

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 1022-11B1CS
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) UO1197A-ST	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	1639 FNL 2609 FEL	SWNE	11	10.0 S	22.0 E	S
Top of Uppermost Producing Zone	577 FNL 1805 FEL	NWNE	11	10.0 S	22.0 E	S
At Total Depth	577 FNL 1805 FEL	NWNE	11	10.0 S	22.0 E	S

21. COUNTY UINTAH	22. DISTANCE TO NEAREST LEASE LINE (Feet) 577	23. NUMBER OF ACRES IN DRILLING UNIT 1674
25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 1171	26. PROPOSED DEPTH MD: 8674 TVD: 8459	
27. ELEVATION - GROUND LEVEL 5032	28. BOND NUMBER 22013542	29. 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 - 2070	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 - 8674	11.6	I-80 LT&C	12.5	Premium Lite High Strength	270	3.38	11.0
							50/50 Poz	1210	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 08/10/2011	EMAIL andrew.lytle@anadarko.com
API NUMBER ASSIGNED 43047518150000	APPROVAL  Permit Manager	

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 1022-11B1CS**

Surface: 1639 FNL / 2609 FEL SWNE
 BHL: 577 FNL / 1805 FEL NWNE

Section 11 T10S R22E

Uintah County, Utah
 Mineral Lease: UO1197A-ST

ONSHORE ORDER NO. 1**DRILLING PROGRAM**

1. & 2. **Estimated Tops of Important Geologic Markers:**
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	930	
Birds Nest	1260	Water
Mahogany	1623	Water
Wasatch	4047	Gas
Mesaverde	6275	Gas
MVU2	7263	Gas
MVL1	7833	Gas
TVD	8459	Gas
TD	8674	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 8459' TVD, approximately equals
5,414 psi (0.64 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 3,541 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.

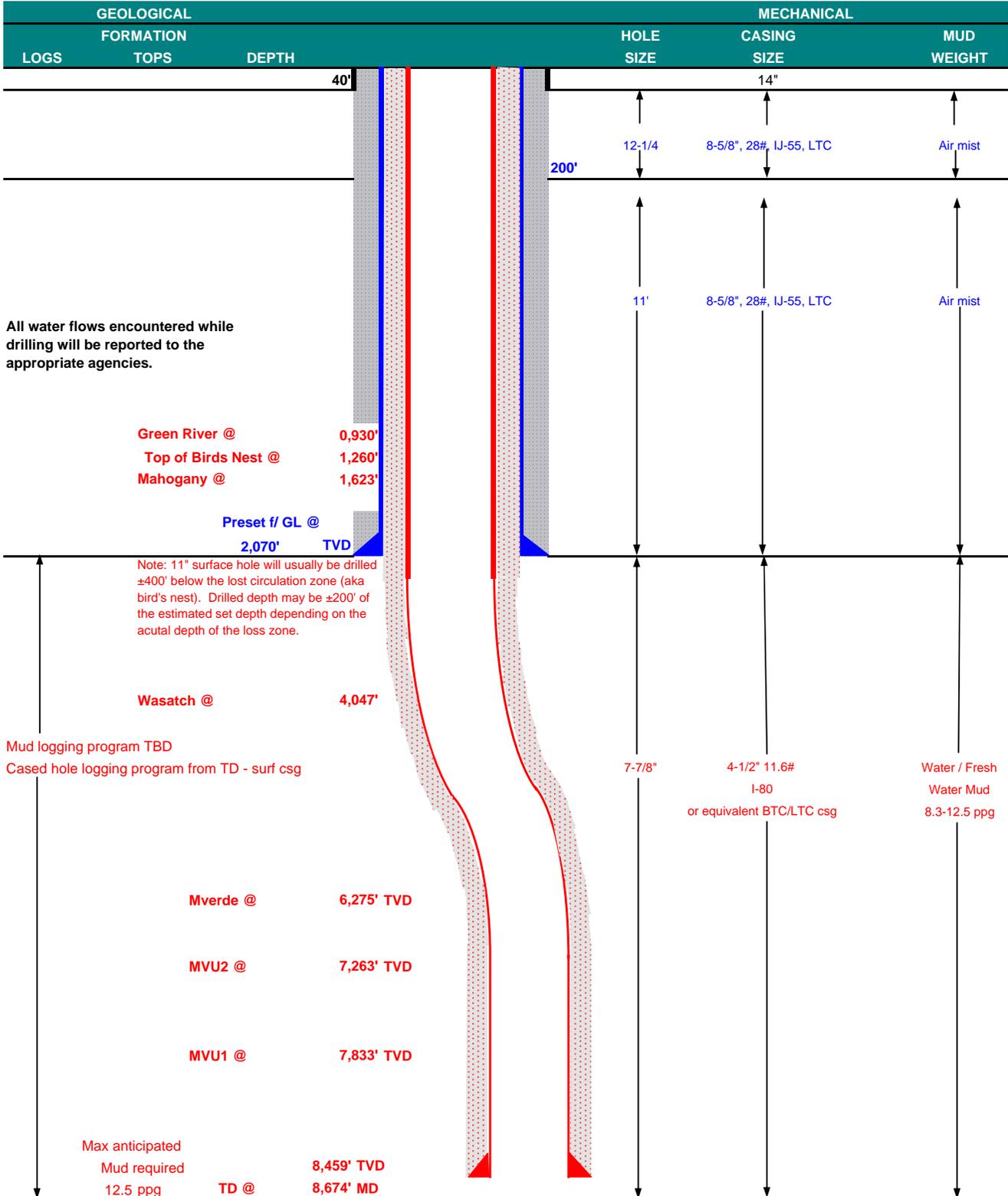
10. **Other Information:**

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	August 10, 2011	
WELL NAME	NBU 1022-11B1CS		TD	8,459'	TVD 8,674' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
SURFACE LOCATION	SWNE	1639 FNL	2609 FEL	Sec 11	T 10S R 22E
	Latitude: 39.966236	Longitude: -109.406348		NAD 27	
BTM HOLE LOCATION	NWNE	577 FNL	1805 FEL	Sec 11	T 10S R 22E
	Latitude: 39.969148	Longitude: -109.403449		NAD 27	
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.				





KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	LTC	BTC
CONDUCTOR	14"	0-40'							
						3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,070	28.00	IJ-55	LTC	2.61	1.94	6.86	N/A
						7,780	6,350	279,000	367,000
PRODUCTION	4-1/2"	0 to 8,674	11.60	I-80	LTC/BTC	1.11	1.15	3.43	4.51

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
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized					
Option 2	LEAD	1,570'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	150	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	3,544'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	270	20%	11.00	3.38
	TAIL	5,130'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,210	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

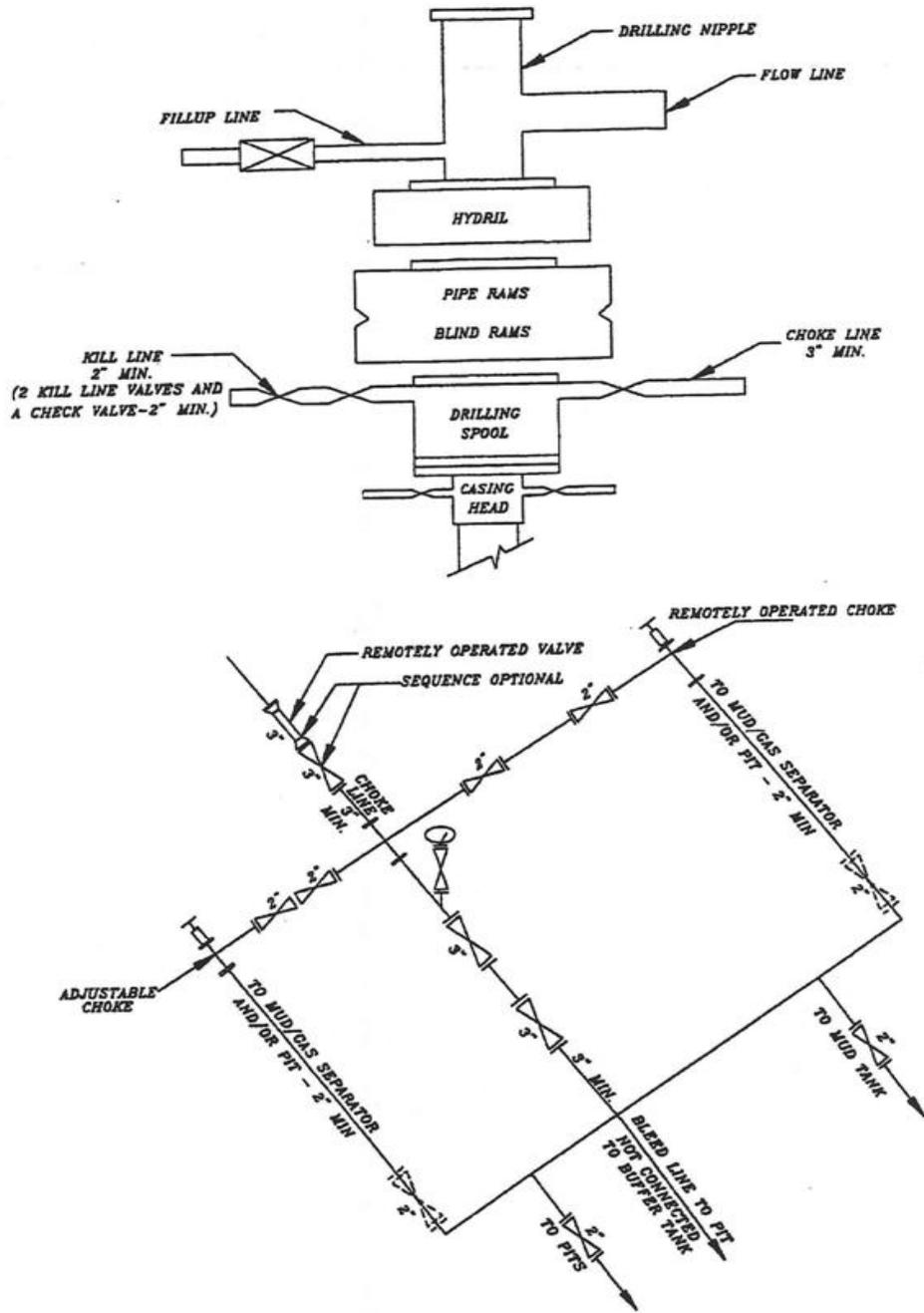
DATE:

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

DATE:

EXHIBIT A NBU 1022-11B1CS



SCHMATIC DIAGRAM OF 5,000 PSI BOP STACK

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

S89°59'W - 80.04 (G.L.O.)

