

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

FORM 3

AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL		1. WELL NAME and NUMBER NBU 1022-2K4BS
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>		3. FIELD OR WILDCAT NATURAL BUTTES
4. TYPE OF WELL Gas Well Coalbed Methane Well: NO		5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. OPERATOR PHONE 720 929-6515
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217		9. OPERATOR E-MAIL julie.jacobson@anadarko.com
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) ST UT ML 22651	11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>	
12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>		13. NAME OF SURFACE OWNER (if box 12 = 'fee')
14. SURFACE OWNER PHONE (if box 12 = 'fee')		15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')
16. SURFACE OWNER E-MAIL (if box 12 = 'fee')		17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')
18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		19. SLANT VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	2097 FSL 752 FWL	NWSW	2	10.0 S	22.0 E	S
Top of Uppermost Producing Zone	1904 FSL 2140 FWL	NESW	2	10.0 S	22.0 E	S
At Total Depth	1904 FSL 2140 FWL	NESW	2	10.0 S	22.0 E	S

21. COUNTY UINTAH	22. DISTANCE TO NEAREST LEASE LINE (Feet) 718	23. NUMBER OF ACRES IN DRILLING UNIT 620
24. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 1169	25. PROPOSED DEPTH MD: 8824 TVD: 8597	
26. ELEVATION - GROUND LEVEL 5052	27. BOND NUMBER 22013542	28. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE 43-8496

Hole, Casing, and Cement Information										
String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
SURF	11	8.625	0 - 2180	28.0	J-55 LT&C	0.2	Type V	180	1.15	15.8
							Class G	270	1.15	15.8
PROD	7.875	4.5	0 - 8824	11.6	I-80 LT&C	12.5	Premium Lite High Strength	270	3.38	11.0
							50/50 Poz	1220	1.31	14.3

ATTACHMENTS

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

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

NAME Andy Lytle	TITLE Regulatory Analyst	PHONE 720 929-6100
SIGNATURE	DATE 08/01/2011	EMAIL andrew.lytle@anadarko.com
API NUMBER ASSIGNED 43047517770000	APPROVAL  Permit Manager	

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 1022-2K4BS**

Surface: 2097 FSL / 752 FWL NWSW
 BHL: 1904 FSL / 2140 FWL NESW

Section 2 T10S R22E

Uintah County, Utah
 Mineral Lease: ST UT ML 22651

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	1084	
Birds Nest	1357	Water
Mahogany	1728	Water
Wasatch	4163	Gas
Mesaverde	6436	Gas
MVU2	7374	Gas
MVL1	7983	Gas
TVD	8597	Gas
TD	8824	Gas

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

Please refer to the attached Drilling Program

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

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

7. **Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 8597' TVD, approximately equals

$$\frac{5,502 \text{ psi}}{0.64 \text{ psi/ft}} = \text{actual bottomhole gradient}$$

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

Maximum anticipated surface pressure equals approximately 3,599 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.

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

The air rig is then mobilized to drill the surface casing hole by drilling a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 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

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

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

Conclusion

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

10. **Other Information:**

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE		TENSION
CONDUCTOR	14"	0-40'				3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,180	28.00	IJ-55	LTC	2.48	1.84	6.51	N/A
PRODUCTION	4-1/2"	0 to 8,824	11.60	I-80	LTC/BTC	1.11	1.14	3.37	4.43

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
Option 1 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
NOTE: If well will circulate water to surface, option 2 will be utilized						
SURFACE LEAD	1,680'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	160	35%	11.00	3.82
Option 2 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	3,654'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	270	20%	11.00	3.38
TAIL	5,170'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,220	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. 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:

Nick Spence / Danny Showers

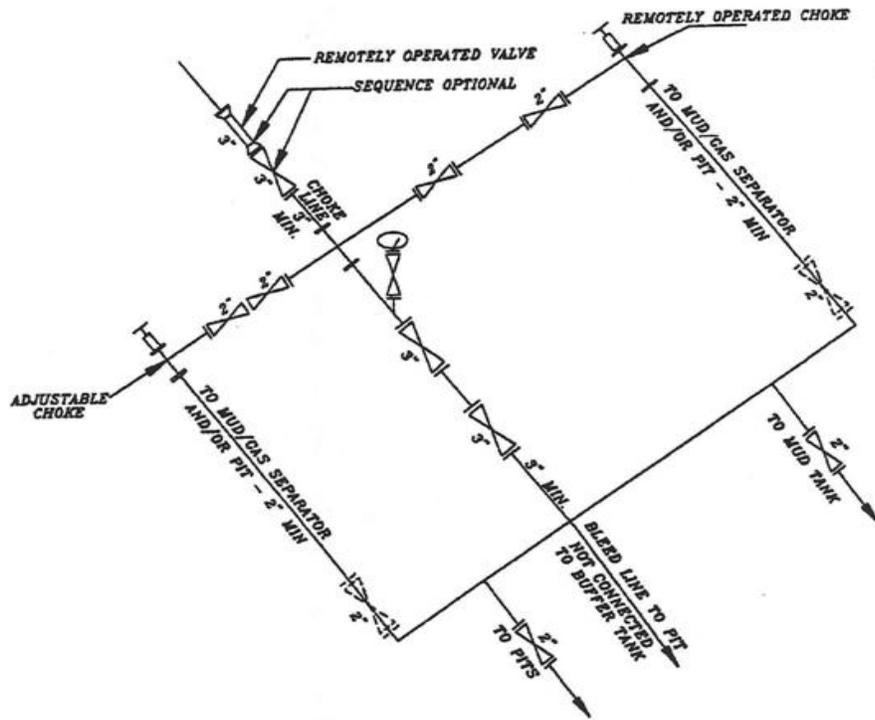
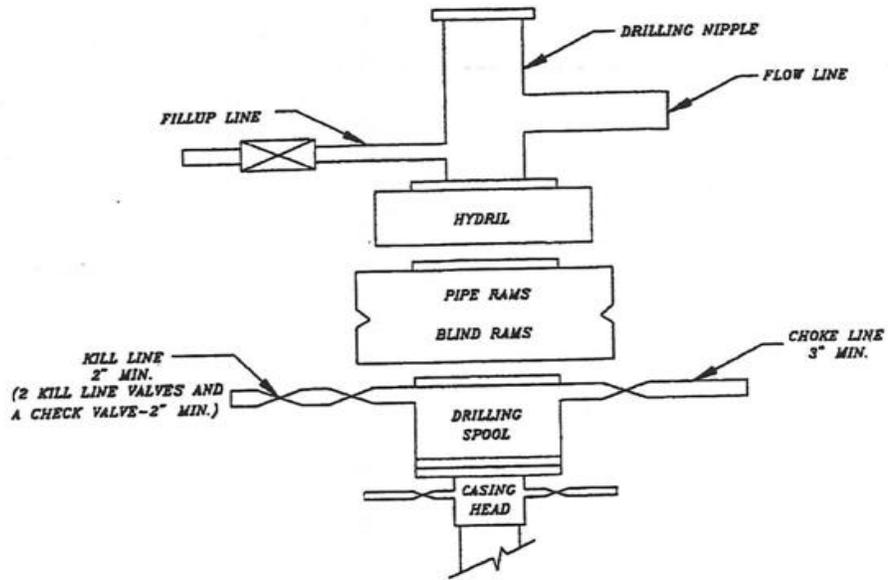
DATE: _____

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

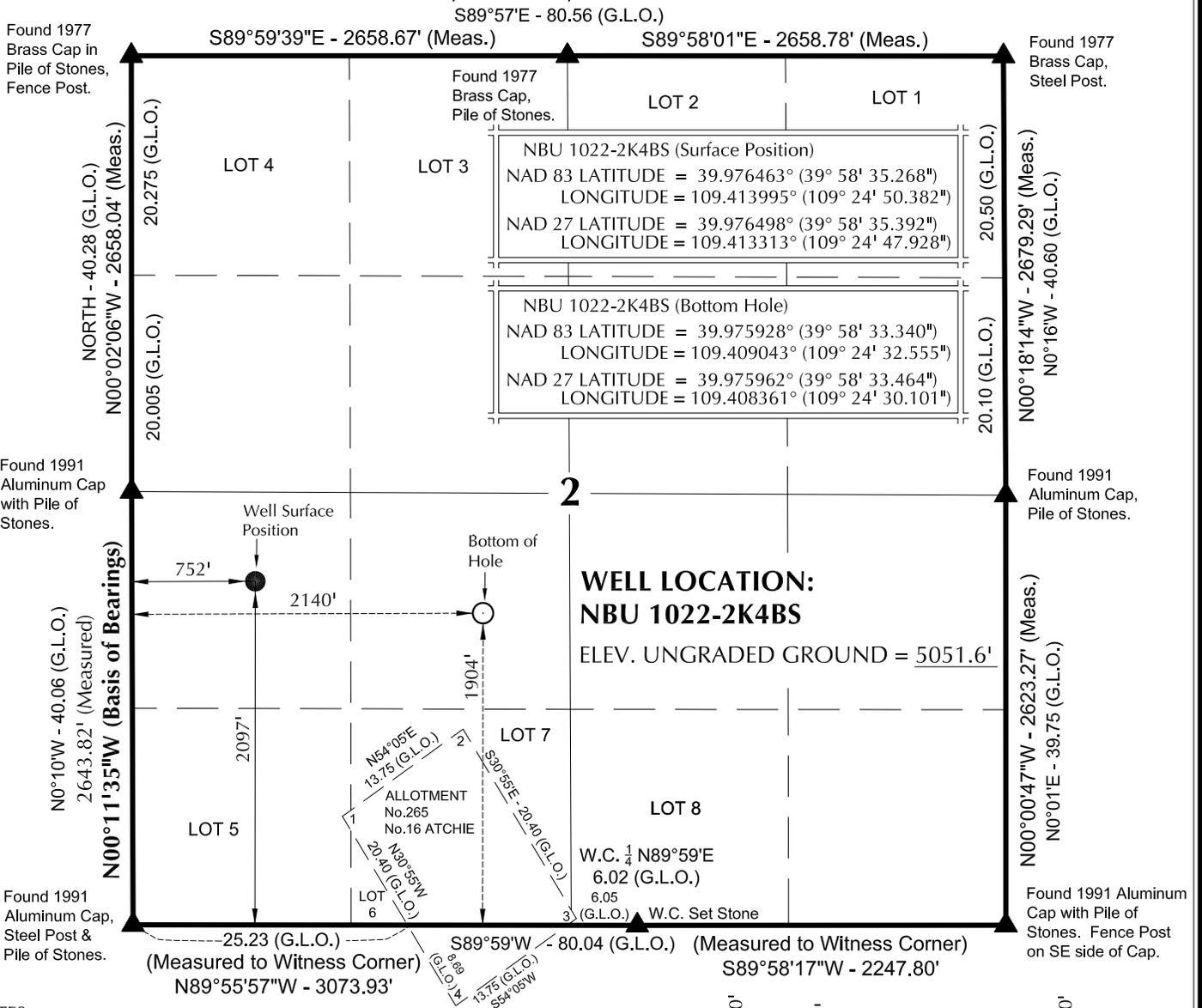
DATE: _____

EXHIBIT A
NBU 1022-2K4BS



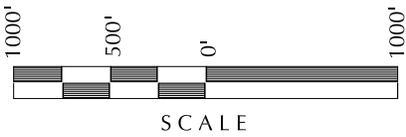
SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

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



NOTES:

- ▲ = Section Corners Located
- 1. Well footages are measured at right angles to the Section Lines.
- 2. G.L.O. distances are shown in feet or chains.
1 chain = 66 feet.
- 3. The Bottom of hole bears S82°01'52"E - 1401.86' from the Surface Position.
- 4. Bearings are based on Global Positioning Satellite observations.
- 5. Basis of elevation is Tri-Sta "Two Water" located in the NW 1/4 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.

John R. Lauch
 No. 6028691
JOHN R. LAUCH
 PROFESSIONAL LAND SURVEYOR
 REGISTRATION NO. 6028691
 STATE OF UTAH
 1-28-11

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

WELL PAD: NBU 1022-2L

NBU 1022-2K4BS
WELL PLAT
1904' FSL, 2140' FWL (Bottom Hole)
NE 1/4 SW 1/4 OF SECTION 2, 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

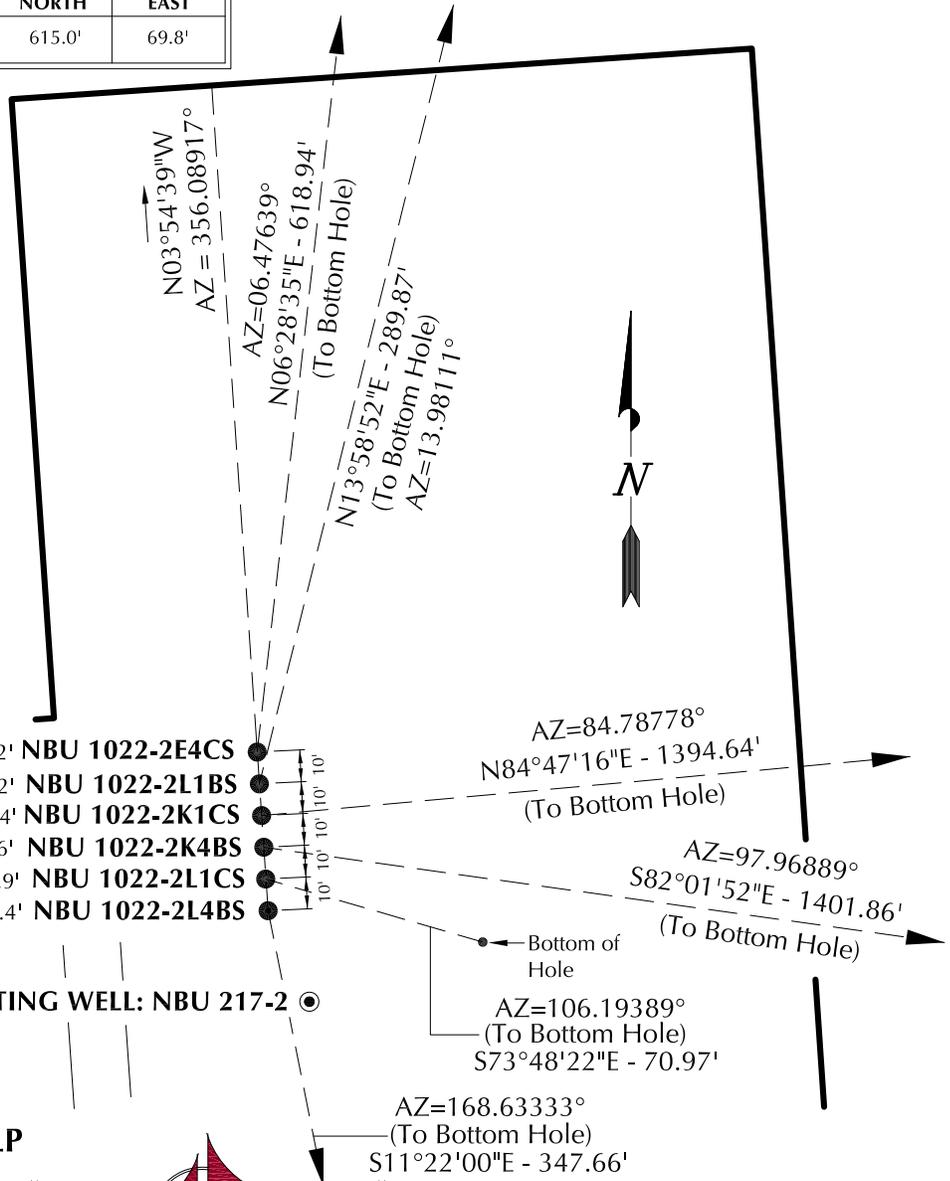
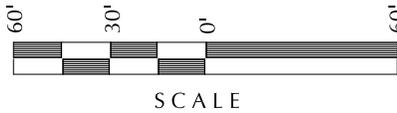
DATE SURVEYED: 01-10-11	SURVEYED BY: R.Y.	SHEET NO: 3
DATE DRAWN: 01-26-11	DRAWN BY: E.M.S.	
SCALE: 1" = 1000'		3 OF 18

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 1022-2L4BS	39°58'35.071"	109°24'50.365"	39°58'35.195"	109°24'47.910"	2077' FSL	39°58'31.703"	109°24'49.487"	39°58'31.827"	109°24'47.033"	1736' FSL
NBU 1022-2L1CS	39°58'35.169"	109°24'50.374"	39°58'35.293"	109°24'47.920"	2087' FSL	39°58'34.974"	109°24'49.499"	39°58'35.098"	109°24'47.045"	2067' FSL
NBU 1022-2K4BS	39°58'35.268"	109°24'50.382"	39°58'35.392"	109°24'47.928"	2097' FSL	39°58'33.340"	109°24'32.555"	39°58'33.464"	109°24'30.101"	1904' FSL
NBU 1022-2K1CS	39°58'35.367"	109°24'50.391"	39°58'35.491"	109°24'47.936"	2107' FSL	39°58'36.610"	109°24'32.554"	39°58'36.734"	109°24'30.100"	2235' FSL
NBU 1022-2L1BS	39°58'35.465"	109°24'50.400"	39°58'35.589"	109°24'47.945"	2117' FSL	39°58'38.244"	109°24'49.499"	39°58'38.368"	109°24'47.044"	2398' FSL
NBU 1022-2E4CS	39°58'35.564"	109°24'50.409"	39°58'35.688"	109°24'47.954"	2127' FSL	39°58'41.640"	109°24'49.508"	39°58'41.764"	109°24'47.053"	2561' FSL
NBU 217-2	39°58'34.789"	109°24'50.199"	39°58'34.913"	109°24'47.744"	2048' FSL	39°58'33.340"	109°24'49.499"	39°58'33.464"	109°24'47.044"	2398' FSL
	39.976409°	109.413990°	39.976443°	109.413308°	754' FWL	39.975473°	109.413747°	39.975508°	109.413065°	821' FWL
	39.976436°	109.413993°	39.976470°	109.413311°	753' FWL	39.976382°	109.413750°	39.976416°	109.413068°	821' FWL
	39.976463°	109.413995°	39.976498°	109.413313°	752' FWL	39.975928°	109.409043°	39.975962°	109.408361°	2140' FWL
	39.976491°	109.413997°	39.976525°	109.413316°	752' FWL	39.976836°	109.409043°	39.976871°	109.408361°	2141' FWL
	39.976518°	109.414000°	39.976553°	109.413318°	751' FWL	39.977290°	109.413750°	39.977324°	109.413068°	822' FWL
	39.976546°	109.414002°	39.976580°	109.413320°	750' FWL	39.978233°	109.413752°	39.978268°	109.413070°	822' FWL
	39.976330°	109.413944°	39.976365°	109.413262°	766' FWL					

RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 1022-2L4BS	-340.8'	68.5'	NBU 1022-2L1CS	-19.8'	68.2'	NBU 1022-2K4BS	-194.3'	1,388.3'	NBU 1022-2K1CS	126.7'	1,388.9'
NBU 1022-2L1BS	281.3'	70.0'	NBU 1022-2E4CS	615.0'	69.8'						

BASIS OF BEARINGS IS THE WEST LINE OF THE SW ¼ OF SECTION 2, T10S, R22E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°11'35"W.



- Az. to Exist. W.H.=168.20639° 80.2' NBU 1022-2E4CS
- Az. to Exist. W.H.=167.07944° 70.2' NBU 1022-2L1BS
- Az. to Exist. W.H.=165.63111° 60.4' NBU 1022-2K1CS
- Az. to Exist. W.H.=163.55833° 50.6' NBU 1022-2K4BS
- Az. to Exist. W.H.=160.41556° 40.9' NBU 1022-2L1CS
- Az. to Exist. W.H.=155.60417° 31.4' NBU 1022-2L4BS

EXISTING WELL: NBU 217-2

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

WELL PAD - NBU 1022-2L

WELL PAD INTERFERENCE PLAT
WELLS - NBU 1022-2L4BS, NBU 1022-2L1CS,
NBU 1022-2K4BS, NBU 1022-2K1CS,
NBU 1022-2L1BS & NBU 1022-2E4CS
LOCATED IN SECTION 2, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH.

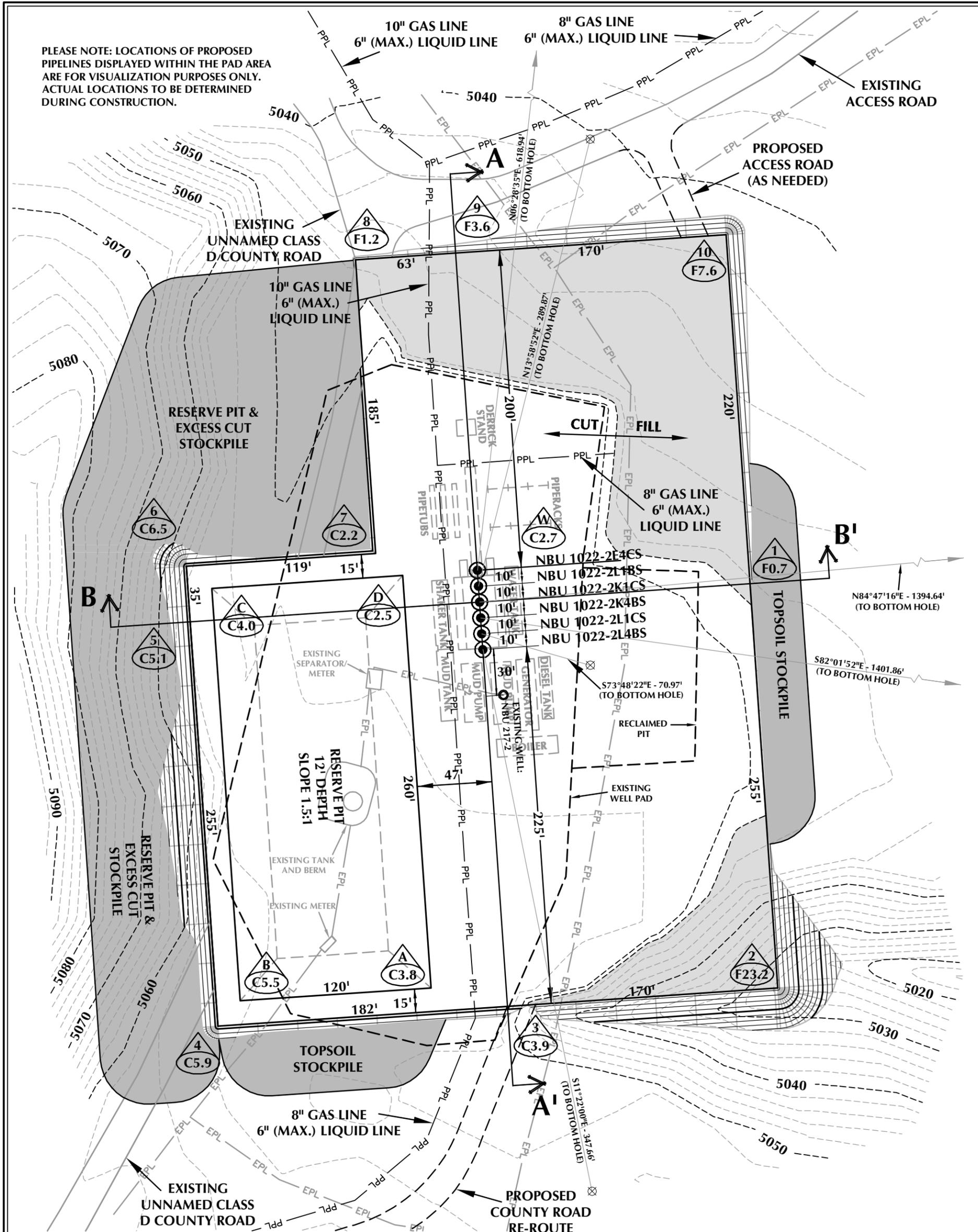


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209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 01-10-11	SURVEYED BY: R.Y.	SHEET NO: 7
DATE DRAWN: 01-26-11	DRAWN BY: E.M.S.	
SCALE: 1" = 60'		7 OF 18

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



WELL PAD - NBU 1022-2L DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5051.6'
 FINISHED GRADE ELEVATION = 5048.9'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.71 ACRES
 TOTAL DISTURBANCE AREA = 6.49 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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

WELL PAD - NBU 1022-2L

WELL PAD - LOCATION LAYOUT
 NBU 1022-2L4BS, NBU 1022-2L1CS,
 NBU 1022-2K4BS, NBU 1022-2K1CS,
 NBU 1022-2L1BS & NBU 1022-2E4CS
 LOCATED IN SECTION 2, 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

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 11,870 C.Y.
 TOTAL FILL FOR WELL PAD = 8,668 C.Y.
 TOPSOIL @ 6" DEPTH = 1,640 C.Y.
 EXCESS MATERIAL = 3,202 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

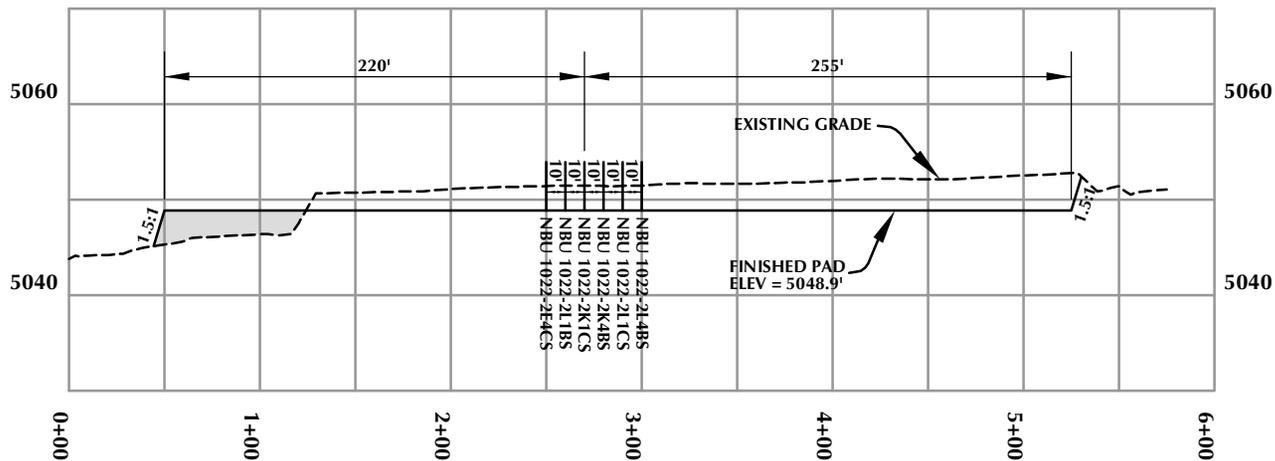


HORIZONTAL 0 30' 60' 1" = 60'
 2' CONTOURS

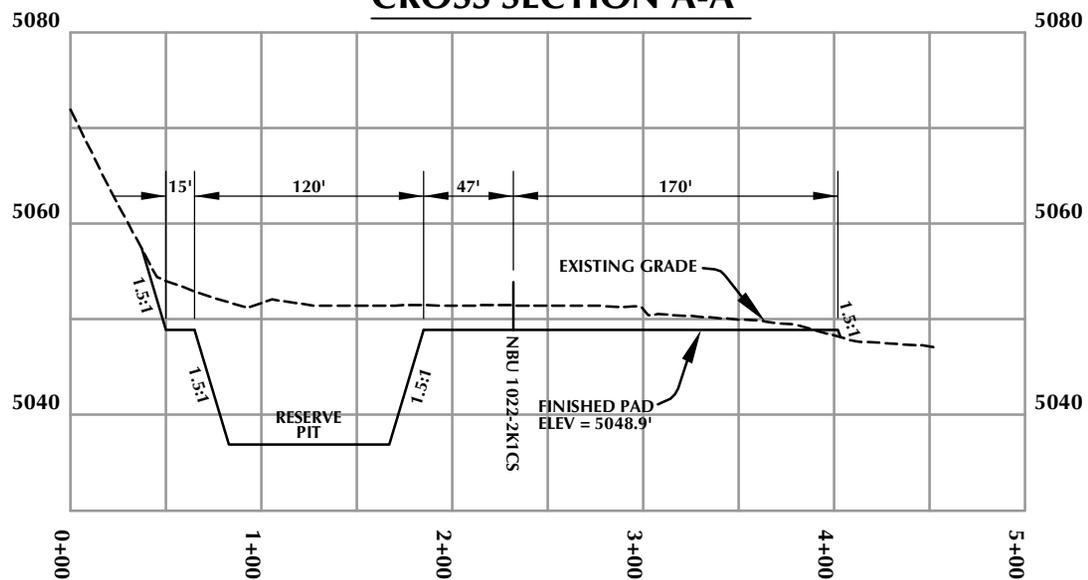
SCALE: 1"=60' DATE: 3/30/11 SHEET NO:
 REVISED: **8** 8 OF 18

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

C:\ANADARKO\2010_63_NBU_FOCUS\2022-2L\DWG\NBU_1022-2L_20110131.dwg, 3/28/2011 1:21:09 PM



CROSS SECTION A-A'



CROSS SECTION B-B'

NOTE: CROSS SECTION B-B' DEPICTS
MAXIMUM RESERVE PIT DEPTH.

