

**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 1022-3L4BS		
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>				<b>3. FIELD OR WILDCAT</b> NATURAL BUTTES		
<b>4. TYPE OF WELL</b> Gas Well Coalbed Methane Well: NO				<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> NATURAL BUTTES		
<b>6. NAME OF OPERATOR</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.				<b>7. OPERATOR PHONE</b> 720 929-6587		
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217				<b>9. OPERATOR E-MAIL</b> mary.mondragon@anadarko.com		
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UTU 01191		<b>11. MINERAL OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		<b>12. SURFACE OWNERSHIP</b> FEDERAL <input 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>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>		
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>		
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>		<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		<b>19. SLANT</b> VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>		
<b>20. LOCATION OF WELL</b>	<b>FOOTAGES</b>	<b>QTR-QTR</b>	<b>SECTION</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>MERIDIAN</b>
<b>LOCATION AT SURFACE</b>	1571 FSL 432 FWL	NWSW	3	10.0 S	22.0 E	S
<b>Top of Uppermost Producing Zone</b>	1774 FSL 712 FWL	NWSW	3	10.0 S	22.0 E	S
<b>At Total Depth</b>	1774 FSL 712 FWL	NWSW	3	10.0 S	22.0 E	S
<b>21. COUNTY</b> UINTAH		<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 712		<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 1042		
		<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 345		<b>26. PROPOSED DEPTH</b> MD: 8829 TVD: 8800		
<b>27. ELEVATION - GROUND LEVEL</b> 5107		<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"/> <b>WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER</b>	<input checked="" type="checkbox"/> <b>COMPLETE DRILLING PLAN</b>
<input type="checkbox"/> <b>AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)</b>	<input type="checkbox"/> <b>FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER</b>
<input checked="" type="checkbox"/> <b>DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)</b>	<input checked="" type="checkbox"/> <b>TOPOGRAPHICAL MAP</b>

<b>NAME</b> Danielle Piernot	<b>TITLE</b> Regulatory Analyst	<b>PHONE</b> 720 929-6156
<b>SIGNATURE</b>	<b>DATE</b> 06/22/2009	<b>EMAIL</b> danielle.piernot@anadarko.com
<b>API NUMBER ASSIGNED</b> 43047504920000	<b>APPROVAL</b>   Permit Manager	

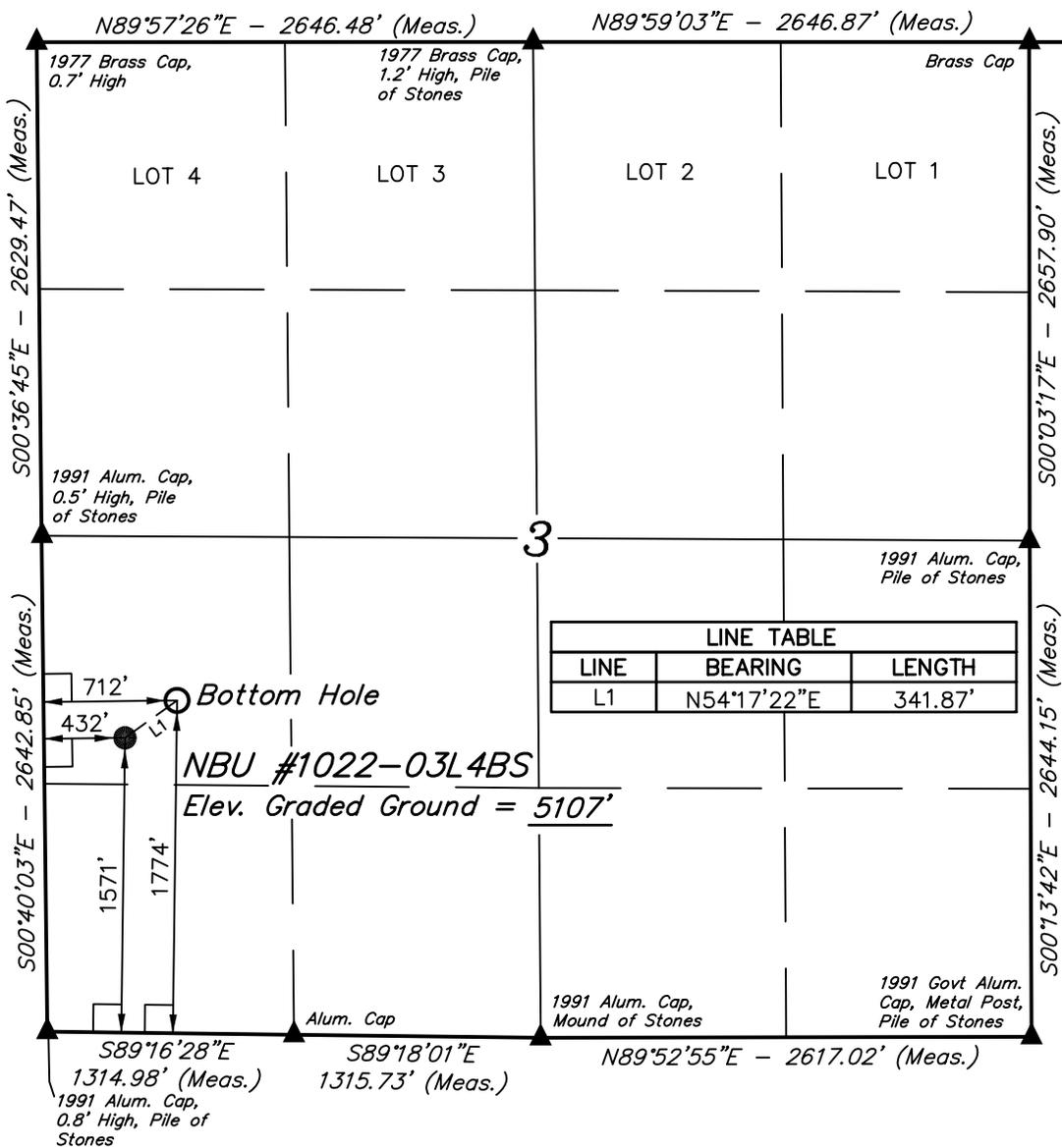
<b>Proposed Hole, Casing, and Cement</b>						
<b>String</b>	<b>Hole Size</b>	<b>Casing Size</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>		
Prod	7.875	4.5	0	8829		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade I-80 LT&C	8829	11.6			

<b>Proposed Hole, Casing, and Cement</b>						
<b>String</b>	<b>Hole Size</b>	<b>Casing Size</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>		
Surf	12.25	9.625	0	2170		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade J-55 LT&C	2170	36.0			

# T10S, R22E, S.L.B.&M.

## Kerr-McGee Oil & Gas Onshore LP

Well location, NBU #1022-03L4BS, located as shown in the NW 1/4 SW 1/4 of Section 3, T10S, R22E, S.L.B.&M., Uintah County, Utah.



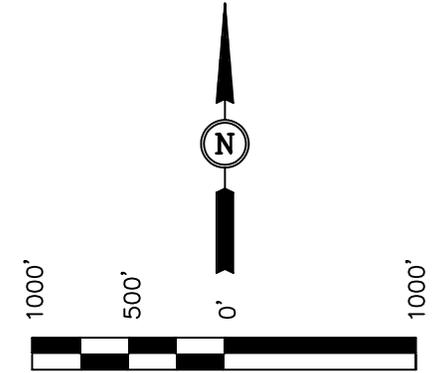
LINE TABLE		
LINE	BEARING	LENGTH
L1	N54°17'22"E	341.87'

### BASIS OF ELEVATION

BENCH MARK (20EAM) LOCATED IN THE SE 1/4 OF SECTION 35, T8S, R21E, S.L.B.&M. TAKEN FROM THE OURAY SE QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 4697 FEET.

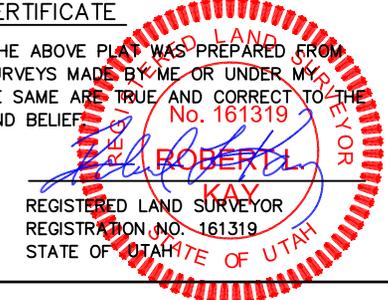
### BASIS OF BEARINGS

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



### SCALE CERTIFICATE

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



<b>UINTAH ENGINEERING &amp; LAND SURVEYING</b> 85 SOUTH 200 EAST - VERNAL, UTAH 84078 (435) 789-1017		
SCALE 1" = 1000'	DATE SURVEYED: 08-14-08	DATE DRAWN: 09-08-08
PARTY D.K. C.K. C.C.	REFERENCES G.L.O. PLAT	
WEATHER HOT	FILE Kerr-McGee Oil & Gas Onshore LP	

- LEGEND:**
- └┘ = 90° SYMBOL
  - = PROPOSED WELL HEAD.
  - ▲ = SECTION CORNERS LOCATED.

NAD 83 (TARGET BOTTOM HOLE)	NAD 83 (SURFACE LOCATION)
LATITUDE = 39°58'32.30" (39.975639)	LATITUDE = 39°58'30.33" (39.975092)
LONGITUDE = 109°25'58.45" (109.432903)	LONGITUDE = 109°26'02.01" (109.433892)
NAD 27 (TARGET BOTTOM HOLE)	NAD 27 (SURFACE LOCATION)
LATITUDE = 39°58'32.42" (39.975672)	LATITUDE = 39°58'30.45" (39.975125)
LONGITUDE = 109°25'55.99" (109.432219)	LONGITUDE = 109°25'59.55" (109.433208)

APIWellNo:43047504920000



Project: Uintah County, UT  
 Site: NBU 1022-3L Pad  
 Well: NBU 1022-3L4BS  
 Wellbore: OH  
 Design: Plan #1

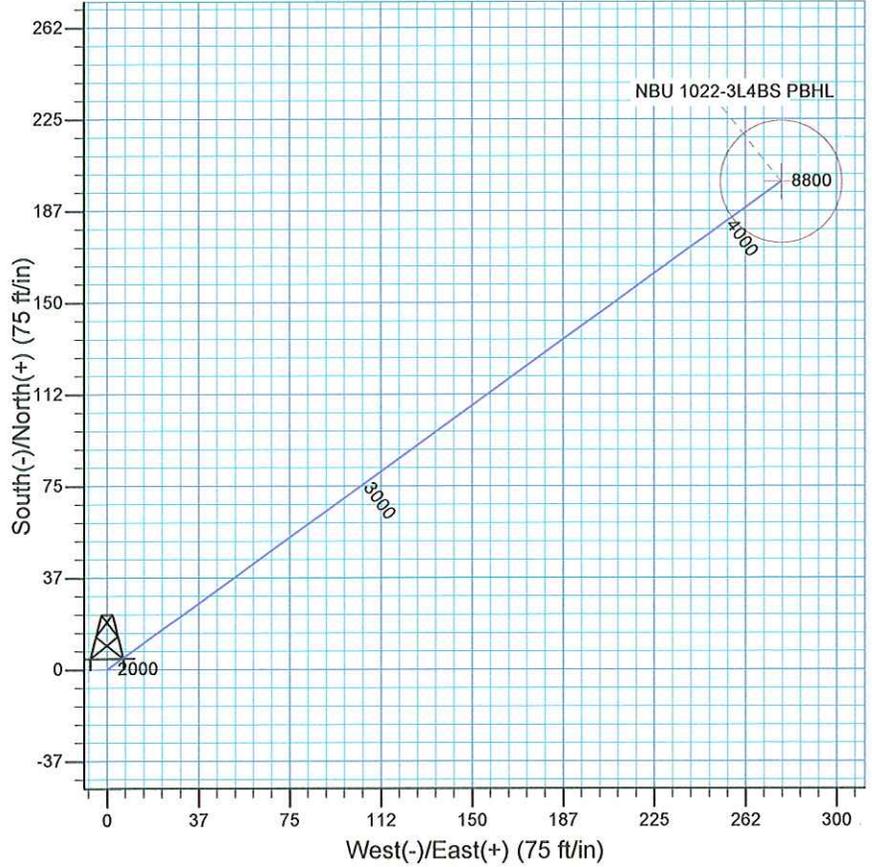
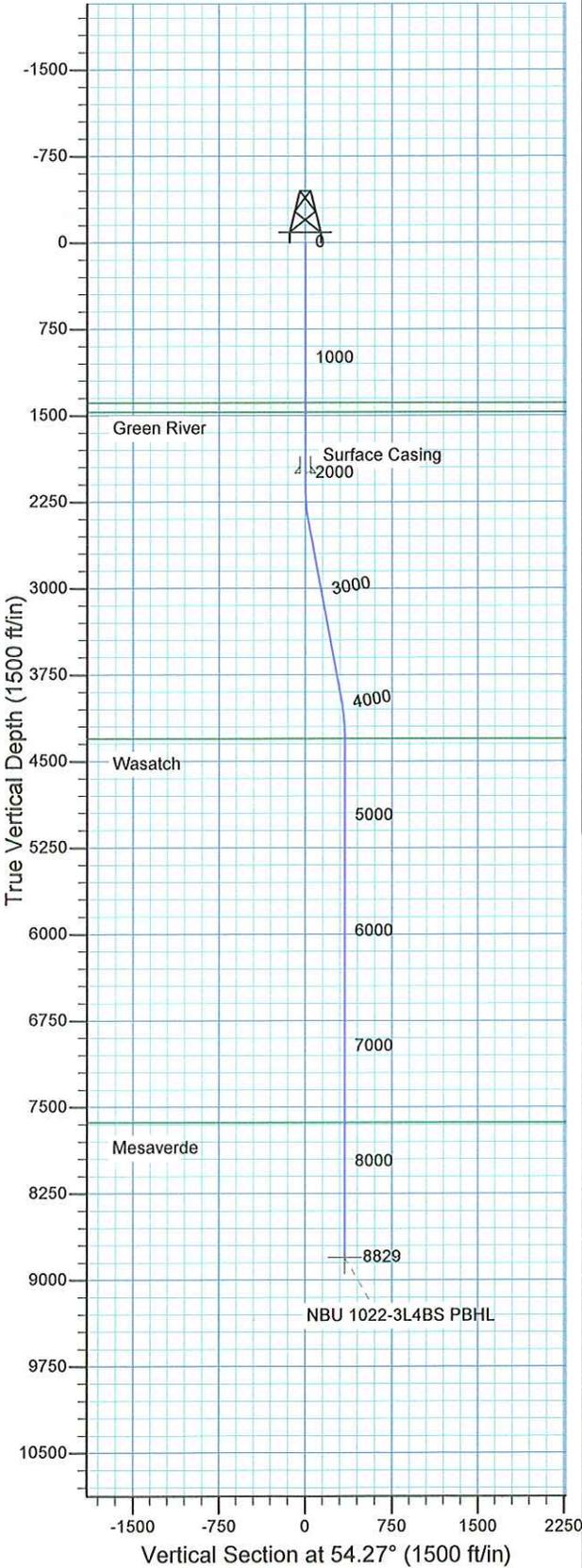
Kerr McGee Oil and Gas Onshore LP



Azimuths to True North  
 Magnetic North: 11.37°  
 Magnetic Field  
 Strength: 52612.3snT  
 Dip Angle: 65.93°  
 Date: 10/20/2008  
 Model: IGRF2005-10

WELL DETAILS: NBU 1022-3L4BS

GL 5107' & RKB 18' @ 5125.00ft 5107.00  
 +N/-S 0.00 +E/-W 0.00 Northing 604677.53 Easting 2579160.58 Latitude 39° 58' 30.450 N Longitude 109° 25' 59.550 W



Plan: Plan #1 (NBU 1022-3L4BS/OH)  
 Created By: Julie Cruse Date: 2008-10-20  
 PROJECT DETAILS: Uintah County, UT  
 Geodetic System: US State Plane 1927 (Exact solution)  
 Datum: NAD 1927 (NADCON CONUS)  
 Ellipsoid: Clarke 1866  
 Zone: Utah Central 4302  
 Location: Sec 3 T10S R22E  
 System Datum: Mean Sea Level  
 Local North: True

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00	0.00	
2447.92	10.44	54.27	2446.00	18.45	25.66	3.00	54.27	31.60	
3983.33	10.44	54.27	3956.00	180.87	251.47	0.00	0.00	309.76	
4331.25	0.00	0.00	4302.00	199.33	277.13	3.00	180.00	341.37	
8829.25	0.00	0.00	8800.00	199.33	277.13	0.00	0.00	341.37	NBU 1022-3L4BS PBHL



**Scientific Drilling**  
Rocky Mountain Operations

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

**Uintah County, UT  
NBU 1022-3L Pad  
NBU 1022-3L4BS  
OH**

**Plan: Plan #1**

## **Standard Planning Report**

**20 October, 2008**



**Scientific Drilling**  
Planning Report

<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3L4BS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 5107' & RKB 18' @ 5125.00ft
<b>Project:</b>	Uintah County, UT	<b>MD Reference:</b>	GL 5107' & RKB 18' @ 5125.00ft
<b>Site:</b>	NBU 1022-3L Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-3L4BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

<b>Project</b>	Uintah County, UT		
<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 1022-3L Pad, Sec 3 T10S R22E				
<b>Site Position:</b>		<b>Northing:</b>	604,677.53 ft	<b>Latitude:</b>	39° 58' 30.450 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,579,160.58 ft	<b>Longitude:</b>	109° 25' 59.550 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	in	<b>Grid Convergence:</b>	1.32 °

<b>Well</b>	NBU 1022-3L4BS, 1774' FSL 712' FWL					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	604,677.53 ft	<b>Latitude:</b>	39° 58' 30.450 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,579,160.58 ft	<b>Longitude:</b>	109° 25' 59.550 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	5,107.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2005-10	10/20/2008	11.37	65.93	52,612

<b>Design</b>	Plan #1				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	54.27	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,447.92	10.44	54.27	2,446.00	18.45	25.66	3.00	3.00	0.00	54.27	
3,983.33	10.44	54.27	3,956.00	180.87	251.47	0.00	0.00	0.00	0.00	
4,331.25	0.00	0.00	4,302.00	199.33	277.13	3.00	-3.00	0.00	180.00	
8,829.25	0.00	0.00	8,800.00	199.33	277.13	0.00	0.00	0.00	0.00	NBU 1022-3L4BS PB



Scientific Drilling  
Planning Report

**Database:** EDM 2003.16 Single User Db  
**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT  
**Site:** NBU 1022-3L Pad  
**Well:** NBU 1022-3L4BS  
**Wellbore:** OH  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well NBU 1022-3L4BS  
**TVD Reference:** GL 5107' & RKB 18' @ 5125.00ft  
**MD Reference:** GL 5107' & RKB 18' @ 5125.00ft  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

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
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,389.00	0.00	0.00	1,389.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Green River</b>									
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,469.00	0.00	0.00	1,469.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Bird's Nest</b>									
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Surface Casing</b>									
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	3.00	54.27	2,199.95	1.53	2.12	2.62	3.00	3.00	0.00
2,300.00	6.00	54.27	2,299.63	6.11	8.49	10.46	3.00	3.00	0.00
2,400.00	9.00	54.27	2,398.77	13.73	19.09	23.51	3.00	3.00	0.00
2,447.92	10.44	54.27	2,446.00	18.45	25.66	31.60	3.00	3.00	0.00
2,500.00	10.44	54.27	2,497.22	23.96	33.32	41.04	0.00	0.00	0.00
2,600.00	10.44	54.27	2,595.56	34.54	48.02	59.15	0.00	0.00	0.00
2,700.00	10.44	54.27	2,693.91	45.12	62.73	77.27	0.00	0.00	0.00
2,800.00	10.44	54.27	2,792.25	55.70	77.44	95.39	0.00	0.00	0.00
2,900.00	10.44	54.27	2,890.60	66.28	92.14	113.50	0.00	0.00	0.00
3,000.00	10.44	54.27	2,988.94	76.85	106.85	131.62	0.00	0.00	0.00
3,100.00	10.44	54.27	3,087.29	87.43	121.56	149.74	0.00	0.00	0.00
3,200.00	10.44	54.27	3,185.63	98.01	136.27	167.85	0.00	0.00	0.00
3,300.00	10.44	54.27	3,283.98	108.59	150.97	185.97	0.00	0.00	0.00
3,400.00	10.44	54.27	3,382.32	119.17	165.68	204.09	0.00	0.00	0.00
3,500.00	10.44	54.27	3,480.67	129.75	180.39	222.20	0.00	0.00	0.00
3,600.00	10.44	54.27	3,579.02	140.32	195.10	240.32	0.00	0.00	0.00
3,700.00	10.44	54.27	3,677.36	150.90	209.80	258.44	0.00	0.00	0.00
3,800.00	10.44	54.27	3,775.71	161.48	224.51	276.55	0.00	0.00	0.00
3,900.00	10.44	54.27	3,874.05	172.06	239.22	294.67	0.00	0.00	0.00
3,983.33	10.44	54.27	3,956.00	180.87	251.47	309.76	0.00	0.00	0.00
4,000.00	9.94	54.27	3,972.41	182.60	253.87	312.71	3.00	-3.00	0.00
4,100.00	6.94	54.27	4,071.32	191.16	265.78	327.39	3.00	-3.00	0.00
4,200.00	3.94	54.27	4,170.85	196.70	273.47	336.86	3.00	-3.00	0.00
4,300.00	0.94	54.27	4,270.75	199.18	276.92	341.11	3.00	-3.00	0.00
4,331.25	0.00	0.00	4,302.00	199.33	277.13	341.37	3.00	-3.00	0.00
<b>Wasatch</b>									



Scientific Drilling  
Planning Report

<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3L4BS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 5107' & RKB 18' @ 5125.00ft
<b>Project:</b>	Uintah County, UT	<b>MD Reference:</b>	GL 5107' & RKB 18' @ 5125.00ft
<b>Site:</b>	NBU 1022-3L Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-3L4BS	<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)	
4,400.00	0.00	0.00	4,370.75	199.33	277.13	341.37	0.00	0.00	0.00	
4,500.00	0.00	0.00	4,470.75	199.33	277.13	341.37	0.00	0.00	0.00	
4,600.00	0.00	0.00	4,570.75	199.33	277.13	341.37	0.00	0.00	0.00	
4,700.00	0.00	0.00	4,670.75	199.33	277.13	341.37	0.00	0.00	0.00	
4,800.00	0.00	0.00	4,770.75	199.33	277.13	341.37	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,870.75	199.33	277.13	341.37	0.00	0.00	0.00	
5,000.00	0.00	0.00	4,970.75	199.33	277.13	341.37	0.00	0.00	0.00	
5,100.00	0.00	0.00	5,070.75	199.33	277.13	341.37	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,170.75	199.33	277.13	341.37	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,270.75	199.33	277.13	341.37	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,370.75	199.33	277.13	341.37	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,470.75	199.33	277.13	341.37	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,570.75	199.33	277.13	341.37	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,670.75	199.33	277.13	341.37	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,770.75	199.33	277.13	341.37	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,870.75	199.33	277.13	341.37	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,970.75	199.33	277.13	341.37	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,070.75	199.33	277.13	341.37	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,170.75	199.33	277.13	341.37	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,270.75	199.33	277.13	341.37	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,370.75	199.33	277.13	341.37	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,470.75	199.33	277.13	341.37	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,570.75	199.33	277.13	341.37	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,670.75	199.33	277.13	341.37	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,770.75	199.33	277.13	341.37	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,870.75	199.33	277.13	341.37	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,970.75	199.33	277.13	341.37	0.00	0.00	0.00	
7,100.00	0.00	0.00	7,070.75	199.33	277.13	341.37	0.00	0.00	0.00	
7,200.00	0.00	0.00	7,170.75	199.33	277.13	341.37	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,270.75	199.33	277.13	341.37	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,370.75	199.33	277.13	341.37	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,470.75	199.33	277.13	341.37	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,570.75	199.33	277.13	341.37	0.00	0.00	0.00	
7,660.25	0.00	0.00	7,631.00	199.33	277.13	341.37	0.00	0.00	0.00	
<b>Mesaverde</b>										
7,700.00	0.00	0.00	7,670.75	199.33	277.13	341.37	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,770.75	199.33	277.13	341.37	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,870.75	199.33	277.13	341.37	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,970.75	199.33	277.13	341.37	0.00	0.00	0.00	
8,100.00	0.00	0.00	8,070.75	199.33	277.13	341.37	0.00	0.00	0.00	
8,200.00	0.00	0.00	8,170.75	199.33	277.13	341.37	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,270.75	199.33	277.13	341.37	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,370.75	199.33	277.13	341.37	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,470.75	199.33	277.13	341.37	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,570.75	199.33	277.13	341.37	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,670.75	199.33	277.13	341.37	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,770.75	199.33	277.13	341.37	0.00	0.00	0.00	
8,829.25	0.00	0.00	8,800.00	199.33	277.13	341.37	0.00	0.00	0.00	



**Scientific Drilling**  
Planning Report

<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3L4BS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 5107' & RKB 18' @ 5125.00ft
<b>Project:</b>	Uintah County, UT	<b>MD Reference:</b>	GL 5107' & RKB 18' @ 5125.00ft
<b>Site:</b>	NBU 1022-3L Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-3L4BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

**Targets**

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
NBU 1022-3L4BS PBHL - hit/miss target - Shape - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,800.00	199.33	277.13	604,883.20	2,579,433.03	39° 58' 32.420 N	109° 25' 55.990 W

**Casing Points**

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,000.00	2,000.00	Surface Casing	9.625	13.500

**Formations**

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,389.00	1,389.00	Green River		0.00	
4,331.25	4,302.00	Wasatch		0.00	
7,660.25	7,631.00	Mesaverde		0.00	
1,469.00	1,469.00	Bird's Nest		0.00	

**NBU 1022-3L4BS**

Pad: NBU 1022-3L

Surface: 1,571' FSL, 432' FWL (NW/4SW/4)

BHL: 1,774' FSL 712' FWL (NW/4SW/4)

Sec. 3 T10S R22E

Uintah, Utah

Mineral Lease: UTU 01191

**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	1,389'	
Birds Nest	1,469'	Water
Mahogany	1,967'	Water
Wasatch	4,302'	Gas
Mesaverde	6,672'	Gas
MVU2	7,631'	Gas
MVL1	8,210'	Gas
TVD	8,800'	
TD	8,829'	

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 8,829' TD, approximately equals 5,226 psi (calculated at 0.59 psi/foot).

Maximum anticipated surface pressure equals approximately 3,272 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

**8. Anticipated Starting Dates:**

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

**9. Variances:**

*Please refer to the attached Drilling Program.*

*Onshore Order #2 – Air Drilling Variance*

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

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

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

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

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

***Background***

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

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

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

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

***Variance for BOPE Requirements***

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

***Variance for Mud Material Requirements***

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

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

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

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

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

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

***Conclusion***

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

**10. Other Information:**

*Please refer to the attached Drilling Program.*





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

**CASING PROGRAM**

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3,520	2,020	453,000
SURFACE	9-5/8"	0 to 2,170	36.00	J-55	LTC	1.04	1.99	7.38
PRODUCTION	4-1/2"	0 to 8,829	11.60	I-80	LTC	2.31	1.20	2.25

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 = 11.6 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 3,272 psi**

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD  
 (Burst Assumptions: TD = 11.6 ppg) 0.59 psi/ft = bottomhole gradient  
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)  
**MABHP 5,226 psi**

**CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	215	60%	15.60	1.18
<b>Option 1</b>							
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele Premium cmt + 2% CaCl	380	0%	15.60	1.18
SURFACE			<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>				
<b>Option 2</b>	LEAD	1,670'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	400	35%	12.60	1.81
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	35%	15.60	1.18
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	3,799'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	360	40%	11.00	3.38
	TAIL	5,030'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,230	40%	14.30	1.31

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

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

**FLOAT EQUIPMENT & CENTRALIZERS**

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

**ADDITIONAL INFORMATION**

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

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

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

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

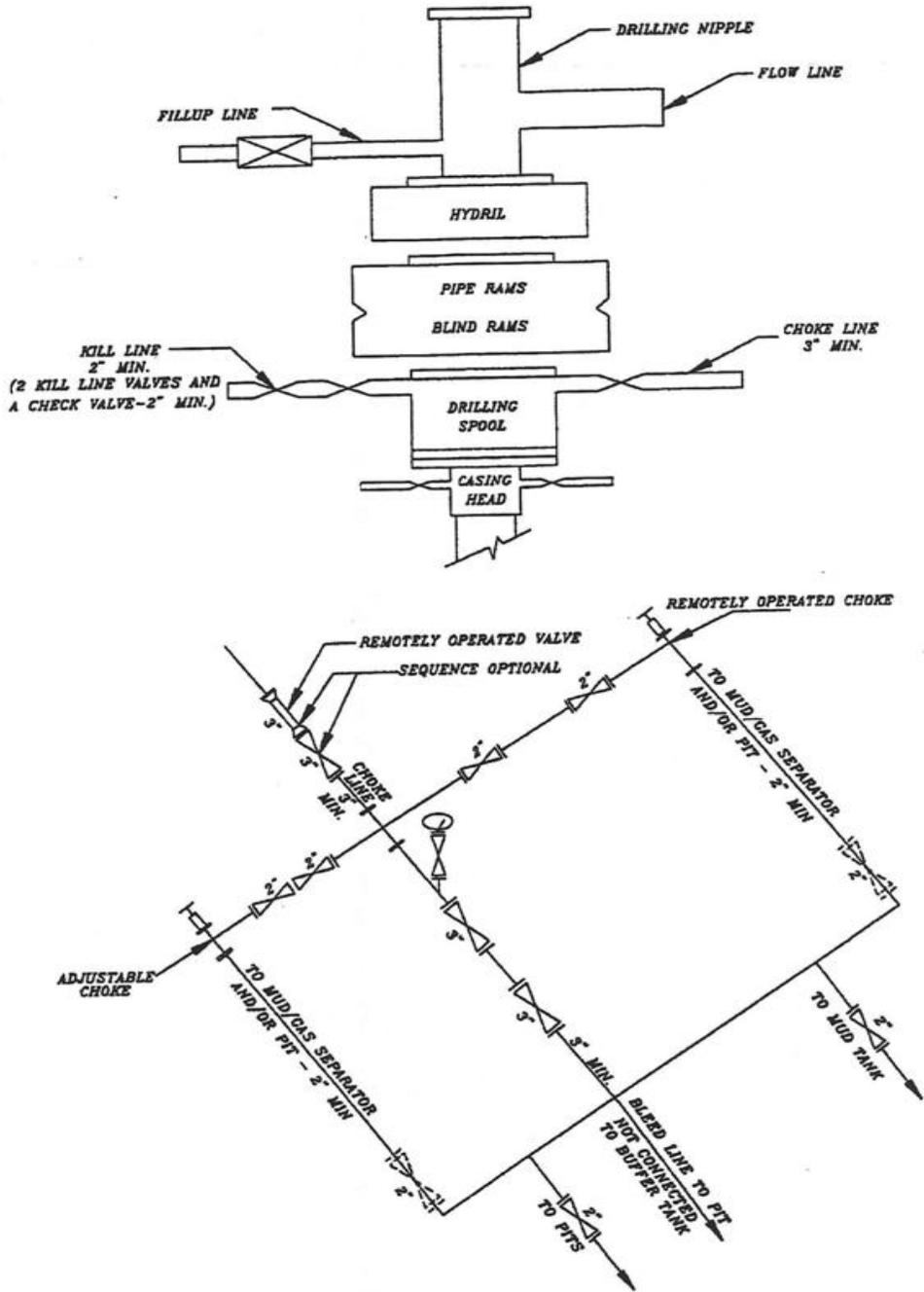
**DRILLING ENGINEER:** \_\_\_\_\_  
John Huycke / Emile Goodwin

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

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

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

### EXHIBIT A NBU 1022-3L4BS



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

# Kerr-McGee Oil & Gas Onshore LP

## LOCATION LAYOUT FOR

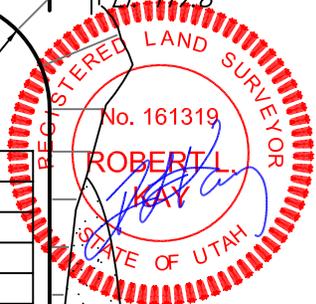
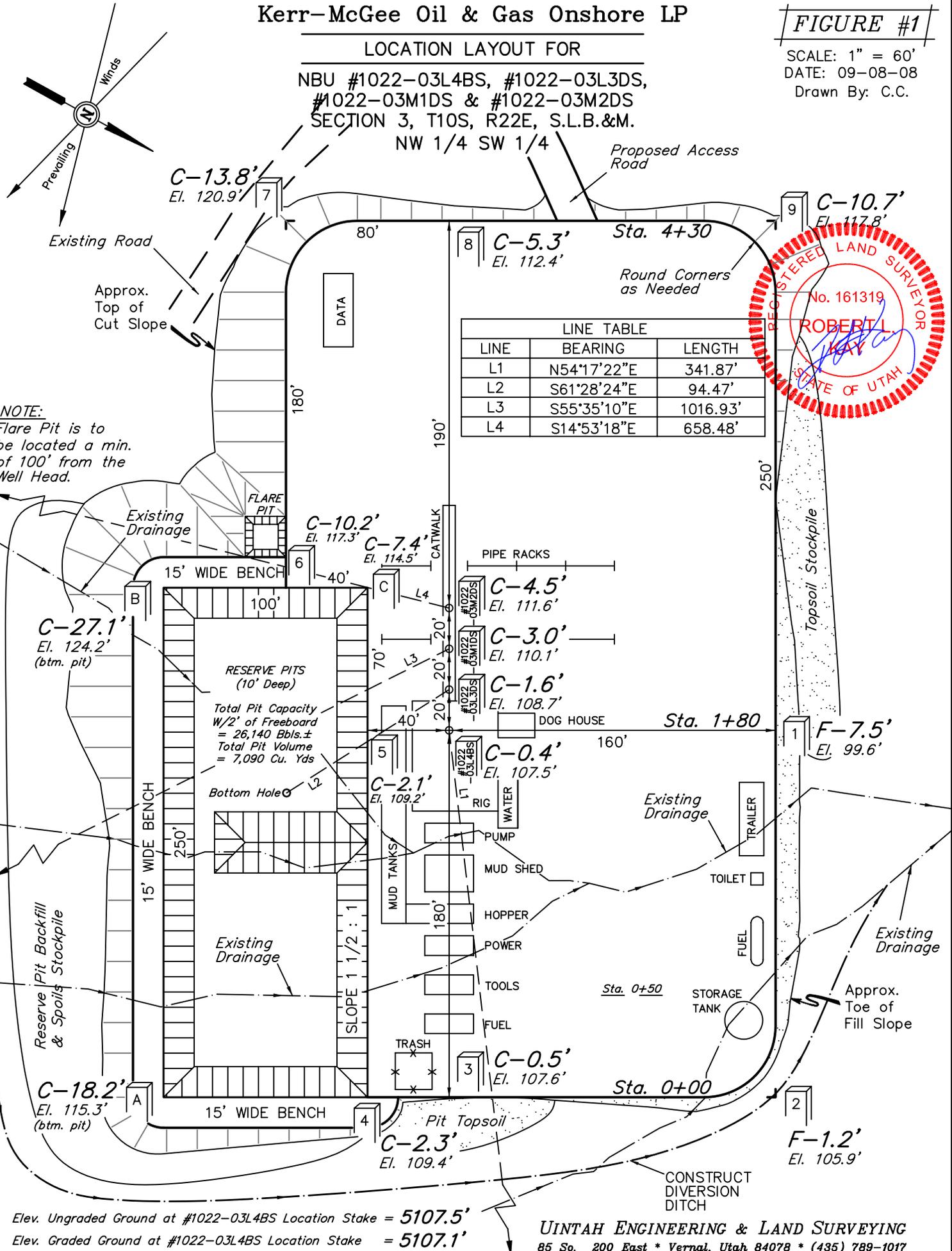
NBU #1022-03L4BS, #1022-03L3DS,  
#1022-03M1DS & #1022-03M2DS  
SECTION 3, T10S, R22E, S.L.B.&M.  
NW 1/4 SW 1/4

FIGURE #1

SCALE: 1" = 60'

DATE: 09-08-08

Drawn By: C.C.



