

**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 922-3014CS
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>		<b>3. FIELD OR WILDCAT</b> NATURAL BUTTES
<b>4. TYPE OF WELL</b> Gas Well Coalbed Methane Well: NO		<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> NATURAL BUTTES
<b>6. NAME OF OPERATOR</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. OPERATOR PHONE</b> 720 929-6007
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217		<b>9. OPERATOR E-MAIL</b> Kathy.SchneebeckDulnoan@anadarko.com
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UTU 0463	<b>11. MINERAL OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>	
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>		<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>		<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>		<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</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"/>

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
<b>LOCATION AT SURFACE</b>	806 FSL 1649 FWL	SESW	29	9.0 S	22.0 E	S
<b>Top of Uppermost Producing Zone</b>	1550 FSL 455 FEL	NESE	30	9.0 S	22.0 E	S
<b>At Total Depth</b>	1550 FSL 455 FEL	NESE	30	9.0 S	22.0 E	S

<b>21. COUNTY</b> UINTAH	<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 455	<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 551
	<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 890	<b>26. PROPOSED DEPTH</b> MD: 9810 TVD: 9421
<b>27. ELEVATION - GROUND LEVEL</b> 4933	<b>28. BOND NUMBER</b> WYB000291	<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> Permit #43-8496

**ATTACHMENTS**

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

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP

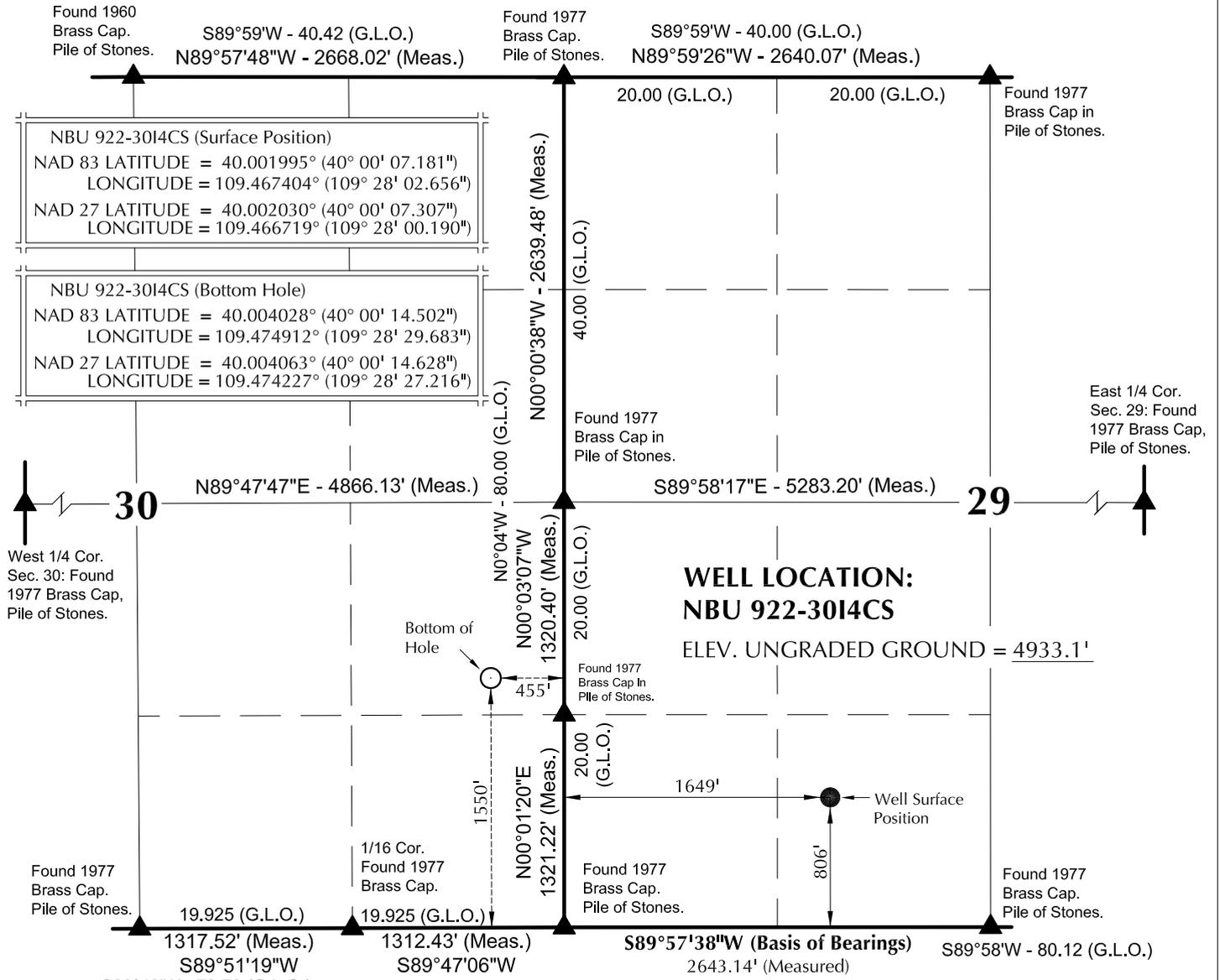
<b>NAME</b> Danielle Piernot	<b>TITLE</b> Regulatory Analyst	<b>PHONE</b> 720 929-6156
<b>SIGNATURE</b>	<b>DATE</b> 07/30/2010	<b>EMAIL</b> gnbregulatory@anadarko.com
<b>API NUMBER ASSIGNED</b> 43047512210000	<b>APPROVAL</b>   Permit Manager	

<b>Proposed Hole, Casing, and Cement</b>						
<b>String</b>	<b>Hole Size</b>	<b>Casing Size</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>		
Prod	7.875	4.5	0	9810		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade I-80 Buttress	9810	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	11	8.625	0	2290		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade I-80 LT&C	2290	28.0			

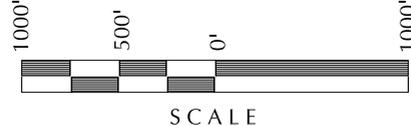
# T9S, R22E, S.L.B.&M.



NOTES: S89°49'W - 73.70 (G.L.O.)

▲ = Section Corners Located

- Well footages are measured at right angles to the Section Lines.
- G.L.O. distances are shown in feet or chains.  
1 chain = 66 feet.
- The Bottom of hole bears N70°35'32"W 2230.49' from the Surface Position.
- Bearings are based on Global Positioning Satellite observations.
- Basis of elevation is Tri-Sta "Two Water" located in the NW ¼ of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.



### SURVEYOR'S CERTIFICATE

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

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

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

**WELL PAD: NBU 922-29N**

**NBU 922-3014CS  
 WELL PLAT**

**1550' FSL, 455' FEL (Bottom Hole)  
 NE ¼ SE ¼ OF SECTION 30, T9S, R22E,  
 S.L.B.&M., UTAH COUNTY, UTAH.**



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

**TIMBERLINE**

(435) 789-1365

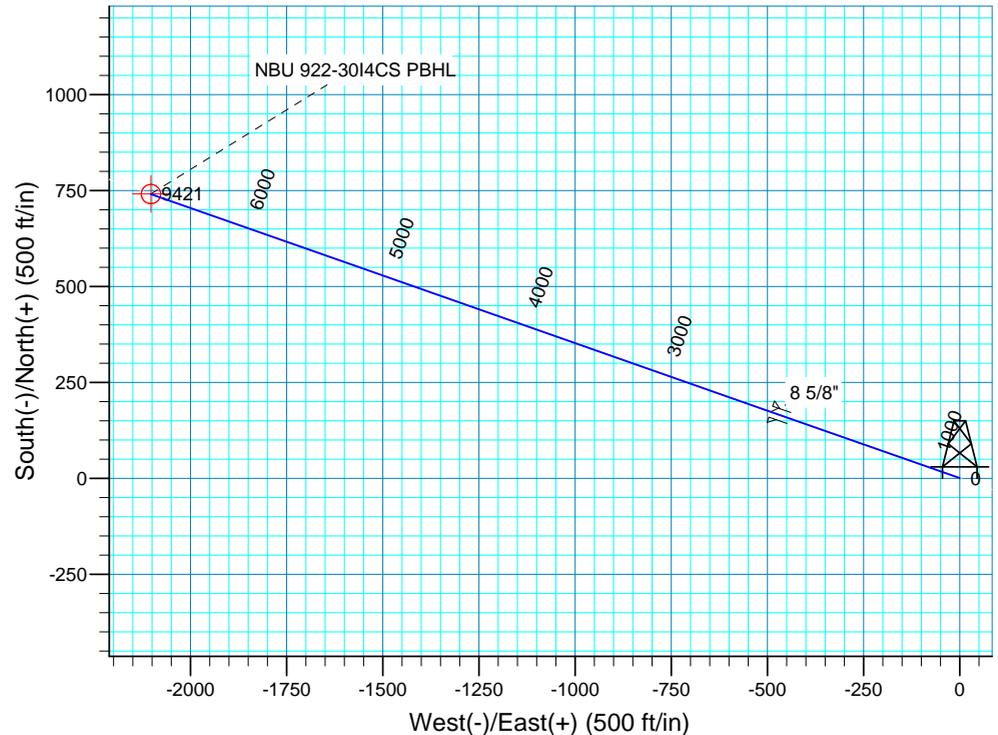
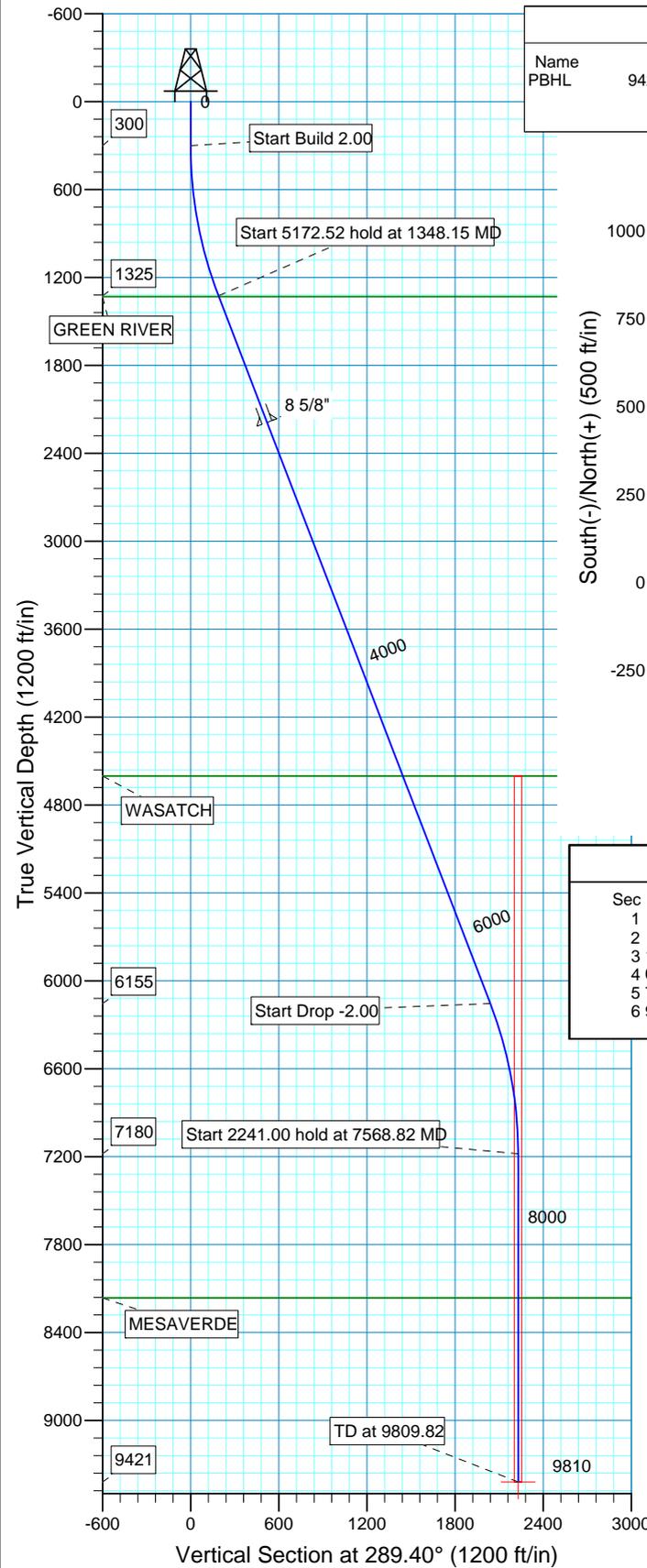
ENGINEERING & LAND SURVEYING, INC.  
 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 05-27-10	SURVEYED BY: M.S.B.	SHEET NO: <b>3</b>
DATE DRAWN: 06-02-10	DRAWN BY: B.M.	
SCALE: 1" = 1000'		Date Last Revised: 3 OF 18

WELL DETAILS: NBU 922-3014CS					
GL 4932' & RKB 14' @ 4946.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	614258.53	2569543.95	40° 0' 7.308 N	109° 28' 0.188 W

Azimuths to True North  
 Magnetic North: 11.16°  
 Magnetic Field  
 Strength: 52458.1snT  
 Dip Angle: 65.91°  
 Date: 07/15/2010  
 Model: IGRF200510

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	9421.00	740.60	-2103.20	614951.13	2567424.47	40° 0' 14.627 N	109° 28' 27.217 W	Circle (Radius: 25.00)



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	1348.15	20.96	289.40	1324.92	62.98	-178.85	2.00	289.40	189.62	
4	6520.67	20.96	289.40	6155.08	677.62	-1924.34	0.00	0.00	2040.16	
5	7568.82	0.00	0.00	7180.00	740.60	-2103.20	2.00	180.00	2229.78	
6	9809.82	0.00	0.00	9421.00	740.60	-2103.20	0.00	0.00	2229.78	NBU 922-3014CS PBHL

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1331.00	1354.66	GREEN RIVER
4603.00	4858.58	WASATCH
8164.00	8552.82	MESAVERDE

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 29 T9S R22E
System Datum:	Mean Sea Level
Local North:	No north reference data is available



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

**Uintah County, UT NAD27  
NBU 922-29N Pad  
NBU 922-30I4CS  
OH**

**Plan: Plan #1**

## **Standard Planning Report**

**15 July, 2010**





**SDI**  
Planning Report



<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 922-30I4CS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4932' & RKB 14'
<b>Project:</b>	Uintah County, UT NAD27	<b>MD Reference:</b>	GL 4932' & RKB 14'
<b>Site:</b>	NBU 922-29N Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-30I4CS	<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 922-29N Pad, SEC 29 T9S R22E				
<b>Site Position:</b>		<b>Northing:</b>	614,282.16 ft	<b>Latitude:</b>	40° 0' 7.546 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,569,525.48 ft	<b>Longitude:</b>	109° 28' 0.419 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	in	<b>Grid Convergence:</b>	1.30 °

<b>Well</b>	NBU 922-30I4CS, 806' FSL 1649' FWL					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	614,258.53 ft	<b>Latitude:</b>	40° 0' 7.308 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,569,543.95 ft	<b>Longitude:</b>	109° 28' 0.188 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,932.00 ft

<b>Wellbore</b>	OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	07/15/10	11.16	65.91	52,458

<b>Design</b>	Plan #1
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<b>Audit Notes:</b>	
<b>Version:</b>	<b>Phase:</b> PLAN <b>Tie On Depth:</b> 0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b> <b>+N/-S (ft)</b> <b>+E/-W (ft)</b> <b>Direction (°)</b>
	0.00 0.00 0.00 289.40

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,348.15	20.96	289.40	1,324.92	62.98	-178.85	2.00	2.00	0.00	289.40	
6,520.67	20.96	289.40	6,155.08	677.62	-1,924.34	0.00	0.00	0.00	0.00	
7,568.82	0.00	0.00	7,180.00	740.60	-2,103.20	2.00	-2.00	0.00	180.00	
9,809.82	0.00	0.00	9,421.00	740.60	-2,103.20	0.00	0.00	0.00	0.00	NBU 922-30I4CS P



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<b>Project:</b>	Uintah County, UT NAD27	<b>MD Reference:</b>	GL 4932' & RKB 14'
<b>Site:</b>	NBU 922-29N Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-30I4CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

**Planned Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
400.00	2.00	289.40	399.98	0.58	-1.65	1.75	2.00	2.00	0.00
500.00	4.00	289.40	499.84	2.32	-6.58	6.98	2.00	2.00	0.00
600.00	6.00	289.40	599.45	5.21	-14.80	15.69	2.00	2.00	0.00
700.00	8.00	289.40	698.70	9.26	-26.30	27.88	2.00	2.00	0.00
800.00	10.00	289.40	797.47	14.46	-41.05	43.52	2.00	2.00	0.00
900.00	12.00	289.40	895.62	20.79	-59.05	62.60	2.00	2.00	0.00
1,000.00	14.00	289.40	993.06	28.26	-80.27	85.10	2.00	2.00	0.00
1,100.00	16.00	289.40	1,089.64	36.86	-104.68	110.98	2.00	2.00	0.00
1,200.00	18.00	289.40	1,185.27	46.57	-132.25	140.21	2.00	2.00	0.00
1,300.00	20.00	289.40	1,279.82	57.38	-162.96	172.77	2.00	2.00	0.00
1,348.15	20.96	289.40	1,324.92	62.98	-178.85	189.62	2.00	2.00	0.00
<b>Start 5172.52 hold at 1348.15 MD</b>									
1,354.66	20.96	289.40	1,331.00	63.75	-181.05	191.94	0.00	0.00	0.00
<b>GREEN RIVER</b>									
1,400.00	20.96	289.40	1,373.34	69.14	-196.35	208.17	0.00	0.00	0.00
1,500.00	20.96	289.40	1,466.72	81.02	-230.09	243.94	0.00	0.00	0.00
1,600.00	20.96	289.40	1,560.10	92.91	-263.84	279.72	0.00	0.00	0.00
1,700.00	20.96	289.40	1,653.48	104.79	-297.58	315.50	0.00	0.00	0.00
1,800.00	20.96	289.40	1,746.86	116.67	-331.33	351.27	0.00	0.00	0.00
1,900.00	20.96	289.40	1,840.25	128.56	-365.08	387.05	0.00	0.00	0.00
2,000.00	20.96	289.40	1,933.63	140.44	-398.82	422.83	0.00	0.00	0.00
2,100.00	20.96	289.40	2,027.01	152.32	-432.57	458.60	0.00	0.00	0.00
2,200.00	20.96	289.40	2,120.39	164.20	-466.31	494.38	0.00	0.00	0.00
2,274.55	20.96	289.40	2,190.00	173.06	-491.47	521.05	0.00	0.00	0.00
<b>8 5/8"</b>									
2,300.00	20.96	289.40	2,213.77	176.09	-500.06	530.15	0.00	0.00	0.00
2,400.00	20.96	289.40	2,307.15	187.97	-533.80	565.93	0.00	0.00	0.00
2,500.00	20.96	289.40	2,400.53	199.85	-567.55	601.71	0.00	0.00	0.00
2,600.00	20.96	289.40	2,493.91	211.74	-601.29	637.48	0.00	0.00	0.00
2,700.00	20.96	289.40	2,587.29	223.62	-635.04	673.26	0.00	0.00	0.00
2,800.00	20.96	289.40	2,680.68	235.50	-668.79	709.04	0.00	0.00	0.00
2,900.00	20.96	289.40	2,774.06	247.38	-702.53	744.81	0.00	0.00	0.00
3,000.00	20.96	289.40	2,867.44	259.27	-736.28	780.59	0.00	0.00	0.00
3,100.00	20.96	289.40	2,960.82	271.15	-770.02	816.37	0.00	0.00	0.00
3,200.00	20.96	289.40	3,054.20	283.03	-803.77	852.14	0.00	0.00	0.00
3,300.00	20.96	289.40	3,147.58	294.92	-837.51	887.92	0.00	0.00	0.00
3,400.00	20.96	289.40	3,240.96	306.80	-871.26	923.70	0.00	0.00	0.00
3,500.00	20.96	289.40	3,334.34	318.68	-905.00	959.47	0.00	0.00	0.00
3,600.00	20.96	289.40	3,427.72	330.56	-938.75	995.25	0.00	0.00	0.00
3,700.00	20.96	289.40	3,521.11	342.45	-972.49	1,031.03	0.00	0.00	0.00
3,800.00	20.96	289.40	3,614.49	354.33	-1,006.24	1,066.80	0.00	0.00	0.00
3,900.00	20.96	289.40	3,707.87	366.21	-1,039.99	1,102.58	0.00	0.00	0.00
4,000.00	20.96	289.40	3,801.25	378.10	-1,073.73	1,138.36	0.00	0.00	0.00
4,100.00	20.96	289.40	3,894.63	389.98	-1,107.48	1,174.13	0.00	0.00	0.00
4,200.00	20.96	289.40	3,988.01	401.86	-1,141.22	1,209.91	0.00	0.00	0.00
4,300.00	20.96	289.40	4,081.39	413.74	-1,174.97	1,245.69	0.00	0.00	0.00
4,400.00	20.96	289.40	4,174.77	425.63	-1,208.71	1,281.46	0.00	0.00	0.00
4,500.00	20.96	289.40	4,268.15	437.51	-1,242.46	1,317.24	0.00	0.00	0.00



<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 922-30I4CS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4932' & RKB 14'
<b>Project:</b>	Uintah County, UT NAD27	<b>MD Reference:</b>	GL 4932' & RKB 14'
<b>Site:</b>	NBU 922-29N Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-30I4CS	<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	20.96	289.40	4,361.54	449.39	-1,276.20	1,353.02	0.00	0.00	0.00
4,700.00	20.96	289.40	4,454.92	461.28	-1,309.95	1,388.79	0.00	0.00	0.00
4,800.00	20.96	289.40	4,548.30	473.16	-1,343.70	1,424.57	0.00	0.00	0.00
4,858.58	20.96	289.40	4,603.00	480.12	-1,363.46	1,445.53	0.00	0.00	0.00
<b>WASATCH</b>									
4,900.00	20.96	289.40	4,641.68	485.04	-1,377.44	1,460.35	0.00	0.00	0.00
5,000.00	20.96	289.40	4,735.06	496.92	-1,411.19	1,496.12	0.00	0.00	0.00
5,100.00	20.96	289.40	4,828.44	508.81	-1,444.93	1,531.90	0.00	0.00	0.00
5,200.00	20.96	289.40	4,921.82	520.69	-1,478.68	1,567.68	0.00	0.00	0.00
5,300.00	20.96	289.40	5,015.20	532.57	-1,512.42	1,603.45	0.00	0.00	0.00
5,400.00	20.96	289.40	5,108.59	544.46	-1,546.17	1,639.23	0.00	0.00	0.00
5,500.00	20.96	289.40	5,201.97	556.34	-1,579.91	1,675.00	0.00	0.00	0.00
5,600.00	20.96	289.40	5,295.35	568.22	-1,613.66	1,710.78	0.00	0.00	0.00
5,700.00	20.96	289.40	5,388.73	580.10	-1,647.40	1,746.56	0.00	0.00	0.00
5,800.00	20.96	289.40	5,482.11	591.99	-1,681.15	1,782.33	0.00	0.00	0.00
5,900.00	20.96	289.40	5,575.49	603.87	-1,714.90	1,818.11	0.00	0.00	0.00
6,000.00	20.96	289.40	5,668.87	615.75	-1,748.64	1,853.89	0.00	0.00	0.00
6,100.00	20.96	289.40	5,762.25	627.64	-1,782.39	1,889.66	0.00	0.00	0.00
6,200.00	20.96	289.40	5,855.63	639.52	-1,816.13	1,925.44	0.00	0.00	0.00
6,300.00	20.96	289.40	5,949.02	651.40	-1,849.88	1,961.22	0.00	0.00	0.00
6,400.00	20.96	289.40	6,042.40	663.29	-1,883.62	1,996.99	0.00	0.00	0.00
6,500.00	20.96	289.40	6,135.78	675.17	-1,917.37	2,032.77	0.00	0.00	0.00
6,520.67	20.96	289.40	6,155.08	677.62	-1,924.34	2,040.16	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
6,600.00	19.38	289.40	6,229.54	686.71	-1,950.14	2,067.52	2.00	-2.00	0.00
6,700.00	17.38	289.40	6,324.44	697.18	-1,979.88	2,099.04	2.00	-2.00	0.00
6,800.00	15.38	289.40	6,420.38	706.54	-2,006.47	2,127.24	2.00	-2.00	0.00
6,900.00	13.38	289.40	6,517.24	714.79	-2,029.89	2,152.06	2.00	-2.00	0.00
7,000.00	11.38	289.40	6,614.91	721.91	-2,050.10	2,173.50	2.00	-2.00	0.00
7,100.00	9.38	289.40	6,713.27	727.89	-2,067.09	2,191.51	2.00	-2.00	0.00
7,200.00	7.38	289.40	6,812.20	732.73	-2,080.83	2,206.07	2.00	-2.00	0.00
7,300.00	5.38	289.40	6,911.58	736.42	-2,091.31	2,217.18	2.00	-2.00	0.00
7,400.00	3.38	289.40	7,011.28	738.95	-2,098.50	2,224.81	2.00	-2.00	0.00
7,500.00	1.38	289.40	7,111.19	740.33	-2,102.42	2,228.95	2.00	-2.00	0.00
7,568.82	0.00	0.00	7,180.00	740.60	-2,103.20	2,229.78	2.00	-2.00	0.00
<b>Start 2241.00 hold at 7568.82 MD</b>									
7,600.00	0.00	0.00	7,211.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
7,700.00	0.00	0.00	7,311.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
7,800.00	0.00	0.00	7,411.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
7,900.00	0.00	0.00	7,511.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
8,000.00	0.00	0.00	7,611.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
8,100.00	0.00	0.00	7,711.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
8,200.00	0.00	0.00	7,811.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
8,300.00	0.00	0.00	7,911.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
8,400.00	0.00	0.00	8,011.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
8,500.00	0.00	0.00	8,111.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
8,552.82	0.00	0.00	8,164.00	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
<b>MESAVERDE</b>									
8,600.00	0.00	0.00	8,211.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
8,700.00	0.00	0.00	8,311.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
8,800.00	0.00	0.00	8,411.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
8,900.00	0.00	0.00	8,511.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
9,000.00	0.00	0.00	8,611.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00



<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 922-30I4CS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4932' & RKB 14'
<b>Project:</b>	Uintah County, UT NAD27	<b>MD Reference:</b>	GL 4932' & RKB 14'
<b>Site:</b>	NBU 922-29N Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-30I4CS	<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)
9,100.00	0.00	0.00	8,711.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
9,200.00	0.00	0.00	8,811.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
9,300.00	0.00	0.00	8,911.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
9,400.00	0.00	0.00	9,011.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
9,500.00	0.00	0.00	9,111.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
9,600.00	0.00	0.00	9,211.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
9,700.00	0.00	0.00	9,311.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
9,800.00	0.00	0.00	9,411.18	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
9,809.82	0.00	0.00	9,421.00	740.60	-2,103.20	2,229.78	0.00	0.00	0.00
<b>NBU 922-30I4CS PBHL</b>									

**Targets**

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
NBU 922-30I4CS PBH - plan hits target center - Circle (radius 25.00)	0.00	0.00	9,421.00	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W

**Casing Points**

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,274.55	2,190.00	8 5/8"	8.625	11.000

**Formations**

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
8,552.82	8,164.00	MESAVERDE			
4,858.58	4,603.00	WASATCH			
1,354.66	1,331.00	GREEN RIVER		0.00	

**Plan Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
300.00	300.00	0.00	0.00	Start Build 2.00
1,348.15	1,324.92	62.98	-178.85	Start 5172.52 hold at 1348.15 MD
6,520.67	6,155.08	677.62	-1,924.34	Start Drop -2.00
7,568.82	7,180.00	740.60	-2,103.20	Start 2241.00 hold at 7568.82 MD
9,809.82	9,421.00	740.60	-2,103.20	TD at 9809.82



**Scientific Drilling**  
Rocky Mountain Operations

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

**Uintah County, UT NAD27  
NBU 922-29N Pad  
NBU 922-30I4CS  
OH**

**Plan: Plan #1**

## **Standard Planning Report - Geographic**

**15 July, 2010**



**SDI**  
Planning Report - Geographic



<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 922-30I4CS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4932' & RKB 14'
<b>Project:</b>	Uintah County, UT NAD27	<b>MD Reference:</b>	GL 4932' & RKB 14'
<b>Site:</b>	NBU 922-29N Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-30I4CS	<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 922-29N Pad, SEC 29 T9S R22E				
<b>Site Position:</b>		<b>Northing:</b>	614,282.16 ft	<b>Latitude:</b>	40° 0' 7.546 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,569,525.48 ft	<b>Longitude:</b>	109° 28' 0.419 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	in	<b>Grid Convergence:</b>	1.30 °

<b>Well</b>	NBU 922-30I4CS, 806' FSL 1649' FWL					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	614,258.53 ft	<b>Latitude:</b>	40° 0' 7.308 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,569,543.95 ft	<b>Longitude:</b>	109° 28' 0.188 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,932.00 ft

<b>Wellbore</b>	OH				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	07/15/10	11.16	65.91	52,458

<b>Design</b>	Plan #1				
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<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00	

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	289.40

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,348.15	20.96	289.40	1,324.92	62.98	-178.85	2.00	2.00	0.00	289.40	
6,520.67	20.96	289.40	6,155.08	677.62	-1,924.34	0.00	0.00	0.00	0.00	
7,568.82	0.00	0.00	7,180.00	740.60	-2,103.20	2.00	-2.00	0.00	180.00	
9,809.82	0.00	0.00	9,421.00	740.60	-2,103.20	0.00	0.00	0.00	0.00	NBU 922-30I4CS P



<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 922-30I4CS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4932' & RKB 14'
<b>Project:</b>	Uintah County, UT NAD27	<b>MD Reference:</b>	GL 4932' & RKB 14'
<b>Site:</b>	NBU 922-29N Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-30I4CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