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

WELL PAD - NBU 1022-2L

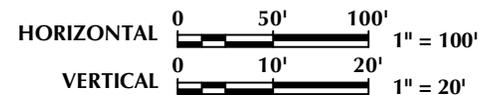
WELL PAD - CROSS SECTIONS
NBU 1022-2L4BS, NBU 1022-2L1CS,
NBU 1022-2K4BS, NBU 1022-2K1CS,
NBU 1022-2L1BS & NBU 1022-2E4CS
LOCATED IN SECTION 2, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH



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

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

(435) 789-1365



Scale: 1"=100'

Date: 3/30/11

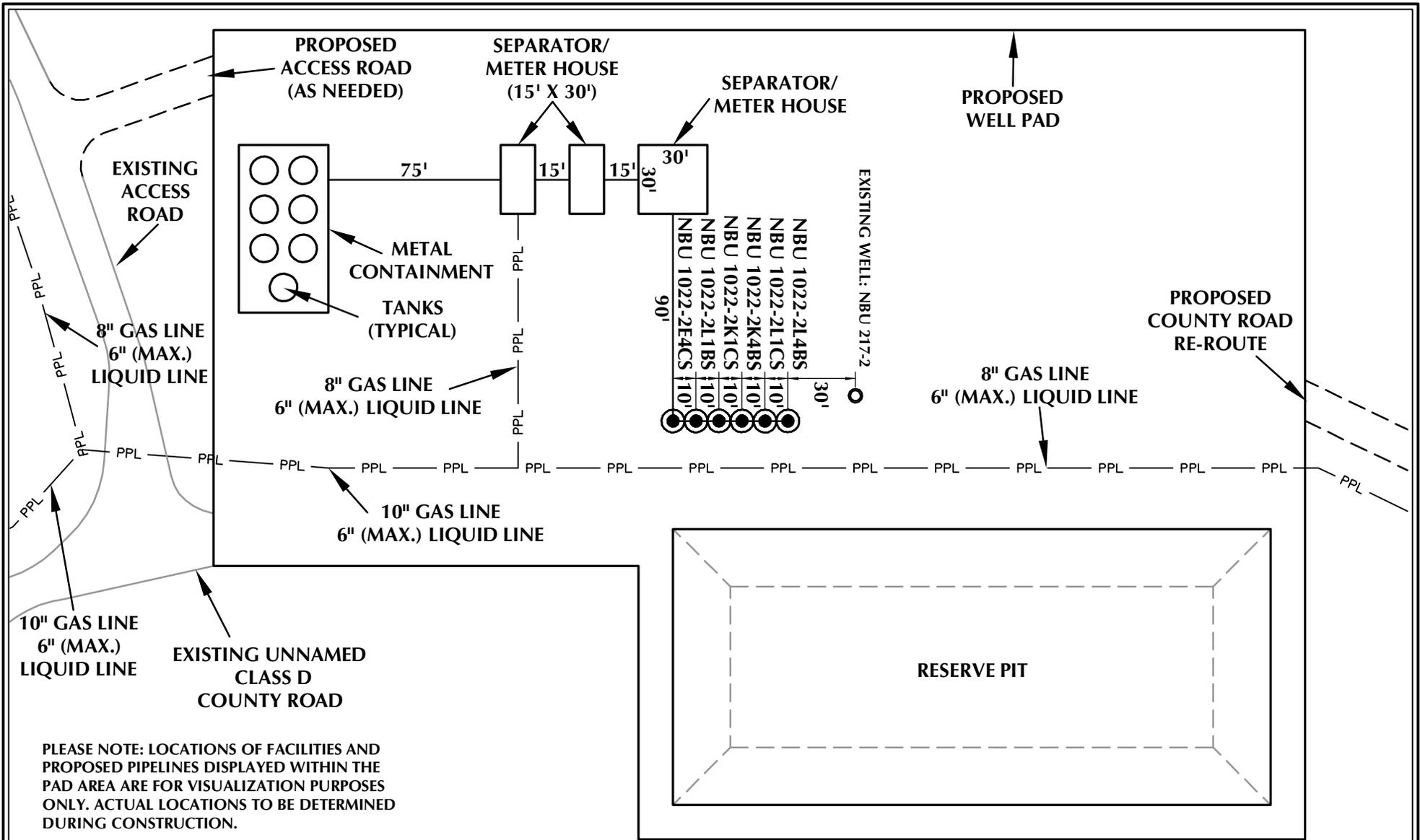
SHEET NO:

REVISED:

9

9 OF 18

RECEIVED: August 01, 2011



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

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

WELL PAD - NBU 1022-2L

WELL PAD - FACILITIES DIAGRAM
NBU 1022-2L4BS, NBU 1022-2L1CS,
NBU 1022-2K4BS, NBU 1022-2K1CS,
NBU 1022-2L1BS & NBU 1022-2E4CS
LOCATED IN SECTION 2, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH



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Phone 307-674-0609
Fax 307-674-0182

WELL PAD LEGEND

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



HORIZONTAL 0 30' 60' 1" = 60'

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

Scale: 1"=60' Date: 3/30/11
REVISED:

SHEET NO:
10 10 OF 18

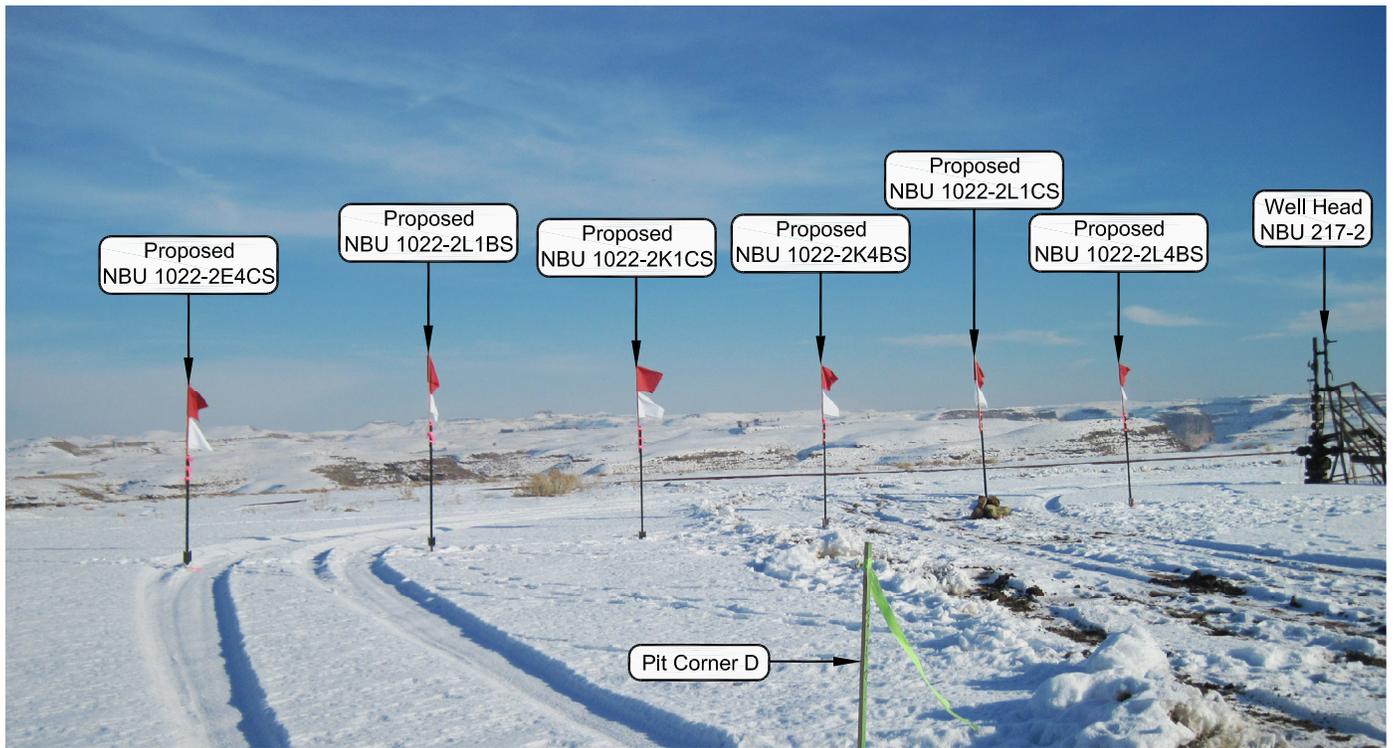


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: EASTERLY

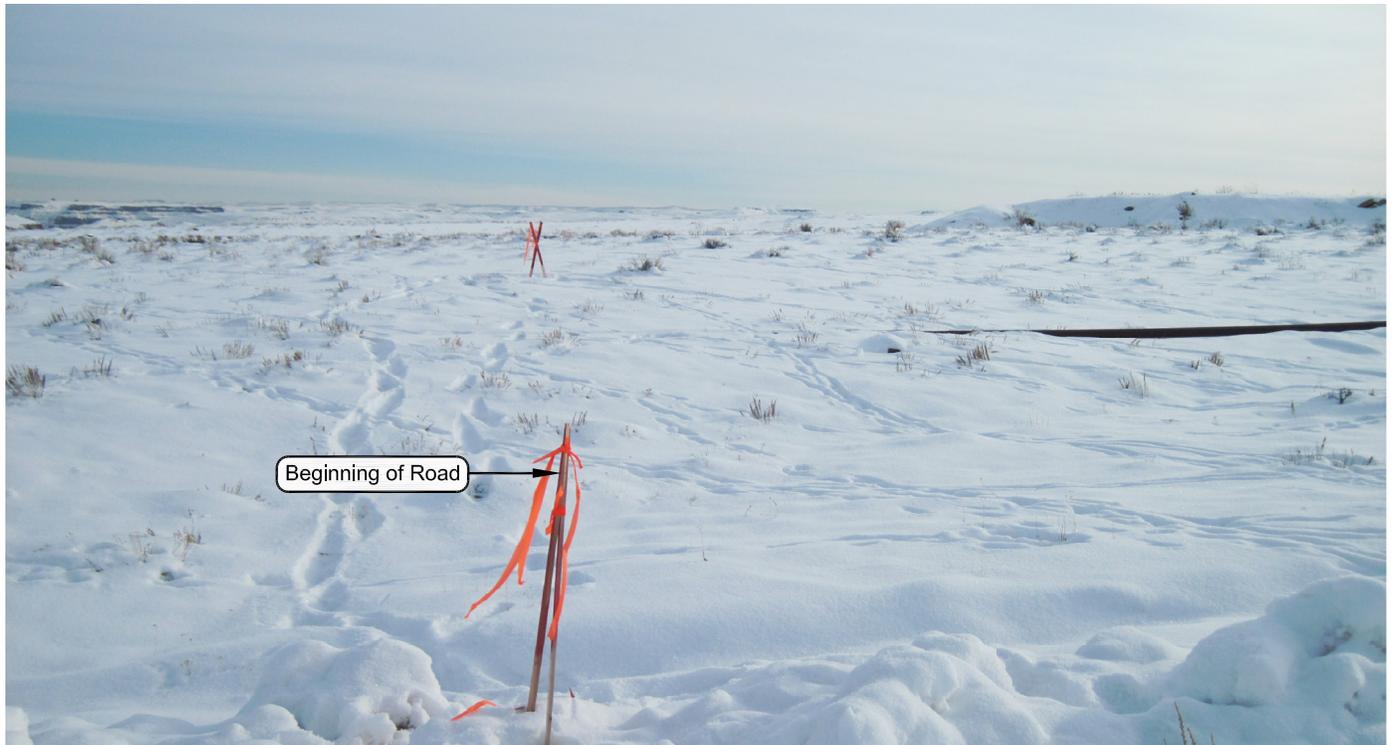


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: SOUTHEASTERLY

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

WELL PAD - NBU 1022-2L

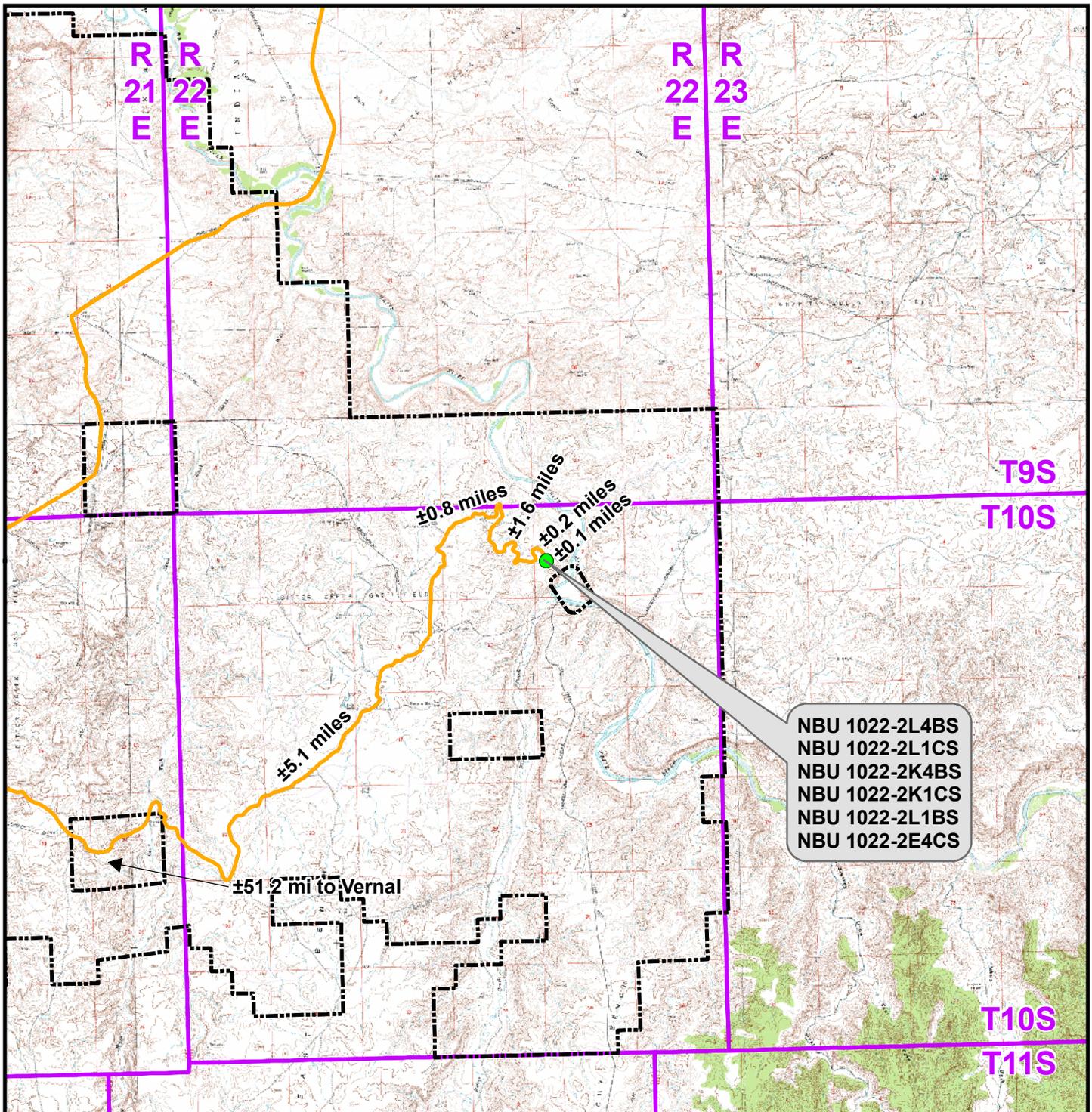
LOCATION PHOTOS
 NBU 1022-2L4BS, NBU 1022-2L1CS,
 NBU 1022-2K4BS, NBU 1022-2K1CS,
 NBU 1022-2L1BS & NBU 1022-2E4CS
 LOCATED IN SECTION 2, T10S, R22E,
 S.L.B.&M., Uintah County, Utah.



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 Sheridan WY 82801
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 Fax 307-674-0182

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

DATE PHOTOS TAKEN: 01-27-11	PHOTOS TAKEN BY: R.Y.	SHEET NO: 11
DATE DRAWN: 01-26-11	DRAWN BY: E.M.S.	
Date Last Revised:		11 OF 18



Legend

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

Distance From Well Pad - NBU 1022-2L To Unit Boundary: ±1,456ft

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

WELL PAD - NBU 1022-2L

TOPO A

NBU 1022-2L4BS, NBU 1022-2L1CS,
 NBU 1022-2K4BS, NBU 1022-2K1CS,
 NBU 1022-2L1BS & NBU 1022-2E4CS
 LOCATED IN SECTION 2, T10S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

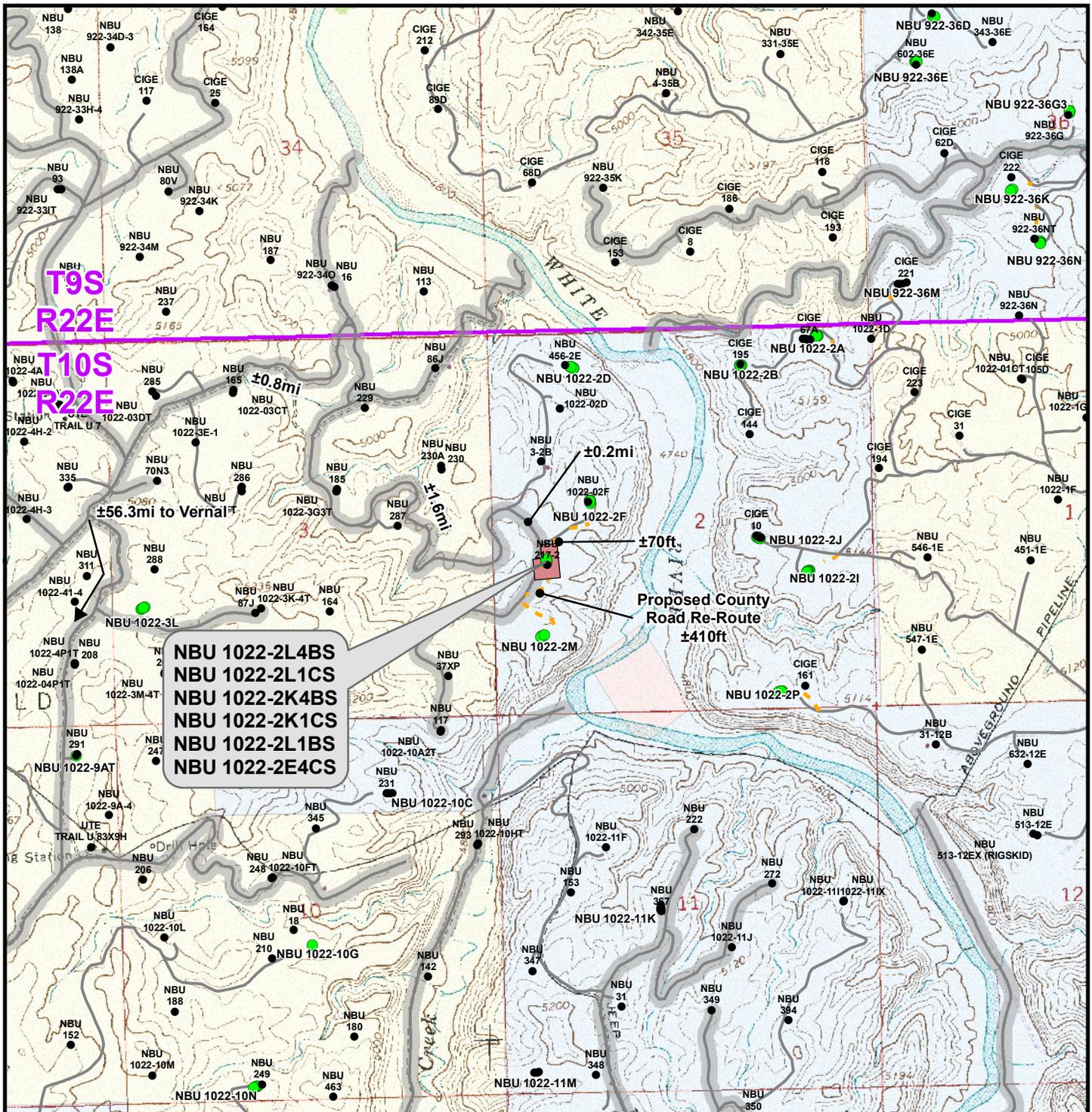


609 CONSULTING, LLC
 2155 North Main Street
 Sheridan, WY 82801
 Phone (307) 674-0609
 Fax (307) 674-0182



Scale: 1:100,000	NAD83 USP Central
Drawn: TL	Date: 30 Mar 2011
Revised:	Date:

Sheet No:
12 12 of 18



Legend

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

Total Proposed Road Length: ±480ft

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

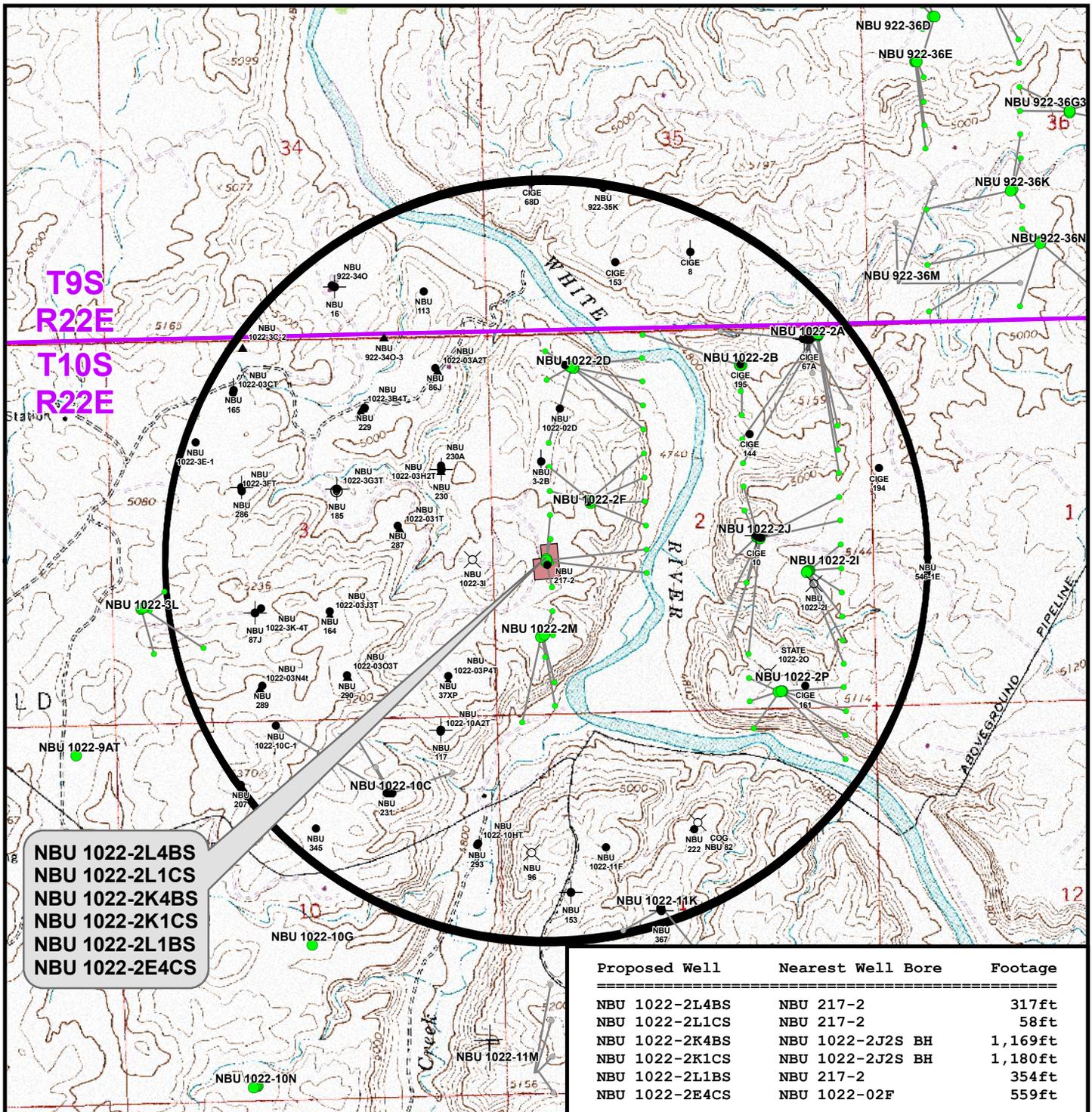
WELL PAD - NBU 1022-2L

TOPO B
NBU 1022-2L4BS, NBU 1022-2L1CS,
NBU 1022-2K4BS, NBU 1022-2K1CS,
NBU 1022-2L1BS & NBU 1022-2E4CS
LOCATED IN SECTION 2, T10S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH

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

Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: 13
Drawn: TL	Date: 30 Mar 2011	13 of 18
Revised:	Date:	



NBU 1022-2L4BS
 NBU 1022-2L1CS
 NBU 1022-2K4BS
 NBU 1022-2K1CS
 NBU 1022-2L1BS
 NBU 1022-2E4CS

Proposed Well	Nearest Well Bore	Footage
NBU 1022-2L4BS	NBU 217-2	317ft
NBU 1022-2L1CS	NBU 217-2	58ft
NBU 1022-2K4BS	NBU 1022-2J2S BH	1,169ft
NBU 1022-2K1CS	NBU 1022-2J2S BH	1,180ft
NBU 1022-2L1BS	NBU 217-2	354ft
NBU 1022-2E4CS	NBU 1022-02F	559ft