**NOTE:**  
Flare Pit is to be located a min. of 100' from the Well Head.

Elev. Ungraded Ground at #1022-03L4BS Location Stake = 5107.5'  
Elev. Graded Ground at #1022-03L4BS Location Stake = 5107.1'

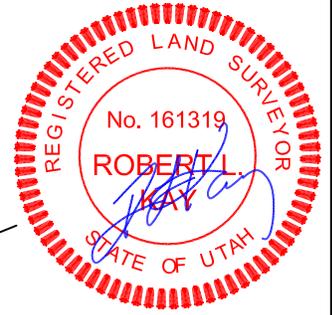
**UINTAH ENGINEERING & LAND SURVEYING**  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

# Kerr-McGee Oil & Gas Onshore LP

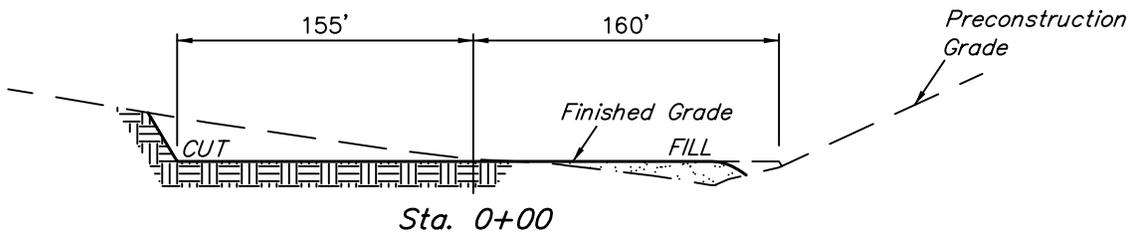
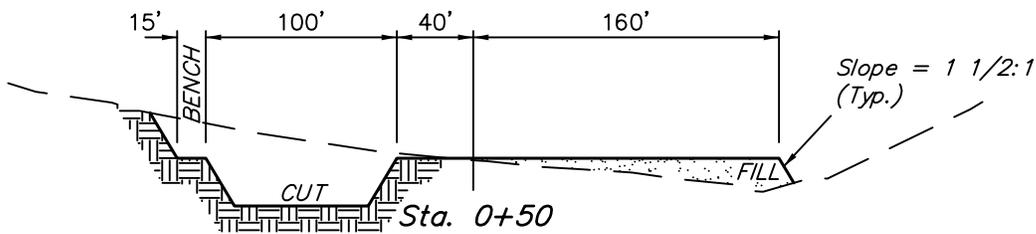
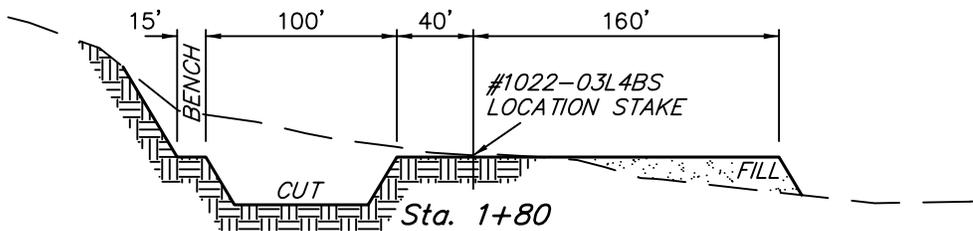
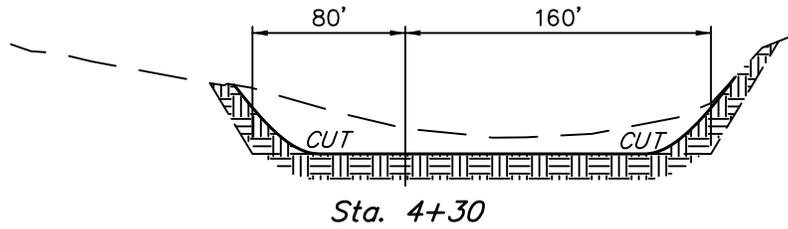
FIGURE #2

## TYPICAL CROSS SECTIONS FOR

NBU #1022-03L4BS, #1022-03L3DS,  
 #1022-03M1DS & #1022-03M2DS  
 SECTION 3, T10S, R22E, S.L.B.&M.  
 NW 1/4 SW 1/4



1" = 40'  
 X-Section  
 Scale  
 1" = 100'  
 DATE: 09-08-08  
 Drawn By: C.C.



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

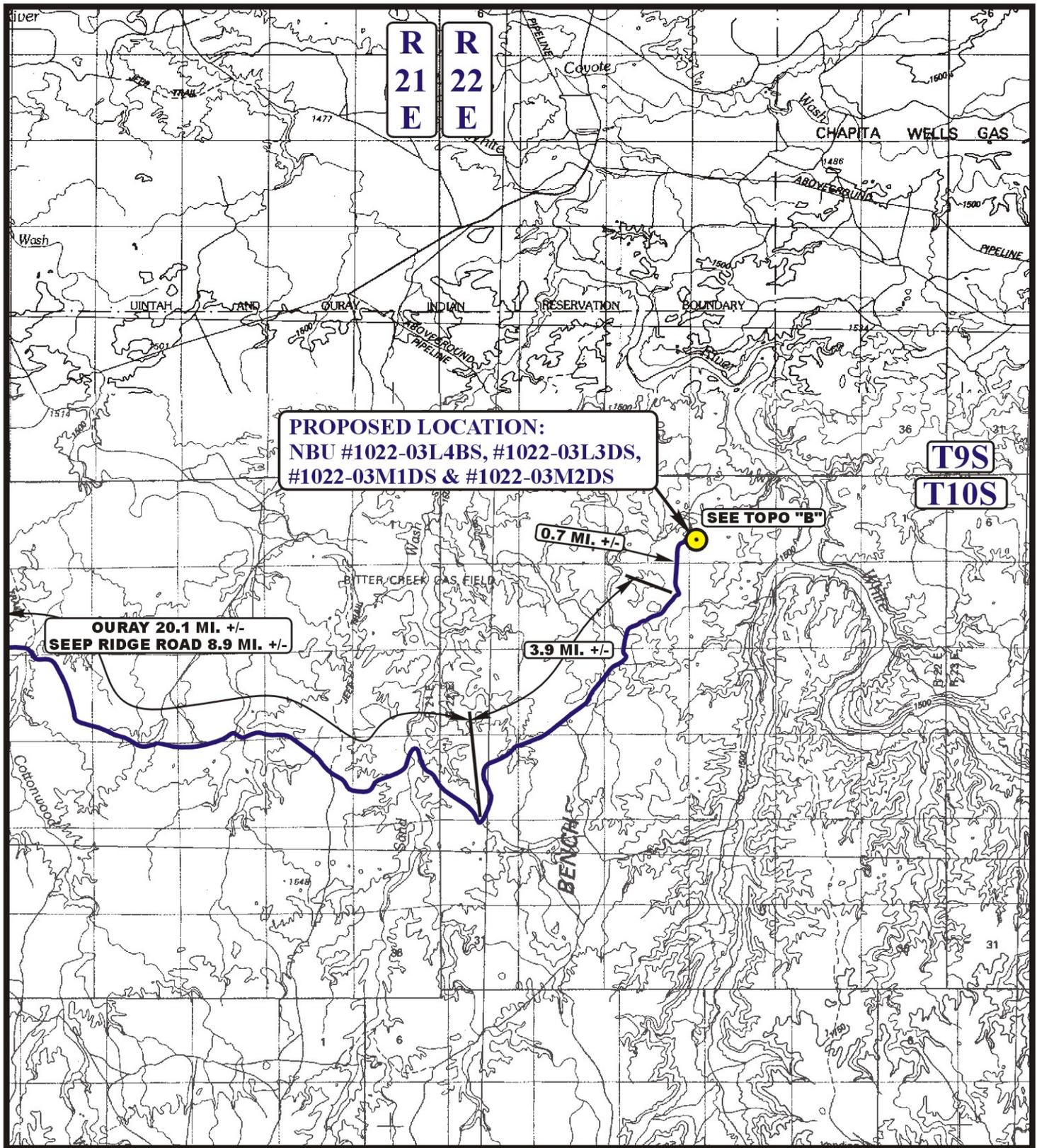
\* NOTE:  
 FILL QUANTITY INCLUDES  
 5% FOR COMPACTION

### APPROXIMATE YARDAGES

(6") Topsoil Stripping = 2,800 Cu. Yds.  
 Remaining Location = 27,690 Cu. Yds.  
**TOTAL CUT = 30,490 CU.YDS.**  
**FILL = 6,530 CU.YDS.**

EXCESS MATERIAL = 23,960 Cu. Yds.  
 Topsoil & Pit Backfill  
 (1/2 Pit Vol.) = 6,350 Cu. Yds.  
 EXCESS UNBALANCE = 17,610 Cu. Yds.  
 (After Interim Rehabilitation)

UINTAH ENGINEERING & LAND SURVEYING  
 85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017



**PROPOSED LOCATION:**  
**NBU #1022-03L4BS, #1022-03L3DS,**  
**#1022-03M1DS & #1022-03M2DS**

**OURAY 20.1 MI. +/-**  
**SEEP RIDGE ROAD 8.9 MI. +/-**

**0.7 MI. +/-**

**3.9 MI. +/-**

**SEE TOPO "B"**

**LEGEND:**

 **PROPOSED LOCATION**

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

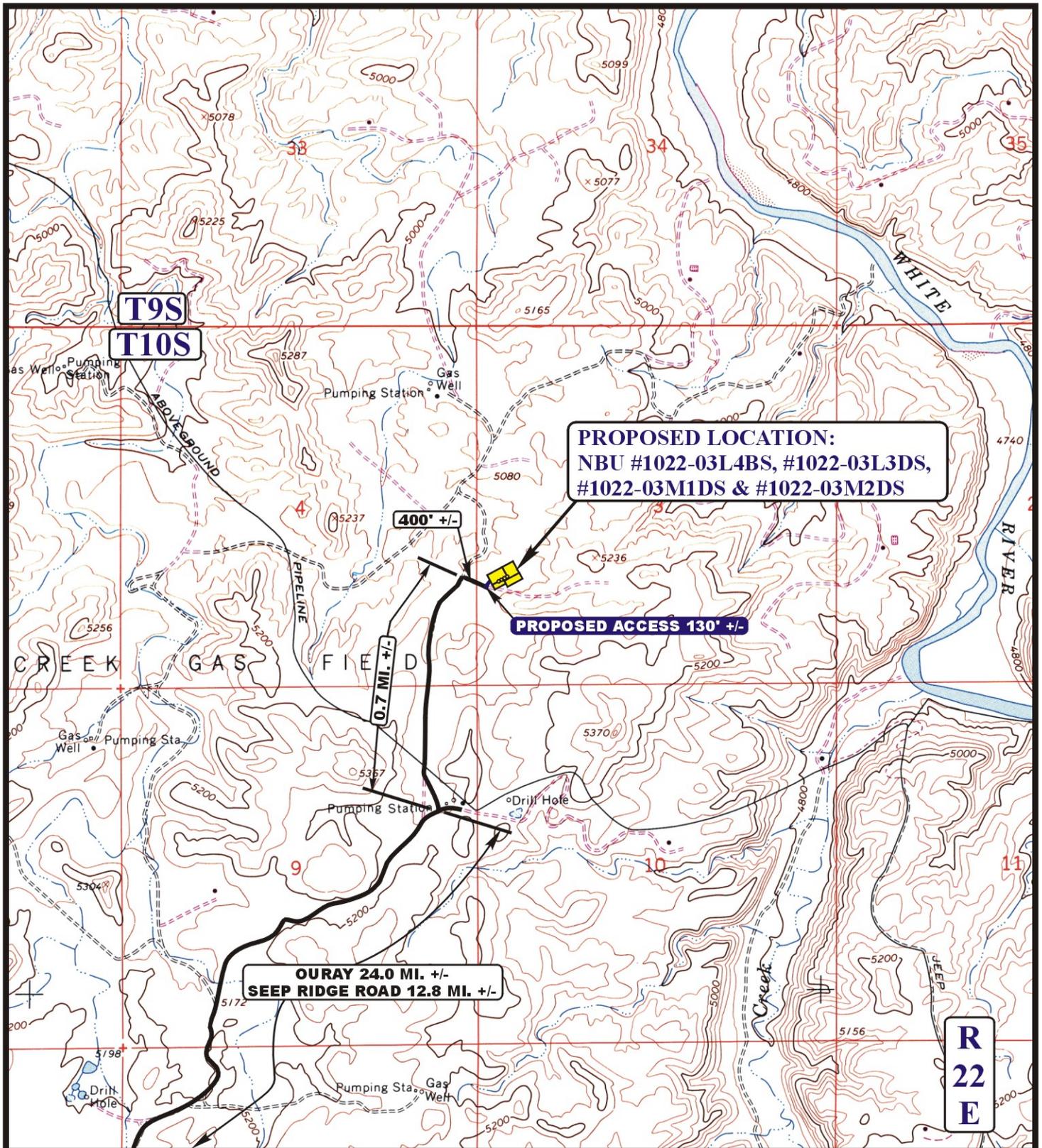
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**#1022-03M1DS & #1022-03M2DS**  
**SECTION 3, T10S, R22E, S.L.B.&M.**  
**NW 1/4 SW 1/4**

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



**TOPOGRAPHIC** **09 10 08**  
**MAP** MONTH DAY YEAR  
 SCALE: 1:100,000 DRAWN BY: J.H. REVISED: 00-00-00





**PROPOSED LOCATION:  
NBU #1022-03L4BS, #1022-03L3DS,  
#1022-03M1DS & #1022-03M2DS**

**PROPOSED ACCESS 130' +/-**

**OURAY 24.0 MI. +/-  
SEEP RIDGE ROAD 12.8 MI. +/-**

**400' +/-**

**0.7 MI. +/-**

**R  
22  
E**

**LEGEND:**

-  EXISTING ROAD
-  PROPOSED ACCESS ROAD

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

NBU #1022-03L4BS, #1022-03L3DS,  
#1022-03M1DS & #1022-03M2DS  
SECTION 3, T10S, R22E, S.L.B.&M.  
NW 1/4 SW 1/4

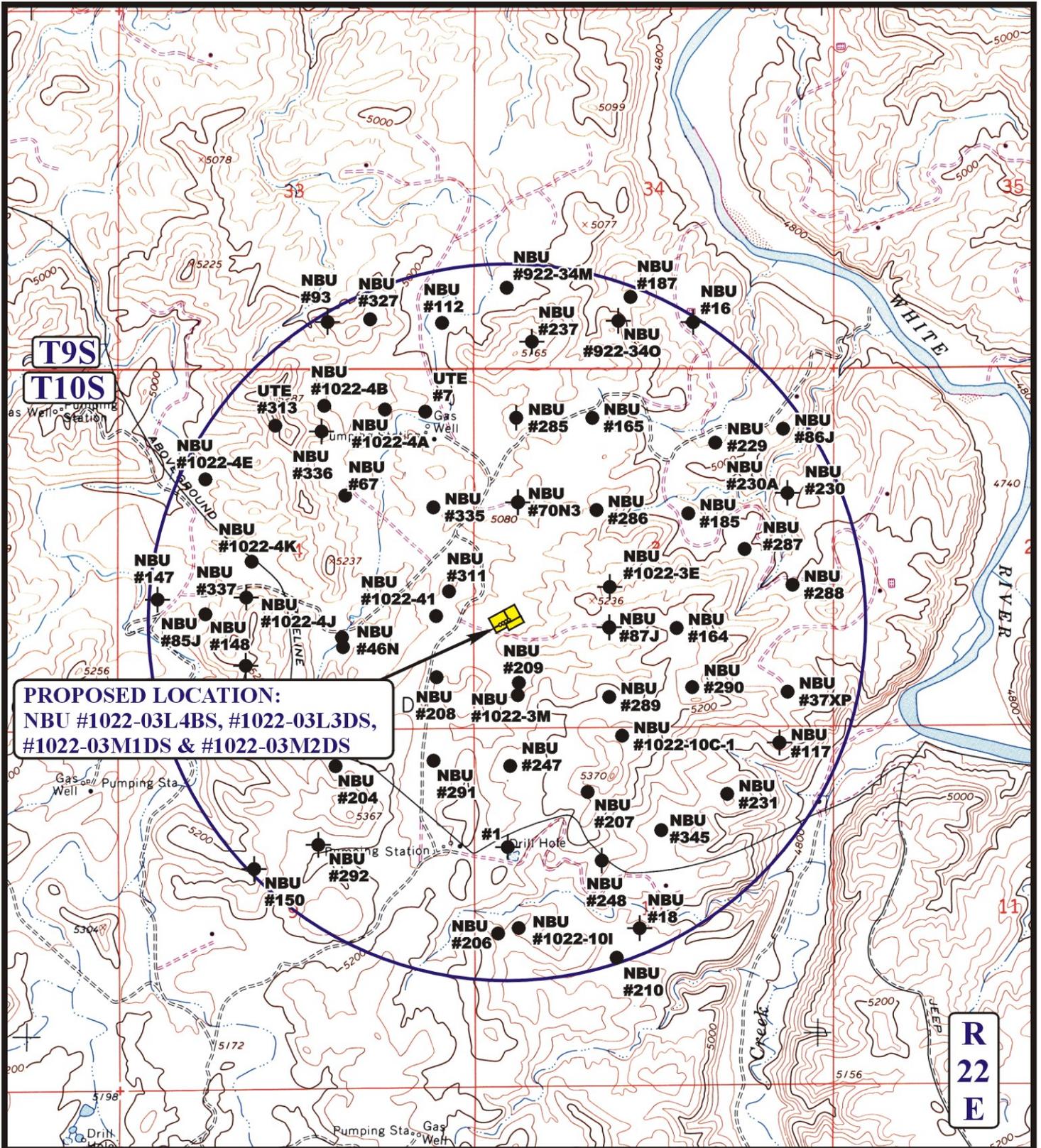
**U**  
**E**  
**S**

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



**TOPOGRAPHIC** **09 10 08**  
**MAP** MONTH DAY YEAR  
SCALE: 1" = 2000' DRAWN BY: J.H. REVISED: 00-00-00

**B**  
**TOPO**



**PROPOSED LOCATION:**  
**NBU #1022-03L4BS, #1022-03L3DS,**  
**#1022-03M1DS & #1022-03M2DS**

**LEGEND:**

- |                   |                         |
|-------------------|-------------------------|
| ⊗ DISPOSAL WELLS  | ⊗ WATER WELLS           |
| ● PRODUCING WELLS | ● ABANDONED WELLS       |
| ● SHUT IN WELLS   | ● TEMPORARILY ABANDONED |

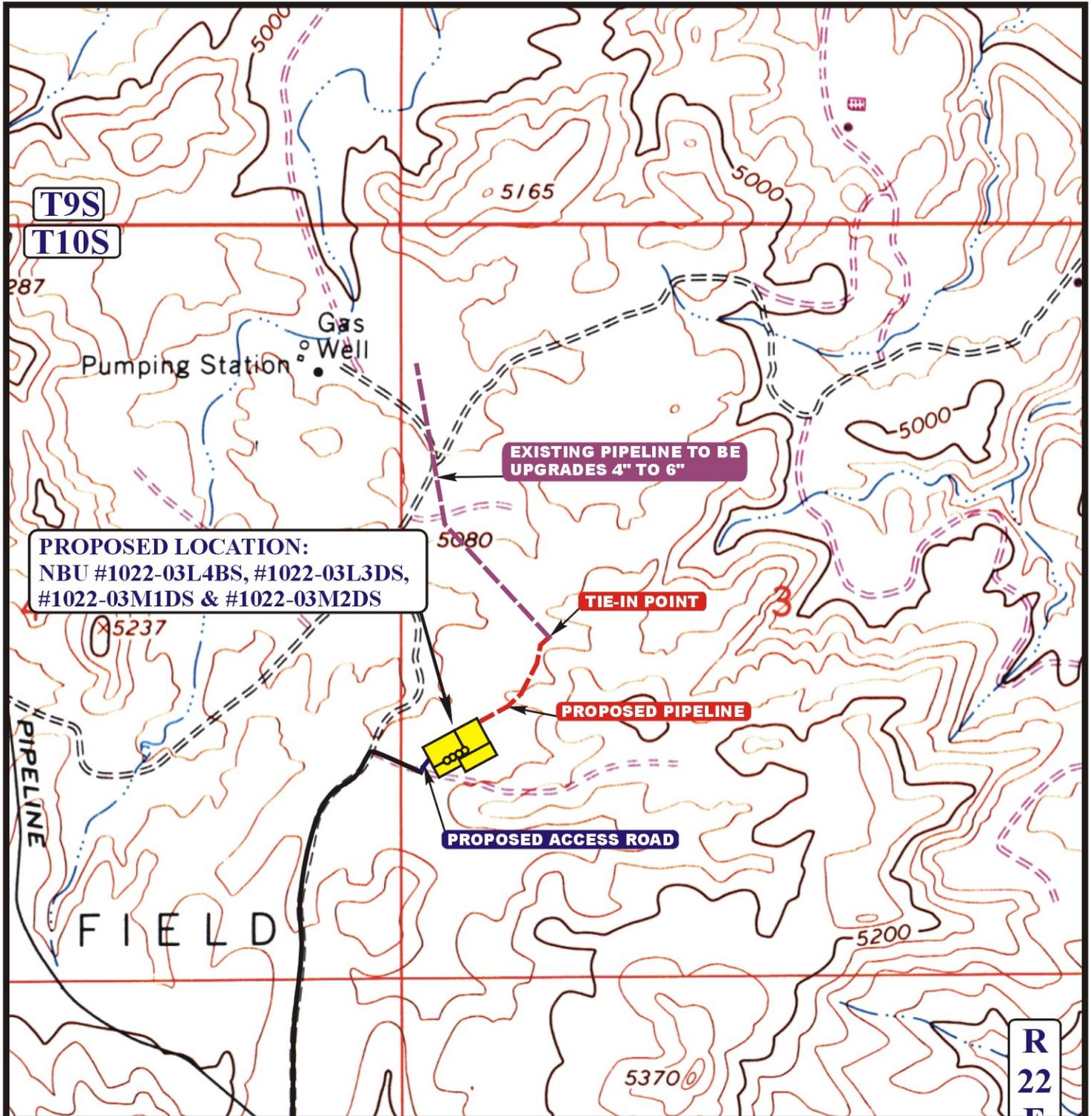
**Kerr-McGee Oil & Gas Onshore LP**

**NBU #1022-03L4BS, #1022-03L3DS,**  
**#1022-03M1DS & #1022-03M2DS**  
**SECTION 3, T10S, R22E, S.L.B.&M.**  
**NW 1/4 SW 1/4**

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

**TOPOGRAPHIC MAP** **09 10 08**  
 MONTH DAY YEAR  
 SCALE: 1" = 2000' DRAWN BY: J.H. REVISED: 00-00-00 **TOPO**





**APPROXIMATE TOTAL PIPELINE DISTANCE = 790' +/-**

**APPROXIMATE TOTAL PIPELINE UPGRADE DISTANCE = 2,200' +/-**

**LEGEND:**

- PROPOSED ACCESS ROAD
- EXISTING PIPELINE
- PROPOSED PIPELINE
- EXISTING PIPELINE TO BE UPGRADEED 4" TO 6"



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

NBU #1022-03L4BS, #1022-03L3DS,  
 #1022-03M1DS & #1022-03M2DS  
 SECTION 3, T10S R22E, S.L.B.&M.  
 NW 1/4 SW 1/4



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

<b>TOPOGRAPHIC MAP</b>	<b>09</b>	<b>10</b>	<b>08</b>
	<small>MONTH</small>	<small>DAY</small>	<small>YEAR</small>
SCALE: 1" = 1000'	DRAWN BY: J.H.		REVISED: 00-00-00



# Kerr-McGee Oil & Gas Onshore LP

NBU #1022-O3L4BS, #1022-03L3DS, #1022-03M1DS, & #1022-03M2DS  
LOCATED IN UINTAH COUNTY, UTAH  
SECTION 3, T10S, R22E, S.L.B.&M.

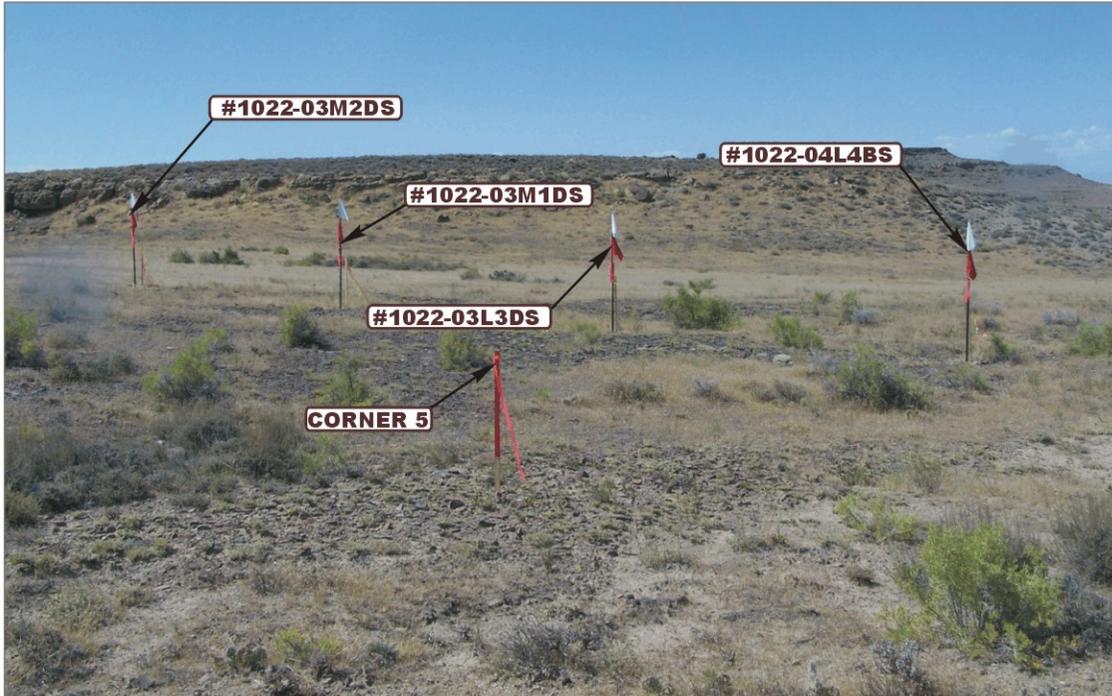


PHOTO: VIEW FROM CORNER 5 TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY



PHOTO: FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: NORTHEASTERLY



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

<b>LOCATION PHOTOS</b>			<b>09</b>	<b>10</b>	<b>08</b>	<b>PHOTO</b>
			MONTH	DAY	YEAR	
TAKEN BY: D.K.	DRAWN BY: J.H.	REVISED: 00-00-00				

**Kerr-McGee Oil & Gas Onshore LP**  
**NBU #1022-O3L4BS, #1022-03L3DS, #1022-03M1DS & #1022-03M2DS**  
**PIPELINE ALIGNMENT**  
**LOCATED IN UINTAH COUNTY, UTAH**  
**SECTION 3, T10S, R22E, S.L.B.&M.**



PHOTO: VIEW FROM TIE IN POINT

CAMERA ANGLE: SOUTHWESTERLY



PHOTO: VIEW OF PIPELINE ALIGNMENT

CAMERA ANGLE: SOUTHWESTERLY



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

<b>LOCATION PHOTOS</b>	<b>09</b> MONTH	<b>10</b> DAY	<b>08</b> YEAR	<b>PHOTO</b>
TAKEN BY: D.K.	DRAWN BY: J.H.	REVISED: 00-00-00		

**NBU 1022-3L3DS**

Surface: 1,561' FSL 415' FWL (NW/4 SW/4)  
BHL: 1,517' FSL 497' FWL (NW/4 SW/4)

**NBU 1022-3L4BS**

Surface: 1,571' FSL 432' FWL (NW/4 SW/4)  
BHL: 1,774' FSL 712' FWL (NW/4 SW/4)

**NBU 1022-3M1DS**

Surface: 1,551' FSL 397' FWL (NW/4 SW/4)  
BHL: 987' FSL 1,229' FWL (SW/4 SW/4)

**NBU 1022-3M2DS**

Surface: 1,541' FSL 379' FWL (NW/4 SW/4)  
BHL: 907' FSL 541' FWL (SW/4 SW/4)

Pad: NBU 1022-3L  
Sec. 3 T10S R22E

Uintah, Utah  
Mineral Lease: UTU 01191

**ONSHORE ORDER NO. 1**

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

This Application for Permit to Drill (APD) is filed under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) documents. An NOS was submitted in November 2008 showing the surface locations in NW/4 SW/4 of Section 3 T10S R22E.

This Surface Use Plan of Operations (SUPO) or 13-point plan provides the site-specific information for the above-referenced wells. This information is to be incorporated by reference into the Master Development Plan (MDP) for Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee). The MDP is available upon request from the BLM-Vernal Field Office.

An on-site meeting was held on March 31, 2009. Present were:

- Verlyn Pindell, Dave Gordon – BLM;
- Kolby Kay – 609 Consulting, LLC
- Tony Kazeck, Raleen White, Grizz Oleen, Hal Blanchard and Charles Chase – Kerr-McGee.

**Directional Drilling:**

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

**1. Existing Roads:**

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

2. **Planned Access Roads:**

*See MDP for additional details on road construction.*

Approximately  $\pm 0.1$  ( $\pm 130'$ ) mile of new access road is proposed. Please refer to the attached Topo Map B. No pipelines will be crossed with the new construction.

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

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

Please refer to Topo Map C.

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

*See MDP for additional details on Existing and Proposed Facilities.*

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

*See MDP for additional details on Location and Type of Water Supply.*

Water for drilling purposes will be obtained from Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, Application number 53617. Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

6. **Source of Construction Materials:**

*See MDP for additional details on Source of Construction Materials.*

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

*See MDP for additional details on Methods of Handling Waste Materials.*

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E

NBU #159 in Sec. 35 T9S R21E

Ace Oilfield in Sec. 2 T6S R20E

MC&MC in Sec. 12 T6S R19E

Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

8. **Ancillary Facilities:**

*See MDP for additional details on Ancillary Facilities.*

None are anticipated.

9. **Well Site Layout:** (See Location Layout Diagram)  
*See MDP for additional details on Well Site Layout.*

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

- Net wire (39-inch) will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.
- Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.
- All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

10. **Plans for Reclamation of the Surface:**  
*See MDP for additional details on Plans for Reclamation of the Surface.*

11. **Surface/Mineral Ownership:**  
United States of America  
Bureau of Land Management  
170 South 500 East  
Vernal, UT 84078  
(435)781-4400

12. **Other Information:**  
*See MDP for additional details on Other Information.*

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

Kathy Schneebeck Dulnoan  
 Regulatory Analyst  
 Kerr-McGee Oil & Gas Onshore LP  
 PO Box 173779  
 Denver, CO 80217-3779  
 (720) 929-6007

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

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

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

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

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

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

  
 \_\_\_\_\_  
 Kathy Schneebeck Dulnoan

June 1, 2009  
 \_\_\_\_\_  
 Date



Kerr-McGee Oil & Gas Onshore LP  
1999 Broadway, Suite 3700  
Denver, CO 80205

November 3, 2008

Mrs. 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 1022-3L4BS  
T10S R22E  
Section 3: NWSW  
NWSW 1571' FSL, 432' FWL (surface)  
NWSW 1774' FSL, 712' FWL (bottom hole)  
Uintah County, Utah

Dear Mrs. 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 Exception to Location and Siting of Wells.

