		End Date: 2/13/2013	
Active Datum: RKB @4,984.00usft (above Mean Sea Level)			UWI: NE/NW0/9/S/21/E/26/0/0/6/PM/N/788.00/W/0/1,685.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
								CREWS SWI
2/11/2013	7:00 - 7:30	0.50	DRLOUT	48		P		TOTAL SAND= 153,153# 30/50 OTTAWA
	7:30 - 11:30	4.00	DRLOUT	30	A	P		TOTAL CLFL= 5,185 BBLS HSM, PICKING UP TBG OFF FLOAT.
	11:30 - 16:00	4.50	DRLOUT	31	I	P		RIG DWN OFF NBU 921-26B3S, MOVE OVER & RIGGED UP. ND WH NU BOPS RU FLOOR & EQUIP. TALLY & PU 37/8 BIT, PUMP OPEN SUB, 1.875 X/N & 169 JTS 23/8 L-80, EOT @ 5323 ' RU DRLG EQUIP PREP TO D/O IN AM, SW SDFN.
2/12/2013	7:00 - 7:30	0.50	DRLOUT	48		P		HSM,
	7:30 - 19:00	11.50	DRLOUT	44	C	P		BROKE CIRC CONV, TEST BOPS TO 4,000# RIH.
								C/O 10' SAND TAG 1ST PLG @ 5346' DRL PLG IN 3 MINS, 0 PSI INCREASE RIH.
								C/O 20' SAND TAG 2ND PLG @ 5453' DRL PLG IN 2 MINS, 0 PSI INCREASE RIH
								C/O 45' SAND TAG 3RD PLG @ 6088' DRL PLG IN 2 MINS, 0 PSI INCREASE RIH
								C/O 30' SAND TAG 4TH PLG @ 6582' DRL PLG IN 3 MINS, 0 PSI INCREASE RIH, W/ GAS UNIT
								C/O 30' SAND TAG 5TH PLG @ 6843' DRL PLG IN 2 MINS, 0 PSI INCREASE RIH, W/ GAS UNIT
								C/O 30' SAND TAG 6TH PLG @ 7178' DRL PLG IN 2 MINS, 0 PSI INCREASE RIH, W/ GAS UNIT
								C/O 60' SAND TAG 7TH PLG @ 7449' DRL PLG IN 2 MINS, 0 PSI INCREASE RIH, W/ GAS UNIT
								C/O TO 7787', CIRC CLN W/ GAS CIRC UNIT KILL TBG, HANG SWIVEL, L/D 9 JTS LAND TBG ON 237 JTS 23/8 L-80, ND BOPS NU WH, TEST FLOW LINE TO 4,000#, PUMP OPEN SUB, CIRC W/ GAS UNIT, TURN TO FB, SDFN
								KB = 14' 71/16 CAMERON HNGR = .83' ( SURFACE OPEN & LOCKED ) 237 JTS 23/8 L-80 = 7488.16' 0 SICP 0 FTP 1.875 X/N, PUMP OPEN SUB, 37/8 BIT = 4.13' EOT @ 7507.12'
								TWTR = 5685 BBLS TWR = 520 BBLS TWLTR = 5165 BBLS
								293 JTS 23/8 L-80 237 LANDED 56 TO SAMEULS YARD. 38 YELLOW. 18 BLUE

US ROCKIES REGION

**Operation Summary Report**

Well: NBU 921-26B2S ( GREEN )	Spud Conductor: 8/22/2009	Spud Date: 8/30/2009
Project: UTAH-UINTAH	Site: NBU 921-26C PAD	Rig Name No: SWABBCO 8/8
Event: RECOMPL/RESEREVEADD	Start Date: 1/16/2013	End Date: 2/13/2013
Active Datum: RKB @4,984.00usft (above Mean Sea Level)	UWI: NE/NW/0/9/S/21/E/26/0/0/6/PM/N/788.00/W/0/1,685.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	19:00 - 19:00	0.00	DRLOUT	50				WELL TURNED TO SALES@ 1035 HR ON 2/13/2013. 900 MCFD, 528 BWPD, FCP 950#, FTP 725#, 20/64" CK.