**Planned Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	614,258.53	2,569,543.95	40° 0' 7.308 N	109° 28' 0.188 W
100.00	0.00	0.00	100.00	0.00	0.00	614,258.53	2,569,543.95	40° 0' 7.308 N	109° 28' 0.188 W
200.00	0.00	0.00	200.00	0.00	0.00	614,258.53	2,569,543.95	40° 0' 7.308 N	109° 28' 0.188 W
300.00	0.00	0.00	300.00	0.00	0.00	614,258.53	2,569,543.95	40° 0' 7.308 N	109° 28' 0.188 W
<b>Start Build 2.00</b>									
400.00	2.00	289.40	399.98	0.58	-1.65	614,259.07	2,569,542.29	40° 0' 7.314 N	109° 28' 0.210 W
500.00	4.00	289.40	499.84	2.32	-6.58	614,260.70	2,569,537.31	40° 0' 7.331 N	109° 28' 0.273 W
600.00	6.00	289.40	599.45	5.21	-14.80	614,263.40	2,569,529.03	40° 0' 7.359 N	109° 28' 0.379 W
700.00	8.00	289.40	698.70	9.26	-26.30	614,267.19	2,569,517.45	40° 0' 7.399 N	109° 28' 0.526 W
800.00	10.00	289.40	797.47	14.46	-41.05	614,272.05	2,569,502.58	40° 0' 7.451 N	109° 28' 0.716 W
900.00	12.00	289.40	895.62	20.79	-59.05	614,277.97	2,569,484.44	40° 0' 7.513 N	109° 28' 0.947 W
1,000.00	14.00	289.40	993.06	28.26	-80.27	614,284.96	2,569,463.06	40° 0' 7.587 N	109° 28' 1.220 W
1,100.00	16.00	289.40	1,089.64	36.86	-104.68	614,293.00	2,569,438.46	40° 0' 7.672 N	109° 28' 1.534 W
1,200.00	18.00	289.40	1,185.27	46.57	-132.25	614,302.08	2,569,410.67	40° 0' 7.768 N	109° 28' 1.888 W
1,300.00	20.00	289.40	1,279.82	57.38	-162.96	614,312.19	2,569,379.73	40° 0' 7.875 N	109° 28' 2.283 W
1,348.15	20.96	289.40	1,324.92	62.98	-178.85	614,317.43	2,569,363.71	40° 0' 7.930 N	109° 28' 2.487 W
<b>Start 5172.52 hold at 1348.15 MD</b>									
1,354.66	20.96	289.40	1,331.00	63.75	-181.05	614,318.15	2,569,361.50	40° 0' 7.938 N	109° 28' 2.515 W
<b>GREEN RIVER</b>									
1,400.00	20.96	289.40	1,373.34	69.14	-196.35	614,323.19	2,569,346.08	40° 0' 7.991 N	109° 28' 2.712 W
1,500.00	20.96	289.40	1,466.72	81.02	-230.09	614,334.30	2,569,312.07	40° 0' 8.109 N	109° 28' 3.145 W
1,600.00	20.96	289.40	1,560.10	92.91	-263.84	614,345.41	2,569,278.07	40° 0' 8.226 N	109° 28' 3.579 W
1,700.00	20.96	289.40	1,653.48	104.79	-297.58	614,356.53	2,569,244.06	40° 0' 8.344 N	109° 28' 4.013 W
1,800.00	20.96	289.40	1,746.86	116.67	-331.33	614,367.64	2,569,210.05	40° 0' 8.461 N	109° 28' 4.446 W
1,900.00	20.96	289.40	1,840.25	128.56	-365.08	614,378.75	2,569,176.05	40° 0' 8.578 N	109° 28' 4.880 W
2,000.00	20.96	289.40	1,933.63	140.44	-398.82	614,389.86	2,569,142.04	40° 0' 8.696 N	109° 28' 5.314 W
2,100.00	20.96	289.40	2,027.01	152.32	-432.57	614,400.98	2,569,108.03	40° 0' 8.813 N	109° 28' 5.747 W
2,200.00	20.96	289.40	2,120.39	164.20	-466.31	614,412.09	2,569,074.03	40° 0' 8.931 N	109° 28' 6.181 W
2,274.55	20.96	289.40	2,190.00	173.06	-491.47	614,420.37	2,569,048.67	40° 0' 9.018 N	109° 28' 6.504 W
<b>8 5/8"</b>									
2,300.00	20.96	289.40	2,213.77	176.09	-500.06	614,423.20	2,569,040.02	40° 0' 9.048 N	109° 28' 6.615 W
2,400.00	20.96	289.40	2,307.15	187.97	-533.80	614,434.32	2,569,006.01	40° 0' 9.166 N	109° 28' 7.048 W
2,500.00	20.96	289.40	2,400.53	199.85	-567.55	614,445.43	2,568,972.00	40° 0' 9.283 N	109° 28' 7.482 W
2,600.00	20.96	289.40	2,493.91	211.74	-601.29	614,456.54	2,568,938.00	40° 0' 9.401 N	109° 28' 7.916 W
2,700.00	20.96	289.40	2,587.29	223.62	-635.04	614,467.65	2,568,903.99	40° 0' 9.518 N	109° 28' 8.349 W
2,800.00	20.96	289.40	2,680.68	235.50	-668.79	614,478.77	2,568,869.98	40° 0' 9.635 N	109° 28' 8.783 W
2,900.00	20.96	289.40	2,774.06	247.38	-702.53	614,489.88	2,568,835.98	40° 0' 9.753 N	109° 28' 9.217 W
3,000.00	20.96	289.40	2,867.44	259.27	-736.28	614,500.99	2,568,801.97	40° 0' 9.870 N	109° 28' 9.650 W
3,100.00	20.96	289.40	2,960.82	271.15	-770.02	614,512.10	2,568,767.96	40° 0' 9.988 N	109° 28' 10.084 W
3,200.00	20.96	289.40	3,054.20	283.03	-803.77	614,523.22	2,568,733.96	40° 0' 10.105 N	109° 28' 10.518 W
3,300.00	20.96	289.40	3,147.58	294.92	-837.51	614,534.33	2,568,699.95	40° 0' 10.223 N	109° 28' 10.951 W
3,400.00	20.96	289.40	3,240.96	306.80	-871.26	614,545.44	2,568,665.94	40° 0' 10.340 N	109° 28' 11.385 W
3,500.00	20.96	289.40	3,334.34	318.68	-905.00	614,556.56	2,568,631.94	40° 0' 10.457 N	109° 28' 11.819 W
3,600.00	20.96	289.40	3,427.72	330.56	-938.75	614,567.67	2,568,597.93	40° 0' 10.575 N	109° 28' 12.252 W
3,700.00	20.96	289.40	3,521.11	342.45	-972.49	614,578.78	2,568,563.92	40° 0' 10.692 N	109° 28' 12.686 W
3,800.00	20.96	289.40	3,614.49	354.33	-1,006.24	614,589.89	2,568,529.92	40° 0' 10.810 N	109° 28' 13.120 W
3,900.00	20.96	289.40	3,707.87	366.21	-1,039.99	614,601.01	2,568,495.91	40° 0' 10.927 N	109° 28' 13.553 W
4,000.00	20.96	289.40	3,801.25	378.10	-1,073.73	614,612.12	2,568,461.90	40° 0' 11.045 N	109° 28' 13.987 W
4,100.00	20.96	289.40	3,894.63	389.98	-1,107.48	614,623.23	2,568,427.90	40° 0' 11.162 N	109° 28' 14.421 W
4,200.00	20.96	289.40	3,988.01	401.86	-1,141.22	614,634.34	2,568,393.89	40° 0' 11.279 N	109° 28' 14.854 W
4,300.00	20.96	289.40	4,081.39	413.74	-1,174.97	614,645.46	2,568,359.88	40° 0' 11.397 N	109° 28' 15.288 W
4,400.00	20.96	289.40	4,174.77	425.63	-1,208.71	614,656.57	2,568,325.87	40° 0' 11.514 N	109° 28' 15.722 W
4,500.00	20.96	289.40	4,268.15	437.51	-1,242.46	614,667.68	2,568,291.87	40° 0' 11.632 N	109° 28' 16.155 W
4,600.00	20.96	289.40	4,361.54	449.39	-1,276.20	614,678.80	2,568,257.86	40° 0' 11.749 N	109° 28' 16.589 W



<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 922-30I4CS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4932' & RKB 14'
<b>Project:</b>	Uintah County, UT NAD27	<b>MD Reference:</b>	GL 4932' & RKB 14'
<b>Site:</b>	NBU 922-29N Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-30I4CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

**Planned Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
4,700.00	20.96	289.40	4,454.92	461.28	-1,309.95	614,689.91	2,568,223.85	40° 0' 11.867 N	109° 28' 17.023 W
4,800.00	20.96	289.40	4,548.30	473.16	-1,343.70	614,701.02	2,568,189.85	40° 0' 11.984 N	109° 28' 17.456 W
4,858.58	20.96	289.40	4,603.00	480.12	-1,363.46	614,707.53	2,568,169.93	40° 0' 12.053 N	109° 28' 17.710 W
<b>WASATCH</b>									
4,900.00	20.96	289.40	4,641.68	485.04	-1,377.44	614,712.13	2,568,155.84	40° 0' 12.101 N	109° 28' 17.890 W
5,000.00	20.96	289.40	4,735.06	496.92	-1,411.19	614,723.25	2,568,121.83	40° 0' 12.219 N	109° 28' 18.324 W
5,100.00	20.96	289.40	4,828.44	508.81	-1,444.93	614,734.36	2,568,087.83	40° 0' 12.336 N	109° 28' 18.757 W
5,200.00	20.96	289.40	4,921.82	520.69	-1,478.68	614,745.47	2,568,053.82	40° 0' 12.454 N	109° 28' 19.191 W
5,300.00	20.96	289.40	5,015.20	532.57	-1,512.42	614,756.58	2,568,019.81	40° 0' 12.571 N	109° 28' 19.625 W
5,400.00	20.96	289.40	5,108.59	544.46	-1,546.17	614,767.70	2,567,985.81	40° 0' 12.689 N	109° 28' 20.059 W
5,500.00	20.96	289.40	5,201.97	556.34	-1,579.91	614,778.81	2,567,951.80	40° 0' 12.806 N	109° 28' 20.492 W
5,600.00	20.96	289.40	5,295.35	568.22	-1,613.66	614,789.92	2,567,917.79	40° 0' 12.923 N	109° 28' 20.926 W
5,700.00	20.96	289.40	5,388.73	580.10	-1,647.40	614,801.04	2,567,883.79	40° 0' 13.041 N	109° 28' 21.360 W
5,800.00	20.96	289.40	5,482.11	591.99	-1,681.15	614,812.15	2,567,849.78	40° 0' 13.158 N	109° 28' 21.793 W
5,900.00	20.96	289.40	5,575.49	603.87	-1,714.90	614,823.26	2,567,815.77	40° 0' 13.276 N	109° 28' 22.227 W
6,000.00	20.96	289.40	5,668.87	615.75	-1,748.64	614,834.37	2,567,781.77	40° 0' 13.393 N	109° 28' 22.661 W
6,100.00	20.96	289.40	5,762.25	627.64	-1,782.39	614,845.49	2,567,747.76	40° 0' 13.510 N	109° 28' 23.094 W
6,200.00	20.96	289.40	5,855.63	639.52	-1,816.13	614,856.60	2,567,713.75	40° 0' 13.628 N	109° 28' 23.528 W
6,300.00	20.96	289.40	5,949.02	651.40	-1,849.88	614,867.71	2,567,679.75	40° 0' 13.745 N	109° 28' 23.962 W
6,400.00	20.96	289.40	6,042.40	663.29	-1,883.62	614,878.82	2,567,645.74	40° 0' 13.863 N	109° 28' 24.395 W
6,500.00	20.96	289.40	6,135.78	675.17	-1,917.37	614,889.94	2,567,611.73	40° 0' 13.980 N	109° 28' 24.829 W
6,520.67	20.96	289.40	6,155.08	677.62	-1,924.34	614,892.23	2,567,604.70	40° 0' 14.004 N	109° 28' 24.919 W
<b>Start Drop -2.00</b>									
6,600.00	19.38	289.40	6,229.54	686.71	-1,950.14	614,900.73	2,567,578.70	40° 0' 14.094 N	109° 28' 25.250 W
6,700.00	17.38	289.40	6,324.44	697.18	-1,979.88	614,910.52	2,567,548.74	40° 0' 14.198 N	109° 28' 25.632 W
6,800.00	15.38	289.40	6,420.38	706.54	-2,006.47	614,919.28	2,567,521.94	40° 0' 14.290 N	109° 28' 25.974 W
6,900.00	13.38	289.40	6,517.24	714.79	-2,029.89	614,926.99	2,567,498.34	40° 0' 14.372 N	109° 28' 26.275 W
7,000.00	11.38	289.40	6,614.91	721.91	-2,050.10	614,933.65	2,567,477.97	40° 0' 14.442 N	109° 28' 26.535 W
7,100.00	9.38	289.40	6,713.27	727.89	-2,067.09	614,939.24	2,567,460.85	40° 0' 14.501 N	109° 28' 26.753 W
7,200.00	7.38	289.40	6,812.20	732.73	-2,080.83	614,943.77	2,567,447.00	40° 0' 14.549 N	109° 28' 26.930 W
7,300.00	5.38	289.40	6,911.58	736.42	-2,091.31	614,947.22	2,567,436.45	40° 0' 14.585 N	109° 28' 27.064 W
7,400.00	3.38	289.40	7,011.28	738.95	-2,098.50	614,949.59	2,567,429.19	40° 0' 14.610 N	109° 28' 27.157 W
7,500.00	1.38	289.40	7,111.19	740.33	-2,102.42	614,950.88	2,567,425.25	40° 0' 14.624 N	109° 28' 27.207 W
7,568.82	0.00	0.00	7,180.00	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
<b>Start 2241.00 hold at 7568.82 MD</b>									
7,600.00	0.00	0.00	7,211.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
7,700.00	0.00	0.00	7,311.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
7,800.00	0.00	0.00	7,411.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
7,900.00	0.00	0.00	7,511.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
8,000.00	0.00	0.00	7,611.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
8,100.00	0.00	0.00	7,711.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
8,200.00	0.00	0.00	7,811.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
8,300.00	0.00	0.00	7,911.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
8,400.00	0.00	0.00	8,011.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
8,500.00	0.00	0.00	8,111.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
8,552.82	0.00	0.00	8,164.00	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
<b>MESAVERDE</b>									
8,600.00	0.00	0.00	8,211.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
8,700.00	0.00	0.00	8,311.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
8,800.00	0.00	0.00	8,411.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
8,900.00	0.00	0.00	8,511.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
9,000.00	0.00	0.00	8,611.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
9,100.00	0.00	0.00	8,711.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
9,200.00	0.00	0.00	8,811.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W



<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 922-30I4CS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4932' & RKB 14'
<b>Project:</b>	Uintah County, UT NAD27	<b>MD Reference:</b>	GL 4932' & RKB 14'
<b>Site:</b>	NBU 922-29N Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-30I4CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
9,300.00	0.00	0.00	8,911.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
9,400.00	0.00	0.00	9,011.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
9,500.00	0.00	0.00	9,111.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
9,600.00	0.00	0.00	9,211.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
9,700.00	0.00	0.00	9,311.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
9,800.00	0.00	0.00	9,411.18	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
9,809.82	0.00	0.00	9,421.00	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W

**NBU 922-30I4CS PBHL**

Targets										
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
NBU 922-30I4CS PBI	- plan hits target center	0.00	0.00	9,421.00	740.60	-2,103.20	614,951.13	2,567,424.47	40° 0' 14.627 N	109° 28' 27.217 W
	- Circle (radius 25.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,274.55	2,190.00	8 5/8"	8.625	11.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
8,552.82	8,164.00	MESAVERDE			
4,858.58	4,603.00	WASATCH			
1,354.66	1,331.00	GREEN RIVER		0.00	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
1,348.15	1,324.92	62.98	-178.85	Start 5172.52 hold at 1348.15 MD
6,520.67	6,155.08	677.62	-1,924.34	Start Drop -2.00
7,568.82	7,180.00	740.60	-2,103.20	Start 2241.00 hold at 7568.82 MD
9,809.82	9,421.00	740.60	-2,103.20	TD at 9809.82

**NBU 922-30I4CS**

Pad: NBU 922-29N

Surface: 806' FSL 1,649' FWL (SE/4SW/4) Section 29

BHL: 1,550' FSL 455' FEL (NE/4SE/4) Section 30

T9S R22E

Uintah County, Utah

Mineral Lease: UTU 0463

**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	1,331'	
Birds Nest	1,667'	Water
Mahogany	2,042'	Water
Wasatch	4,603'	Gas
Mesaverde	7,180'	Gas
MVU2	8,164'	Gas
MVL1	8,702'	Gas
TVD	9,421'	
TD	9,810'	

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

*Please refer to the attached Drilling Program.*

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

*Please refer to the attached Drilling Program.*

5. **Drilling Fluids Program:**

*Please refer to the attached Drilling Program.*

6. **Evaluation Program:**

*Please refer to the attached Drilling Program.*

**7. Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 9,421' TVD, approximately equals 5,772 psi (calculated at 0.61 psi/foot).

Maximum anticipated surface pressure equals approximately 3,699 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

**8. Anticipated Starting Dates:**

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

**9. Variances:**

*Please refer to the attached Drilling Program.*

*Onshore Order #2 – Air Drilling Variance*

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

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

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

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

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

***Background***

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

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

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

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

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

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

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

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

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

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

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

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

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

***Conclusion***

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

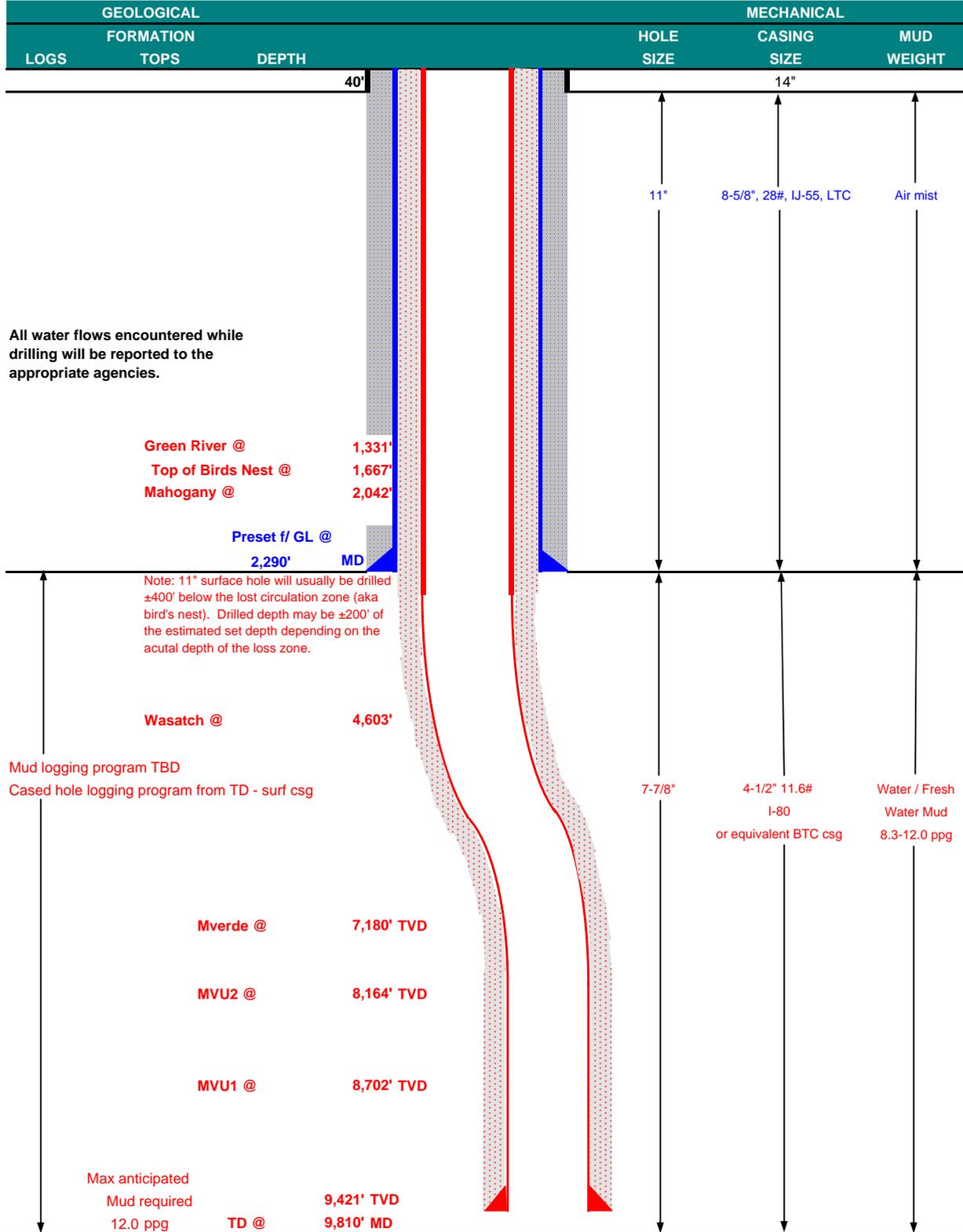
**10. Other Information:**

*Please refer to the attached Drilling Program.*



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

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	July 28, 2010	
WELL NAME	<b>NBU 922-3014CS</b>		TD	9,421'	TVD 9,810' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
SURFACE LOCATION	SE/4 SW/4	806' FSL	1,649' FWL	Sec 29	T 9S R 22E
	Latitude: 40.001995	Longitude: -109.467404		NAD 83	
BTM HOLE LOCATION	NE/4 SE/4	1,550' FSL	455' FEL	Sec 30	T 9S R 22E
	Latitude: 40.004028	Longitude: -109.474912		NAD 83	
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.				





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

### CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'						
						3,390	1,880	348,000
SURFACE	8-5/8"	0 to 2,290	28.00	IJ-55	LTC	0.86	1.75	5.37
						7,780	6,350	278,000
PRODUCTION	4-1/2"	0 to 9,810	11.60	I-80	BTC	2.04	1.08	2.80

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

D.F. = 2.35

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 3,699 psi**

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

(Burst Assumptions: TD = 12.0 ppg)

0.61 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

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

**MABHP 5,772 psi**

### CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
			+ 0.25 pps flocele				
Option 1							
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE			<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>				
Option 2	LEAD	1,790'	65/35 Poz + 6% Gel + 10 pps gilsonite	170	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,100'	Premium Lite II +0.25 pps	300	10%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	5,710'	50/50 Poz/G + 10% salt + 2% gel	1,100	10%	14.30	1.31
			+ 0.1% R-3				

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

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

### FLOAT EQUIPMENT & CENTRALIZERS

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

### ADDITIONAL INFORMATION

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

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

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

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

DRILLING ENGINEER:

John Huycke / Emile Goodwin

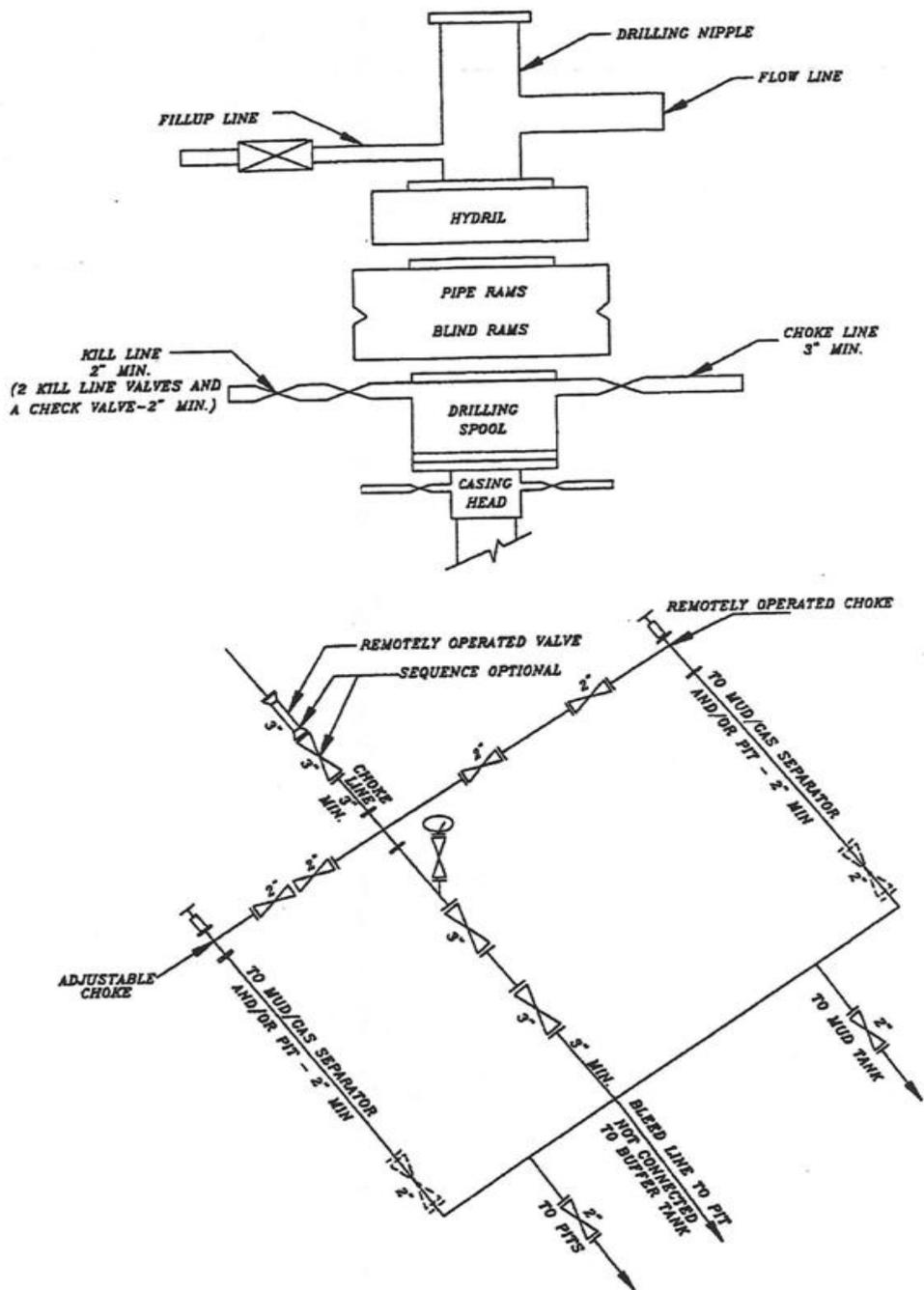
DATE:

DRILLING SUPERINTENDENT:

John Merkel / Lovel Young

DATE:

### EXHIBIT A NBU 922-30I4CS

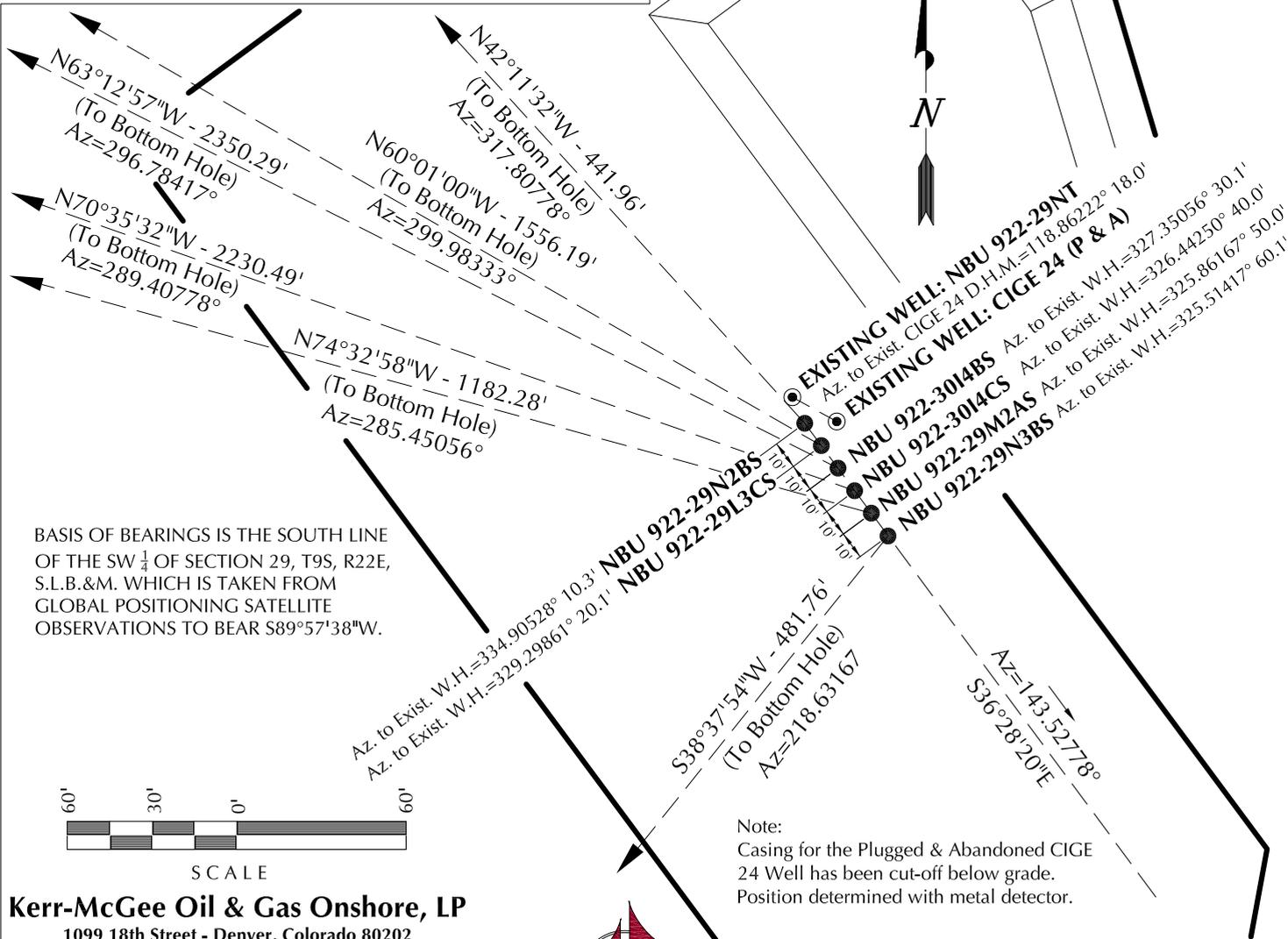


**SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK**

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 922-29N3BS	40°00'07.022" 40.001951°	109°28'02.503" 109.467362°	40°00'07.148" 40.001985°	109°28'00.037" 109.466677°	790' FSL 1661' FWL	40°00'03.304" 40.000918°	109°28'06.367" 109.468435°	40°00'03.429" 40.000953°	109°28'03.901" 109.467750°	414' FSL 1360' FWL
NBU 922-29M2AS	40°00'07.102" 40.001973°	109°28'02.579" 109.467383°	40°00'07.228" 40.002008°	109°28'00.114" 109.466698°	798' FSL 1655' FWL	40°00'10.213" 40.002837°	109°28'17.219" 109.471450°	40°00'10.339" 40.002872°	109°28'14.753" 109.470765°	1114' FSL 515' FWL
NBU 922-3014CS	40°00'07.181" 40.001995°	109°28'02.656" 109.467404°	40°00'07.307" 40.002030°	109°28'00.190" 109.466719°	806' FSL 1649' FWL	40°00'14.502" 40.004028°	109°28'29.683" 109.474912°	40°00'14.628" 40.004063°	109°28'27.216" 109.474227°	1550' FSL 455' FEL
NBU 922-3014BS	40°00'07.261" 40.002017°	109°28'02.732" 109.467425°	40°00'07.387" 40.002052°	109°28'00.266" 109.466740°	814' FSL 1643' FWL	40°00'17.723" 40.004923°	109°28'29.687" 109.474913°	40°00'17.849" 40.004958°	109°28'27.220" 109.474228°	1876' FSL 455' FEL
NBU 922-29L3CS	40°00'07.340" 40.002039°	109°28'02.808" 109.467447°	40°00'07.466" 40.002074°	109°28'00.342" 109.466762°	822' FSL 1637' FWL	40°00'15.023" 40.004173°	109°28'20.126" 109.472257°	40°00'15.149" 40.004208°	109°28'17.659" 109.471572°	1601' FSL 289' FWL
NBU 922-29N2BS	40°00'07.419" 40.002061°	109°28'02.884" 109.467468°	40°00'07.545" 40.002096°	109°28'00.418" 109.466783°	830' FSL 1631' FWL	40°00'10.654" 40.002959°	109°28'06.697" 109.468527°	40°00'10.780" 40.002994°	109°28'04.231" 109.467842°	1158' FSL 1334' FWL
NBU 922-29NT	40°00'07.511" 40.002063°	109°28'02.940" 109.467483°	40°00'07.637" 40.002097°	109°28'00.474" 109.466798°	840' FSL 1627' FWL					
CIGE 24	40°00'07.425" 40.002063°	109°28'02.737" 109.467427°	40°00'07.551" 40.002097°	109°28'00.272" 109.466742°	831' FSL 1642' FWL					

RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 922-29N3BS	-376.3'	-300.8'	NBU 922-29M2AS	315.0'	-1139.6'	NBU 922-3014CS	741.2'	-2103.7'	NBU 922-3014BS	1059.1'	-2098.1'
NBU 922-29L3CS	777.7'	-1347.9'	NBU 922-29N2BS	327.4'	-296.8'						



BASIS OF BEARINGS IS THE SOUTH LINE OF THE SW 1/4 OF SECTION 29, T9S, R22E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR S89°57'38"W.