- Kerr-McGee's NBU 1022-3L4BS 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



Jason K. Rayburn  
Landman

'APIWellNo:43047504920000'

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS  
ONSHORE LP'S 73 PROPOSED NBU WELL LOCATIONS  
IN TOWNSHIP 10S, RANGE 22E  
UINTAH COUNTY, UTAH

By:

Jacki A. Montgomery

Prepared For:

Bureau of Land Management  
Vernal Field Office  
and  
School and Institutional  
Trust Lands Administration

Prepared Under Contract With:

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

Prepared By:

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

MOAC Report No. 08-268

October 16, 2008

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

Public Lands Policy Coordination Office  
Archaeological Survey Permit No. 117

**IPC #08-228**

# **Paleontological Reconnaissance Survey Report**

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**Survey of Kerr McGee's Proposed Multi Well Pads & Pipeline  
Upgrades for "NBU #1022-03M2DS, 03M1DS, 03L3DS &  
03L4BS" & "NBU #1022-11K1T"  
(Sec. 3 & 11, T 10 S, R 22 E)**

Archy Bench  
Topographic Quadrangle  
Uintah County, Utah

October 10, 2008

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



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, Utah 84145-0155

**IN REPLY REFER TO:**

**3160  
(UT-922)**

June 26, 2009

Memorandum

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

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

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-50491	NBU 1022-3L3DS	Sec 03 T10S R22E 1561 FSL 0415 FWL
	BHL	Sec 03 T10S R22E 1517 FSL 0497 FWL
43-047-50492	NBU 1022-3L4BS	Sec 03 T10S R22E 1571 FSL 0432 FWL
	BHL	Sec 03 T10S R22E 1774 FSL 0712 FWL
43-047-50493	NBU 1022-3M1DS	Sec 03 T10S R22E 1551 FSL 0397 FWL
	BHL	Sec 03 T10S R22E 0987 FSL 1229 FWL
43-047-50494	NBU 1022-3M2DS	Sec 03 T10S R22E 1541 FSL 0379 FWL
	BHL	Sec 03 T10S R22E 0907 FSL 0541 FWL
43-047-50507	NBU 922-33E2DS	Sec 33 T09S R22E 1234 FNL 1257 FWL
	BHL	Sec 33 T09S R22E 1904 FNL 0487 FWL
43-047-50508	NBU 922-33E3AS	Sec 33 T09S R22E 1229 FNL 1276 FWL
	BHL	Sec 33 T09S R22E 2278 FNL 0508 FWL
43-047-50509	NBU 922-33E3DS	Sec 33 T09S R22E 1223 FNL 1295 FWL
	BHL	Sec 33 T09S R22E 2617 FNL 0426 FWL
43-047-50510	NBU 922-33F3DS	Sec 33 T09S R22E 1217 FNL 1315 FWL
	BHL	Sec 33 T09S R22E 2513 FNL 1817 FWL

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

/s/ Michael L. Coulthard

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

MCoulthard:mc:6-26-09

**WORKSHEET  
APPLICATION FOR PERMIT TO DRILL**

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**APD RECEIVED:** 6/22/2009

**API NO. ASSIGNED:** 43047504920000

**WELL NAME:** NBU 1022-3L4BS

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

**PHONE NUMBER:** 720 929-6156

**CONTACT:** Danielle Piernot

**PROPOSED LOCATION:** NWSW 3 100S 220E

**Permit Tech Review:**

**SURFACE:** 1571 FSL 0432 FWL

**Engineering Review:**

**BOTTOM:** 1774 FSL 0712 FWL

**Geology Review:**

**COUNTY:** UINTAH

**LATITUDE:** 39.97497

**LONGITUDE:** -109.43323

**UTM SURF EASTINGS:** 633795.00

**NORTHINGS:** 4425944.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 1 - Federal

**LEASE NUMBER:** UTU 01191

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

**SURFACE OWNER:** 1 - Federal

**COALBED METHANE:** NO

---

**RECEIVED AND/OR REVIEWED:**

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

**Commingle Approved**

**LOCATION AND SITING:**

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

**Comments:** Presite Completed

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



JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

### Permit To Drill

\*\*\*\*\*

**Well Name:** NBU 1022-3L4BS  
**API Well Number:** 43047504920000  
**Lease Number:** UTU 01191  
**Surface Owner:** FEDERAL  
**Approval Date:** 7/16/2009

**Issued to:**

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

**Authority:**

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

**Duration:**

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

**Commingling:**

In accordance with Board Cause No. 173-14 commingling 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.

**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

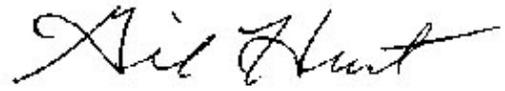
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <http://oilgas.ogm.utah.gov>

**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:**



Gil Hunt  
Associate Director, Oil & Gas

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 01191
<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 1022-3L4BS
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047504920000
<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> 1571 FSL 0432 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 03 Township: 10.0S 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 checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 7/16/2010	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input checked="" type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: _____

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

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

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

**Date:** July 22, 2010

**By:**

<b>NAME (PLEASE PRINT)</b> Danielle Piernot	<b>PHONE NUMBER</b> 720 929-6156	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 7/14/2010	



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

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

**Request for Permit Extension Validation Well Number 43047504920000**

**API:** 43047504920000

**Well Name:** NBU 1022-3L4BS

**Location:** 1571 FSL 0432 FWL QTR NWSW SEC 03 TWP 100S RNG 220E MER S

**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 7/16/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated?  Yes  No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?  Yes  No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?  Yes  No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?  Yes  No
- Has the approved source of water for drilling changed?  Yes  No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?  Yes  No
- Is bonding still in place, which covers this proposed well?  Yes  No

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

**Signature:** Danielle Piernot

**Date:** 7/14/2010

**Title:** Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date:** July 22, 2010

**By:** 

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9	
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 01191	
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 1022-3L4BS		
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047504920000		
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6515 Ext	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES	
<b>4. LOCATION OF WELL FOOTAGES AT SURFACE:</b> 1571 FSL 0432 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 03 Township: 10.0S 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			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 7/16/2011  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: <input style="width: 50px;" type="text"/>
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.			
<p>Kerr-McGee Oil &amp; Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.</p>			
			<p><b>Approved by the Utah Division of Oil, Gas and Mining</b></p> <p><b>Date:</b> <u>06/20/2011</u></p> <p><b>By:</b> </p>
<b>NAME (PLEASE PRINT)</b> Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	<b>TITLE</b> Regulatory Analyst	
<b>SIGNATURE</b> N/A		<b>DATE</b> 6/13/2011	



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

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

**Request for Permit Extension Validation Well Number 43047504920000**

**API:** 43047504920000

**Well Name:** NBU 1022-3L4BS

**Location:** 1571 FSL 0432 FWL QTR NWSW SEC 03 TWP 100S RNG 220E MER S

**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 7/16/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated?  Yes  No
  
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?  Yes  No
  
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?  Yes  No
  
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?  Yes  No
  
- Has the approved source of water for drilling changed?  Yes  No
  
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?  Yes  No
  
- Is bonding still in place, which covers this proposed well?  Yes  No

**Signature:** Andy Lytle

**Date:** 6/13/2011

**Title:** Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Green River District-Vernal Field Office

170 South 500 East

Vernal, UT 84078

(435) 781-4400 Fax: (435) 781-4410

<http://www.blm.gov/ut/st/en/fo/vernal.html>



**OCT 31 2011**

IN REPLY REFER TO:  
3160 (UTG011)

Julie Jacobson  
Kerr McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779

43 047 50492

Re: Request to Return APD  
Well No. NBU 1022-3L4BS  
NWSW, Sec. 3, T10S, R22E  
Uintah County, Utah  
Lease No. UTU-01191  
Natural Buttes Unit

Dear Ms. Jacobson:

The Application for Permit to Drill (APD) for the above referenced well received in this office on June 26, 2009, is being returned unapproved per a request to this office in an email message from Andy Lytle received on February 14, 2011. If you intend to drill at this location at a future date, a new Application for Permit to Drill must be submitted.

If you have any questions regarding APD processing, please contact Cindy Severson at (435) 781-4455.

Sincerely,

Jerry Kenczka  
Assistant Field Manager  
Lands & Mineral Resources

Enclosures

cc: UDOGM

**RECEIVED**

**NOV 07 2011**

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

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9  5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 01191
<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.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 1022-3L4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047504920000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6514  9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2085 FSL 0617 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 03 Township: 10.0S Range: 22.0E Meridian: S	COUNTY: UINTAH  STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 6/1/2012  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE  <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION  OTHER: <input style="width: 100px;" type="text"/>

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

The operator is requesting the approval of the following changes to the originally approved APD: 1. Surface & Bottom Hole Location Change (New Plat is Attached) / a. From = 1571 FSL/ 432 FWL To = 2085 FSL/ 617 FWL / 2. Proposed Total Depth (New Drilling Program Attached) / 3. Surface Hole Size and Casing Grade (New Wellbore Diagram Attached) / 4. Updated Directional Drilling Survey Attached / 5. Surface Use Plan of Operation (Updated Plan Attached)

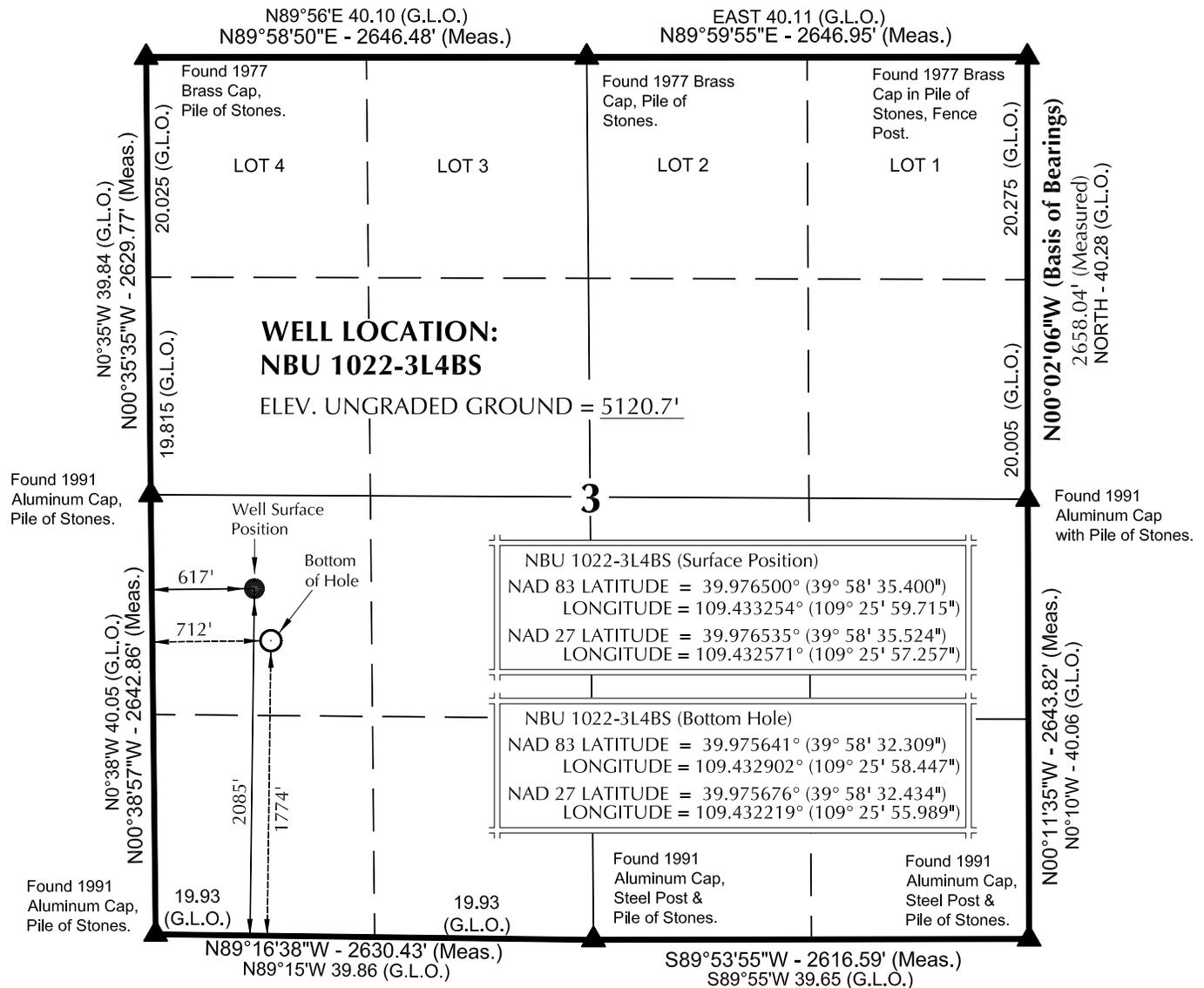
**Approved by the  
 Utah Division of  
 Oil, Gas and Mining**

**Date:** June 04, 2012

**By:**

NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 5/21/2012	

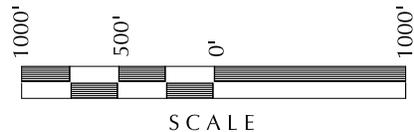
# T10S, R22E, S.L.B.&M.



**NOTES:**

▲ = 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 S17°32'38"E 328.04' 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.

No. 6028691 11-17-11  
 JOHN R SAUGH  
 PROFESSIONAL LAND SURVEYOR  
 REGISTRATION No. 6028691  
 STATE OF UTAH

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

**WELL PAD: NBU 1022-3L**

**NBU 1022-3L4BS**  
**WELL PLAT**  
 1774' FSL, 712' FWL (Bottom Hole)  
 NW ¼ SW ¼ OF SECTION 3, T10S, R22E,  
 S.L.B.&M., UTAH COUNTY, UTAH.

**609**

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

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

DATE SURVEYED: 11-9-11	SURVEYED BY: J.W.	SHEET NO: <b>2</b>
DATE DRAWN: 11-14-11	DRAWN BY: C.T.C.	
SCALE: 1" = 1000'		2 OF 16

**Kerr-McGee Oil & Gas Onshore, LP  
WELL PAD – NBU 1022-3L  
WELLS - NBU 1022-3L1CS, NBU 1022-3L4BS,  
NBU 1022-3L1AS & NBU 1022-3L1BS  
Section 3, T10S, 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 23.8 miles to the intersection of the Bitter Creek Road (County B Road 4120). Exit left and proceed in a southeasterly direction along the Bitter Creek Road approximately 4.0 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 4.8 miles to a service road to the southeast. Exit right and proceed in a southeasterly direction along the service road approximately 0.2 miles to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 56.3 miles in a southerly direction.

**Kerr-McGee Oil & Gas Onshore. L.P.****NBU 1022-3L4BS**

Surface:	2085 FSL / 617 FWL	NWSW
BHL:	1774 FSL / 712 FWL	NWSW

Section 3 T10S R22E

Uintah County, Utah  
Mineral Lease: UTU-01191

**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	1,216'	
Birds Nest	1,456'	Water
Mahogany	1,930'	Water
Wasatch	4,298'	Gas
Mesaverde	6,673'	Gas
Sego	8,829'	Gas
TVD	8,829'	
TD	8,852'	

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

2/15/2012

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**7. Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 8829' TVD, approximately equals  
 5,651 psi 0.64 psi/ft = actual bottomhole gradient

---

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

Maximum anticipated surface pressure equals approximately 3,696 psi (bottom hole pressure  
 minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

---

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-  
 (0.22 psi/ft-partial evac gradient x TVD of next csg point))

**8. Anticipated Starting Dates:**

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

**9. Variances:**

Please refer to the attached Drilling Program.  
 Onshore Order #2 – Air Drilling Variance

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

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

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

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

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

**Background**

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

2/15/2012

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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 for the first 200 feet, then will drill a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

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

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

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

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

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

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

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

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

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

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on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

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

**Variance for FIT Requirements**

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

**Conclusion**

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

10. **Other Information:**

Please refer to the attached Drilling Program.

2/15/2012

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

**CASING PROGRAM**

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	LTC		DQX TENSION
							COLLAPSE		
CONDUCTOR	14"	0-40'				3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,380	28.00	IJ-55	LTC	2.27	1.69	5.96	N/A
						7,780	6,350	223,000	267,035
PRODUCTION	4-1/2"	0 to 5,000	11.60	I-80	DQX	1.11	1.11		3.21
	4-1/2"	5,000 to 8,852'	11.60	I-80	LTC	1.11	1.11	6.17	

**Surface Casing:**

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe  
Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**Production casing:**

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>							
SURFACE	LEAD	1,880'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps flocele + 3% salt BWOW	170	35%	11.00	3.82
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	3,792'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	300	35%	12.00	3.38
	TAIL	5,060'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,200	35%	14.30	1.31

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

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

**FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter.

**ADDITIONAL INFORMATION**

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

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

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

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

**DRILLING ENGINEER:**

Nick Spence / Danny Showers / Chad Loesel

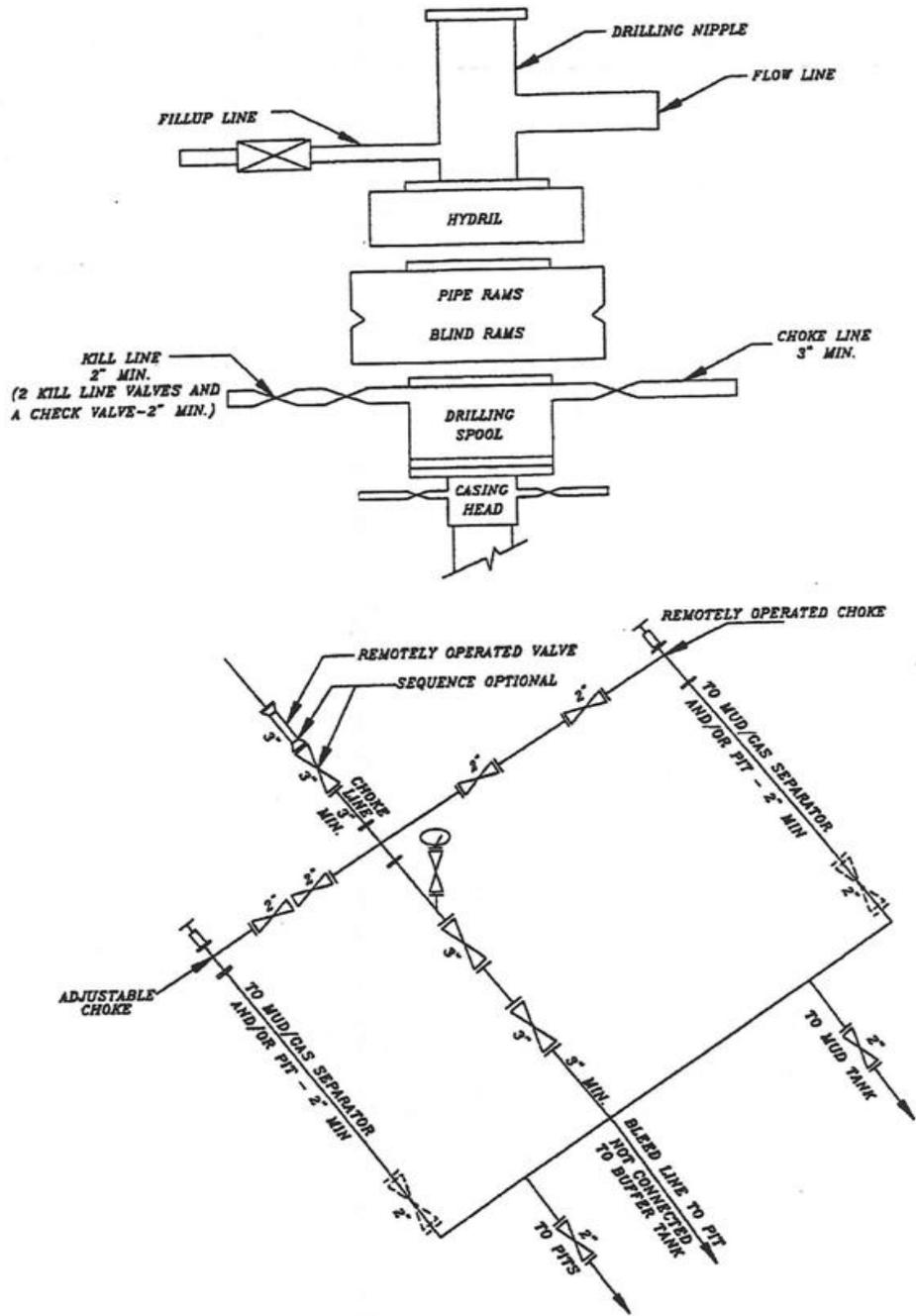
**DATE:**

**DRILLING SUPERINTENDENT:**

Kenny Gathings / Lovel Young

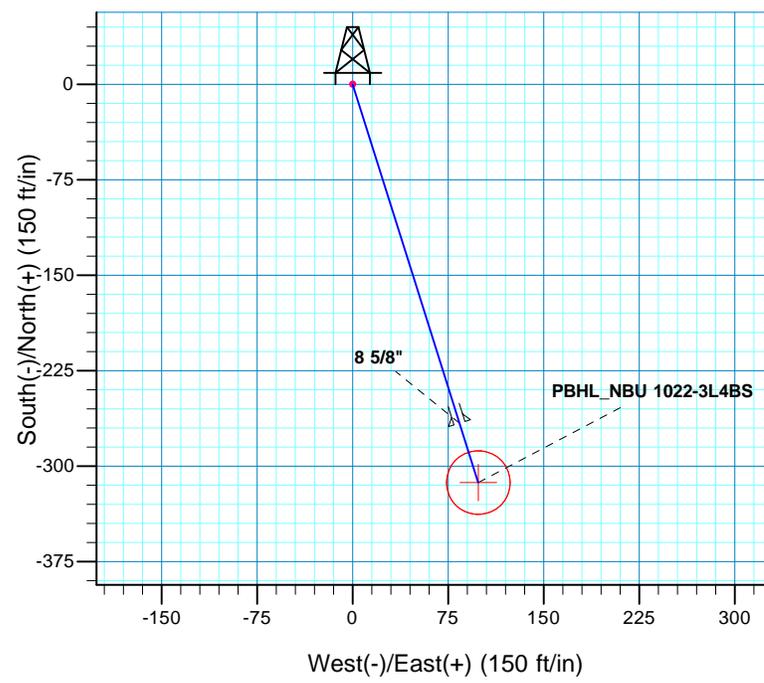
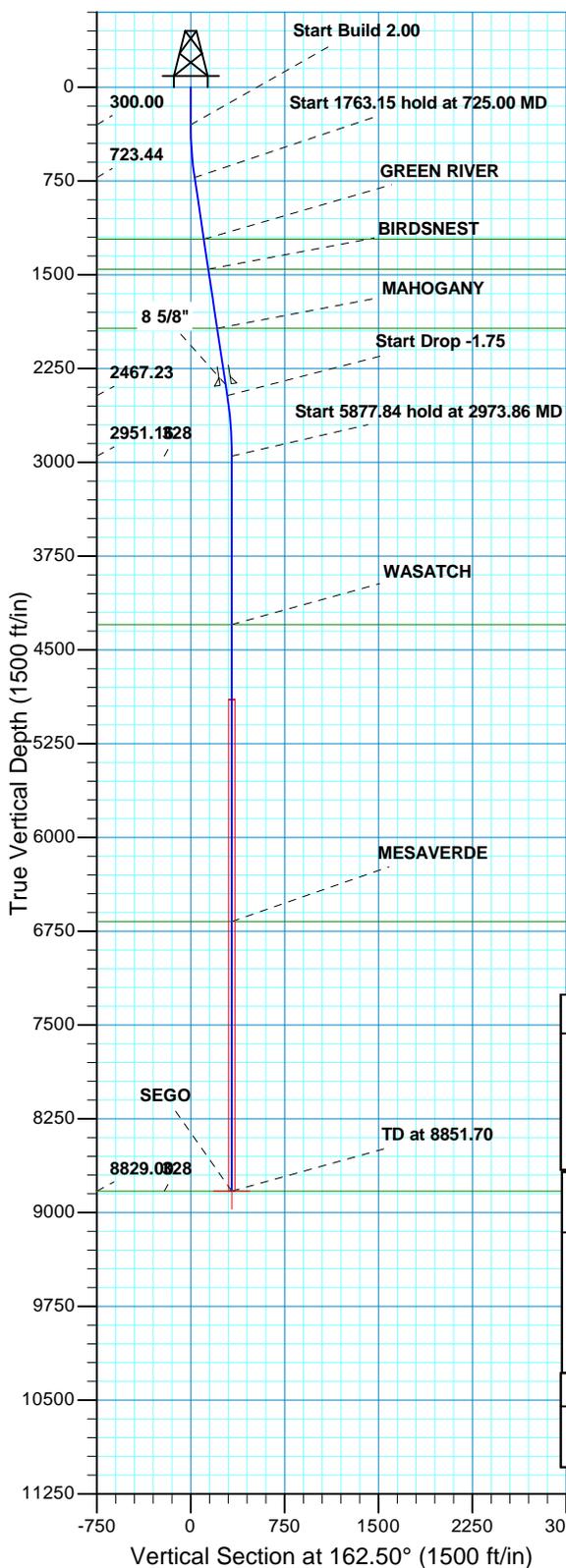
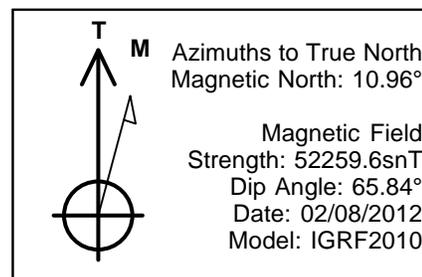
**DATE:**

### EXHIBIT A NBU 1022-3L4BS



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

WELL DETAILS: NBU 1022-3L4BS						
GL 5118 & KB 4 @ 5122.00ft (ASSUMED)						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	14521359.61	2079548.07	39.976535	-109.432571	
DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude Longitude Shape
PBHL	8829.00	-312.86	98.64	14521048.53	2079652.19	39.975676 -109.432219 Circle (Radius: 25.00)
- plan hits target center						



SECTION DETAILS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	
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		
725.00	8.50	162.50	723.44	-30.01	9.46	2.00	162.50	31.47		
2488.15	8.50	162.50	2467.23	-278.56	87.82	0.00	0.00	292.08		
2973.86	0.00	0.00	2951.16	-312.86	98.64	1.75	180.00	328.04		
8851.70	0.00	0.00	8829.00	-312.86	98.64	0.00	0.00	328.04	PBHL_NBU 1022-3L4BS	

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N			FORMATION TOP DETAILS		
Geodetic System:	Universal Transverse Mercator (US Survey Feet)		TVDPath	MDPath	Formation
Datum:	NAD 1927 (NADCON CONUS)		1216.00	1223.03	GREEN RIVER
Ellipsoid:	Clarke 1866		1456.00	1465.69	BIRDSNEST
Zone:	Zone 12N (114 W to 108 W)		1930.00	1944.96	MAHOGANY
Location:	SECTION 3 T10S R22E		4298.00	4320.70	WASATCH
System Datum:	Mean Sea Level		6673.00	6695.70	MESAVERDE
			8829.00	8851.70	SEGO

CASING DETAILS			
TVD	MD	Name	Size
2380.00	2399.96	8 5/8"	8.625



# **US ROCKIES REGION PLANNING**

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

**NBU 1022-3L PAD**

**NBU 1022-3L4BS**

**OH**

**Plan: PLAN #1**

## **Standard Planning Report**

**08 February, 2012**





**SDI**  
Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3L4BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5118 & KB 4 @ 5122.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5118 & KB 4 @ 5122.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-3L PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-3L4BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

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

<b>Site</b>	NBU 1022-3L PAD, SECTION 3 T10S R22E				
<b>Site Position:</b>	<b>Northing:</b>	14,521,359.42 usft	<b>Latitude:</b>	39.976534	
<b>From:</b> Lat/Long	<b>Easting:</b>	2,079,557.87 usft	<b>Longitude:</b>	-109.432536	
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	1.01 °

<b>Well</b>	NBU 1022-3L4BS, 2085 FSL 617 FWL					
<b>Well Position</b>	<b>+N/-S</b>	0.36 ft	<b>Northing:</b>	14,521,359.61 usft	<b>Latitude:</b>	39.976535
	<b>+E/-W</b>	-9.81 ft	<b>Easting:</b>	2,079,548.06 usft	<b>Longitude:</b>	-109.432571
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	5,118.00 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	02/08/12	10.96	65.84	52,260

<b>Design</b>	PLAN #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	162.50

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
725.00	8.50	162.50	723.44	-30.01	9.46	2.00	2.00	0.00	162.50	
2,488.15	8.50	162.50	2,467.23	-278.56	87.82	0.00	0.00	0.00	0.00	
2,973.86	0.00	0.00	2,951.16	-312.86	98.64	1.75	-1.75	0.00	180.00	
8,851.70	0.00	0.00	8,829.00	-312.86	98.64	0.00	0.00	0.00	0.00	PBHL_NBU 1022-3L4



**SDI**  
Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3L4BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5118 & KB 4 @ 5122.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5118 & KB 4 @ 5122.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-3L PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-3L4BS	<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	162.50	399.98	-1.66	0.52	1.75	2.00	2.00	0.00	
500.00	4.00	162.50	499.84	-6.66	2.10	6.98	2.00	2.00	0.00	
600.00	6.00	162.50	599.45	-14.97	4.72	15.69	2.00	2.00	0.00	
700.00	8.00	162.50	698.70	-26.59	8.38	27.88	2.00	2.00	0.00	
725.00	8.50	162.50	723.44	-30.01	9.46	31.47	2.00	2.00	0.00	
<b>Start 1763.15 hold at 725.00 MD</b>										
800.00	8.50	162.50	797.62	-40.58	12.80	42.55	0.00	0.00	0.00	
900.00	8.50	162.50	896.52	-54.68	17.24	57.33	0.00	0.00	0.00	
1,000.00	8.50	162.50	995.42	-68.78	21.68	72.11	0.00	0.00	0.00	
1,100.00	8.50	162.50	1,094.32	-82.87	26.13	86.90	0.00	0.00	0.00	
1,200.00	8.50	162.50	1,193.23	-96.97	30.57	101.68	0.00	0.00	0.00	
1,223.03	8.50	162.50	1,216.00	-100.22	31.60	105.08	0.00	0.00	0.00	
<b>GREEN RIVER</b>										
1,300.00	8.50	162.50	1,292.13	-111.07	35.02	116.46	0.00	0.00	0.00	
1,400.00	8.50	162.50	1,391.03	-125.17	39.46	131.24	0.00	0.00	0.00	
1,465.69	8.50	162.50	1,456.00	-134.43	42.38	140.95	0.00	0.00	0.00	
<b>BIRDSNEST</b>										
1,500.00	8.50	162.50	1,489.93	-139.26	43.91	146.02	0.00	0.00	0.00	
1,600.00	8.50	162.50	1,588.83	-153.36	48.35	160.80	0.00	0.00	0.00	
1,700.00	8.50	162.50	1,687.73	-167.46	52.79	175.58	0.00	0.00	0.00	
1,800.00	8.50	162.50	1,786.63	-181.55	57.24	190.36	0.00	0.00	0.00	
1,900.00	8.50	162.50	1,885.54	-195.65	61.68	205.14	0.00	0.00	0.00	
1,944.96	8.50	162.50	1,930.00	-201.99	63.68	211.79	0.00	0.00	0.00	
<b>MAHOGANY</b>										
2,000.00	8.50	162.50	1,984.44	-209.75	66.13	219.92	0.00	0.00	0.00	
2,100.00	8.50	162.50	2,083.34	-223.84	70.57	234.71	0.00	0.00	0.00	
2,200.00	8.50	162.50	2,182.24	-237.94	75.02	249.49	0.00	0.00	0.00	
2,300.00	8.50	162.50	2,281.14	-252.04	79.46	264.27	0.00	0.00	0.00	
2,399.96	8.50	162.50	2,380.00	-266.13	83.90	279.04	0.00	0.00	0.00	
<b>8 5/8"</b>										
2,400.00	8.50	162.50	2,380.04	-266.13	83.91	279.05	0.00	0.00	0.00	
2,488.15	8.50	162.50	2,467.23	-278.56	87.82	292.08	0.00	0.00	0.00	
<b>Start Drop -1.75</b>										
2,500.00	8.29	162.50	2,478.95	-280.21	88.34	293.81	1.75	-1.75	0.00	
2,600.00	6.54	162.50	2,578.11	-292.52	92.23	306.72	1.75	-1.75	0.00	
2,700.00	4.79	162.50	2,677.62	-301.94	95.20	316.59	1.75	-1.75	0.00	
2,800.00	3.04	162.50	2,777.38	-308.46	97.25	323.42	1.75	-1.75	0.00	
2,900.00	1.29	162.50	2,877.30	-312.06	98.39	327.21	1.75	-1.75	0.00	
2,973.86	0.00	0.00	2,951.16	-312.86	98.64	328.04	1.75	-1.75	0.00	
<b>Start 5877.84 hold at 2973.86 MD</b>										
3,000.00	0.00	0.00	2,977.30	-312.86	98.64	328.04	0.00	0.00	0.00	
3,100.00	0.00	0.00	3,077.30	-312.86	98.64	328.04	0.00	0.00	0.00	
3,200.00	0.00	0.00	3,177.30	-312.86	98.64	328.04	0.00	0.00	0.00	
3,300.00	0.00	0.00	3,277.30	-312.86	98.64	328.04	0.00	0.00	0.00	
3,400.00	0.00	0.00	3,377.30	-312.86	98.64	328.04	0.00	0.00	0.00	
3,500.00	0.00	0.00	3,477.30	-312.86	98.64	328.04	0.00	0.00	0.00	
3,600.00	0.00	0.00	3,577.30	-312.86	98.64	328.04	0.00	0.00	0.00	
3,700.00	0.00	0.00	3,677.30	-312.86	98.64	328.04	0.00	0.00	0.00	