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 921-26B2S ( GREEN )	Wellbore No.	OH
Well Name	NBU 921-26B2S	Wellbore Name	NBU 921-26B2S
Report No.	1	Report Date	1/16/2013
Project	UTAH-UINTAH	Site	NBU 921-26C PAD
Rig Name/No.		Event	RECOMPL/RESEREVEADD
Start Date	1/16/2013	End Date	2/13/2013
Spud Date	8/30/2009	Active Datum	RKB @4,984.00usft (above Mean Sea Level)
UWI	NE/NW/0/9/S/21/E/26/0/0/6/PM/N/788.00/W/0/1,685.00/O/0		

1.3 General

Contractor		Job Method		Supervisor	
Perforated Assembly		Conveyed Method			

1.4 Initial Conditions

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

1.5 Summary

Gross Interval	5,396.0 (usft)-7,772.0 (usft)	Start Date/Time	1/29/2013 12:00AM
No. of Intervals	30	End Date/Time	1/29/2013 12:00AM
Total Shots	154	Net Perforation Interval	49.00 (usft)
Avg Shot Density	3.14 (shot/ft)	Final Surface Pressure	
		Final Press Date	

2 Intervals

2.1 Perforated Interval

Date	Formation/Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (*)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
1/29/2013 12:00AM	WASATCH/			5,396.0	5,403.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

## 2.1 Perforated Interval (Continued)

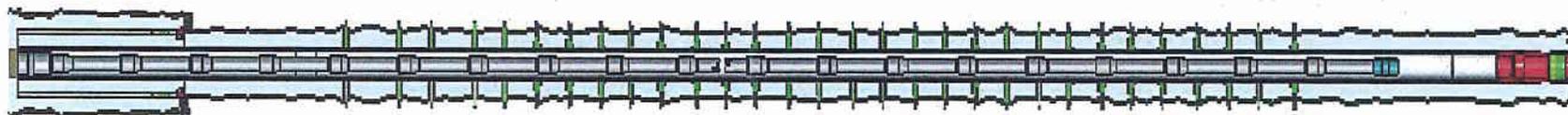
Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add_Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
1/29/2013 12:00AM	WASATCH/			5,978.0	5,979.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			6,032.0	6,038.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			6,380.0	6,381.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			6,397.0	6,398.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			6,482.0	6,485.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			6,550.0	6,552.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			6,609.0	6,610.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			6,631.0	6,632.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			6,653.0	6,654.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			6,776.0	6,777.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			6,791.0	6,792.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			6,802.0	6,803.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			6,899.0	6,900.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			6,911.0	6,912.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			7,015.0	7,016.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			7,033.0	7,034.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			7,111.0	7,112.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			7,132.0	7,133.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			7,147.0	7,148.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			7,194.0	7,195.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			7,253.0	7,254.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr. Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
1/29/2013 12:00AM	WASATCH/			7,281.0	7,282.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			7,358.0	7,359.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			7,365.0	7,366.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			7,396.0	7,399.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			7,551.0	7,553.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			7,591.0	7,593.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			7,619.0	7,620.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/29/2013 12:00AM	WASATCH/			7,770.0	7,772.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

3 Plots

3.1 Wellbore Schematic



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UO 01194	
<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>	
<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES	
<b>8. WELL NAME and NUMBER:</b> NBU 921-26B2S	
<b>9. API NUMBER:</b> 43047503650000	
<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES	
<b>COUNTY:</b> UINTAH	
<b>STATE:</b> UTAH	

**SUNDRY NOTICES AND REPORTS ON WELLS**

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

<b>1. TYPE OF WELL</b> Gas Well	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6501
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0788 FNL 1685 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 26 Township: 09.0S Range: 21.0E Meridian: S	

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 4/8/2013	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: <input type="text" value="Drill Out ISO-Plug"/>

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

Drill out last plug @7802ft. clean out to PBSD at 10003ft. Shear off bit and land tubing at 9336ft. This well will be comingled at this point.

**Approved by the Utah Division of Oil, Gas and Mining**  
**Date:** April 23, 2013  
**By:** *D. K. Duff*

<b>NAME (PLEASE PRINT)</b> Luke Urban	<b>PHONE NUMBER</b> 720 929-6501	<b>TITLE</b> Regulatory Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/8/2013	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UO 01194	
<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>	
<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES	
<b>8. WELL NAME and NUMBER:</b> NBU 921-26B2S	
<b>9. API NUMBER:</b> 43047503650000	
<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES	
<b>COUNTY:</b> UINTAH	
<b>STATE:</b> UTAH	

**SUNDRY NOTICES AND REPORTS ON WELLS**

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

<b>1. TYPE OF WELL</b> Gas Well	<b>1. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>PHONE NUMBER:</b> 720 929-6511
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0788 FNL 1685 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 26 Township: 09.0S Range: 21.0E Meridian: S	

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: 7/2/2013	<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 checked="" 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 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.

On 05/08/2013 the Iso-Plug set at 7,810 ft. was drilled out in five minutes. The Wasatch and Mesaverde formations are now comingled.  
Thank you.

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

**FOR RECORD ONLY**

July 08, 2013

<b>NAME (PLEASE PRINT)</b> Matthew P Wold	<b>PHONE NUMBER</b> 720 929-6993	<b>TITLE</b> Regulatory Analyst I
<b>SIGNATURE</b> N/A	<b>DATE</b> 7/2/2013	