Note:  
Casing for the Plugged & Abandoned CIGE 24 Well has been cut-off below grade.  
Position determined with metal detector.

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

**WELL PAD - NBU 922-29N**

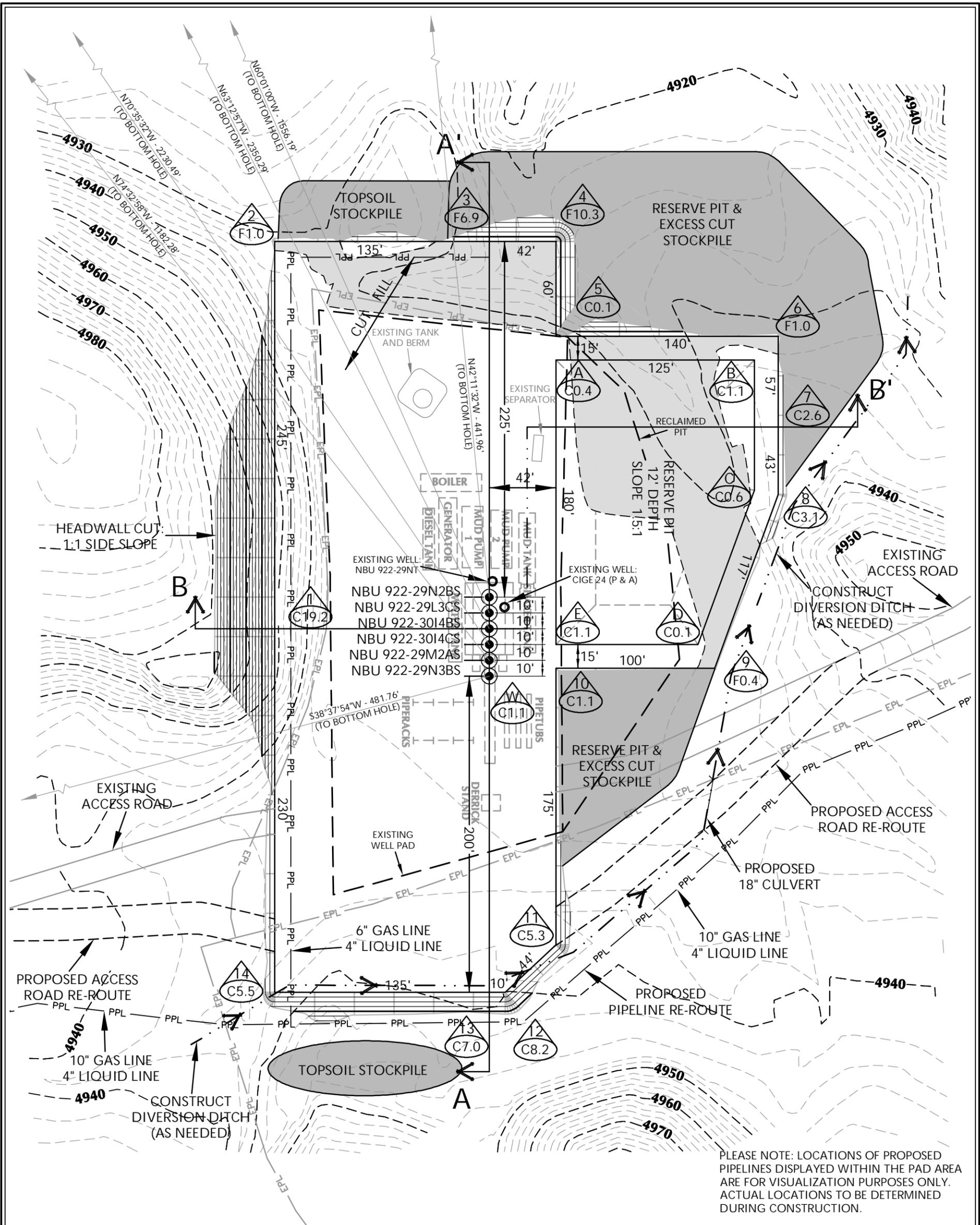
**WELL PAD INTERFERENCE PLAT**  
WELLS - NBU 922-29N3BS, NBU 922-29M2AS, NBU 922-3014CS, NBU 922-3014BS, NBU 922-29L3CS & NBU 922-29N2BS LOCATED IN SECTION 29, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.



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

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

DATE SURVEYED: 05-27-10	SURVEYED BY: M.S.B.	SHEET NO: <b>7</b>
DATE DRAWN: 06-02-10	DRAWN BY: B.M.	
SCALE: 1" = 60'		7 OF 18



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

**WELL PAD - NBU 922-29N DESIGN SUMMARY**

EXISTING GRADE @ CENTER OF WELL PAD = 4933.1'  
 FINISHED GRADE ELEVATION = 4932.0'  
 CUT SLOPES = VARY  
 FILL SLOPES = 1.5:1  
 TOTAL WELL PAD AREA = 2.89 ACRES  
 TOTAL DAMAGE AREA = 5.98 ACRES  
 SHRINKAGE FACTOR = 1.10  
 SWELL FACTOR = 1.00

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

WELL PAD - NBU 922-29N

WELL PAD - LOCATION LAYOUT  
 NBU 922-29N3BS, NBU 922-29M2AS,  
 NBU 922-3014CS, NBU 922-3014BS,  
 NBU 922-29L3CS & NBU 922-29N2BS  
 LOCATED IN SECTION 29, T9S, R22E,  
 S.L.B.&M., Uintah County, Utah



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 Sheridan, WY 82801  
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**WELL PAD QUANTITIES**  
 TOTAL CUT FOR WELL PAD = 10,525 C.Y.  
 TOTAL FILL FOR WELL PAD = 2,639 C.Y.  
 TOPSOIL @ 6" DEPTH = 1,402 C.Y.  
 EXCESS MATERIAL = 7,886 C.Y.

**RESERVE PIT QUANTITIES**  
 TOTAL CUT FOR RESERVE PIT  
 +/- 7,100 CY  
 RESERVE PIT CAPACITY (2' OF FREEBOARD)  
 +/- 27,030 BARRELS

**WELL PAD LEGEND**

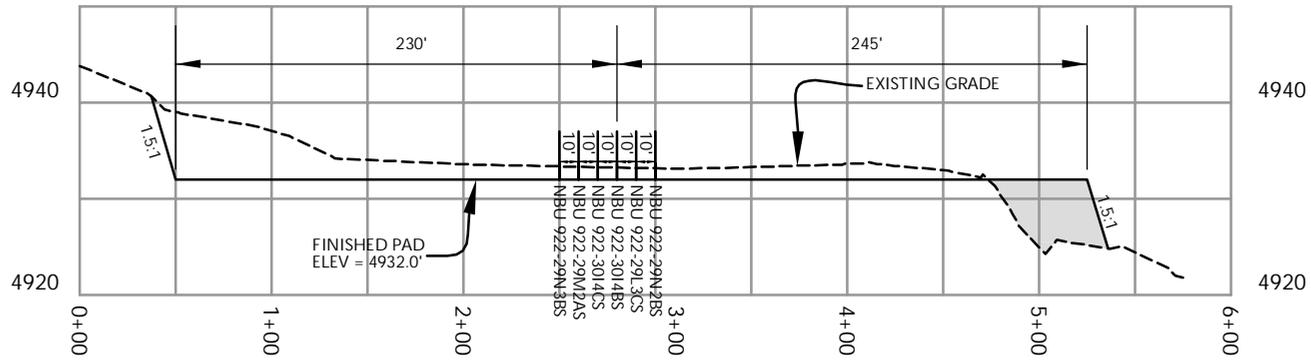
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL - PROPOSED PIPELINE
- EPL - EXISTING PIPELINE



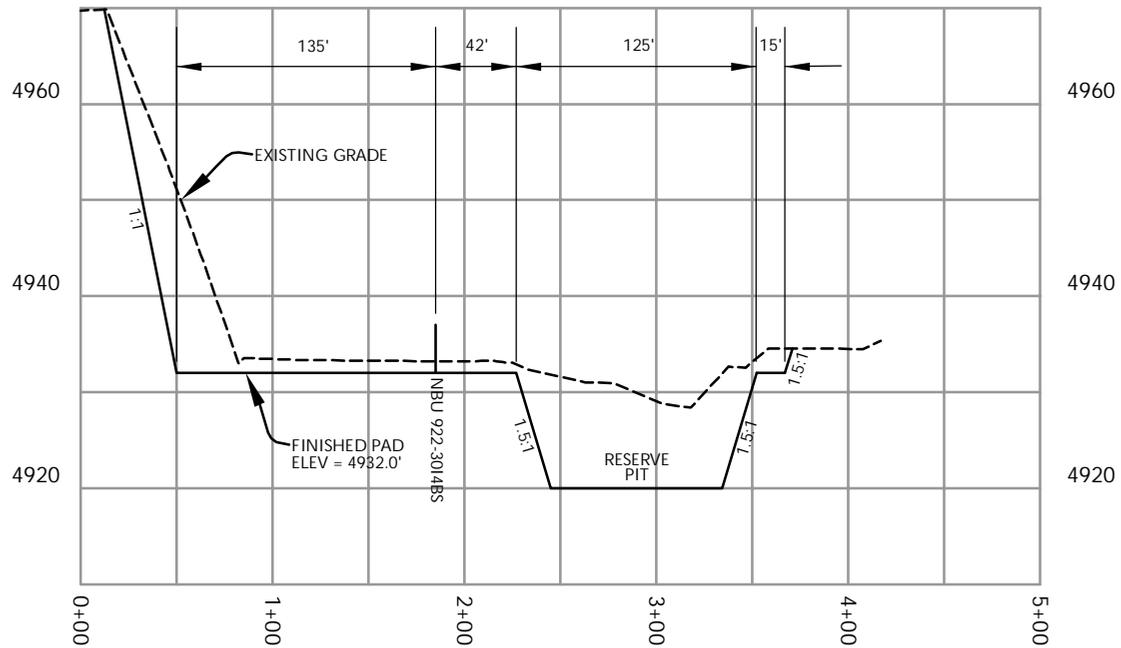
HORIZONTAL 0 30 60 1" = 60'  
 2' CONTOURS

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

Scale: 1"=60' Date: 6/9/10 SHEET NO:  
 REVISED: TAR 9/3/10 **8** 8 OF 18



**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

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

WELL PAD - NBU 922-29N

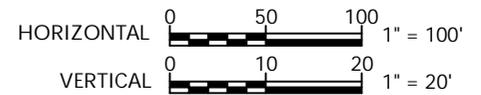
WELL PAD - CROSS SECTIONS  
NBU 922-29N3BS, NBU 922-29M2AS,  
NBU 922-3014CS, NBU 922-3014BS,  
NBU 922-29L3CS & NBU 922-29N2BS  
LOCATED IN SECTION 29, T9S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH



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

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

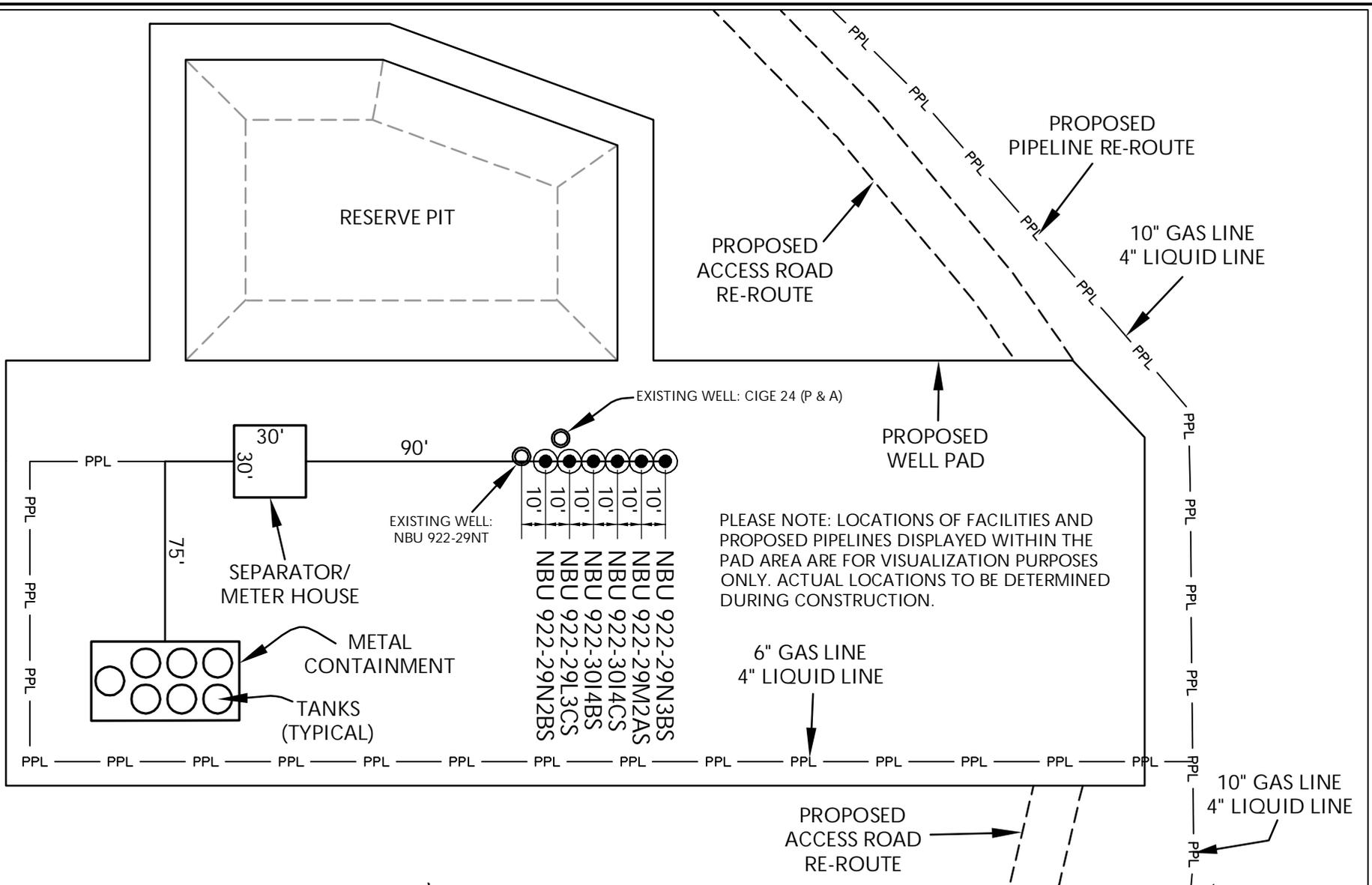
(435) 789-1365



Scale: 1"=100'	Date: 6/9/10	SHEET NO:
REVISED:	TAR 9/7/10	<b>9</b> 9 OF 18

APIWellNo:43047512210000  
K:\MADRACO\2010\_35\_NBU\_FOCUS\_SEC\_922-29\DWG\NBU 922-29N\922-29N.dwg, 9/7/2010 10:44:05 AM

'APIWellNo:43047512210000'  
 C:\Users\jg2010\Documents\609\609.dwg, 9/7/2010 1:32:30 PM



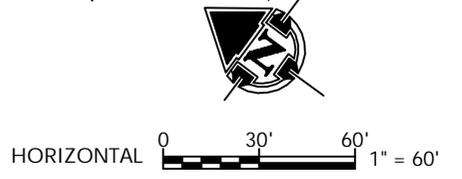
PLEASE NOTE: LOCATIONS OF FACILITIES AND PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

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 1099 18th Street - Denver, Colorado 80202



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

WELL PAD LEGEND	
	EXISTING WELL LOCATION
	PROPOSED WELL LOCATION
	PROPOSED PIPELINE
	EXISTING PIPELINE



<b>WELL PAD - NBU 922-29N</b>
<b>WELL PAD - FACILITIES DIAGRAM</b> NBU 922-29N3BS, NBU 922-29M2AS, NBU 922-3014CS, NBU 922-3014BS, NBU 922-29L3CS & NBU 922-29N2BS LOCATED IN SECTION 29, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

<b>TIMBERLINE</b> <b>ENGINEERING &amp; LAND SURVEYING, INC.</b> 209 NORTH 300 WEST - VERNAL, UTAH 84078	(435) 789-1365 Scale: 1"=60' REVISED:	Date: 6/9/10 TAR 8/30/10	SHEET NO: <b>10</b> 10 OF 18

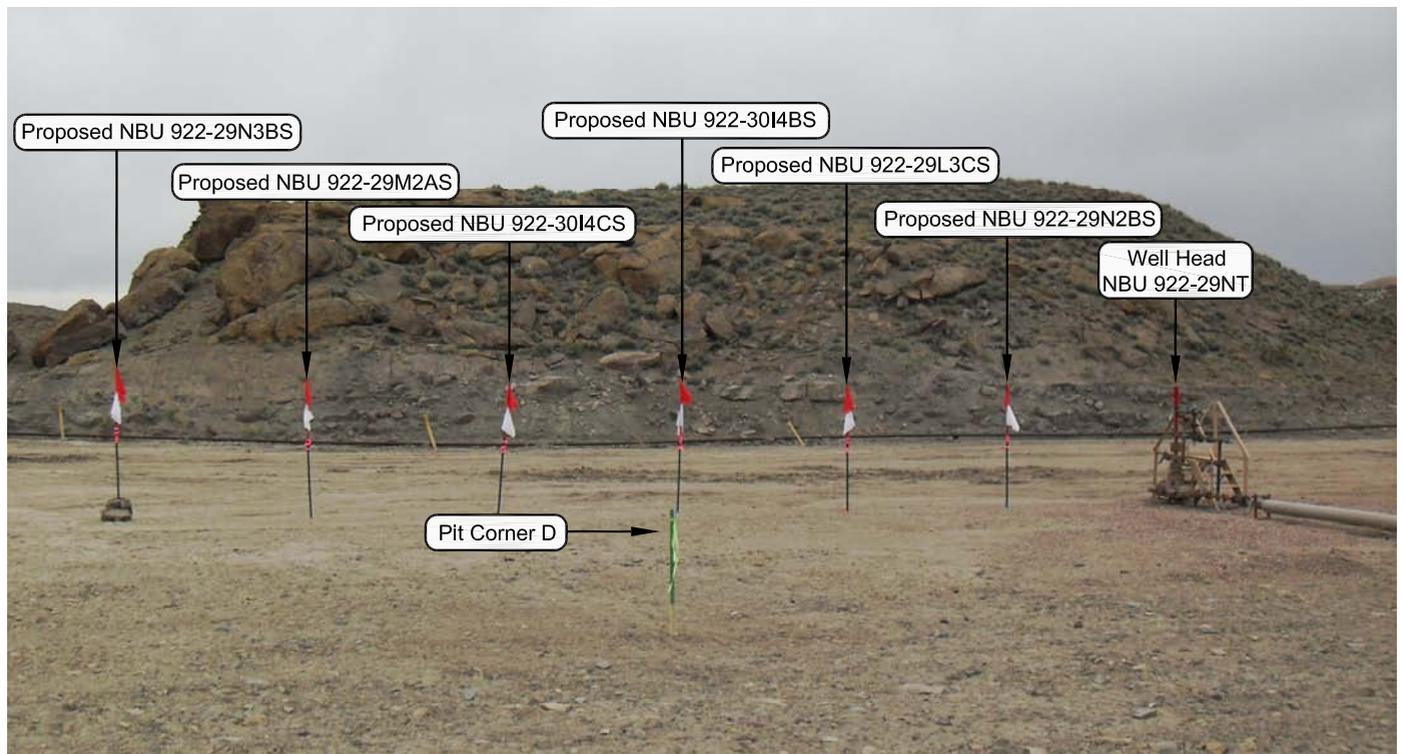


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: SOUTHWESTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHEASTERLY

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

**WELL PAD - NBU 922-29N**

**LOCATION PHOTOS**  
NBU 922-29N3BS, NBU 922-29M2AS,  
NBU 922-30I4CS, NBU 922-30I4BS,  
NBU 922-29L3CS & NBU 922-29N2BS  
LOCATED IN SECTION 29, T9S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH.



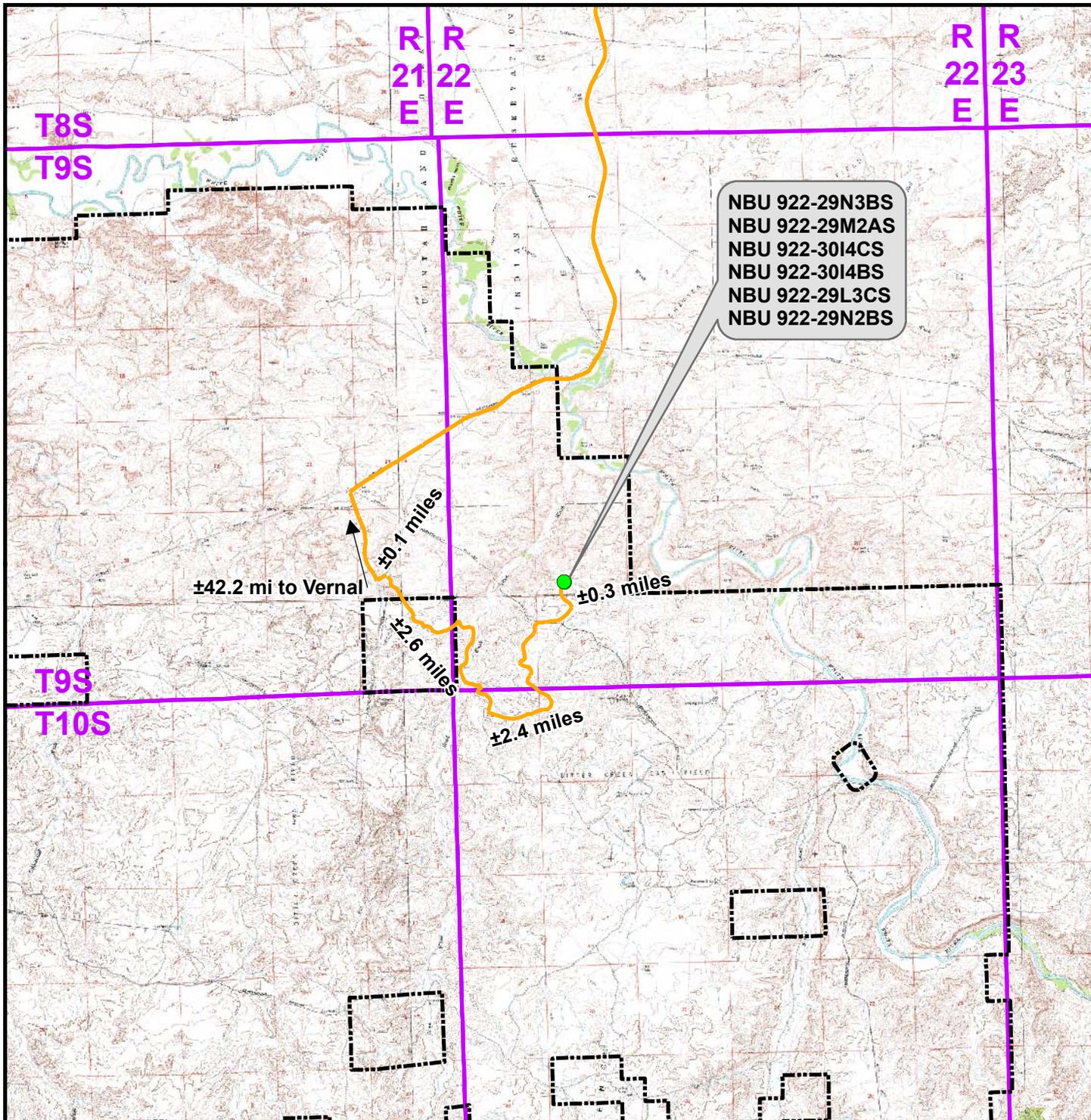
**CONSULTING, LLC**  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

**TIMBERLINE**

(435) 789-1365

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

DATE PHOTOS TAKEN: 05-27-10	PHOTOS TAKEN BY: M.S.B.	SHEET NO: <b>11</b>
DATE DRAWN: 06-02-10	DRAWN BY: B.M.	
Date Last Revised:		11 OF 18



**Legend**

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

Distance From Well Pad - NBU 922-29N To Unit Boundary: ±3,623ft

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

**WELL PAD - NBU 922-29N**

**TOPO A**  
 NBU 922-29N3BS, NBU 922-29M2AS,  
 NBU 922-30I4CS, NBU 922-30I4BS,  
 NBU 922-29L3CS & NBU 922-29N2BS  
 LOCATED IN SECTION 29, T9S, R22E  
 S.L.B.&M., UTAH COUNTY, UTAH