Legend

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

- Well - Proposed (Green dot)
- Bottom Hole - Proposed (Green dot)
- Well Pad (Red square)
- Well Path (Grey line)
- Bottom Hole - Existing (Grey dot)
- Well - 1 Mile Radius (Black circle)
- Producing (Black dot)
- Active (Star symbol)
- Spudded (Drilling commenced: Not yet completed) (Circle with dot)
- Approved permit (APD); not yet spudded (Triangle)
- New Permit (Not yet approved or drilled) (Square)
- Inactive (Circle with cross)
- Drilling Operations Suspended (Cross symbol)
- Temporarily-Abandoned (Circle with dot)
- Shut-In (Circle with dot)
- Plugged and Abandoned (Circle with dot)
- Location Abandoned (Circle with cross)
- Dry hole marker, buried (Circle with cross)
- Returned APD (Unapproved) (Circle with cross)

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 1099 18th Street, Denver, Colorado 80202

WELL PAD - NBU 1022-2L

TOPO C
 NBU 1022-2L4BS, NBU 1022-2L1CS,
 NBU 1022-2K4BS, NBU 1022-2K1CS,
 NBU 1022-2L1BS & NBU 1022-2E4CS
 LOCATED IN SECTION 2, T10S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH

609

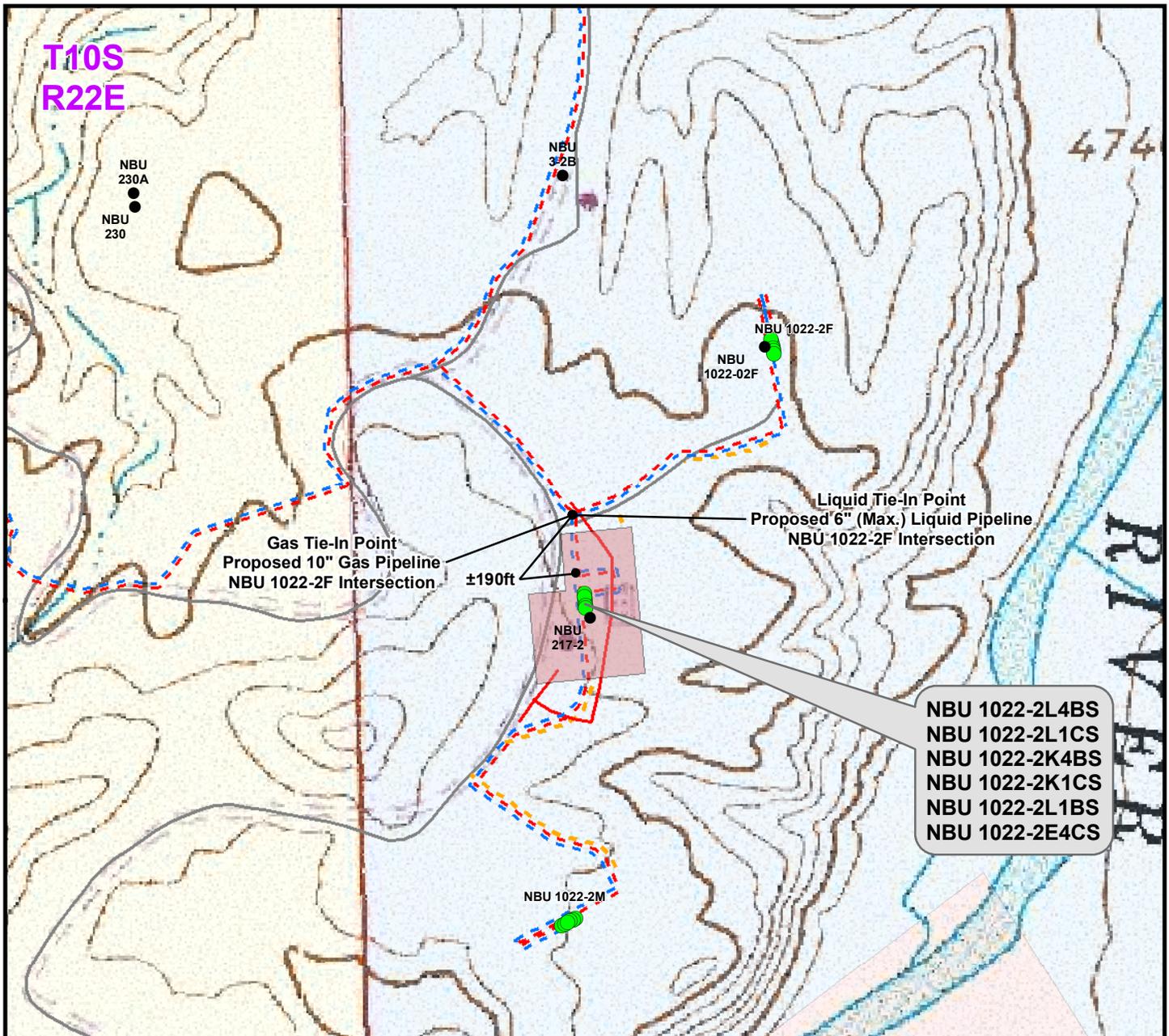
CONSULTING, LLC
 2155 North Main Street
 Sheridan, WY 82801
 Phone (307) 674-0609
 Fax (307) 674-0182



Scale: 1" = 2,000ft | NAD83 USP Central | Sheet No: **14** of 18

Drawn: TL | Date: 30 Mar 2011

Revised: | Date: |



Proposed Liquid Pipeline		Length	Proposed Gas Pipeline		Length
Proposed 6" (Max.)	(Meter House to 2M Intersection)	±125ft	Proposed 8"	(Meter House to 2M Intersection)	±125ft
Proposed 6" (Max.)	(2M Intersection to 2F Intersection)	±190ft	Proposed 10"	(2M Intersection to 2F Intersection)	±190ft
TOTAL PROPOSED LIQUID PIPELINE =		±315ft	TOTAL PROPOSED GAS PIPELINE =		±315ft

Legend

- Well - Proposed
- Well - Existing
- Well Pad
- - - 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

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

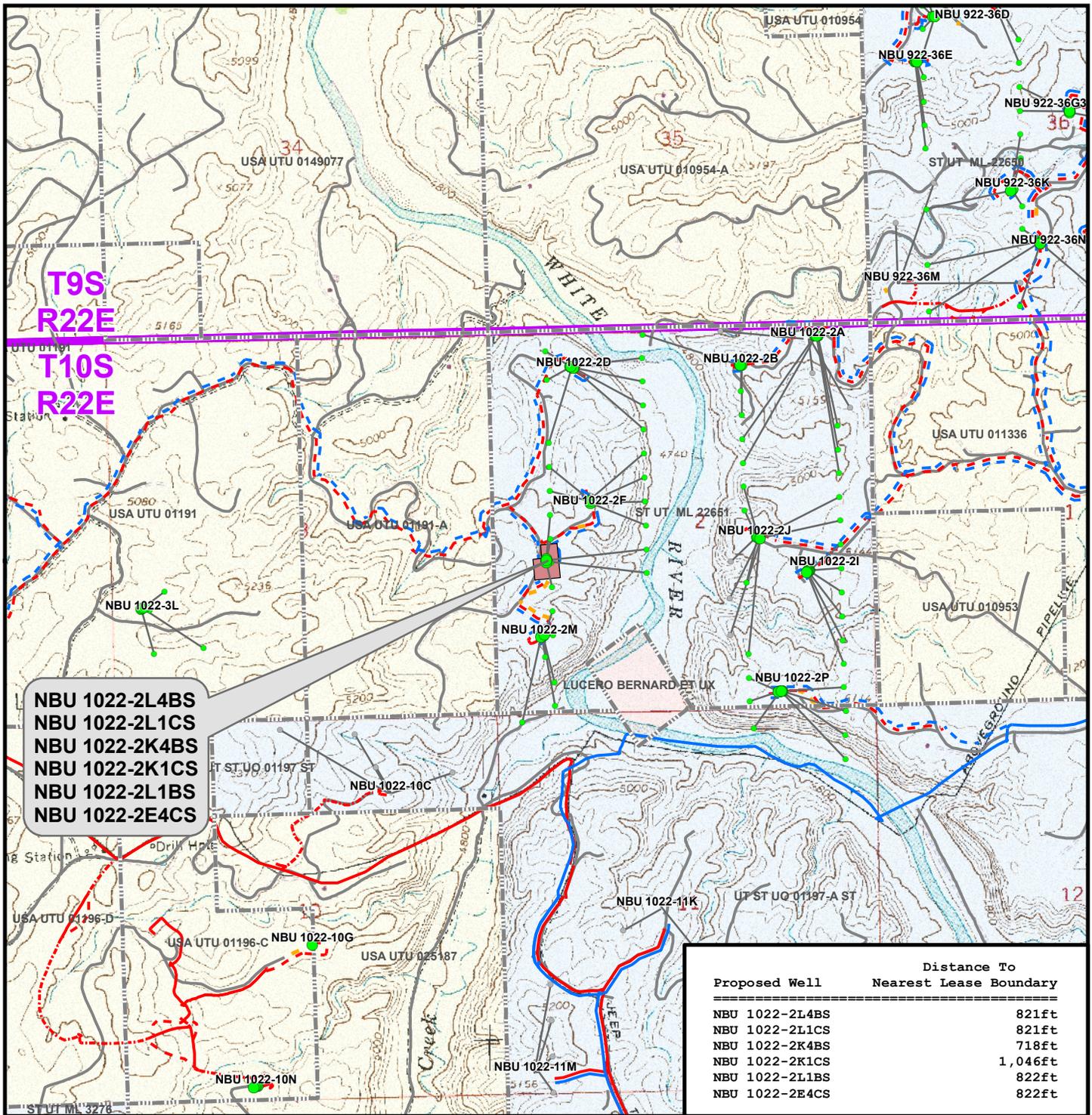
WELL PAD - NBU 1022-2L

TOPO D2 (PAD & PIPELINE DETAIL)
 NBU 1022-2L4BS, NBU 1022-2L1CS,
 NBU 1022-2K4BS, NBU 1022-2K1CS,
 NBU 1022-2L1BS & NBU 1022-2E4CS
 LOCATED IN SECTION 2, T10S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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



Scale: 1" = 500ft	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 30 Mar 2011	16 16 of 18
Revised:	Date:	



NBU 1022-2L4BS
 NBU 1022-2L1CS
 NBU 1022-2K4BS
 NBU 1022-2K1CS
 NBU 1022-2L1BS
 NBU 1022-2E4CS

Proposed Well	Distance To Nearest Lease Boundary
NBU 1022-2L4BS	821ft
NBU 1022-2L1CS	821ft
NBU 1022-2K4BS	718ft
NBU 1022-2K1CS	1,046ft
NBU 1022-2L1BS	822ft
NBU 1022-2E4CS	822ft

Legend

- Well - Proposed (Green dot)
- Bottom Hole - Proposed (Green dot)
- Well - Existing (Grey dot)
- Bottom Hole - Existing (Grey dot)
- Well Path (Grey line)
- Well Pad (Red shaded area)
- Lease Boundary (Dashed grey line)
- Gas Pipeline - Proposed (Red dashed line)
- Gas Pipeline - To Be Upgraded (Red dotted line)
- Gas Pipeline - Existing (Red solid line)
- Liquid Pipeline - Proposed (Blue dashed line)
- Liquid Pipeline - Existing (Blue solid line)
- Road - Proposed (Yellow dashed line)
- Road - Existing (Grey solid line)
- Bureau of Land Management (Yellow shaded area)
- Indian Reservation (Red shaded area)
- State (Light blue shaded area)
- Private (White shaded area)

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

WELL PAD - NBU 1022-2L

TOPO E
 NBU 1022-2L4BS, NBU 1022-2L1CS,
 NBU 1022-2K4BS, NBU 1022-2K1CS,
 NBU 1022-2L1BS & NBU 1022-2E4CS
 LOCATED IN SECTION 2, 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



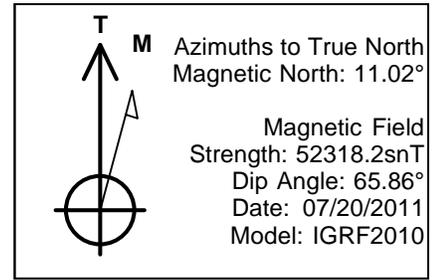
Scale: 1" = 2,000ft | NAD83 USP Central | Sheet No: **17** of 18

Drawn: TL | Date: 30 Mar 2011
 Revised: | Date:

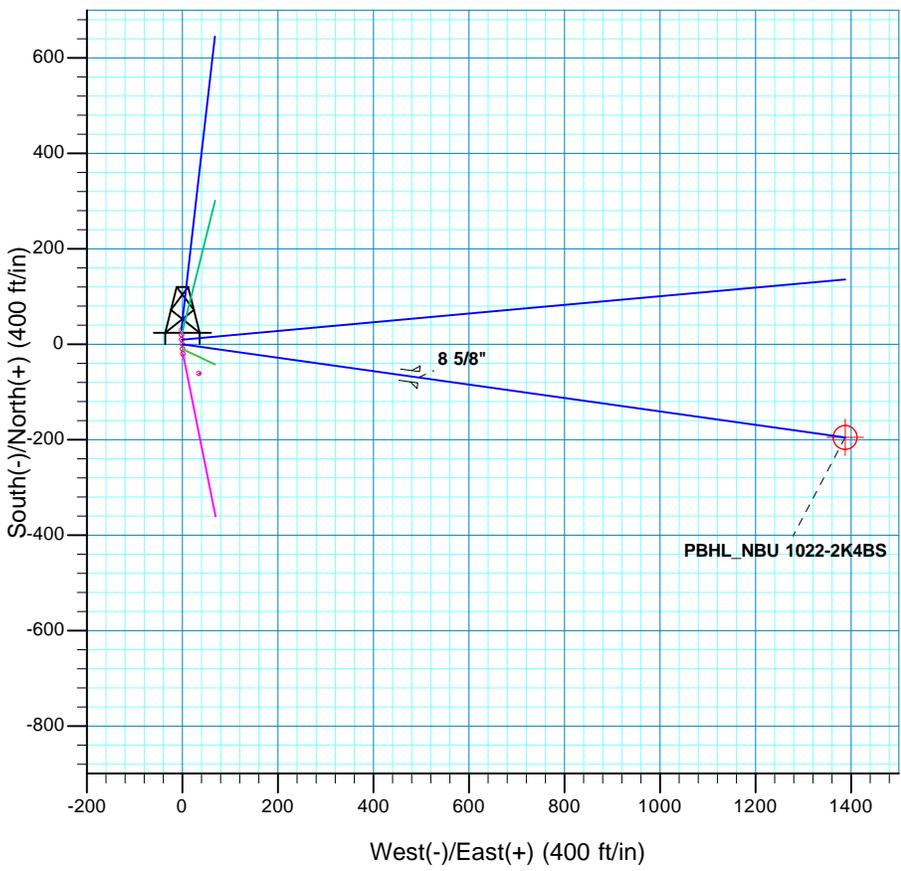
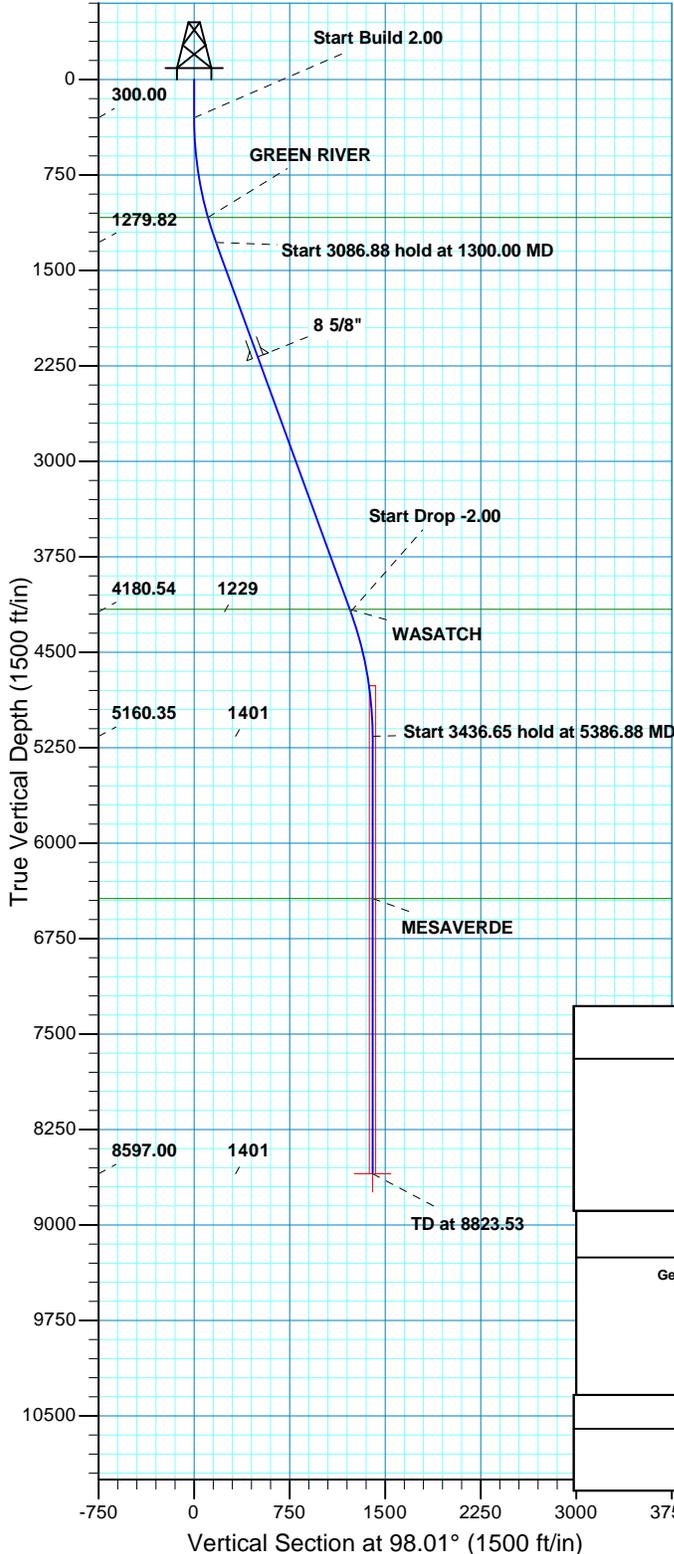
**Kerr-McGee Oil & Gas Onshore, LP
WELL PAD - NBU 1022-2L
WELLS – NBU 1022-2L4BS, NBU 1022-2L1CS,
NBU 1022-2K4BS, NBU 1022-2K1CS,
NBU 1022-2L1BS & NBU 1022-2E4CS
Section 2, T10S, R22E, S.L.B.&M.**

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 3.9 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 5.1 miles to a second Class D County Road to the northeast. Exit right and proceed in a northeasterly direction along the second Class D County Road approximately 0.8 miles to a third Class D County Road to the South. Exit right and proceed in a southerly, then easterly direction along the third Class D County Road approximately 1.6 miles to a fourth Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the Class D County Road approximately 0.2 miles to the proposed access road. Follow road flags in a southeasterly direction approximately 70 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 58.9 miles in a southerly direction.



WELL DETAILS: NBU 1022-2K4BS								
GL 5049' & KB 4' @ 5053.00ft (ASSUMED)								
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude			
0.00	0.00	14521441.57	2084943.87	39° 58' 35.393 N	109° 24' 47.927 W			
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8597.00	-195.18	1387.65	14521271.12	2086334.78	39° 58' 33.463 N	109° 24' 30.100 W	Circle (Radius: 25.00)
- plan hits target center								



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	98.01	1279.82	-24.06	171.08	2.00	98.01	172.77	
4386.88	20.00	98.01	4180.54	-171.12	1216.57	0.00	0.00	1228.54	
5386.88	0.00	0.00	5160.35	-195.18	1387.65	2.00	180.00	1401.31	
8823.53	0.00	0.00	8597.00	-195.18	1387.65	0.00	0.00	1401.31	PBHL_NBU 1022-2K4BS

PROJECT DETAILS: Uintah County, UT UTM12			FORMATION TOP DETAILS		
Geodetic System: Universal Transverse Mercator (US Survey Feet)			TVDPath	MDPath	Formation
Datum: NAD 1927 - Western US			1084.00	1094.13	GREEN RIVER
Ellipsoid: Clarke 1866			4163.00	4368.22	WASATCH
Zone: Zone 12N (114 W to 108 W)			6436.00	6662.53	MESAVERDE
Location: SECTION 2 T10S R22E					
System Datum: Mean Sea Level					

CASING DETAILS					
TVD	MD	Name	Size		
2178.00	2255.83	8 5/8"	8.620		

RECEIVED



Kerr McGee Oil and Gas Onshore LP

**Uintah County, UT UTM12
NBU 1022-2L PAD
NBU 1022-2K4BS**

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

21 July, 2011





SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-2K4BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 5049' & KB 4' @ 5053.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 5049' & KB 4' @ 5053.00ft (ASSUMED)
Site:	NBU 1022-2L PAD	North Reference:	True
Well:	NBU 1022-2K4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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

Site	NBU 1022-2L PAD, SECTION 2 T10S R22E				
Site Position:	Northing:	14,521,471.40 usft	Latitude:	39° 58' 35.688 N	
From: Lat/Long	Easting:	2,084,941.38 usft	Longitude:	109° 24' 47.952 W	
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	1.02 °

Well	NBU 1022-2K4BS, 2097 FSL 742 FWL					
Well Position	+N/-S	-29.87 ft	Northing:	14,521,441.58 usft	Latitude:	39° 58' 35.393 N
	+E/-W	1.96 ft	Easting:	2,084,943.87 usft	Longitude:	109° 24' 47.927 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,049.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	07/20/11	11.02	65.86	52,318

Design	PLAN #1 PRELIMINARY			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	98.01

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	20.00	98.01	1,279.82	-24.06	171.08	2.00	2.00	0.00	98.01	
4,386.88	20.00	98.01	4,180.54	-171.12	1,216.57	0.00	0.00	0.00	0.00	
5,386.88	0.00	0.00	5,160.35	-195.18	1,387.65	2.00	-2.00	0.00	180.00	
8,823.53	0.00	0.00	8,597.00	-195.18	1,387.65	0.00	0.00	0.00	0.00	PBHL_NBU 1022-2K4



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-2K4BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 5049' & KB 4' @ 5053.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 5049' & KB 4' @ 5053.00ft (ASSUMED)
Site:	NBU 1022-2L PAD	North Reference:	True
Well:	NBU 1022-2K4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00										
400.00	2.00	98.01	399.98	-0.24	1.73	1.75	2.00	2.00	2.00	0.00
500.00	4.00	98.01	499.84	-0.97	6.91	6.98	2.00	2.00	2.00	0.00
600.00	6.00	98.01	599.45	-2.19	15.54	15.69	2.00	2.00	2.00	0.00
700.00	8.00	98.01	698.70	-3.88	27.61	27.88	2.00	2.00	2.00	0.00
800.00	10.00	98.01	797.47	-6.06	43.10	43.52	2.00	2.00	2.00	0.00
900.00	12.00	98.01	895.62	-8.72	61.99	62.60	2.00	2.00	2.00	0.00
1,000.00	14.00	98.01	993.06	-11.85	84.27	85.10	2.00	2.00	2.00	0.00
1,094.13	15.88	98.01	1,084.00	-15.23	108.30	109.37	2.00	2.00	2.00	0.00
GREEN RIVER										
1,100.00	16.00	98.01	1,089.64	-15.46	109.90	110.98	2.00	2.00	2.00	0.00
1,200.00	18.00	98.01	1,185.27	-19.53	138.85	140.21	2.00	2.00	2.00	0.00
1,300.00	20.00	98.01	1,279.82	-24.06	171.08	172.77	2.00	2.00	2.00	0.00
Start 3086.88 hold at 1300.00 MD										
1,400.00	20.00	98.01	1,373.78	-28.83	204.95	206.97	0.00	0.00	0.00	0.00
1,500.00	20.00	98.01	1,467.75	-33.59	238.82	241.17	0.00	0.00	0.00	0.00
1,600.00	20.00	98.01	1,561.72	-38.36	272.69	275.37	0.00	0.00	0.00	0.00
1,700.00	20.00	98.01	1,655.69	-43.12	306.56	309.58	0.00	0.00	0.00	0.00
1,800.00	20.00	98.01	1,749.66	-47.88	340.43	343.78	0.00	0.00	0.00	0.00
1,900.00	20.00	98.01	1,843.63	-52.65	374.30	377.98	0.00	0.00	0.00	0.00
2,000.00	20.00	98.01	1,937.60	-57.41	408.16	412.18	0.00	0.00	0.00	0.00
2,100.00	20.00	98.01	2,031.57	-62.17	442.03	446.38	0.00	0.00	0.00	0.00
2,200.00	20.00	98.01	2,125.54	-66.94	475.90	480.59	0.00	0.00	0.00	0.00
2,255.83	20.00	98.01	2,178.00	-69.60	494.81	499.68	0.00	0.00	0.00	0.00
8 5/8"										
2,300.00	20.00	98.01	2,219.51	-71.70	509.77	514.79	0.00	0.00	0.00	0.00
2,400.00	20.00	98.01	2,313.48	-76.47	543.64	548.99	0.00	0.00	0.00	0.00
2,500.00	20.00	98.01	2,407.45	-81.23	577.51	583.19	0.00	0.00	0.00	0.00
2,600.00	20.00	98.01	2,501.42	-85.99	611.38	617.39	0.00	0.00	0.00	0.00
2,700.00	20.00	98.01	2,595.39	-90.76	645.24	651.60	0.00	0.00	0.00	0.00
2,800.00	20.00	98.01	2,689.35	-95.52	679.11	685.80	0.00	0.00	0.00	0.00
2,900.00	20.00	98.01	2,783.32	-100.29	712.98	720.00	0.00	0.00	0.00	0.00
3,000.00	20.00	98.01	2,877.29	-105.05	746.85	754.20	0.00	0.00	0.00	0.00
3,100.00	20.00	98.01	2,971.26	-109.81	780.72	788.40	0.00	0.00	0.00	0.00
3,200.00	20.00	98.01	3,065.23	-114.58	814.59	822.61	0.00	0.00	0.00	0.00
3,300.00	20.00	98.01	3,159.20	-119.34	848.46	856.81	0.00	0.00	0.00	0.00
3,400.00	20.00	98.01	3,253.17	-124.10	882.32	891.01	0.00	0.00	0.00	0.00
3,500.00	20.00	98.01	3,347.14	-128.87	916.19	925.21	0.00	0.00	0.00	0.00
3,600.00	20.00	98.01	3,441.11	-133.63	950.06	959.41	0.00	0.00	0.00	0.00
3,700.00	20.00	98.01	3,535.08	-138.40	983.93	993.62	0.00	0.00	0.00	0.00
3,800.00	20.00	98.01	3,629.05	-143.16	1,017.80	1,027.82	0.00	0.00	0.00	0.00
3,900.00	20.00	98.01	3,723.02	-147.92	1,051.67	1,062.02	0.00	0.00	0.00	0.00
4,000.00	20.00	98.01	3,816.99	-152.69	1,085.54	1,096.22	0.00	0.00	0.00	0.00
4,100.00	20.00	98.01	3,910.95	-157.45	1,119.41	1,130.42	0.00	0.00	0.00	0.00
4,200.00	20.00	98.01	4,004.92	-162.22	1,153.27	1,164.63	0.00	0.00	0.00	0.00
4,300.00	20.00	98.01	4,098.89	-166.98	1,187.14	1,198.83	0.00	0.00	0.00	0.00
4,368.22	20.00	98.01	4,163.00	-170.23	1,210.25	1,222.16	0.00	0.00	0.00	0.00
WASATCH										
4,386.88	20.00	98.01	4,180.54	-171.12	1,216.57	1,228.54	0.00	0.00	0.00	0.00