N89°55'57"W - 3073.93'
(Measured to Witness Corner)

S89°58'17"W (Basis of Bearings)
2247.80' (Measured to Witness Corner)

Found 1991
Aluminum Cap,
Steel Post &
Pile of Stones.

Found 1991
Aluminum Cap
with Pile of
Stones. Fence
Post on SE side
of Cap.

N00°06'51"W (Meas.)
1320.03' (G.L.O.)
20.005 (G.L.O.)

N00°09'14"W (Meas.)
1320.53' (G.L.O.)
20.005 (G.L.O.)

N0°06'W - 80.02 (G.L.O.)
1320.39' (Meas.)
20.005 (G.L.O.)

N00°06'14"W - 2640.39' (Meas.)
40.01 (G.L.O.)

N00°06'14"W - 2640.39' (Meas.)
40.01 (G.L.O.)

N00°06'14"W - 2640.39' (Meas.)
40.01 (G.L.O.)

N00°25'25"E - 5276.36' (Meas.)
N0°01'W (G.L.O.)

**WELL LOCATION:
NBU 1022-11B1CS**
ELEV. UNGRADED
GROUND = 5032.1'

NBU 1022-11B1CS (Surface Position)
NAD 83 LATITUDE = 39.966202° (39° 57' 58.326")
LONGITUDE = 109.407030° (109° 24' 25.307")
NAD 27 LATITUDE = 39.966236° (39° 57' 58.450")
LONGITUDE = 109.406348° (109° 24' 22.854")

NBU 1022-11B1CS (Bottom Hole)
NAD 83 LATITUDE = 39.969114° (39° 58' 08.811")
LONGITUDE = 109.404131° (109° 24' 14.870")
NAD 27 LATITUDE = 39.969148° (39° 58' 08.934")
LONGITUDE = 109.403449° (109° 24' 12.417")

Found 1991 Aluminum
Cap, Set Stone West
of Cap, Pile of Stones

Found Uintah
County Aluminum
Cap on 3/4" rebar.
Pile of Stones

N89°59'34"W - 2633.26' (Meas.)

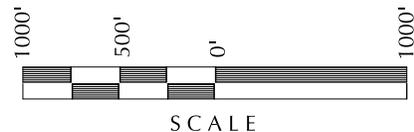
S89°56'39"W - 2638.49' (Meas.)

N89°59'W - 79.98 (G.L.O.)

NOTES:

▲ = Section Corners Located

- Well footages are measured at right angles to the Section Lines.
- G.L.O. distances are shown in feet or chains.
1 chain = 66 feet.
- The Bottom of hole bears N37°24'53"E 1336.72' from the Surface Position.
- Bearings are based on Global Positioning Satellite observations.
- 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.

PROFESSIONAL LAND SURVEYOR
No. 6028691
JOHN R. SLAUCH
STATE OF UTAH
1-17-11

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

WELL PAD: NBU 1022-11G2

**NBU 1022-11B1CS
WELL PLAT**

577' FNL, 1805' FEL (Bottom Hole)
NW 1/4 NE 1/4 OF SECTION 11, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH.