**SDI**  
Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3L4BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5118 & KB 4 @ 5122.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5118 & KB 4 @ 5122.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-3L PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-3L4BS	<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)
3,800.00	0.00	0.00	3,777.30	-312.86	98.64	328.04	0.00	0.00	0.00
3,900.00	0.00	0.00	3,877.30	-312.86	98.64	328.04	0.00	0.00	0.00
4,000.00	0.00	0.00	3,977.30	-312.86	98.64	328.04	0.00	0.00	0.00
4,100.00	0.00	0.00	4,077.30	-312.86	98.64	328.04	0.00	0.00	0.00
4,200.00	0.00	0.00	4,177.30	-312.86	98.64	328.04	0.00	0.00	0.00
4,300.00	0.00	0.00	4,277.30	-312.86	98.64	328.04	0.00	0.00	0.00
4,320.70	0.00	0.00	4,298.00	-312.86	98.64	328.04	0.00	0.00	0.00
<b>WASATCH</b>									
4,400.00	0.00	0.00	4,377.30	-312.86	98.64	328.04	0.00	0.00	0.00
4,500.00	0.00	0.00	4,477.30	-312.86	98.64	328.04	0.00	0.00	0.00
4,600.00	0.00	0.00	4,577.30	-312.86	98.64	328.04	0.00	0.00	0.00
4,700.00	0.00	0.00	4,677.30	-312.86	98.64	328.04	0.00	0.00	0.00
4,800.00	0.00	0.00	4,777.30	-312.86	98.64	328.04	0.00	0.00	0.00
4,900.00	0.00	0.00	4,877.30	-312.86	98.64	328.04	0.00	0.00	0.00
5,000.00	0.00	0.00	4,977.30	-312.86	98.64	328.04	0.00	0.00	0.00
5,100.00	0.00	0.00	5,077.30	-312.86	98.64	328.04	0.00	0.00	0.00
5,200.00	0.00	0.00	5,177.30	-312.86	98.64	328.04	0.00	0.00	0.00
5,300.00	0.00	0.00	5,277.30	-312.86	98.64	328.04	0.00	0.00	0.00
5,400.00	0.00	0.00	5,377.30	-312.86	98.64	328.04	0.00	0.00	0.00
5,500.00	0.00	0.00	5,477.30	-312.86	98.64	328.04	0.00	0.00	0.00
5,600.00	0.00	0.00	5,577.30	-312.86	98.64	328.04	0.00	0.00	0.00
5,700.00	0.00	0.00	5,677.30	-312.86	98.64	328.04	0.00	0.00	0.00
5,800.00	0.00	0.00	5,777.30	-312.86	98.64	328.04	0.00	0.00	0.00
5,900.00	0.00	0.00	5,877.30	-312.86	98.64	328.04	0.00	0.00	0.00
6,000.00	0.00	0.00	5,977.30	-312.86	98.64	328.04	0.00	0.00	0.00
6,100.00	0.00	0.00	6,077.30	-312.86	98.64	328.04	0.00	0.00	0.00
6,200.00	0.00	0.00	6,177.30	-312.86	98.64	328.04	0.00	0.00	0.00
6,300.00	0.00	0.00	6,277.30	-312.86	98.64	328.04	0.00	0.00	0.00
6,400.00	0.00	0.00	6,377.30	-312.86	98.64	328.04	0.00	0.00	0.00
6,500.00	0.00	0.00	6,477.30	-312.86	98.64	328.04	0.00	0.00	0.00
6,600.00	0.00	0.00	6,577.30	-312.86	98.64	328.04	0.00	0.00	0.00
6,695.70	0.00	0.00	6,673.00	-312.86	98.64	328.04	0.00	0.00	0.00
<b>MESAVERDE</b>									
6,700.00	0.00	0.00	6,677.30	-312.86	98.64	328.04	0.00	0.00	0.00
6,800.00	0.00	0.00	6,777.30	-312.86	98.64	328.04	0.00	0.00	0.00
6,900.00	0.00	0.00	6,877.30	-312.86	98.64	328.04	0.00	0.00	0.00
7,000.00	0.00	0.00	6,977.30	-312.86	98.64	328.04	0.00	0.00	0.00
7,100.00	0.00	0.00	7,077.30	-312.86	98.64	328.04	0.00	0.00	0.00
7,200.00	0.00	0.00	7,177.30	-312.86	98.64	328.04	0.00	0.00	0.00
7,300.00	0.00	0.00	7,277.30	-312.86	98.64	328.04	0.00	0.00	0.00
7,400.00	0.00	0.00	7,377.30	-312.86	98.64	328.04	0.00	0.00	0.00
7,500.00	0.00	0.00	7,477.30	-312.86	98.64	328.04	0.00	0.00	0.00
7,600.00	0.00	0.00	7,577.30	-312.86	98.64	328.04	0.00	0.00	0.00
7,700.00	0.00	0.00	7,677.30	-312.86	98.64	328.04	0.00	0.00	0.00
7,800.00	0.00	0.00	7,777.30	-312.86	98.64	328.04	0.00	0.00	0.00
7,900.00	0.00	0.00	7,877.30	-312.86	98.64	328.04	0.00	0.00	0.00
8,000.00	0.00	0.00	7,977.30	-312.86	98.64	328.04	0.00	0.00	0.00
8,100.00	0.00	0.00	8,077.30	-312.86	98.64	328.04	0.00	0.00	0.00
8,200.00	0.00	0.00	8,177.30	-312.86	98.64	328.04	0.00	0.00	0.00
8,300.00	0.00	0.00	8,277.30	-312.86	98.64	328.04	0.00	0.00	0.00
8,400.00	0.00	0.00	8,377.30	-312.86	98.64	328.04	0.00	0.00	0.00
8,500.00	0.00	0.00	8,477.30	-312.86	98.64	328.04	0.00	0.00	0.00
8,600.00	0.00	0.00	8,577.30	-312.86	98.64	328.04	0.00	0.00	0.00
8,700.00	0.00	0.00	8,677.30	-312.86	98.64	328.04	0.00	0.00	0.00



**SDI**  
Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3L4BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5118 & KB 4 @ 5122.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5118 & KB 4 @ 5122.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-3L PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-3L4BS	<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)
8,800.00	0.00	0.00	8,777.30	-312.86	98.64	328.04	0.00	0.00	0.00
8,851.70	0.00	0.00	8,829.00	-312.86	98.64	328.04	0.00	0.00	0.00
TD at 8851.70 - SEGO - PBHL_NBU 1022-3L4BS									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 1022-3L4BS - hit/miss target - Shape - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,829.00	-312.86	98.64	14,521,048.54	2,079,652.18	39.975676	-109.432219

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)		
2,399.96	2,380.00	8 5/8"	8.625	11.000		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,223.03	1,216.00	GREEN RIVER				
1,465.69	1,456.00	BIRDSNEST				
1,944.96	1,930.00	MAHOGANY				
4,320.70	4,298.00	WASATCH				
6,695.70	6,673.00	MESAVERDE				
8,851.70	8,829.00	SEGO				

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	
725.00	723.44	-30.01	9.46	Start 1763.15 hold at 725.00 MD	
2,488.15	2,467.23	-278.56	87.82	Start Drop -1.75	
2,973.86	2,951.16	-312.86	98.64	Start 5877.84 hold at 2973.86 MD	
8,851.70	8,829.00	-312.86	98.64	TD at 8851.70	

**Kerr-McGee Oil & Gas Onshore. L.P.****NBU 1022-3L PAD**

<b><u>API #</u></b>	<b><u>NBU 1022-3L1AS</u></b>		
	Surface: 2086 FSL / 607 FWL	NWSW	Lot
	BHL: 2411 FSL / 825 FWL	NWSW	Lot
<b><u>API #</u></b>	<b><u>NBU 1022-3L1BS</u></b>		
	Surface: 2086 FSL / 597 FWL	NWSW	Lot
	BHL: 2644 FSL / 665 FWL	NWSW	Lot
<b><u>API #4304750170</u></b>	<b><u>NBU 1022-3L1CS</u></b>		
	Surface: 2085 FSL / 627 FWL	NWSW	Lot
	BHL: 2065 FSL / 818 FWL	NWSW	Lot
<b><u>API #4304750492</u></b>	<b><u>NBU 1022-3L4BS</u></b>		
	Surface: 2085 FSL / 617 FWL	NWSW	Lot
	BHL: 1774 FSL / 712 FWL	NWSW	Lot

This Surface Use Plan of Operations (SUPO) or 13-point plan provides site-specific information for the above-referenced wells.

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.

An on-site meeting was held on December 6, 2011. Present were:

- David Gordon, Tyler Cox - BLM;
- Jacob Dunham - 609 Consulting;
- John Slaugh, Mitch Batty - Timberline Engineering & Land Surveying, Inc.; and
- Gina Becker, Charles Chase, Doyle Holmes, Casey McGee, Grizz Oleen, Sheila Wopsock - Kerr-McGee

**A. Existing Roads:**

Existing roads consist of county and improved/unimproved access roads (two-tracks). In accordance with Onshore Order #1, Kerr-McGee will, in accordance with BMPs, improve or maintain existing roads in a condition that is the same as or better than before operations began. New or reconstructed proposed access roads are discussed in Section B.

The existing roads will be maintained in a safe and usable condition. Maintenance for existing roads will continue until final abandonment and reclamation of well pads and/or other facilities, as applicable. Road maintenance will include, but is not limited to, blading, ditching, and/or culvert installation and cleanout. To ensure safe operating conditions, gravel surfacing will be performed where excessive rutting or erosion may occur. Dust control will be performed as necessary to ensure safe operating conditions.

Roads, gathering lines and electrical distribution lines will occupy common disturbance corridors where possible. Where available, roadways will be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor will overlap each other to the maximum extent possible, while maintaining safe and sound construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

Please refer to Topo B, for existing roads.

**B. New or Reconstructed Access Roads:**

All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BLM. BMPs. Described in the BLM's Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition (Gold Book) (USDI and USDA, 2007) and/or BLM Manual Section 9113 (1985) will be considered in consultation with the BLM in the design, construction, improvement and maintenance of all new or reconstructed roads. If a new road would cross a water of the United States, Kerr-McGee will adhere to the requirements of applicable Nationwide Permits of the Department of Army Corps of Engineers.

Each new well pad or pad expansion may require construction of a new access road and/or de-commissioning of an older road. Plans, routes, and distances for new roads and road improvements are provided in design packages, exhibits and maps for a project. Project-specific maps are submitted to depict the locations of existing, proposed, and/or decommissioned and include the locations for supporting structures, including, but not limited to, culverts, bridges, low water crossings, range infrastructure, and haul routes, as per OSO 1. Designs for cuts and fills, including spoils source and storage areas, are provided with the road designs, as necessary.

Where safety objectives can be met. As applicable, Kerr-McGee may use unimproved and/or two-track roads for lease operations, to lessen total disturbance.

Road designs will be based on the road safety requirements, traffic characteristics, environmental conditions, and the vehicles the road is intended to carry. Generally, newly constructed unpaved lease roads will be crowned and ditched with the running surfaces of the roads approximately 12-18 feet wide and a total road corridor width not to exceed 45 feet, except where noted in the road design for a specific project. Maximum grade will generally not exceed 8%. Borrow ditches will be back sloped 3:1 or less. Construction BMPs will be employed to control onsite and offsite erosion.

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities, such as V- or wing-ditches, will be constructed to divert surface water runoff. Drainage features, including culverts, will be constructed or installed prior to commencing other operations, including drilling or facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s), as necessary.

Prior to construction, new access road(s) will be staked according to the requirements of OSO 1. Construction activity will not be conducted using frozen or saturated materials or during periods when significant watershed damage (e.g. rutting, extensive sheet soil erosion, formation of rills/gullies, etc.) is likely to occur. Vegetative debris will not be placed in or under fill embankments.

New road maintenance will include, but is not limited to, blading, ditching, culvert installation and cleanout, gravel surfacing where excessive rutting or erosion may occur and dust control, as necessary to ensure safe operating conditions. All vehicular traffic, personnel movement, construction/restoration operations will be confined to the approved area and to existing roadways and/or access routes.

Snow removal will be conducted on an as-needed basis to accommodate safe travel. Snow removal will occur as necessary throughout the year, as will necessary drainage ditch construction. Removed snow may be stored on permitted well pads to reduce hauling distances and/or at the aerial extent of approved disturbance boundaries to facilitate snow removal for the remainder of the season.

If a county road crossing or encroachment permit is needed, it will be obtained prior to construction.

**C. Location of Existing Wells:**

A) Refer to Topo Map C.

**D. Location of Existing and/or Proposed Facilities:**

This pad will expand the existing pad for the NBU 288, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on February 10, 2012. Gathering (pipeline) infrastructure will be

utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad. A berm will be constructed completely around production components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will generally be constructed of compacted subsoil or corrugated metal, and will hold the capacity of the largest tank and have sufficient freeboard to accommodate a 25 year rainfall event. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with the BLM (typically Shadow Gray). A production facility layout is provided as part of a project-specific APD, ROW or NOS submission.

### **GAS GATHERING**

*Please refer to Exhibit A and Topo D2- Pad and Pipeline Detail.*

The gas gathering pipeline material: Steel line pipe. Surface = Bare pipe. Buried = Coated with fusion bonded epoxy coating (or equivalent). The total gas gathering pipeline distance from the meter to the tie in point is  $\pm 1,935'$  and the individual segments are broken up as follows:

**The following segments are "onlease", no ROW needed.**

- $\pm 425'$  (0.08 miles) – Section 3 T10S R22E (NW/4 SW/4) – On-lease UTU-01191, BLM surface, New 8" buried gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 975'$  (0.18 miles) – Section 3 T10S R22E (NW/4 SW/4) – On-lease UTU-01191, BLM surface, New 8" buried gas gathering pipeline from the edge of the pad to tie-in to the proposed 16" gas gathering pipeline at the NBU 1022-3M intersection. Please refer to Exhibit A, Line 8.
- $\pm 535'$  (0.10 miles) – Section 3 T10S R22E (NW/4 SW/4) – On-lease UTU-01191, BLM surface, New 16" buried gas gathering pipeline from the NBU 1022-3M intersection to the approved 16" gas pipeline in 10S, 22E, Section 4. This pipeline will be used concurrently with the NBU 1022-3O, NBU 1022-3J, NBU 1022-3K and the NBU 1022-3M pads. Please refer to Exhibit A, Line 1.

### **LIQUID GATHERING**

*Please refer to Exhibit B and Topo D2- Pad and Pipeline Detail.*

The total liquid gathering pipeline distance from the separator to the tie in point is  $\pm 1,935'$  and the individual segments are broken up as follows:

**The following segments are "onlease", no ROW needed.**

- $\pm 425'$  (0.08 miles) – Section 3 T10S R22E (NW/4 SW/4) – On-lease UTU-01191, BLM surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 975'$  (0.18 miles) – Section 3 T10S R22E (NW/4 SW/4) – On-lease UTU-01191, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad to tie-in to the NBU 1022-3M intersection. Please refer to Exhibit B, Line 8.
- $\pm 535'$  (0.10 miles) – Section 3 T10S R22E (NW/4 SW/4) – On-lease UTU-01191, BLM surface, New 6" buried liquid gathering pipeline from the NBU 1022-3M intersection to the approved liquid gathering line in 10S, 22E, Section 4. This pipeline will be used concurrently with the NBU 1022-3O, NBU 1022-3J, NBU 1022-3K and the NBU 1022-3M pads. Please refer Exhibit B, Line 1.

### **Pipeline Gathering Construction**

Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee. Gas gathering pipeline(s), gas lift, or liquids pipelines may be constructed to lie on the surface or be buried. 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. The area of disturbance during construction from the edge of road or well pad will typically be 30' in width. Where pipelines run cross country, the width of disturbance will typically be 45 ft for buried lines and 30 ft for surface lines. In addition, Kerr-McGee requests for a permanent 30' disturbance width that will be maintained for the portion adjacent to the road. The need for the 30' permanent disturbance width is for maintenance and repairs. Cross country permanent disturbance width also are required to be 30ft.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. In some surface pipeline installation instances pipe cannot be constructed where it will lay. In these cases where an above-ground pipeline is constructed parallel and adjacent to a road, it will be welded/fused on the road and then lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment.

Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2 inches (typically fuel gas lines) to 24 inches (typically transportation lines) in diameter, but 6 to 16 inches is typical for a buried gas line. The diameter of liquids pipelines may vary from 2 inches to 12 inches, but 6 inches is the typical diameter. Gas lift lines may vary from 2 to 12 inches in diameter, but 6-inch diameter pipes are generally used for gas lift. If two or more pipelines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

Typically, to install a buried pipeline, topsoil will be removed, windrowed and placed on the non-working side of the route for later reclamation. Because working room is limited, the spoil may be spread out across the working side and construction will take place on the spoil. The working side of the corridor will be used for pipe stringing, bending, welding and equipment travel. Small areas on the working side displaying ruts or uneven ground will be groomed to facilitate the safe passage of equipment. After the pipelines are installed, spoil will be placed back into the trench, and the topsoil will be redistributed over the disturbed corridor prior to final reclamation. Typical depth of the trench will be 6 feet, but depths may vary according to site-specific conditions (presence of bedrock, etc.). The proposed trench width for the pipeline would range from 18-48 inches.

The pipeline will be welded along the proposed route and lowered into place. Trenching equipment will cut through the soil or into the bedrock and create good backfill, eliminating the need to remove large rocks. The proposed buried pipeline will be visually and radiographically inspected and the entire pipeline will be pneumatically or hydrostatically tested before being placed into service. Routine vehicle traffic will be prevented from using pipeline routes as travel ways by posting signs at the route's intersection with an access road.

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

If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, Kerr-McGee will apply all applicable Army Corps mandates as well as the BLM's Hydraulic Considerations for Pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface.

Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations for production integrity and safety purposes.

Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation.

When no longer deemed necessary by the operator, Kerr-McGee or it's successor will consult with the BLM, Vernal Field Office before terminating of the use of the pipeline(s).

**The Anadarko Completions Transportation System (ACTS) information:**

Please refer to Exhibit C for ACTs Lines

Kerr-McGee will use either a closed loop drilling system that will require one pit and one storage area to be constructed on the drilling pad or a traditional drilling operation with one pit. The storage area will be used to contain only the de-watered drill cuttings and will be lined and reclaimed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit is lined and will be used for the wells drilled on the pad or used as part of our Anadarko Completions Transportation (ACTS) system which is discussed in more detail below. Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completion pit.

If Kerr-McGee does not use a closed loop system, it will construct a drilling reserve pit to contain drill cuttings and for use in completion operations. Depending on the location of the pit, its relation to future drilling locations, the reserve/completion pit will be utilized for the completion of the wells on that pad and/or be used as part of our ACTS system.

Kerr-McGee will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of frac fluids by utilizing existing reserve pits and temporary, surface-laid aluminum liquids transfer lines between frac locations. The pit will be refurbished as follows when a traditional drill pit is used: mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom of pit with cat. Kerr-McGee will reline the pit with a 30 mil liner and double felt padding. The refurbished pit will be the same size or smaller as specified in the originally approved ROW/APD. The pit refurb will be done in a normal procedure and there will be no modification to the pit.

All four sides of the completions pit will be fenced in according to standard pit fencing procedures. Netting will be installed over all pits.

Any hydrocarbons collected will be treated and sold at approved sales facilities. A loading rack with drip containment will also be installed where water trucks would unload and load to prevent damage caused from pulling hoses in and out of the pit .

ACTS will require temporarily laying multiple 6" aluminum water transfer lines on the surface between either existing or refurbished reserve pits. Please see the attached ACTS exhibit C for placement of the proposed temporary lines. The temporary aluminum transfer lines will be utilized to transport frac fluid being injected and/or recovered during the completion process and will be laid adjacent to existing access roads or pipeline corridors. Upon completion of the frac operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. Kerr-McGee requests to keep the netted pit open for one year from first production of the first produced well on the pad. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other frac jobs in the area. After one year Kerr-McGee will backfill the pit and reclaim. If the pit is not needed for an entire year it will be backfilled and reclaimed earlier. Kerr-McGee understands that due to

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the temporary nature of this system, BLM considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BLM.

**E. Location and Types of Water Supply:**

Water for drilling and completion operations will be obtained from the following sources:

Permit # 49-2307	JD Field Services	Green River- Section 15, T2N, R22E
Permit # 49-2321	R.N. Industries	White River- Section 2, T10S, R24E
Permit # 49-2319	R.N. Industries	White River- Various Sources
Permit # 49-2320	R.N. Industries	Green River- Section 33, T8S, R23E

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.

**F. Construction Materials:**

Construction operations will typically be completed with native materials found on location. 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 (described in site-specific documents). No construction materials will be removed from federal lands without prior approval from the BLM. A source location other than an on-location construction site will be designated either via a map or narrative within the project specific materials provided to the BLM.

**G. Methods for Handling Waste:**

All wastes subject to regulation will be handled in compliance with applicable laws to minimize the potential for leaks or spills to the environment. Kerr-McGee also maintains a Spill Control and Countermeasure Plan, which includes notification requirements, including the BLM, for all reportable spills of oil, produced liquids, and hazardous materials.

Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of CERCLA, Section 102 B. If a release involves petroleum hydrocarbons or produced liquids, Kerr-McGee will comply with the notification requirements of NTL-3A. Drill cuttings and/or drilling fluids will be contained in the reserve/frac pit whether a closed loop system is used or not. Cuttings will be buried in pit(s) upon closure. Unless specifically approved by the BLM, 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 precipitation runoff into the pit (via appropriate placement of subsoil storage areas and/or construction of berms, ditches, etc). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons 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 reserve/completion 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 the BLM. Should timely removal not be feasible, the pit will be netted as soon as practical. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with an impermeable liner. The liner will be a synthetic material 30 mil or thicker. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. 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. After evaporation and when dry, the reserve pit liners will be cut off, ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions (freeboard, etc.) allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per Onshore Order Number 7 (OSO 7). Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Otherwise, fluids disposal locations and associated haul routes, for ROW consideration, are typically depicted on Topo A of individual projects. Revisions to the water source or method of transportation will be subject to written approval from the BLM.

Any additional pits necessary for 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.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after one year 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. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift.

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 (trash and other solid waste including cans, paper, cable, etc.) 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. Immediately after removal of the drilling rig, all debris and other waste materials not contained within trash receptacles will be collected and removed from the well location.

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced 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. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

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.

### **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.

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. Kerr-McGee maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time. Chemicals meeting the criteria for being an acutely hazardous material/substance or meet the quantities criteria per BLM Instruction Memorandum No. 93-344 will not be used.

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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 (crude oil/condensate, produced water). They may also be kept in limited quantities on drilling sites (barite, diesel fuel, cement, cottonseed hulls etc.) for short periods of time during drilling or completion activities.

Fluids disposal and pipeline/haul routes are depicted on Topo Map A.

Any produced water separated from recoverable condensate from the proposed well will be contained in a water tank and will then be transported by pipeline and/or truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E  
NBU #159 in Sec. 35 T9S R21E  
Ace Oilfield in Sec. 2 T6S R20E  
MC&MC in Sec. 12 T6S R19E  
Pipeline Facility in Sec. 36 T9S R20E  
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E  
Bonanza Evaporation Pond in Sec. 2 T10S R23E

Or to one of the following Kerr-McGee active Salt Water Disposal (SWD) wells:

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. 34 T9S R21E

#### **H. Ancillary Facilities:**

No additional ancillary facilities are planned for this location.

#### **I. Well Site Layout:**

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit (for closed loop or non-closed loop operations), 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 depending on whether a closed loop system is used. Surface distance may be less if using closed loop. But in either case, the area of disturbance will not exceed the maximum disturbance outlined in the attached exhibits.

For the protection of livestock and wildlife, all open pits and cellars will be fenced 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.

Each well will utilize either a centralized tank battery, centralized fluids management system, or have tanks installed on its pad. Production/ Produced Liquid 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 will be kept reasonably free from surface accumulations of liquid hydrocarbons. The tanks are not to be used for disposal of liquids from additional sources without prior approval of BLM.

#### **J. Plans for Surface Reclamation:**

The 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. Interim 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 is not limited to the 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 may include pit evaporation, fluid removal, pit solidification, re-contouring, ripping, spreading top soil, seeding, and/or weed control. Interim reclamation will be performed in accordance with OSO 1, or written notification will be provided to the BLM for approval. Where feasible, drilling locations, reserve pits, or access routes not utilized for production operations will be re-contoured to a natural appearance.

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. Disposal of pit fluids and linings is discussed in Section G.

### **Final Reclamation**

Final reclamation will be performed for unproductive wells and after 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 Kerr-McGee. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BLM will be notified prior to commencement of reclamation operations. 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 the site to the approximate contour that existed prior to pad construction, final grading will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers, where practical. The surface soil material will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep, where practical. The entire area will be uniformly covered with the depressions constructed perpendicular to the natural flow of water.

Reclamation of roads will be performed at the discretion of the BLM. 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 in accordance with the seeding specifications of the BLM.

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

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

Soil preparation will be conducted using a disk for areas in need of more soil preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeding, compacted areas will be scarified by ripping or chiseling to loosen compacted soils, promote water infiltration, and improve soil aeration and root penetration.

Seeding will occur year-round as conditions allow and will typically be accomplished through the use of a no-till rangeland style seed drill with a “picker box” in order to seed “fluffy” seed. Where drill seeding is not the preferred method, seed will be broadcast and then raked into the ground at double the rate of drill seeding. 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 seed mixes will be selected from a list provided by or approved by the BLM, or a specific seed mix will be proposed by Kerr-McGee to the BLM and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be maintained by Kerr-McGee. Every effort will be made to obtain “cheat grass free seed”.

Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

<b>Bonanza Area Mix</b>	<b>Pure Live Seed lbs/acre</b>
Crested Wheat (Hycrest)	2
Bottlebrush Squirreltail	1
Western Wheatgrass (Arriba)	1
Indian Ricegrass	1
Fourwing Saltbush	2
Shadscale	2
Forage Kochia	0.25
Rocky Mountain Bee	0.5
<b>Total</b>	<b>9.75</b>

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. Slopes 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, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage. Soil amendments such as “Sustain” (an organic fertilizer that will be applied at the rate 1,800 – 2,100 lbs/acre with seed) may also be dry broadcast or applied with hydro-seeding equipment.

### **Weed Control**

All weed management will be done in accordance with the Vernal BLM Surface Disturbance Weed Policy. Noxious weeds will be controlled, as applicable, on project areas. Monitoring and management of noxious and/or invasive weeds of concern will be completed annually until the project is deemed successfully reclaimed by the surface management agency and/or owner according to the Anadarko Integrated Weed Management Plan. Noxious weed infestations will be mapped using a GPS unit and submitted to the BLM with information required in the Vernal BLM Surface Disturbance Weed Policy. If herbicide is to be applied it will be done according to an approved Pesticide Use Permit (PUP), inclusive of applicable locations. All pesticide applications will be recorded using a Pesticide Application Record (PAR) and will be submitted along with a Pesticide Use Report (PUR) annually prior to Dec. 31.

### **Monitoring**

Monitoring of reclaimed project areas will be completed annually during the growing season and actions to ensure reclamation success will be taken as needed. During the first two growing seasons an ocular methodology will be used to determine the success of the reclamation activities. During the 3rd growing season a 200 point line intercept (quantitative) methodology will be used to obtain basal cover. The goal is to have the reclaimed area reach 30% basal cover when compared to the reference site. If after three growing seasons the area has not reached 30% basal cover, additional reclamation activities may be necessary. Monitoring will continue until the reclaimed area reaches 75% basal cover of desirable vegetation when compared to the reference site. (Green River District Reclamation Guidelines)

All monitoring reports will be submitted electronically to the Vernal BLM in the form of a geo-database no later than March 1st of the calendar year following the data collection.

**K. Surface/Mineral Ownership:**

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

**L. Other Information:****Onsite Specifics:**

- Keep topsoil on shelf at corners 6 and 8.
- Trim spoils pile near corner 4 to avoid drainage.
- Armor fill slope from corner 3 to corner 2.
- Need to obtain a storm water permit
- BMP on the pit use (waddles, hay bails or silt fence)

**Cultural and Paleontological Resources**

All personnel are strictly prohibited from collecting artifacts, any paleontological specimens or fossils, and from disturbing any significant cultural resources in the area. If artifacts, fossils, or any culturally sensitive materials are exposed or identified in the area of construction, all construction operations that would affect the newly discovered resource will cease, and Kerr-McGee will provide immediate notification to the BLM.

**Resource Reports:**

A Class I literature review was completed on February 1, 2012 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 11-404.

A paleontological reconnaissance survey was completed on February 3, 2012 by Intermountain Paleo Consultants. For additional details please refer to report IPC 11-202PRE.

Biological field survey was completed on June 15, 2011 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-691.

**Proposed Action Annual Emissions Tables:**

<b>Table 1: Proposed Action Annual Emissions (tons/year)<sup>1</sup></b>			
<b>Pollutant</b>	<b>Development</b>	<b>Production</b>	<b>Total</b>
NOx	3.8	0.12	3.92
CO	2.2	0.11	2.31
VOC	0.1	4.9	5
SO <sub>2</sub>	0.005	0.0043	0.0093
PM <sub>10</sub>	1.7	0.11	1.81
PM <sub>2.5</sub>	0.4	0.025	0.425
Benzene	2.2E-03	0.044	0.046
Toluene	1.6E-03	0.103	0.105
Ethylbenzene	3.4E-04	0.005	0.005
Xylene	1.1E-03	0.076	0.077
n-Hexane	1.7E-04	0.145	0.145
Formaldehyde	1.3E-02	8.64E-05	1.31E-02

<sup>1</sup> Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

<b>Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison</b>			
<b>Species</b>	<b>Proposed Action Production Emissions (ton/yr)</b>	<b>WRAP Phase III 2012 Uintah Basin Emission Inventory<sup>a</sup> (ton/yr)</b>	<b>Percentage of Proposed Action to WRAP Phase III</b>
NOx	15.68	16,547	0.09%
VOC	20	127,495	0.02%

<sup>a</sup> [http://www.wrapair.org/forums/ogwg/PhaseIII\\_Inventory.html](http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html)

Uintah Basin Data

NBU 1022-3L1AS/ 1022-3L1BS/  
1022-3L1CS/ 1022-3L4BS

Surface Use Plan of Operations  
13 of 13

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

Gina T. Becker  
Regulatory Analyst II  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6086

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

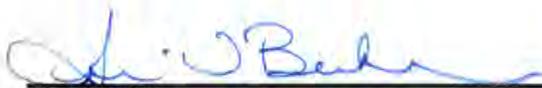
Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

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

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

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

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



Gina T. Becker

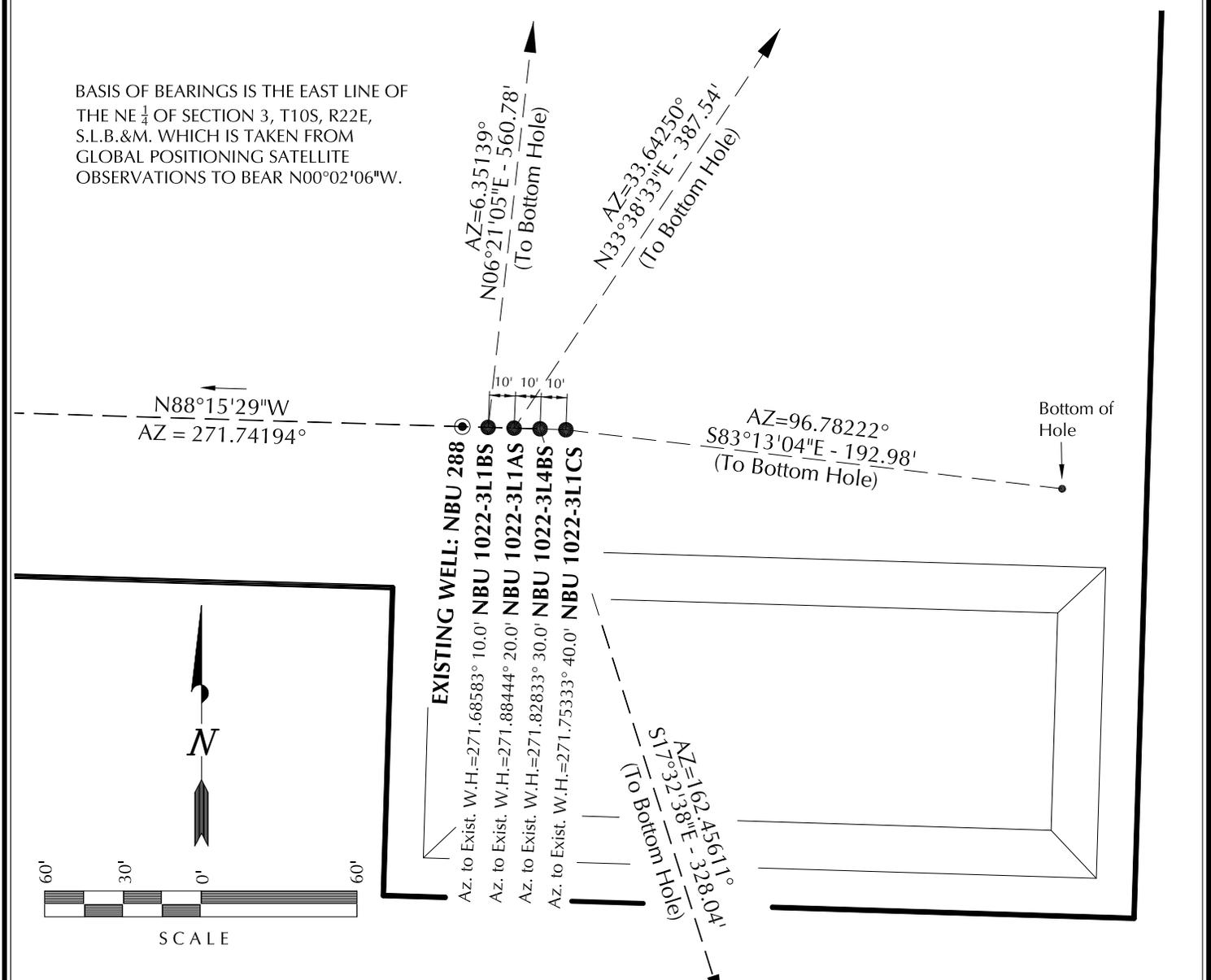
February 16, 2012

Date

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 1022-3L1CS	39°58'35.397"	109°25'59.587"	39°58'35.522"	109°25'57.129"	2085' FSL 627' FWL	39°58'35.171"	109°25'57.126"	39°58'35.296"	109°25'54.668"	2065' FSL 818' FWL
NBU 1022-3L4BS	39°58'35.400"	109°25'59.715"	39°58'35.524"	109°25'57.257"	2085' FSL 617' FWL	39°58'32.309"	109°25'58.447"	39°58'32.434"	109°25'55.989"	1774' FSL 712' FWL
NBU 1022-3L1AS	39°58'35.403"	109°25'59.844"	39°58'35.527"	109°25'57.386"	2086' FSL 607' FWL	39°58'38.590"	109°25'57.085"	39°58'38.714"	109°25'54.627"	2411' FSL 825' FWL
NBU 1022-3L1BS	39°58'35.407"	109°25'59.972"	39°58'35.531"	109°25'57.514"	2086' FSL 597' FWL	39°58'40.913"	109°25'59.173"	39°58'41.037"	109°25'56.715"	2644' FSL 665' FWL
NBU 288	39°58'35.410"	109°26'00.101"	39°58'35.534"	109°25'57.643"	2086' FSL 587' FWL	39°58'35.410"	109°26'00.101"	39°58'35.534"	109°25'57.643"	

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 1022-3L1CS	-22.8'	191.6'	NBU 1022-3L4BS	-312.8'	98.9'	NBU 1022-3L1AS	322.6'	214.7'	NBU 1022-3L1BS	557.3'	62.0'



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

**WELL PAD - NBU 1022-3L**

**WELL PAD INTERFERENCE PLAT**  
 WELLS - NBU 1022-3L1CS, NBU 1022-3L4BS,  
 NBU 1022-3L1AS & NBU 1022-3L1BS  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., UINTAH COUNTY, UTAH.