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-2K4BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 5049' & KB 4' @ 5053.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 5049' & KB 4' @ 5053.00ft (ASSUMED)
Site:	NBU 1022-2L PAD	North Reference:	True
Well:	NBU 1022-2K4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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)
Start Drop -2.00									
4,400.00	19.74	98.01	4,192.87	-171.74	1,220.98	1,233.00	2.00	-2.00	0.00
4,500.00	17.74	98.01	4,287.57	-176.21	1,252.79	1,265.12	2.00	-2.00	0.00
4,600.00	15.74	98.01	4,383.33	-180.22	1,281.31	1,293.92	2.00	-2.00	0.00
4,700.00	13.74	98.01	4,480.03	-183.77	1,306.50	1,319.36	2.00	-2.00	0.00
4,800.00	11.74	98.01	4,577.57	-186.84	1,328.33	1,341.41	2.00	-2.00	0.00
4,900.00	9.74	98.01	4,675.81	-189.43	1,346.78	1,360.04	2.00	-2.00	0.00
5,000.00	7.74	98.01	4,774.64	-191.55	1,361.82	1,375.23	2.00	-2.00	0.00
5,100.00	5.74	98.01	4,873.95	-193.18	1,373.44	1,386.96	2.00	-2.00	0.00
5,200.00	3.74	98.01	4,973.60	-194.33	1,381.62	1,395.22	2.00	-2.00	0.00
5,300.00	1.74	98.01	5,073.48	-195.00	1,386.35	1,399.99	2.00	-2.00	0.00
5,386.88	0.00	0.00	5,160.35	-195.18	1,387.65	1,401.31	2.00	-2.00	0.00
Start 3436.65 hold at 5386.88 MD									
5,400.00	0.00	0.00	5,173.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
5,500.00	0.00	0.00	5,273.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
5,600.00	0.00	0.00	5,373.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
5,700.00	0.00	0.00	5,473.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
5,800.00	0.00	0.00	5,573.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
5,900.00	0.00	0.00	5,673.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
6,000.00	0.00	0.00	5,773.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
6,100.00	0.00	0.00	5,873.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
6,200.00	0.00	0.00	5,973.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
6,300.00	0.00	0.00	6,073.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
6,400.00	0.00	0.00	6,173.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
6,500.00	0.00	0.00	6,273.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
6,600.00	0.00	0.00	6,373.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
6,662.53	0.00	0.00	6,436.00	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
MESAVERDE									
6,700.00	0.00	0.00	6,473.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
6,800.00	0.00	0.00	6,573.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
6,900.00	0.00	0.00	6,673.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
7,000.00	0.00	0.00	6,773.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
7,100.00	0.00	0.00	6,873.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
7,200.00	0.00	0.00	6,973.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
7,300.00	0.00	0.00	7,073.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
7,400.00	0.00	0.00	7,173.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
7,500.00	0.00	0.00	7,273.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
7,600.00	0.00	0.00	7,373.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
7,700.00	0.00	0.00	7,473.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
7,800.00	0.00	0.00	7,573.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
7,900.00	0.00	0.00	7,673.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
8,000.00	0.00	0.00	7,773.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
8,100.00	0.00	0.00	7,873.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
8,200.00	0.00	0.00	7,973.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
8,300.00	0.00	0.00	8,073.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
8,400.00	0.00	0.00	8,173.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
8,500.00	0.00	0.00	8,273.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
8,600.00	0.00	0.00	8,373.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
8,700.00	0.00	0.00	8,473.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
8,800.00	0.00	0.00	8,573.47	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
8,823.53	0.00	0.00	8,597.00	-195.18	1,387.65	1,401.31	0.00	0.00	0.00
PBHL_NBU 1022-2K4BS									



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-2K4BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 5049' & KB 4' @ 5053.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 5049' & KB 4' @ 5053.00ft (ASSUMED)
Site:	NBU 1022-2L PAD	North Reference:	True
Well:	NBU 1022-2K4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 1022-2K4B: - hit/miss target - Shape	0.00	0.00	8,597.00	-195.18	1,387.65	14,521,271.12	2,086,334.77	39° 58' 33.463 N	109° 24' 30.100 W
- plan hits target center - Circle (radius 25.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,255.83	2,178.00	8 5/8"	8.620	11.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,094.13	1,084.00	GREEN RIVER			
4,368.22	4,163.00	WASATCH			
6,662.53	6,436.00	MESAVERDE			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
300.00	300.00	0.00	0.00	Start Build 2.00	
1,300.00	1,279.82	-24.06	171.08	Start 3086.88 hold at 1300.00 MD	
4,386.88	4,180.54	-171.12	1,216.57	Start Drop -2.00	
5,386.88	5,160.35	-195.18	1,387.65	Start 3436.65 hold at 5386.88 MD	
8,823.53	8,597.00	-195.18	1,387.65	TD at 8823.53	

NBU 1022-2E4CS			
Surface:	2127 FSL / 750 FWL	NWSW	Lot
BHL:	2561 FNL / 822 FWL	SWNW	Lot
NBU 1022-2K1CS			
Surface:	2107 FSL / 752 FWL	NWSW	Lot
BHL:	2235 FSL / 2141 FWL	NESW	Lot
NBU 1022-2K4BS			
Surface:	2097 FSL / 752 FWL	NWSW	Lot
BHL:	1904 FSL / 2140 FWL	NESW	Lot
NBU 1022-2L1BS			
Surface:	2117 FSL / 751 FWL	NWSW	Lot
BHL:	2398 FSL / 822 FWL	NWSW	Lot
NBU 1022-2L1CS			
Surface:	2087 FSL / 753 FWL	NWSW	Lot
BHL:	2067 FSL / 821 FWL	NWSW	Lot
NBU 1022-2L4BS			
Surface:	2077 FSL / 754 FWL	NWSW	Lot
BHL:	1736 FSL / 821 FWL	NWSW	Lot

Pad: NBU 1022-2L PAD
Section 2 T10S R22E
Mineral Lease: ST UT ML 22651

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

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

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

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

A. Existing Roads:

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

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

B. Planned Access Roads:

One access road is proposed from the existing access road for the NBU 1022-2F pad heading south to the NE corner of the pad. Total distance is $\pm 70'$ (see Topo Map B). An additional access road is proposed from the southern edge of the pad heading southwesterly to the existing county road. Total distance of the additional access road to the existing county road is $\pm 410'$ (see Topo Map B).

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

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

C. Location of Existing and Proposed Facilities:

This pad will expand the existing pad for the NBU 217-2. The NBU 217-2 well location is a vertical producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of July 19, 2011.

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

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

Gathering Facilities:

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

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is $\pm 315'$ and the individual segments are broken up as follows:

- $\pm 125'$ (0.02 miles) – New 8" buried gas pipeline from the meter to the tie-in at the proposed 1022-2M Intersection. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 190'$ (0.04 miles) – New 10" buried gas pipeline from the tie-in at the proposed 1022-2M Intersection to the tie-in at the proposed 1022-2F Intersection 10" gas pipeline. Please refer to Topo D2 - Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is $\pm 315'$ and the individual segments are broken up as follows:

- $\pm 125'$ (0.02 miles) – Up to 6" new buried liquid pipeline from the separator to the tie-in at the proposed 1022-2M Intersection. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 190'$ (0.04 miles) – Up to 6" new buried liquid pipeline from the proposed 1022-2M Intersection to the proposed 1022-2F Intersection 6" (max) liquid pipeline. Please refer to Topo D2 - Pad and Pipeline Detail.

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

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

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

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

D. Location and Type of Water Supply:

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

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

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

No water well is to be drilled on this lease.

E. Source of Construction Materials:

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

F. Methods for Handling Waste Materials:

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

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

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

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

The reserve and/or fracture stimulation pit will be lined with a synthetic material 20 mil or thicker. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. Any additional pits necessary 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.

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

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

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

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

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

Materials Management

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

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

G. Ancillary Facilities:

None are anticipated.

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

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

Coordinates are provided in the National Spatial Reference System, North American Datum, 1927 (NAD27) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

I. Plans for Reclamation of the Surface:

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

Reclamation activities in both phases may include but 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 includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

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

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

Final Reclamation

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

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

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

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

Seeding and Measures Common to Interim and Final Reclamation

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

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

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

J. Surface/Mineral Ownership:

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

L. Other Information:

None

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

Andy Lytle
Regulatory Analyst I
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6100

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

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

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

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

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

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



Andy Lytle

July 19, 2011

Date



Joseph D. Johnson
1099 18TH STREET STE. 1800 • DENVER, CO 80202
720-929-6708 • FAX 720-929-7708
E-MAIL: JOE.JOHNSON@ANADARKO.COM

July 25, 2011

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 1022-2K4BS
T10S-R22E
Section 2: NWSW
Surface: 2097' FSL, 752' FWL
T10S-R22E
Section 2: NESW
Bottom Hole: 1904' FSL, 2140' 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 1022-2K4BS 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.

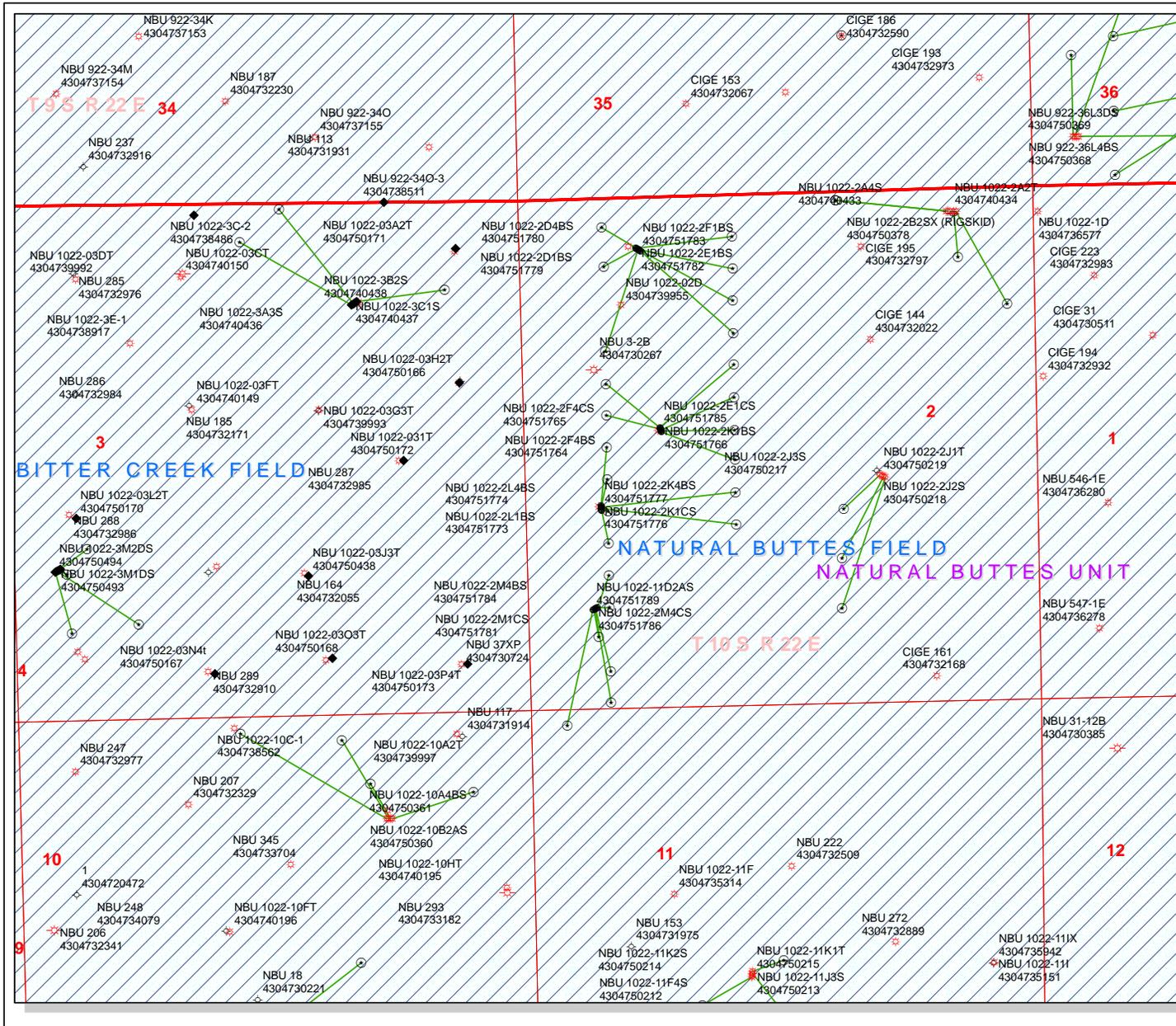
Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink, appearing to read 'Joe D. Johnson', with a horizontal line underneath.

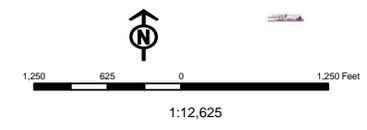
Joseph D. Johnson
Landman



API Number: 4304751777
Well Name: NBU 1022-2K4BS
Township T1.0 . Range R2.2 . Section 02
Meridian: SLBM
 Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
 Map Produced by Diana Mason

Units	Wells Query Status
ACTIVE	APD - Approved Permit
EXPLORATORY	DRL - Spudded (Drilling Commenced)
GAS STORAGE	GIW - Gas Injection
NF PP OIL	GS - Gas Storage
NF SECONDARY	LA - Location Abandoned
PI OIL	LOC - New Location
PP GAS	OPS - Operation Suspended
PP GEOTHERM	PA - Plugged Abandoned
PP OIL	PGW - Producing Gas Well
SECONDARY	POW - Producing Oil Well
TERMINATED	RET - Returned APD
Unknown	SGW - Shut-in Gas Well
ABANDONED	SOI - Shut-in Oil Well
ACTIVE	TA - Temp. Abandoned
COMBINED	TW - Test Well
INACTIVE	WDW - Water Disposal
STORAGE	WIW - Water Injection Well
TERMINATED	WSW - Water Supply Well
Sections	
Township	



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:

3160

(UT-922)

August 5, 2011

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2011 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 2011 within the Natural Buttes Unit, Uintah County, Utah.

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

NBU 1022-2F PAD

43-047-51760	NBU 1022-E4BS	Sec 02 T10S R22E 2386 FNL 1379 FWL
	BHL	Sec 02 T10S R22E 2231 FNL 0822 FWL

43-047-51761	NBU 1022-2F1CS	Sec 02 T10S R22E 2366 FNL 1376 FWL
	BHL	Sec 02 T10S R22E 1738 FNL 2145 FWL

43-047-51764	NBU 1022-2F4BS	Sec 02 T10S R22E 2395 FNL 1381 FWL
	BHL	Sec 02 T10S R22E 2069 FNL 2144 FWL

43-047-51765	NBU 1022-2F4CS	Sec 02 T10S R22E 2405 FNL 1382 FWL
	BHL	Sec 02 T10S R22E 2412 FNL 2141 FWL

43-047-51766	NBU 1022-2K1BS	Sec 02 T10S R22E 2415 FNL 1384 FWL
	BHL	Sec 02 T10S R22E 2566 FSL 2142 FWL

43-047-51785	NBU 1022-2E1CS	Sec 02 T10S R22E 2376 FNL 1377 FWL
	BHL	Sec 02 T10S R22E 1900 FNL 0823 FWL

NBU 1022-2D PAD

43-047-51767	NBU 1022-2C4BS	Sec 02 T10S R22E 0526 FNL 1185 FWL
	BHL	Sec 02 T10S R22E 0745 FNL 2148 FWL

43-047-51768	NBU 1022-2C4CS	Sec 02 T10S R22E 0537 FNL 1202 FWL
	BHL	Sec 02 T10S R22E 1076 FNL 2147 FWL

43-047-51779	NBU 1022-2D1BS	Sec 02 T10S R22E 0503 FNL 1152 FWL
	BHL	Sec 02 T10S R22E 0291 FNL 0807 FWL

RECEIVED: August 08, 2011

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-51780	NBU 1022-2D4BS	Sec 02 T10S R22E 0514 FNL 1168 FWL BHL Sec 02 T10S R22E 0692 FNL 0820 FWL
43-047-51782	NBU 1022-2E1BS	Sec 02 T10S R22E 0520 FNL 1177 FWL BHL Sec 02 T10S R22E 1569 FNL 0823 FWL
43-047-51783	NBU 1022-2F1BS	Sec 02 T10S R22E 0531 FNL 1193 FWL BHL Sec 02 T10S R22E 1407 FNL 2146 FWL
NBU 1022-2L PAD		
43-047-51771	NBU 1022-2E4CS	Sec 02 T10S R22E 2127 FSL 0750 FWL BHL Sec 02 T10S R22E 2561 FNL 0822 FWL
43-047-51772	NBU 1022-2L1CS	Sec 02 T10S R22E 2087 FSL 0753 FWL BHL Sec 02 T10S R22E 2067 FSL 0821 FWL
43-047-51773	NBU 1022-2L1BS	Sec 02 T10S R22E 2117 FSL 0751 FWL BHL Sec 02 T10S R22E 2398 FSL 0822 FWL
43-047-51774	NBU 1022-2L4BS	Sec 02 T10S R22E 2077 FSL 0754 FWL BHL Sec 02 T10S R22E 1736 FSL 0821 FWL
43-047-51776	NBU 1022-2K1CS	Sec 02 T10S R22E 2107 FSL 0752 FWL BHL Sec 02 T10S R22E 2235 FSL 2141 FWL
43-047-51777	NBU 1022-2K4BS	Sec 02 T10S R22E 2097 FSL 0752 FWL BHL Sec 02 T10S R22E 1904 FSL 2140 FWL
NBU 1022-2M PAD		
43-047-51775	NBU 1022-2L4CS	Sec 02 T10S R22E 1075 FSL 0695 FWL BHL Sec 02 T10S R22E 1406 FSL 0820 FWL
43-047-51778	NBU 1022-2M1BS	Sec 02 T10S R22E 1071 FSL 0686 FWL BHL Sec 02 T10S R22E 1075 FSL 0820 FWL
43-047-51781	NBU 1022-2M1CS	Sec 02 T10S R22E 1057 FSL 0659 FWL BHL Sec 02 T10S R22E 0771 FSL 0704 FWL
43-047-51784	NBU 1022-2M4BS	Sec 02 T10S R22E 1066 FSL 0677 FWL BHL Sec 02 T10S R22E 0414 FSL 0819 FWL
43-047-51786	NBU 1022-2M4CS	Sec 02 T10S R22E 1062 FSL 0668 FWL BHL Sec 02 T10S R22E 0092 FSL 0822 FWL
43-047-51789	NBU 1022-11D2AS	Sec 02 T10S R22E 1053 FSL 0650 FWL BHL Sec 11 T10S R22E 0133 FNL 0360 FWL

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

Michael L. Coulthard

Digitally signed by Michael L. Coulthard
DN: cn=Michael L. Coulthard, o=Bureau of Land Management,
ou=Branch of Minerals, email=Michael_Coulthard@blm.gov,
c=US
Date: 2011.08.08 08:31:52 -06'00'

RECEIVED: August 08, 2011

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

MCoulthard:mc:8-5-11

From: Jim Davis
To: Hill, Brad; Mason, Diana
CC: Bonner, Ed; Garrison, LaVonne; Lytle, Andy
Date: 9/26/2011 5:08 PM
Subject: Anadarko APD approvals 10S 22E Sec 2, 11 and 14
Attachments: Anadarko Approvals from SITLA 9.26.11.xls

The following APDs have been approved by SITLA including arch clearance and paleo clearance:

4304751840 NBU 1022-11P4CS
4304751860 NBU 1022-12M1CS
4304751868 NBU 1022-12M4BS
4304751870 NBU 1022-12M4CS
4304751803 NBU 1022-2G1CS
4304751807 NBU 1022-2G1BS
4304751808 NBU 1022-2H1BS
4304751812 NBU 1022-2H1CS
4304751825 NBU 1022-2H4BS
4304751811 NBU 1022-2B1CS
4304751827 NBU 1022-2B4CS
4304751828 NBU 1022-2B4BS
4304751830 NBU 1022-2C1BS
4304751809 NBU 1022-2I4CS
4304751810 NBU 1022-2P1BS
4304751824 NBU 1022-2I1CS
4304751829 NBU 1022-2I4BS
4304751838 NBU 1022-2P4BS
4304751852 NBU 1022-2P1CS
4304751839 NBU 1022-2P4CS
4304751841 NBU 1022-11B1BS
4304751842 NBU 1022-11A1BS
4304751846 NBU 1022-2O4CS
4304751848 NBU 1022-11A4BS
4304751849 NBU 1022-2O4BS
4304751850 NBU 1022-11A1CS

These APDS are approved including arch clearance but will require **spot paleo monitoring** as recommended in the applicable paleo reports:

4304751758 NBU 1022-2C1CS
4304751767 NBU 1022-2C4BS
4304751768 NBU 1022-2C4CS
4304751779 NBU 1022-2D1BS
4304751780 NBU 1022-2D4BS
4304751782 NBU 1022-2E1BS
4304751783 NBU 1022-2F1BS
4304751760 NBU 1022-2E4BS
4304751761 NBU 1022-2F1CS
4304751764 NBU 1022-2F4BS
4304751765 NBU 1022-2F4CS
4304751766 NBU 1022-2K1BS
4304751785 NBU 1022-2E1CS
4304751775 NBU 1022-2L4CS
4304751778 NBU 1022-2M1BS
4304751781 NBU 1022-2M1CS
4304751784 NBU 1022-2M4BS
4304751786 NBU 1022-2M4CS
4304751789 NBU 1022-11D2AS

4304751802 NBU 1022-11B4CS
4304751813 NBU 1022-11B4BS
4304751815 NBU 1022-11B1CS
4304751817 NBU 1022-11C4AS
4304751818 NBU 1022-11C4CS
4304751855 NBU 1022-11F4AS
4304751805 NBU 1022-11A4CS
4304751814 NBU 1022-11H1BS
4304751822 NBU 1022-11G4CS
4304751823 NBU 1022-11G1BS
4304751837 NBU 1022-11G1CS
4304751853 NBU 1022-11G4BS
4304751834 NBU 1022-11I1CS
4304751835 NBU 1022-12L1CS
4304751857 NBU 1022-11H4BS
4304751858 NBU 1022-11H4CS
4304751861 NBU 1022-12L1BS
4304751863 NBU 1022-11H1CS
4304751866 NBU 1022-11I4BS
4304751871 NBU 1022-11I4CS
4304751872 NBU 1022-12L4BS
4304751873 NBU 1022-12L4CS
4304751816 NBU 1022-11K4BS
4304751843 NBU 1022-11J1CS
4304751851 NBU 1022-11J1BS
4304751859 NBU 1022-11K4CS
4304751862 NBU 1022-11N1BS
4304751864 NBU 1022-11N1CS
4304751865 NBU 1022-11N4BS
4304751867 NBU 1022-11N4CS
4304751869 NBU 1022-11O2AS

These APDS are approved including arch clearance but will require **full paleo monitoring** as recommended in the applicable paleo reports:

4304751771 NBU 1022-2E4CS
4304751772 NBU 1022-2L1CS
4304751773 NBU 1022-2L1BS
4304751774 NBU 1022-2L4BS
4304751776 NBU 1022-2K1CS
4304751777 NBU 1022-2K4BS
4304751819 NBU 1022-2G4CS
4304751820 NBU 1022-2H4CS
4304751844 NBU 1022-2J4BS
4304751845 NBU 1022-2O1CS
4304751847 NBU 1022-2I1BS
4304751854 NBU 1022-2G4BS
4304751797 NBU 1022-11C2CS
4304751799 NBU 1022-11C3DS
4304751800 NBU 1022-11D1CS
4304751801 NBU 1022-11F2DS
4304751821 NBU 1022-11O1CS
4304751831 NBU 1022-11O4CS
4304751832 NBU 1022-11P1BS
4304751833 NBU 1022-11P4BS
4304751836 NBU 1022-12M1BS
4304751856 NBU 1022-11O4BS

That's a big enough list that I'm including a simple spreadsheet that has this same information, but organized in such a way as may be more useful to some of you.

Thanks.

-Jim

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

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 1022-2K4BS			
String	SURF	PROD		
Casing Size(")	8.625	4.500		
Setting Depth (TVD)	2107	8597		
Previous Shoe Setting Depth (TVD)	40	2107		
Max Mud Weight (ppg)	8.3	12.5		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	7780		
Operators Max Anticipated Pressure (psi)	5502	12.3		

Calculations	SURF String	8.625	"
Max BHP (psi)	.052*Setting Depth*MW=	909	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	656	NO <input type="text" value="air drill"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	445	YES <input type="text" value="OK"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	454	NO <input type="text" value="Reasonable for area"/>
Required Casing/BOPE Test Pressure=		2107	psi
*Max Pressure Allowed @ Previous Casing Shoe=		40	psi *Assumes 1psi/ft frac gradient

Calculations	PROD String	4.500	"
Max BHP (psi)	.052*Setting Depth*MW=	5588	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4556	YES <input type="text"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3697	YES <input type="text" value="OK"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	4160	NO <input type="text" value="Reasonable"/>
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2107	psi *Assumes 1psi/ft frac gradient

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

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

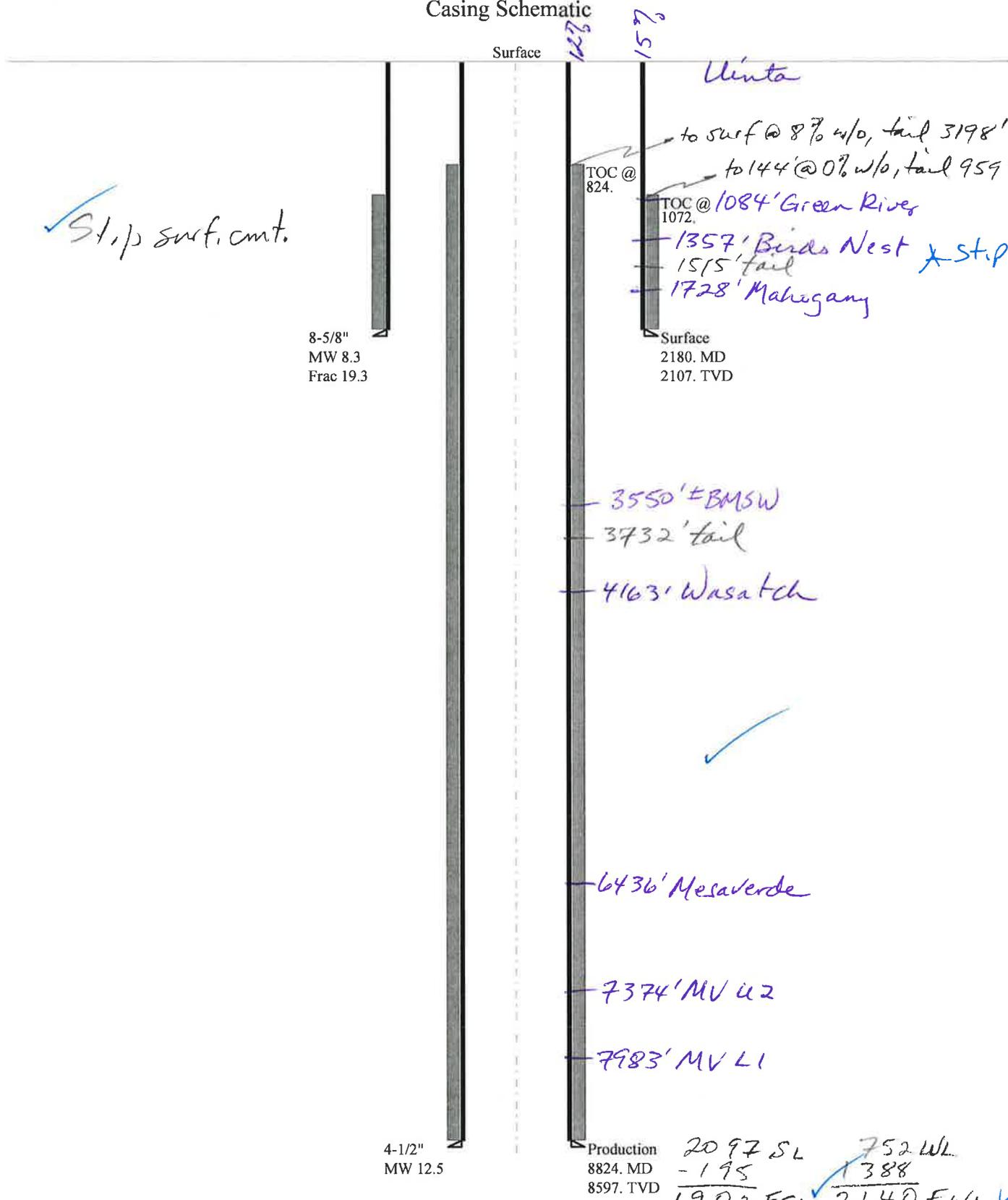
API Well Number: 43047517770000

*Max Pressure Allowed @ Previous Casing Shoe=

psi *Assumes 1psi/ft frac gradient

43047517770000 NBU 1022-2K4BS

Casing Schematic



✓ Stip surf. amt.