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

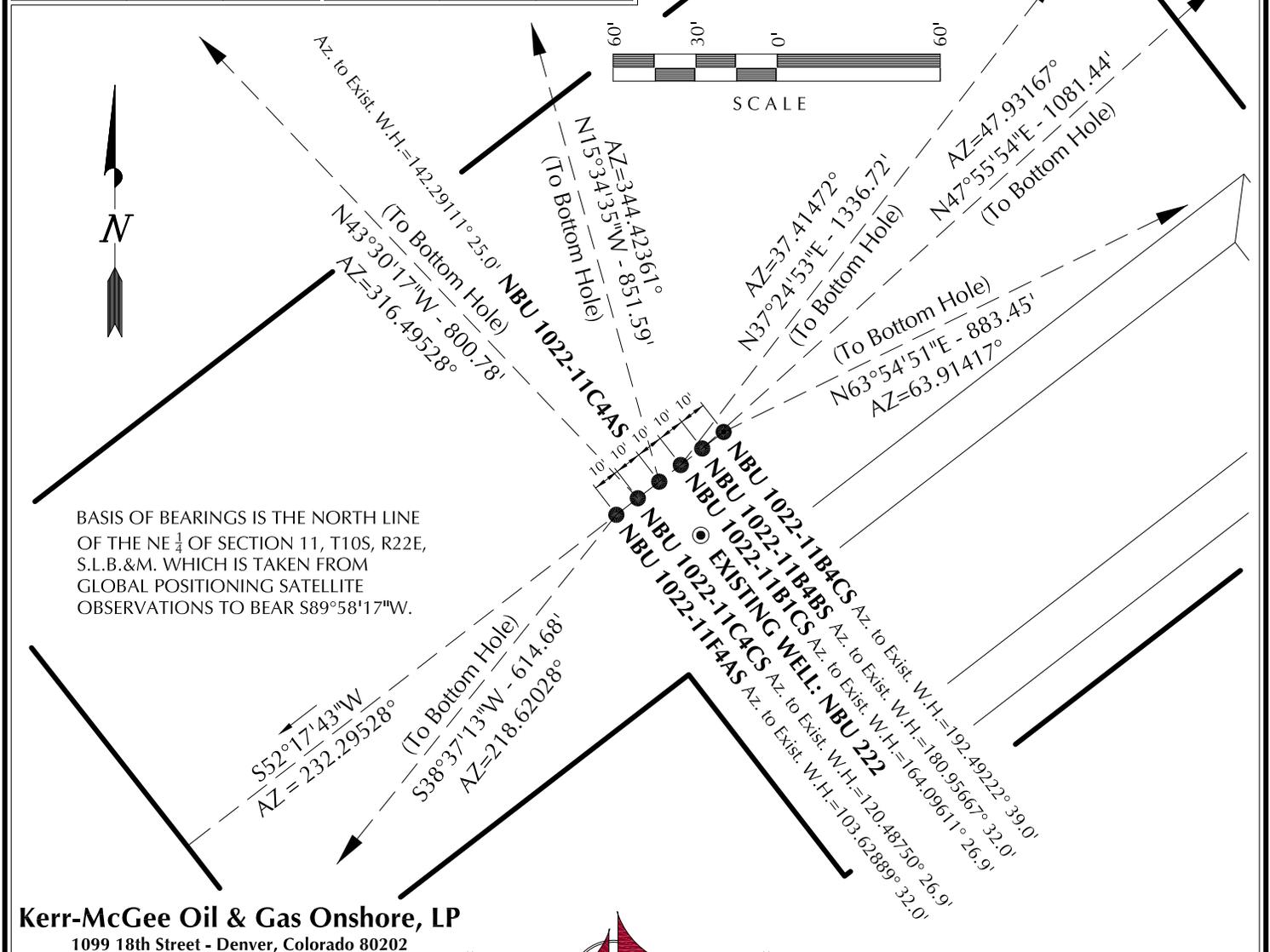
TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 12-28-10	SURVEYED BY: M.S.B.	SHEET NO: 3
DATE DRAWN: 01-13-11	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 1022-11B4CS	39°57'58.447"	109°24'25.104"	39°57'58.571"	109°24'22.651"	1627' FNL	39°58'02.280"	109°24'14.913"	39°58'02.404"	109°24'12.460"	1238' FNL
NBU 1022-11B4BS	39°57'58.387"	109°24'25.206"	39°57'58.510"	109°24'22.753"	2594' FEL	39°58'05.540"	109°24'14.891"	39°58'05.664"	109°24'12.439"	908' FNL
NBU 1022-11B1CS	39°57'58.326"	109°24'25.307"	39°57'58.450"	109°24'22.854"	1639' FNL	39°58'08.811"	109°24'14.870"	39°58'08.934"	109°24'12.417"	577' FNL
NBU 1022-11C4AS	39°57'58.266"	109°24'25.409"	39°57'58.390"	109°24'22.956"	1645' FNL	39°58'06.372"	109°24'28.338"	39°58'06.496"	109°24'25.885"	825' FNL
NBU 1022-11C4CS	39°57'58.206"	109°24'25.510"	39°57'58.329"	109°24'23.058"	1651' FNL	39°58'03.948"	109°24'32.584"	39°58'04.071"	109°24'30.131"	1071' FNL
NBU 1022-11F4AS	39°57'58.145"	109°24'25.612"	39°57'58.269"	109°24'23.159"	1657' FNL	39°57'53.403"	109°24'30.542"	39°57'53.526"	109°24'28.089"	2138' FNL
NBU 222	39°57'58.071"	109°24'25.213"	39°57'58.194"	109°24'22.760"	1665' FNL	39°58'48.834"	109°24'08.484"	39°58'48.834"	109°24'08.484"	2288' FNL

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 1022-11B4CS	388.5'	793.5'	NBU 1022-11B4BS	724.6'	802.8'	NBU 1022-11B1CS	1,061.7'	812.2'	NBU 1022-11C4AS	820.3'	-228.7'
NBU 1022-11C4CS	580.8'	-551.3'	NBU 1022-11F4AS	-480.2'	-383.7'						