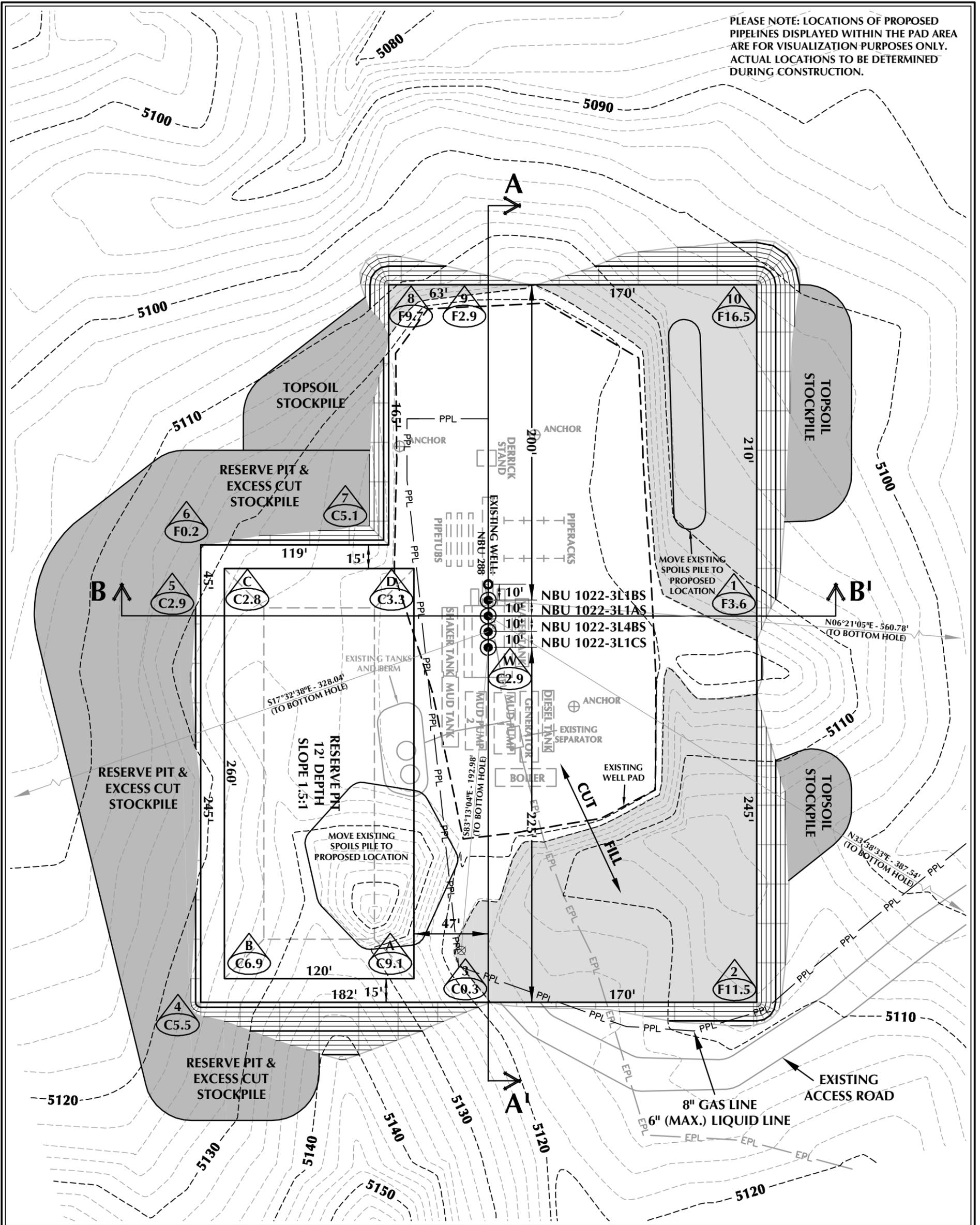


**609 CONSULTING, LLC**  
 2155 North Main Street  
 Sheridan WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

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

DATE SURVEYED: 11-9-11	SURVEYED BY: J.W.	SHEET NO: <b>5</b> 5 OF 16
DATE DRAWN: 11-14-11	DRAWN BY: C.T.C.	
SCALE: 1" = 60'	Date Last Revised:	

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 1022-3L DESIGN SUMMARY**

EXISTING GRADE @ CENTER OF WELL PAD = 5120.8'  
 FINISHED GRADE ELEVATION = 5117.9'  
 CUT SLOPES = 1.5:1  
 FILL SLOPES = 1.5:1  
 TOTAL WELL PAD AREA = 3.69 ACRES  
 TOTAL DISTURBANCE AREA = 4.89 ACRES  
 SHRINKAGE FACTOR = 1.10  
 SWELL FACTOR = 1.00

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

**WELL PAD - NBU 1022-3L**

WELL PAD - LOCATION LAYOUT  
 NBU 1022-3L1CS, NBU 1022-3L4BS,  
 NBU 1022-3L1AS & NBU 1022-3L1BS  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., UTAH COUNTY, UTAH



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

**WELL PAD QUANTITIES**

TOTAL CUT FOR WELL PAD = 18,549 C.Y.  
 TOTAL FILL FOR WELL PAD = 17,268 C.Y.  
 TOPSOIL @ 6" DEPTH = 2,097 C.Y.  
 EXCESS MATERIAL = 1,281 C.Y.

**RESERVE PIT QUANTITIES**

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

**WELL PAD LEGEND**

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

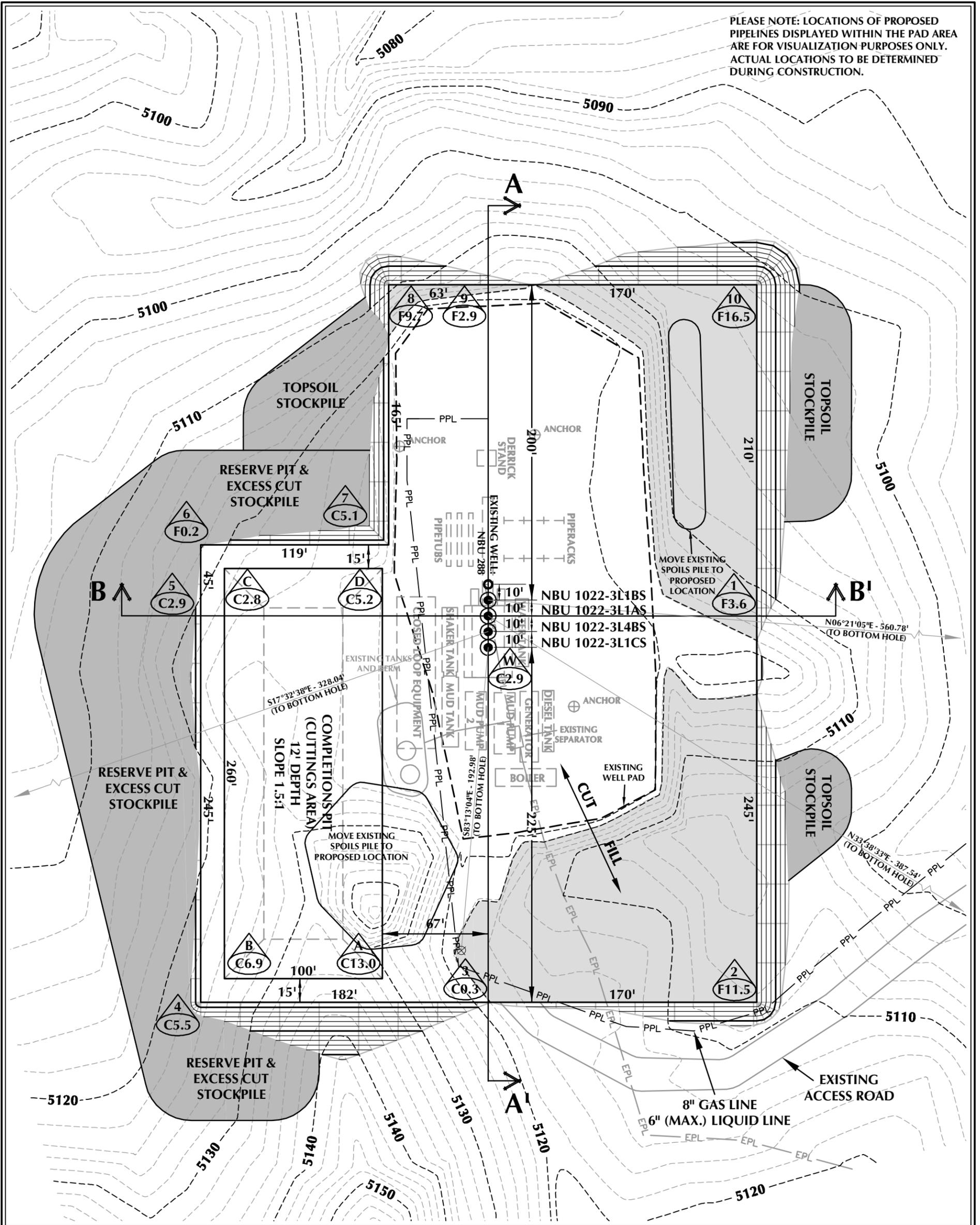


HORIZONTAL 0 30' 60' 1" = 60'  
 2' CONTOURS

SCALE: 1"=60' DATE: 11/18/11 SHEET NO:  
 REVISED: 1/11/12 JID 6 6 OF 16

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

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 1022-3L (CLOSED LOOP) DESIGN SUMMARY**

EXISTING GRADE @ CENTER OF WELL PAD = 5120.8'  
 FINISHED GRADE ELEVATION = 5117.9'  
 CUT SLOPES = 1.5:1  
 FILL SLOPES = 1.5:1  
 TOTAL WELL PAD AREA = 3.69 ACRES  
 TOTAL DISTURBANCE AREA = 4.89 ACRES  
 SHRINKAGE FACTOR = 1.10  
 SWELL FACTOR = 1.00

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

**WELL PAD - NBU 1022-3L**

WELL PAD - LOCATION LAYOUT  
 NBU 1022-3L1CS, NBU 1022-3L4BS,  
 NBU 1022-3L1AS & NBU 1022-3L1BS  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., UTAH COUNTY, UTAH



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

**WELL PAD QUANTITIES**

TOTAL CUT FOR WELL PAD = 18,549 C.Y.  
 TOTAL FILL FOR WELL PAD = 17,268 C.Y.  
 TOPSOIL @ 6" DEPTH = 2,097 C.Y.  
 EXCESS MATERIAL = 1,281 C.Y.

**COMPLETIONS PIT QUANTITIES**

TOTAL CUT FOR COMPLETIONS PIT  
 +/- 8,870 C.Y.  
 COMPLETIONS PIT CAPACITY  
 (2' OF FREEBOARD)  
 +/- 33,770 BARRELS

**WELL PAD LEGEND**

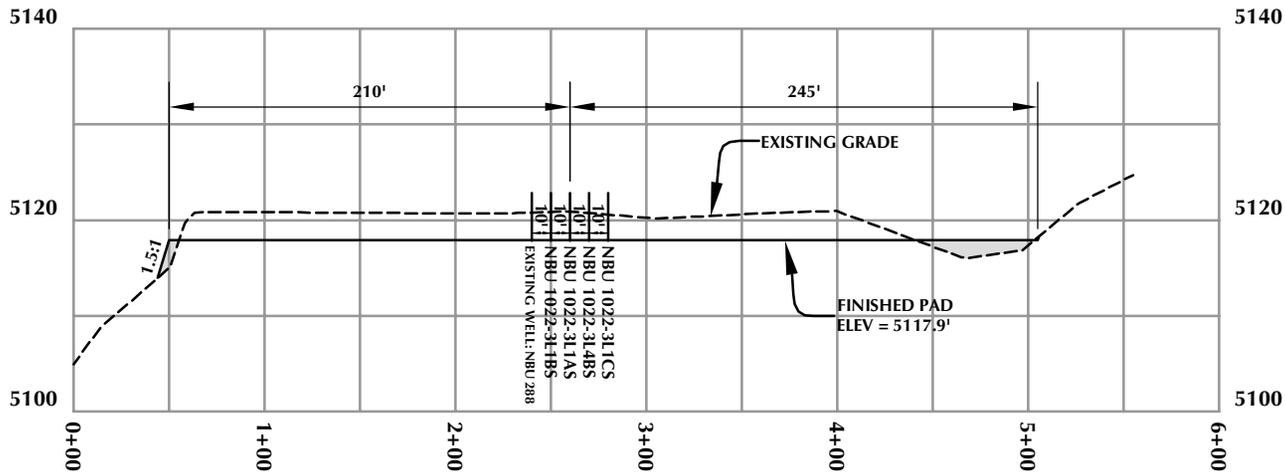
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL - PROPOSED PIPELINE
- EPL - EXISTING PIPELINE



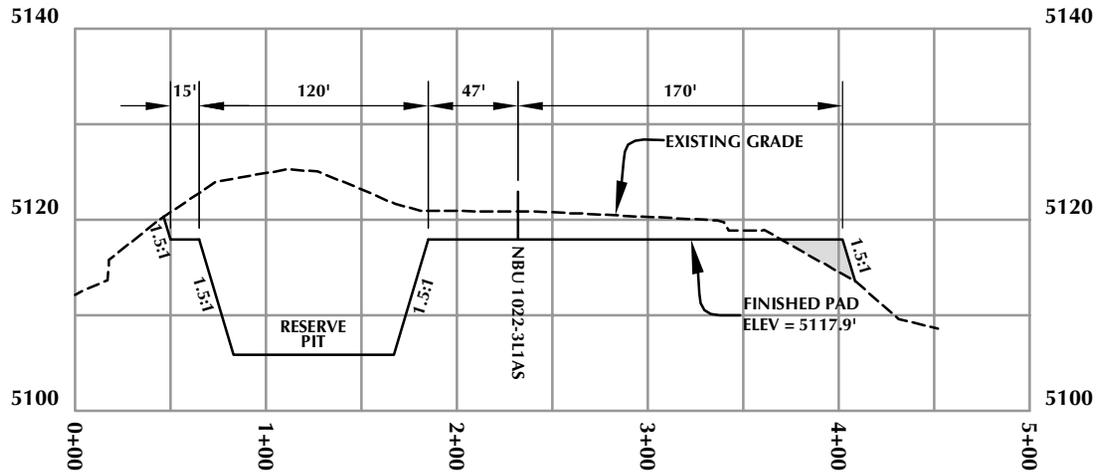
HORIZONTAL 0 30' 60' 1" = 60'  
 2' CONTOURS

SCALE: 1"=60' DATE: 1/11/12 SHEET NO:  
 REVISED: **6B** 6B OF 16

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**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

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

**WELL PAD - NBU 1022-3L**

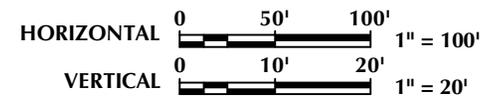
**WELL PAD - CROSS SECTIONS**  
 NBU 1022-3L1CS, NBU 1022-3L4BS,  
 NBU 1022-3L1AS & NBU 1022-3L1BS  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., Uintah County, Utah



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 Sheridan, WY 82801  
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(435) 789-1365



Scale: 1"=100'

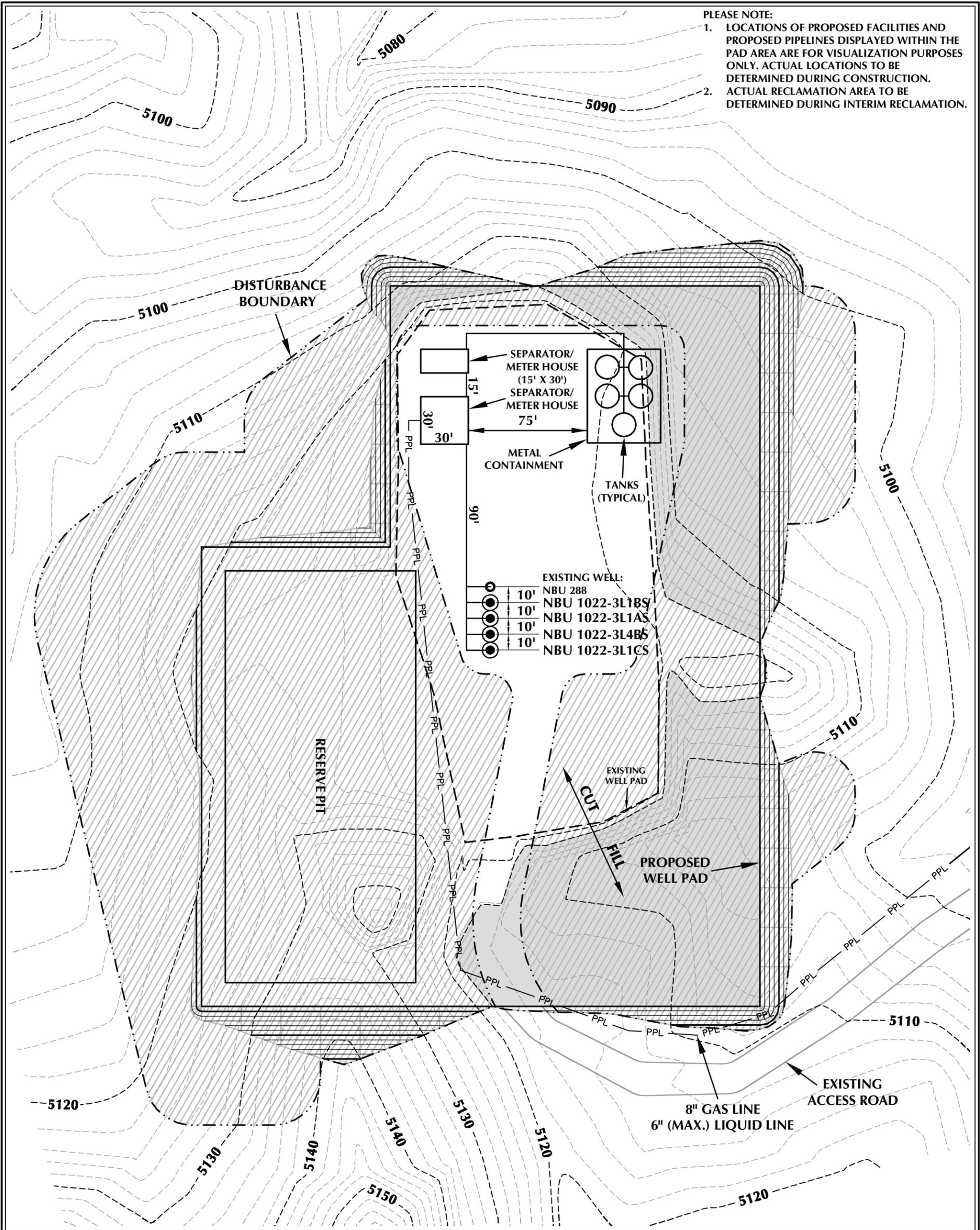
Date: 11/18/11

SHEET NO:

REVISED:

**7**

7 OF 16



**WELL PAD - NBU 1022-3L DESIGN SUMMARY**

TOTAL DISTURBANCE AREA = 4.89 ACRES (INCLUDING EXISTING)  
 RECLAMATION AREA = 3.95 ACRES  
 TOTAL WELL PAD AREA AFTER RECLAMATION = 0.94 ACRES

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

**WELL PAD - NBU 1022-3L**

**WELL PAD - RECLAMATION LAYOUT**  
 NBU 1022-3L1CS, NBU 1022-3L4BS,  
 NBU 1022-3L1AS & NBU 1022-3L1BS  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., UTAH COUNTY, UTAH



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**WELL PAD LEGEND**

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



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

SCALE: 1"=60' DATE: 1/11/12 SHEET NO:

REVISED: **8** 8 OF 16

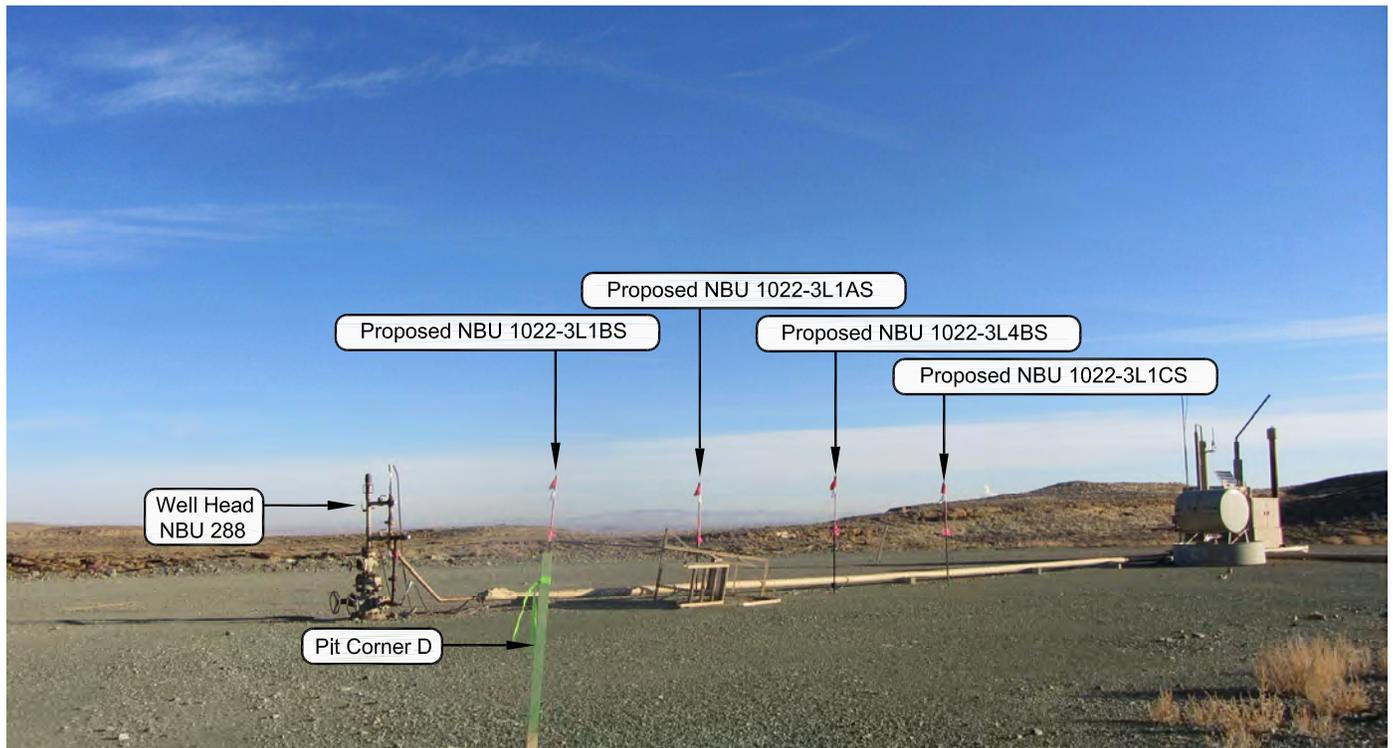


PHOTO VIEW: FROM CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: SOUTHEASTERLY

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

**WELL PAD - NBU 1022-3L**

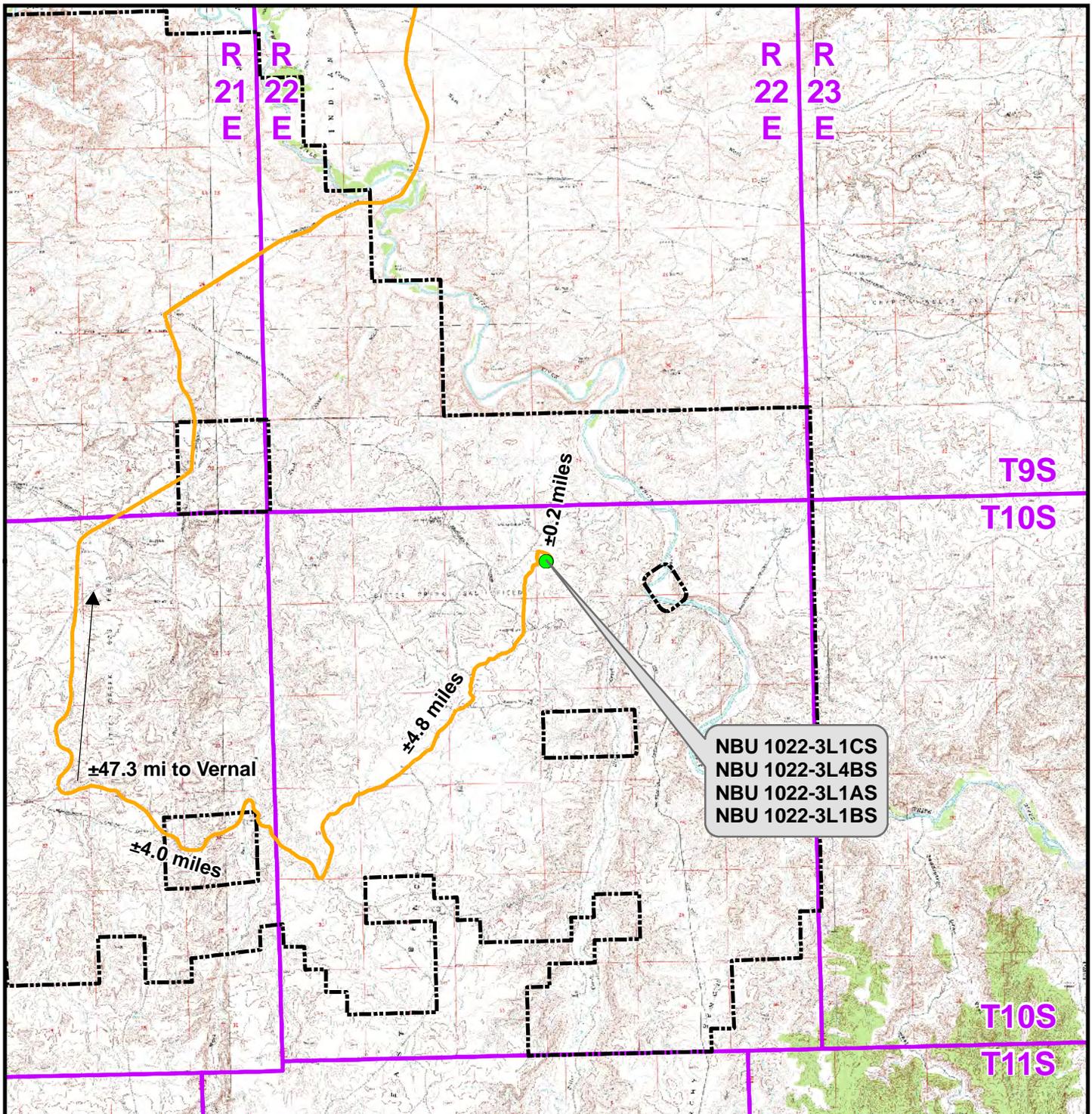
**LOCATION PHOTOS**  
NBU 1022-3L1CS, NBU 1022-3L4BS,  
NBU 1022-3L1AS & NBU 1022-3L1BS  
LOCATED IN SECTION 3, T10S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH.



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

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

DATE PHOTOS TAKEN: 11-9-11	PHOTOS TAKEN BY: J.W.	SHEET NO: <b>9</b> 9 OF 16
DATE DRAWN: 11-14-11	DRAWN BY: C.T.C.	
Date Last Revised:		



**Legend**

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

Distance From Well Pad - NBU 1022-3L To Unit Boundary: ±6,108ft

**WELL PAD - NBU 1022-3L**

**TOPO A**  
**NBU 1022-3L1CS, NBU 1022-3L4BS,**  
**NBU 1022-3L1AS & NBU 1022-3L1BS**  
**LOCATED IN SECTION 3, T10S, R22E,**  
**S.L.B.&M., UINTAH COUNTY, UTAH**

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

**1099 18th Street**  
**Denver, Colorado 80202**



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



SCALE: 1:100,000

NAD83 USP Central

SHEET NO:

DRAWN: TL

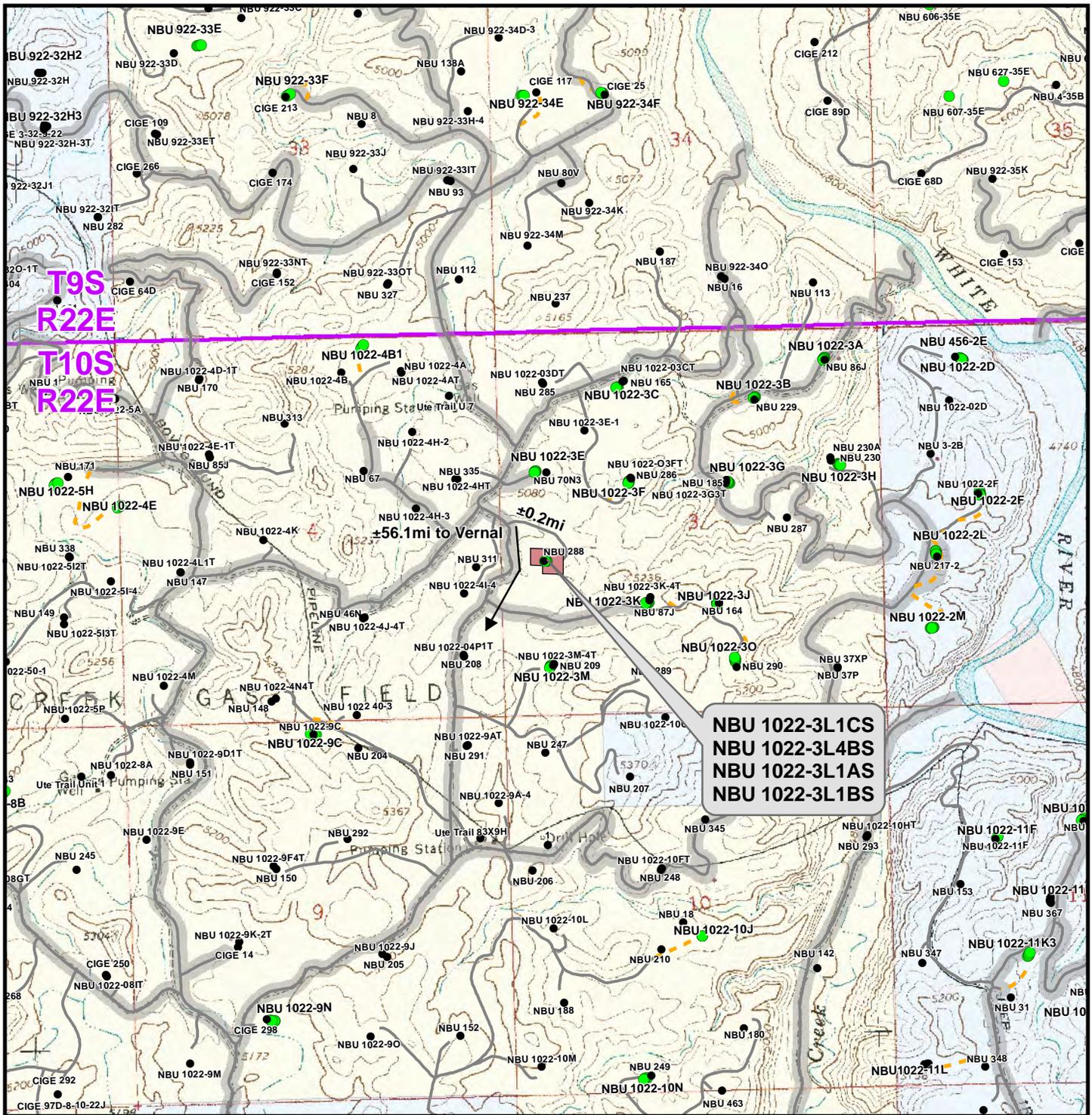
DATE: 18 Nov 2011

**10**

REVISED:

DATE:

10 OF 16



**Legend**

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

Total Proposed Road Length: ±0ft

**WELL PAD - NBU 1022-3L**

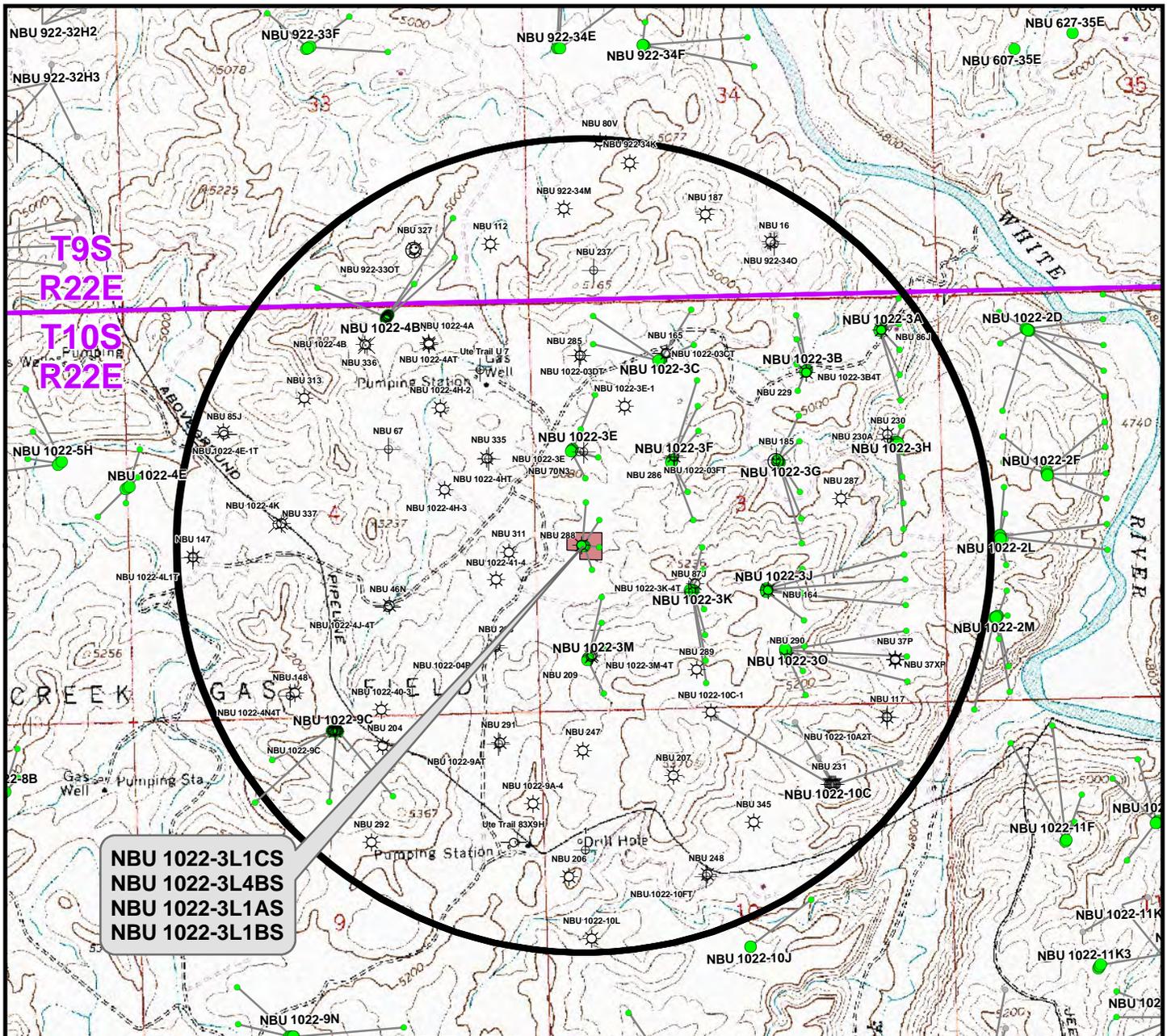
**TOPO B**  
**NBU 1022-3L1CS, NBU 1022-3L4BS,**  
**NBU 1022-3L1AS & NBU 1022-3L1BS**  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., UINTAH COUNTY, UTAH