8-5/8"
MW 8.3
Frac 19.3

4-1/2"
MW 12.5

Production
8824. MD
8597. TVD

2097 SL	752 WL
-195	1388
1902 FSL	2140 FWL

NE SW Sec 2-10 S - 22 E

OK ✓

Well name:	43047517770000 NBU 1022-2K4BS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Surface	Project ID:	43-047-51777
Location:	UINTAH COUNTY		

Design parameters:

Collapse

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

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
 Surface temperature: 74 °F
 Bottom hole temperature: 103 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 100 ft

Cement top: 1,072 ft

Burst

Max anticipated surface pressure: 1,918 psi
 Internal gradient: 0.120 psi/ft
 Calculated BHP 2,171 psi

No backup mud specified.

Tension:

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

Tension is based on air weight.
 Neutral point: 1,905 ft

Directional Info - Build & Drop

Kick-off point 300 ft
 Departure at shoe: 474 ft
 Maximum dogleg: 2 °/100ft
 Inclination at shoe: 20 °

Re subsequent strings:

Next setting depth: 8,597 ft
 Next mud weight: 12.500 ppg
 Next setting BHP: 5,583 psi
 Fracture mud wt: 19.250 ppg
 Fracture depth: 2,180 ft
 Injection pressure: 2,180 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2180	8.625	28.00	I-55	LT&C	2107	2180	7.892	86328

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	912	1880	2.062	2171	3390	1.56	59	348	5.90 J

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

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

Date: August 22, 2011
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2107 ft, a mud weight of 8.33 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

Well name:	43047517770000 NBU 1022-2K4BS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Production	Project ID:	43-047-51777
Location:	UINTAH COUNTY		

Design parameters:

Collapse

Mud weight: 12.500 ppg
 Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
 Surface temperature: 74 °F
 Bottom hole temperature: 194 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 100 ft
 Cement top: 824 ft

Burst

Max anticipated surface pressure: 3,691 psi
 Internal gradient: 0.220 psi/ft
 Calculated BHP 5,583 psi

No backup mud specified.

Tension:

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

Tension is based on air weight.
 Neutral point: 7,218 ft

Directional Info - Build & Drop

Kick-off point 300 ft
 Departure at shoe: 1401 ft
 Maximum dogleg: 2 °/100ft
 Inclination at shoe: 0 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	8824	4.5	11.60	I-80	LT&C	8597	8824	3.875	116477
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	5583	6360	1.139	5583	7780	1.39	99.7	212	2.13 J

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

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

Date: August 22, 2011
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 8597 ft, a mud weight of 12.5 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.
Well Name NBU 1022-2K4BS
API Number 43047517770000 **APD No** 4303 **Field/Unit** NATURAL BUTTES
Location: 1/4,1/4 NWSW **Sec 2 Tw** 10.0S **Rng** 22.0E 2097 FSL 752 FWL
GPS Coord (UTM) 635493 4426147 **Surface Owner**

Participants

Andy Lytle, Sheila Wopsock, Charles Chase, Grizz Oleen, Mark Kuehn, Doyle Holmes, (Kerr McGee). John Slaugh, Mitch Batty, (Timberline). Jim Davis (SITLA). David Hackford, (DOGM).

Regional/Local Setting & Topography

The general area is in the southeast portion of the Natural Buttes Unit on the northeast end of a major drainage divide called Archy Bench.. Within this area is the White River and rugged drainages that drain into it. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River varies from ¼ mile to 2 miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 41 air miles to the northwest. Access from Vernal is approximately 58.9 road miles following Utah State, Uintah County and oilfield development roads. Five wells, in addition to this one will be directionally drilled from this pad. (for a total of six new wells). There is one existing well on this pad. (The NBU 217-2). At this time, the decision rather to PA or TA this well has not been made. This proposed location takes in an existing location, and very little new construction will be necessary except for digging the reserve pit. The existing access road will be reclaimed and a new access road of 70 feet will be constructed. The location runs in a north-south direction along the top of a flat topped ridge. This ridge breaks off sharply into rugged secondary canyons especially on the southeast and east sides. New construction will consist of approx. 50 feet on all sides of the existing pad, and an additional 50 feet on the northeast corner for reserve pit and excess cut stockpile. No drainage concerns exist, and no diversions will be needed. The pad as modified should be stable and should be a suitable location for seven wells, and is on the best site available in the immediate area.

Surface Use Plan

Current Surface Use

Wildlife Habitat
Existing Well Pad

New Road Miles	Well Pad	Src Const Material	Surface Formation
0.075	Width 352 Length 425	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate? Y

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Prickly pear, wild onion, shadscale, mat saltbrush, Indian ricegrass, halogeton, pepper grass, annuals and curly Vegetation is a salt desert shrub type. Principal species present are cheatgrass, black sagebrush, stipa, mesquite grass.

Sheep, antelope, raptors and small mammals and birds.

Soil Type and Characteristics

Shallow rocky sandy loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diverson Required? N

Berm Required? N

Erosion Sedimentation Control Required? N

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

Reserve Pit

Site-Specific Factors

Site Ranking

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

Characteristics / Requirements

The reserve pit is planned in an area of cut on the west side of the location. Dimensions are 120' x 255' x 12' deep with 2' of freeboard. Kerr McGee agreed to line the pit with a 30-mil liner and 2 layers of felt.

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

Other Observations / Comments

David Hackford
Evaluator

8/18/2011
Date / Time

Application for Permit to Drill Statement of Basis

9/27/2011

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
4303	43047517770000	LOCKED	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		Surface Owner-APD		
Well Name	NBU 1022-2K4BS		Unit	NATURAL BUTTES	
Field	NATURAL BUTTES		Type of Work	DRILL	
Location	NWSW 2 10S 22E S 2097 FSL 752 FWL	GPS Coord (UTM)	635495E	4426136N	

Geologic Statement of Basis

Kerr McGee proposes to set 2,180' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 3,550'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 2. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Production casing cement should be brought up above the base of the moderately saline ground water to isolate it from fresher waters uphole.

Brad Hill
APD Evaluator

9/22/2011
Date / Time

Surface Statement of Basis

The general area is in the southeast portion of the Natural Buttes Unit on the northeast end of a major drainage divide called Archy Bench. Within this area is the White River and rugged drainages that drain into it. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River varies from ¼ mile to 2 miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 41 air miles to the northwest. Access from Vernal is approximately 58.9 road miles following Utah State, Uintah County and oilfield development roads. The existing access road will be reclaimed and a new one of 70 feet will be constructed.

Six wells will be directionally drilled from this location. They are the NBU 1022-2L4BS, NBU 1022-2L1CS, NBU 1022-2K4BS, NBU 1022-2K1CS, NBU 1022-2L1BS, and the NBU 1022-2E4CS. The existing location has one existing well. This well is the NBU 217-2 and at this time the decision rather to PA or TA this well has not been made. The location is on a flat topped ridge that runs in a north-south direction. This ridge breaks off sharply into rugged secondary canyons especially on the southeast and east sides. No drainage concerns exist, and no diversions will be needed. The pad as modified should be stable and sufficient for seven wells, and is the best site for a location in the immediate area.

Excess material will be stockpiled on the north side of the new reserve pit. Approx. 50' of additional construction will be necessary on all sides of the original location.

Both the surface and minerals are owned by SITLA. Jim Davis of SITLA and Ben Williams with DWR were invited by email to the pre-site evaluation. Jim Davis was present. Kerr McGee was told to consult with SITLA for reclamation standards including seeding mixes to be used.

David Hackford
Onsite Evaluator

8/18/2011
Date / Time

RECEIVED: September 27, 2011

Application for Permit to Drill Statement of Basis

9/27/2011

Utah Division of Oil, Gas and Mining

Page 2

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Pits	The reserve pit should be located on the west side of the location.

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 8/1/2011**API NO. ASSIGNED:** 43047517770000**WELL NAME:** NBU 1022-2K4BS**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)**PHONE NUMBER:** 720 929-6100**CONTACT:** Andy Lytle**PROPOSED LOCATION:** NWSW 02 100S 220E**Permit Tech Review:** **SURFACE:** 2097 FSL 0752 FWL**Engineering Review:** **BOTTOM:** 1904 FSL 2140 FWL**Geology Review:** **COUNTY:** Uintah**LATITUDE:** 39.97642**LONGITUDE:** -109.41328**UTM SURF EASTINGS:** 635495.00**NORTHINGS:** 4426136.00**FIELD NAME:** NATURAL BUTTES**LEASE TYPE:** 3 - State**LEASE NUMBER:** ST UT ML 22651**PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE**SURFACE OWNER:** 3 - State**COALBED METHANE:** NO**RECEIVED AND/OR REVIEWED:**

- PLAT**
- Bond:** STATE - 22013542
- Potash**
- Oil Shale 190-5**
- Oil Shale 190-3**
- Oil Shale 190-13**
- Water 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 & Uncommitted Tracts
- R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations:

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



GARY R. HERBERT
Governor

GREGORY S. BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: NBU 1022-2K4BS
API Well Number: 43047517770000
Lease Number: ST UT ML 22651
Surface Owner: STATE
Approval Date: 9/27/2011

Issued to:

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

Authority:

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

Duration:

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

Commingle:

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

General:

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

Conditions of Approval:

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

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

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

Surface casing shall be cemented to the surface.

Additional Approvals:

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

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

Notification Requirements:

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

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

Contact Information:

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

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

Reporting Requirements:

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

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

Approved By:



For John Rogers
Associate Director, Oil & Gas

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
Submitted By SHEILA WOPSOCK Phone Number 435.781.7024
Well Name/Number NBU 1022-2K4BS
Qtr/Qtr NW/SW Section 2 Township 10S Range 22E
Lease Serial Number ST UT ML-22651
API Number 4304751777

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

Date/Time 02/14/2012 1200 HRS. AM PM

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

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

RECEIVED
FEB 13 2012
DIV. OF OIL, GAS & MINING

Date/Time 02/22/2012 0800 HRS AM PM

BOPE

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

Date/Time _____ AM PM

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT
LOVEL YOUNG AT 435.781.7051 FOR MORE

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML 22651	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
8. WELL NAME and NUMBER: NBU 1022-2K4BS	
9. API NUMBER: 43047517770000	
9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
COUNTY: UINTAH	
STATE: 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.

1. TYPE OF WELL Gas Well	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2097 FSL 0752 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 02 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 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: 2/14/2012	<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.
 MIRU TRIPPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'.
 RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD
 WELL ON 02/14/2012 AT 1600 HRS.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining**
FOR RECORD ONLY
 February 16, 2012

NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUMBER 435 781-7024	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 2/16/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML 22651	
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.	
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 1022-2K4BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	
9. API NUMBER: 43047517770000	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 PHONE NUMBER: 720 929-6511	
9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2097 FSL 0752 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 02 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 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: 3/3/2012	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

MIRU AIR RIG ON MARCH 2, 2012. DRILLED SURFACE HOLE TO 2,410'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 March 06, 2012**

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 3/5/2012	

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

FORM 6

ENTITY ACTION FORM

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

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751777	NBU 1022-2K4BS		NWSW	2	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
A	99999	2900	2/14/2012		2/23/2012		
Comments: MIRU TRIPPLE A BUCKET RIG. wsmvd SPUD WELL ON 02/14/2012 AT 1600 HRS. BHL NESW							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751776	NBU 1022-2K1CS		NWSW	2	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
A	99999	2900	2/14/2012		2/23/2012		
Comments: MIRU TRIPPLE A BUCKET RIG. wsmvd SPUD WELL ON 02/14/2012 AT 2000 HRS. BHL NESW							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751771	NBU 1022-2E4CS		NWSW	2	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
A	99999	2900	2/15/2012		2/23/2012		
Comments: MIRU TRIPPLE A BUCKET RIG. wsmvd SPUD WELL ON 02/15/2012 AT 1200 HRS. BHL SWNW							

ACTION CODES:

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

SHEILA WOPSOCK

Name (Please Print)

Sheila Wopsock

Signature

REGULATORY ANALYST

2/16/2012

Title

Date

(5/2000)

RECEIVED

FEB 16 2012

Div. of Oil, Gas & Mining

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
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.	
1. TYPE OF WELL Gas Well	5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML 22651
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2097 FSL 0752 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 02 Township: 10.0S Range: 22.0E Meridian: S	8. WELL NAME and NUMBER: NBU 1022-2K4BS
PHONE NUMBER: 720 929-6511	9. API NUMBER: 43047517770000
9. FIELD and POOL or WILDCAT: NATURAL BUTTES	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: 3/6/2012	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input checked="" 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 checked="" 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.

The operator requests approval to deepen the well to the Blackhawk formation (part of the Mesaverde Group). The Operator also requests approval for a FIT wavier, closed loop drilling option, and a production casing change. All other aspects of the previously approved drilling plan will not change. Please see the attachment. Thank you.

Approved by the Utah Division of Oil, Gas and Mining

Date: March 22, 2012

By: *Derek Duff*

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 3/6/2012	

Well name:	43047517770000 NBU 1022-2K4BS	
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.	
String type:	Production	Project ID: 43-047-51777
Location:	UINTAH COUNTY	

Design parameters:

Collapse

Mud weight: 13.000 ppg
Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 211 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top:

628 ft → 4/128 ✓

Burst

Max anticipated surface pressure:

4,456 psi → 5 in ROPE proposed ✓

Internal gradient: 0.220 psi/ft
Calculated BHP 6,608 psi

No backup mud specified.

Tension:

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

Directional well information:

Kick-off point 300 ft
Departure at shoe: 1401 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 0 °

Tension is based on air weight.
Neutral point: 8,110 ft

Estimated cost: 156,148 (\$)

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
2	5000	4.5	11.60	HCP-110	DQX	4777	5000	3.875	132000
1	5012	4.5	11.60	HCP-110	LT&C	9785	10012	3.875	24148

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
2	3226	8128	2.520 ✓	5507	10690	1.94 ✓	113.5	367.2	3.23 B ✓
1	6608	8650	1.309 ✓	6608	10690	1.62 ✓	58.1	279	4.80 J ✓

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

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

Date: March 22, 2012
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 9785 ft, a mud weight of 13 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

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

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 1022-2K4BS**

Surface: 2097 FSL / 752 FWL NWSW
 BHL: 1904 FSL / 2140 FWL NESW

Section 2 T10S R22E

Unitah County, Utah
 Mineral Lease: ST UT ML 22651

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	1,078'	
Birds Nest	1,359'	Water
Mahogany	1,853'	Water
Wasatch	4,165'	Gas
Mesaverde	6,433'	Gas
Sego	8,613'	Gas
Castlegate	8,742'	Gas
Blackhawk	9,189'	Gas
TVD	9,789'	
TD	10,012'	

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

Please refer to the attached Drilling Program

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

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 9789' TVD, approximately equals
 6,461 psi (0.66 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,352 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.

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 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.

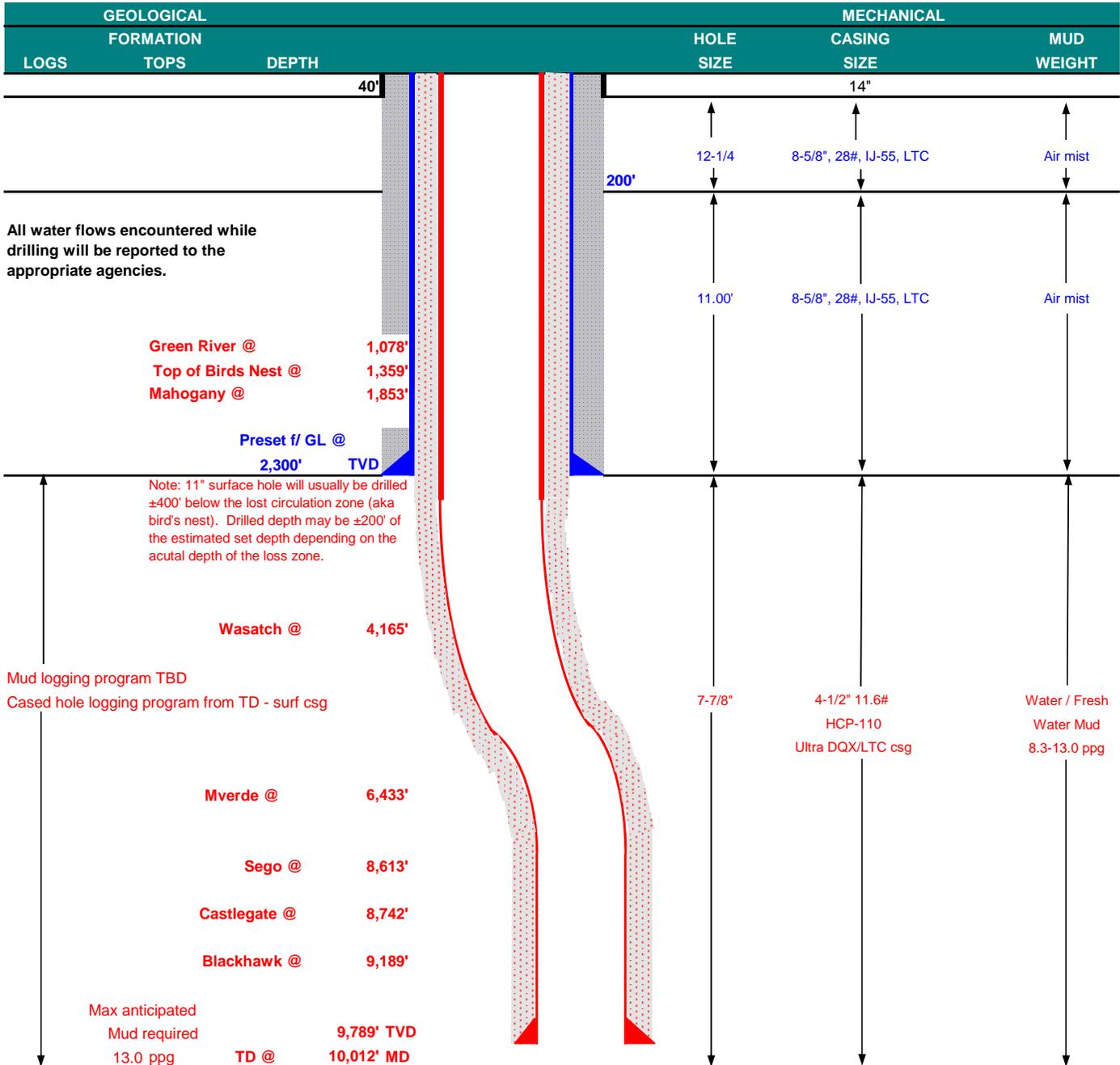
NBU 1022-2K4BS

Drilling Program
5 of 7



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	February 8, 2012		
WELL NAME	NBU 1022-2K4BS		TD	9,789'	TVD	10,012' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	
SURFACE LOCATION	NWSW	2097 FSL	752 FWL	Sec 2	T 10S	R 22E
	Latitude:	39.976498	Longitude:	-109.413313		NAD 27
BTM HOLE LOCATION	NESW	1904 FSL	2140 FWL	Sec 2	T 10S	R 22E
	Latitude:	39.975962	Longitude:	-109.408361		NAD 27
OBJECTIVE ZONE(S)	BLACKHAWK (Part of the Mesaverde Group)					
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept.					





KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	LTC	DQX
								TENSION	
CONDUCTOR	14"	0-40'							
						3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,300	28.00	IJ-55	LTC	2.34	1.75	6.17	N/A
						10,690	8,650	279,000	367,174
PRODUCTION	4-1/2"	0 to 5,000	11.60	HCP-110	DQX	1.19	1.31		3.95
	4-1/2"	5,000 to 10,012'	11.60	HCP-110	LTC	1.19	1.31	5.99	

Surface casing:

(Burst Assumptions: TD = 13.0 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 @ 9000 psi) 0.66 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
Option 1							
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized					
Option 2	LEAD	1,800'	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	3,662'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	290	35%	12.00	3.38
	TAIL	6,350'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,500	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.

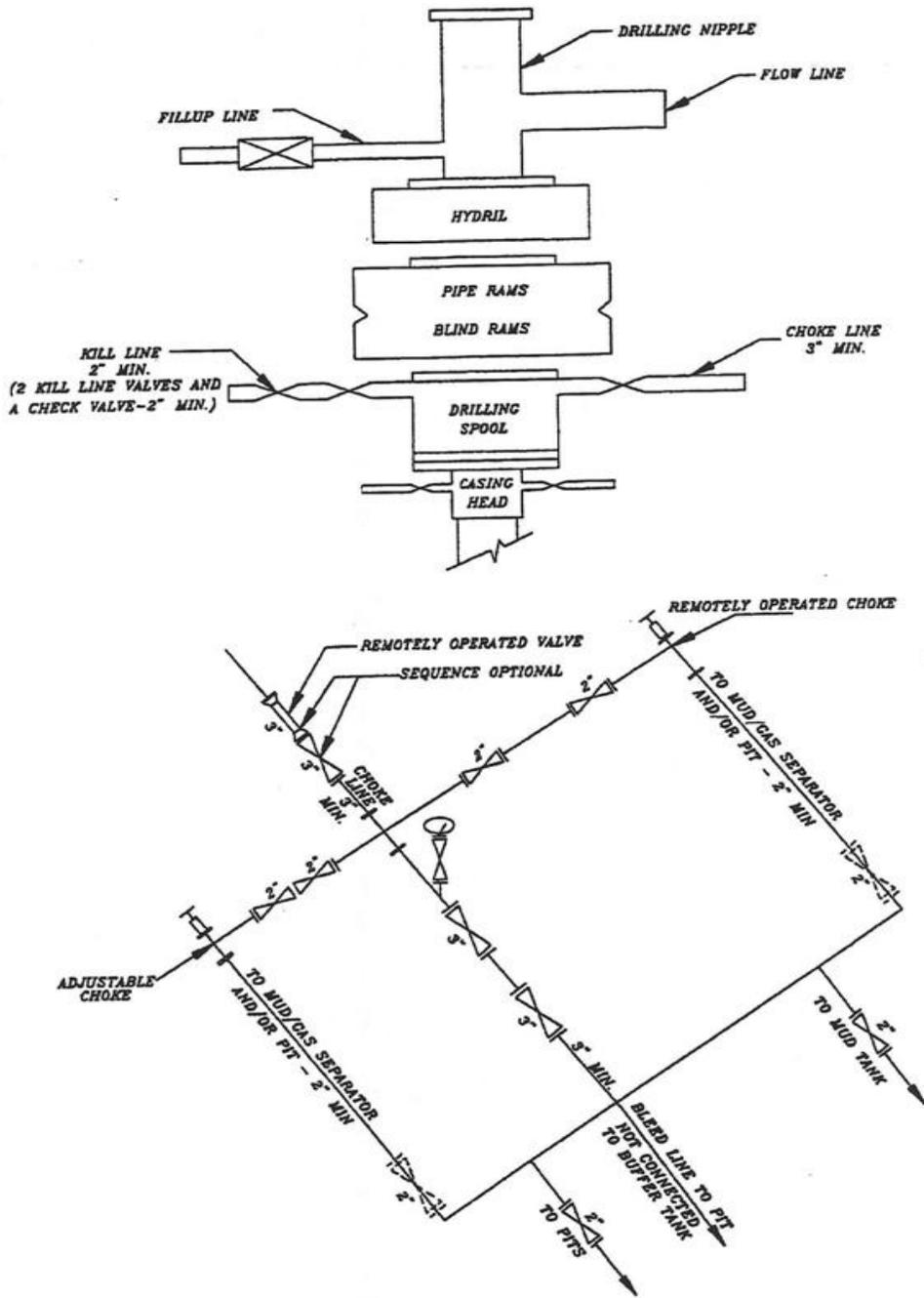
DRILLING ENGINEER: _____
Nick Spence / Danny Showers / Chad Loesel

DATE: _____

DRILLING SUPERINTENDENT: _____
Kenny Gathings / Lovel Young

DATE: _____

EXHIBIT A NBU 1022-2K4BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). 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/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
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.		5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML 22651
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 1022-2K4BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2097 FSL 0752 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 02 Township: 10.0S Range: 22.0E Meridian: S		9. API NUMBER: 43047517770000
PHONE NUMBER: 720 929-6511		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
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"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 3/30/2012	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CHANGE WELL NAME	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> OTHER	
	OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU ROTARY RIG. FINISHED DRILLING FROM 2,410' TO 10,024' ON MARCH 27, 2012. RAN 4-1/2" 11.6# P-110 PRODUCING CASING. CEMENTED PRODUCTION CASING. RELEASED ENSIGN 146 RIG ON MARCH 30, 2012 @ 11:00 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES.		
		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY April 03, 2012
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regularatory Analyst
SIGNATURE N/A	DATE 4/3/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
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.	
1. TYPE OF WELL Gas Well	5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML 22651
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
PHONE NUMBER: 720 929-6511	8. WELL NAME and NUMBER: NBU 1022-2K4BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2097 FSL 0752 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 02 Township: 10.0S Range: 22.0E Meridian: S	9. API NUMBER: 43047517770000
	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
	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: 6/19/2012	<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 SUBJECT WELL WAS PLACED ON PRODUCTION ON JUNE 19, 2012 AT 12:30 HOURS. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 July 06, 2012

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 7/6/2012	

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

AMENDED REPORT FORM 8
(highlight changes)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL GAS WELL DRY OTHER _____

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

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

3. ADDRESS OF OPERATOR: P.O. BOX 173779 CITY DENVER STATE CO ZIP 80217 PHONE NUMBER: (720) 929-6000

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: NWSW 2097 FSL 752 FWL S2,T10S,R22E
AT TOP PRODUCING INTERVAL REPORTED BELOW: NESW 1911 FSL 2135 FWL S2,T10S,R22E
AT TOTAL DEPTH: NESW 1862 FSL 2159 FWL S2,T10S,R22E *BHLBY HSM*

5. LEASE DESIGNATION AND SERIAL NUMBER:
ST UT ML 22651

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT or CA AGREEMENT NAME
UTU63047A

8. WELL NAME and NUMBER:
NBU 1022-2K4BS

9. API NUMBER:
4304751777

10. FIELD AND POOL, OR WILDCAT
NATURAL BUTTES

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
NWSW 2 10S 22E S

12. COUNTY
UINTAH

13. STATE
UTAH

14. DATE SPUNDED: 2/14/2012 15. DATE T.D. REACHED: 3/27/2012 16. DATE COMPLETED: 6/19/2012 ABANDONED READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL):
5049 GL

18. TOTAL DEPTH: MD 10,024 TVD 9,775

19. PLUG BACK T.D.: MD 9,959 TVD 9,710

20. IF MULTIPLE COMPLETIONS, HOW MANY? *

21. DEPTH BRIDGE MD PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
BHP-HDIL/ZDL/CNGR-ULTRA SLIM SD/DSN/ACTR-CBL/GR/CCL/TEMP

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

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

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#	0	40		28			
11"	8 5/8" IJ-55	28#	0	2,398		675		0	
7 7/8"	4 1/2" P-110	11.6#	0	10,004		1,955		160	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	8,552							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A) MESAVERDE	6,800	9,625		
(B)				
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
6,800 9,625	0.36	237	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
			Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
			Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
			Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

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

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
6800-9625	PUMP 12,391 BBLs SLICK H2O & 257,513 LBS 30/50 OTTAWA SAND
	10 STAGES

RECEIVED
AUG 14 2012

DIV. OF OIL, GAS & MINING

29. ENCLOSED ATTACHMENTS:

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

30. WELL STATUS:

PROD

31. INITIAL PRODUCTION

INTERVAL A (As shown in Item #26)

DATE FIRST PRODUCED: 6/19/2012		TEST DATE: 6/23/2012		HOURS TESTED: 24		TEST PRODUCTION RATES: →		OIL – BBL: 0	GAS – MCF: 2,802	WATER – BBL: 264	PROD. METHOD:
CHOKE SIZE: 20/64	TBG. PRESS. 1,853	CSG. PRESS. 2,547	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 2,802	WATER – BBL: 264	INTERVAL STATUS: PROD	

INTERVAL B (As shown in Item #26)

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

INTERVAL C (As shown in Item #26)

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

INTERVAL D (As shown in Item #26)

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

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

33. SUMMARY OF POROUS ZONES (Include Aquifers):

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

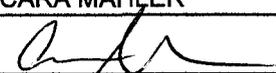
34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				GREEN RIVER	1,120
				BIRD'S NEST	1,367
				MAHOGANY	1,745
				WASATCH	4,421
				MESAVERDE	6,573

35. ADDITIONAL REMARKS (Include plugging procedure)

The first 210' of the surface hole was drilled with a 12 1/4" bit. The remainder of surface hole was drilled with an 11" bit. DQX P-110 csg was run from surface to 5002'; LTC P-110 csg was run from 5002' to 10,004'. Attached is the chronological well history, perforation report & final survey.