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

WELL PAD - NBU 1022-11G2

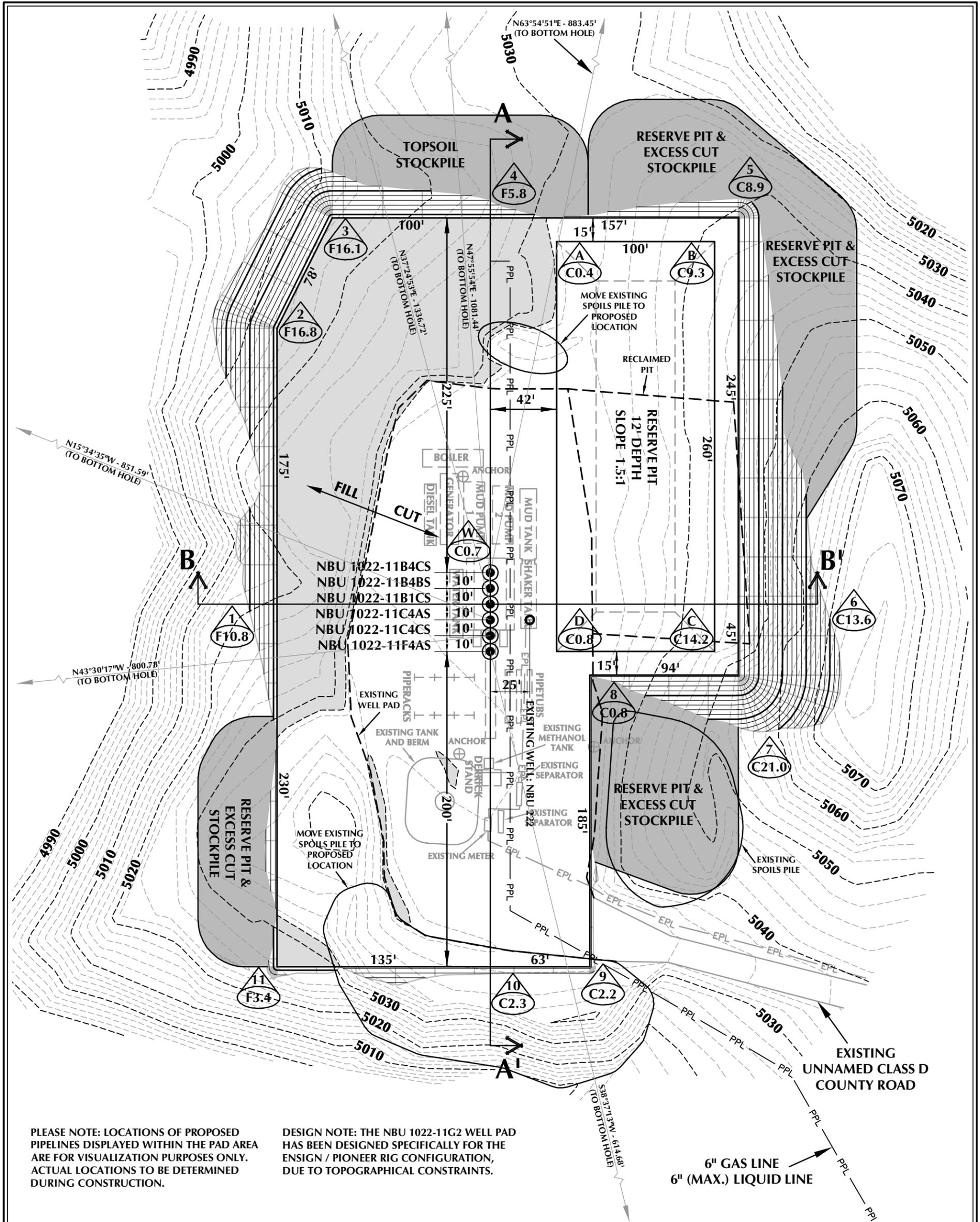
WELL PAD INTERFERENCE PLAT
WELLS - NBU 1022-11B4CS, NBU 1022-11B4BS, NBU 1022-11B1CS, NBU 1022-11C4AS, NBU 1022-11C4CS & NBU 1022-11F4AS LOCATED IN SECTION 11, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

609

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

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

DATE SURVEYED: 12-28-10	SURVEYED BY: M.S.B.	SHEET NO: 7
DATE DRAWN: 01-13-11	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.

DESIGN NOTE: THE NBU 1022-11G2 WELL PAD HAS BEEN DESIGNED SPECIFICALLY FOR THE ENSIGN / PIONEER RIG CONFIGURATION, DUE TO TOPOGRAPHICAL CONSTRAINTS.

WELL PAD - NBU 1022-11G2 DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5032.1'
 FINISHED GRADE ELEVATION = 5031.4'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.40 ACRES
 TOTAL DAMAGE AREA = 5.62 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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

WELL PAD - NBU 1022-11G2

WELL PAD - LOCATION LAYOUT
 NBU 1022-11B4CS, NBU 1022-11B4BS,
 NBU 1022-11B1CS, NBU 1022-11C4AS,
 NBU 1022-11C4CS & NBU 1022-11F4AS
 LOCATED IN SECTION 11, T10S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

WELL PAD QUANTITIES
 TOTAL CUT FOR WELL PAD = 13,013 C.Y.
 TOTAL FILL FOR WELL PAD = 10,794 C.Y.
 TOPSOIL @ 6" DEPTH = 1,850 C.Y.
 EXCESS MATERIAL = 2,219 C.Y.

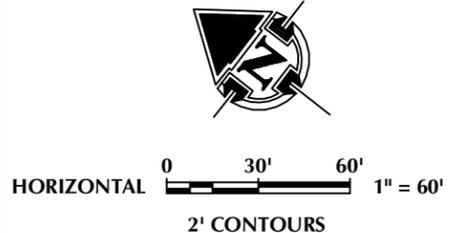
RESERVE PIT QUANTITIES
 TOTAL CUT FOR RESERVE PIT
 +/- 8,870 C.Y.
 RESERVE PIT CAPACITY (2' OF FREEBOARD)
 +/- 33,770 BARRELS