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



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

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO:
DRAWN: TL	DATE: 18 Nov 2011	<b>11</b>
REVISED:	DATE:	



NBU 1022-3L1CS  
 NBU 1022-3L4BS  
 NBU 1022-3L1AS  
 NBU 1022-3L1BS

Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 1022-3L1CS	NBU 288	233ft
NBU 1022-3L4BS	NBU 288	339ft
NBU 1022-3L1AS	NBU 288	398ft
NBU 1022-3L1BS	NBU 288	561ft

**Legend**

- Well - Proposed
- Well Path
- ☀ Producing
- ⊕ Deferred
- ☀ Active Injector
- ⊕ Plugged & Abandoned
- Bottom Hole - Proposed
- Well Pad
- ☺ Spudded
- ⊗ Cancelled
- ☀ Location Abandoned
- Bottom Hole - Existing
- ◻ Well - 1 Mile Radius
- APD Approved
- ⊖ Temporarily Abandoned
- Shut-In
- ⊗ Preliminary Location

**WELL PAD - NBU 1022-3L**

TOPO C  
 NBU 1022-3L1CS, NBU 1022-3L4BS,  
 NBU 1022-3L1AS & NBU 1022-3L1BS  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., Uintah County, Utah

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

1099 18th Street  
 Denver, Colorado 80202



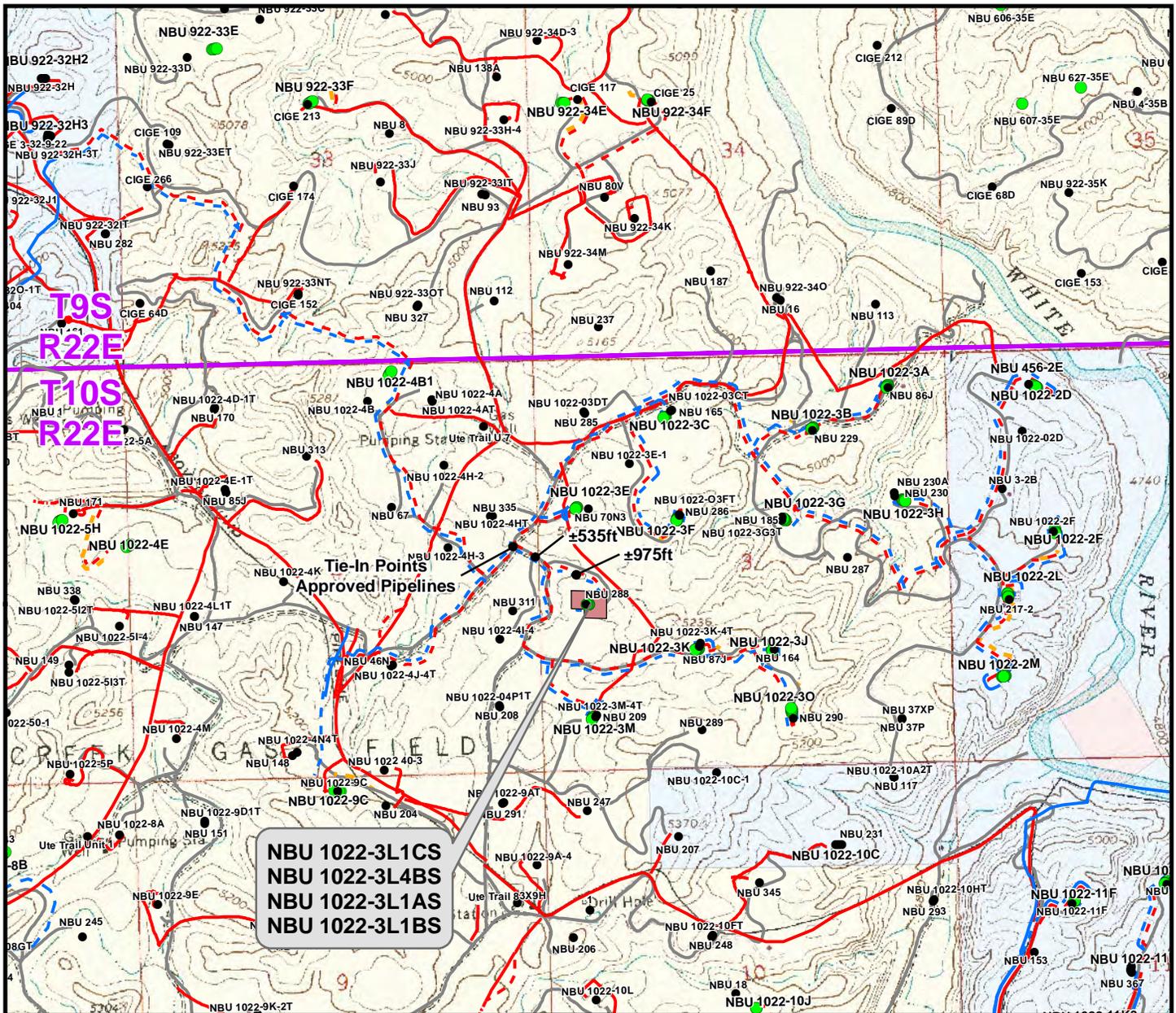
**CONSULTING, LLC**

2155 North Main Street  
 Sheridan, Wyoming 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

SCALE: 1" = 2,000ft	NAD83 USP Central	12
DRAWN: TL	DATE: 18 Nov 2011	
REVISED:	DATE:	

SHEET NO:

12 OF 16



Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Buried 6" (Max.) (Meter House to Edge of Pad)	±425ft	Buried 8" (Meter House to Edge of Pad)	±425ft
Buried 6" (Max.) (Edge of Pad to 3M Intersection)	±975ft	Buried 8" (Edge of Pad to 3M Intersection)	±975ft
Buried 6" (Max.) (3M Intersection to Approved Liquid Pipeline)	±535ft	Buried 16" (3M Intersection to Approved 16" Gas Pipeline)	±535ft
<b>TOTAL PROPOSED BURIED LIQUID PIPELINE =</b>	<b>±1,935ft</b>	<b>TOTAL PROPOSED BURIED GAS PIPELINE =</b>	<b>±1,935ft</b>

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

**WELL PAD - NBU 1022-3L**

**TOPO D**  
**NBU 1022-3L1CS, NBU 1022-3L4BS,**  
**NBU 1022-3L1AS & NBU 1022-3L1BS**  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., UINTAH COUNTY, UTAH

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

1099 18th Street  
 Denver, Colorado 80202



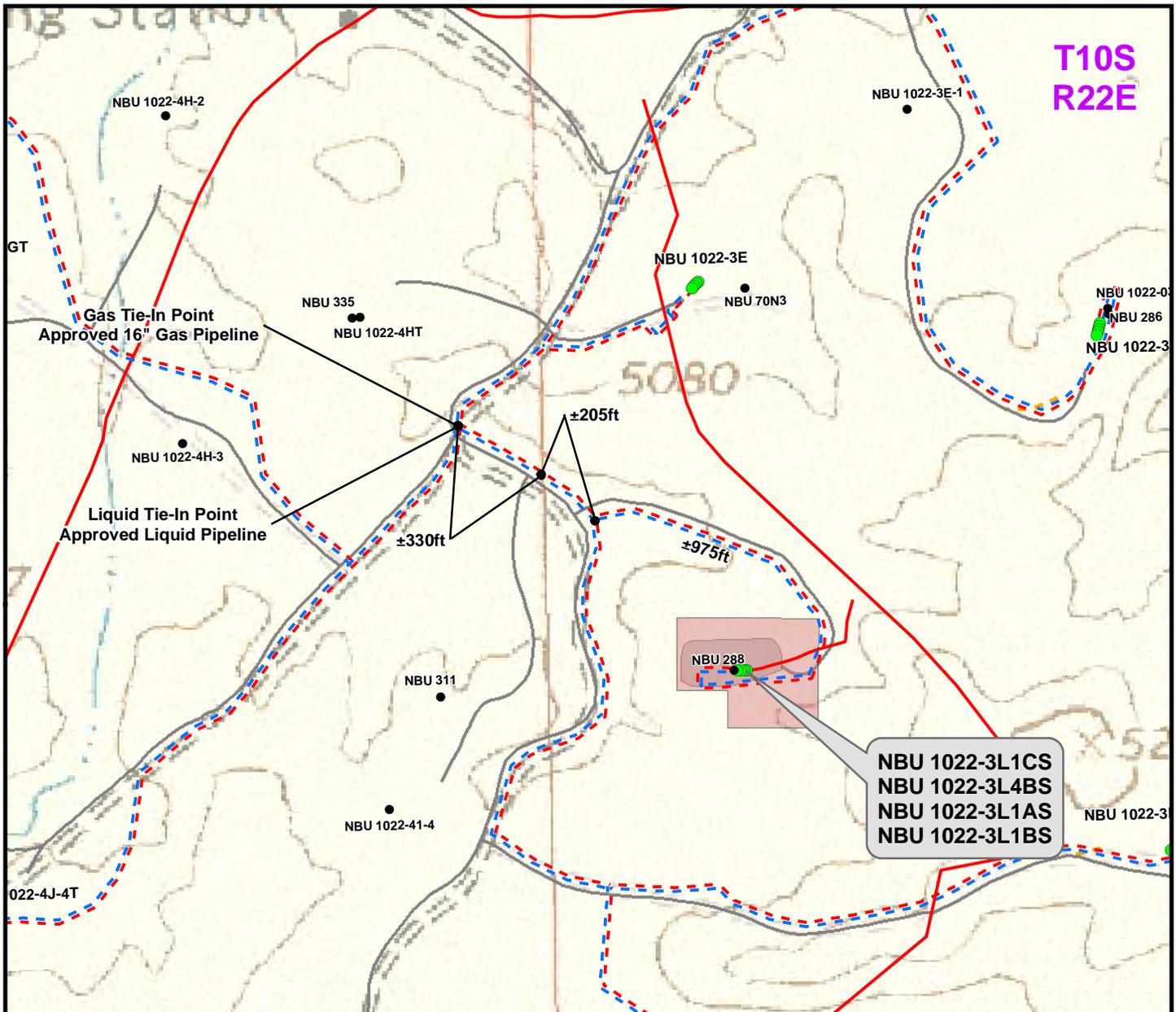
**609 CONSULTING, LLC**  
 2155 North Main Street  
 Sheridan, Wyoming 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

N



SCALE: 1" = 2,000ft	NAD83 USP Central	<b>13</b>
DRAWN: TL	DATE: 18 Nov 2011	
REVISED:	DATE:	

SHEET NO:  
13 OF 16



Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Buried 6" (Max.) (Meter House to Edge of Pad)	±425ft	Buried 8" (Meter House to Edge of Pad)	±425ft
Buried 6" (Max.) (Edge of Pad to 3M Intersection)	±975ft	Buried 8" (Edge of Pad to 3M Intersection)	±975ft
Buried 6" (Max.) (3M Intersection to Approved Liquid Pipeline)	±535ft	Buried 16" (3M Intersection to Approved 16" Gas Pipeline)	±535ft
<b>TOTAL PROPOSED BURIED LIQUID PIPELINE =</b>	<b>±1,935ft</b>	<b>TOTAL PROPOSED BURIED GAS PIPELINE =</b>	<b>±1,935ft</b>

**Legend**

<span style="color: green;">●</span> Well - Proposed	<span style="background-color: #d9ead3; border: 1px solid #808080; display: inline-block; width: 15px; height: 10px;"></span> Well Pad - Proposed	<span style="color: red;">---</span> Gas Pipeline - Proposed	<span style="color: blue;">---</span> Liquid Pipeline - Proposed	<span style="color: orange;">---</span> Road - Proposed	<span style="background-color: #fff2cc; border: 1px solid #808080; display: inline-block; width: 15px; height: 10px;"></span> Bureau of Land Management
<span style="color: black;">●</span> Well - Existing	<span style="background-color: #d9ead3; border: 1px solid #808080; display: inline-block; width: 15px; height: 10px;"></span> Well Pad - Existing	<span style="color: red;">---</span> Gas Pipeline - To Be Upgraded	<span style="color: blue;">---</span> Liquid Pipeline - Existing	<span style="color: gray;">---</span> Road - Existing	<span style="background-color: #f4cccc; border: 1px solid #808080; display: inline-block; width: 15px; height: 10px;"></span> Indian Reservation
		<span style="color: red;">---</span> Gas Pipeline - Existing			<span style="background-color: #cfe2f3; border: 1px solid #808080; display: inline-block; width: 15px; height: 10px;"></span> State
					<span style="border: 1px solid #808080; display: inline-block; width: 15px; height: 10px;"></span> Private

**WELL PAD - NBU 1022-3L**

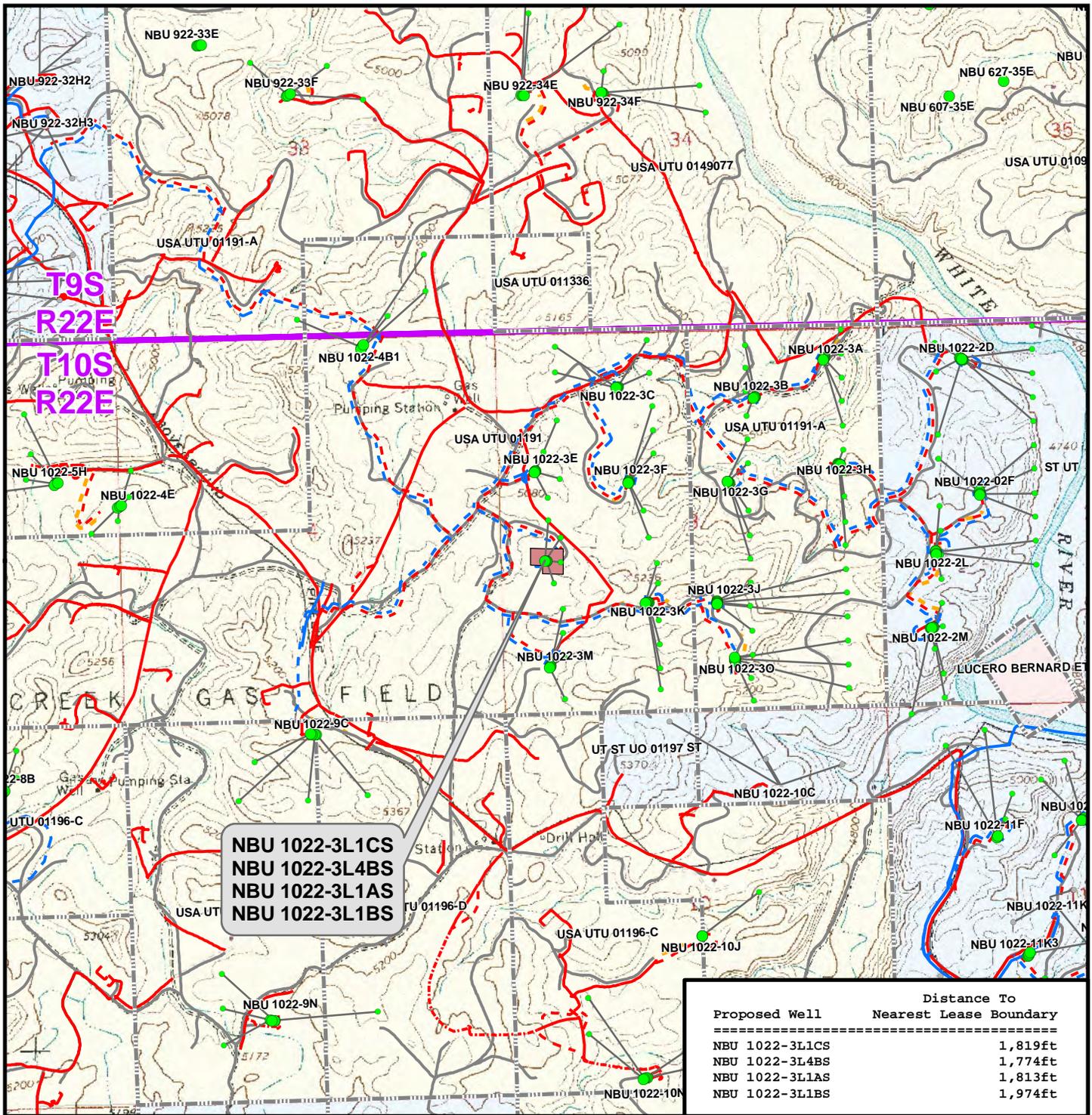
**TOPO D2 (PAD & PIPELINE DETAIL)**  
**NBU 1022-3L1CS, NBU 1022-3L4BS,**  
**NBU 1022-3L1AS & NBU 1022-3L1BS**  
**LOCATED IN SECTION 3, T10S, R22E,**  
**S.L.B.&M., UINTAH COUNTY, UTAH**

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

**1099 18th Street**  
**Denver, Colorado 80202**

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

SCALE: 1" = 500ft	NAD83 USP Central	<b>14</b> 14 OF 16
DRAWN: TL	DATE: 18 Nov 2011	
REVISED:	DATE:	



**Legend**

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

**WELL PAD - NBU 1022-3L**

**TOPO E**  
**NBU 1022-3L1CS, NBU 1022-3L4BS,**  
**NBU 1022-3L1AS & NBU 1022-3L1BS**  
**LOCATED IN SECTION 3, T10S, R22E,**  
**S.L.B.&M., UINTAH COUNTY, UTAH**

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

**1099 18th Street**  
**Denver, Colorado 80202**



**CONSULTING, LLC**

2155 North Main Street  
 Sheridan, Wyoming 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

SCALE: 1" = 2,000ft

DRAWN: TL

REVISED:

NAD83 USP Central

DATE: 18 Nov 2011

DATE:

SHEET NO:

**15**

15 OF 16



Kerr-McGee Oil & Gas Onshore LP  
1099 18TH STREET STE. 1800  
DENVER, CO 80202  
720-929-6708 • FAX 720-929-7708  
E-MAIL: JOE.JOHNSON@ANADARKO.COM

February 14, 2012

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 1022-3L4BS  
T10S-R22E  
Section 3: NWSW/NWSW  
Surface: 2085' FSL, 617' FWL  
Bottom Hole: 1774' FSL, 712' FWL  
Uintah County, Utah

Dear Ms. Mason:

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

- Kerr-McGee's NBU 1022-3L4BS 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 'Joe D. Johnson', with a horizontal line underneath.

Joseph D. Johnson  
Landman

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>	
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	
<b>1. TYPE OF WELL</b> Gas Well	<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 01191
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2085 FSL 0617 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 03 Township: 10.0S Range: 22.0E Meridian: S	<b>8. WELL NAME and NUMBER:</b> NBU 1022-3L4BS
<b>PHONE NUMBER:</b> 720 929-6511	<b>9. API NUMBER:</b> 43047504920000
<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES	<b>COUNTY:</b> Uintah
	<b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 7/16/2012	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input checked="" type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

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

**Date:** June 07, 2012

**By:**

<b>NAME (PLEASE PRINT)</b> Jenn Hawkins	<b>PHONE NUMBER</b> 720 929-6247	<b>TITLE</b> Staff Operations Specialist III
<b>SIGNATURE</b> N/A	<b>DATE</b> 6/5/2012	



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

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

**Request for Permit Extension Validation Well Number 43047504920000**

API: 43047504920000

Well Name: NBU 1022-3L4BS

Location: 2085 FSL 0617 FWL QTR NWSW SEC 03 TWNP 100S RNG 220E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 7/16/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated?  Yes  No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?  Yes  No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?  Yes  No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?  Yes  No
- Has the approved source of water for drilling changed?  Yes  No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?  Yes  No
- Is bonding still in place, which covers this proposed well?  Yes  No

Signature: Jenn Hawkins

Date: 6/5/2012

Title: Staff Operations Specialist III Representing: KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FEB 27 2012

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

BLM Vernal Utah RECEIVED

Form fields including: 1a. Type of Work: DRILL; 1b. Type of Well: Gas Well; 2. Name of Operator: KERR-MCGEE OIL & GAS ONSHORE; 3a. Address: DENVER, CO; 3b. Phone No.; 4. Location of Well; 11. Sec., T., R., M., or Blk. and Survey or Area; 12. County or Parish: UINTAH; 13. State: UT; 16. No. of Acres in Lease: 1042.00; 17. Spacing Unit; 19. Proposed Depth; 20. BLM/BIA Bond No. on file; 21. Elevations; 22. Approximate date work will start; 23. Estimated duration.

24. Attachments

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

- 1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

Signature fields for Regulatory Analyst II and Assistant Field Manager, including names GINA T BECKER and Jerry Kenczka, and dates 02/16/2012 and JUL 31 2012.

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 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 #131114 verified by the BLM Well Information System For KERR-MCGEE OIL & GAS ONSHORE, sent to the Vernal

NOTICE OF APPROVAL



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

17+1 DUCA

NOS-11/29/11



**UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
VERNAL FIELD OFFICE**

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



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

<b>Company:</b>	<b>Kerr-McGee Oil &amp; Gas Onshore, LP</b>	<b>Location:</b>	<b>NWSW, Sec. 3, T10S, R22E</b>
<b>Well No:</b>	<b>NBU 1022-3L4BS</b>	<b>Lease No:</b>	<b>UTU-01191</b>
<b>API No:</b>	<b>43-047-50492</b>	<b>Agreement:</b>	<b>Natural Buttes Unit</b>

**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:blm_ut_vn_opreport@blm.gov">blm 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 new 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.
- The following will be used as standard operating procedures: Green completion or controlled VOC emissions methods with 90% efficiency for Oil or Gas Atmospheric Storage Tanks, VOC Venting controls or flaring, Glycol Dehydration and Amine Unites, Well Completion, Re-Completion, Venting, and Planned Blowdown Emissions.
- All reclamation activities will comply with the Green River Reclamation Guidelines.
- All vehicles and equipment shall be cleaned either through power-washing, or other approved method, if the vehicles or equipment were previously operated outside the Uinta Basin, to prevent weed seed introduction.
- All disturbance areas shall be monitored for noxious weeds annually, for a minimum of three growing seasons following completion of project or until desirable vegetation is established.
- Noxious and invasive weeds will be controlled by the proponent throughout the area of project disturbance.
- Noxious weeds will be inventoried and reported to BLM in the annual reclamation report. Where an integrated pest management program is applicable, coordination has been undertaken with the state and local management program (if existing). A copy of the pest management plan will be submitted for each project.
- A pesticide use proposal (PUP) will be obtained for the project, by the proponent if applicable.
- A permitted paleontologist is to be present to monitor construction at all well pads during all surface disturbing activities: examples include the following; building of the well pad, access road, and pipelines.

To maintain compliance with current cactus survey protocols, the following measures will be required:

1. If construction does not occur within 4 years of the original survey date, new 100% clearance surveys will be required.
2. Prior to construction within 4 years of the original survey date, a spot check survey will be required during the year of construction. KMG and their respective 3<sup>rd</sup> party surveyor will refer to the current

*Sclerocactus* Spot Check Survey Methods, to determine site specific survey distances and intensity levels.

3. Spot check reports will be reported to the BLM and the US Fish and Wildlife Service.
4. Construction will not commence until written approval is received from the BLM.

*Discovery Stipulation:* Reinitiation of section 7 consultation with the USFWS will be sought immediately if any loss of plants or occupied habitat for Uinta Basin hookless cactus is anticipated as a result of project activities.

- Construction or drilling is not allowed from January 1 – August 31 on the NBU 1022-3O pad to minimize impacts during golden eagle nesting.
- If it is anticipated that construction or drilling will occur during the given timing restriction, a BLM or qualified biologist shall be notified to conduct surveys for raptors. Depending upon the results of the surveys, permission to proceed may or may not be granted by the Authorized Officer.
- The best method to avoid entrainment is to pump from an off-channel location – one that does not connect to the river during high spring flows. An infiltration gallery constructed in a BLM and Service approved location is best.
- If the pump head is located in the river channel where larval fish are known to occur, the following measures apply:
  - a. do not situate the pump in a low-flow or no-flow area as these habitats tend to concentrate larval fishes;
  - b. limit the amount of pumping, to the greatest extent possible, during that period of the year when larval fish may be present (April 1 to August 31); and
  - c. limit the amount of pumping, to the greatest extent possible, during the pre-dawn hours as larval drift studies indicate that this is a period of greatest daily activity.
- Screen all pump intakes with 3/32 inch mesh material.
- Approach velocities for intake structures will follow the National Marine Fisheries Service's document "Fish Screening Criteria for Anadromous Salmonids." For projects with an in-stream intake that operate in stream reaches where larval fish may be present, the approach velocity will not exceed 0.33 feet per second (ft/s).
- Report any fish impinged on the intake screen to the Service (801.975.3330) and the Utah Division of Wildlife Resources:
  - Northeastern Region
  - 318 North Vernal Avenue
  - Vernal, UT 84078
  - Phone: (435) 781-9453
- Kerr McGee can only use the following water source:  
Permit # 49-2307 JD Field Services Green River-Section 15, T2N, R22E

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

**SITE SPECIFIC DOWNHOLE COAs:**

Site Specific Drilling Plan COA's:

- Gamma ray Log shall be run from Total Depth to Surface.

Variations Granted:

Air Drilling

- Properly lubricated and maintained rotating head. Variance granted to use a properly maintained and lubricated diverter bowl in place of a rotating head.
- Blooie line discharge 100' from the well bore. Variance granted for blooie line discharge to be 45' from the well bore.
- Compressors located in the opposite direction from the blooie line a minimum of 100' from the well bore. Variance granted for truck/trailer mounted air compressors located 40' from the well bore.
- In lieu of mud products on location, Kerr McGee will fill the reserve pit with water for the kill medium and will utilize a skid pump near the reserve pit to supply the water to the well bore if necessary.
- Automatic igniter. Variance granted for igniter due to there being no productive formations encountered while air drilling.
- FIT Test. Variance granted due to well known geology and the problems that can occur with the FIT test.

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

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order

No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.

- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well in LAS format to BLM\_UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

## OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at [www.ONRR.gov](http://www.ONRR.gov).
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location (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.

<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 01191	
<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>	
<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES	
<b>8. WELL NAME and NUMBER:</b> NBU 1022-3L4BS	
<b>9. API NUMBER:</b> 43047504920000	
<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES	
<b>COUNTY:</b> UINTAH	
<b>STATE:</b> UTAH	

**SUNDRY NOTICES AND REPORTS ON WELLS**

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

<b>1. TYPE OF WELL</b> Gas Well	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6511
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2085 FSL 0617 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 03 Township: 10.0S Range: 22.0E Meridian: S	

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 7/16/2013	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input checked="" type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

**Approved by the Utah Division of Oil, Gas and Mining**  
**Date:** July 10, 2013  
**By:**

<b>NAME (PLEASE PRINT)</b> Teena Paulo	<b>PHONE NUMBER</b> 720 929-6236	<b>TITLE</b> Staff Regulatory Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 7/5/2013	



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

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

**Request for Permit Extension Validation Well Number 43047504920000**

API: 43047504920000

Well Name: NBU 1022-3L4BS

Location: 2085 FSL 0617 FWL QTR NWSW SEC 03 TWNP 100S RNG 220E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 7/16/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated?  Yes  No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?  Yes  No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?  Yes  No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?  Yes  No
- Has the approved source of water for drilling changed?  Yes  No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?  Yes  No
- Is bonding still in place, which covers this proposed well?  Yes  No

Signature: Teena Paulo

Date: 7/5/2013

Title: Staff Regulatory Specialist Representing: KERR-MCGEE OIL & GAS ONSHORE, L.P.

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 01191	
<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 1022-3L4BS
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047504920000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6511
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2085 FSL 0617 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 03 Township: 10.0S 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"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT 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"/> SPUD REPORT Date of Spud: 7/13/2013	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input 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.

Spud well 07/13/2013 @ 08:30. MIRU Triple A Bucket Rig, drill 20" conductor hole to 40', run 14", 36.7# schedule 10 conductor pipe, cement with 28 sacks ready mix. Anticipated surface spud date and surface casing cement 07/26/2013.

**Accepted by the  
 Utah Division of  
 Oil, Gas and Mining  
 FOR RECORD ONLY  
 July 15, 2013**

<b>NAME (PLEASE PRINT)</b> Doreen Green	<b>PHONE NUMBER</b> 435 781-9758	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A	<b>DATE</b> 7/15/2013	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 01191	
<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>	
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<b>COUNTY:</b> UINTAH	
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**SUNDRY NOTICES AND REPORTS ON WELLS**

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<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6511
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2085 FSL 0617 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 03 Township: 10.0S Range: 22.0E Meridian: S	

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TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
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<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 9/5/2013	<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.

No activity for the month of August 2013. Well TD at 40 ft.

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

**FOR RECORD ONLY**

September 06, 2013

<b>NAME (PLEASE PRINT)</b> Teena Paulo	<b>PHONE NUMBER</b> 720 929-6236	<b>TITLE</b> Staff Regulatory Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 9/5/2013	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 01191
1. TYPE OF WELL Gas Well	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	8. WELL NAME and NUMBER: NBU 1022-3L4BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2085 FSL 0617 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 03 Township: 10.0S Range: 22.0E Meridian: S	9. API NUMBER: 43047504920000
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	COUNTY: UINTAH
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT 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"/> SPUD REPORT 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"/> DRILLING REPORT Report Date: 10/4/2013	<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
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12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Drilled to 2,466 ft. since last report.

**Accepted by the  
 Utah Division of  
 Oil, Gas and Mining  
 FOR RECORD ONLY  
 October 07, 2013**

<b>NAME (PLEASE PRINT)</b> Matthew P Wold	<b>PHONE NUMBER</b> 720 929-6993	<b>TITLE</b> Regulatory Analyst I
<b>SIGNATURE</b> N/A	<b>DATE</b> 10/4/2013	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>	
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	
<b>1. TYPE OF WELL</b> Gas Well	<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 01191
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>PHONE NUMBER:</b> 720 929-6511	<b>8. WELL NAME and NUMBER:</b> NBU 1022-3L4BS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2085 FSL 0617 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 03 Township: 10.0S Range: 22.0E Meridian: S	<b>9. API NUMBER:</b> 43047504920000
	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
	<b>COUNTY:</b> UINTAH
	<b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 12/20/2013	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input checked="" type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

The NBU 1022-3L4BS was placed on production 12/20/2013.

**Accepted by the  
 Utah Division of  
 Oil, Gas and Mining  
 FOR RECORD ONLY  
 January 03, 2014**

<b>NAME (PLEASE PRINT)</b> Doreen Green	<b>PHONE NUMBER</b> 435 781-9758	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A	<b>DATE</b> 12/23/2013	

Form 3160-4  
(August 2007)

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.  
UTU01191

1a. Type of Well  Oil Well  Gas Well  Dry  Other  
 b. Type of Completion  New Well  Work Over  Deepen  Plug Back  Diff. Resvr.  
 Other \_\_\_\_\_

6. If Indian, Allottee or Tribe Name \_\_\_\_\_

7. Unit or CA Agreement Name and No.  
UTU63047A

2. Name of Operator  
KERR-MCGEE OIL AND GAS ONSHORE  
Contact: KAY KELLY  
Email: kay.kelly@anadarko.com

8. Lease Name and Well No.  
NBU 1022-3L4BS

3. Address P.O. BOX 173779  
DENVER, CO 82017  
3a. Phone No. (include area code)  
Ph: 720-929-6000

9. API Well No.  
43-047-50492

4. Location of Well (Report location clearly and in accordance with Federal requirements)\*  
 At surface NWSW 2085FSL 617FWL 39.976500 N Lat, 109.433254 W Lon  
 At top prod interval reported below NWSW 1789FSL 713FWL  
 At total depth NWSW 1762FSL 707FWL

10. Field and Pool, or Exploratory  
NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey or Area  
Sec 3 T10S R22E Mer SLB

12. County or Parish  
UINTAH

13. State  
UT

14. Date Spudded  
07/13/2013

15. Date T.D. Reached  
10/23/2013

16. Date Completed  
 D & A  Ready to Prod.  
12/20/2013

17. Elevations (DF, KB, RT, GL)\*  
5136 KB

18. Total Depth: MD 8860  
TVD 8841

19. Plug Back T.D.: MD 8797  
TVD 8778

20. Depth Bridge Plug Set: MD  
TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)  
CBL/GR/CCL/TEMP-SD/DSN/ACTR-BHV

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	0	40		28			
11.000	8.625 J-55	28.0	18	2445		900		0	
7.875	4.500 I-80	11.6	18	8844		1548		2320	

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	8261							

25. Producing Intervals

26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) MESAVERDE	7072	8771	7072 TO 8771	0.360	168	OPEN
B)						
C)						
D)						

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

Depth Interval	Amount and Type of Material
7072 TO 8771	PUMP 7741 BBLS SLICKWATER AND 152,255 LBS 30/50 MESH SAND

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
12/20/2013	12/27/2013	24	→	0.0	2447.0	0.0			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 1440	1855.0	→	0	2447	0		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 #232161 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

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 BIRD'S NEST MAHOGANY WASATCH MESAVERDE	1088 1346 1987 4337 6703

32. Additional remarks (include plugging procedure):

The first 200 ft. of the surface hole was drilled with a 12 ? in. bit. The remainder of surface hole was drilled with an 11 in. bit. DQX csg was run from surface to 4914 ft.; LTC csg was run from 4914 ft. to 8844 ft. Attached is the chronological well history, perforation report & final survey.