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

NAME (PLEASE PRINT) CARA MAHLER TITLE REGULATORY ANALYST
 SIGNATURE  DATE 8/7/2012

This report must be submitted within 30 days of

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

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

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

Send to: Utah Division of Oil, Gas and Mining Phone: 801-538-5340
 1594 West North Temple, Suite 1210
 Box 145801 Fax: 801-359-3940
 Salt Lake City, Utah 84114-5801

Project: UTAH - UTM (feet), NAD27, Zone 12N
 Site: UINTAH_NBU 1022-2L PAD
 Well: NBU 1022-2K4BS
 Wellbore: NBU 1022-2K4BS
 Section:
 SHL:
 Design: NBU 1022-2K4BS
 Latitude: 39.976498
 Longitude: -109.413313
 GL: 5049.00
 KB: 5049' GL + 14' RKB @ 5063.00ft

FORMATION TOP DETAILS		
TVDPath	MDFPath	Formation
4165.00	4397.46	WASATCH
4765.00	5003.47	TOP OF CYLINDER
4889.00	5127.50	INTERCEPT POINT
6433.00	6671.52	MESAVERDE
8613.00	8851.55	SEGO
8742.00	8980.55	CASTLEGATE
9189.00	9427.55	BLACKHAWK

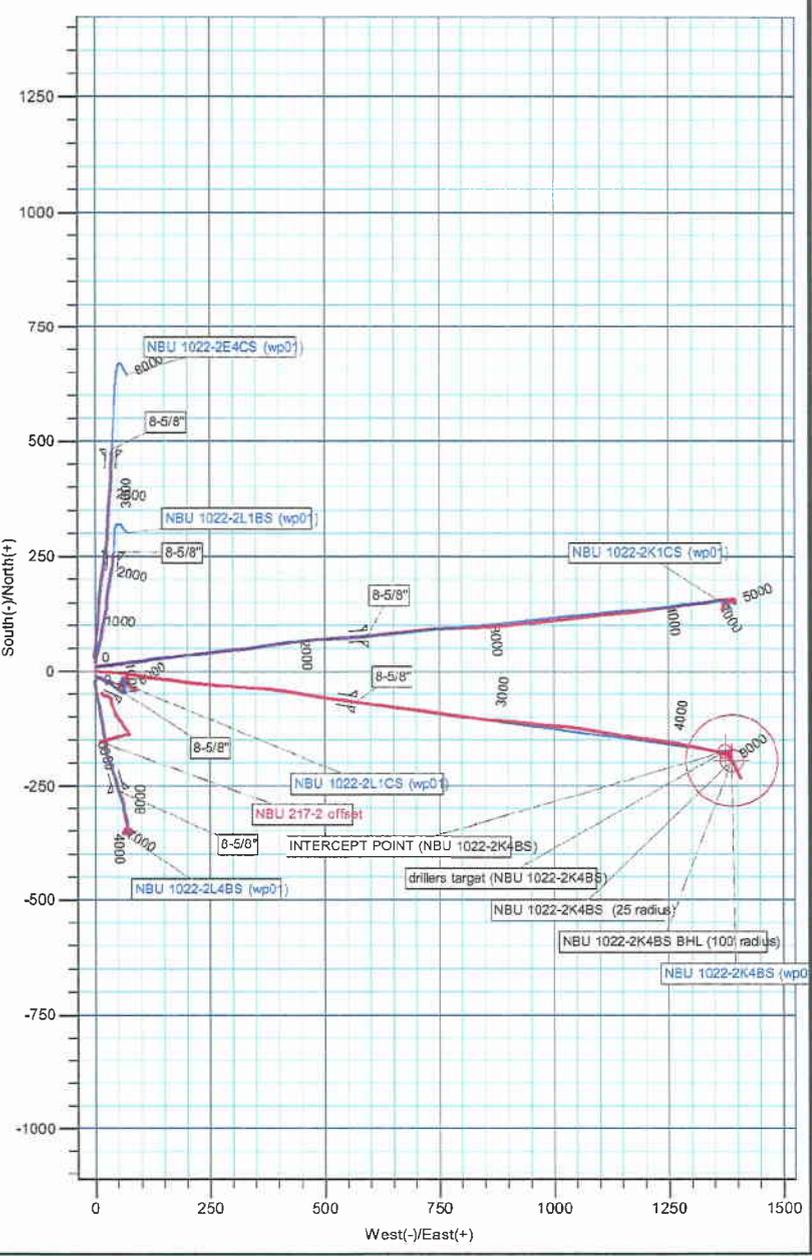
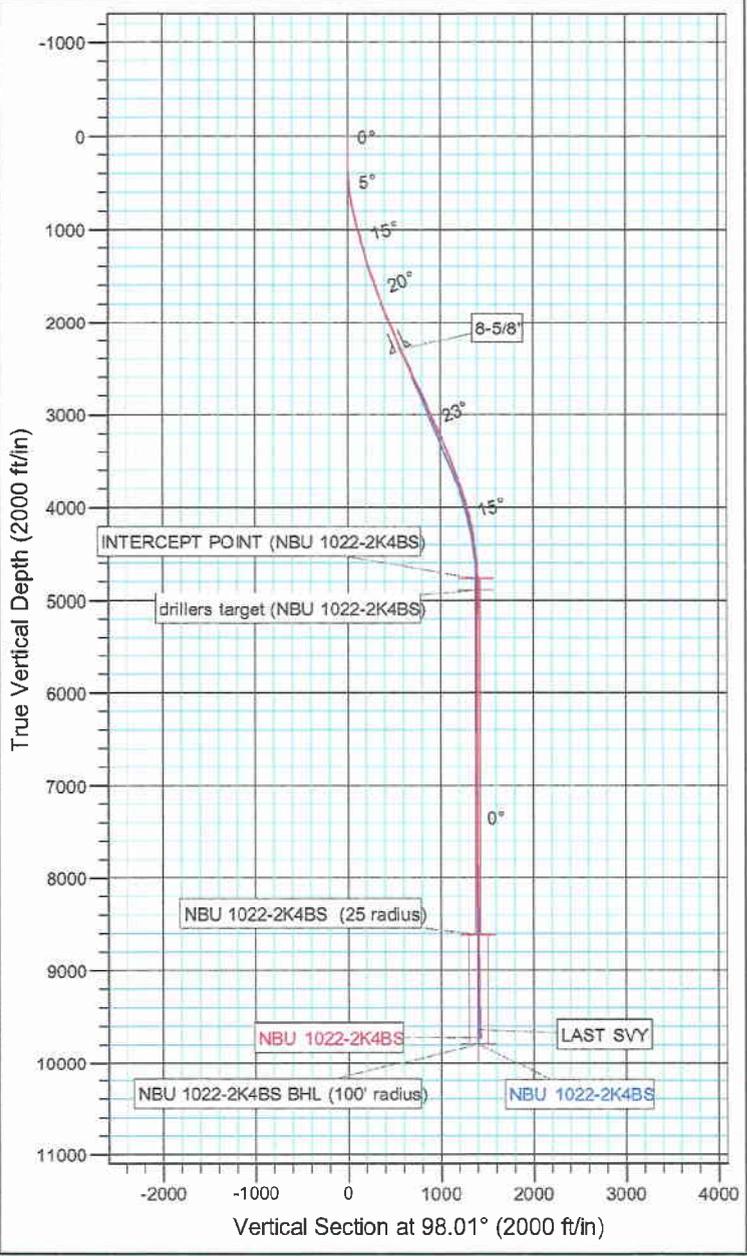
WELL DETAILS: NBU 1022-2K4BS				
+N/-S	+E/-W	Northing	Ground Level: Easting	Slot
0.00	0.00	14521441.57	5049.00 Latitude 2084943.87	
			39.976498	-109.413313

CASING DETAILS			
TVD	MD	Name	Size
2295.60	2387.58	8-5/8"	8-5/8"

Azimuths to True North
 Magnetic North: 10.94°
 Magnetic Field
 Strength: 52255.7nT
 Dip Angle: 65.85°
 Date: 3/5/2012
 Model: IGRF2010

DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
INTERCEPT POINT (NBU 1022-2K4BS)	4765.00	-175.18	1372.65	14521290.85	2086319.42	39.976017	-109.408415	Point	
drillers target (NBU 1022-2K4BS)	4889.00	-175.18	1372.65	14521290.85	2086319.42	39.976017	-109.408415	Circle (Radius: 15.00)	
NBU 1022-2K4BS (25 radius)	8613.00	-195.18	1387.65	14521271.12	2086334.78	39.975962	-109.408361	Circle (Radius: 25.00)	
NBU 1022-2K4BS BHL (100' radius)	9789.00	-195.18	1387.65	14521271.12	2086334.78	39.975962	-109.408361	Circle (Radius: 100.00)	

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
2356.00	23.92	99.45	2266.73	-64.74	554.41	0.00	0.00	558.02	
2506.00	23.92	99.45	2403.85	-74.72	614.40	0.00	0.00	618.82	
2579.13	22.67	97.51	2471.01	-79.00	643.00	2.00	-149.24	647.74	
3831.79	22.67	97.51	3626.85	-142.11	1121.76	0.00	0.00	1130.62	
5127.50	0.00	0.00	4889.00	-175.18	1372.65	1.75	180.00	1383.67	
5225.94	0.30	143.13	4987.44	-175.38	1372.80	0.30	143.13	1383.85	
10027.56	0.30	143.13	9789.00	-195.18	1387.65	0.00	0.00	1401.31	



US ROCKIES REGION PLANNING

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

UINTAH_NBU 1022-2L PAD

NBU 1022-2K4BS

NBU 1022-2K4BS

Design: NBU 1022-2K4BS

Standard Survey Report

30 July, 2012

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-2K4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	5049' GL + 14' RKB @ 5063.00ft
Site:	UINTAH_NBU 1022-2L PAD	MD Reference:	5049' GL + 14' RKB @ 5063.00ft
Well:	NBU 1022-2K4BS	North Reference:	True
Wellbore:	NBU 1022-2K4BS	Survey Calculation Method:	Minimum Curvature
Design:	NBU 1022-2K4BS	Database:	edmp

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

Site	UINTAH_NBU 1022-2L PAD				
Site Position:		Northing:	14,521,421.58 usft	Latitude:	39.976443
From:	Lat/Long	Easting:	2,084,945.63 usft	Longitude:	-109.413308
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	1.02 °

Well	NBU 1022-2K4BS					
Well Position	+N/-S	0.00 ft	Northing:	14,521,441.58 usft	Latitude:	39.976498
	+E/-W	0.00 ft	Easting:	2,084,943.87 usft	Longitude:	-109.413313
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,049.00 ft

Wellbore	NBU 1022-2K4BS				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	3/5/2012	(°)	(°)	(nT)
			10.94	65.85	52,256

Design	NBU 1022-2K4BS				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	10.00
Vertical Section:		Depth From (TVD)	+N/-S	+E/-W	Direction
		(ft)	(ft)	(ft)	(°)
		10.00	0.00	0.00	98.01

Survey Program	Date 7/30/2012				
From	To	Survey (Wellbore)	Tool Name	Description	
(ft)	(ft)				
188.00	2,356.00	Survey #1 (NBU 1022-2K4BS)	MWD	MWD - STANDARD	
2,445.00	10,024.00	Survey #2 (NBU 1022-2K4BS)	MWD	MWD - STANDARD	

Survey										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn	
Depth	(°)	(°)	Depth	(ft)	(ft)	Section	Rate	Rate	Rate	
(ft)			(ft)			(ft)	(°/100usft)	(°/100usft)	(°/100usft)	
10.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
188.00	0.62	300.37	188.00	0.49	-0.83	-0.89	0.35	0.35	0.00	
274.00	1.14	99.54	273.99	0.58	-0.39	-0.47	2.02	0.60	185.08	
356.00	2.29	100.01	355.95	0.16	2.03	1.99	1.40	1.40	0.57	
446.00	4.35	92.92	445.80	-0.33	7.21	7.18	2.33	2.29	-7.88	
536.00	6.68	89.81	535.38	-0.48	15.85	15.77	2.61	2.59	-3.46	
626.00	8.53	94.97	624.58	-1.04	27.74	27.61	2.19	2.06	5.73	
716.00	10.38	95.50	713.35	-2.40	42.46	42.38	2.06	2.06	0.59	
806.00	12.43	97.34	801.57	-4.41	60.14	60.17	2.31	2.28	2.04	
896.00	13.37	99.81	889.30	-7.42	80.00	80.26	1.21	1.04	2.74	

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-2K4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	5049' GL + 14' RKB @ 5063.00ft
Site:	UINTAH_NBU 1022-2L PAD	MD Reference:	5049' GL + 14' RKB @ 5063.00ft
Well:	NBU 1022-2K4BS	North Reference:	True
Wellbore:	NBU 1022-2K4BS	Survey Calculation Method:	Minimum Curvature
Design:	NBU 1022-2K4BS	Database:	edmp

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Buid Rate (°/100usft)	Turn Rate (°/100usft)
986.00	14.25	99.54	976.70	-11.03	101.18	101.73	0.98	0.98	-0.30
1,076.00	15.12	97.70	1,063.76	-14.44	123.73	124.54	1.10	0.97	-2.04
1,166.00	16.09	96.64	1,150.44	-17.46	147.76	148.75	1.12	1.08	-1.18
1,256.00	16.52	97.00	1,236.82	-20.46	172.84	174.01	0.49	0.48	0.40
1,346.00	17.23	96.11	1,322.94	-23.44	198.80	200.12	0.84	0.79	-0.99
1,436.00	18.20	95.24	1,408.68	-26.14	226.05	227.49	1.12	1.08	-0.97
1,526.00	18.20	95.76	1,494.17	-28.83	254.03	255.57	0.18	0.00	0.58
1,616.00	18.78	95.87	1,579.53	-31.73	282.42	284.09	0.65	0.64	0.12
1,706.00	21.19	93.65	1,664.10	-34.24	313.07	314.79	2.81	2.68	-2.47
1,796.00	20.75	94.18	1,748.14	-36.44	345.21	346.92	0.53	-0.49	0.59
1,886.00	21.28	95.67	1,832.16	-39.22	377.36	379.14	0.84	0.59	1.66
1,976.00	21.28	99.01	1,916.02	-43.39	409.74	411.79	1.35	0.00	3.71
2,066.00	22.25	99.01	1,999.61	-48.61	442.70	445.16	1.08	1.08	0.00
2,156.00	22.42	97.61	2,082.85	-53.56	476.54	479.36	0.62	0.19	-1.56
2,246.00	23.04	98.05	2,165.86	-58.29	510.99	514.13	0.71	0.69	0.49
2,336.00	23.83	98.57	2,248.44	-63.47	546.41	549.93	0.91	0.88	0.58
2,356.00	23.92	99.45	2,266.73	-64.74	554.41	558.02	1.84	0.45	4.40
2,445.00	24.49	97.08	2,347.91	-69.97	590.51	594.50	1.27	0.64	-2.66
2,536.00	25.15	97.36	2,430.50	-74.78	628.41	632.70	0.74	0.73	0.31
2,626.00	24.00	97.98	2,512.35	-79.77	665.50	670.12	1.31	-1.28	0.69
2,717.00	24.50	97.61	2,595.32	-84.84	702.53	707.50	0.57	0.55	-0.41
2,808.00	25.81	97.61	2,677.68	-89.96	740.87	746.18	1.44	1.44	0.00
2,898.00	25.81	98.86	2,758.71	-95.57	779.65	785.36	0.60	0.00	1.39
2,989.00	25.75	97.23	2,840.65	-101.11	818.83	824.94	0.78	-0.07	-1.79
3,080.00	25.31	95.36	2,922.77	-105.41	857.81	864.13	1.01	-0.48	-2.05
3,170.00	22.69	95.11	3,004.98	-108.76	894.26	900.69	2.91	-2.91	-0.28
3,261.00	23.69	96.48	3,088.63	-112.38	929.91	936.50	1.25	1.10	1.51
3,352.00	24.75	95.23	3,171.61	-116.18	967.04	973.80	1.29	1.16	-1.37
3,442.00	23.50	93.61	3,253.75	-119.03	1,003.72	1,010.51	1.57	-1.39	-1.80
3,533.00	23.44	97.11	3,337.23	-122.41	1,039.79	1,046.70	1.53	-0.07	3.85
3,624.00	22.00	98.98	3,421.17	-127.31	1,074.58	1,081.84	1.77	-1.58	2.05
3,715.00	20.81	100.11	3,505.89	-132.81	1,107.33	1,115.04	1.38	-1.31	1.24
3,805.00	20.06	101.11	3,590.22	-138.59	1,138.22	1,146.43	0.92	-0.83	1.11
3,896.00	21.56	98.36	3,675.29	-144.03	1,170.08	1,178.73	1.97	1.65	-3.02
3,987.00	18.44	95.61	3,760.79	-147.87	1,200.95	1,209.84	3.58	-3.43	-3.02
4,077.00	18.13	98.36	3,846.25	-151.30	1,228.97	1,238.07	1.02	-0.34	3.06
4,168.00	16.31	99.11	3,933.17	-155.38	1,255.60	1,265.00	2.01	-2.00	0.82
4,258.00	14.44	100.73	4,019.94	-159.47	1,279.11	1,288.85	2.13	-2.08	1.80
4,349.00	13.00	103.36	4,108.34	-163.95	1,300.21	1,310.37	1.72	-1.58	2.89
4,440.00	11.19	103.11	4,197.32	-168.32	1,318.77	1,329.36	1.99	-1.99	-0.27
4,531.00	10.63	102.36	4,286.67	-172.12	1,335.57	1,346.53	0.63	-0.62	-0.82
4,621.00	9.19	98.98	4,375.33	-175.02	1,350.78	1,361.99	1.72	-1.60	-3.76
4,712.00	8.13	110.36	4,465.30	-178.39	1,363.99	1,375.54	2.21	-1.16	12.51

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-2K4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	5049' GL + 14' RKB @ 5063.00ft
Site:	UINTAH_NBU 1022-2L PAD	MD Reference:	5049' GL + 14' RKB @ 5063.00ft
Well:	NBU 1022-2K4BS	North Reference:	True
Wellbore:	NBU 1022-2K4BS	Survey Calculation Method:	Minimum Curvature
Design:	NBU 1022-2K4BS	Database:	edmp

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Bulld Rate (°/100usft)	Turn Rate (°/100usft)
4,802.00	5.75	113.61	4,554.63	-182.41	1,374.09	1,386.10	2.68	-2.64	3.61
4,893.00	4.00	102.98	4,645.30	-184.95	1,381.36	1,393.66	2.16	-1.92	-11.68
4,984.00	1.94	128.98	4,736.18	-186.63	1,385.65	1,398.14	2.65	-2.26	28.57
5,074.00	0.44	174.98	4,826.16	-187.93	1,386.87	1,399.52	1.85	-1.67	51.11
5,165.00	0.81	165.98	4,917.15	-188.91	1,387.05	1,399.84	0.42	0.41	-9.89
5,255.00	1.38	256.73	5,007.14	-189.77	1,386.15	1,399.07	1.79	0.63	100.83
5,346.00	1.19	252.61	5,098.12	-190.31	1,384.18	1,397.20	0.23	-0.21	-4.53
5,437.00	1.06	240.23	5,189.10	-191.01	1,382.55	1,395.68	0.30	-0.14	-13.60
5,527.00	1.13	220.73	5,279.08	-192.09	1,381.25	1,394.54	0.42	0.08	-21.67
5,618.00	0.63	305.86	5,370.07	-192.48	1,380.26	1,393.61	1.37	-0.55	93.55
5,709.00	0.31	286.98	5,461.07	-192.11	1,379.62	1,392.93	0.39	-0.35	-20.75
5,799.00	0.25	233.36	5,551.07	-192.16	1,379.23	1,392.55	0.29	-0.07	-59.58
5,890.00	0.94	35.61	5,642.07	-191.67	1,379.50	1,392.75	1.30	0.76	178.30
5,981.00	0.81	50.36	5,733.06	-190.65	1,380.43	1,393.53	0.28	-0.14	16.21
6,071.00	0.75	64.61	5,823.05	-190.00	1,381.45	1,394.45	0.22	-0.07	15.83
6,162.00	0.81	335.23	5,914.04	-189.16	1,381.72	1,394.60	1.21	0.07	-98.22
6,253.00	0.56	345.98	6,005.04	-188.14	1,381.35	1,394.09	0.31	-0.27	11.81
6,343.00	0.44	5.11	6,095.03	-187.37	1,381.27	1,393.90	0.23	-0.13	21.26
6,434.00	0.44	33.86	6,186.03	-186.73	1,381.50	1,394.04	0.24	0.00	31.59
6,524.00	0.25	51.73	6,276.03	-186.32	1,381.84	1,394.32	0.24	-0.21	19.86
6,615.00	0.25	76.48	6,367.03	-186.15	1,382.19	1,394.65	0.12	0.00	27.20
6,706.00	0.31	98.11	6,458.03	-186.14	1,382.63	1,395.08	0.13	0.07	23.77
6,796.00	0.56	106.48	6,548.02	-186.30	1,383.29	1,395.76	0.29	0.28	9.30
6,887.00	1.13	299.23	6,639.02	-185.99	1,382.93	1,395.36	1.85	0.63	-183.79
6,977.00	2.50	321.73	6,728.97	-184.01	1,380.94	1,393.11	1.69	1.52	25.00
7,068.00	2.19	318.48	6,819.90	-181.15	1,378.56	1,390.36	0.37	-0.34	-3.57
7,159.00	1.06	355.98	6,910.86	-179.01	1,377.35	1,388.86	1.64	-1.24	41.21
7,249.00	0.94	2.61	7,000.85	-177.44	1,377.33	1,388.62	0.19	-0.13	7.37
7,340.00	0.75	32.88	7,091.84	-176.20	1,377.68	1,388.80	0.53	-0.21	33.26
7,431.00	0.63	72.98	7,182.83	-175.55	1,378.48	1,389.50	0.53	-0.13	44.07
7,522.00	0.75	83.61	7,273.83	-175.34	1,379.55	1,390.53	0.19	0.13	11.68
7,612.00	1.00	85.84	7,363.82	-175.22	1,380.92	1,391.87	0.28	0.28	2.48
7,703.00	1.06	99.36	7,454.80	-175.30	1,382.55	1,393.49	0.27	0.07	14.86
7,793.00	1.56	174.86	7,544.78	-176.65	1,383.48	1,394.60	1.84	0.56	83.89
7,884.00	1.94	169.23	7,635.74	-179.40	1,383.88	1,395.37	0.46	0.42	-6.19
7,975.00	1.94	175.48	7,726.69	-182.45	1,384.29	1,396.20	0.23	0.00	6.87
8,065.00	1.88	175.36	7,816.64	-185.44	1,384.52	1,396.86	0.07	-0.07	-0.13
8,156.00	1.81	171.73	7,907.59	-188.35	1,384.85	1,397.59	0.15	-0.08	-3.99
8,246.00	1.38	167.66	7,997.56	-190.81	1,385.29	1,398.36	0.49	-0.48	-4.52
8,337.00	1.38	162.10	8,088.53	-192.93	1,385.86	1,399.22	0.15	0.00	-6.11
8,428.00	1.38	153.73	8,179.50	-194.95	1,386.68	1,400.32	0.22	0.00	-9.20
8,518.00	1.44	147.35	8,269.48	-196.88	1,387.77	1,401.67	0.19	0.07	-7.09
8,609.00	1.44	142.36	8,360.45	-198.74	1,389.09	1,403.23	0.14	0.00	-5.48

Anadarko Petroleum Corp

Survey Report

Company: US ROCKIES REGION PLANNING	Local Co-ordinate Reference: Well NBU 1022-2K4BS
Project: UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference: 5049' GL + 14' RKB @ 5063.00ft
Site: UINTAH_NBU 1022-2L PAD	MD Reference: 5049' GL + 14' RKB @ 5063.00ft
Well: NBU 1022-2K4BS	North Reference: True
Wellbore: NBU 1022-2K4BS	Survey Calculation Method: Minimum Curvature
Design: NBU 1022-2K4BS	Database: edmp