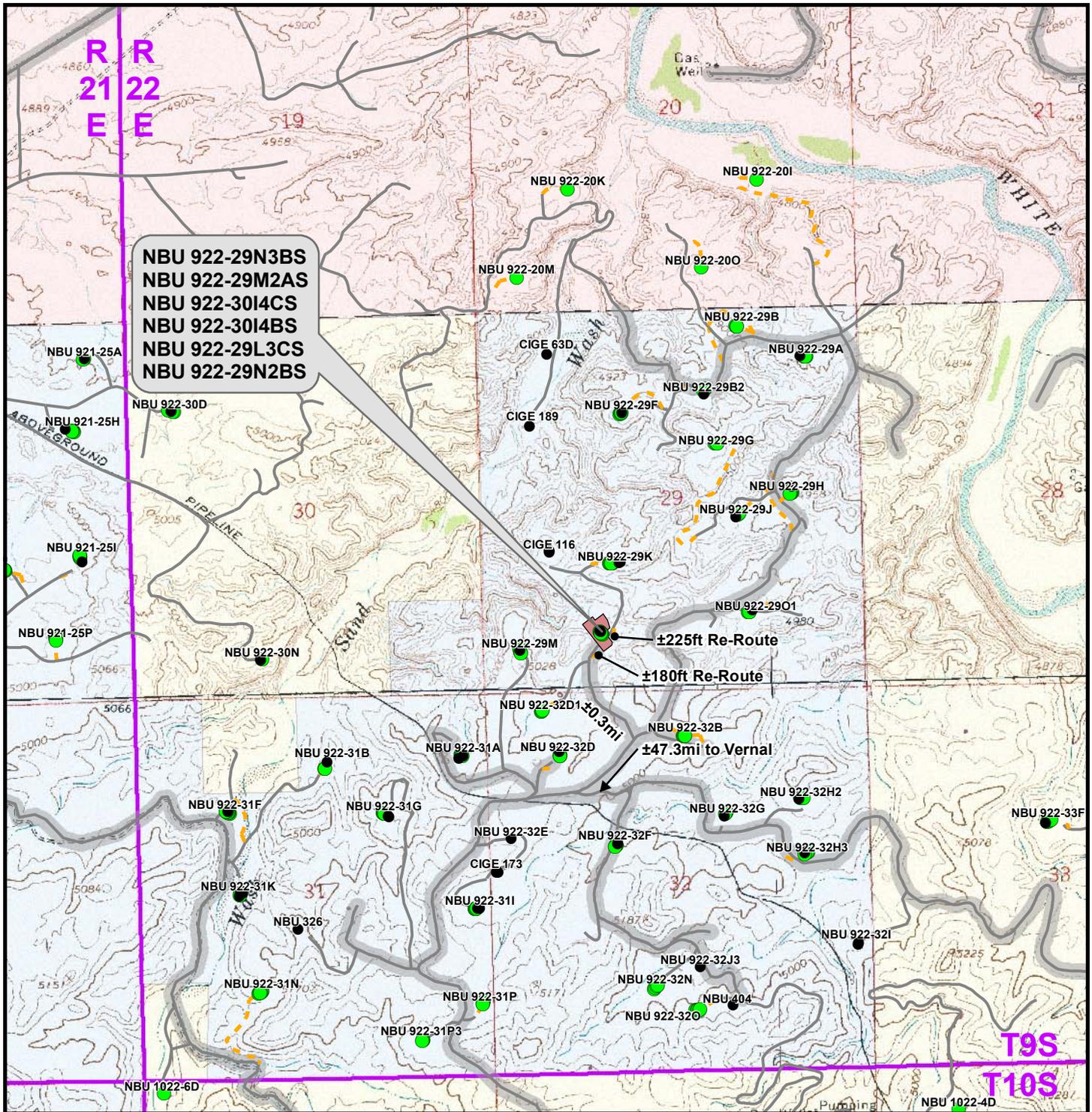


**CONSULTING, LLC**  
 371 Coffeen Avenue  
 Sheridan, WY 82801  
 Phone (307) 674-0609  
 Fax (307) 674-0182



Scale: 1:100,000	NAD83 USP Central
Drawn: CPS	Date: 9 June 2010
Revised: CPS	Date: 9 July 2010

Sheet No:  
12 12 of 18



**Legend**

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

Total Proposed Road Re-Route Length: ±405ft

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

**WELL PAD - NBU 922-29N**

**TOPO B**  
 NBU 922-29N3BS, NBU 922-29M2AS,  
 NBU 922-30I4CS, NBU 922-30I4BS,  
 NBU 922-29L3CS & NBU 922-29N2BS  
 LOCATED IN SECTION 29, T9S, R22E  
 S.L.B.&M., UTAH COUNTY, UTAH



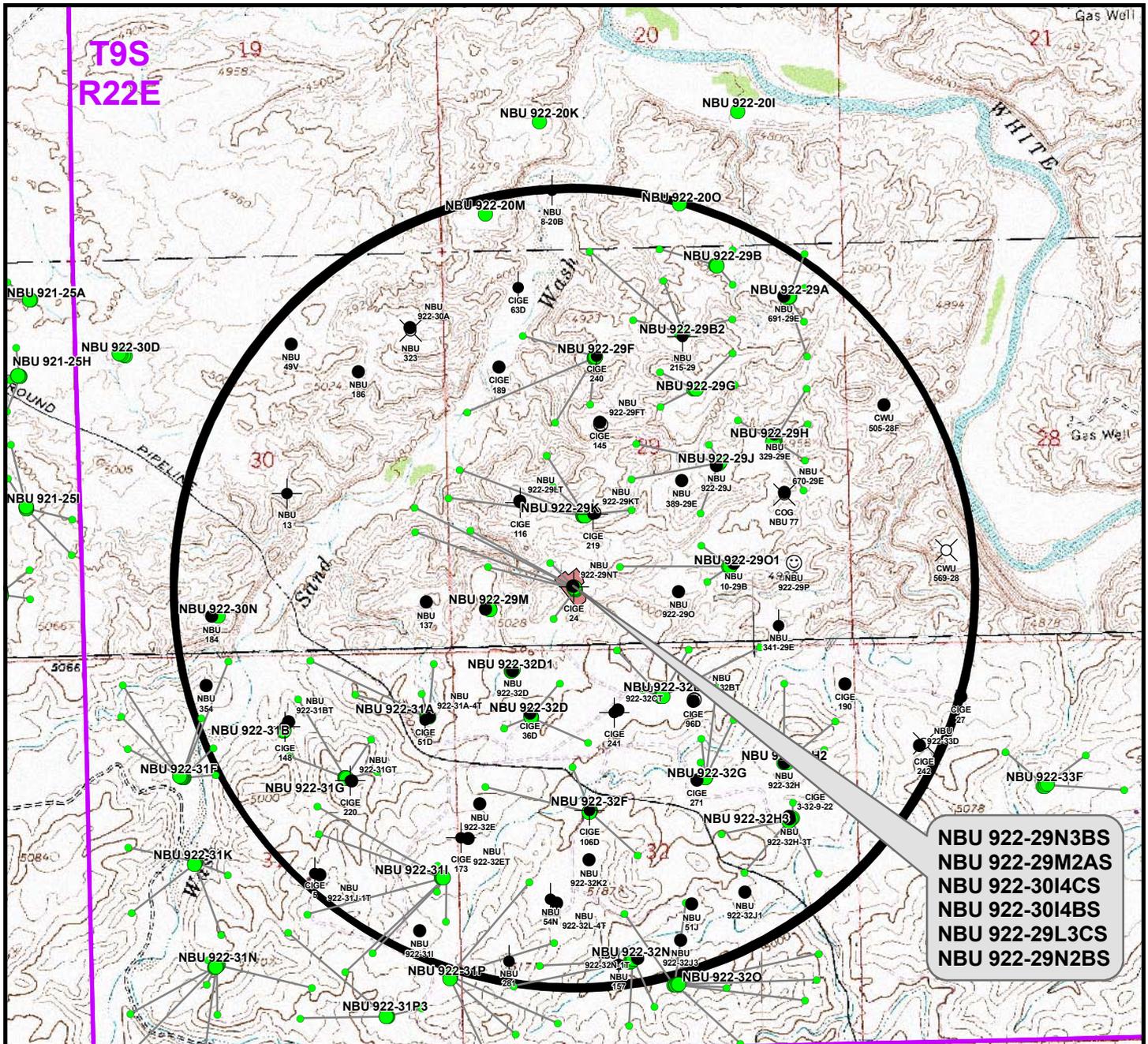
**CONSULTING, LLC**  
 371 Coffeen Avenue  
 Sheridan, WY 82801  
 Phone (307) 674-0609  
 Fax (307) 674-0182



Scale: 1" = 2,000ft  
 Drawn: CPS  
 Revised: CPS

NAD83 USP Central  
 Date: 9 June 2010  
 Date: 31 Aug 2010

Sheet No:  
**13** of 18



NBU 922-29N3BS  
 NBU 922-29M2AS  
 NBU 922-30I4CS  
 NBU 922-29L3CS  
 NBU 922-29N2BS

Proposed Well	Nearest Well Bore	Footage	Proposed Well	Nearest Well Bore	Footage
NBU 922-29N3BS	CIGE 24	504ft	NBU 922-30I4BS	NBU 137	1,213ft
NBU 922-29M2AS	NBU 922-29M	522ft	NBU 922-29L3CS	CIGE 116	756ft
NBU 922-30I4CS	NBU 137	890ft	NBU 922-29N2BS	NBU 922-29NT	432ft

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

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

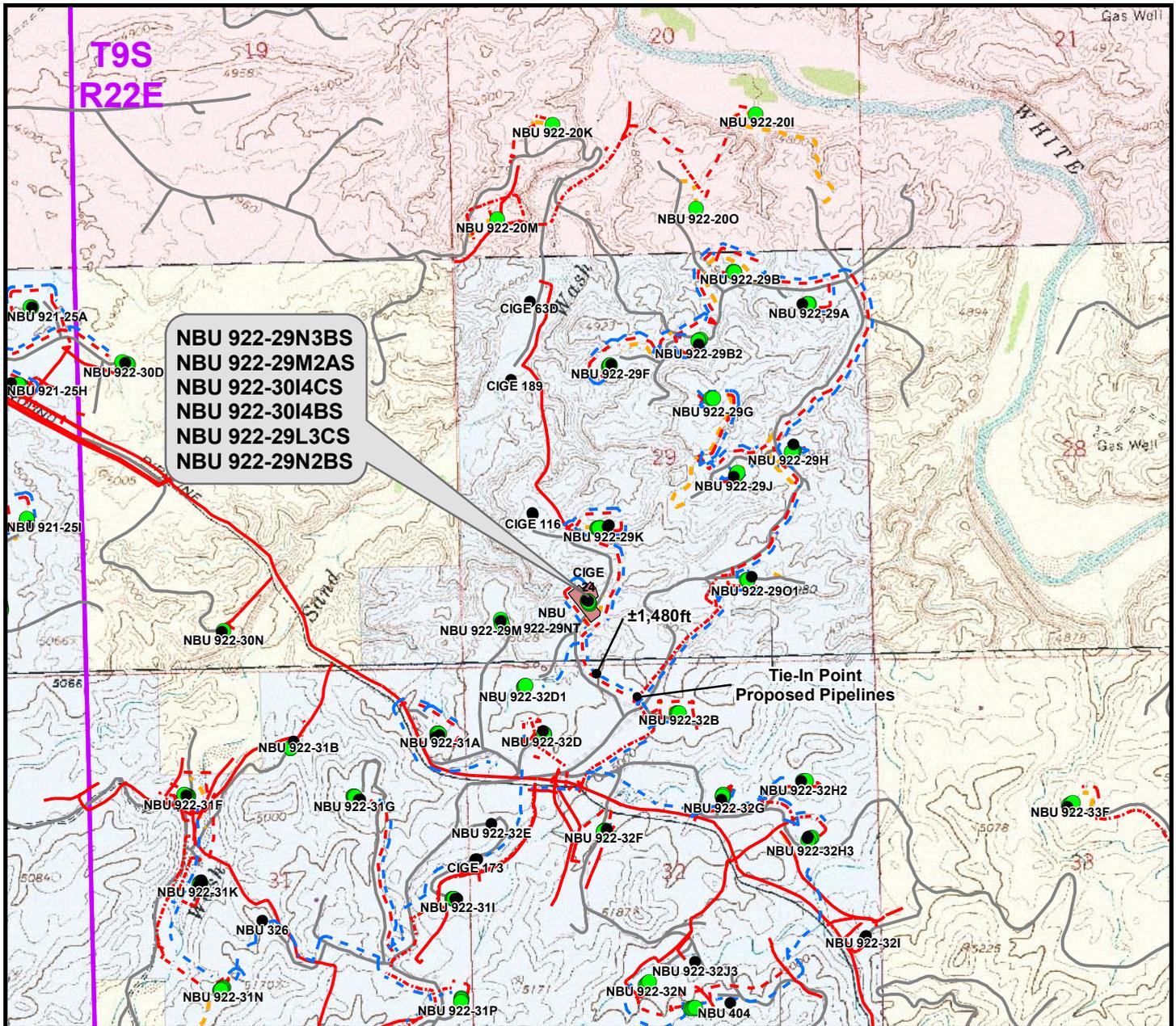
**Kerr-McGee Oil & Gas Onshore, LP**  
 1099 18th Street, Denver, Colorado 80202

**WELL PAD - NBU 922-29N**

**TOPO C**  
 NBU 922-29N3BS, NBU 922-29M2AS,  
 NBU 922-30I4CS, NBU 922-30I4BS,  
 NBU 922-29L3CS & NBU 922-29N2BS  
 LOCATED IN SECTION 29, T9S, R22E  
 S.L.B.&M., UTAH COUNTY, UTAH

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

Scale: 1" = 2,000ft | NAD83 USP Central | Sheet No: 14 of 18  
 Drawn: CPS | Date: 9 June 2010  
 Revised: CPS | Date: 31 Aug 2010



Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Proposed 4" (Meter House To Edge Of Pad)	±690ft	Proposed 6" (Meter House To Edge of Pad)	±690ft
Proposed 4" (Edge Of Pad to 29K Intersection)	±20ft	Proposed 6" (Edge of Pad To 29K Intersection)	±20ft
Proposed 4" (29K Intersection to 29O1 Intersection)	±1,460ft	Proposed 10" (29K Intersection To 29O1 Intersection)	±1,460ft
<b>TOTAL PROPOSED LIQUID PIPELINE =</b>	<b>±2,170ft</b>	<b>TOTAL PROPOSED GAS PIPELINE =</b>	<b>±2,170ft</b>

**Legend**

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

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

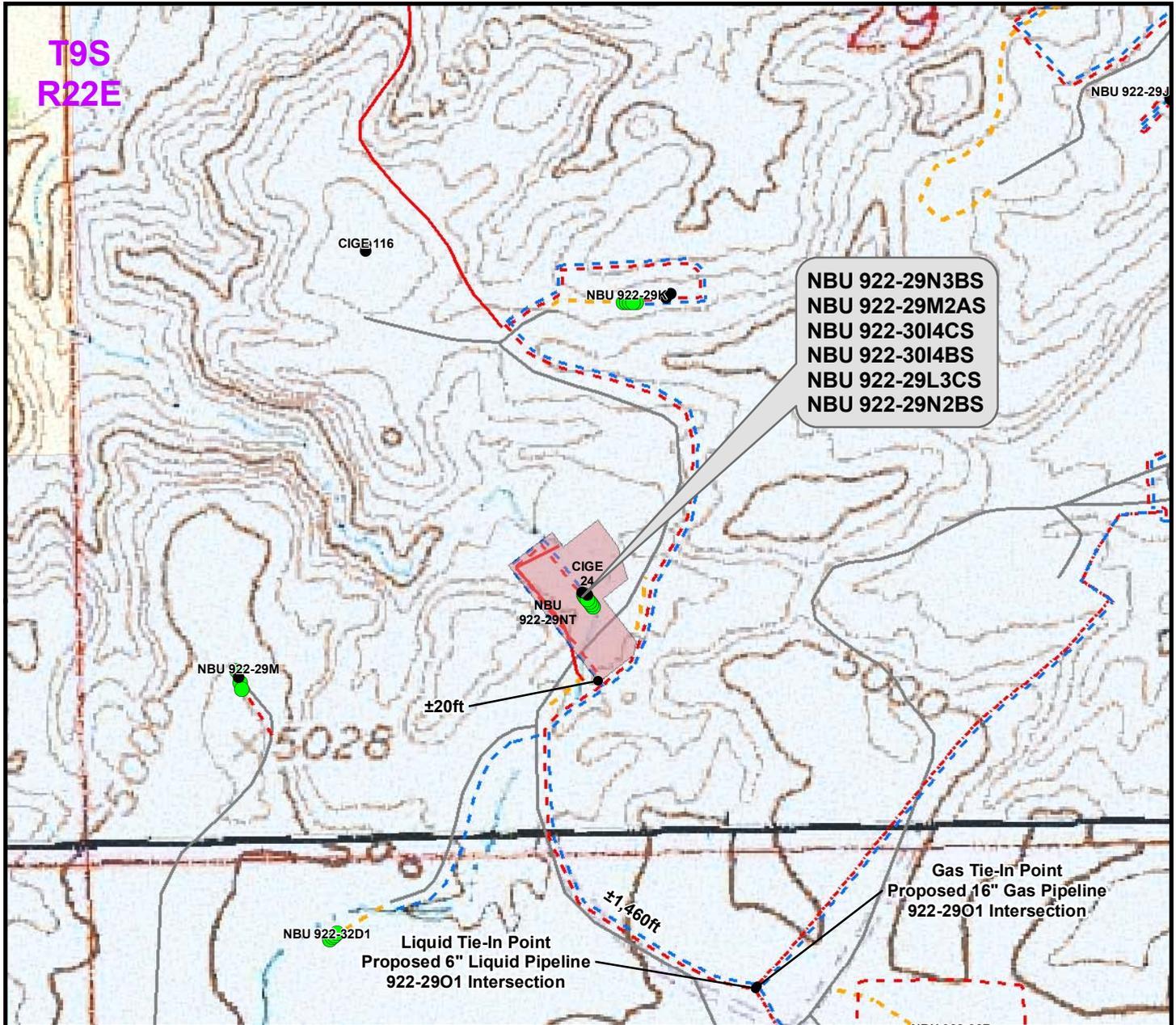
**WELL PAD - NBU 922-29N**

**TOPO D**  
 NBU 922-29N3BS, NBU 922-29M2AS,  
 NBU 922-30I4CS, NBU 922-30I4BS,  
 NBU 922-29L3CS & NBU 922-29N2BS  
 LOCATED IN SECTION 29, T9S, R22E  
 S.L.B.&M., UINTAH COUNTY, UTAH

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

Scale: 1" = 2,000ft | NAD83 USP Central | Sheet No: **15** of 18

Drawn: CPS | Date: 9 June 2010  
 Revised: CPS | Date: 31 Aug 2010



Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Proposed 4" (Meter House To Edge Of Pad)	±690ft	Proposed 6" (Meter House To Edge of Pad)	±690ft
Proposed 4" (Edge Of Pad to 29K Intersection)	±20ft	Proposed 6" (Edge of Pad To 29K Intersection)	±20ft
Proposed 4" (29K Intersection to 2901 Intersection)	±1,460ft	Proposed 10" (29K Intersection To 2901 Intersection)	±1,460ft
<b>TOTAL PROPOSED LIQUID PIPELINE =</b>	<b>±2,170ft</b>	<b>TOTAL PROPOSED GAS PIPELINE =</b>	<b>±2,170ft</b>

**Legend**

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

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

**WELL PAD - NBU 922-29N**

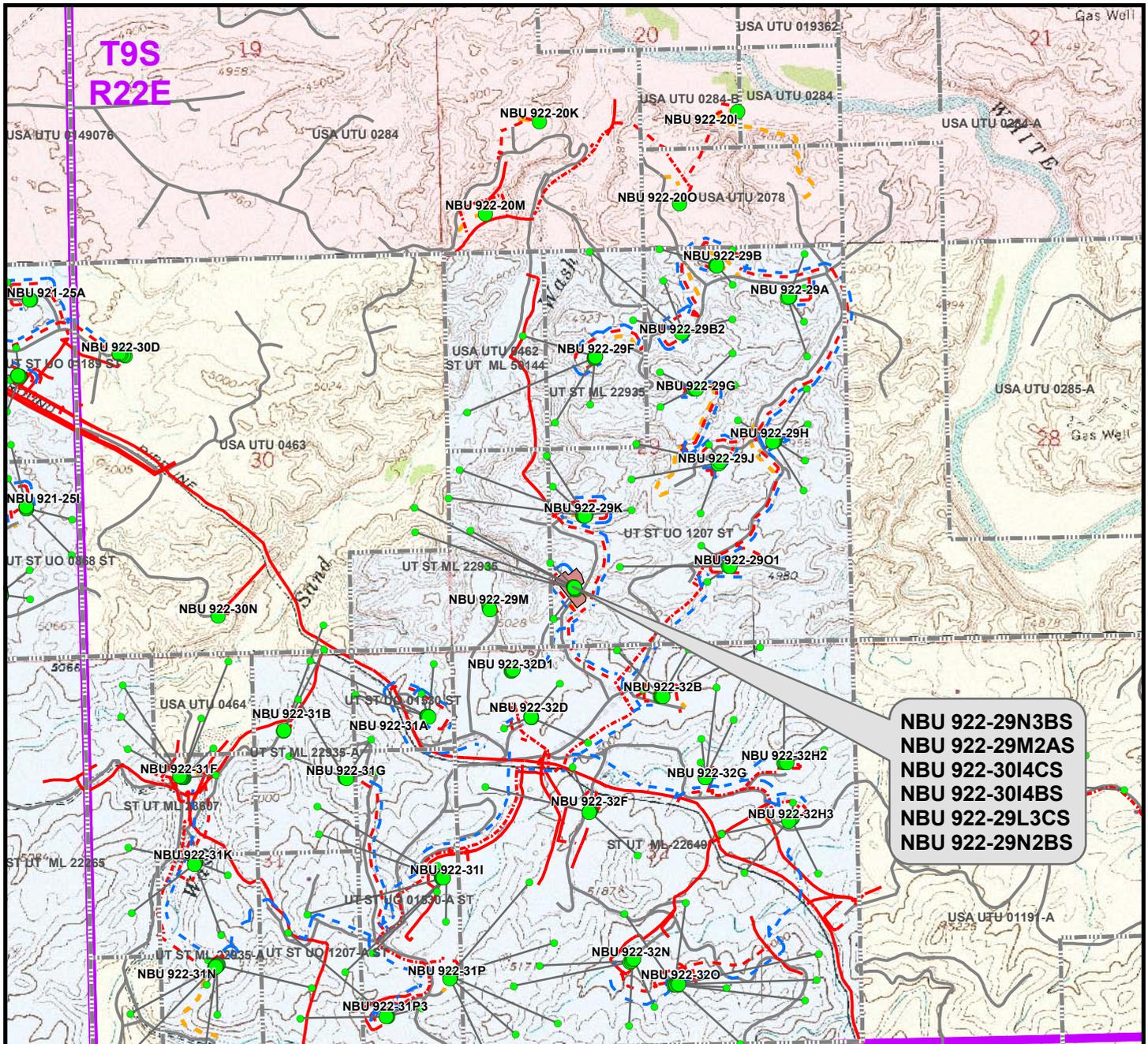
**TOPO D2 (PAD & PIPELINE DETAIL)**  
 NBU 922-29N3BS, NBU 922-29M2AS,  
 NBU 922-30I4CS, NBU 922-30I4BS,  
 NBU 922-29L3CS & NBU 922-29N2BS  
 LOCATED IN SECTION 29, T9S, R22E  
 S.L.B.&M., UINTAH COUNTY, UTAH

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



Scale: 1" = 500ft	NAD83 USP Central	Sheet No:
Drawn: CPS	Date: 9 June 2010	<b>16</b>
Revised: CPS	Date: 31 Aug 2010	

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**NBU 922-29N3BS**  
**NBU 922-29M2AS**  
**NBU 922-30I4CS**  
**NBU 922-29L3CS**  
**NBU 922-29N2BS**

Proposed Well	Distance To		Proposed Well	Distance To	
	Nearest Lease Boundary			Nearest Lease Boundary	
NBU 922-29N3BS		15ft	NBU 922-30I4BS		455ft
NBU 922-29M2AS		515ft	NBU 922-29L3CS		289ft
NBU 922-30I4CS		229ft	NBU 922-29N2BS		14ft

**Legend**

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

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

**WELL PAD - NBU 922-29N**

**TOPO E**  
 NBU 922-29N3BS, NBU 922-29M2AS,  
 NBU 922-30I4CS, NBU 922-30I4BS,  
 NBU 922-29L3CS & NBU 922-29N2BS  
 LOCATED IN SECTION 29, T9S, R22E  
 S.L.B.&M., UINTAH COUNTY, UTAH

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



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: CPS	Date: 9 June 2010	<b>17</b>
Revised: CPS	Date: 31 Aug 2010	

**Kerr-McGee Oil & Gas Onshore, LP  
WELL PAD – NBU 922-29N  
WELLS – NBU 922-29N3BS, NBU 922-29M2AS,  
NBU 922-30I4CS, NBU 922-30I4BS,  
NBU 922-29L3CS & NBU 922-29N2BS  
Section 29, T9S, R22E, S.L.B.&M.**

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45; exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 18.7 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the Class D County Road approximately 0.1 miles to a second Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the second Class D County Road approximately 2.6 miles to a third Class D County Road to the east. Exit left and proceed in an easterly then northerly direction along the third Class D County Road approximately 2.4 miles to an existing service road to the northwest. Exit left and proceed in a northwesterly then northeasterly direction along the existing service road approximately 0.3 miles to the proposed well pad.

Total distance from Vernal, Utah to the proposed well location is approximately 47.6 miles in a southerly direction.

**NBU 922-29L3CS**

Surface: 822' FSL 1,637' FWL (SE/4SW/4) Section 29  
BHL: 1,601' FSL 289' FWL (NW/4SW/4) Section 29  
State Mineral Lease: ML 22935

**NBU 922-29M2AS**

Surface: 798' FSL 1,655' FWL (SE/4SW/4) Section 29  
BHL: 1,114' FSL 515' FWL (SW/4SW/4) Section 29  
State Mineral Lease: ML 22935

**NBU 922-29N2BS**

Surface: 830' FSL 1,631' FWL (SE/4SW/4) Section 29  
BHL: 1,158' FSL 1,334' FWL (SE/4SW/4) Section 29  
State Mineral Lease: UO 1207 ST

**NBU 922-29N3BS**

Surface: 790' FSL 1,661' FWL (SE/4SW/4) Section 29  
BHL: 414' FSL 1,360' FWL (SE/4SW/4) Section 29  
State Mineral Lease: UO 1207 ST

**NBU 922-30I4BS**

Surface: 814' FSL 1,643' FWL (SE/4SW/4) Section 29  
BHL: 1,876' FSL 455' FEL (NE/4SE/4) Section 30  
Federal Mineral Lease: UTU 0463

**NBU 922-30I4CS**

Surface: 806' FSL 1,649' FWL (SE/4SW/4) Section 29  
BHL: 1,550' FSL 455' FEL (NE/4SE/4) Section 30  
Federal Mineral Lease: UTU 0463

Pad: NBU 922-29N  
T9S R22E

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

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

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

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

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

**A. Existing Roads:**

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

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

**B. Planned Access Roads:**

Approximately  $\pm 405'$  (0.08 miles) of new access road to this pad location is proposed (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

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

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

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

This pad will expand the existing pad for the CIGE 24, which is a vertical plugged and abandoned well, and for the NBU 922-29NT, which is a vertical producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of July 29, 2010.

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

Production facilities will be installed on the disturbed portion of each well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site

six months or longer) aboveground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

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

Gathering facilities:

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

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is  $\pm 2,170'$  and the individual segments are broken up as follows:

$\pm 720'$  (0.1 miles) –New 6” buried gas pipeline from the meter to the edge of the pad.

$\pm 20'$  (0.01 miles) –New 6” buried gas pipeline from the edge of the pad to the NBU 922-29K pad intersection.

$\pm 1,430'$  (0.3 miles) –New 10” buried gas pipeline from the NBU 922-29K pad intersection to the proposed 16” buried gas pipeline tie-in point (NBU 922-29O1 pad intersection).

The total liquid gathering pipeline (Flexsteel) distance from the meter to the tie in point is  $\pm 2,170'$  and the individual segments are broken up as follows:

$\pm 720'$  (0.1 miles) –New 4” buried liquid pipeline from the meter to the edge of the pad.

$\pm 1,450'$  (0.3 miles) –New 4” buried liquid pipeline from the edge of the pad to the proposed 6” buried liquid pipeline tie-in point (NBU 922-29O1 pad intersection).

Kerr-McGee will request any needed right of way on state surface from Utah Division of Oil, Gas and Mining (UDOGM) and/or School and Institutional Trust Land Administration (SITLA) as per their requirements.

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

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

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

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

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

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

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

No water well is to be drilled on this lease.

**E. Source of Construction Materials:**

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

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

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

RNI in Sec. 5 T9S R22E  
Ace Oilfield in Sec. 2 T6S R20E  
MC&MC in Sec. 12 T6S R19E  
Pipeline Facility in Sec. 36 T9S R20E  
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E  
Bonanza Evaporation Pond in Sec. 2 T10S R23E  
Ouray #1 SWD in Sec. 1 T9S R21E  
NBU 159 SWD in Sec. 35 T9S R21E  
CIGE 112D SWD in Sec. 19 T9S R21E  
CIGE 114 SWD in Sec. 34 T9S R21E  
NBU 921-34K SWD in Sec. 34 T9S R21E  
NBU 921-33F SWD in Sec. 33 T9S R21E  
NBU 921-34L SWD in Sec. 34 T9S R21E

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

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

The reserve and/or fracture stimulation pit will be lined with a synthetic material 20-mil or thicker, The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. Any additional pits necessary to subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

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

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

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

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

**Materials Management**

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

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

**G. Ancillary Facilities:**

None are anticipated.

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

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

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

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

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

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

**Interim Reclamation**

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

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

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

### **Final Reclamation**

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

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

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

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

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

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

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

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

**J. Surface Ownership:**

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

**Mineral Ownership for NBU 922-30I4BS, 922-30I4CS:**

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

**Mineral Ownership for NBU 922-29L3CS, 922-29M2AS, 922-29N2BS, 922-29N3BS:**

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

**K. Other Information:**

A Class I literature report was completed on July 26, 2010 by Montgomery Archaeological Consultants, Inc. (MOAC). For additional details please refer to report MOAC 10-088.

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

A biological field survey was completed by Grasslands Consulting, Inc. on May 18<sup>th</sup> and July 1, 2010. For additional details please refer to report GCI-259:

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

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

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

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

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

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

Bond coverage for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, by Bureau of Land Management Nationwide Bond WYB000291.

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

  
Danielle Piernot

July 29, 2010  
Date

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS  
ONSHORE LP'S 42 PROPOSED WELL LOCATIONS IN  
T9S, R22E, SECTION 29  
(MOAC Report No. 10-088)  
UINTAH COUNTY, UTAH

By:

Andrea Van Schmus

Prepared For:

State of Utah  
School and Institutional Trust Lands Administration

Prepared Under Contract With:

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

Prepared By:

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

MOAC Report No. 10-088

July 26, 2010

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

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



# Grasslands Consulting, Inc.

4800 Happy Canyon Road, Suite 110, Denver, CO 80237  
(303) 759-5377 Office (303) 759-5324 Fax

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

**Report Number:** GCI #259

**Report Date:** July 23, 2010

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

**Well:** NBU 922-29N well pad (Bores: NBU 922-29L3CS, NBU 922-29M2AS, NBU 922-29N2BS, NBU-29N3BS, NBU 922-30I4BS, NBU 922-30I4CS)

**Pipeline:** Associated pipeline and pipeline re-route

**Access Road:** Associated access road re-route

**Location:** Section 29, Township 9 South, Range 22 East; Uintah County, Utah

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

**Survey Date:** May 18 and July 1, 2010

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



1099 18<sup>th</sup> Street  
Denver, CO 80202  
303-296-3600 (main)  
303-296-3601 (fax)

ANNA C. CAVALERI  
(Direct) 720-929-6029  
(Direct Fax) 720-929-7029

July 26, 2010

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

Re: Directional Drilling R649-3-11  
NBU 922-30I4CS  
T9S R22E  
Section 29: SESW (Surface); Section 30: NESE (Bottom Hole)  
Surface Footages: Section 29: 806' FSL, 1649' FWL  
Bottom Hole Footages: Section 30: 1550' FSL, 455' 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 the Directional Drilling of Wells.