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

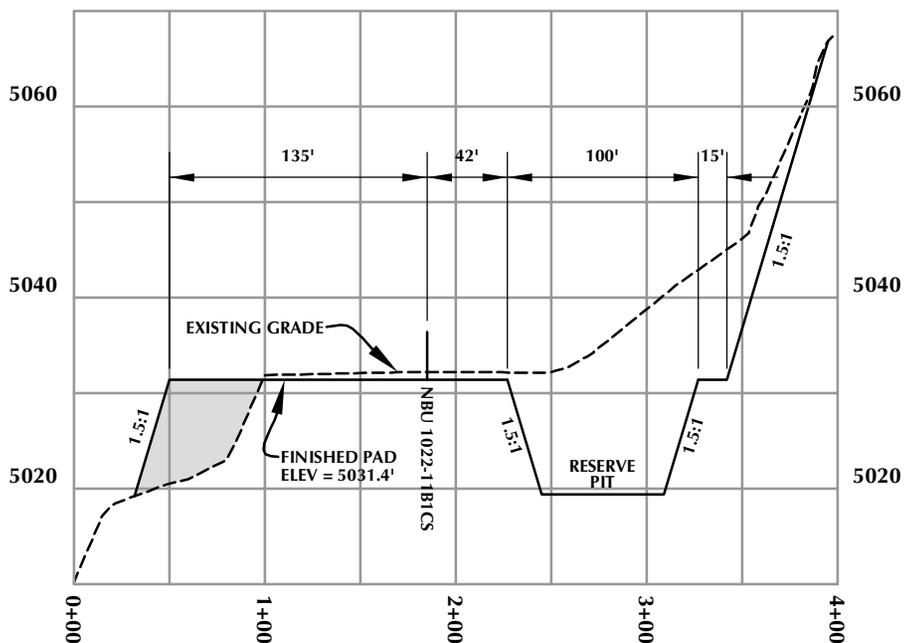
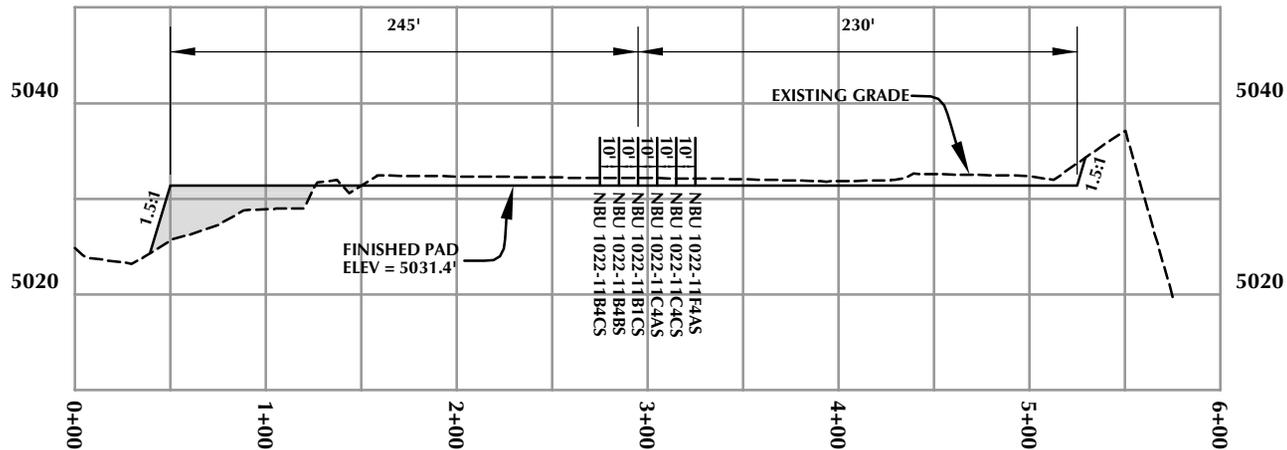
TIMBERLINE ENGINEERING & LAND SURVEYING, INC.
 209 NORTH 300 WEST - VERNAL, UTAH 84078
 (435) 789-1365

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



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

C:\ANADARKO\2010_62_NBU_FOCUS_1022-11_14\DWG\NBU_1022-11G2_PAD_20110105.dwg, 3/3/2011 4:40:17 PM



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

WELL PAD - NBU 1022-11G2

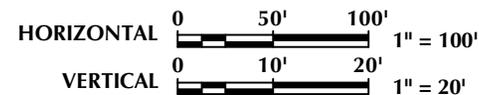
WELL PAD - CROSS SECTIONS
 NBU 1022-11B4CS, NBU 1022-11B4BS,
 NBU 1022-11B1CS, NBU 1022-11C4AS,
 NBU 1022-11C4CS & NBU 1022-11F4AS
 LOCATED IN SECTION 11, T10S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH



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: 3/3/11

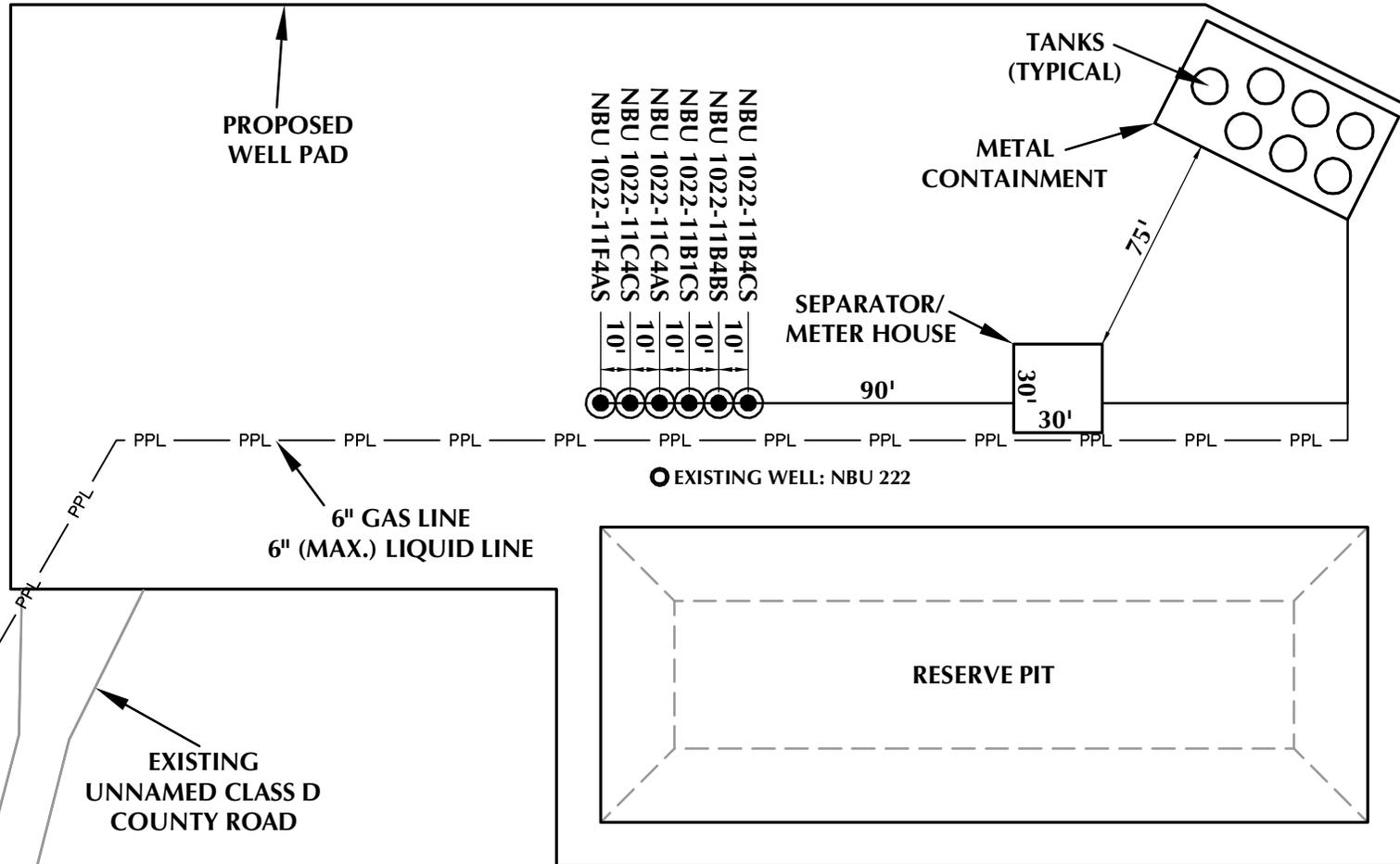
SHEET NO:

REVISED:

9

9 OF 18

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 1022-11G2

WELL PAD - FACILITIES DIAGRAM
NBU 1022-11B4CS, NBU 1022-11B4BS,
NBU 1022-11B1CS, NBU 1022-11C4AS,
NBU 1022-11C4CS & NBU 1022-11F4AS
LOCATED IN SECTION 11, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

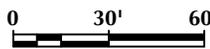


CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

WELL PAD LEGEND

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



HORIZONTAL  1" = 60'