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)
8,700.00	1.35	137.76	8,451.42	-200.44	1,390.50	1,404.87	0.16	-0.10	-5.05
8,790.00	1.06	149.23	8,541.40	-201.94	1,391.64	1,406.21	0.42	-0.32	12.74
8,881.00	1.06	168.35	8,632.38	-203.49	1,392.24	1,407.02	0.39	0.00	21.01
8,972.00	1.31	163.35	8,723.37	-205.31	1,392.71	1,407.73	0.30	0.27	-5.49
9,062.00	1.56	158.48	8,813.34	-207.44	1,393.46	1,408.77	0.31	0.28	-5.41
9,153.00	1.44	167.11	8,904.31	-209.70	1,394.17	1,409.78	0.28	-0.13	9.48
9,244.00	1.50	158.36	8,995.28	-211.93	1,394.86	1,410.78	0.26	0.07	-9.62
9,335.00	1.56	153.98	9,086.24	-214.15	1,395.84	1,412.06	0.14	0.07	-4.81
9,475.00	1.63	147.73	9,226.19	-217.54	1,397.74	1,414.42	0.13	0.05	-4.46
9,516.00	1.81	151.10	9,267.17	-218.60	1,398.37	1,415.18	0.50	0.44	8.22
9,607.00	1.94	149.10	9,358.12	-221.18	1,399.85	1,417.01	0.16	0.14	-2.20
9,697.00	1.94	150.23	9,448.07	-223.81	1,401.39	1,418.90	0.04	0.00	1.26
9,788.00	2.00	151.98	9,539.02	-226.55	1,402.90	1,420.78	0.09	0.07	1.92
9,879.00	2.19	154.36	9,629.96	-229.52	1,404.40	1,422.68	0.23	0.21	2.62
9,974.00	2.25	151.48	9,724.88	-232.79	1,406.08	1,424.79	0.13	0.06	-3.03
LAST SVY									
10,024.00	2.25	151.48	9,774.85	-234.52	1,407.01	1,425.96	0.00	0.00	0.00
PROJECTION TO TD									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
9,974.00	9,724.88	-232.79	1,406.08	LAST SVY
10,024.00	9,774.85	-234.52	1,407.01	PROJECTION TO TD

Checked By: _____ Approved By: _____ Date: _____

US ROCKIES REGION PLANNING

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

UINTAH_NBU 1022-2L PAD

NBU 1022-2K4BS

NBU 1022-2K4BS

Design: NBU 1022-2K4BS

Survey Report - Geographic

30 July, 2012

Anadarko Petroleum Corp

Survey Report - Geographic

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-2K4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	5049' GL + 14' RKB @ 5063.00ft
Site:	UINTAH_NBU 1022-2L PAD	MD Reference:	5049' GL + 14' RKB @ 5063.00ft
Well:	NBU 1022-2K4BS	North Reference:	True
Wellbore:	NBU 1022-2K4BS	Survey Calculation Method:	Minimum Curvature
Design:	NBU 1022-2K4BS	Database:	edmp

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

Site	UINTAH_NBU 1022-2L PAD				
Site Position:		Northing:	14,521,421.58 usft	Latitude:	39.976443
From:	Lat/Long	Easting:	2,084,945.63 usft	Longitude:	-109.413308
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	1.02 °

Well	NBU 1022-2K4BS					
Well Position	+N-S	0.00 ft	Northing:	14,521,441.58 usft	Latitude:	39.976498
	+E-W	0.00 ft	Easting:	2,084,943.87 usft	Longitude:	-109.413313
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,049.00 ft

Wellbore	NBU 1022-2K4BS				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	3/5/2012	(°)	(°)	(nT)
			10.94	65.85	52,256

Design	NBU 1022-2K4BS				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	10.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	10.00	0.00	0.00	98.01	

Survey Program	Date	7/30/2012			
From	To	Survey (Wellbore)	Tool Name	Description	
(ft)	(ft)				
188.00	2,356.00	Survey #1 (NBU 1022-2K4BS)	MWD	MWD - STANDARD	
2,445.00	10,024.00	Survey #2 (NBU 1022-2K4BS)	MWD	MWD - STANDARD	

Survey									
Measured	Inclination	Azimuth	Vertical	+N-S	+E-W	Map	Map	Latitude	Longitude
Depth	(°)	(°)	Depth	(ft)	(ft)	Northing	Easting		
(ft)			(ft)			(usft)	(usft)		
10.00	0.00	0.00	10.00	0.00	0.00	14,521,441.58	2,084,943.87	39.976498	-109.413313
188.00	0.62	300.37	188.00	0.49	-0.83	14,521,442.05	2,084,943.03	39.976499	-109.413316
274.00	1.14	99.54	273.99	0.58	-0.39	14,521,442.15	2,084,943.47	39.976500	-109.413315
356.00	2.29	100.01	355.95	0.16	2.03	14,521,441.78	2,084,945.90	39.976499	-109.413306
446.00	4.35	92.92	445.80	-0.33	7.21	14,521,441.38	2,084,951.09	39.976497	-109.413288
536.00	6.68	89.81	535.38	-0.48	15.85	14,521,441.38	2,084,959.73	39.976497	-109.413257
626.00	8.53	94.97	624.58	-1.04	27.74	14,521,441.03	2,084,971.62	39.976495	-109.413214
716.00	10.38	95.50	713.35	-2.40	42.46	14,521,439.94	2,084,986.37	39.976492	-109.413162
806.00	12.43	97.34	801.57	-4.41	60.14	14,521,438.24	2,085,004.08	39.976486	-109.413099
896.00	13.37	99.81	889.30	-7.42	80.00	14,521,435.58	2,085,023.99	39.976478	-109.413028
986.00	14.25	99.54	976.70	-11.03	101.18	14,521,432.35	2,085,045.23	39.976468	-109.412952

Anadarko Petroleum Corp

Survey Report - Geographic

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-2K4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	5049' GL + 14' RKB @ 5063.00ft
Site:	UINTAH_NBU 1022-2L PAD	MD Reference:	5049' GL + 14' RKB @ 5063.00ft
Well:	NBU 1022-2K4BS	North Reference:	True
Wellbore:	NBU 1022-2K4BS	Survey Calculation Method:	Minimum Curvature
Design:	NBU 1022-2K4BS	Database:	edmp

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,076.00	15.12	97.70	1,063.76	-14.44	123.73	14,521,429.34	2,085,067.84	39.976458	-109.412872
1,166.00	16.09	96.64	1,150.44	-17.46	147.76	14,521,426.75	2,085,091.91	39.976450	-109.412786
1,256.00	16.52	97.00	1,236.82	-20.46	172.84	14,521,424.20	2,085,117.05	39.976442	-109.412696
1,346.00	17.23	96.11	1,322.94	-23.44	198.80	14,521,421.68	2,085,143.05	39.976434	-109.412604
1,436.00	18.20	95.24	1,408.68	-26.14	226.05	14,521,419.47	2,085,170.35	39.976426	-109.412507
1,526.00	18.20	95.76	1,494.17	-28.83	254.03	14,521,417.27	2,085,198.37	39.976419	-109.412407
1,616.00	18.78	95.87	1,579.53	-31.73	282.42	14,521,414.88	2,085,226.82	39.976411	-109.412305
1,706.00	21.19	93.65	1,664.10	-34.24	313.07	14,521,412.91	2,085,257.50	39.976404	-109.412196
1,796.00	20.75	94.18	1,748.14	-36.44	345.21	14,521,411.29	2,085,289.67	39.976398	-109.412081
1,886.00	21.28	95.67	1,832.16	-39.22	377.36	14,521,409.08	2,085,321.87	39.976390	-109.411967
1,976.00	21.28	99.01	1,916.02	-43.39	409.74	14,521,405.49	2,085,354.32	39.976379	-109.411851
2,066.00	22.25	99.01	1,999.61	-48.61	442.70	14,521,400.85	2,085,387.37	39.976365	-109.411733
2,156.00	22.42	97.61	2,082.85	-53.56	476.54	14,521,396.51	2,085,421.29	39.976351	-109.411613
2,246.00	23.04	98.05	2,165.86	-58.29	510.99	14,521,392.39	2,085,455.82	39.976338	-109.411490
2,336.00	23.83	98.57	2,248.44	-63.47	546.41	14,521,387.84	2,085,491.32	39.976324	-109.411363
2,356.00	23.92	99.45	2,266.73	-64.74	554.41	14,521,386.72	2,085,499.34	39.976320	-109.411335
2,445.00	24.49	97.08	2,347.91	-69.97	590.51	14,521,382.12	2,085,535.53	39.976306	-109.411206
2,536.00	25.15	97.36	2,430.50	-74.78	628.41	14,521,378.00	2,085,573.51	39.976293	-109.411071
2,626.00	24.00	97.98	2,512.35	-79.77	665.50	14,521,373.67	2,085,610.69	39.976279	-109.410938
2,717.00	24.50	97.61	2,595.32	-84.84	702.53	14,521,369.26	2,085,647.80	39.976265	-109.410806
2,808.00	25.81	97.61	2,677.68	-89.96	740.87	14,521,364.82	2,085,686.22	39.976251	-109.410669
2,898.00	25.81	98.86	2,758.71	-95.57	779.65	14,521,359.90	2,085,725.10	39.976236	-109.410531
2,989.00	25.75	97.23	2,840.65	-101.11	818.83	14,521,355.06	2,085,764.37	39.976220	-109.410391
3,080.00	25.31	95.36	2,922.77	-105.41	857.81	14,521,351.45	2,085,803.42	39.976209	-109.410252
3,170.00	22.69	95.11	3,004.98	-108.76	894.26	14,521,348.75	2,085,839.93	39.976199	-109.410122
3,261.00	23.69	96.48	3,088.63	-112.38	929.91	14,521,345.76	2,085,875.63	39.976189	-109.409995
3,352.00	24.75	95.23	3,171.61	-116.18	967.04	14,521,342.62	2,085,912.83	39.976179	-109.409862
3,442.00	23.50	93.61	3,253.75	-119.03	1,003.72	14,521,340.43	2,085,949.54	39.976171	-109.409731
3,533.00	23.44	97.11	3,337.23	-122.41	1,039.79	14,521,337.69	2,085,985.67	39.976162	-109.409603
3,624.00	22.00	98.98	3,421.17	-127.31	1,074.58	14,521,333.41	2,086,020.55	39.976148	-109.409478
3,715.00	20.81	100.11	3,505.89	-132.81	1,107.33	14,521,328.49	2,086,053.39	39.976133	-109.409362
3,805.00	20.06	101.11	3,590.22	-138.59	1,138.22	14,521,323.26	2,086,084.37	39.976118	-109.409251
3,896.00	21.56	98.36	3,675.29	-144.03	1,170.08	14,521,318.39	2,086,116.33	39.976103	-109.409138
3,987.00	18.44	95.61	3,760.79	-147.87	1,200.95	14,521,315.10	2,086,147.26	39.976092	-109.409028
4,077.00	18.13	98.36	3,846.25	-151.30	1,228.97	14,521,312.17	2,086,175.34	39.976083	-109.408928
4,168.00	16.31	99.11	3,933.17	-155.38	1,255.60	14,521,308.57	2,086,202.04	39.976071	-109.408833
4,258.00	14.44	100.73	4,019.94	-159.47	1,279.11	14,521,304.89	2,086,225.61	39.976060	-109.408749
4,349.00	13.00	103.36	4,108.34	-163.95	1,300.21	14,521,300.79	2,086,246.79	39.976048	-109.408673
4,440.00	11.19	103.11	4,197.32	-168.32	1,318.77	14,521,296.76	2,086,265.43	39.976036	-109.408607
4,531.00	10.63	102.36	4,286.67	-172.12	1,335.57	14,521,293.26	2,086,282.29	39.976025	-109.408547
4,621.00	9.19	98.98	4,375.33	-175.02	1,350.78	14,521,290.63	2,086,297.55	39.976017	-109.408493
4,712.00	8.13	110.36	4,465.30	-178.39	1,363.99	14,521,287.49	2,086,310.82	39.976008	-109.408446
4,802.00	5.75	113.61	4,554.63	-182.41	1,374.09	14,521,283.65	2,086,320.99	39.975997	-109.408410
4,893.00	4.00	102.98	4,645.30	-184.95	1,381.36	14,521,281.24	2,086,328.30	39.975990	-109.408384
4,984.00	1.94	128.98	4,736.18	-186.63	1,385.65	14,521,279.64	2,086,332.62	39.975986	-109.408368
5,074.00	0.44	174.98	4,826.16	-187.93	1,386.87	14,521,278.35	2,086,333.86	39.975982	-109.408364
5,165.00	0.81	165.98	4,917.15	-188.91	1,387.05	14,521,277.39	2,086,334.06	39.975979	-109.408363
5,255.00	1.38	256.73	5,007.14	-189.77	1,386.15	14,521,276.50	2,086,333.18	39.975977	-109.408367
5,346.00	1.19	252.61	5,098.12	-190.31	1,384.18	14,521,275.94	2,086,331.22	39.975975	-109.408374
5,437.00	1.06	240.23	5,189.10	-191.01	1,382.55	14,521,275.21	2,086,329.60	39.975974	-109.408379
5,527.00	1.13	220.73	5,279.08	-192.09	1,381.25	14,521,274.10	2,086,328.32	39.975971	-109.408384
5,618.00	0.63	305.86	5,370.07	-192.48	1,380.26	14,521,273.69	2,086,327.33	39.975970	-109.408388
5,709.00	0.31	286.98	5,461.07	-192.11	1,379.62	14,521,274.05	2,086,326.69	39.975971	-109.408390
5,799.00	0.25	233.36	5,551.07	-192.16	1,379.23	14,521,273.99	2,086,326.30	39.975970	-109.408391
5,890.00	0.94	35.61	5,642.07	-191.67	1,379.50	14,521,274.49	2,086,326.56	39.975972	-109.408390

Anadarko Petroleum Corp

Survey Report - Geographic

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-2K4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	5049' GL + 14' RKB @ 5063.00ft
Site:	UINTAH_NBU 1022-2L PAD	MD Reference:	5049' GL + 14' RKB @ 5063.00ft
Well:	NBU 1022-2K4BS	North Reference:	True
Wellbore:	NBU 1022-2K4BS	Survey Calculation Method:	Minimum Curvature
Design:	NBU 1022-2K4BS	Database:	edmp

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,981.00	0.81	50.36	5,733.06	-190.65	1,380.43	14,521,275.52	2,086,327.48	39.975975	-109.408387
6,071.00	0.75	64.61	5,823.05	-190.00	1,381.45	14,521,276.20	2,086,328.49	39.975976	-109.408383
6,162.00	0.81	335.23	5,914.04	-189.16	1,381.72	14,521,277.04	2,086,328.74	39.975979	-109.408382
6,253.00	0.56	345.98	6,005.04	-188.14	1,381.35	14,521,278.05	2,086,328.34	39.975981	-109.408384
6,343.00	0.44	5.11	6,095.03	-187.37	1,381.27	14,521,278.82	2,086,328.25	39.975984	-109.408384
6,434.00	0.44	33.86	6,186.03	-186.73	1,381.50	14,521,279.46	2,086,328.47	39.975985	-109.408383
6,524.00	0.25	51.73	6,276.03	-186.32	1,381.84	14,521,279.88	2,086,328.81	39.975986	-109.408382
6,615.00	0.25	76.48	6,367.03	-186.15	1,382.19	14,521,280.05	2,086,329.15	39.975987	-109.408381
6,706.00	0.31	98.11	6,458.03	-186.14	1,382.63	14,521,280.07	2,086,329.59	39.975987	-109.408379
6,796.00	0.56	106.48	6,548.02	-186.30	1,383.29	14,521,279.92	2,086,330.26	39.975986	-109.408377
6,887.00	1.13	299.23	6,639.02	-185.99	1,382.93	14,521,280.23	2,086,329.89	39.975987	-109.408378
6,977.00	2.50	321.73	6,728.97	-184.01	1,380.94	14,521,282.17	2,086,327.87	39.975993	-109.408385
7,068.00	2.19	318.48	6,819.90	-181.15	1,378.56	14,521,284.98	2,086,325.44	39.976001	-109.408394
7,159.00	1.06	355.98	6,910.86	-179.01	1,377.35	14,521,287.10	2,086,324.19	39.976006	-109.408398
7,249.00	0.94	2.61	7,000.85	-177.44	1,377.33	14,521,288.67	2,086,324.13	39.976011	-109.408398
7,340.00	0.75	32.88	7,091.84	-176.20	1,377.68	14,521,289.92	2,086,324.47	39.976014	-109.408397
7,431.00	0.63	72.98	7,182.83	-175.55	1,378.48	14,521,290.58	2,086,325.26	39.976016	-109.408394
7,522.00	0.75	83.61	7,273.83	-175.34	1,379.55	14,521,290.82	2,086,326.33	39.976017	-109.408390
7,612.00	1.00	85.84	7,363.82	-175.22	1,380.92	14,521,290.96	2,086,327.69	39.976017	-109.408385
7,703.00	1.06	99.36	7,454.80	-175.30	1,382.55	14,521,290.91	2,086,329.32	39.976017	-109.408379
7,793.00	1.56	174.86	7,544.78	-176.65	1,383.48	14,521,289.57	2,086,330.27	39.976013	-109.408376
7,884.00	1.94	169.23	7,635.74	-179.40	1,383.88	14,521,286.83	2,086,330.72	39.976005	-109.408375
7,975.00	1.94	175.48	7,726.69	-182.45	1,384.29	14,521,283.79	2,086,331.18	39.975997	-109.408373
8,065.00	1.88	175.36	7,816.64	-185.44	1,384.52	14,521,280.81	2,086,331.47	39.975989	-109.408372
8,156.00	1.81	171.73	7,907.59	-188.35	1,384.85	14,521,277.90	2,086,331.85	39.975981	-109.408371
8,246.00	1.38	167.66	7,997.56	-190.81	1,385.29	14,521,275.45	2,086,332.33	39.975974	-109.408370
8,337.00	1.38	162.10	8,088.53	-192.93	1,385.86	14,521,273.34	2,086,332.94	39.975968	-109.408368
8,428.00	1.38	153.73	8,179.50	-194.95	1,386.68	14,521,271.33	2,086,333.80	39.975963	-109.408365
8,518.00	1.44	147.35	8,269.48	-196.88	1,387.77	14,521,269.43	2,086,334.92	39.975957	-109.408361
8,609.00	1.44	142.36	8,360.45	-198.74	1,389.09	14,521,267.59	2,086,336.27	39.975952	-109.408356
8,700.00	1.35	137.76	8,451.42	-200.44	1,390.50	14,521,265.91	2,086,337.72	39.975948	-109.408351
8,790.00	1.06	149.23	8,541.40	-201.94	1,391.64	14,521,264.43	2,086,338.89	39.975944	-109.408347
8,881.00	1.06	168.35	8,632.38	-203.49	1,392.24	14,521,262.90	2,086,339.51	39.975939	-109.408345
8,972.00	1.31	163.35	8,723.37	-205.31	1,392.71	14,521,261.08	2,086,340.01	39.975934	-109.408343
9,062.00	1.56	158.48	8,813.34	-207.44	1,393.46	14,521,258.97	2,086,340.80	39.975928	-109.408341
9,153.00	1.44	167.11	8,904.31	-209.70	1,394.17	14,521,256.72	2,086,341.55	39.975922	-109.408338
9,244.00	1.50	158.36	8,995.28	-211.93	1,394.86	14,521,254.51	2,086,342.28	39.975916	-109.408336
9,335.00	1.56	153.98	9,086.24	-214.15	1,395.84	14,521,252.31	2,086,343.30	39.975910	-109.408332
9,475.00	1.63	147.73	9,226.19	-217.54	1,397.74	14,521,248.94	2,086,345.26	39.975901	-109.408325
9,516.00	1.81	151.10	9,267.17	-218.60	1,398.37	14,521,247.90	2,086,345.90	39.975898	-109.408323
9,607.00	1.94	149.10	9,358.12	-221.18	1,399.85	14,521,245.34	2,086,347.43	39.975891	-109.408318
9,697.00	1.94	150.23	9,448.07	-223.81	1,401.39	14,521,242.74	2,086,349.02	39.975883	-109.408312
9,788.00	2.00	151.98	9,539.02	-226.55	1,402.90	14,521,240.03	2,086,350.58	39.975876	-109.408307
9,879.00	2.19	154.36	9,629.96	-229.52	1,404.40	14,521,237.09	2,086,352.13	39.975868	-109.408302
9,974.00	2.25	151.48	9,724.88	-232.79	1,406.08	14,521,233.84	2,086,353.86	39.975859	-109.408296
LAST SVY									
10,024.00	2.25	151.48	9,774.85	-234.52	1,407.01	14,521,232.13	2,086,354.83	39.975854	-109.408292
PROJECTION TO TD									

Anadarko Petroleum Corp

Survey Report - Geographic

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-2K4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	5049' GL + 14' RKB @ 5063.00ft
Site:	UINTAH_NBU 1022-2L PAD	MD Reference:	5049' GL + 14' RKB @ 5063.00ft
Well:	NBU 1022-2K4BS	North Reference:	True
Wellbore:	NBU 1022-2K4BS	Survey Calculation Method:	Minimum Curvature
Design:	NBU 1022-2K4BS	Database:	edmp

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N-S (ft)	+E-W (ft)	
9,974.00	9,724.88	-232.79	1,406.08	LAST SVY
10,024.00	9,774.85	-234.52	1,407.01	PROJECTION TO TD

Checked By: _____ Approved By: _____ Date: _____

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-2K4BS YELLOW

Spud Date: 3/2/2012

Project: UTAH-UINTAH

Site: NBU 1022-2L PAD

Rig Name No: PROPETRO 12/12, ENSIGN 146/146

Event: DRILLING

Start Date: 12/8/2011

End Date: 3/30/2012

Active Datum: RKB @5,063.01ft (above Mean Sea Level)

UWI: NW/SW/0/10/S/22/E/2/0/0/26/PM/S/2097/N/0/752/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/2/2012	0:00 - 3:00	3.00	PRSPD	13	A	P		WAIT ON CEMENTERS TO FINISH, MOVE OFF WELL
	3:00 - 6:30	3.50	PRSPD	01	B	P		PJSM, INSTALL DIVERTER HEAD AND BLOOIE LINE, BUILD DITCH, SPOT IN RIG, CATWALK AND PIPE RACKS. RIG UP PIT PUMP. RIG UP HOLE PUMP. INSPECT RIG.
	6:30 - 7:00	0.50	PRSPD	01	B	P		HELD PJSM. P/U 8 in 1.83 BEND .17 RPG MUD MOTOR (5th RUN) (SN 775-77248). M/U QD507 12.25 in BIT (15th RUN) (SN 7137066). P/U SHOCK SUB (5th RUN) (SN 169-80835). TRIP IN CONDUCTOR TO SPUD.
	7:00 - 8:30	1.50	PRSPD	08	B	Z		RIG REPAIR - YELLOW DOG DOWN. VALVE FROZEN, BROKEN.
	8:30 - 10:00	1.50	DRLSUR	02	D	P		SPUD 02/29/2012 08:30. DRILL 12.25 in HOLE 44 ft TO 210 ft (166 ft, 111 FPH). WOB 5-15 Kips. PSI ON/OFF 600/400. UP/DOWN/ ROT 20/20/20 K. DRAG 0 Kips. CIRC RESERVE W/8.4 ppg WATER. DRILL DOWN TO 210 ft W/6 in COLLARS. CIRC 15 min.
	10:00 - 11:30	1.50	DRLSUR	06	A	P		PJSM, LAY DOWN 6 in DRILL COLLARS, 12 1/4 in BIT. MAKE UP Q506 11 in BIT (4th RUN) (SN 7024523) P/U 8 in DIRECTIONAL ASSEMBLY. INSTALL EM TOOL.
	11:30 - 0:00	12.50	DRLSUR	02	D	P		DRILL 11 in. HOLE 210 ft TO 1430 ft, (1220 ft, 102 FPH). WOB 15-20 Kips. PSI ON/OFF 1290/1080. UP/DOWN/ ROT 66/50/59 K. DRAG 7 Kips. CIRC RESERVE PIT W/8.4 ppg WATER. NO HOLE ISSUES. SLIDING @ 30 PERCENT FOR TURN AND BUILD.
3/3/2012	0:00 - 12:30	12.50	DRLSUR	02	D	P		DRILL 11 in HOLE 1430 ft TO 2410 ft, (980 ft, 78 FPH). WOB 15-20 Kips. PSI ON/OFF 1500/1370. UP/DOWN/ ROT 80/60/70 K. DRAG 10 Kips. CIRC RESERVE PIT W. 8.4 ppg WATER. NO HOLE ISSUES. SLIDING @ 10 PERCENT FOR TURN AND BUILD. LOST RETURNS AT 1520 ft, BEGIN AERATED WATER.
	12:30 - 14:00	1.50	DRLSUR	05	C	P		CIRCULATE AND CONDITION WELLBORE FOR TRIP OUT OF HOLE, FILL HOLE WITH WATER
	14:00 - 17:00	3.00	DRLSUR	06	A	P		PJSM, TRIP OUT OF HOLE, LAY DOWN BOTTOM HOLE ASSEMBLY AND DIRECTIONAL TOOLS, MOTOR AND BIT. REMOVE UNRELATED- OPERATIONAL TOOLS FROM AREA.
	17:00 - 21:30	4.50	DRLSUR	12	C	P		PJSM, MOVE PIPE RACKS AND CATWALK. PULL DIVERTER HEAD. RIG UP TO RUN CASING. RUN 54 JOINTS OF 8-5/8 in. 28# J-55 LTC CASING. LAND FLOAT SHOE @ 2388 ft KB. LAND BAFFLE PLATE @ 2342 ft KB. RAN 5 TOTAL CENTRALIZERS. LAND CASING WHILE RIGGING UP CEMENTERS. RAN 200 ft OF 1 in. PIPE DOWN BACK-SIDE. CASING. RELEASE RIG AT 21:30 3/3/2012.