- Kerr-McGee's NBU 922-30I4CS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore

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

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink, appearing to read 'Cavaleri'.

Anna C. Cavaleri  
Landman



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

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

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

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

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

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

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

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

Thanks.  
-Jim

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

# ON-SITE PREDRILL EVALUATION

## Utah Division of Oil, Gas and Mining

**Operator** KERR-MCGEE OIL & GAS ONSHORE, L.P.  
**Well Name** NBU 922-30I4CS  
**API Number** 43047512210000      **APD No** 2886      **Field/Unit** NATURAL BUTTES  
**Location: 1/4,1/4**      **SESW**      **Sec 29**      **Tw 9.0S**      **Rng 22.0E**      **806**      **FSL 1649**      **FWL**  
**GPS Coord (UTM)**      **Surface Owner**

**Participants**

See Other Comments.

**Regional/Local Setting & Topography**

The general area is within the Natural Buttes Unit in the lower portion of the Sand Wash Drainage of Uintah, County, approximately 37 air miles and 47.6 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads to the site. Topography of the Sand Wash area is characterized by broad open flats dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs furnishing water for antelope or livestock.

The NBU 922-29N pad will be created by enlarging the existing pad of the NBU-922NT. gas well. Six gas wells, to be directionally drilled, will be added. They are the NBU 922-29L3CS, 922-29M2AS, 922-29N2BS, 922-29N3BS, 922-30I4BS and 922-30I4CS. Significant cut will be necessary on the southwest into a steep rocky hillside. To reduce the cut into this hillside the pad will be narrowed 25 feet. Reserve pit Corner C will be angled to reduce the fill needed in this corner. A drainage ditch will be constructed on the edge of the bench around the north side of the pit tying in with a ditch coming around the southeast side of the pad. The pad extends west into a drainage that will be filled. No diversion is needed here. A drainage to the north will be missed. Sand Wash is about 1/2 mile to the west of the site and the White River about 1 1/2 mile down drainage. The selected site as adjusted appears to be suitable for enlarging a pad, drilling and operating the proposed wells and is the only site in the general area.

Both the surface and minerals for the NBU 922-29L3CS, 922-29M2AS, 922-29N2BS, and the 922-29N3BS are owned by SITLA. The minerals for the NBU 922-30I4BS and 922-30I4CS are owned by the United States Government and administered by the BLM.

**Surface Use Plan**

**Current Surface Use**

- Grazing
- Wildlife Habitat
- Existing Well Pad

<b>New Road Miles</b>	<b>Well Pad</b>	<b>Src Const Material</b>	<b>Surface Formation</b>
0	<b>Width 342    Length 450</b>	Onsite	UNTA

**Ancillary Facilities** N

**Waste Management Plan Adequate?**

**Environmental Parameters**

**Affected Floodplains and/or Wetlands** N

**Flora / Fauna**

Vegetation is a poor desert shrub type, which includes shadscale, curly mesquite, broom snakeweed and halogeton..

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

**Soil Type and Characteristics**

Surface soils are shallow and rocky

**Erosion Issues** N

**Sedimentation Issues** Y

**Site Stability Issues** N

**Drainage Diverson Required?** Y

A drainage ditch will be constructed on the edge of the bench around the north side of the pit tying in with a ditch coming around the southeast side of the pad.

**Berm Required?** N

**Erosion Sedimentation Control Required?** Y

A drainage ditch will be constructed on the edge of the bench around the north side of the pit tying in with a ditch coming around the southeast side of the pad.

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

**Reserve Pit**

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

**Characteristics / Requirements**

The proposed reserve pit is 125' x 180' x 12' deep located in a cut on the north side of the location. Kerr McGee plans a 30-mil liner with a double felt sub-liner.

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

**Other Observations / Comments**

Floyd Bartlett (DOGM), Sheila Wopsock, Clay Einerson, Mac Burton, Jordon Portillo, Roger Perry, Laura Gianokas, Doyle Holmes, Kenny Gathings (Kerr McGee), Mitch Batty, John Slaugh, (Timberline Engineering and Land Surveying), Jim Davis (SITLA), Ben Williams, Alex Hansen (UDWR), Travis Slaugh (Uintah County), David Gordon (BLM).

Floyd Bartlett  
**Evaluator**

8/25/2010  
**Date / Time**

# Application for Permit to Drill Statement of Basis

9/27/2010

## Utah Division of Oil, Gas and Mining

Page 1

<b>APD No</b>	<b>API WellNo</b>	<b>Status</b>	<b>Well Type</b>	<b>Surf Owner</b>	<b>CBM</b>
2886	43047512210000	LOCKED	GW	S	No
<b>Operator</b>	KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>Surface Owner-APD</b>		
<b>Well Name</b>	NBU 922-30I4CS		<b>Unit</b>	NATURAL BUTTES	
<b>Field</b>	NATURAL BUTTES		<b>Type of Work</b>	DRILL	
<b>Location</b>	SESW 29 9S 22E S 806 FSL 1649 FWL GPS Coord (UTM) 630890E 4428899N				

### Geologic Statement of Basis

Kerr McGee proposes to set 2,290' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 2,800'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the proposed location. 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. Production casing cement should be brought up above the base of the moderately saline ground water in order to isolate fresher waters uphole.

Brad Hill  
APD Evaluator

9/27/2010  
Date / Time

### Surface Statement of Basis

The general area is within the Natural Buttes Unit in the lower portion of the Sand Wash Drainage of Uintah, County, approximately 37 air miles and 47.6 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads to the site. Topography of the Sand Wash area is characterized by broad open flats dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs furnishing water for antelope or livestock.

The NBU 922-29N pad will be created by enlarging the existing pad of the NBU-922NT. gas well. Six gas wells, to be directionally drilled, will be added. They are the NBU 922-29L3CS, 922-29M2AS, 922-29N2BS, 922-29N3BS, 922-30I4BS and 922-30I4CS. Significant cut will be necessary on the southwest into a steep rocky hillside. To reduce the cut into this hillside the pad will be narrowed 25 feet. Reserve pit Corner C will be angled to reduce the fill needed in this corner. A drainage ditch will be constructed on the edge of the bench around the north side of the pit tying in with a ditch coming around the southeast side of the pad. The pad extends west into a drainage that will be filled. No diversion is needed here. A drainage to the north will be missed. Sand Wash is about 1/2 mile to the west of the site and the White River about 1 1/2 mile down drainage. The selected site as adjusted appears to be suitable for enlarging a pad, drilling and operating the proposed wells and is the only site in the general area.

Both the surface and minerals for the NBU 922-29L3CS, 922-29M2AS, 922-29N2BS, and the 922-29N3BS are owned by SITLA. Jim Davis represented SITLA at the pre-site investigation. Mr. Davis had no concerns pertaining to this location excepted as covered above. SITLA will provide site reclamation standards and a seed mix. Mr. David Gordon represented the BLM. The minerals for the NBU 922-30I4BS and 922-30I4CS are owned by the United States Government and administered by the BLM. Mr. Gordon had no comments on the proposal.

Ben Williams and Alex Hansen represented the Utah Division of Wildlife Resources. Mr. Williams stated the

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# Application for Permit to Drill Statement of Basis

9/27/2010

Utah Division of Oil, Gas and Mining

Page 2

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area is classified as crucial yearlong antelope habitat but recommended no restrictions for this species. No other wildlife will be significantly affected.

Floyd Bartlett  
Onsite Evaluator

8/25/2010  
Date / Time

## Conditions of Approval / Application for Permit to Drill

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

# WORKSHEET APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 7/30/2010

**API NO. ASSIGNED:** 43047512210000

**WELL NAME:** NBU 922-30I4CS

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

**PHONE NUMBER:** 720 929-6156

**CONTACT:** Danielle Piernot

**PROPOSED LOCATION:** SESW 29 090S 220E

**Permit Tech Review:**

**SURFACE:** 0806 FSL 1649 FWL

**Engineering Review:**

**BOTTOM:** 1550 FSL 0455 FEL

**Geology Review:**

**COUNTY:** UINTAH

**LATITUDE:** 40.00204

**LONGITUDE:** -109.46663

**UTM SURF EASTINGS:** 630890.00

**NORTHINGS:** 4428899.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 1 - Federal

**LEASE NUMBER:** UTU 0463

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

**SURFACE OWNER:** 3 - State

**COALBED METHANE:** NO

## RECEIVED AND/OR REVIEWED:

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

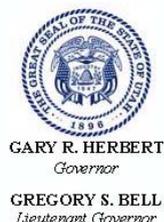
Commingle Approved

## LOCATION AND SITING:

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

**Comments:** Presite Completed

**Stipulations:**  
3 - Commingle - ddoucet  
4 - Federal Approval - dmason  
5 - Statement of Basis - bhill  
15 - Directional - dmason  
17 - Oil Shale 190-5(b) - dmason



# 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 922-30I4CS  
**API Well Number:** 43047512210000  
**Lease Number:** UTU 0463  
**Surface Owner:** STATE  
**Approval Date:** 9/27/2010

### Issued to:

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

### Authority:

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

### Duration:

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

### Commingle:

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

### General:

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

### Conditions of Approval:

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

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).

**Notification Requirements:**

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

- Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)

OR

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

**Reporting Requirements:**

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

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

**Approved By:**



Acting Associate Director, Oil & Gas

RECEIVED  
 UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 BUREAU OF LAND MANAGEMENT  
 AUG 11 2010

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

APPLICATION FOR PERMIT TO DRILL OR REENTER  
 BLM

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU463
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator KERRMCGEE OIL&GAS ONSHORE LP Contact: DANIELLE E PIERNOT E-Mail: Danielle.Piernot@anadarko.com		7. If Unit or CA Agreement, Name and No. 891008900A
3a. Address PO BOX 173779 DENVER, CO 80202-3779		8. Lease Name and Well No. NBU 922-3014CS
3b. Phone No. (include area code) Ph: 720-929-6156 Fx: 720-929-7156		9. API Well No. 43-047-51221
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SESW 806FSL 1649FWL 40.00200 N Lat, 109.46740 W Lon At proposed prod. zone NESE 1550FSL 455FEL 40.00403 N Lat, 109.47491 W Lon, Sec. 30		10. Field and Pool, or Exploratory NATURAL BUTTES
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 49 MILES SOUTHEAST OF OURAY, UTAH		11. Sec., T., R., M., or Blk. and Survey or Area Sec 29 T9S R22E Mer SLB
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 455 FEET	16. No. of Acres in Lease 551.44	12. County or Parish UINTAH
17. Spacing Unit dedicated to this well	13. State UT	20. BLM/BIA Bond No. on file WYB000291
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. APPROXIMATELY 890 FEET	19. Proposed Depth 9810 MD 9421 TVD	21. Estimated duration 60-90 DAYS
21. Elevations (Show whether DF, KB, RT, GL, etc.) 4933 GL	22. Approximate date work will start 09/07/2010	23. Estimated duration 60-90 DAYS

24. Attachments

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

- |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>1. Well plat certified by a registered surveyor.</li> <li>2. A Drilling Plan.</li> <li>3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).</li> </ul> | <ul style="list-style-type: none"> <li>4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).</li> <li>5. Operator certification</li> <li>6. Such other site specific information and/or plans as may be required by the authorized officer.</li> </ul> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

25. Signature (Electronic Submission)	Name (Printed/Typed) DANIELLE E PIERNOT Ph: 720-929-6156	Date 07/30/2010
------------------------------------------	-------------------------------------------------------------	--------------------

Title REGULATORY ANALYST I		
Approved by (Signature) <i>Naomi Hatch</i>	Name (Printed/Typed) Naomi Hatch	Date DEC 07 2010
Title Acting Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
 Conditions of approval, if any, are attached. **CONDITIONS OF APPROVAL ATTACHED**

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Additional Operator Remarks (see next page)

Electronic Submission #90616 verified by the BLM Well Information System  
 For KERRMCGEE OIL&GAS ONSHORE LP, sent to the Vernal  
 Committed to AFMSS for processing by ROBIN R. HANSEN on 08/12/2010 ()

NOTICE OF APPROVAL

RECEIVED

DEC 14 2010

DIV. OF OIL, GAS & MINING



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



UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
VERNAL FIELD OFFICE  
170 South 500 East VERNAL, UT 84078 (435) 781-4400



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

Company:	Kerr McGee Oil & Gas Onshore	Location:	SESW, Sec. 29, T9S, R22E
Well No:	NBU 922-3014CS	Lease No:	UTU-463
API No:	43-047-51221	Agreement:	Natural Buttes Unit

**OFFICE NUMBER: (435) 781-4400**

**OFFICE FAX NUMBER: (435) 781-3420**

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR  
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

**NOTIFICATION REQUIREMENTS**

Location Construction (Notify Environmental Scientist)	- Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	- Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	- Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <a href="mailto:ut_vn_opreport@blm.gov">ut_vn_opreport@blm.gov</a> .
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	- Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

***SURFACE USE PROGRAM  
CONDITIONS OF APPROVAL (COAs)***

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.

**Category Condition**

- Pits: A synthetic liner with a minimum thickness of 30 mils with a double felt subliner shall be properly installed and maintained in the reserve pit.
- Surface: Drainages adjacent to the proposed pad shall be diverted around the location.
- Surface: The reserve pit shall be fenced upon completion of drilling operations.
- Surface: The well site shall be bermed to prevent fluids from leaving the pad.

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

**SITE SPECIFIC DOWNHOLE COAs:**

- A copy of Kerr McGee's Standard Operating Practices (SOP version: dated 7/17/08 and approved 7/28/08) shall be on location.

**All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to.** The following items are emphasized:

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well in LAS format to [UT\\_VN\\_Welllogs@BLM.gov](mailto:UT_VN_Welllogs@BLM.gov). This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

#### OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4.

Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

## BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG  
 Submitted By ANDY LYTLE Phone Number 720.929.6100  
 Well Name/Number NBU 922-30I4CS  
 Qtr/Qtr SESW Section 29 Township 9S Range 22E  
 Lease Serial Number UTU-463  
 API Number 4304751221

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

Date/Time 01/07/2011 14:00 HRS AM  PM

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

- Surface Casing  
 Intermediate Casing  
 Production Casing  
 Liner  
 Other

RECEIVED

JAN 05 2011

DIV. OF OIL, GAS &amp; MINING

Date/Time 02/03/2011 08:00 HRS AM  PM

**BOPE**

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

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

**Remarks** ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT

435.828.0986 OR LOVEL YOUNG AT 435.781.7051

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0463
<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 922-30I4CS
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047512210000
<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> 0806 FSL 1649 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SESW Section: 29 Township: 09.0S Range: 22.0E 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: 1/8/2011	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'.  
 RAN 14" 36.7# SCHEDULE 10 CONDUCTOR PIPE. CMT W/28 SX READY MIX  
 SPUD WELL LOCATION ON JANUARY 08, 2011 AT 8:45 HRS.

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

<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> 1/11/2011

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0463
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<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> NBU 922-30I4CS
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047512210000
<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> 0806 FSL 1649 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SESW Section: 29 Township: 09.0S Range: 22.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES  <b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH

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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: 1/23/2011	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
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	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

MIRU PROPETRO AIR RIG #11 ON JANUARY 21, 2011. DRILLED 11" SURFACE HOLE TO 2590'. RAN 8 5/8" 28# IJ-55 SURFACE CSG. PUMP 150 BBLs FRESH WATER. PUMP 20 BBLs GEL WATER. LEAD CEMENT W/ 200 SX CLASS G PREM LITE @ 11.0 PPG, 3.82 YD. TAILED CEMENT W/ 200 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YD. NO CIRC. DROP PLUG ON THE FLY, DISPLACED W/ 156 BBLs WATER. LIFT PRESSURE 300 PSI, BUMP PLUG & HOLD 800 PSI FOR 5 MIN. FLOAT HELD. NO CEMENT TO SURFACE. TOP OUT W/ 100 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YD. WOC. TOP OUT #2 W/ 150 SX SAME CEMENT. WORT.

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

<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> 1/24/2011

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0463
<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 922-30I4CS
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047512210000
<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> 0806 FSL 1649 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SESW Section: 29 Township: 09.0S Range: 22.0E 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		
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<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: 3/15/2011	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
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	<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.

FINISHED DRILLING FROM 2590' TO 9830' ON MARCH 13, 2011. RAN 4 1/2" 11.6# I-80 PRODUCTION CSG TO 9562'. RAN 4 1/2" 11.6 P110 CSG FROM 9562' TO 9822'. PUMP 40 BBLS SPACER, LEAD CEMENT W/ 530 SX CLASS ECONOCEM @ 12.4 PPG, 2.03 YD. TAILED CEMENT W/ 1100 SX CLASS 50/50 POZ MIX @ 14.3 PPG, 1.25 YD. DISPLACED W/ 152 BBLS WATER W/ CLAYFIX & ALDACIDE. BUMPED PLUG TO 2847, FINAL LIFT 2350, 500 PSI OVER, 1.5 BBLS BACK TO TRUCK. FULL RETURNS, 10 BBL OF 40 BBL WATER SPACER BACK. EST TOP OF CEMENT 480'. RD CEMENTERS AND CLEANED PITS. RELEASED ENSIGN RIG #145 ON MARCH 15, 2011 @ 06:00 HRS.

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

<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> 3/15/2011

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0463
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>
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<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> NBU 922-30I4CS	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047512210000	
<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> 0806 FSL 1649 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SESW Section: 29 Township: 09.0S Range: 22.0E Meridian: S	<b>COUNTY:</b> UINTAH	
		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input checked="" type="checkbox"/> <b>DRILLING REPORT</b> Report Date: 6/13/2011	<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 style="width: 100px;" type="text"/>		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 06/13/2011 AT 3:00 PM. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.		
<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY</b>		
<b>NAME (PLEASE PRINT)</b> Sheila Wopsock	<b>PHONE NUMBER</b> 435 781-7024	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 6/14/2011	

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

5. Lease Serial No. UTU463

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No. UTU63047A

8. Lease Name and Well No. NBU 922-3014CS

9. API Well No. 43-047-51221

10. Field and Pool, or Exploratory NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey or Area Sec 29 T9S R22E Mer SLB

12. County or Parish UINTAH 13. State UT

14. Date Spudded 01/08/2011 15. Date T.D. Reached 03/13/2011 16. Date Completed 06/13/2011  D & A  Ready to Prod.

17. Elevations (DF, KB, RT, GL)\* 4932 GL

18. Total Depth: MD 9830 TVD 9394 19. Plug Back T.D.: MD 9777 TVD 9341 20. Depth Bridge Plug Set: MD TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each) ACBL-RMTE-CHI TRIPLE COMBO-RMTE 22. Was well cored?  No  Yes (Submit analysis) Was DST run?  No  Yes (Submit analysis) Directional Survey?  No  Yes (Submit analysis)

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

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20.000	14.000 STL	36.7		40		28			
11.000	8.625 IJ-55	28.0		2575		650		0	
7.875	4.500 I-80	11.6		9562		1630		1880	
7.875	4.500 P110	11.6	9562	9822					

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	9115							

25. Producing Intervals 26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) WASATCH	7560	7562	7560 TO 7562	0.360	8	OPEN
B) MESAVERDE	7654	9657	7654 TO 9657	0.360	203	OPEN
C)						
D)						

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

Depth Interval	Amount and Type of Material
7560 TO 9657	PUMP 9,955 BBLs SLICK H2O & 218,720 LBS SAND

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
06/13/2011	06/19/2011	24	→	0.0	2703.0	696.0			FLows FROM WELL
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
20/64	SI 1900	2550.0	→	0	2703	696		PGW	

28a. Production - Interval B

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

(See Instructions and spaces for additional data on reverse side)  
ELECTRONIC SUBMISSION #112874 VERIFIED BY THE BLM WELL INFORMATION SYSTEM  
\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

**RECEIVED**  
**JUL 19 2011**

DIV. OF OIL, GAS & MINING

28b. Production - Interval C

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

28c. Production - Interval D

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

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

30. Summary of Porous Zones (Include Aquifers):

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

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
GREEN RIVER	1355				
BIRD'S NEST	1717				
MAHOGANY	2083				
WASATCH	4895	7622			
MESAVERDE	7622	9830			

32. Additional remarks (include plugging procedure):

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

33. Circle enclosed attachments:

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

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

**Electronic Submission #112874 Verified by the BLM Well Information System.  
 For KERR MCGEE OIL & GAS ONSHORE,L, sent to the Vernal**

Name (please print) GINA T. BECKER Title REGULATORY ANALYST

Signature (Electronic Submission) Date 07/13/2011

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 922-30I4CS ( GREEN )      Spud Conductor: 1/8/2011      Spud Date: 1/21/2011  
 Project: UTAH-UINTAH      Site: NBU 922-29N PAD      Rig Name No: PROPETRO/, ENSIGN 145/145  
 Event: DRILLING      Start Date: 1/5/2011      End Date: 3/15/2011  
 Active Datum: RKB @4,945.00ft (above Mean Sea Level)      UWI: SE/SW/0/9/S/22/E/29/0/0/26/PM/S/806/W/0/1649/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
1/21/2011	0:00 - 2:00	2.00	MIRU	01	A	P		MOVE RIG IN OFF NBU 922-30I4BS
	2:00 - 3:00	1.00	MIRU	01	B	P		RIG UP PREPARE TO SPUD WELL
	3:00 - 3:30	0.50	MIRU	06	A	P		P/U 1.83 DEG BENT HOUSING HUNTING MTR SN 8010 . 7/8 LOBE .17 RPM. M/U Q507 SN 7021794 1ST RUN, W/ 7-18'S. INSTALL RUBBER.
	3:30 - 5:30	2.00	DRLSUR	02	A	P		SPUD SURFACE 01/21/2011 @ 03:30 HRS. DRILL 11" SURFACE HOLE F/40'-210' (170' @ 85'/HR) PSI ON/ OFF 700/450, UP/ DOWN/ ROT 28/21/26. 532 GPM, 45 RPM ON TOP DRIVE,90 RPM ON MM, 15-18K WOB
	5:30 - 8:30	3.00	DRLSUR	06	A	P		TOOH, PU AND ORIENT DIR TOOLS, TIH TO 210'
	8:30 - 16:30	8.00	DRLSUR	02	D	P		DRILL/ SLIDE AND SURVEY11" SURFACE HOLE F/210'-790' (580' @ 73'/HR) , PSI ON/ OFF 1150/880, UP/ DOWN/ ROT 51/50/55. 532 GPM, 45 RPM ON TOP DRIVE,90 RPM ON MM 18-20K WOB,CIRC RESERVE PIT
	16:30 - 17:00	0.50	DRLSUR	07	A	P		SERVICE RIG
	17:00 - 0:00	7.00	DRLSUR	02	D	P		DRILL/ SLIDE AND SURVEY11" SURFACE HOLE F/790'-1450' (660' @ 94'/HR) , PSI ON/ OFF 1280/1070, UP/ DOWN/ ROT 65/55/60 532 GPM, 45 RPM ON TOP DRIVE,90 RPM ON MM 18-20K WOB,CIRC RESERVE PIT
	1/22/2011	0:00 - 4:30	4.50	DRLSUR	02	D	P	
	4:30 - 19:30	15.00	DRLSUR	02	D	P		DRILL/ SLIDE AND SURVEY11" SURFACE HOLE F/1810'-2590' (780' @ 52'/HR) , PSI ON/ OFF 1600/1490, UP/ DOWN/ ROT 85/70/75 532 GPM, 45 RPM ON TOP DRIVE,90 RPM ON MM 18-20K WOB,CIRC RESERVE PIT(TD 11" SURF. HOLE @ 19:30)
	19:30 - 21:00	1.50	DRLSUR	05	C	P		CIRC & COND HOLE F/L/D & SURF. CSG
	21:00 - 0:00	3.00	DRLSUR	06	D	P		LAY DOWN DRILLSTRING
1/23/2011	0:00 - 2:00	2.00	DRLSUR	06	D	P		CONT. T/L/D DRILLSTRING,DIR TOOLS & 11"BHA
	2:00 - 3:30	1.50	CSG	12	A	P		R/U TO RUN 8 5/8" 28# SURF. CSG
	3:30 - 7:30	4.00	CSG	12	C	P		HOLD SAFTEY MEETING,RUN SHOE,SHOE JNT,BAFFEL & 57 JNTS 8 5/8" 28# LT&C CSG W/ THE SHOE @2565' & THE BAFFEL @2519'
	7:30 - 8:30	1.00	CSG	12	A	P		R/U T/CEMENT 8 5/8" 28# SURF. CSG
	8:30 - 10:00	1.50	CSG	12	E	P		HOLD SAFETY MEETING. INSTALL CEMENT HEAD. PSI TEST TO 2000 PSI. PUMP 150 BBLs OF 8.4# H2O AHEAD. NO CIRC. PUMP 20 BBLs OF 8.4# GEL WATER AHEAD. NO CIRC. PUMP 200 SX(136 BBLs) 11# 3.82 YIELD LEAD CEMENT, PUMP 200 SX (41 BBLs) OF 15.8# 1.15 YIELD TAIL(2% CALC, 1/4#/SK OF FLOCELE). NO CIRC. DROP PLUG ON FLY AND DISPLACE W/156 BBLs OF 8.3# H2O. LIFT PRESSURE WAS 300 PSI, BUMP PLUG AND HOLD 800 PSI FOR 5 MIN. FLOAT HELD,NO CEMENT TO SURF
	10:00 - 10:30	0.50	CSG	12	F	P		TOP OUT W/100 SKS 15.8 PPG CLASS "G" CEMENT W/4% CACL2 & 1/4#/SK FLOCELE
	10:30 - 12:00	1.50	CSG	13	A	P		WAIT ON CEMENT

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

Well: NBU 922-30I4CS ( GREEN )		Spud Conductor: 1/8/2011		Spud Date: 1/21/2011	
Project: UTAH-UINTAH		Site: NBU 922-29N PAD		Rig Name No: PROPETRO/, ENSIGN 145/145	
Event: DRILLING		Start Date: 1/5/2011		End Date: 3/15/2011	
Active Datum: RKB @4,945.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/22/E/29/0/0/26/PM/S/806/W/0/1649/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	12:00 - 12:30	0.50	CSG	12	F	P		TOP OUT W/150 SKS 15.8 PPG CLASS "G" CEMENT W/4% CACL2 & 1/4#/SK FLOCELE,RIG RELEASED @ 12:30 01/23/2011
	12:30 - 12:30	0.00	CSG					CONDUCTOR CASING: Cond. Depth set: 40' Cement sx used: 28  SPUD DATE/TIME: 1/21/2011 3:30  SURFACE HOLE: Surface From depth: 40' Surface To depth: 2,590 Total SURFACE hours: 36.50 Surface Casing size: 8 5/8 # of casing joints ran: 58 Casing set MD: 2,566.0 # sx of cement: 200/200/250 Cement blend (ppg): 11.0/15.8/15.8 Cement yield (ft3/sk): 3.82/1.15/1.15 # of bbls to surface: Describe cement issues: NONE Describe hole issues: NONE
3/6/2011	15:30 - 17:30	2.00	MIRU	01	E	P		PREP RIGTO SKID
	17:30 - 18:00	0.50	MIRU	01	C	P		SKID RIG
	18:00 - 21:00	3.00	MIRU	01	B	P		CENTER & LEVEL RIG
	21:00 - 0:00	3.00	MIRU	14	A	P		NIPPLE UP BOP
3/7/2011	0:00 - 5:00	5.00	DRLPRO	15	A	P		HELD SAFTEY MEETING, RIG UP SINGLE JACK TESTER, TEST BOP, I-BOP, MANUEL I-BOP, PIPE RAMS, TIW, HCR, 250 LOW 5000 HIGH, TEST HCR, MANUEL HCR, BLIND RAMS, INSIDE/OUTSIDE KILL, CHOKE MANIFOLD TO 250 LOW 5000 HIGH, TEST ANNULAR TO 2500 AND CASING TO 1500, RIG DOWN TESTER, SET WEAR BUSHING
	5:00 - 7:00	2.00	DRLPRO	06	A	P		PICK UP DIRECTIONAL BHA SCRIBE MOTOR, TRIP IN HOLE WITH BHA 1121', RIG IS CENTER AND LEVEL
	7:00 - 10:30	3.50	DRLPRO	09	A	P		SLIP CUT 100' DRL LINE, RIG INSPECTION
	10:30 - 11:30	1.00	DRLPRO	06	A	P		TRIP IN HOLE TO 2471 TAG CEMENT
	11:30 - 13:30	2.00	DRLPRO	02	F	P		DRILL FLOAT EQUI & CLEAN OUT SURFACE RAT HOLE F/ 2441 TO 2599
	13:30 - 14:00	0.50	DRLPRO	07	A	P		DAILY RIG SERVICE
	14:00 - 0:00	10.00	DRLPRO	02	D	P		DRILL F/ 2599' TO 3516' = 917' 91.7 FPH STKS #1 & #2 PUMPS 00/105, 473 GPM PSI OFF BOTTOM / ON BOTTOM 900/1320 MOTOR RPM / ROTARY RPM, 132/37 TQ ON / OFF BOTTOM 8K/7K FT/LBS PU / SO / ROT WT 123 / 100/ 106 WT ON BIT 15K TO 20K ROTATING = 76.9% FOOTAGE DRILLED SLIDING = 211' 23.1% FOOTAGE DRILLED DRL WITH WATER,NO LOSS, 2' FLARE STARTED @ 3500'