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 #232161 Verified by the BLM Well Information System.  
For KERR-MCGEE OIL AND GAS ONSHORE, sent to the Vernal**

Name (please print) KAY KELLY Title SR STAFF REGULATORY SPECIALIST

Signature (Electronic Submission) Date 01/15/2014

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

**\*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\***

RECEIVED: Jan. 15, 2014

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 1022-3L4BS BLUE				Spud Date: 9/12/2013					
Project: UTAH-UINTAH			Site: NBU 1022-03L PAD			Rig Name No: SST 57/57, CAPSTAR 310/310			
Event: DRILLING			Start Date: 9/2/2013			End Date: 10/25/2013			
Active Datum: RKB @5,136.00usft (above Mean Sea Level)				UWI: NW/SW/0/10/S/22/E/3/0/0/26/PM/S/2085/W/0/617/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation	
9/11/2013	20:00 - 0:00	4.00	MIRU	01	A	P	58	RIG DOWN AND PREPARE FOR TRUCKS	
9/12/2013	0:00 - 7:00	7.00	MIRU	21	C	P	58	WAIT ON DAYLIGHT TO MOVE RIG / RIG CREW WENT THROUGH BOTH PUMPS & CHANGED OUT HYDRAULIC BOOM PUMP	
	7:00 - 12:00	5.00	MIRU	01	A	P	58	PRE JOB SAFETY MEETING WITH RIG CREW, HOWCRAFT DRIVERS, STALLION CREW, CLEAN HARBORS CREW. MOVE RIG 1.2 MILES TO THE NBU 1022-3L4BS / MOVE IN & RIG UP CAMPS, SET MATTING BOARDS, PIPE RANGLER, SUB, DOG HOUSE, DERRICK, AND BACK YARD / HOWCRAFT FIELD SERVICES HAD 5 TRUCKS, 1 PUSHER, AND 1 SWAMPER, 7 TOTAL HANDS / STALLION HAD 1 TRUCK AND 2 SERVICE PICKUPS, 4 TOTAL HANDS. CONDITIONS WERE MUDDY & SLICK.	
	12:00 - 16:30	4.50	MIRU	01	B	P	58	RIG UP MUFFLER TANK AND CLOSED LOOP SYSTEM / WELD EXTRA OUTLETS ON MUD SYSTEM / RIG UP FLOOR & SET BHA ON PIPE RACKS	
	16:30 - 18:30	2.00	MIRU	01	B	P	58	WELD UP CONDUCTOR PIPE AND NIPPLE UP ROTATING HEAD / HOOK UP FLOW LINE	
	18:30 - 19:00	0.50	DRLSUR	23		P		PRESPUD SAFETY MEETING WITH RIG CREW, CLEAN HARBORS CREW, AND SCIENTIFIC CREW / REVIEW DIRECTIONAL PLANS WITH DIRECTIONAL DRILLERS	
	19:00 - 19:30	0.50	DRLSUR	06	A	P	58	PICK UP 12 1/4" BIT AND 8" MUD MOTOR / INSTALL ROTATING RUBBER AND TRIP IN HOLE	
	19:30 - 20:00	0.50	DRLSUR	08	A	Z	58	*** FAILURE: WORK ON AUTO DRILLER	
	20:00 - 22:00	2.00	DRLSUR	02	B	P	58	DRILL 12 1/4 SURFACE HOLE F/49' TO 200', 151' @ 75.5 FPH WAIT ON BIT = 8 TO 12K ROTARY RPM = 65 / MUD MOTOR RPM = 95 / TOTAL = 166 PUMPING 560 GPM @ 190 SPM TORQUE ON/OFF = 2000/740 PU = 30 / SO = 28 / ROT = 28 PEAK ON LINE MUD WT 8.4 NO HOLE ISSUES	
	22:00 - 23:00	1.00	DRLSUR	06	A	P	209	TRIP OUT OF HOLE / LAY DOWN 12 1/4" BIT	
	23:00 - 0:00	1.00	DRLSUR	06	A	P	209	PICK UP 11" BIT AND DIRECTIONAL ASSEMBLY / SCRIBE MOTOR & TRIP IN HOLE	
9/13/2013	0:00 - 1:00	1.00	DRLSUR	06	A	P	209	PICK UP 11" BIT AND DIRECTIONAL ASSEMBLY / SCRIBE MOTOR & TRIP IN HOLE	

## Operation Summary Report

Well: NBU 1022-3L4BS BLUE

Spud Date: 9/12/2013

Project: UTAH-UINTAH

Site: NBU 1022-03L PAD

Rig Name No: SST 57/57, CAPSTAR 310/310

Event: DRILLING

Start Date: 9/2/2013

End Date: 10/25/2013

Active Datum: RKB @5,136.00usft (above Mean Sea Level)

UWI: NW/SW/0/10/S/22/E/3/0/0/26/PM/S/2085/W/0/617/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	1:00 - 3:00	2.00	DRLSUR	02	B	P	209	DRILL 11" SURFACE HOLE F/ 200' TO 378', 178' @ 89 FPH WOB = 15 TO 20K ROTARY RPM = 60 / MUD MOTOR RPM = 101 / TOTAL = 169 PUMPING 594 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 1060/810 TORQUE ON/OFF = 2420/850 PU = 55 / SO = 38 / ROT = 42 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 32' = 18.18% 1.77' HIGH & 0.50' RIGHT OF THE LINE NO HOLE ISSUES
	3:00 - 4:00	1.00	DRLSUR	07	C	P	387	CHANGE OUT ROTATING RUBBERS FROM 6" TO 4"
	4:00 - 6:00	2.00	DRLSUR	02	B	P	387	DRILL 11" SURFACE HOLE F/ 378' TO 629', 251' @ 125.5 FPH WOB = 15 TO 20K ROTARY RPM = 60 / MUD MOTOR RPM = 101 / TOTAL = 169 PUMPING 594 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 1060/810 TORQUE ON/OFF = 2,520/1,000 PU = 58 / SO = 40 / ROT = 45 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 22' = 9.05% 6.40' HIGH & 1.65' LEFT OF THE LINE NO HOLE ISSUES
	6:00 - 14:00	8.00	DRLSUR	02	B	P	638	DRILL 11" SURFACE HOLE F/ 629' TO 1,634', 1,005' @ 125.6 FPH WOB = 15 TO 20K ROTARY RPM = 60 / MUD MOTOR RPM = 101 / TOTAL = 169 PUMPING 594 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 1,2500/1,000 TORQUE ON/OFF = 2,730/1,180 PU = 65 / SO = 53 / ROT = 58 PEAK ON LINE ARCHER ON LINE @ 1,288' WITH 500 CFM MUD WT 8.4 SLID 63' = 6.10% 7.56' HIGH & 1.69' RIGHT OF THE LINE HOLE ISSUES = LOSS CIRCULATION @ 1,288'
	14:00 - 14:30	0.50	DRLSUR	07	A	P	1643	RIG SERVICE

## Operation Summary Report

Well: NBU 1022-3L4BS BLUE

Spud Date: 9/12/2013

Project: UTAH-UINTAH

Site: NBU 1022-03L PAD

Rig Name No: SST 57/57, CAPSTAR 310/310

Event: DRILLING

Start Date: 9/2/2013

End Date: 10/25/2013

Active Datum: RKB @5,136.00usft (above Mean Sea Level)

UWI: NW/SW/0/10/S/22/E/3/0/0/26/PM/S/2085/W/0/617/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	14:30 - 22:30	8.00	DRLSUR	02	B	P	1643	DRILL 11" SURFACE HOLE F/ 1,634' TO 2,310', 676' @ 84.5 FPH WOB = 15 TO 20K ROTARY RPM = 60 / MUD MOTOR RPM = 80 / TOTAL = 140 PUMPING 416 GPM @ 140 SPM STAND PIPE PRESSURE ON/OFF = 1,150/950 TORQUE ON/OFF = 2,830/1,250 PU = 88 / SO = 75 / ROT = 80 PEAK ON LINE ARCHER ON LINE WITH 250 CFM MUD WT 8.4 SLID 58' = 9.70% 3.0' HIGH & 0.19' RIGHT OF THE LINE HOLE ISSUES = LOSS CIRCULATION @ 1,288'
	22:30 - 23:00	0.50	DRLSUR	08	A	Z	2319	*** FAILURE: REPLACE AIR BOOT ON SUCTION PIPE TO CLEAN HARBOR'S FEED PUMP
	23:00 - 0:00	1.00	DRLSUR	02	B	P	2319	DRILL 11" SURFACE HOLE F/ 2,310' TO 2,383', 73' @ 73 FPH WOB = 15 TO 20K ROTARY RPM = 60 / MUD MOTOR RPM = 82 / TOTAL = 142 PUMPING 416 GPM @ 140 SPM STAND PIPE PRESSURE ON/OFF = 1,150/950 TORQUE ON/OFF = 2,830/1,250 PU = 88 / SO = 75 / ROT = 80 PEAK ON LINE ARCHER ON LINE WITH 300 CFM MUD WT 8.4 SLID 0' = 0% 3.0' HIGH & 0.19' RIGHT OF THE LINE HOLE ISSUES = LOSS CIRCULATION @ 1,288'
9/14/2013	0:00 - 1:30	1.50	DRLSUR	02	B	P	2392	DRILL 11" SURFACE HOLE F/ 2,383' TO 2,466', 83' @ 55.3 FPH WOB = 15 TO 20K ROTARY RPM = 60 / MUD MOTOR RPM = 82 / TOTAL = 142 PUMPING 416 GPM @ 140 SPM STAND PIPE PRESSURE ON/OFF = 1,150/950 TORQUE ON/OFF = 2,830/1,250 PU = 91 / SO = 75 / ROT = 80 PEAK ON LINE ARCHER ON LINE WITH 300 CFM MUD WT 8.4 SLID 0' = 0% 1.69' HIGH & 1.30' LEFT OF THE LINE HOLE ISSUES = LOSS CIRCULATION @ 1,288'
	1:30 - 3:30	2.00	DRLSUR	05	A	P	2475	CIRCULATE AND CONDITION HOLE, WHILE RECIPRICATING PIPE / PUMPING 416 GPM @ 140 SPM WITH 550 CFM AIR / RETURNS CLEAN COMING OVER SHAKER / 3 - 400 BBL UPRIGHTS FULL / 3 - 400 BBL UPRIGHTS EMPTY / SPOT 130 BBL 10.5 # MUD ON BOTTOM
	3:30 - 7:00	3.50	DRLSUR	06	D	P	2475	LAY DOWN DRILL PIPE AND BHA

Operation Summary Report

Well: NBU 1022-3L4BS BLUE		Spud Date: 9/12/2013	
Project: UTAH-UINTAH		Site: NBU 1022-03L PAD	Rig Name No: SST 57/57, CAPSTAR 310/310
Event: DRILLING		Start Date: 9/2/2013	End Date: 10/25/2013
Active Datum: RKB @5,136.00usft (above Mean Sea Level)		UWI: NW/SW/0/10/S/22/E/3/0/0/26/PM/S/2085/W/0/617/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:00 - 9:30	2.50	CSGSUR	12	C	P	2475	PREJOB SAFETY MEETING WITH RIG CREW. RAN 55 JTS (2,438.11') OF 8 5/8", 28#, J-55, LT&C CASING WITH CTE FLOAT GUIDE SHOE AND BAFFLE PLATE LOCATED 1 JOINT ABOVE THE SHOE. 5 CENTRALIZERS SPACED 10' ABOVE THE SHOE, 2ND & 3RD COLLARS, AND EVERY THIRD COLLAR TO 2,079'. LANDED CASING SHOE AT 2,436'. BAFFLE PLATE @ 2,390'
	9:30 - 10:00	0.50	CSGSUR	05	D	P	2475	CIRCULATE CASING WITH RIG PUMP
	10:00 - 12:30	2.50	CSGSUR	12	E	P	2475	PREJOB SAFETY WITH PRO PETRO CEMENTERS & RIG CREW. RAN 200' OF 1" PIPE DOWN BACKSIDE OF CASING TESTED LINES TO 1500 PSI PUMPED 142 BBLs FRESH WATER CLEARING SHOE MIXED AND PUMPED 20 BBL GELLED WATER FLUSH AHEAD OF CEMENT MIXED AND PUMPED 300 SX OF PREMIUM CEMENT WITH 2% CACL2 & 1/4 LB/SX FLOCELE. 61.4 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. DROP PLUG ON FLY. DISPLACE WITH 149.1 BBL FRESH WATER. NO RETURNS THROUGHOUT JOB. FINAL LIFT OF 310 PSI @ 2.5 BBL/MINUTE. BUMP PLUG WITH 650 PSI. HELD 650 PSI FOR 5 MINUTES. CHECK FLOAT. FLOAT HELD. TOP JOB # 1: PUMP CEMENT DOWN 1" PIPE WITH 150 SX PREMIUM CEMENT WITH 4% CACL2, 2% GR-3, & 1/4 LB/SX FLOCELE. 30.7 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. NO RETURNS NIPPLE DOWN CONDUCTOR PIPE AND CUT OFF CASING  RELEASE RIG @ 12:30, 9/14/2013  WAIT ON CEMENT 2 HRS TOP JOB # 2: CEMENT DOWN BACK SIDE WITH 150 SX PREMIUM CEMENT WITH 4% CACL2, 2% GR-3, & 1/4 LB/SX FLOCELE. 30.7 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. NO RETURNS WAIT ON CEMENT 2 HRS TOP JOB # 3: CEMENT DOWN BACK SIDE WITH 200 SX PREMIUM CEMENT WITH 4% CACL2, 2% GR-3, & 1/4 LB/SX FLOCELE. 40.9 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. NO RETURNS WAIT ON CEMENT 2 RS TOP JOB # 4: CEMENT DOWN BACK SIDE WITH 100 SX PREMIUM CEMENT WITH 4% CACL2, 2% GR-3, & 1/4 LB/SX FLOCELE. 20.4 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. NO RETURNS JOB FINISHED @ 18:00, 9/14/2013.

## Operation Summary Report

Well: NBU 1022-3L4BS BLUE

Spud Date: 9/12/2013

Project: UTAH-UINTAH

Site: NBU 1022-03L PAD

Rig Name No: SST 57/57, CAPSTAR 310/310

Event: DRILLING

Start Date: 9/2/2013

End Date: 10/25/2013

Active Datum: RKB @5,136.00usft (above Mean Sea Level)

UWI: NW/SW/0/10/S/22/E/3/0/0/26/PM/S/2085/W/0/617/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/20/2013	11:00 - 12:00	1.00	MIRU3	01	C	P		RIG DOWN - SKID RIG - RIG UP
	12:00 - 13:30	1.50	MIRU3	14	A	P		NIPPLE UP BOP'S - CHOKE & KILL LINES / ROTATING HEAD - CHANGE BALES & ELEVATORS
	13:30 - 17:00	3.50	MIRU3	15	A	P		HOLD SAFETY MEETING, RUN TEST ASSY, TEST BOP WITH A-1 TESTERS - TEST ANNULAR TO 250 PSI LOW/ 5 MINUTES 2,500 PSI HIGH 10 MINUTES, PIPE & BLIND RAMS, FLOOR VALVES, IBOP, HCR VALVE, KILL LINE VALVES, TEST BOP'S, CHOKE MANIFOLD TO 250 PSI LOW/ 5 MINUTES - 5,000 PSI HIGH 10 MINUTES, HOLD ACCUMULATOR FUNCTION TEST, TEST CASING @ 1,500 PSI FOR 30 MINUTES, RIG DOWN (DURING B.O.P. TEST) VERIFY ALL TOOLS AND BACK UP TOOLS ARE ON LOCATION, CHECK AND DOCUMENT ALL OUTER DIAMETER'S AND INNER DIAMETER'S ON DOWN HOLE EQUIPMENT
	17:00 - 17:30	0.50	MIRU3	14	B	P		INSTALL WEAR BUSHING, REVIEW DIRECTIONAL PLANS AND PLATS AND VERIFY LAT/LONGS AND WELL ORDER PRIOR TO SPUD, VERIFY DIRECTIONAL DRILLERS PLAN IS THE MOST RECENT AND APPROVED VERSION, REFERENCE WELLBORE DIAGRAMS FOR EXACT CASING DESIGN AND GENERAL OVERVIEW OF WELLBORE.
	17:30 - 18:00	0.50	MIRU3	06	J	P		PICK UP HUNTING 6 1/2", 1.5 BEND, HR, 7/8 LOBE, 3.5 STAGE 0.22 RPG MUD MOTOR, ( SER #6009) MAKE UP SMITH MDI616 PDC BIT, DRESSED WITH 6 X 15 JETS, (TFA = 1.035), SER #JH4431 INSTALL MWD TOOL, ORIENT & SCRIBE TOOLS
	18:00 - 19:00	1.00	MIRU3	06	A	P		TRIP IN HOLE TO TOP OF CEMENT @ 2,335' INSTALL ROTATING RUBBER
	19:00 - 20:00	1.00	DRLPRC	02	F	P	2335	SPUD @ 10/20/2013 19:00 DRILL CEMENT, BAFFLE, & FLOAT EQUIPMENT, CLEAN OUT TO 2,475' DRILLED 140' OF CEMENT
	20:00 - 0:00	4.00	DRLPRC	02	B	P	2475	DIRECTIONAL DRILL FROM/2,475' TO/3,035' = 560' = 140' PER HOUR 18-24K WEIGHT ON BIT 105 STROKES PER MINUTE = 515 GALLONS PER MINUTE MOTOR = 108 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=148-168 4-8K FT/LBS TORQUE 1500 PSI ON BOTTOM - 1000 PSI OFF BOTTOM PICK UP = 130K - SLACK OFF = 80K - ROTATING = 110K DRAG-20K HOLE IN GOOD SHAPE SLIDE 5.2% OF TIME & 10% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 8.5 - VISCOSITY = 27

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-3L4BS BLUE		Spud Date: 9/12/2013	
Project: UTAH-UINTAH		Site: NBU 1022-03L PAD	Rig Name No: SST 57/57, CAPSTAR 310/310
Event: DRILLING		Start Date: 9/2/2013	End Date: 10/25/2013
Active Datum: RKB @5,136.00usft (above Mean Sea Level)		UWI: NW/SW/0/10/S/22/E/3/0/0/26/PM/S/2085/W/0/617/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/21/2013	0:00 - 5:30	5.50	DRLPRC	02	B	P	3035	DIRECTIONAL DRILL FROM/3,035' TO/3,879' = 844' = 153' PER HOUR 18-24K WEIGHT ON BIT 105 STROKES PER MINUTE = 515 GALLONS PER MINUTE MOTOR = 108 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=148-168 4-8K FT/LBS TORQUE 1500 PSI ON BOTTOM - 1000 PSI OFF BOTTOM PICK UP = 130K - SLACK OFF = 80K - ROTATING = 110K DRAG-20K HOLE IN GOOD SHAPE SLIDE 5.2% OF TIME & 10% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 8.5 - VISCOSITY = 27
	5:30 - 7:30	2.00	DRLPRC	08	A	Z	3879	***FAILURE: RIG EQUIPMENT - (I-BOP) REPLACE I-BOP VALVE ON TOP DRIVE
	7:30 - 12:30	5.00	DRLPRV	02	B	P	3879	DIRECTIONAL DRILL FROM/3,879' TO/4,636' = 757' = 151' PER HOUR 18-24K WEIGHT ON BIT 105 STROKES PER MINUTE = 515 GALLONS PER MINUTE MOTOR = 108 RPM, 40-70 RPM ON TOP DRIVE, TOTAL RPM=148-168 6-10K FT/LBS TORQUE 1800 PSI ON BOTTOM - 1400 PSI OFF BOTTOM PICK UP = 160K - SLACK OFF = 110K - ROTATING = 140K DRAG-20K HOLE IN GOOD SHAPE SLIDE 3% OF TIME & 6% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 8.8 - VISCOSITY = 30
	12:30 - 16:00	3.50	DRLPRV	08	A	Z	4636	***FAILURE: RIG EQUIPMENT - (SWIVEL PACKING) REMOVE AND REPLACE SWIVEL PACKING.
	16:00 - 0:00	8.00	DRLPRV	02	B	P	4636	DIRECTIONAL DRILL FROM/4,636' TO/5,596' = 960' = 120' PER HOUR 18-24K WEIGHT ON BIT 105 STROKES PER MINUTE = 515 GALLONS PER MINUTE MOTOR = 108 RPM, 40-70 RPM ON TOP DRIVE, TOTAL RPM=148-168 6-10K FT/LBS TORQUE 1800 PSI ON BOTTOM - 1400 PSI OFF BOTTOM PICK UP = 160K - SLACK OFF = 130K - ROTATING = 150K DRAG-10K HOLE IN GOOD SHAPE SLIDE 0% OF TIME & 0% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 8.8 - VISCOSITY = 30

Operation Summary Report

Well: NBU 1022-3L4BS BLUE		Spud Date: 9/12/2013	
Project: UTAH-UINTAH		Site: NBU 1022-03L PAD	Rig Name No: SST 57/57, CAPSTAR 310/310
Event: DRILLING		Start Date: 9/2/2013	End Date: 10/25/2013
Active Datum: RKB @5,136.00usft (above Mean Sea Level)		UWI: NW/SW/0/10/S/22/E/3/0/0/26/PM/S/2085/W/0/617/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/22/2013	0:00 - 6:00	6.00	DRLPRV	02	B	P	5596	DIRECTIONAL DRILL FROM/5,596' TO/6,154' = 558' = 93' PER HOUR 18-24K WEIGHT ON BIT 105 STROKES PER MINUTE = 515 GALLONS PER MINUTE MOTOR = 108 RPM, 40-70 RPM ON TOP DRIVE, TOTAL RPM=148-168 6-10K FT/LBS TORQUE 1800 PSI ON BOTTOM - 1400 PSI OFF BOTTOM PICK UP = 160K - SLACK OFF = 130K - ROTATING = 150K DRAG-10K HOLE IN GOOD SHAPE SLIDE 0% OF TIME & 0% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 8.8 - VISCOSITY = 30
	6:00 - 12:00	6.00	DRLPRV	02	B	P	6154	DIRECTIONAL DRILL FROM/6,154' TO/6,844' = 690' = 115' PER HOUR 18-24K WEIGHT ON BIT 105 STROKES PER MINUTE = 515 GALLONS PER MINUTE MOTOR = 108 RPM, 40-70 RPM ON TOP DRIVE, TOTAL RPM=148-168 10-12K FT/LBS TORQUE 2000 PSI ON BOTTOM - 1600 PSI OFF BOTTOM PICK UP = 180K - SLACK OFF = 50K - ROTATING = 170K DRAG-10K HOLE IN GOOD SHAPE SLIDE 1.9% OF TIME & 3% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 9.2 - VISCOSITY = 32
	12:00 - 15:00	3.00	DRLPRV	02	B	P	6844	DIRECTIONAL DRILL FROM/6,844' TO/7,105' = 261' = 87' PER HOUR 18-24K WEIGHT ON BIT 105 STROKES PER MINUTE = 515 GALLONS PER MINUTE MOTOR = 108 RPM, 40-70 RPM ON TOP DRIVE, TOTAL RPM=148-168 10-12K FT/LBS TORQUE 2000 PSI ON BOTTOM - 1600 PSI OFF BOTTOM PICK UP = 180K - SLACK OFF = 150K - ROTATING = 170K DRAG-10K HOLE IN GOOD SHAPE SLIDE 2.9% OF TIME & 5% OF FOOTAGE BOS DEWATERING - LOST POWER TO BOTH CENTRIFUGES AND HAVE AN ELECTRICIAN ON THE WAY CENTRIFUGE - DOWN MUD CLEANER - RUNNING MUD WEIGHT = 9.3 - VISCOSITY = 34

Operation Summary Report

Well: NBU 1022-3L4BS BLUE		Spud Date: 9/12/2013	
Project: UTAH-UINTAH		Site: NBU 1022-03L PAD	Rig Name No: SST 57/57, CAPSTAR 310/310
Event: DRILLING		Start Date: 9/2/2013	End Date: 10/25/2013
Active Datum: RKB @5,136.00usft (above Mean Sea Level)		UWI: NW/SW/0/10/S/22/E/3/0/0/26/PM/S/2085/W/0/617/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	15:00 - 15:30	0.50	DRLPRV	07	A	P	7105	RIG SERVICE, SERVICE TOP DRIVE, SERVICE DRAW WORKS, CHECK BRAKES AND ADJUST, SERVICE CROWN.
	15:30 - 0:00	8.50	DRLPRV	02	B	P	7105	DIRECTIONAL DRILL FROM/7,105' TO/7,873' = 768' = 90' PER HOUR 18-24K WEIGHT ON BIT 105 STROKES PER MINUTE = 515 GALLONS PER MINUTE MOTOR = 108 RPM, 40-70 RPM ON TOP DRIVE, TOTAL RPM=148-168 10-12K FT/LBS TORQUE 2200 PSI ON BOTTOM - 1800 PSI OFF BOTTOM PICK UP = 200K - SLACK OFF = 160K - ROTATING = 180K DRAG-20K HOLE IN GOOD SHAPE SLIDE 5.6% OF TIME & 8% OF FOOTAGE BOS DEWATERING - LOST POWER TO BOTH CENTRIFUGES AND HAVE AN ELECTRICIAN ON THE WAY CENTRIFUGE - DOWN MUD CLEANER - RUNNING MUD WEIGHT = 9.4 - VISCOSITY = 34
10/23/2013	0:00 - 6:00	6.00	DRLPRV	02	B	P	7873	DIRECTIONAL DRILL FROM/7,873' TO/8,342' = 469' = 78' PER HOUR 18-24K WEIGHT ON BIT 105 STROKES PER MINUTE = 515 GALLONS PER MINUTE MOTOR = 108 RPM, 40-70 RPM ON TOP DRIVE, TOTAL RPM=148-168 10-12K FT/LBS TORQUE 2200 PSI ON BOTTOM - 1800 PSI OFF BOTTOM PICK UP = 200K - SLACK OFF = 160K - ROTATING = 180K DRAG-20K HOLE IN GOOD SHAPE SLIDE 0% OF TIME & 0% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 9.4 - VISCOSITY = 34

## Operation Summary Report

Well: NBU 1022-3L4BS BLUE

Spud Date: 9/12/2013

Project: UTAH-UINTAH

Site: NBU 1022-03L PAD

Rig Name No: SST 57/57, CAPSTAR 310/310

Event: DRILLING

Start Date: 9/2/2013

End Date: 10/25/2013

Active Datum: RKB @5,136.00usft (above Mean Sea Level)

UWI: NW/SW/0/10/S/22/E/3/0/0/26/PM/S/2085/W/0/617/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:00 - 14:30	8.50	DRLPRV	02	B	P	8342	DIRECTIONAL DRILL FROM/8,342' TO/8818' = 476' = 56' PER HOUR 18-24K WEIGHT ON BIT 105 STROKES PER MINUTE = 515 GALLONS PER MINUTE MOTOR = 108 RPM, 40-70 RPM ON TOP DRIVE, TOTAL RPM=148-168 10-12K FT/LBS TORQUE 2650 PSI ON BOTTOM - 2300 PSI OFF BOTTOM PICK UP = 230K - SLACK OFF = 150K - ROTATING = 175K DRAG-55K HOLE IN GOOD SHAPE SLIDE 0% OF TIME & 0% OF FOOTAGE BOS DEWATERING - OFF CENTRIFUGE - OFF MUD CLEANER - RUNNING MUD WEIGHT = 11.7 - VISCOSITY = 38 TRANSFER HEAVY MUD @ 8400'
	14:30 - 15:00	0.50	DRLPRV	07	A	P		LUBRICATE RIG
	15:00 - 15:30	0.50	DRLPRV	02	B	P	8818	DIRECTIONAL DRILL FROM/8818' TO/8860' = 42' = 84' PER HOUR 18-24K WEIGHT ON BIT 105 STROKES PER MINUTE = 515 GALLONS PER MINUTE MOTOR = 108 RPM, 40-70 RPM ON TOP DRIVE, TOTAL RPM=148-168 10-12K FT/LBS TORQUE 2650 PSI ON BOTTOM - 2300 PSI OFF BOTTOM PICK UP = 230K - SLACK OFF = 150K - ROTATING = 175K DRAG-55K HOLE IN GOOD SHAPE SLIDE 0% OF TIME & 0% OF FOOTAGE BOS DEWATERING - OFF CENTRIFUGE - OFF MUD CLEANER - RUNNING MUD WEIGHT = 11.7 - VISCOSITY = 38
	15:30 - 17:00	1.50	DRLPRV	05	A	P		CONDITION MUD & CIRCULATE, WORKING DRILL STRING UP AND DOWN, MUD IN 11.8 PPG VISCOSITY=38, MUD OUT 11.8 PPG VISCOSITY=38, MUD COMING OVER SHAKERS IS CLEAN, BUILD 40 BBL 13.8# DRY JOB CIRCULATE WITH NO GAINS AND NO LOSSES NO FLOW ON FLOW CHECKS
	17:00 - 21:30	4.50	DRLPRV	06	E	P		WIPER TRIP, PUMP 40 BBL DRY JOB, BLOW DOWN TOP DRIVE, TIGHT HOLE @ 5090',-4743' - BACKREAM THROUGH - TRIP OUT TO SURFACE CASING SHOE, HOLE TOOK PROPER FILL WITH NO GAINS NO LOSSES NO FLOW ON FLOW CHECKS
	21:30 - 0:00	2.50	DRLPRV	06	E	P		TRIP IN HOLE - BREAK CIRCULATION @ SHOE @ 6000' - WASH LAST 500' TO BTM
10/24/2013	0:00 - 0:30	0.50	DRLPRV	06	E	P		TRIP IN HOLE - WASH DOWN LAST 500' TO BTM

## Operation Summary Report

Well: NBU 1022-3L4BS BLUE

Spud Date: 9/12/2013

Project: UTAH-UINTAH

Site: NBU 1022-03L PAD

Rig Name No: SST 57/57, CAPSTAR 310/310

Event: DRILLING

Start Date: 9/2/2013

End Date: 10/25/2013

Active Datum: RKB @5,136.00usft (above Mean Sea Level)

UWI: NW/SW/0/10/S/22/E/3/0/0/26/PM/S/2085/W/0/617/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	0:30 - 2:30	2.00	DRLPRV	05	A	P		CONDITION MUD & CIRCULATE - PUMP HIGH VIS LCM SWEEP AROUND - CIRCULATE @ 490 GPM WITH 2400 PSI - BUILD PILL
	2:30 - 6:30	4.00	DRLPRV	06	A	P		TRIP OUT OF HOLE FOR LOGS - LAY DOWN MWD TOOLS & MUD MOTOR - HOLE IN GOOD SHAPE
	6:30 - 7:00	0.50	DRLPRV	14	B	P		PULL WEAR BUSHING
	7:00 - 12:00	5.00	EVALPR	11	D	P		HOLD SAFETY MEETING WITH HALLIBURTON - RIG UP & RUN TRIPLE COMBO LOGS - LOGGERS TD = 8846' - TIGHT SPOT WHILE LOGGING OUT @ 8600'
	12:00 - 13:00	1.00	DRLPRV	12	A	P		HOLD SAFETY MEETING WITH WYOMING CASING - RIG UP CASING CREW & LAYDOWN TRUCK TO RUN 4 1/2 CASING
	13:00 - 18:00	5.00	CSGPRO	12	C	P		RAN 88 JTS + MARKER JT 4 1/2", 11.6# 180, LT&C CASING + 111 JTS + CROSSOVER + PUP JT, 4 1/2", 11.6#, 180/ DQX CASING, SHOE AT 8843.73', TOP FLOAT COLLAR AT 8796.69', RAN 15 CENT'S - TOP OF MESEVERDE MK JT 6700.72'
	18:00 - 19:30	1.50	CSGPRO	05	D	P		CIRCULATE / RIG DOWN WYOMING CASING SERVICE CASING TOOLS / RIG UP BAKER CEMENTING EQUIPMENT - CIRCULATE @ 105 SPM = 500 GPM @ 1050 PSI
	19:30 - 22:30	3.00	CSGPRO	21	E	Z		WAIT ON BAKER BULK CEMENT TRUCK
	22:30 - 0:00	1.50	CSGPRO	12	E	P		CEMENT W/ BAKER - HOLD SAFETY MEETING - TEST LINES TO 4700 PSI - PUMP 25 BBLs WATER SPACER - 165 BBLs LEAD CEMENT 468 SKS @ 12.5 PPG W/ 1.98 YIELD, MIX & PUMP 254 BBLs TAIL CEMENT 1080 SKS @ 14.3 PPG W/ 1.32 YIELD - WASH UP LINES - DISPLACE W/ 136.3 BBLs WATER - BUMP PLUG TO 2500 PSI - HAD 2000 PSI LIFT PRESSURE PRIOR TO BUMP PLUG / LOST RETURNS WHEN STARTING TO PUMP CEMENT - REGAINED RETURNS 156 BBLs INTO TAIL CEMENT - HAD RETURNS WHILE DISPLACING CEMENT - DID NOT GET SPACER BACK TO SURFACE - RIG DOWN CEMENTERS
10/25/2013	0:00 - 1:30	1.50	CSGPRO	12	E	P		CEMENT W/ BAKER - HOLD SAFETY MEETING - TEST LINES TO 4700 PSI - PUMP 25 BBLs WATER SPACER - 165 BBLs LEAD CEMENT 468 SKS @ 12.5 PPG W/ 1.98 YIELD, MIX & PUMP 254 BBLs TAIL CEMENT 1080 SKS @ 14.3 PPG W/ 1.32 YIELD - WASH UP LINES - DISPLACE W/ 136.3 BBLs WATER - BUMP PLUG TO 2500 PSI - HAD 2000 PSI LIFT PRESSURE PRIOR TO BUMP PLUG / LOST RETURNS WHEN STARTING TO PUMP CEMENT - REGAINED RETURNS 156 BBLs INTO TAIL CEMENT - HAD RETURNS WHILE DISPLACING CEMENT - DID NOT GET SPACER BACK TO SURFACE - RIG DOWN CEMENTERS
	1:30 - 2:30	1.00	CSGPRO	14	A	P		BACK OUT LANDING JT - INSTALL PACKOFF
	2:30 - 3:30	1.00	CSGPRO	14	A	P		NIPPLE DOWN BOP & CLEAN MUD TANKS - RIG RELEASED @ 0330 HRS ON 10/25/2013