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-2K4BS YELLOW

Spud Date: 3/2/2012

Project: UTAH-UINTAH

Site: NBU 1022-2L PAD

Rig Name No: PROPETRO 12/12, ENSIGN 146/146

Event: DRILLING

Start Date: 12/8/2011

End Date: 3/30/2012

Active Datum: RKB @5,063.01ft (above Mean Sea Level)

UWI: NWSW/0/10/S/22/E/2/0/0/26/PM/S/2097/W/0/752/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	21:30 - 21:30	0.00	DRLSUR	12	E	P		PJSM, CEMENT DOWN BACKSIDE w/150 sx (30.7 bbls.) SAME TAIL CEMENT WITHOUT RETURNS TO SURFACE, WAIT ON CEMENT, THEN TOP OUT CEMENT DOWN BACKSIDE w/225sx (46 bbls) SAME TAIL CEMENT WITH CEMENT TO SURFACE. RIG DOWN CEMENTERS. (CEMENT JOB FINISHED AT 01:00 3/4/2012) RELEASE RIG AT 21:30 3/3/2012.
	21:30 - 21:30	0.00	DRLSUR	12	E	P		PJSM, PRESSURE TEST LINES TO 1500 PSI. PUMP 140 BBLs OF WATER AHEAD. MIX AND PUMP 20 BBLs OF 8.3# GEL WATER AHEAD. MIX AND PUMP (300 sx) 61.4 BBLs OF 15.8# 1.15 YIELD 5 GAL/SK PREMIUM CEMENT W/ 4% CALC. DROP PLUG ON FLY. DISPLACE W/145 BBLs OF H2O. NO RETURNS THROUGH OUT JOB. FINAL LIFT OF 230 PSI AT 3 BBL/MIN. BUMP PLUG AT DISPLACEMENT VOLUME. LAND THE PLUG WITH 560 PSI. SHUT DOWN HELD 560 PSI FOR 5 MIN. TESTED FLOAT AND FLOAT HELD.
3/21/2012	6:00 - 7:00	1.00	MIRU	01	C	P		SKID RIG 10'
	7:00 - 8:00	1.00	DRLPRO	14	A	P		NIPPLE UP BOPE
	8:00 - 11:30	3.50	DRLPRO	15	A	P		TEST BOPE, RAMS, CHOKE, CHOKE LINE, MANUAL VALVES, FLOOR VALVES, HCR & IBOP 250 LOW 5000 HIGH, ANNULAR 250 LOW 2500 HIGH, CASING 1500
	11:30 - 12:00	0.50	DRLPRO	14	B	P		SET WEARBUSHING
	12:00 - 13:30	1.50	DRLPRO	09	A	P		CUT DRILL LINE
	13:30 - 16:00	2.50	DRLPRO	06	A	P		PICK UP HUNTING MUD MOTOR 1.50 DEG .21 RPG, RIH DIRECTIONAL TOOLS SCRIBE & ORIENT , RIH TAG CEMENT @2240'
	16:00 - 17:00	1.00	DRLPRO	07	B	P		CENTER & LEVEL DERRICK - INSTALL ROTATING HEAD
	17:00 - 17:30	0.50	DRLPRO	02	F	P		DRILL CEMENT, BAFFLE/FLOAT & RATHOLE F/2240' TO 2420' WOB 5/10 RPM 35, MM RPM 80 TQ 3/5 SPM 96, GPM 470
	17:30 - 0:00	6.50	DRLPRO	02	D	P		DRLG F/2420" TO 3130' (710' @ 109 fph) MW 8.4 VIS 27 WOB 20, RPM 45 MM RPM 99 TQ 6/8 SPM 112, GPM 550 PSI OFF/ON 1520/1850 - DIFF 300 PU 119, SO 102, ROT 108 NOV - DEWATERING ROT 4.1 HR 618' 73.61% SLIDE 1.58 HRS 92' 12.95% NO FLAIR

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2K4BS YELLOW

Spud Date: 3/2/2012

Project: UTAH-UINTAH

Site: NBU 1022-2L PAD

Rig Name No: PROPETRO 12/12, ENSIGN 146/146

Event: DRILLING

Start Date: 12/8/2011

End Date: 3/30/2012

Active Datum: RKB @5,063.01ft (above Mean Sea Level)

UWI: NWSW/0/10/S/22/E/2/0/0/26/PM/S/2097/W/0/752/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/22/2012	0:00 - 15:30	15.50	DRLPRO	02	D	P		DRLG F/ 3130' TO 4552' (1422' @ 92 fph) MW 8.5 VIS 26 WOB 20, RPM 45 MM RPM 99 TQ ON/OFF 8000/6000 SPM 112, GPM 550 PSI ON/OFF 2167 / 1952 - DIFF 250 PU 156, SO 123, ROT 137 NOV - DEWATERING ROT 9 HR 1449' 84% SLIDE 5 HRS 273' 16% NO FLAIR
	15:30 - 16:00	0.50	DRLPRO	07	A	P		SERVICE TOP DRIVE TRAVLING BLOCKS AND DRAW TOOL.
	16:00 - 0:00	8.00	DRLPRO	02	D	P		0DRLG F/ 4552' TO 5759 (1207' @150 fph) MW 8.5 VIS 26 WOB 20, RPM 45 MM RPM 99 TQ ON/OFF 9000/7000 SPM 112, GPM 550 PSI ON/OFF 2275 / 206 - DIFF 175 PU 176, SO 132, ROT 148 NOV - DEWATERING Slide = 99' 11% 1 hour 35 min 19% Rotate= 799' 89% 8 hours 81% NO FLAIR
3/23/2012	0:00 - 13:00	13.00	DRLPRO	02	D	P		DRLG F/ 5759 TO 6937' (1178' @90 fph) MW 8.5 VIS 26 WOB 20, RPM 45 MM RPM 99 TQ ON/OFF 9000/7000 SPM 112, GPM 550 PSI ON/OFF 2052 / 1916 - DIFF 318 PU 212, SO 142, ROT 170 NOV - DEWATERING Slide = 48' 4% 1.10 hour 9% Rotate= 1221' 96% 12.90 hours 91% NO FLAIR
	13:00 - 13:30	0.50	DRLPRO	07	A	P		SERVICE TOP DRIVE TRAVLING BLOCKS AND DRAW TOOL.
	13:30 - 0:00	10.50	DRLPRO	02	D	P		DRLG F/ 6937' TO 7660 (723' @68 fph) MUD UP @ 7400' MW 11.5 VIS 34 WOB 22, RPM 45 MM RPM 99 TQ ON/OFF 12000/11000 SPM 112, GPM 550 PSI ON/OFF 2720 / 2500 - DIFF 276 PU 212, SO 142, ROT 170 NOV - OFF LINE NO FLAIR

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-2K4BS YELLOW

Spud Date: 3/2/2012

Project: UTAH-UINTAH

Site: NBU 1022-2L PAD

Rig Name No: PROPETRO 12/12, ENSIGN 146/146

Event: DRILLING

Start Date: 12/8/2011

End Date: 3/30/2012

Active Datum: RKB @5,063.01ft (above Mean Sea Level)

UWI: NW/SW/0/10/S/22/E/2/0/0/26/PM/S/2097/W/0/752/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/24/2012	0:00 - 11:30	11.50	DRLPRO	02	D	P		DRLG F/ 7660 TO 8296' (636' @55.3 fph) MUD UP @ 7400' MW 11.5 VIS 36 WOB 23, RPM 35 MM RPM 99 TQ ON/OFF 12000/11000 SPM 96, GPM 470 PSI ON/OFF 2672 / 2448 - DIFF 260 PU 231, SO 146, ROT 183 NOV - OFF LINE NO FLAIR
	11:30 - 12:00	0.50	DRLPRO	07	A	P		SERVICE TOP DRIVE TRAVLING BLOCKS AND DRAW TOOL / IDM
	12:00 - 0:00	12.00	DRLPRO	02	D	P		DRLG F/ 8296 TO 8865' (569" @47.4 fph) MUD UP @ 7400' MW 11.7 VIS 36 WOB 23, RPM 35 MM RPM 99 TQ ON/OFF 13000/12000 SPM 95, GPM 465 PSI ON/OFF 2860 / 2600 - DIFF 219 PU 236, SO 158, ROT 189 NOV - OFF LINE NO FLAIR
3/25/2012	0:00 - 15:00	15.00	DRLPRO	02	D	P		DRLG F/ 8865' TO 9385' (520" @34.6 fph) MW 11.9+ VIS 36 WOB 23, RPM 35 MM RPM 99 TQ ON/OFF 14000/14000 SPM 95, GPM 465 PSI ON/OFF 2974 / 2664 - DIFF 219 PU 258, SO 163, ROT 199 NOV - OFF LINE NO FLAIR
	15:00 - 15:30	0.50	DRLPRO	07	A	P		SERVICE TOP DRIVE TRAVLING BLOCKS AND DRAW TOOL / IDM
	15:30 - 0:00	8.50	DRLPRO	02	D	P		DRLG F/ 9385' TO 9738' (639" @41 fph) MUD UP @ 7400' MW 12.2 VIS 41 WOB 26, RPM 35 MM RPM 99 TQ ON/OFF 16000/15000 SPM 95, GPM 465 PSI ON/OFF 2950 / 2600 - DIFF 220 PU 280, SO 168, ROT 205 NOV - OFF LINE NO FLAIR

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2K4BS YELLOW

Spud Date: 3/2/2012

Project: UTAH-UINTAH

Site: NBU 1022-2L PAD

Rig Name No: PROPETRO 12/12, ENSIGN 146/146

Event: DRILLING

Start Date: 12/8/2011

End Date: 3/30/2012

Active Datum: RKB @5,063.01ft (above Mean Sea Level)

UWI: NWSW0/10/S/22/E/2/0/0/26/PM/S/2097/W/0/752/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/26/2012	0:00 - 8:30	8.50	DRLPRO	02	D	P		DRLG F/ 9738' TO 10024' (286" @36 fph) MUD UP @ 7400' MW 12.2 VIS 41 WOB 26, RPM 35 MM RPM 99 TQ ON/OFF 16000/15000 SPM 95, GPM 465 PSI ON/OFF 2950 / 2600 - DIFF 220 PU 280, SO 168, ROT 205 NOV - OFF LINE NO FLAIR
	8:30 - 10:30	2.00	DRLPRO	05	C	P		CIRC BTMMS UP / NO FLAIR
	10:30 - 21:00	10.50	DRLPRO	06	E	P		HELD SM / ON HIGH WINDS WAS ABLE TO KEEP TRIPPING BUT SLOW DO TO HIGH WINDS. WIPER TRIP - BACKREAM F/10024' TO 5940' - 45 STANDS - CONTINUE POOH TO 2420' LOST 76 bbls ON TRIP OUT. WORK TIGHT SPOTS @ 7859' / 6590' / 5600'
	21:00 - 0:00	3.00	DRLPRO	06	E	P		WIPER TRIP - TRIP IN F/2420' TO 5000', WORK THROUGH TIGHT SPOTS F/ 5000-5811'
3/27/2012	0:00 - 3:30	3.50	DRLPRO	06	E	P		WIPER TRIP - TRIP IN F/5811' TO 6000', WORK THROUGH TIGHT SPOT TIH TO 9800' WASH F/ 9800' TO 10024'
	3:30 - 5:00	1.50	DRLPRO	05	C	P		CIRC BTMMS UP / NO FLAIR
	5:00 - 13:00	8.00	DRLPRO	06	E			HELD SM / TRIPPING BACKREAM F/10024' TO 7944' - 22 STANDS - CONTINUE POOH TO BIT WORK TIGHT SPOT @ 3766'
	13:00 - 13:30	0.50	DRLPRO	14	B	P		RETRIEVE WEARBUSHING
	13:30 - 14:30	1.00	DRLPRO	21	E	P		WAITING ON BAKER HUGHES LOGGERS
	14:30 - 18:30	4.00	DRLPRO	11	D	P		HPJSM R/U BAKER HUGHES LOGGERS RUN IN HOLE TO 4232' TAGED UP WORK TIGHT SPOT WITH NO LUCK POOH R/D SAME.
	18:30 - 19:00	0.50	DRLPRO	14	B	P		INSTALL WEARBUSHING
	19:00 - 0:00	5.00	DRLPRO	06	E	P		WIPER TRIP FOR LOGS - TRIP IN F/SURFACE' TO 5380', WORK THROUGH TIGHT SPOTS @3490,4090',4250,4275.
3/28/2012	0:00 - 5:00	5.00	DRLPRO	06	F	X		WIPER TRIP - TRIP IN F/SURFACE' TO 10024', WASH F/9882' TO 1024' - 8' TO BTM - WORK THROUGH TIGHT SPOTS @ 8255'-8800' & 9500 LOST 10 BBLS MUD ON TRIP.
	5:00 - 7:00	2.00	DRLPRO	05	C	X		CIRC BTMMS UP / NO FLAIR -RAISE MUD WT TO 12.6 42 VIS / DO TO HOLE COND.
	7:00 - 14:00	7.00	DRLPRO	06	F	X		HELD SM / ON TRIPPING PIPE / WIPER TRIP FOR LOGS- BACKREAM F/10024' TO 8628' - 15 STANDS / LAY DOWN M/M BREAK BIT
	14:00 - 14:30	0.50	DRLPRO	14	B	X		RETRIEVE WEARBUSHING
	14:30 - 18:30	4.00	DRLPRO	11	D	X		PRE JOB SAFETY MEETING, RIG UP BAKER ATLAS & RUN TRIPLE COMBO TO LOGGERS TD @ 4170' - BRIDGED OFF - LOGGED OUT OF HOLE FROM 4170' - RIG DOWN
	18:30 - 22:30	4.00	DRLPRO	06	B	X		TRIP IN DRILL PIPE OPEN ENDED TO 4984' - BREAK CIRC @ 4984' - CIRC BOTTOMS UP
	22:30 - 0:00	1.50	DRLPRO	11	D	X		PRE-JOB SAFETY MEETING, RIG UP HALLIBIRTON WIRELINE - RIH LOGGING TOOLS INSIDE DRILL PIPE TO 4984' @ MID NIGHT

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2K4BS YELLOW

Spud Date: 3/2/2012

Project: UTAH-UINTAH

Site: NBU 1022-2L PAD

Rig Name No: PROPETRO 12/12, ENSIGN 146/146

Event: DRILLING

Start Date: 12/8/2011

End Date: 3/30/2012

Active Datum: RKB @5,063.01ft (above Mean Sea Level)

UWI: NWSW/0/10/S/22/E/2/0/0/26/PM/S/2097/NW/0/752/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/29/2012	0:00 - 2:30	2.50	DRLPRO	11	D	X		RUN HALLIBURTON LOGGING TOOLS INSIDE DP TO 6120' - BRIDGED OFF @ 6120' - LOGGED OUT - RIGGED DOWN HALLIBURTON
	2:30 - 6:30	4.00	DRLPRO	06	B	X		RUN IN DRILL PIPE OPEN ENDED TO 10,024' - CIRC BTTMS UP - NO GAS - NO FLARE - NO PROBLEMS ON TRIP IN HOLE FROM 4984'
	6:30 - 8:00	1.50	DRLPRO	06	B	X		TRIP OUT DRILL PIPE FROM 10,024' TO 8882'
	8:00 - 12:00	4.00	DRLPRO	11	D	X		PRE-JOB SAFETY MEETING, R/UP HALLIBURTON, RUN IN LOGS THRU DRILL PIPE TO 10,020' LOG BACK TO 8882' - PULL OUT WIRELINE & RIG DOWN HALLIBURTON
	12:00 - 17:00	5.00	DRLPRO	06	B	X		TRIP OUT DRILL PIPE F/8882' TO SURFACE
	17:00 - 0:00	7.00	DRLPRO	12	C	P		PRE-JOB SAFETY MEETING, R/UP FRANKS & RUN 4.5" 11.60 LTC & DQX P-110 CASING, FLOAT SHOE 10,004', FLOAT COLLAR 9959', BLACKHAWK MKR 9388', MESA MKR 8611', X-OVER 4979'
	3/30/2012	0:00 - 3:30	3.50	CSG	12	C	P	
3/30/2012	3:30 - 5:00	1.50	CSG	05	D	P		CIRC - NO FLARE
	5:00 - 8:00	3.00	CSG	12	E	P		HPJSM, R/UP BJ & CEMENT 4.5" PROD CASING, TEST LINES 5000 PSI, DROPPED BOTTOM PLUG, PUMP 5 BBLS FRESH WATER, 40 BBLS SEAL BOND WEIGHTED SPACER @ 12.5 ppg, 545 SKS LEAD 13.0 PPG 1.77 YIELD, TAIL 1410 SKS 14.3 PPG, 1.31 YIELD, DROPPED TOP PLUG & DISPLACED W/155 BBLS FRESH WATER W/0.1 gal/bbl CLAYFIX II & 0.01 gal/bbl ALDACIDE G @ 3082 PSI, BUMPED PLUG @ 3552 PSI - FLOATS HELD W/2.0 BBLS RETURN, GOOD RETURNS DURING CMT JOB W/34 BBLS LEAD CEMENT TO SURFACE - R/DN BJ
	8:00 - 9:00	1.00	CSG	21	E	P		WAIT ON WEATHERFORD SLIP PERSONNEL - PIPE LINERS CUT ROAD FOR PIPE CROSSING - WEATHERFORD PERSONNEL NOTIFIED CO-MAN ABOUT ROAD - CALL WAS MADE TO PIPE LINE PERSONNEL AND ROAD WAS RE-OPENED
	9:00 - 9:30	0.50	CSG	14	B	P		SET C-22 SLIPS WITH 105K STRING WEIGHT - WEATHERFORD TIM SUMMERLIN
	9:30 - 11:00	1.50	CSG	14	A	P		NIPPLE DOWN BOPE - ROUGH CUT CASING - RELEASE RIG @ 11:00

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 1022-2K4BS YELLOW	Wellbore No.	OH
Well Name	NBU 1022-2K4BS	Wellbore Name	NBU 1022-2K4BS
Report No.	1	Report Date	5/31/2012
Project	UTAH-UINTAH	Site	NBU 1022-2L PAD
Rig Name/No.		Event	COMPLETION
Start Date	5/31/2012	End Date	6/19/2012
Spud Date	3/2/2012	Active Datum	RKB @5,063.01ft (above Mean Sea Level)
UWI	NW/SW0/10/S/22/E/2/0/0/26/PM/S/2097/NW/0/752/0/0		

1.3 General

Contractor		Job Method		Supervisor	
Perforated Assembly		Conveyed Method			

1.4 Initial Conditions

Fluid Type		Fluid Density		Gross Interval	6,800.0 (ft)-9,625.0 (ft)	Start Date/Time	6/8/2012 12:00AM
Surface Press		Estimate Res Press		No. of Intervals	50	End Date/Time	6/8/2012 12:00AM
TVD Fluid Top		Fluid Head		Total Shots	237	Net Perforation Interval	66.00 (ft)
Hydrostatic Press		Press Difference		Avg Shot Density	3.59 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL					Final Press Date	

1.5 Summary

2 Intervals

2.1 Perforated Interval

Date	Formation/Reservoir	CCL@ (ft)	CCL-T S (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/Add Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
6/8/2012 12:00AM	MESAVERDE/			6,800.0	6,801.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (ft)	CCL-T S (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
6/8/2012 12:00AM	MESAVERDE/			6,862.0	6,863.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			6,886.0	6,887.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			6,924.0	6,926.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			6,960.0	6,961.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,004.0	7,005.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,062.0	7,063.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,084.0	7,085.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,104.0	7,105.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,146.0	7,147.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,166.0	7,167.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,220.0	7,221.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,230.0	7,231.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,254.0	7,255.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,292.0	7,293.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,304.0	7,305.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,330.0	7,331.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,380.0	7,381.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,670.0	7,671.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,714.0	7,715.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,752.0	7,753.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,782.0	7,783.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

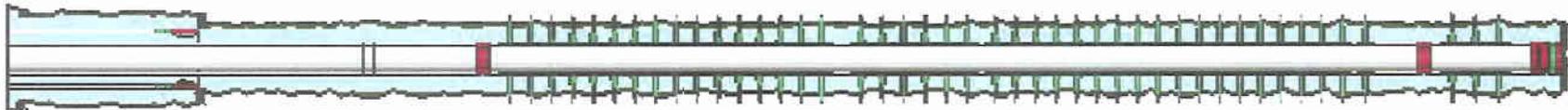
Date	Formation/ Reservoir	CCL@ (ft)	CCL-T S (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
6/8/2012 12:00AM	MESAVERDE/			7,828.0	7,829.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,840.0	7,841.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,874.0	7,875.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			7,982.0	7,984.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,026.0	8,028.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,040.0	8,042.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,063.0	8,065.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,104.0	8,105.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,128.0	8,129.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,160.0	8,161.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,174.0	8,175.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,190.0	8,192.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,232.0	8,233.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,286.0	8,287.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,320.0	8,321.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,350.0	8,352.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,390.0	8,391.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,444.0	8,446.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,454.0	8,456.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,494.0	8,496.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,540.0	8,542.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (ft)	CCL-T S (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
6/8/2012 12:00AM	MESAVERDE/			8,584.0	8,586.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,604.0	8,606.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			8,681.0	8,683.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			9,562.0	9,565.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			9,604.0	9,605.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			9,613.0	9,614.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
6/8/2012 12:00AM	MESAVERDE/			9,624.0	9,625.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

3 Plots

3.1 Wellbore Schematic



**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-2K4BS YELLOW		Spud Date: 3/2/2012	
Project: UTAH-UINTAH		Site: NBU 1022-2L PAD	Rig Name No: MILES 3/3
Event: COMPLETION		Start Date: 5/31/2012	End Date: 6/19/2012
Active Datum: RKB @5,063.01ft (above Mean Sea Level)		UWI: NWSW/0/10/S/22/E/2/0/0/26/PM/S/2097/NI/0/752/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/2/2012	-							
5/31/2012	8:15 - 8:30	0.25	SURFPR	48		P		HSM & JSA WB & C QUICK TEST
	13:00 - 14:13	1.22	SURFPR	33	C	P		WHP 0 PSI. FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1062 PSI. HELD FOR 15 MIN LOST 6 PSI. PSI TEST T/ 3506 PSI. HELD FOR 15 MIN LOST 13 PSI. 1ST PSI TEST T/ 9012 PSI. HELD FOR 30 MIN LOST 56 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG. BLEED OFF PSI. MOVE T/ NEXT WELL. SWI
6/8/2012	7:00 - 12:00	5.00	COMP	37		P		PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF AS PER PERF DESIGN. POOH. SWFW
6/11/2012	6:15 - 6:30	0.25	COMP	48		P		HSM, OVERHEAD CRANES & HIGH PRESSURE

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-2K4BS YELLOW

Spud Date: 3/2/2012

Project: UTAH-UINTAH

Site: NBU 1022-2L PAD

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 5/31/2012

End Date: 6/19/2012

Active Datum: RKB @5,063.01ft (above Mean Sea Level)

UWI: NWSW/0/10/S/22/E/2/0/0/26/PM/S/2097/W/0/752/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	6:30 - 18:00	11.50	COMP	36	B	P		<p>FRAC STG 1)WHP 1091 PSI, BRK 4343 PSI @ 5.7 BPM. ISIP 3406 PSI, FG .79 CALC HOLES OPEN @ 51.0 BPM @ 5726 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 3534 PSI, FG .81, NPI 128 PSI. MP 7376 PSI, MR 54.1 BPM, AP 5374 PSI, AR 51.5 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8713' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 2)WHP 1567 PSI, BRK 2977 PSI @ 4.6 BPM. ISIP 2111 PSI, FG .68. CALC HOLES OPEN @ 52.4 BPM @ 4154 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 2341 PSI, FG .71, NPI 230 PSI. MP 4596 PSI, MR 54.1 BPM, AP 4064 PSI, AR 52.7 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 3)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8572' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 3)WHP 1855 PSI, BRK 2817 PSI @ 4.6 BPM. ISIP 2000 PSI, FG .67 CALC HOLES OPEN @ 52.9 BPM @ 4083 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 2381 PSI, FG .72, NPI 381 PSI. MP 5274 PSI, MR 53.5 BPM, AP 4387 PSI, AR 53.0 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 4)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8421' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 4)WHP 2050 PSI, BRK 2767 PSI @ 4.6 BPM. ISIP 2236 PSI, FG .71 CALC HOLES OPEN @ 52.6 BPM @ 4151 PSI = 100% HOLES OPEN. (22/22 HOLES OPEN) ISIP 2672 PSI, FG .76, NPI 436 PSI. MP 5266 PSI, MR 54.1 BPM, AP 44393 PSI, AR 52.8 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE SWIFN</p>

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-2K4BS YELLOW

Spud Date: 3/2/2012

Project: UTAH-UINTAH

Site: NBU 1022-2L PAD

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 5/31/2012

End Date: 6/19/2012

Active Datum: RKB @5,063.01ft (above Mean Sea Level)

UWI: NW/SW/0/10/S/22/E/2/0/0/26/PM/S/2097/W/0/752/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
6/12/2012	6:45 - 18:00	11.25	COMP	36	B	P		<p>PERF STG 5)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8222' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 5)WHP 1314 PSI, BRK 3325 PSI @ 4.8 BPM. ISIP 2025 PSI, FG .69. CALC HOLES OPEN @ 51.6 BPM @ 5251 PSI = 96% HOLES OPEN. (24/24 HOLES OPEN) ISIP 2672 PSI, FG .75, NPI 534 PSI. MP 5685 PSI, MR 53.2 BPM, AP 4784 PSI, AR 51.9 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 6)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8095' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 6)WHP 1802 PSI, BRK 4161 PSI @ 5.1 BPM. ISIP 2237 PSI, FG .72. CALC HOLES OPEN @ 50.3 BPM @ 4538 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 2725 PSI, FG .78, NPI 488 PSI. MP 5025 PSI, MR 51.5 BPM, AP 4512 PSI, AR 50.8 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 7)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7906' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 7)WHP 240 PSI, BRK 2831 PSI @ 4.6 BPM. ISIP 1869 PSI, FG .68 CALC HOLES OPEN @ 52.0 BPM @ 3888 PSI = 100% HOLES OPEN. (26/26 HOLES OPEN) ISIP 2025 PSI, FG .70, NPI 156 PSI. MP 4980 PSI, MR 53.6 BPM, AP 3985 PSI, AR 52.7 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE. SWM FN</p>

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-2K4BS YELLOW

Spud Date: 3/2/2012

Project: UTAH-UINTAH

Site: NBU 1022-2L PAD

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 5/31/2012

End Date: 6/19/2012

Active Datum: RKB @5,063.01ft (above Mean Sea Level)

UWI: NWSW/0/10/S/22/E/2/0/0/26/PM/S/2097/W/0/752/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
6/13/2012	6:45 - 15:00	8.25	COMP	36	B	P		<p>PERF STG 8)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7411' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 8)WHP 260 PSI, BRK 2586 PSI @ 5.1 BPM. ISIP 1585 PSI, FG .66 CALC HOLES OPEN @ 52.1 BPM @ 4889 PSI = 100% HOLES OPEN. (23/23 HOLES OPEN) ISIP 2369 PSI, FG .76, NPI 784 PSI. MP 4549 PSI, MR 51.9 BPM, AP 3966 PSI, AR 51.5 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 9)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7197' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 9)WHP 1931 PSI, BRK 2465 PSI @ 4.7 BPM. ISIP 2034 PSI, FG .730. CALC HOLES OPEN @ 52.3 BPM @ 3456 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 2264 PSI, FG .76, NPI 230 PSI. MP 4303 PSI, MR 52.5 BPM, AP 3745 PSI, AR 52.1 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 10)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 6,991' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 10)WHP 1315 PSI, BRK 1553 PSI @ 4.6 BPM. ISIP 1372 PSI, FG .64 CALC HOLES OPEN @ 51.8 BPM @ 3434 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 2175 PSI, FG .75 NPI 803 PSI. MP 3867 PSI, MR 52.3 BPM, AP 3579 PSI, AR 51.7 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PU 4 1/2 8K HAL CBP & RIH SET CBP @ 6,570' POOH. SWI RD FRAC & WL CREWS</p> <p>TOTAL SAND= 257,513 30/50 OTTAWA TOTAL CLFL= 12,391 BBLs</p>
6/18/2012	11:30 - 12:30	1.00	COMP	30	A	P		<p>MOVE OVER FROM 1022-2L1CS. RUSU. ND WH. NU BOP. RU FLOOR AND TBG EQUIP. SPOT TBG.</p>
	12:30 - 17:30	5.00	COMP	31	I	P		<p>MU 3-7/8" BIT, POBS, AND 1.87" XN. RIH AS MEAS AND PU 2-3/8" L-80 TBG. TAG SAND AT 6735'. RU DRLG EQUIP W/ # 213. FILL TBG. PRES TEST TO 4000#. SDFN W/ 212-JTS IN. EOT AT 6725'.</p>