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

Well: NBU 922-30I4CS ( GREEN )	Spud Conductor: 1/8/2011	Spud Date: 1/21/2011
Project: UTAH-UINTAH	Site: NBU 922-29N PAD	Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLING	Start Date: 1/5/2011	End Date: 3/15/2011
Active Datum: RKB @4,945.00ft (above Mean Sea Level)		UWI: SE/SW/09/S/22/E/29/0/0/26/PM/S/806/W/0/1649/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/8/2011	0:00 - 12:00	12.00	DRLPRO	02	D	P		DRILL F/ 3516' TO 4479' = 963' 80.25 FPH STKS #1 & #2 PUMPS 00/105, 473 GPM PSI OFF BOTTOM / ON BOTTOM 1013/1343 MOTOR RPM / ROTARY RPM, 132/37 TQ ON / OFF BOTTOM 8K/7K FT/LBS PU / SO / ROT WT 135 / 108/ 116 WT ON BIT 18K TO 22K ROTATING = 59% FOOTAGE DRILLED SLIDING = 394' 41% FOOTAGE DRILLED DRL WITH WATER,NO LOSS, 2' TO 12' FLARE DAILY RIG SERVICE
	12:00 - 12:30	0.50	DRLPRO	07	A	P		
	12:30 - 0:00	11.50	DRLPRO					DRILL F/ 4479' TO 5350' = 871' 75.73' FPH STKS #1 & #2 PUMPS 00/105, 473 GPM PSI OFF BOTTOM / ON BOTTOM 1108/1450 MOTOR RPM / ROTARY RPM, 132/37 TQ ON / OFF BOTTOM 11K/10K FT/LBS PU / SO / ROT WT 174 / 141/ 144 WT ON BIT 18K TO 22K ROTATING = 62.2% FOOTAGE DRILLED SLIDING = 329' 37.8% FOOTAGE DRILLED DRL WITH WATER,NO LOSS, 2' TO 12' FLARE
3/9/2011	0:00 - 11:00	11.00	DRLPRO	02	D	P		DRILL F/ 5350' TO 6238' = 888' 80.7' FPH STKS #1 & #2 PUMPS 00/105, 473 GPM PSI OFF BOTTOM / ON BOTTOM 1173/1536 MOTOR RPM / ROTARY RPM, 132/37 TQ ON / OFF BOTTOM 12K/11K FT/LBS PU / SO / ROT WT 227 / 153/ 158 WT ON BIT 20K TO 22K ROTATING = 87.7% FOOTAGE DRILLED SLIDING = 109' 12.3% FOOTAGE DRILLED DRL WITH WATER,NO LOSS, 2' TO 8' FLARE DAILY RIG SERVICE
	11:00 - 11:30	0.50	DRLPRO	07	A	P		
	11:30 - 0:00	12.50	DRLPRO					DRILL F/ 6238' TO 7200' = 962' 76.96' FPH STKS #1 & #2 PUMPS 00/105, 473 GPM PSI OFF BOTTOM / ON BOTTOM 1290/1560 MOTOR RPM / ROTARY RPM, 132/37 TQ ON / OFF BOTTOM 12K/11K FT/LBS PU / SO / ROT WT 227 / 150/ 172 WT ON BIT 20K TO 22K ROTATING = 94.69% FOOTAGE DRILLED SLIDING = 51' 5.31% FOOTAGE DRILLED DRL WITH WATER,NO LOSS, 5' TO 8' FLARE
3/10/2011	0:00 - 11:00	11.00	DRLPRO	02	D	P		DRILL F/ 7200' TO 7926' = 726' 66 FPH STKS #1 & #2 PUMPS 00/105, 473 GPM PSI OFF BOTTOM / ON BOTTOM 1383/1864 MOTOR RPM / ROTARY RPM, 132/45 TQ ON / OFF BOTTOM 13K/11K FT/LBS PU / SO / ROT WT 227 / 170/ 190 WT ON BIT 20K TO 24K ROTATING = 94.69% FOOTAGE DRILLED SLIDING = 123' 5.31% FOOTAGE DRILLED DRL WITH WATER,NO LOSS, 5' TO 8' FLARE RIG SERVICE
	11:00 - 11:30	0.50	DRLPRO	07	A	P		

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

Well: NBU 922-30I4CS ( GREEN )		Spud Conductor: 1/8/2011		Spud Date: 1/21/2011	
Project: UTAH-UINTAH		Site: NBU 922-29N PAD		Rig Name No: PROPETRO/, ENSIGN 145/145	
Event: DRILLING		Start Date: 1/5/2011		End Date: 3/15/2011	
Active Datum: RKB @4,945.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/22/E/29/0/0/26/PM/S/806/W/0/1649/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	11:30 - 0:00	12.50	DRLPRO	02	D	P		DRILL F/ 7926' TO 8575' = 649' 51.92 FPH STKS #1 & #2 PUMPS 00/105, 473 GPM PSI OFF BOTTOM / ON BOTTOM 1699/2098 MOTOR RPM / ROTARY RPM, 132/48 TQ ON / OFF BOTTOM 16K/14K FT/LBS PU / SO / ROT WT 263 / 174/ 197 WT ON BIT 20K TO 24K ROTATING = 92.35% FOOTAGE DRILLED SLIDING = 80' 7.65% FOOTAGE DRILLED STARTED MUD UP @ 8000',NO LOSS, NO FLARE @ 9.1 MUD WT, 9.5 MUD NOW
3/11/2011	0:00 - 5:30	5.50	DRLPRO	02	D	P		DRILL F/ 8575' TO 8802' = 227' 41.2 FPH STKS #1 & #2 PUMPS 00/105, 473 GPM PSI OFF BOTTOM / ON BOTTOM 1964/2215 MOTOR RPM / ROTARY RPM, 132/48 TQ ON / OFF BOTTOM 16K/13K FT/LBS PU / SO / ROT WT 263 / 169/ 197 WT ON BIT 20K TO 24K ROTATING = 90.9% FOOTAGE DRILLED SLIDING = 20' 7 9.1% FOOTAGE DRILLED STARTED MUD UP @ 8000',NO LOSS, NO FLARE @ 9.1 MUD WT, 10.9 MUD NOW
	5:30 - 8:30	3.00	DRLPRO	05	C	P		CIRCUALTE PRIOR TO TRIP, FLOW CHECK WELL FLOWING, RAISE MUD WT TO 11.2, NO FLOW
	8:30 - 15:30	7.00	DRLPRO	06	A	P		TRIP OUT FOR BHA, MOTOR SPIKING AND ROP DROP TO 25' AN HR. BACK REAM OUT TO 5764', PUMP SLUG, BLOW DOWN TOP DRIVE, TRIP OUT TO 4870'
	15:30 - 16:00	0.50	DRLPRO	07	A	P		DAILY RIG SERVICE
	16:00 - 16:30	0.50	DRLPRO	08	A	Z		WORK ON IRON DERRICKMAN, REPAIR HYD FITTING ON ROTARY MOTOR
	16:30 - 19:30	3.00	DRLPRO	06	A	P		FINISH TRIP OUT TIGHT SPOT @ 3411 & 2744, LAY DOWN MOTOR & BIT, MOTOR DRAINED AND SEALS CHECKED OK, BIT HAD THREE CUTTERS CHIPPED LOOKED ALMOST NEW.
	19:30 - 0:00	4.50	DRLPRO	06	A	P		PICK UP NEW MOTOR & BIT SCRIBE MWD TOOL, TRIP IN HOLE, NO TIGHT SPOTS
3/12/2011	0:00 - 4:00	4.00	DRLPRO	06	A	P		TIRP IN HOLE TO BREAK CIRCULATION EVERY 3000'. TIGHT SPOT @ 6294' TO 6450' WASH & REAM, TIGHT SPOT @ 7946' FELL THROUGH TRIP IN HOLE TO 8652'
	4:00 - 5:00	1.00	DRLPRO	03	D	P		WASH REAM TO BOTTOM F/ 8652 TO 8802, NO FLARE BOTTOMS UP
	5:00 - 5:30	0.50	DRLPRO	02	D	P		DRILL F/ 8802' TO 8833' = 31" 62 FPH STKS #1 & #2 PUMPS 00/105, 473 GPM PSI OFF BOTTOM / ON BOTTOM 2285/2560 MOTOR RPM / ROTARY RPM, 75/45 TQ ON / OFF BOTTOM 16K/13K FT/LBS PU / SO / ROT WT 245 / 169/ 197 WT ON BIT 20K TO 24K ROTATING = 100% FOOTAGE DRILLED SLIDING = 00% FOOTAGE DRILLED MU WT,11.2 - 38 VIS
	5:30 - 6:45	1.25	DRLPRO	02	D	Z		ATTEMPT TO SLIDE F/ 8835 TO 8842, MWD NOT WORKING PROPERLY, TROUBLE SHOOT MWD

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

Well: NBU 922-30I4CS ( GREEN )      Spud Conductor: 1/8/2011      Spud Date: 1/21/2011  
 Project: UTAH-UINTAH      Site: NBU 922-29N PAD      Rig Name No: PROPETRO/, ENSIGN 145/145  
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 Active Datum: RKB @4,945.00ft (above Mean Sea Level)      UWI: SE/SW/0/9/S/22/E/29/0/0/26/PM/S/806/W/0/1649/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	6:45 - 7:30	0.75	DRLPRO	02	D	P		DRILL F/ 8842' TO 8879' = 37' 49' FPH STKS #1 & #2 PUMPS 00/105, 473 GPM PSI OFF BOTTOM / ON BOTTOM 2285/2560 MOTOR RPM / ROTARY RPM, 75/45 TQ ON / OFF BOTTOM 16K/13K FT/LBS PU / SO / ROT WT 245 / 169/ 197 WT ON BIT 20K TO 24K ROTATING = 100% FOOTAGE DRILLED SLIDING = 00% FOOTAGE DRILLED MU WT, 11.2 - 38 VIS
	7:30 - 8:00	0.50	DRLPRO	22	D	Z		TROUBLE SHOOT MWD TOOL NO TOOL FACE
	8:00 - 11:30	3.50	DRLPRO	02	D	P		DRILL F/ 8879' TO 9014' = 135' 38.5' FPH STKS #1 & #2 PUMPS 00/105, 473 GPM PSI OFF BOTTOM / ON BOTTOM 2154/2465 MOTOR RPM / ROTARY RPM, 75/45 TQ ON / OFF BOTTOM 17K/16K FT/LBS PU / SO / ROT WT 260 / 169/ 203 WT ON BIT 20K TO 24K ROTATING = 69% FOOTAGE DRILLED SLIDING = 31' 23% FOOTAGE DRILLED MU WT, 11.2 - 42 VIS
	11:30 - 12:00	0.50	DRLPRO	07	A	P		DAILY RIG SERVICE
	12:00 - 0:00	12.00	DRLPRO	02	D	P		DRILL F/ 9014' TO 9615' = 601' - 50' FPH STKS #1 & #2 PUMPS 00/105, 473 GPM PSI OFF BOTTOM / ON BOTTOM 2215/2483 MOTOR RPM / ROTARY RPM, 75/45 TQ ON / OFF BOTTOM 17K/16K FT/LBS PU / SO / ROT WT 258 / 171/ 207 WT ON BIT 20K TO 24K ROTATING = 69% FOOTAGE DRILLED SLIDING = 31' 23% FOOTAGE DRILLED MU WT, 11.5 - 42 VIS, LOST 71BBLs, PUMP LCM SWEEP, START BRINGING LCM TO 2%
3/13/2011	0:00 - 6:00	5.00	DRLPRO	02	D	P		DRILL F/ 9615' TO 9830' = 215' - 43 FPH STKS #1 & #2 PUMPS 00/105, 473 GPM PSI OFF BOTTOM / ON BOTTOM 2330/2472 MOTOR RPM / ROTARY RPM, 75/45 TQ ON / OFF BOTTOM 14K/13K FT/LBS PU / SO / ROT WT 250 / 180/ 207 WT ON BIT 20K TO 24K ROTATING = 100% FOOTAGE DRILLED SLIDING = 000% FOOTAGE DRILLED MU WT, 11.8 - 42 VIS, 2% LCM
	6:00 - 9:00	3.00	DRLPRO	05	C	P		CIRCULATE 2 SWEEPS FOR HOLE CLEANING PIROR TO TRIP OUT FOR SURFACE CASING LOGS, 11.8 WT WITH A 8' FLARE, AFTER SWEEPS, RAISE WT TO 12.0
	9:00 - 19:00	10.00	DRLPRO	06	A	P		TRIP OUT OF HOLE BACK REAM OUT, WORK THRU TIGHT SPOT @ 7751' TO 7490', 6497' TO 6410', 6229' TO 6138' CONTINUE BACK REAM OUT TO 5333', PULL OUT NO REAM TIGHT SPOT @ 4896' TO 4873' PULL OUT TO SHOE NO TIGHT SPOTS
	19:00 - 21:00	2.00	DRLPRO	05	A	P		CIRCULATE LCM OUT OF HOLE @ SHOE FOR SURFACE CASING LOGS
	21:00 - 0:00	3.00	DRLPRO	06	A	P		TRIP OUT FROM SHOE, LAY DOWN BIT, MOTOR & MWD TOOL
3/14/2011	0:00 - 7:00	7.00	DRLPRO	11	E	P		HELD SAFTEY MEETING, RIG UP & RUN HALLIBURTON ULTRASOINC SURFACE CASING LOG F/ 2560 TO TOP, HELD SAFTEY MEETING RIG DOWN LOGGERS, PULL WEAR BUSHING

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

Well: NBU 922-30I4CS ( GREEN )	Spud Conductor: 1/8/2011	Spud Date: 1/21/2011
Project: UTAH-UINTAH	Site: NBU 922-29N PAD	Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLING	Start Date: 1/5/2011	End Date: 3/15/2011
Active Datum: RKB @4,945.00ft (above Mean Sea Level)	UWI: SE/SW/0/9/S/22/E/29/0/0/26/PM/S/806/W/0/1649/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:00 - 20:00	13.00	CSG	12	C	P		HELD SAFTEY MEETING, RIG UP CASERS, RUN 234 JOINTS CASING, 6 P-110 228 I-80, SHOE SET @ 9822', FLOAT TOP @ 9776', WASH TIGHT HOLE F/ 6127' TO 7899', LOST 150 BBL WHILE WASHING DOWN BUILD VOLUME AND 2% LCM, CONTINUE IN HOLE TO BOTTOM
	20:00 - 21:30	1.50	CSG	05	D	P		CIRCULATE BOTTOMS UP FOR CEMENT, 5' FLARE FOR 5 MIN, NO LOSSES
	21:30 - 0:00	2.50	CSG	12	E	P		HELD SAFTEY MEETING, HOOK UP IRON TO HEAD, TEST LINES TO 5000 PSI, PUMP 40 BBL FRESH WATER AHEAD LEAD 191 BBL 530 SKS ECONCEM 12.4 PPG, 2.03 YEILD, 11.07 GPS WATER TAIL 244 BBL 1100 SKS POZ PREMIUM 50/50 14.3 PPG 1.25 YEILD, 5.41 GPS WATER DROP PLUG DISPLACE WITH 152 BBL FRESH WATER WITH CLAY FIX & ALDACIDE, BUMP PLUG TO 2847, FINAL LIFT 2350, 500 PSI OVER, 1.5 BBL BACK TO TRUCK, FULL RETURNS, 10 BBL OF 40 BBL WATER SPACER BACK, EST TOP OF CEMENT 480', HELD SAFTEY MEETING, RIG DOWN CEMENTERS
3/15/2011	0:00 - 2:00	2.00	CSG	12	C	P		FLUSH STACK, READY STACK TO SET SLIPS, SET SLIPS, WITH WEATHERFORD HAND 90K ON SLIPS, LIFT STACK & CUT CASING, CLEAN PITS
	2:00 - 6:00	4.00	DRLPRO	14	A	P		NIPPLE DOWN CLEAN PITS

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

Well: NBU 922-30I4CS ( GREEN )		Spud Conductor: 1/8/2011	Spud Date: 1/21/2011
Project: UTAH-UINTAH		Site: NBU 922-29N PAD	Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLING		Start Date: 1/5/2011	End Date: 3/15/2011
Active Datum: RKB @4,945.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/22/E/29/0/0/26/PM/S/806/W/0/1649/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	6:00 - 6:01	0.02	DRLPRO					PRODUCTION: Rig Move/Skid start date/time: 3/6/2011 15:30 Rig Move/Skid finish date/time: 3/7/2011 18:00 Total MOVE hours: 26.5 Prod Rig Spud date/time: 3/7/2011 14:00 Rig Release date/time: 3/15/2011 6:00 Total SPUD to RR hours: 184.0 Planned depth MD 9,849 Planned depth TVD 9,409 Actual MD: 9,830 Actual TVD: 9,394 Open Wells \$: AFE \$: Open wells \$/ft:  PRODUCTION HOLE: Prod. From depth: 2,599 Prod. To depth: 9,830 Total PROD hours: 100.75 Log Depth: SURFACE SONIC, NO OPEN HOLE Production Casing size: 4 1/2 # of casing joints ran: 6 P-110- 228 I-80 Casing set MD: 9,822.0 # sx of cement: 1,630 Cement blend (ppg): LEAD 12.4#, TAIL 14.3# Cement yield (ft3/sk): LEAD 2.03 YD, TAIL 1.25 YD Est. TOC (Lead & Tail) or 2 Stage : LEAD 480, TAIL 4716' Describe cement issues: FULL RETURNS, 10 BBLS OF 40 BBLS SPACER BACK TO PITS Describe hole issues: MUD SEEPAGE STARTING @ 11.9#  DIRECTIONAL INFO: KOP: 40 Max angle: 26.87 Departure: 2248.85 Max dogleg MD: 2.59

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well Information

Well	NBU 922-3014CS ( GREEN )		
Common Name	NBU 922-3014CS		
Well Name	NBU 922-3014CS	Wellbore No.	OH
Report No.	1	Report Date	5/24/2011
Project	UTAH-UINTAH	Site	NBU 922-29N PAD
Rig Name/No.		Event	COMPLETION
Start Date	5/24/2011	End Date	6/13/2011
Spud Date	1/21/2011	Active Datum	RKB @4,945.00ft (above Mean Sea Level)
UWI	SE/SW/0/9/S/22/E/29/0/0/26/PM/S/806/W/0/1649/0/0		

1.3 General

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

1.4 Initial Conditions

Fluid Type		Fluid Density		Gross Interval	7,560.0 (ft)-9,563.0 (ft)	Start Date/Time	5/31/2011 12:00AM
Surface Press		Estimate Res Press		No. of Intervals	33	End Date/Time	5/31/2011 12:00AM
TVD Fluid Top		Fluid Head		Total Shots	211	Net Perforation Interval	64.00 (ft)
Hydrostatic Press		Press Difference		Avg Shot Density	3.30 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL					Final Press Date	

1.5 Summary

2 Intervals

2.1 Perforated Interval

Date	Formation/Reservoir	CCL@ (ft)	CCL-T S (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12:00AM	WASATCH/			7,560.0	7,562.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

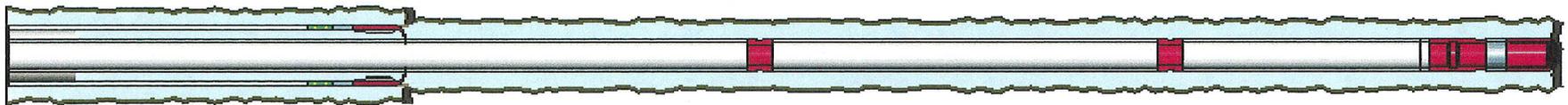
Date	Formation/ Reservoir	CCL@ (ft)	CCL-T S (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12:00	AMMESAVERDE/			7,654.0	7,658.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			7,677.0	7,678.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			7,754.0	7,756.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			7,769.0	7,770.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			7,795.0	7,796.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			7,823.0	7,826.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			7,902.0	7,904.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			7,948.0	7,950.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			7,970.0	7,972.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			8,046.0	8,048.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			8,128.0	8,130.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			8,230.0	8,232.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			8,319.0	8,322.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			8,484.0	8,486.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			8,504.0	8,505.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			8,593.0	8,595.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			8,663.0	8,665.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			8,788.0	8,792.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			8,918.0	8,922.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			8,983.0	8,985.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00	AMMESAVERDE/			9,005.0	9,007.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (ft)	CCL-T S (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12:00AM	MESAVERDE/			9,090.0	9,091.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			9,106.0	9,108.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			9,151.0	9,152.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			9,176.0	9,178.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			9,200.0	9,202.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			9,320.0	9,321.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			9,382.0	9,383.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			9,423.0	9,424.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			9,444.0	9,445.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			9,459.0	9,460.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			9,560.0	9,563.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

3 Plots

3.1 Wellbore Schematic



**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 922-30I4CS ( GREEN )	Spud Conductor: 1/8/2011	Spud Date: 1/21/2011
Project: UTAH-UINTAH	Site: NBU 922-29N PAD	Rig Name No: GWS 1/1
Event: COMPLETION	Start Date: 5/24/2011	End Date: 6/13/2011
Active Datum: RKB @4,945.00ft (above Mean Sea Level)	UWI: SE/SW/0/9/S/22/E/29/0/0/26/PM/S/806/W/0/1649/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
5/27/2011	7:00 - 15:00	8.00	COMP	33	C	P		FILL SURFACE CSG. PSI TEST T/ 1011 PSI. LOST 7 PSI IN 15 MIN. PSI TEST T/ 3508 PSI. LOST 25 PSI IN 15 MIN. 1ST PSI TEST T/ 7009 PSI. LOST 62 PSI IN 30 MIN. 2ND PSI TEST T/ 7003 PSI. LOST 31 PSI IN 30 MIN. GOOD TEST. BLEED OFF PSI. SWI. MOVE T/ NEXT WELL. HSM. MOVING EQUIP.
6/1/2011	13:00 - 13:15	0.25	COMP	48		P		SLIDE SUPERIOR FRAC SERV OVER TO LAST 3 WELL ON PAD. PSI TEST FRAC LINES T/ 9500 PSI. SET MECH POP-OFF T/ 7010 PSI.
	13:15 - 18:00	4.75	COMP	37	B	P		PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH STACK OUT @ 9564' P/U. CALL ZACH GARRITY. CHANGE BOTTOM INTERVAL FROM 9654'-57' TO 9560'-63'. PERF AS PER DESIGN ON THE TOP 3 INTERVALS. POOH. SWIFN.
6/2/2011	6:30 - 6:45	0.25	COMP	48	B	P		HSM, HIGH PSI LINES. WIRE LINE AWARENESS

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

Well: NBU 922-30I4CS ( GREEN )		Spud Conductor: 1/8/2011	Spud Date: 1/21/2011
Project: UTAH-UINTAH		Site: NBU 922-29N PAD	Rig Name No: GWS 1/1
Event: COMPLETION		Start Date: 5/24/2011	End Date: 6/13/2011
Active Datum: RKB @4,945.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/22/E/29/0/0/26/PM/S/806/W/0/1649/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	6:45 - 6:45	0.00	COMP					<p>FRAC STG 1)WHP 717 PSI, BRK 3660 PSI @ 4.7 BPM. ISIP 2842 PSI, FG .74. PUMP 100 BBLS @ 50.4 BPM @ 5794 PSI = 100% HOLES OPEN. ISIP 2823 PSI, FG .73, NPI -19 PSI. MP 6422 PSI, MR 50.7 BPM, AP 5777 PSI, AR 50.2 BPM, PMP 1070 BBLS SW &amp; 14,700 LBS OF 30/50 SND &amp; 2585 LBS OF 20/40 RESIN SND. TOTAL PROP 17,285 LBS. SWI, X-OVER FOR WL.</p> <p>PERF STG 2)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 &amp; 120 DEG PHASING. RIH SET CBP @ 9413' P/U PERF AS PER STG 2 PERF DESIGN. POOH. X-OVER FOR FRAC CREW.</p> <p>FRAC STG 2)BEFORE PUMPING THIS STG RESET POP-OFF T/ 6930 PSI. WHP 2533 PSI, BRK 3714 PSI @ 6.5 BPM. ISIP 2612 PSI, FG .72. SHUT DOWN TO REPAIR GROUND VALVES. ( DOWN TIME 2 HRS 20 MIN. ) PUMP 100 BBLS @ 50.6 BPM @ 5734 PSI = 93% HOLES OPEN. ISIP 2861 PSI, FG .75, NPI 249 PSI. MP 6518 PSI, MR 50.9 BPM, AP 5572 PSI, AR 50.6 BPM, PMP 2180 BBLS SW &amp; 38,266 LBS OF 30/50 SND &amp; 4703 LBS OF 20/40 RESIN SND. TOTAL PROP 42,969 LBS. SWI, X-OVER FOR WL.</p> <p>PERF STG 3)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 &amp; 120 DEG PHASING. RIH SET CBP @ 9138' P/U PERF AS PER STG 3 PERF DESIGN. POOH.</p> <p>FRAC STG 3)WHP 1207 PSI, BRK 3359 PSI @ 4.8 BPM. ISIP 2660 PSI, FG .73. PUMP 100 BBLS @ 37.3 BPM @ 6335 PSI = 60% HOLES OPEN. ISIP 2756 PSI, FG .74, NPI 96 PSI. MP 6633 PSI, MR 50.9 BPM, AP 5961 PSI, AR 45.8 BPM, PMP 1238 BBLS SW &amp; 20,872 LBS OF 30/50 SND &amp; 5,291 LBS OF 20/40 RESIN SND. TOTAL PROP 26,163 LBS. SWI, 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. 120 DEG PHASING. RIH SET CBP @ 8952' P/U PERF AS PER STG 4 PERF DESIGN. POOH. X-OVER FRAC CREW.</p> <p>FRAC STG 4)WHP 2020 PSI, BRK 2803 PSI @ 4.5 BPM. ISIP 2278 PSI, FG .70. PUMP 100 BBLS @ 33.3 BPM @ 5644 PSI = 61% HOLES OPEN. ISIP 2612 PSI, FG .74, NPI 334 PSI. MP 6534 PSI, MR 50.9 BPM, AP 5912 PSI, AR 47.7 BPM, PMP 609 BBLS SW &amp; 8,005 LBS OF 30/50 SND &amp; 2873 LBS OF 20/40 RESIN SND. TOTAL PROP 10,875 LBS. SWI, X-OVER FOR WL.</p> <p>PERF STG 5)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 &amp; 120 DEG</p>

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

Well: NBU 922-30I4CS ( GREEN )		Spud Conductor: 1/8/2011	Spud Date: 1/21/2011
Project: UTAH-UINTAH		Site: NBU 922-29N PAD	Rig Name No: GWS 1/1
Event: COMPLETION		Start Date: 5/24/2011	End Date: 6/13/2011
Active Datum: RKB @4,945.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/22/E/29/0/0/26/PM/S/806/W/0/1649/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
								<p>PHASING. RIH SET CBP @ 8788' P/U PERF AS PER STG 5 PERF DESIGN. POOH. X-OVER FOR FRAC CREW.</p> <p>FRAC STG 5)WHP 1770 PSI, BRK 4319 PSI @ 4.8 BPM. ISIP 2673 PSI, FG .75. PUMP 100 BBLS @ 37.6 BPM @ 6081 PSI = 62% HOLES OPEN. ISIP 2889 PSI, FG .78, NPI 216 PSI. MP 6370 PSI, MR 51.5 BPM, AP 6083 PSI, AR 47.9 BPM, PMP 620 BBLS SW &amp; 8721 LBS OF 30/50 SND &amp; 2696 LBS OF 20/40 RESIN SND. TOTAL PROP 11,417 LBS. SWIFN.</p>

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

Well: NBU 922-30I4CS ( GREEN )		Spud Conductor: 1/8/2011	Spud Date: 1/21/2011
Project: UTAH-UINTAH		Site: NBU 922-29N PAD	Rig Name No: GWS 1/1
Event: COMPLETION		Start Date: 5/24/2011	End Date: 6/13/2011
Active Datum: RKB @4,945.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/22/E/29/0/0/26/PM/S/806/W/0/1649/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
6/3/2011	7:30 - 14:55	7.42	COMP	36	B	P		<p>PERF STG 6)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 &amp; 120 DEG PHASING. RIH SET CBP @ 8372' P/U PERF AS PER STG 6 PERF DESIGN.</p> <p>FRAC STG 6)WHP 445 PSI, BRK 3023 PSI @ 4.3 BPM. ISIP 1999 PSI, FG .68. PUMP 100 BBLS @ 46.1 BPM @ 5496 PSI = 73% HOLES OPEN. ISIP 2506 PSI, FG .74, NPI 507 PSI. MP 6031 PSI, MR 51.3 BPM, AP 5440 PSI, AR 50.7 BPM, PMP 613 BBLS SW &amp; 8203 LBS OF 30/50 SND &amp; 2945 LBS OF 20/40 RESIN SND. TOTAL PROP 11,148 LBS. SWI, 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. 120 DEG PHASING. RIH SET CBP @ 8078' P/U PERF AS PER STG 7 PERF DESIGN. POOH. X-OVER FOR FRAC CREW.</p> <p>FRAC STG 7)WHP 2145 PSI, BRK 3911 PSI @ 4.7 BPM. ISIP 2940 PSI, FG .81. PUMP 100 BBLS @ 48.1 BPM @ 6473 PSI = 73% HOLES OPEN. ISIP 2339 PSI, FG .73, NPI -601 PSI. MP 6603 PSI, MR 50.7 BPM, AP 5293 PSI, AR 48 BPM, PMP 890 BBLS SW &amp; 16,180 LBS OF 30/50 SND &amp; 2121 LBS OF 20/40 RESIN SND. TOTAL PROP 18,301 LBS. SWI. X-OVER FOR WL.</p> <p>PERF STG 8)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE.90 &amp; 120 DEG PHASING. RIH SET CBP @ 7856' P/U PERF AS PER STG 8 PERF DESIGN. POOH, X-OVER FOR FRAC CREW.</p> <p>FRAC STG 8) WHP 1115 PSI, BRK 4200 PSI @ 4.7 BPM. ISIP 2623 PSI, FG 0.78. PUMP 142 BBLS @ 49.3 BPM @ 6396 PSI = 74% HOLES OPEN. ISIP 2145 PSI, FG 0.71, NPI (-478) PSI. MP 6454 PSI, MR 50.6 BPM, AP 5232 PSI, AR 50.1 BPM, PMP 1038 BBLS SW &amp; 16,952 LBS OF 30/50 SND &amp; 5,141 LBS OF 20/40 RESIN SND. TOTAL PROP 22,093 LBS. SWI, X-OVER FOR WL.</p> <p>PERF STG 9)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE.90 &amp; 120 DEG PHASING. RIH SET CBP @ 7708' P/U PERF AS PER STG 8 PERF DESIGN. POOH, X-OVER FOR FRAC CREW.</p> <p>FRAC STG 9) WHP 1920 PSI, BRK 2491 PSI @ 6.8 BPM. ISIP 1999 PSI, FG 0.70. PUMP 252 BBLS @ 51.9 BPM @ 5422 PSI = 83% HOLES OPEN. ISIP 2347 PSI, FG 0.75, NPI 348 PSI. MP 6599 PSI, MR 53.5 BPM, AP 5119 PSI, AR 51.3 BPM, PMP 1739 BBLS SW &amp; 53,572 LBS OF 30/50 SND &amp; 4,897 LBS OF 20/40 RESIN SND. TOTAL PROP 58,469 LBS. SWI, X-OVER FOR WL.</p>

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

Well: NBU 922-30I4CS ( GREEN )		Spud Conductor: 1/8/2011	Spud Date: 1/21/2011
Project: UTAH-UINTAH		Site: NBU 922-29N PAD	Rig Name No: GWS 1/1
Event: COMPLETION		Start Date: 5/24/2011	End Date: 6/13/2011
Active Datum: RKB @4,945.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/22/E/29/0/0/26/PM/S/806/W/0/1649/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
								<p>KILL PLG) PU 4 1/2 8K HALCO CBP, RIH SET CBP @ 7510'. POOH &amp; LD TOOLS. SWI - RD CUTTERS WL &amp; SUPERIOR FRAC.</p> <p>14:55 SDFN. PREP WELL TO RIH W/BHA &amp; D/O CBPs.</p> <p>TOTAL SAND = 218,720 LBS TOTAL CLFL = 9955 BBLS SCALE = 1017 GAL BIO = 208 GAL</p>
6/10/2011	6:45 - 7:00	0.25	COMP	48		P		HSM. BACK UP CHECK. ( STIFF ARM, BACK UP CABLE )
	7:00 - 7:00	0.00	COMP					OPEN WELL 0 PSI. PU 3 3/7 BIT + X-DART + POBS + XN-NIPPLE. ( 1 .875 ) PREP & TALLY NEW 2 3/8 L-80 TBG. ( 314 JTS ) RIH W/ 237 JTS TBG TAG KILL PLUG @ 7510'. RU DRL EQUIP & PUMP & LINES. FILL TBG & CSG. PSI TEST T/ 3000 PSI. GOOD TEST. BLEED OFF PSI. SWIFWE.
6/11/2011	7:00 - 7:15	0.25	COMP	48		P		HSM, SLIPS, TRIPS & FALLS, D/O PLUGS & LAND TBG.