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 1022-3L4BS BLUE	Wellbore No.	OH
Well Name	NBU 1022-3L4BS	Wellbore Name	NBU 1022-3L4BS
Report No.	1	Report Date	12/9/2013
Project	UTAH-UINTAH	Site	NBU 1022-03L PAD
Rig Name/No.		Event	COMPLETION
Start Date	12/2/2013	End Date	12/20/2013
Spud Date	9/12/2013	Active Datum	RKB @5,136.00usft (above Mean Sea Level)
UWI	NW/SW/0/10/S/22/E/3/0/0/26/PM/S/2085/W/0/617/0/0		

1.3 General

Contractor		Job Method		Supervisor	
Perforated Assembly		Conveyed Method			

1.4 Initial Conditions

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

1.5 Summary

Gross Interval	7,072.0 (usft)-8,771.0 (usft)	Start Date/Time	12/9/2013 12:00AM
No. of Intervals	46	End Date/Time	12/9/2013 12:00AM
Total Shots	168	Net Perforation Interval	56.00 (usft)
Avg Shot Density	3.00 (shot/ft)	Final Surface Pressure	
		Final Press Date	

2 Intervals

2.1 Perforated Interval

Date	Formation/Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/9/2013 12:00AM	MESAVERDE/			7,072.0	7,073.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/9/2013 12:00AM	MESAVERDE/			7,101.0	7,102.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,111.0	7,112.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,122.0	7,123.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,129.0	7,130.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,224.0	7,225.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,270.0	7,271.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,288.0	7,289.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,360.0	7,361.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,422.0	7,423.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,455.0	7,456.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,475.0	7,476.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,548.0	7,550.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,574.0	7,576.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,661.0	7,662.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,684.0	7,685.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,694.0	7,695.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,703.0	7,704.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,728.0	7,729.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,748.0	7,749.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,756.0	7,757.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,814.0	7,815.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

RECEIVED : Jan. 15, 2014

2.1 Perforated Interval (Continued)

Date	Formation/Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/9/2013 12:00AM	MESAVERDE/			7,846.0	7,847.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,850.0	7,851.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,930.0	7,931.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,959.0	7,960.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			7,990.0	7,992.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			8,081.0	8,083.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			8,106.0	8,107.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			8,114.0	8,115.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			8,126.0	8,127.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			8,151.0	8,152.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			8,155.0	8,156.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			8,180.0	8,181.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			8,204.0	8,205.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			8,237.0	8,238.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			8,310.0	8,311.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			8,390.0	8,391.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			8,435.0	8,437.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			8,480.0	8,482.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			8,518.0	8,520.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			8,560.0	8,561.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			8,620.0	8,621.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

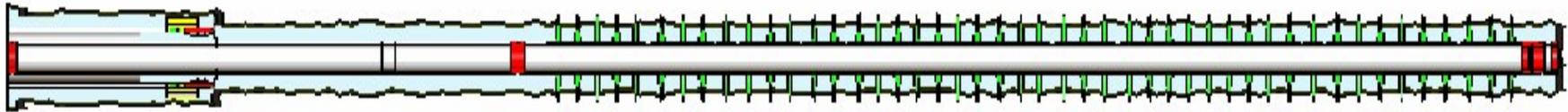
RECEIVED : Jan. 15, 2014

2.1 Perforated Interval (Continued)

Date	Formation/Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/9/2013 12:00AM	MESAVERDE/			8,690.0	8,692.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			8,745.0	8,747.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/9/2013 12:00AM	MESAVERDE/			8,769.0	8,771.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

3 Plots

3.1 Wellbore Schematic



RECEIVED: Jan. 15, 2014

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

Well: NBU 1022-3L4BS BLUE		Spud Date: 9/12/2013	
Project: UTAH-UINTAH		Site: NBU 1022-03L PAD	Rig Name No: MILES-GRAY 1/1
Event: COMPLETION		Start Date: 12/2/2013	End Date: 12/20/2013
Active Datum: RKB @5,136.00usft (above Mean Sea Level)		UWI: NW/SW/0/10/S/22/E/3/0/0/26/PM/S/2085/W/0/617/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
11/12/2013	-							
12/2/2013	8:30 - 9:30	1.00	SUBSPR	52	E	P		0 PSI ON SURFACE , RU HOT OILER FILLED SURFACE WITH 1/2 BBL H2O PRESSURED TO 1200 PSI, BLED DOWN TO 1100. HELD INSTALL POP OFF ASSEMBLY
12/4/2013	12:00 - 13:00	1.00	SUBSPR	52	B	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -51 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI.  PRESSURE TEST 8 5/8 X 4 1/2 TO 1200 PSI HELD FOR 5 MIN LOST -100 PSI, BLED PSI OFF, REINSTALLED POP OFF SWIFN NO PRESSURE ON SURFACE CASING FILLED SURFACE WITH 1/2 BBL H2O
12/6/2013	7:30 - 7:45	0.25	FRAC	48		P		HSM,JSA
	8:00 - 15:00	7.00	FRAC	37	C	P		MIRU CASED HOLE SOLUTIONS PERF 1ST SHOOT AS PER DESIGN W/O FRAC
12/9/2013	6:30 - 6:45	0.25	FRAC	48		P		HSM,JSA
	11:30 - 17:00	5.50	FRAC	36	H	P		REFER TO STIMULATION PJR FOR FLUID, SAND AND CHEMICAL VOLUMES, ALL STAGES WERE PERFORATED ACCORDING TO PERF RECORD IN OPEN WELLS, ALL STAGES WERE STIMULATED TO VENDOR POST JOB REPORT. ALL PLUGS ARE HALIBURTON 8K CBPS  FRAC STG #1] WHP=1743#, BRK DN PERFS=4753#, @=5.5 BPM, INTIAL ISIP=3000#, FG=.78, FINAL ISIP=2663#, FG=.75,  SET PLUG & PERFORATE STG #2
12/10/2013	6:30 - 6:45	0.25	FRAC	48		P		SWIFN W/O FRAC HSM,JSA

## Operation Summary Report

Well: NBU 1022-3L4BS BLUE

Spud Date: 9/12/2013

Project: UTAH-UINTAH

Site: NBU 1022-03L PAD

Rig Name No: MILES-GRAY 1/1

Event: COMPLETION

Start Date: 12/2/2013

End Date: 12/20/2013

Active Datum: RKB @5,136.00usft (above Mean Sea Level)

UWI: NW/SW/0/10/S/22/E/3/0/0/26/PM/S/2085/W/0/617/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:00 - 17:00	10.00	FRAC	36	H	P		FRAC STG #2] WHP=1450#, BRK DN PERFS=3739#, @=3.7 BPM, INTIAL ISIP=2528#, FG=.74, FINAL ISIP=2581#, FG=.75,  SET PLUG & PERFORATE STG #3  FRAC STG #3] WHP=620#, BRK DN PERFS=2471#, @=4.0 BPM, INTIAL ISIP=1793#, FG=.66, FINAL ISIP=2686#, FG=.77,  SET PLUG & PERFORATE STG #4  SWIFN W/O FRAC HSM,JSA
12/11/2013	6:30 - 6:45	0.25	FRAC	48		P		
	7:00 - 17:00	10.00	FRAC	36	H	P		FRAC STG #4] WHP=1677#, BRK DN PERFS=3868#, @=4.0 BPM, INTIAL ISIP=2516#, FG=.70, FINAL ISIP=2391#, FG=.74,  SET PLUG PERFORATE STG #5  FRAC STG #5] WHP=1426#, BRK DN PERFS=3157#, @=4.0 BPM, INTIAL ISIP=1963#, FG=.69, FINAL ISIP=2392#, FG=.75,  SET PLUG AND PERFORATE STG #6  SWIFN W/O FRAC HSM,JSA
12/12/2013	7:15 - 7:30	0.25	FRAC	48		P		
	7:45 - 12:10	4.42	FRAC	36	H	P		FRAC STG #6] WHP=1318#, BRK DN PERFS=3485#, @=4.0 BPM, INTIAL ISIP=2145#, FG=.73, FINAL ISIP=2429#, FG=.76,  SET PLUG AND PERFORATE STG #7  FRAC STG #7] WHP=965#, BRK DN PERFS=2615#, @=4.0 BPM, INTIAL ISIP=1970#, FG=.71, FINAL ISIP=2512#, FG=.79,  SET TOP KILL  TOTAL BBLS=7741 TOTAL SAND=152,255
12/19/2013	7:00 - 7:15	0.25	DRLOUT	48		P		JSA= PU TUBING
	7:15 - 17:00	9.75	DRLOUT	30		P		RD RIG ON 3L1CS MOVE RU ON 3L4BS ND W/H NU BOPS RU FLOOR & TUBING EQUIP TALLY & PU TUBING TAG 1ST CBP @ 7022' PREP TO D/O SIW SDFN
12/20/2013	7:00 - 7:15	0.25	DRLOUT	48		P		JSA=PROPER BOP OPERATING

**Operation Summary Report**

Well: NBU 1022-3L4BS BLUE		Spud Date: 9/12/2013	
Project: UTAH-UINTAH		Site: NBU 1022-03L PAD	Rig Name No: MILES-GRAY 1/1
Event: COMPLETION		Start Date: 12/2/2013	End Date: 12/20/2013
Active Datum: RKB @5,136.00usft (above Mean Sea Level)		UWI: NW/SW/0/10/S/22/E/3/0/0/26/PM/S/2085/W/0/617/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
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7:15 - 17:00 9.75 DRLOUT 30 P EST CIRC TEST BOPS TO 3000 PSI DRILL 1ST CBP

PLUG #1] DRILL THRU HALLI 8K CBP @ 7022' IN 6 MIN W/ 300 PSI INCREASE

PLUG #2] CONTINUE TO RIH TAG SAND @7291' (19' FILL) C/O & DRILL THRU HALLI 8K CBP @ 7310' IN 7 MIN W/ 100 PSI INCREASE

PLUG #3] CONTINUE TO RIH TAG SAND @7597' (9' FILL) C/O & DRILL THRU HALLI 8K CBP @ 7606' IN 7 MIN W/ 100 PSI INCREASE

PLUG #4] CONTINUE TO RIH TAG SAND @7818' (12' FILL) C/O & DRILL THRU HALLI 8K CBP @ 7830' IN 5 MIN W/ 100 PSI INCREASE

PLUG #5] CONTINUE TO RIH TAG SAND @8082' (14' FILL) C/O & DRILL THRU HALLI 8K CBP @ 8096' IN 9 MIN W/ 100 PSI INCREASE

PLUG #6] CONTINUE TO RIH TAG SAND @8242' (18' FILL) C/O & DRILL THRU HALLI 8K CBP @ 8260' IN 6 MIN W/ 200 PSI INCREASE

PLUG #7] CONTINUE TO RIH TAG SAND @8525' (15' FILL) C/O & DRILL THRU HALLI 8K CBP @ 8540' IN 8 MIN W/ 400 PSI INCREASE

PBTD] CONTINUE TO RIH TAG SAND @8777' (20' FILL) C/O TO PBTD @ 8797' CIRC CLEAN POOH LD 17 JNTS LAND TUBING ON HNGR W/ 260 JNTS EOT @ 8260.76' RD FLOOR & TUBING EQUIP ND BOPS NU WELLHEAD DROP BALL NU & TEST FLOW LINE PUMP OFF BIT @ 1200 PSI TURN WELL OVER TO FBC RD RIG SDFW

TUBING DETAIL

K.B.....18.00'  
 HNGR.....83"  
 110 JNTS L-80  
 2-3/8".....3494.58'  
 6' PUP  
 L-80.....6.13'  
 150 JNTS 2-3/8"  
 J-55.....4739.02'  
 POBS.....2.  
 20'  
 EOT@.....8260.  
 76

TOTAL FLUID PMPD.....7741 BBLs  
 RIG RECOVERD.....2500 BBLs  
 LEFT TO RECOVER.....5241 BBLs

API Well Number: 43047504920000

US ROCKIES REGION

Operation Summary Report

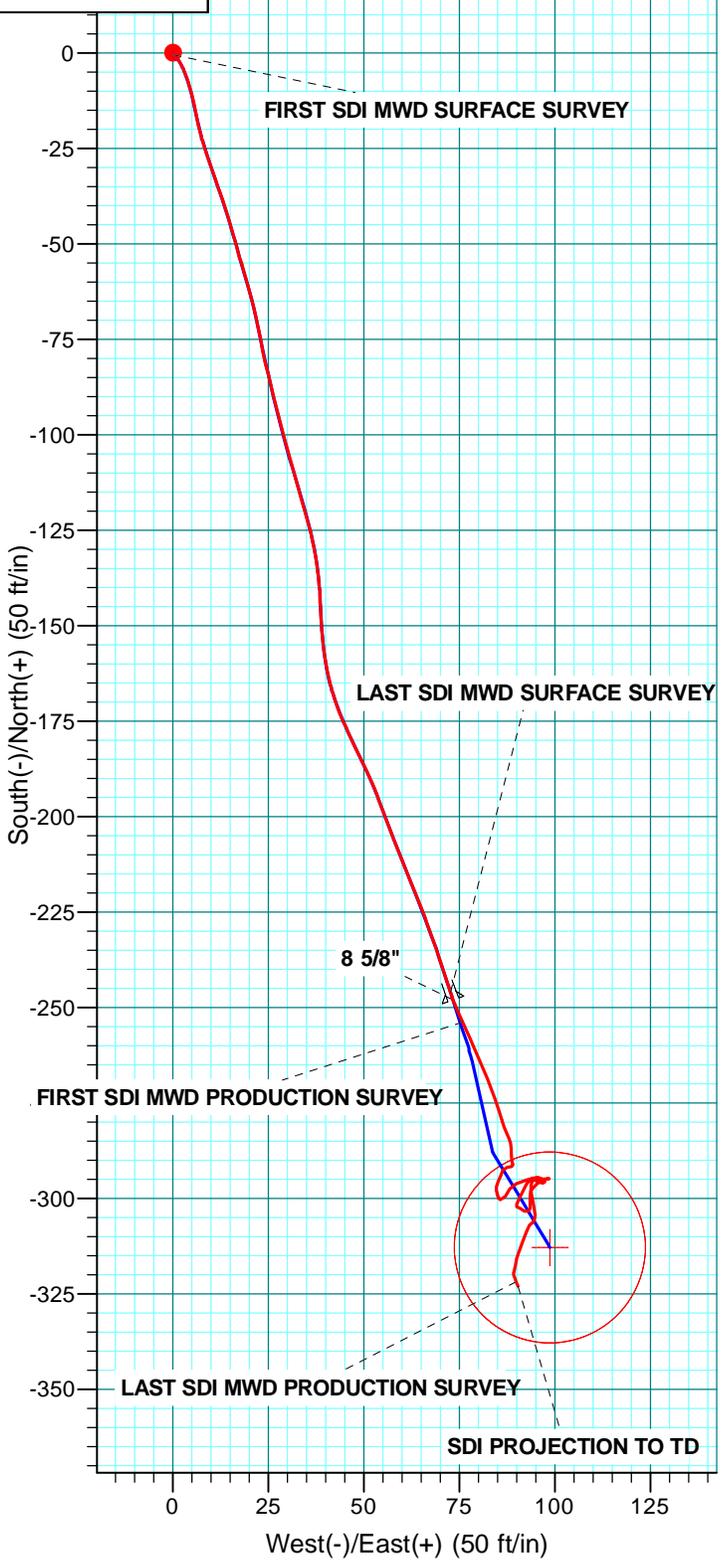
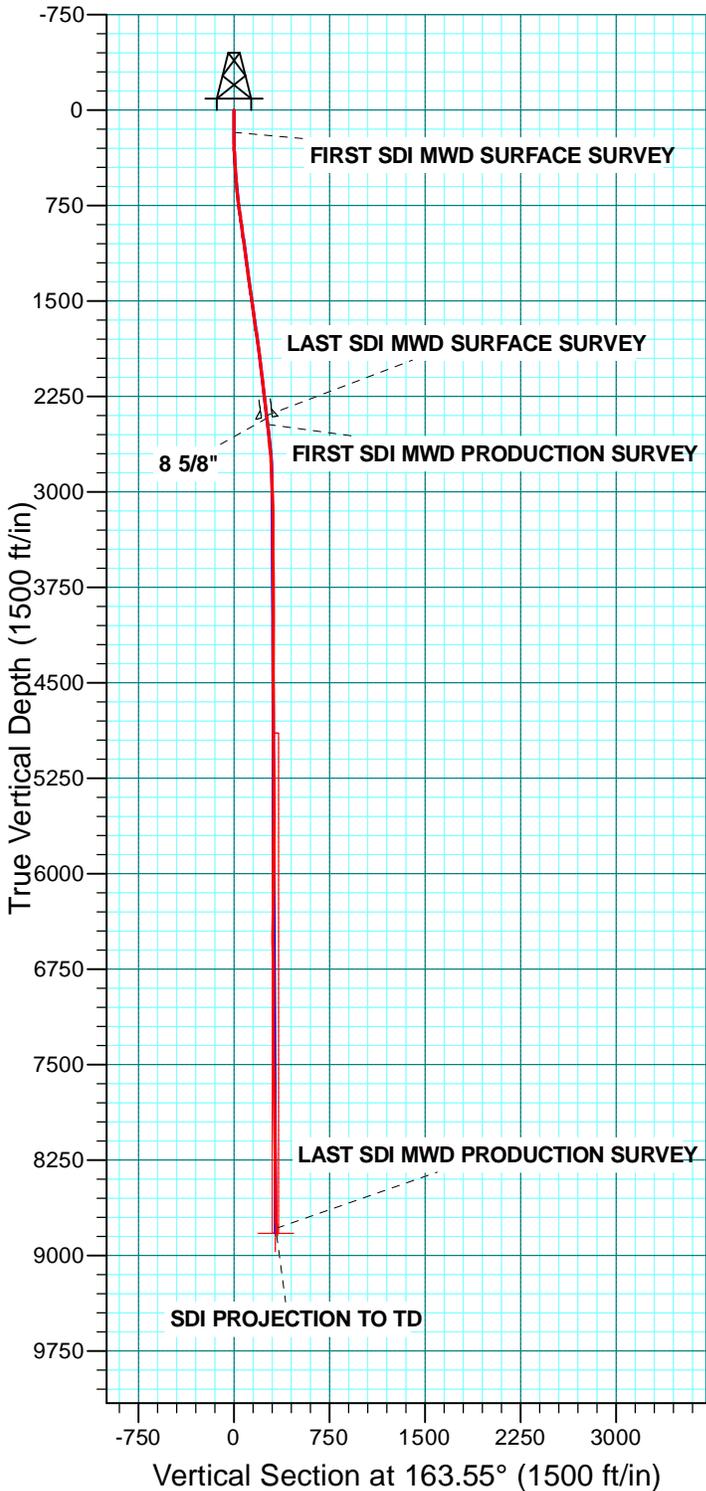
Well: NBU 1022-3L4BS BLUE				Spud Date: 9/12/2013				
Project: UTAH-UINTAH			Site: NBU 1022-03L PAD			Rig Name No: MILES-GRAY 1/1		
Event: COMPLETION			Start Date: 12/2/2013			End Date: 12/20/2013		
Active Datum: RKB @5,136.00usft (above Mean Sea Level)				UWI: NW/SW/0/10/S/22/E/3/0/0/26/PM/S/2085/W/0/617/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	17:00 - 17:00	0.00	DRLOUT	50				WELL TURNED TO SALES @ 1500 HR ON 12/20/2013. 954 MCFD, 1560 BWPD, FCP 2400#, FTP 1850#, 20/64" CK.



API Well Number: 4204750492000  
 Project: UTAH - UTM (feet), NAD27, Zone 12N  
 Site: NBU 1022-3L PAD  
 Well: NBU 1022-3L4BS  
 Wellbore: OH



WELL DETAILS: NBU 1022-3L4BS					
GL 5118 & KB 18 @ 5136.00ft (SST 57)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14521359.61	2079548.07	39.9765350	-109.4325710





# **US ROCKIES REGION PLANNING**

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

**NBU 1022-3L PAD**

**NBU 1022-3L4BS**

**OH**

**Design: OH**

## **Standard Survey Report**

**10 January, 2014**





<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3L4BS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 5118 & KB 18 @ 5136.00ft (SST 57)
<b>Site:</b>	NBU 1022-3L PAD	<b>MD Reference:</b>	GL 5118 & KB 18 @ 5136.00ft (SST 57)
<b>Well:</b>	NBU 1022-3L4BS	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

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

<b>Site</b>	NBU 1022-3L PAD, SECTION 3 T10S R22E				
<b>Site Position:</b>		<b>Northing:</b>	14,521,359.42 usft	<b>Latitude:</b>	39.9765340
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,079,557.87 usft	<b>Longitude:</b>	-109.4325360
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	1.01 °

<b>Well</b>	NBU 1022-3L4BS, 2085 FSL 617 FWL					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,521,359.61 usft	<b>Latitude:</b>	39.9765350
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,079,548.06 usft	<b>Longitude:</b>	-109.4325710
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	5,118.00 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>
	BGGM2013	9/3/2013	10.84	65.80	52,027

<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	163.55	

<b>Survey Program</b>	<b>Date</b>	11/26/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
9.00	2,419.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
2,490.00	8,860.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.00	0.00	0.00	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177.00	0.35	169.13	177.00	-0.50	0.10	0.51	0.21	0.21	0.21	0.00
<b>FIRST SDI MWD SURFACE SURVEY</b>										
268.00	1.49	130.37	267.99	-1.54	1.05	1.78	1.36	1.25	-42.59	
362.00	2.90	158.32	361.92	-4.54	2.86	5.17	1.84	1.50	29.73	
457.00	3.80	163.93	456.75	-9.80	4.62	10.71	1.01	0.95	5.91	
550.00	4.57	169.74	549.51	-16.41	6.13	17.48	0.94	0.83	6.25	
646.00	5.89	162.18	645.11	-24.86	8.32	26.20	1.55	1.38	-7.88	
741.00	6.77	160.25	739.53	-34.77	11.71	36.67	0.95	0.93	-2.03	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3L4BS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 5118 & KB 18 @ 5136.00ft (SST 57)
<b>Site:</b>	NBU 1022-3L PAD	<b>MD Reference:</b>	GL 5118 & KB 18 @ 5136.00ft (SST 57)
<b>Well:</b>	NBU 1022-3L4BS	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
891.00	8.46	165.06	888.20	-53.76	17.54	56.52	1.20	1.13	3.21	
928.00	8.70	162.99	924.78	-59.06	19.06	62.04	1.06	0.65	-5.59	
1,022.00	7.65	169.30	1,017.83	-72.01	22.30	75.38	1.47	-1.12	6.71	
1,116.00	7.58	166.41	1,111.00	-84.18	24.92	87.79	0.41	-0.07	-3.07	
1,209.00	7.70	165.85	1,203.18	-96.19	27.88	100.15	0.15	0.13	-0.60	
1,304.00	8.09	163.94	1,297.28	-108.78	31.29	113.19	0.49	0.41	-2.01	
1,398.00	7.89	163.78	1,390.36	-121.33	34.92	126.26	0.21	-0.21	-0.17	
1,490.00	7.04	171.13	1,481.58	-132.97	37.55	138.16	1.39	-0.92	7.99	
1,585.00	8.35	178.44	1,575.73	-145.62	38.64	150.60	1.72	1.38	7.69	
1,680.00	8.82	170.80	1,669.67	-159.70	39.99	164.49	1.30	0.49	-8.04	
1,773.00	8.27	157.52	1,761.64	-172.92	43.69	178.21	2.20	-0.59	-14.28	
1,868.00	7.47	153.48	1,855.75	-184.76	49.06	191.09	1.02	-0.84	-4.25	
1,963.00	6.81	158.90	1,950.01	-195.54	53.84	202.78	0.99	-0.69	5.71	
2,056.00	7.03	158.93	2,042.34	-206.00	57.87	213.95	0.24	0.24	0.03	
2,151.00	6.51	158.14	2,136.67	-216.42	61.97	225.11	0.56	-0.55	-0.83	
2,246.00	6.51	159.11	2,231.06	-226.45	65.90	235.84	0.12	0.00	1.02	
2,337.00	7.03	161.30	2,321.43	-236.54	69.52	246.55	0.64	0.57	2.41	
2,419.00	7.03	162.01	2,402.81	-246.07	72.68	256.58	0.11	0.00	0.87	
<b>LAST SDI MWD SURFACE SURVEY</b>										
2,436.00	6.91	160.30	2,419.68	-248.02	73.34	258.64	1.40	-0.68	-10.07	
<b>8 5/8"</b>										
2,490.00	6.59	154.49	2,473.31	-253.88	75.78	264.94	1.40	-0.60	-10.76	
<b>FIRST SDI MWD PRODUCTION SURVEY</b>										
2,586.00	6.07	156.99	2,568.72	-263.52	80.13	275.43	0.61	-0.54	2.60	
2,681.00	4.66	159.01	2,663.31	-271.75	83.48	284.26	1.50	-1.48	2.13	
2,776.00	4.00	163.64	2,758.03	-278.53	85.79	291.42	0.79	-0.69	4.87	
2,871.00	2.46	154.35	2,852.88	-283.55	87.61	296.75	1.71	-1.62	-9.78	
2,966.00	1.67	181.16	2,947.82	-286.77	88.46	300.08	1.29	-0.83	28.22	
3,060.00	1.58	172.01	3,041.78	-289.42	88.62	302.67	0.29	-0.10	-9.73	
3,155.00	0.74	157.05	3,136.76	-291.28	89.04	304.58	0.93	-0.88	-15.75	
3,251.00	0.70	279.50	3,232.76	-291.76	88.70	304.93	1.31	-0.04	127.55	
3,347.00	0.88	249.62	3,328.75	-291.92	87.43	304.73	0.46	0.19	-31.13	
3,442.00	0.88	212.62	3,423.74	-292.79	86.35	305.26	0.59	0.00	-38.95	
3,537.00	0.78	191.66	3,518.73	-294.04	85.83	306.30	0.33	-0.11	-22.06	
3,633.00	1.27	206.29	3,614.71	-295.63	85.23	307.66	0.57	0.51	15.24	
3,728.00	0.69	190.42	3,709.70	-297.14	84.66	308.95	0.67	-0.61	-16.71	
3,821.00	1.53	165.87	3,802.68	-298.89	84.86	310.69	1.02	0.90	-26.40	
3,916.00	0.69	115.22	3,897.67	-300.36	85.69	312.33	1.28	-0.88	-53.32	
4,011.00	1.63	32.67	3,992.65	-299.47	86.93	311.83	1.77	0.99	-86.89	
4,106.00	1.14	37.06	4,087.62	-297.58	88.23	310.38	0.53	-0.52	4.62	
4,201.00	1.33	60.83	4,182.60	-296.29	89.76	309.58	0.57	0.20	25.02	
4,296.00	1.14	75.24	4,277.58	-295.51	91.64	309.36	0.38	-0.20	15.17	
4,391.00	1.14	72.61	4,372.56	-294.99	93.46	309.38	0.06	0.00	-2.77	
4,486.00	0.74	99.51	4,467.55	-294.80	94.96	309.63	0.62	-0.42	28.32	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3L4BS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 5118 & KB 18 @ 5136.00ft (SST 57)
<b>Site:</b>	NBU 1022-3L PAD	<b>MD Reference:</b>	GL 5118 & KB 18 @ 5136.00ft (SST 57)
<b>Well:</b>	NBU 1022-3L4BS	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,581.00	1.13	90.47	4,562.53	-294.91	96.51	310.17	0.44	0.41	-9.52	
4,676.00	0.95	87.06	4,657.52	-294.88	98.23	310.63	0.20	-0.19	-3.59	
4,771.00	0.67	267.39	4,752.52	-294.87	98.46	310.68	1.71	-0.29	-189.13	
4,866.00	0.70	250.65	4,847.51	-295.08	97.36	310.58	0.21	0.03	-17.62	
4,961.00	0.62	247.95	4,942.50	-295.47	96.33	310.65	0.09	-0.08	-2.84	
5,056.00	0.74	217.79	5,037.50	-296.15	95.48	311.06	0.39	0.13	-31.75	
5,151.00	0.88	237.67	5,132.49	-297.02	94.49	311.62	0.33	0.15	20.93	
5,246.00	0.79	193.81	5,227.48	-298.05	93.72	312.39	0.66	-0.09	-46.17	
5,341.00	0.97	191.26	5,322.47	-299.47	93.40	313.66	0.19	0.19	-2.68	
5,435.00	1.06	170.17	5,416.45	-301.11	93.40	315.23	0.41	0.10	-22.44	
5,531.00	0.97	186.43	5,512.44	-302.79	93.46	316.86	0.31	-0.09	16.94	
5,626.00	0.53	291.11	5,607.43	-303.43	92.96	317.34	1.28	-0.46	110.19	
5,720.00	0.62	264.30	5,701.43	-303.33	92.04	316.98	0.30	0.10	-28.52	
5,815.00	1.04	321.80	5,796.42	-302.70	91.00	316.08	0.93	0.44	60.53	
5,910.00	0.53	250.79	5,891.41	-302.17	90.05	315.30	1.05	-0.54	-74.75	
6,005.00	1.06	21.28	5,986.41	-301.49	89.96	314.63	1.54	0.56	137.36	
6,099.00	1.32	28.18	6,080.39	-299.73	90.78	313.17	0.32	0.28	7.34	
6,194.00	1.32	24.27	6,175.36	-297.77	91.75	311.56	0.09	0.00	-4.12	
6,289.00	0.57	39.87	6,270.35	-296.41	92.50	310.47	0.83	-0.79	16.42	
6,384.00	0.50	26.15	6,365.34	-295.67	92.99	309.90	0.15	-0.07	-14.44	
6,479.00	0.98	56.61	6,460.34	-294.85	93.85	309.36	0.64	0.51	32.06	
6,574.00	0.84	99.78	6,555.32	-294.52	95.21	309.43	0.72	-0.15	45.44	
6,669.00	0.77	120.20	6,650.31	-294.96	96.45	310.20	0.31	-0.07	21.49	
6,764.00	0.31	131.37	6,745.31	-295.45	97.20	310.88	0.49	-0.48	11.76	
6,860.00	0.18	209.46	6,841.31	-295.76	97.32	311.21	0.34	-0.14	81.34	
6,955.00	0.53	241.18	6,936.31	-296.10	96.86	311.41	0.41	0.37	33.39	
7,050.00	1.13	307.36	7,031.30	-295.74	95.73	310.74	1.09	0.63	69.66	
7,145.00	0.38	266.13	7,126.29	-295.19	94.67	309.92	0.93	-0.79	-43.40	
7,241.00	0.27	213.00	7,222.29	-295.41	94.23	310.00	0.32	-0.11	-55.34	
7,336.00	0.42	216.14	7,317.29	-295.87	93.90	310.35	0.16	0.16	3.31	
7,431.00	0.79	178.17	7,412.28	-296.81	93.72	311.20	0.55	0.39	-39.97	
7,527.00	1.23	172.45	7,508.27	-298.49	93.87	312.86	0.47	0.46	-5.96	
7,622.00	1.06	173.33	7,603.25	-300.38	94.11	314.73	0.18	-0.18	0.93	
7,716.00	1.32	167.27	7,697.23	-302.30	94.45	316.67	0.31	0.28	-6.45	
7,811.00	1.49	171.40	7,792.20	-304.58	94.88	318.98	0.21	0.18	4.35	
7,907.00	0.77	244.72	7,888.18	-306.09	94.48	320.32	1.53	-0.75	76.38	
8,002.00	1.08	218.46	7,983.17	-307.07	93.34	320.93	0.54	0.33	-27.64	
8,097.00	1.40	195.65	8,078.15	-308.89	92.47	322.43	0.61	0.34	-24.01	
8,192.00	1.41	205.50	8,173.12	-311.06	91.66	324.28	0.25	0.01	10.37	
8,287.00	0.88	191.00	8,268.10	-312.83	91.02	325.80	0.63	-0.56	-15.26	
8,383.00	0.85	208.15	8,364.09	-314.18	90.54	326.96	0.27	-0.03	17.86	
8,478.00	1.14	197.94	8,459.08	-315.70	89.92	328.24	0.36	0.31	-10.75	
8,573.00	1.05	181.62	8,554.06	-317.47	89.60	329.85	0.34	-0.09	-17.18	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3L4BS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 5118 & KB 18 @ 5136.00ft (SST 57)
<b>Site:</b>	NBU 1022-3L PAD	<b>MD Reference:</b>	GL 5118 & KB 18 @ 5136.00ft (SST 57)
<b>Well:</b>	NBU 1022-3L4BS	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,668.00	0.99	198.53	8,649.05	-319.12	89.31	331.35	0.32	-0.06	17.80
8,763.00	1.30	156.36	8,744.03	-320.89	89.49	333.09	0.92	0.33	-44.39
8,805.00	1.42	159.00	8,786.02	-321.81	89.86	334.08	0.32	0.29	6.29
<b>LAST SDI MWD PRODUCTION SURVEY</b>									
8,860.00	1.42	159.00	8,841.00	-323.08	90.35	335.44	0.00	0.00	0.00
<b>SDI PROJECTION TO TD</b>									

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 1022-3L4BS	0.00	0.00	8,829.00	-312.86	98.64	14,521,048.54	2,079,652.18	39.9756760	-109.4322190
- hit/miss target									
- Shape									
- actual wellpath misses target center by 13.01ft at 8847.84ft MD (8828.84 TVD, -322.80 N, 90.24 E)									
- Circle (radius 25.00)									

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,436.00	2,419.68	8 5/8"	8.625	11.000

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
177.00	177.00	-0.50	0.10	FIRST SDI MWD SURFACE SURVEY
2,419.00	2,402.81	-246.07	72.68	LAST SDI MWD SURFACE SURVEY
2,490.00	2,473.31	-253.88	75.78	FIRST SDI MWD PRODUCTION SURVEY
8,805.00	8,786.02	-321.81	89.86	LAST SDI MWD PRODUCTION SURVEY
8,860.00	8,841.00	-323.08	90.35	SDI PROJECTION TO TD

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