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

Well: NBU 922-30I4CS ( GREEN )		Spud Conductor: 1/8/2011	Spud Date: 1/21/2011
Project: UTAH-UINTAH		Site: NBU 922-29N PAD	Rig Name No: GWS 1/1
Event: COMPLETION		Start Date: 5/24/2011	End Date: 6/13/2011
Active Datum: RKB @4,945.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/22/E/29/0/0/26/PM/S/806/W/0/1649/0/0	

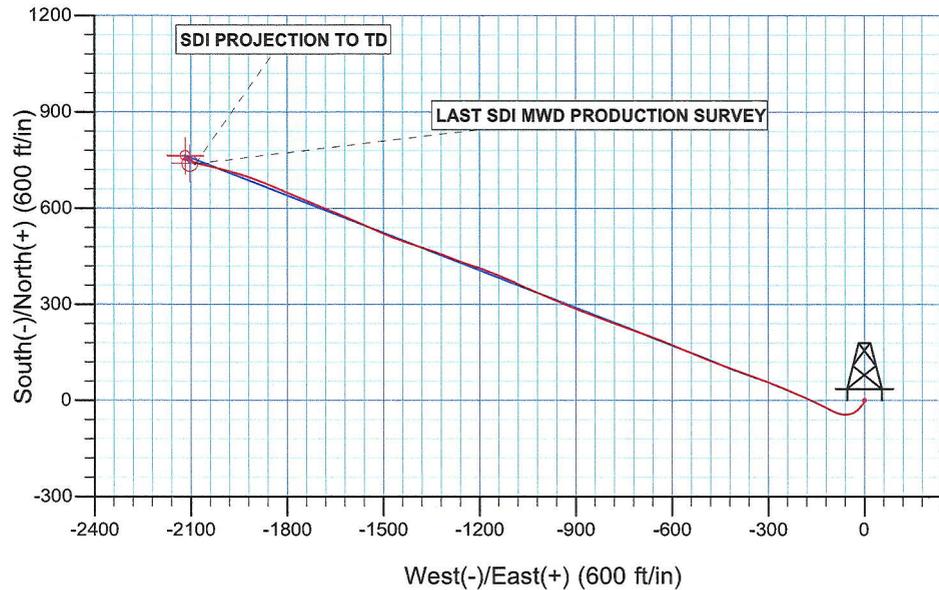
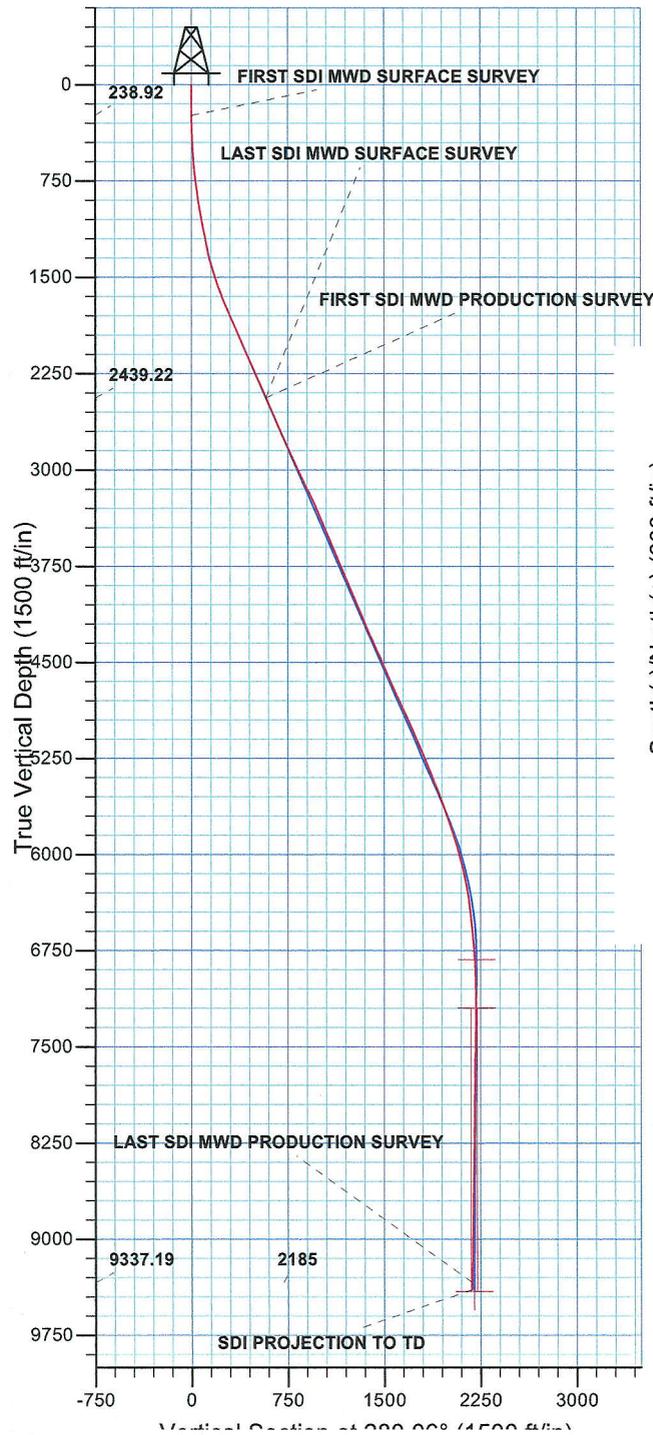
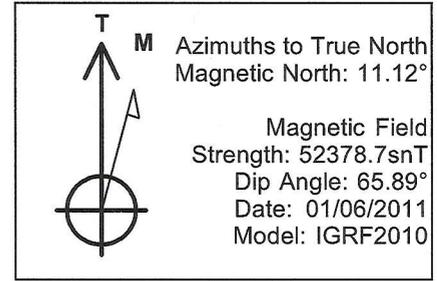
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 - 17:00	9.75	COMP	44	C	P		<p>BREAK CIRC, START DRLG PLUGS, ALL SURFACE CSG VALVES OPEN.</p> <p>C/O 25' SAND, TAG 1ST PLUG @ 7,510' DRL PLUG IN 11 MIN. 500 PSI INCREASE RIH, CSG PRESS 0 PSI.</p> <p>C/O 30' SAND, TAG 2ND PLUG @ 7,708' DRL PLUG IN 5 MIN. 350 PSI INCREASE RIH, CSG PRESS 100 PSI.</p> <p>C/O 20' SAND, TAG 3RD PLUG @ 7,856' DRL PLUG IN 7 MIN. 150 PSI INCREASE RIH, CSG PRESS 100 PSI.</p> <p>C/O 20' SAND, TAG 4TH PLUG @ 8,078' DRL PLUG IN 8 MIN. 450 PSI INCREASE RIH, CSG PRESS 100 PSI.</p> <p>C/O 15' SAND, TAG 5TH PLUG @ 8,360' DRL PLUG IN 5 MIN. 250 PSI INCREASE RIH, CSG PRESS 250 PSI.</p> <p>C/O 30' SAND, TAG 6TH PLUG @ 8,700' DRL PLUG IN 6 MIN. 400 PSI INCREASE RIH, CSG PRESS 250 PSI.</p> <p>C/O 25' SAND, TAG 7TH PLUG @ 8,952' DRL PLUG IN 9 MIN. 450 PSI INCREASE RIH, CSG PRESS 300 PSI.</p> <p>C/O 30' SAND, TAG 8TH PLUG @ 9,138' DRL PLUG IN 7 MIN. 300 PSI INCREASE RIH, CSG PRESS 350 PSI.</p> <p>C/O 25' SAND, TAG 9TH PLUG @ 9,413' DRL PLUG IN 7 MIN. 200 PSI INCREASE RIH, CSG PRESS 500 PSI.</p> <p>PBTD 9,775', BTM PERF @ 9,657', RIH TO TAG @ 9,625', C/O FROM 9,625' TO 9,750', 93' PAST BTM PERF W/ 307 JTS 2 3/8" L-80 TBG, LD 20 JTS, PU &amp; STRIP IN TBG HANGER &amp; LAND TBG W/ 287 JTS 2 3/8" L-80, EOT 9,115.21'.</p> <p>RD POWER SWIVEL, FLOOR &amp; TBG EQUIP, ND BOPS, NU WH, DROP BALL TO SHEAR OFF BIT W/ 2,800 PSI, LET BIT FALL FOR 20 MIN.</p> <p>TURN OVER TO FLOW BACK CREW, RD &amp; MOVE TO NEXT WELL, SDFN.</p> <p>KB= 13' 4 1/16" WEATHERFORD HANGER= .83' TBG DELIVERED 314 JTS 287 JTS 2 3/8" L-80 = 9,099.18' <span style="float: right;">TBG</span> USED 287 JTS POBS= 2.20' <span style="float: right;">TBG</span> RETURNED 27 JTS (2 W/ BAD THREADS) EOT @ 9,115.21' SN @ 9,113.01'</p> <p>TWTR= 9,955 BBLs TWR= 1,200 BBLs TWLTR= 8,755 BBLs <span style="float: right;">CALLED CDC TALKED</span></p>

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

Well: NBU 922-30I4CS ( GREEN )	Spud Conductor: 1/8/2011	Spud Date: 1/21/2011
Project: UTAH-UINTAH	Site: NBU 922-29N PAD	Rig Name No: GWS 1/1
Event: COMPLETION	Start Date: 5/24/2011	End Date: 6/13/2011
Active Datum: RKB @4,945.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/22/E/29/0/0/26/PM/S/806/W/0/1649/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
6/14/2011	7:00 -			33	A			TO RYAN 7 AM FLBK REPORT: CP 3025#, TP 2225#, 20/64" CK, 50 BWPH, MED SAND, - GAS TTL BBLS RECOVERED: 2060 BBLS LEFT TO RECOVER: 7895
6/15/2011	7:00 -			33	A			7 AM FLBK REPORT: CP 2950#, TP 2150#, 20/64" CK, 40 BWPH, MED SAND, - GAS TTL BBLS RECOVERED: 3072 BBLS LEFT TO RECOVER: 6883
6/16/2011	7:00 -			33	A			7 AM FLBK REPORT: CP 2750#, TP 2050#, 20/64" CK, 30 BWPH, LIGHT SAND, - GAS TTL BBLS RECOVERED: 3868 BBLS LEFT TO RECOVER: 6087
6/17/2011	7:00 -			33	A			7 AM FLBK REPORT: CP 2600#, TP 1950#, 20/64" CK, 28 BWPH, trace SAND, - GAS TTL BBLS RECOVERED: 4564 BBLS LEFT TO RECOVER: 5391

WELL DETAILS: NBU 922-3014CS					
GL 4932' & KB 14' @ 4946.00ft (ENSIGN 145)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14530477.38	2069821.04	40° 0' 7.308 N	109° 28' 0.188 W



PROJECT DETAILS: Uintah County, UT UTM12	
Geodetic System:	Universal Transverse Mercator (US Survey Feet)
Datum:	NAD 1927 - Western US
Ellipsoid:	Clarke 1866
Zone:	Zone 12N (114 W to 108 W)
Location:	SEC 29 T9S R22E
System Datum:	Mean Sea Level



**Scientific Drilling**  
Rocky Mountain Operations

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

Uintah County, UT UTM12  
NBU 922-29N Pad  
NBU 922-30I4CS

OH

Design: OH

## **Survey Report - Geographic**

14 March, 2011

<b>Company:</b> Kerr McGee Oil and Gas Onshore LP	<b>Local Co-ordinate Reference:</b> Well NBU 922-30I4CS
<b>Project:</b> Uintah County, UT UTM12	<b>TVD Reference:</b> GL 4932' & KB 14' @ 4946.00ft (ENSIGN 145)
<b>Site:</b> NBU 922-29N Pad	<b>MD Reference:</b> GL 4932' & KB 14' @ 4946.00ft (ENSIGN 145)
<b>Well:</b> NBU 922-30I4CS	<b>North Reference:</b> True
<b>Wellbore:</b> OH	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> OH	<b>Database:</b> EDM5000-RobertS-Local

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

<b>Site</b>	NBU 922-29N Pad, SEC 29 T9S R22E				
<b>Site Position:</b>	<b>Northing:</b>	14,530,501.12 usft	<b>Latitude:</b>	40° 0' 7.545 N	
<b>From:</b> Lat/Long	<b>Easting:</b>	2,069,802.70 usft	<b>Longitude:</b>	109° 28' 0.419 W	
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.99 °

<b>Well</b>	NBU 922-30I4CS, 806' FSL 1649' FWL					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,530,477.38 usft	<b>Latitude:</b>	40° 0' 7.308 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,069,821.04 usft	<b>Longitude:</b>	109° 28' 0.188 W
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,932.00 ft	

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	01/06/2011	11.12	65.89	52,379

<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	280.06	

<b>Survey Program</b>	<b>Date</b>	03/14/2011			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
10.00	2,544.00	Survey #1 SDI MWD SURFACE (OH)	MWD SDI	MWD - Standard ver 1.0.1	
2,614.00	9,830.00	Survey #2 SDI MWD PRODUCTION (OH)	MWD SDI	MWD - Standard ver 1.0.1	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,530,477.38	2,069,821.04	40° 0' 7.308 N	109° 28' 0.188 W
10.00	0.00	0.00	10.00	0.00	0.00	14,530,477.38	2,069,821.04	40° 0' 7.308 N	109° 28' 0.188 W
239.00	2.60	201.77	238.92	-4.82	-1.93	14,530,472.52	2,069,819.19	40° 0' 7.260 N	109° 28' 0.213 W
<b>FIRST SDI MWD SURFACE SURVEY</b>									
354.00	4.49	211.06	353.70	-11.10	-5.22	14,530,466.19	2,069,816.01	40° 0' 7.198 N	109° 28' 0.255 W
444.00	5.59	220.10	443.35	-17.47	-9.86	14,530,459.74	2,069,811.48	40° 0' 7.135 N	109° 28' 0.315 W
534.00	7.11	221.72	532.79	-24.99	-16.39	14,530,452.12	2,069,805.08	40° 0' 7.061 N	109° 28' 0.399 W
624.00	7.80	230.55	622.04	-33.02	-24.81	14,530,443.94	2,069,796.80	40° 0' 6.981 N	109° 28' 0.507 W
714.00	8.39	245.78	711.15	-39.60	-35.52	14,530,437.18	2,069,786.21	40° 0' 6.916 N	109° 28' 0.645 W
804.00	8.79	260.61	800.15	-43.41	-48.29	14,530,433.14	2,069,773.50	40° 0' 6.879 N	109° 28' 0.809 W
894.00	8.93	270.27	889.08	-44.50	-62.06	14,530,431.82	2,069,759.75	40° 0' 6.868 N	109° 28' 0.986 W

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 922-29N Pad  
**Well:** NBU 922-30I4CS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 922-30I4CS  
**TVD Reference:** GL 4932' & KB 14' @ 4946.00ft (ENSGN 145)  
**MD Reference:** GL 4932' & KB 14' @ 4946.00ft (ENSGN 145)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
984.00	9.42	285.97	977.94	-42.44	-76.13	14,530,433.63	2,069,745.65	40° 0' 6.888 N	109° 28' 1.167 W
1,074.00	9.82	294.38	1,066.68	-37.25	-90.20	14,530,438.59	2,069,731.49	40° 0' 6.940 N	109° 28' 1.348 W
1,164.00	11.11	297.42	1,155.18	-30.09	-104.89	14,530,445.49	2,069,716.68	40° 0' 7.010 N	109° 28' 1.536 W
1,254.00	12.60	297.92	1,243.26	-21.50	-121.26	14,530,453.80	2,069,700.16	40° 0' 7.095 N	109° 28' 1.747 W
1,344.00	14.45	295.51	1,330.76	-12.06	-140.07	14,530,462.91	2,069,681.19	40° 0' 7.188 N	109° 28' 1.989 W
1,434.00	16.16	294.65	1,417.57	-2.00	-161.59	14,530,472.60	2,069,659.50	40° 0' 7.288 N	109° 28' 2.265 W
1,524.00	18.40	294.17	1,503.50	9.04	-185.94	14,530,483.22	2,069,634.97	40° 0' 7.397 N	109° 28' 2.578 W
1,614.00	20.43	293.55	1,588.38	21.13	-213.30	14,530,494.84	2,069,607.41	40° 0' 7.517 N	109° 28' 2.930 W
1,704.00	22.24	292.16	1,672.21	33.83	-243.47	14,530,507.02	2,069,577.02	40° 0' 7.642 N	109° 28' 3.318 W
1,794.00	23.23	291.88	1,755.21	46.87	-275.72	14,530,519.50	2,069,544.55	40° 0' 7.771 N	109° 28' 3.732 W
1,884.00	24.43	290.63	1,837.54	60.04	-309.61	14,530,532.09	2,069,510.44	40° 0' 7.901 N	109° 28' 4.168 W
1,974.00	24.11	289.61	1,919.59	72.77	-344.34	14,530,544.22	2,069,475.49	40° 0' 8.027 N	109° 28' 4.614 W
2,064.00	23.51	290.28	2,001.93	85.16	-378.50	14,530,556.02	2,069,441.13	40° 0' 8.149 N	109° 28' 5.053 W
2,154.00	23.95	290.48	2,084.32	97.77	-412.45	14,530,568.05	2,069,406.97	40° 0' 8.274 N	109° 28' 5.489 W
2,244.00	24.49	292.03	2,166.39	111.16	-446.85	14,530,580.84	2,069,372.34	40° 0' 8.406 N	109° 28' 5.931 W
2,334.00	24.61	291.86	2,248.26	125.14	-481.54	14,530,594.22	2,069,337.42	40° 0' 8.545 N	109° 28' 6.377 W
2,424.00	24.95	291.68	2,329.97	139.13	-516.57	14,530,607.60	2,069,302.15	40° 0' 8.683 N	109° 28' 6.827 W
2,514.00	24.19	291.90	2,411.82	153.02	-551.32	14,530,620.89	2,069,267.17	40° 0' 8.820 N	109° 28' 7.274 W
2,544.00	23.87	292.02	2,439.22	157.59	-562.65	14,530,625.26	2,069,255.76	40° 0' 8.865 N	109° 28' 7.420 W
<b>LAST SDI MWD SURFACE SURVEY - FIRST SDI MWD PRODUCTION SURVEY</b>									
2,614.00	22.89	292.09	2,503.47	168.02	-588.39	14,530,635.25	2,069,229.84	40° 0' 8.968 N	109° 28' 7.751 W
2,705.00	24.36	292.78	2,586.84	181.94	-622.10	14,530,648.59	2,069,195.90	40° 0' 9.106 N	109° 28' 8.184 W
2,796.00	24.68	291.02	2,669.64	196.02	-657.14	14,530,662.07	2,069,160.63	40° 0' 9.245 N	109° 28' 8.634 W
2,886.00	24.60	290.03	2,751.44	209.18	-692.27	14,530,674.62	2,069,125.27	40° 0' 9.375 N	109° 28' 9.086 W
2,977.00	24.35	289.49	2,834.27	221.92	-727.76	14,530,686.75	2,069,089.57	40° 0' 9.501 N	109° 28' 9.542 W
3,067.00	23.99	289.04	2,916.38	234.08	-762.54	14,530,698.31	2,069,054.58	40° 0' 9.621 N	109° 28' 9.989 W
3,158.00	25.62	291.14	2,998.98	247.21	-798.38	14,530,710.82	2,069,018.52	40° 0' 9.751 N	109° 28' 10.449 W
3,249.00	26.42	290.72	3,080.76	261.47	-835.67	14,530,724.44	2,068,980.99	40° 0' 9.892 N	109° 28' 10.929 W
3,339.00	26.87	291.24	3,161.20	275.93	-873.35	14,530,738.24	2,068,943.07	40° 0' 10.035 N	109° 28' 11.413 W
3,430.00	25.97	291.60	3,242.69	290.71	-911.05	14,530,752.37	2,068,905.12	40° 0' 10.181 N	109° 28' 11.897 W
3,520.00	23.83	293.80	3,324.32	305.30	-946.01	14,530,766.36	2,068,869.92	40° 0' 10.325 N	109° 28' 12.347 W
3,611.00	22.94	293.00	3,407.85	319.65	-979.15	14,530,780.14	2,068,836.53	40° 0' 10.467 N	109° 28' 12.773 W
3,702.00	23.40	294.68	3,491.51	334.13	-1,011.90	14,530,794.05	2,068,803.54	40° 0' 10.610 N	109° 28' 13.194 W
3,792.00	24.22	293.40	3,573.85	348.92	-1,045.08	14,530,808.27	2,068,770.11	40° 0' 10.756 N	109° 28' 13.620 W
3,883.00	23.10	294.62	3,657.20	363.77	-1,078.44	14,530,822.54	2,068,736.50	40° 0' 10.903 N	109° 28' 14.049 W
3,973.00	24.14	293.68	3,739.66	378.52	-1,111.35	14,530,836.72	2,068,703.34	40° 0' 11.049 N	109° 28' 14.472 W
4,064.00	23.06	292.10	3,823.05	392.70	-1,144.90	14,530,850.32	2,068,669.55	40° 0' 11.189 N	109° 28' 14.903 W
4,154.00	23.57	291.59	3,905.70	405.95	-1,177.96	14,530,863.00	2,068,636.26	40° 0' 11.320 N	109° 28' 15.328 W
4,245.00	22.94	287.22	3,989.31	417.90	-1,211.82	14,530,874.36	2,068,602.20	40° 0' 11.438 N	109° 28' 15.763 W
4,336.00	22.43	287.62	4,073.27	428.40	-1,245.31	14,530,884.29	2,068,568.54	40° 0' 11.542 N	109° 28' 16.194 W
4,426.00	22.61	291.81	4,156.41	440.03	-1,277.74	14,530,895.36	2,068,535.92	40° 0' 11.657 N	109° 28' 16.610 W
4,517.00	23.79	292.27	4,240.05	453.48	-1,310.97	14,530,908.24	2,068,502.46	40° 0' 11.790 N	109° 28' 17.037 W
4,608.00	25.20	289.78	4,322.86	466.99	-1,346.18	14,530,921.14	2,068,467.02	40° 0' 11.923 N	109° 28' 17.490 W
4,698.00	24.57	287.29	4,404.51	479.04	-1,382.08	14,530,932.57	2,068,430.92	40° 0' 12.042 N	109° 28' 17.951 W
4,789.00	23.34	288.86	4,487.67	490.49	-1,417.20	14,530,943.42	2,068,395.60	40° 0' 12.155 N	109° 28' 18.403 W
4,879.00	23.63	289.97	4,570.22	502.41	-1,451.03	14,530,954.76	2,068,361.58	40° 0' 12.273 N	109° 28' 18.838 W
4,970.00	24.66	292.09	4,653.25	515.78	-1,485.76	14,530,967.52	2,068,326.62	40° 0' 12.405 N	109° 28' 19.284 W
5,060.00	25.53	293.96	4,734.76	530.72	-1,520.88	14,530,981.86	2,068,291.25	40° 0' 12.553 N	109° 28' 19.735 W
5,151.00	24.78	292.76	4,817.13	546.06	-1,556.39	14,530,996.58	2,068,255.48	40° 0' 12.705 N	109° 28' 20.192 W
5,242.00	24.10	294.83	4,899.98	561.24	-1,590.84	14,531,011.17	2,068,220.78	40° 0' 12.855 N	109° 28' 20.635 W
5,332.00	24.87	292.23	4,981.88	576.12	-1,625.03	14,531,025.45	2,068,186.33	40° 0' 13.002 N	109° 28' 21.074 W
5,423.00	24.90	292.82	5,064.44	590.79	-1,660.41	14,531,039.51	2,068,150.71	40° 0' 13.147 N	109° 28' 21.529 W
5,513.00	24.28	292.58	5,146.27	605.24	-1,694.96	14,531,053.37	2,068,115.92	40° 0' 13.290 N	109° 28' 21.973 W
5,604.00	23.32	293.23	5,229.53	619.53	-1,728.78	14,531,067.07	2,068,081.85	40° 0' 13.431 N	109° 28' 22.407 W
5,695.00	21.64	292.22	5,313.62	632.98	-1,760.87	14,531,079.97	2,068,049.54	40° 0' 13.564 N	109° 28' 22.820 W

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 922-29N Pad  
**Well:** NBU 922-30I4CS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 922-30I4CS  
**TVD Reference:** GL 4932' & KB 14' @ 4946.00ft (ENSGN 145)  
**MD Reference:** GL 4932' & KB 14' @ 4946.00ft (ENSGN 145)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,785.00	22.19	293.52	5,397.11	646.04	-1,791.82	14,531,092.50	2,068,018.37	40° 0' 13.693 N	109° 28' 23.218 W
5,876.00	21.56	293.24	5,481.56	659.49	-1,822.94	14,531,105.41	2,067,987.03	40° 0' 13.826 N	109° 28' 23.618 W
5,966.00	20.77	293.36	5,565.49	672.35	-1,852.78	14,531,117.75	2,067,956.96	40° 0' 13.953 N	109° 28' 24.001 W
6,057.00	20.47	290.62	5,650.66	684.35	-1,882.49	14,531,129.24	2,067,927.06	40° 0' 14.071 N	109° 28' 24.383 W
6,148.00	19.85	288.33	5,736.09	694.81	-1,912.05	14,531,139.19	2,067,897.32	40° 0' 14.175 N	109° 28' 24.763 W
6,238.00	18.63	287.91	5,821.06	704.04	-1,940.23	14,531,147.93	2,067,868.98	40° 0' 14.266 N	109° 28' 25.125 W
6,329.00	16.58	285.91	5,907.79	712.07	-1,966.55	14,531,155.51	2,067,842.53	40° 0' 14.345 N	109° 28' 25.463 W
6,420.00	15.11	284.53	5,995.33	718.60	-1,990.52	14,531,161.63	2,067,818.45	40° 0' 14.410 N	109° 28' 25.772 W
6,510.00	13.55	285.22	6,082.53	724.31	-2,012.05	14,531,166.97	2,067,796.82	40° 0' 14.466 N	109° 28' 26.048 W
6,601.00	11.56	283.17	6,171.35	729.19	-2,031.22	14,531,171.52	2,067,777.58	40° 0' 14.514 N	109° 28' 26.295 W
6,691.00	9.86	283.37	6,259.78	733.03	-2,047.50	14,531,175.07	2,067,761.23	40° 0' 14.552 N	109° 28' 26.504 W
6,782.00	8.77	282.67	6,349.58	736.35	-2,061.85	14,531,178.15	2,067,746.83	40° 0' 14.585 N	109° 28' 26.688 W
6,873.00	7.54	286.07	6,439.66	739.53	-2,074.35	14,531,181.11	2,067,734.27	40° 0' 14.617 N	109° 28' 26.849 W
6,963.00	5.86	290.65	6,529.04	742.78	-2,084.33	14,531,184.19	2,067,724.24	40° 0' 14.649 N	109° 28' 26.977 W
7,054.00	5.14	286.08	6,619.62	745.55	-2,092.59	14,531,186.81	2,067,715.93	40° 0' 14.676 N	109° 28' 27.083 W
7,144.00	4.48	285.51	6,709.30	747.60	-2,099.85	14,531,188.75	2,067,708.64	40° 0' 14.696 N	109° 28' 27.177 W
7,235.00	4.27	284.86	6,800.04	749.42	-2,106.55	14,531,190.45	2,067,701.91	40° 0' 14.714 N	109° 28' 27.263 W
7,326.00	3.12	281.77	6,890.85	750.80	-2,112.25	14,531,191.73	2,067,696.19	40° 0' 14.728 N	109° 28' 27.336 W
7,416.00	1.86	289.92	6,980.76	751.79	-2,116.02	14,531,192.66	2,067,692.40	40° 0' 14.738 N	109° 28' 27.385 W
7,507.00	1.19	321.07	7,071.73	753.03	-2,118.00	14,531,193.86	2,067,690.40	40° 0' 14.750 N	109° 28' 27.410 W
7,597.00	1.62	28.30	7,161.71	754.88	-2,117.99	14,531,195.71	2,067,690.38	40° 0' 14.768 N	109° 28' 27.410 W
7,688.00	1.86	30.11	7,252.66	757.29	-2,116.64	14,531,198.14	2,067,691.69	40° 0' 14.792 N	109° 28' 27.392 W
7,779.00	1.39	39.95	7,343.63	759.41	-2,115.19	14,531,200.29	2,067,693.10	40° 0' 14.813 N	109° 28' 27.374 W
7,869.00	1.39	61.59	7,433.60	760.77	-2,113.53	14,531,201.67	2,067,694.74	40° 0' 14.827 N	109° 28' 27.353 W
7,960.00	1.73	79.59	7,524.57	761.54	-2,111.20	14,531,202.49	2,067,697.05	40° 0' 14.834 N	109° 28' 27.323 W
8,050.00	1.55	82.31	7,614.53	761.95	-2,108.66	14,531,202.94	2,067,699.58	40° 0' 14.838 N	109° 28' 27.290 W
8,141.00	1.35	136.97	7,705.51	761.33	-2,106.71	14,531,202.35	2,067,701.54	40° 0' 14.832 N	109° 28' 27.265 W
8,232.00	0.75	163.50	7,796.49	759.98	-2,105.81	14,531,201.02	2,067,702.47	40° 0' 14.819 N	109° 28' 27.253 W
8,322.00	0.48	173.41	7,886.49	759.04	-2,105.60	14,531,200.08	2,067,702.69	40° 0' 14.809 N	109° 28' 27.251 W
8,413.00	0.40	215.63	7,977.48	758.40	-2,105.74	14,531,199.44	2,067,702.56	40° 0' 14.803 N	109° 28' 27.252 W
8,503.00	0.54	153.15	8,067.48	757.77	-2,105.73	14,531,198.81	2,067,702.58	40° 0' 14.797 N	109° 28' 27.252 W
8,594.00	0.51	137.07	8,158.48	757.09	-2,105.26	14,531,198.14	2,067,703.06	40° 0' 14.790 N	109° 28' 27.246 W
8,684.00	1.14	120.94	8,248.47	756.34	-2,104.22	14,531,197.40	2,067,704.12	40° 0' 14.783 N	109° 28' 27.233 W
8,776.00	1.46	139.50	8,340.44	754.97	-2,102.67	14,531,196.07	2,067,705.69	40° 0' 14.769 N	109° 28' 27.213 W
8,867.00	1.26	137.39	8,431.42	753.36	-2,101.24	14,531,194.47	2,067,707.15	40° 0' 14.753 N	109° 28' 27.195 W
8,957.00	0.87	123.07	8,521.40	752.26	-2,100.00	14,531,193.39	2,067,708.41	40° 0' 14.742 N	109° 28' 27.179 W
9,048.00	0.93	126.06	8,612.39	751.44	-2,098.83	14,531,192.60	2,067,709.60	40° 0' 14.734 N	109° 28' 27.164 W
9,139.00	1.04	134.43	8,703.38	750.43	-2,097.64	14,531,191.61	2,067,710.80	40° 0' 14.724 N	109° 28' 27.148 W
9,229.00	0.97	157.80	8,793.36	749.15	-2,096.77	14,531,190.35	2,067,711.69	40° 0' 14.712 N	109° 28' 27.137 W
9,320.00	1.14	137.49	8,884.35	747.77	-2,095.87	14,531,188.98	2,067,712.62	40° 0' 14.698 N	109° 28' 27.126 W
9,410.00	1.33	139.34	8,974.33	746.32	-2,094.58	14,531,187.55	2,067,713.93	40° 0' 14.684 N	109° 28' 27.109 W
9,501.00	1.68	132.15	9,065.30	744.62	-2,092.90	14,531,185.89	2,067,715.64	40° 0' 14.667 N	109° 28' 27.087 W
9,591.00	1.64	143.93	9,155.26	742.70	-2,091.17	14,531,183.99	2,067,717.41	40° 0' 14.648 N	109° 28' 27.065 W
9,682.00	1.60	143.54	9,246.22	740.62	-2,089.64	14,531,181.94	2,067,718.96	40° 0' 14.627 N	109° 28' 27.046 W
9,773.00	1.62	148.04	9,337.19	738.51	-2,088.21	14,531,179.85	2,067,720.43	40° 0' 14.607 N	109° 28' 27.027 W
<b>LAST SDI MWD PRODUCTION SURVEY</b>									
9,830.00	1.62	148.04	9,394.16	737.14	-2,087.36	14,531,178.50	2,067,721.31	40° 0' 14.593 N	109° 28' 27.016 W
<b>SDI PROJECTION TO TD</b>									

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 922-29N Pad  
**Well:** NBU 922-30I4CS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 922-30I4CS  
**TVD Reference:** GL 4932' & KB 14' @ 4946.00ft (ENSIGN 145)  
**MD Reference:** GL 4932' & KB 14' @ 4946.00ft (ENSIGN 145)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

**Design Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
239.00	238.92	-4.82	-1.93	FIRST SDI MWD SURFACE SURVEY
2,544.00	2,439.22	157.59	-562.65	LAST SDI MWD SURFACE SURVEY
2,544.00	2,439.22	157.59	-562.65	FIRST SDI MWD PRODUCTION SURVEY
9,773.00	9,337.19	738.51	-2,088.21	LAST SDI MWD PRODUCTION SURVEY
9,830.00	9,394.16	737.14	-2,087.36	SDI PROJECTION TO TD

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



**Scientific Drilling**  
Rocky Mountain Operations

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

**Uintah County, UT UTM12  
NBU 922-29N Pad  
NBU 922-30I4CS**

**OH**

**Design: OH**

## **Survey Report - Geographic**

**14 March, 2011**

<b>Company:</b> Kerr McGee Oil and Gas Onshore LP	<b>Local Co-ordinate Reference:</b> Well NBU 922-30I4CS
<b>Project:</b> Uintah County, UT UTM12	<b>TVD Reference:</b> GL 4932' & KB 14' @ 4946.00ft (ENSIGN 145)
<b>Site:</b> NBU 922-29N Pad	<b>MD Reference:</b> GL 4932' & KB 14' @ 4946.00ft (ENSIGN 145)
<b>Well:</b> NBU 922-30I4CS	<b>North Reference:</b> True
<b>Wellbore:</b> OH	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> OH	<b>Database:</b> EDM5000-RobertS-Local

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

<b>Site</b>	NBU 922-29N Pad, SEC 29 T9S R22E				
<b>Site Position:</b>	<b>Northing:</b>	14,530,501.12 usft	<b>Latitude:</b>	40° 0' 7.545 N	
<b>From:</b> Lat/Long	<b>Easting:</b>	2,069,802.70 usft	<b>Longitude:</b>	109° 28' 0.419 W	
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.99 °

<b>Well</b>	NBU 922-30I4CS, 806' FSL 1649' FWL					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,530,477.38 usft	<b>Latitude:</b>	40° 0' 7.308 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,069,821.04 usft	<b>Longitude:</b>	109° 28' 0.188 W
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,932.00 ft	

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	01/06/2011	11.12	65.89	52,379

<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	280.06	

<b>Survey Program</b>	<b>Date</b>	03/14/2011			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
10.00	2,544.00	Survey #1 SDI MWD SURFACE (OH)	MWD SDI	MWD - Standard ver 1.0.1	
2,614.00	9,830.00	Survey #2 SDI MWD PRODUCTION (OH)	MWD SDI	MWD - Standard ver 1.0.1	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,530,477.38	2,069,821.04	40° 0' 7.308 N	109° 28' 0.188 W
10.00	0.00	0.00	10.00	0.00	0.00	14,530,477.38	2,069,821.04	40° 0' 7.308 N	109° 28' 0.188 W
239.00	2.60	201.77	238.92	-4.82	-1.93	14,530,472.52	2,069,819.19	40° 0' 7.260 N	109° 28' 0.213 W
<b>FIRST SDI MWD SURFACE SURVEY</b>									
354.00	4.49	211.06	353.70	-11.10	-5.22	14,530,466.19	2,069,816.01	40° 0' 7.198 N	109° 28' 0.255 W
444.00	5.59	220.10	443.35	-17.47	-9.86	14,530,459.74	2,069,811.48	40° 0' 7.135 N	109° 28' 0.315 W
534.00	7.11	221.72	532.79	-24.99	-16.39	14,530,452.12	2,069,805.08	40° 0' 7.061 N	109° 28' 0.399 W
624.00	7.80	230.55	622.04	-33.02	-24.81	14,530,443.94	2,069,796.80	40° 0' 6.981 N	109° 28' 0.507 W
714.00	8.39	245.78	711.15	-39.60	-35.52	14,530,437.18	2,069,786.21	40° 0' 6.916 N	109° 28' 0.645 W
804.00	8.79	260.61	800.15	-43.41	-48.29	14,530,433.14	2,069,773.50	40° 0' 6.879 N	109° 28' 0.809 W
894.00	8.93	270.27	889.08	-44.50	-62.06	14,530,431.82	2,069,759.75	40° 0' 6.868 N	109° 28' 0.986 W

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 922-29N Pad  
**Well:** NBU 922-304CS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 922-304CS  
**TVD Reference:** GL 4932' & KB 14' @ 4946.00ft (ENSIGN 145)  
**MD Reference:** GL 4932' & KB 14' @ 4946.00ft (ENSIGN 145)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
984.00	9.42	285.97	977.94	-42.44	-76.13	14,530,433.63	2,069,745.65	40° 0' 6.888 N	109° 28' 1.167 W
1,074.00	9.82	294.38	1,066.68	-37.25	-90.20	14,530,438.59	2,069,731.49	40° 0' 6.940 N	109° 28' 1.348 W
1,164.00	11.11	297.42	1,155.18	-30.09	-104.89	14,530,445.49	2,069,716.68	40° 0' 7.010 N	109° 28' 1.536 W
1,254.00	12.60	297.92	1,243.26	-21.50	-121.26	14,530,453.80	2,069,700.16	40° 0' 7.095 N	109° 28' 1.747 W
1,344.00	14.45	295.51	1,330.76	-12.06	-140.07	14,530,462.91	2,069,681.19	40° 0' 7.188 N	109° 28' 1.989 W
1,434.00	16.16	294.65	1,417.57	-2.00	-161.59	14,530,472.60	2,069,659.50	40° 0' 7.288 N	109° 28' 2.265 W
1,524.00	18.40	294.17	1,503.50	9.04	-185.94	14,530,483.22	2,069,634.97	40° 0' 7.397 N	109° 28' 2.578 W
1,614.00	20.43	293.55	1,588.38	21.13	-213.30	14,530,494.84	2,069,607.41	40° 0' 7.517 N	109° 28' 2.930 W
1,704.00	22.24	292.16	1,672.21	33.83	-243.47	14,530,507.02	2,069,577.02	40° 0' 7.642 N	109° 28' 3.318 W
1,794.00	23.23	291.88	1,755.21	46.87	-275.72	14,530,519.50	2,069,544.55	40° 0' 7.771 N	109° 28' 3.732 W
1,884.00	24.43	290.63	1,837.54	60.04	-309.61	14,530,532.09	2,069,510.44	40° 0' 7.901 N	109° 28' 4.168 W
1,974.00	24.11	289.61	1,919.59	72.77	-344.34	14,530,544.22	2,069,475.49	40° 0' 8.027 N	109° 28' 4.614 W
2,064.00	23.51	290.28	2,001.93	85.16	-378.50	14,530,556.02	2,069,441.13	40° 0' 8.149 N	109° 28' 5.053 W
2,154.00	23.95	290.48	2,084.32	97.77	-412.45	14,530,568.05	2,069,406.97	40° 0' 8.274 N	109° 28' 5.489 W
2,244.00	24.49	292.03	2,166.39	111.16	-446.85	14,530,580.84	2,069,372.34	40° 0' 8.406 N	109° 28' 5.931 W
2,334.00	24.61	291.86	2,248.26	125.14	-481.54	14,530,594.22	2,069,337.42	40° 0' 8.545 N	109° 28' 6.377 W
2,424.00	24.95	291.68	2,329.97	139.13	-516.57	14,530,607.60	2,069,302.15	40° 0' 8.683 N	109° 28' 6.827 W
2,514.00	24.19	291.90	2,411.82	153.02	-551.32	14,530,620.89	2,069,267.17	40° 0' 8.820 N	109° 28' 7.274 W
2,544.00	23.87	292.02	2,439.22	157.59	-562.65	14,530,625.26	2,069,255.76	40° 0' 8.865 N	109° 28' 7.420 W
<b>LAST SDI MWD SURFACE SURVEY - FIRST SDI MWD PRODUCTION SURVEY</b>									
2,614.00	22.89	292.09	2,503.47	168.02	-588.39	14,530,635.25	2,069,229.84	40° 0' 8.968 N	109° 28' 7.751 W
2,705.00	24.36	292.78	2,586.84	181.94	-622.10	14,530,648.59	2,069,195.90	40° 0' 9.106 N	109° 28' 8.184 W
2,796.00	24.68	291.02	2,669.64	196.02	-657.14	14,530,662.07	2,069,160.63	40° 0' 9.245 N	109° 28' 8.634 W
2,886.00	24.60	290.03	2,751.44	209.18	-692.27	14,530,674.62	2,069,125.27	40° 0' 9.375 N	109° 28' 9.086 W
2,977.00	24.35	289.49	2,834.27	221.92	-727.76	14,530,686.75	2,069,089.57	40° 0' 9.501 N	109° 28' 9.542 W
3,067.00	23.99	289.04	2,916.38	234.08	-762.54	14,530,698.31	2,069,054.58	40° 0' 9.621 N	109° 28' 9.989 W
3,158.00	25.62	291.14	2,998.98	247.21	-798.38	14,530,710.82	2,069,018.52	40° 0' 9.751 N	109° 28' 10.449 W
3,249.00	26.42	290.72	3,080.76	261.47	-835.67	14,530,724.44	2,068,980.99	40° 0' 9.892 N	109° 28' 10.929 W
3,339.00	26.87	291.24	3,161.20	275.93	-873.35	14,530,738.24	2,068,943.07	40° 0' 10.035 N	109° 28' 11.413 W
3,430.00	25.97	291.60	3,242.69	290.71	-911.05	14,530,752.37	2,068,905.12	40° 0' 10.181 N	109° 28' 11.897 W
3,520.00	23.83	293.80	3,324.32	305.30	-946.01	14,530,766.36	2,068,869.92	40° 0' 10.325 N	109° 28' 12.347 W
3,611.00	22.94	293.00	3,407.85	319.65	-979.15	14,530,780.14	2,068,836.53	40° 0' 10.467 N	109° 28' 12.773 W
3,702.00	23.40	294.68	3,491.51	334.13	-1,011.90	14,530,794.05	2,068,803.54	40° 0' 10.610 N	109° 28' 13.194 W
3,792.00	24.22	293.40	3,573.85	348.92	-1,045.08	14,530,808.27	2,068,770.11	40° 0' 10.756 N	109° 28' 13.620 W
3,883.00	23.10	294.62	3,657.20	363.77	-1,078.44	14,530,822.54	2,068,736.50	40° 0' 10.903 N	109° 28' 14.049 W
3,973.00	24.14	293.68	3,739.66	378.52	-1,111.35	14,530,836.72	2,068,703.34	40° 0' 11.049 N	109° 28' 14.472 W
4,064.00	23.06	292.10	3,823.05	392.70	-1,144.90	14,530,850.32	2,068,669.55	40° 0' 11.189 N	109° 28' 14.903 W
4,154.00	23.57	291.59	3,905.70	405.95	-1,177.96	14,530,863.00	2,068,636.26	40° 0' 11.320 N	109° 28' 15.328 W
4,245.00	22.94	287.22	3,989.31	417.90	-1,211.82	14,530,874.36	2,068,602.20	40° 0' 11.438 N	109° 28' 15.763 W
4,336.00	22.43	287.62	4,073.27	428.40	-1,245.31	14,530,884.29	2,068,568.54	40° 0' 11.542 N	109° 28' 16.194 W
4,426.00	22.61	291.81	4,156.41	440.03	-1,277.74	14,530,895.36	2,068,535.92	40° 0' 11.657 N	109° 28' 16.610 W
4,517.00	23.79	292.27	4,240.05	453.48	-1,310.97	14,530,908.24	2,068,502.46	40° 0' 11.790 N	109° 28' 17.037 W
4,608.00	25.20	289.78	4,322.86	466.99	-1,346.18	14,530,921.14	2,068,467.02	40° 0' 11.923 N	109° 28' 17.490 W
4,698.00	24.57	287.29	4,404.51	479.04	-1,382.08	14,530,932.57	2,068,430.92	40° 0' 12.042 N	109° 28' 17.951 W
4,789.00	23.34	288.86	4,487.67	490.49	-1,417.20	14,530,943.42	2,068,395.60	40° 0' 12.155 N	109° 28' 18.403 W
4,879.00	23.63	289.97	4,570.22	502.41	-1,451.03	14,530,954.76	2,068,361.58	40° 0' 12.273 N	109° 28' 18.838 W
4,970.00	24.66	292.09	4,653.25	515.78	-1,485.76	14,530,967.52	2,068,326.62	40° 0' 12.405 N	109° 28' 19.284 W
5,060.00	25.53	293.96	4,734.76	530.72	-1,520.88	14,530,981.86	2,068,291.25	40° 0' 12.553 N	109° 28' 19.735 W
5,151.00	24.78	292.76	4,817.13	546.06	-1,556.39	14,530,996.58	2,068,255.48	40° 0' 12.705 N	109° 28' 20.192 W
5,242.00	24.10	294.83	4,899.98	561.24	-1,590.84	14,531,011.17	2,068,220.78	40° 0' 12.855 N	109° 28' 20.635 W
5,332.00	24.87	292.23	4,981.88	576.12	-1,625.03	14,531,025.45	2,068,186.33	40° 0' 13.002 N	109° 28' 21.074 W
5,423.00	24.90	292.82	5,064.44	590.79	-1,660.41	14,531,039.51	2,068,150.71	40° 0' 13.147 N	109° 28' 21.529 W
5,513.00	24.28	292.58	5,146.27	605.24	-1,694.96	14,531,053.37	2,068,115.92	40° 0' 13.290 N	109° 28' 21.973 W
5,604.00	23.32	293.23	5,229.53	619.53	-1,728.78	14,531,067.07	2,068,081.85	40° 0' 13.431 N	109° 28' 22.407 W
5,695.00	21.64	292.22	5,313.62	632.98	-1,760.87	14,531,079.97	2,068,049.54	40° 0' 13.564 N	109° 28' 22.820 W

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 922-29N Pad  
**Well:** NBU 922-30I4CS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 922-30I4CS  
**TVD Reference:** GL 4932' & KB 14' @ 4946.00ft (ENSIGN 145)  
**MD Reference:** GL 4932' & KB 14' @ 4946.00ft (ENSIGN 145)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,785.00	22.19	293.52	5,397.11	646.04	-1,791.82	14,531,092.50	2,068,018.37	40° 0' 13.693 N	109° 28' 23.218 W
5,876.00	21.56	293.24	5,481.56	659.49	-1,822.94	14,531,105.41	2,067,987.03	40° 0' 13.826 N	109° 28' 23.618 W
5,966.00	20.77	293.36	5,565.49	672.35	-1,852.78	14,531,117.75	2,067,956.96	40° 0' 13.953 N	109° 28' 24.001 W
6,057.00	20.47	290.62	5,650.66	684.35	-1,882.49	14,531,129.24	2,067,927.06	40° 0' 14.071 N	109° 28' 24.383 W
6,148.00	19.85	288.33	5,736.09	694.81	-1,912.05	14,531,139.19	2,067,897.32	40° 0' 14.175 N	109° 28' 24.763 W
6,238.00	18.63	287.91	5,821.06	704.04	-1,940.23	14,531,147.93	2,067,868.98	40° 0' 14.266 N	109° 28' 25.125 W
6,329.00	16.58	285.91	5,907.79	712.07	-1,966.55	14,531,155.51	2,067,842.53	40° 0' 14.345 N	109° 28' 25.463 W
6,420.00	15.11	284.53	5,995.33	718.60	-1,990.52	14,531,161.63	2,067,818.45	40° 0' 14.410 N	109° 28' 25.772 W
6,510.00	13.55	285.22	6,082.53	724.31	-2,012.05	14,531,166.97	2,067,796.82	40° 0' 14.466 N	109° 28' 26.048 W
6,601.00	11.56	283.17	6,171.35	729.19	-2,031.22	14,531,171.52	2,067,777.58	40° 0' 14.514 N	109° 28' 26.295 W
6,691.00	9.86	283.37	6,259.78	733.03	-2,047.50	14,531,175.07	2,067,761.23	40° 0' 14.552 N	109° 28' 26.504 W
6,782.00	8.77	282.67	6,349.58	736.35	-2,061.85	14,531,178.15	2,067,746.83	40° 0' 14.585 N	109° 28' 26.688 W
6,873.00	7.54	286.07	6,439.66	739.53	-2,074.35	14,531,181.11	2,067,734.27	40° 0' 14.617 N	109° 28' 26.849 W
6,963.00	5.86	290.65	6,529.04	742.78	-2,084.33	14,531,184.19	2,067,724.24	40° 0' 14.649 N	109° 28' 26.977 W
7,054.00	5.14	286.08	6,619.62	745.55	-2,092.59	14,531,186.81	2,067,715.93	40° 0' 14.676 N	109° 28' 27.083 W
7,144.00	4.48	285.51	6,709.30	747.60	-2,099.85	14,531,188.75	2,067,708.64	40° 0' 14.696 N	109° 28' 27.177 W
7,235.00	4.27	284.86	6,800.04	749.42	-2,106.55	14,531,190.45	2,067,701.91	40° 0' 14.714 N	109° 28' 27.263 W
7,326.00	3.12	281.77	6,890.85	750.80	-2,112.25	14,531,191.73	2,067,696.19	40° 0' 14.728 N	109° 28' 27.336 W
7,416.00	1.86	289.92	6,980.76	751.79	-2,116.02	14,531,192.66	2,067,692.40	40° 0' 14.738 N	109° 28' 27.385 W
7,507.00	1.19	321.07	7,071.73	753.03	-2,118.00	14,531,193.86	2,067,690.40	40° 0' 14.750 N	109° 28' 27.410 W
7,597.00	1.62	28.30	7,161.71	754.88	-2,117.99	14,531,195.71	2,067,690.38	40° 0' 14.768 N	109° 28' 27.410 W
7,688.00	1.86	30.11	7,252.66	757.29	-2,116.64	14,531,198.14	2,067,691.69	40° 0' 14.792 N	109° 28' 27.392 W
7,779.00	1.39	39.95	7,343.63	759.41	-2,115.19	14,531,200.29	2,067,693.10	40° 0' 14.813 N	109° 28' 27.374 W
7,869.00	1.39	61.59	7,433.60	760.77	-2,113.53	14,531,201.67	2,067,694.74	40° 0' 14.827 N	109° 28' 27.353 W
7,960.00	1.73	79.59	7,524.57	761.54	-2,111.20	14,531,202.49	2,067,697.05	40° 0' 14.834 N	109° 28' 27.323 W
8,050.00	1.55	82.31	7,614.53	761.95	-2,108.66	14,531,202.94	2,067,699.58	40° 0' 14.838 N	109° 28' 27.290 W
8,141.00	1.35	136.97	7,705.51	761.33	-2,106.71	14,531,202.35	2,067,701.54	40° 0' 14.832 N	109° 28' 27.265 W
8,232.00	0.75	163.50	7,796.49	759.98	-2,105.81	14,531,201.02	2,067,702.47	40° 0' 14.819 N	109° 28' 27.253 W
8,322.00	0.48	173.41	7,886.49	759.04	-2,105.60	14,531,200.08	2,067,702.69	40° 0' 14.809 N	109° 28' 27.251 W
8,413.00	0.40	215.63	7,977.48	758.40	-2,105.74	14,531,199.44	2,067,702.56	40° 0' 14.803 N	109° 28' 27.252 W
8,503.00	0.54	153.15	8,067.48	757.77	-2,105.73	14,531,198.81	2,067,702.58	40° 0' 14.797 N	109° 28' 27.252 W
8,594.00	0.51	137.07	8,158.48	757.09	-2,105.26	14,531,198.14	2,067,703.06	40° 0' 14.790 N	109° 28' 27.246 W
8,684.00	1.14	120.94	8,248.47	756.34	-2,104.22	14,531,197.40	2,067,704.12	40° 0' 14.783 N	109° 28' 27.233 W
8,776.00	1.46	139.50	8,340.44	754.97	-2,102.67	14,531,196.07	2,067,705.69	40° 0' 14.769 N	109° 28' 27.213 W
8,867.00	1.26	137.39	8,431.42	753.36	-2,101.24	14,531,194.47	2,067,707.15	40° 0' 14.753 N	109° 28' 27.195 W
8,957.00	0.87	123.07	8,521.40	752.26	-2,100.00	14,531,193.39	2,067,708.41	40° 0' 14.742 N	109° 28' 27.179 W
9,048.00	0.93	126.06	8,612.39	751.44	-2,098.83	14,531,192.60	2,067,709.60	40° 0' 14.734 N	109° 28' 27.164 W
9,139.00	1.04	134.43	8,703.38	750.43	-2,097.64	14,531,191.61	2,067,710.80	40° 0' 14.724 N	109° 28' 27.148 W
9,229.00	0.97	157.80	8,793.36	749.15	-2,096.77	14,531,190.35	2,067,711.69	40° 0' 14.712 N	109° 28' 27.137 W
9,320.00	1.14	137.49	8,884.35	747.77	-2,095.87	14,531,188.98	2,067,712.62	40° 0' 14.698 N	109° 28' 27.126 W
9,410.00	1.33	139.34	8,974.33	746.32	-2,094.58	14,531,187.55	2,067,713.93	40° 0' 14.684 N	109° 28' 27.109 W
9,501.00	1.68	132.15	9,065.30	744.62	-2,092.90	14,531,185.89	2,067,715.64	40° 0' 14.667 N	109° 28' 27.087 W
9,591.00	1.64	143.93	9,155.26	742.70	-2,091.17	14,531,183.99	2,067,717.41	40° 0' 14.648 N	109° 28' 27.065 W
9,682.00	1.60	143.54	9,246.22	740.62	-2,089.64	14,531,181.94	2,067,718.96	40° 0' 14.627 N	109° 28' 27.046 W
9,773.00	1.62	148.04	9,337.19	738.51	-2,088.21	14,531,179.85	2,067,720.43	40° 0' 14.607 N	109° 28' 27.027 W
<b>LAST SDI MWD PRODUCTION SURVEY</b>									
9,830.00	1.62	148.04	9,394.16	737.14	-2,087.36	14,531,178.50	2,067,721.31	40° 0' 14.593 N	109° 28' 27.016 W
<b>SDI PROJECTION TO TD</b>									

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 922-29N Pad  
**Well:** NBU 922-30I4CS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 922-30I4CS  
**TVD Reference:** GL 4932' & KB 14' @ 4946.00ft (ENSIGN 145)  
**MD Reference:** GL 4932' & KB 14' @ 4946.00ft (ENSIGN 145)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

**Design Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
239.00	238.92	-4.82	-1.93	FIRST SDI MWD SURFACE SURVEY
2,544.00	2,439.22	157.59	-562.65	LAST SDI MWD SURFACE SURVEY
2,544.00	2,439.22	157.59	-562.65	FIRST SDI MWD PRODUCTION SURVEY
9,773.00	9,337.19	738.51	-2,088.21	LAST SDI MWD PRODUCTION SURVEY
9,830.00	9,394.16	737.14	-2,087.36	SDI PROJECTION TO TD

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

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

FORM 6

ENTITY ACTION FORM

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

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751221	NBU 922-3014CS		SESW	29	9S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	1/8/2011		1/13/2011		
Comments: MIRU PETE MARTIN BUCKET RIG. <i>WSMVD</i> SPUD WELL LOCATION ON 01/08/2011 AT 08:45 HRS. <i>BAL = Sec 30 NESE</i>							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751217	NBU 922-29M2AS		SESW	29	9S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	1/8/2011		1/13/2011		
Comments: MIRU PETE MARTIN BUCKET RIG. <i>WSMVD</i> SPUD WELL LOCATION ON 01/08/2011 AT 10:45 HRS. <i>BAL = SWSW</i>							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751219	NBU 922-29N3BS		<i>SESW</i> SESE	<i>29</i> 32	9S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	1/8/2011		1/13/2011		
Comments: MIRU PETE MARTIN BUCKET RIG. <i>WSMVD</i> SPUD WELL LOCATION ON 01/08/2011 AT 13:00 HRS. <i>BAL = SESW</i>							

ACTION CODES:

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

GINA BECKER

Name (Please Print)

Signature

REGULATORY ANALYST

Title

1/11/2011

Date

RECEIVED

JAN 13 2011

DIV. OF OIL, GAS & MINING