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

Scale: 1"=60'	Date: 3/3/11	SHEET NO:
REVISED:		10 10 OF 18

RECEIVED: August 10, 2011

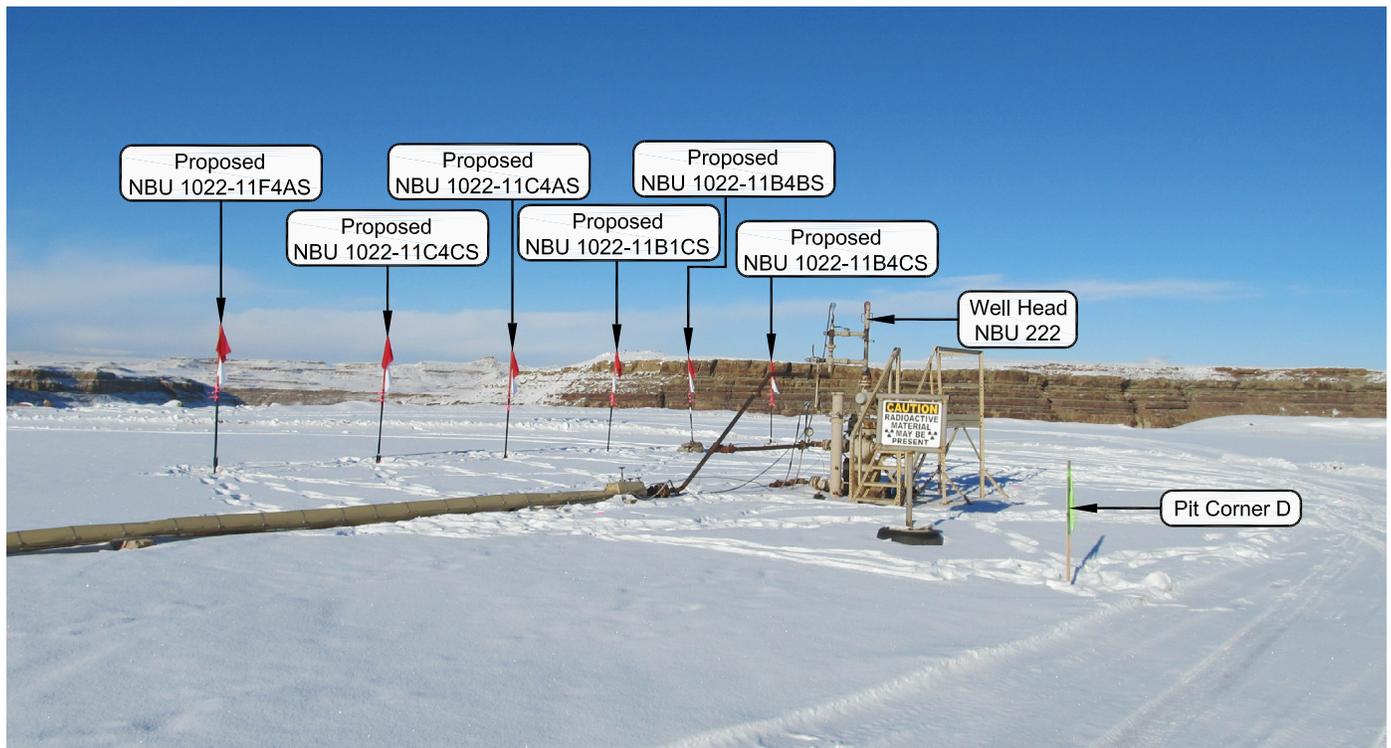


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: NORTHWESTERLY

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

WELL PAD - NBU 1022-11G2

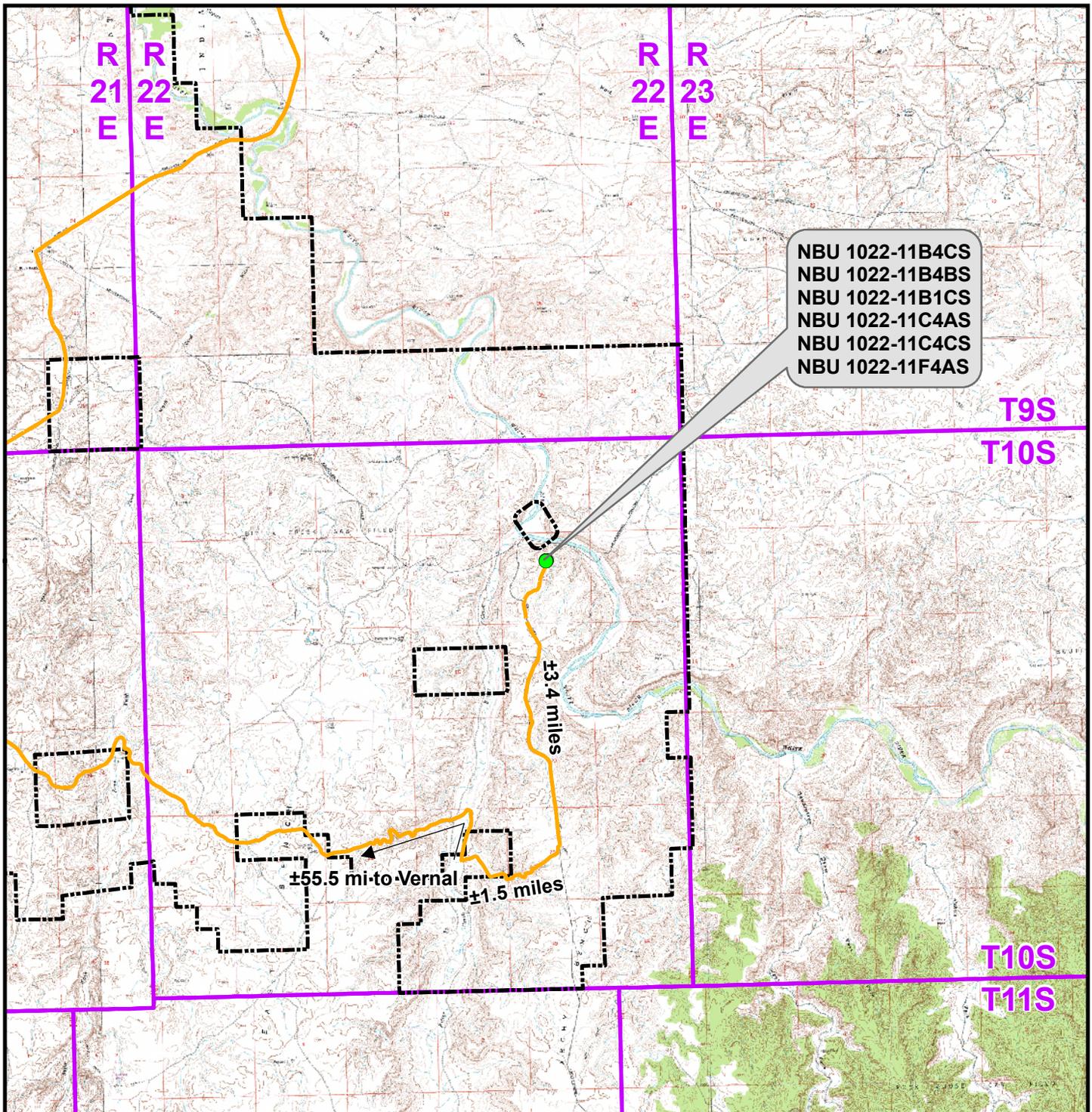
LOCATION PHOTOS
 NBU 1022-11B4CS, NBU 1022-11B4BS,
 NBU 1022-11B1CS, NBU 1022-11C4AS,
 NBU 1022-11C4CS & NBU 1022-11F4AS
 LOCATED IN SECTION 11, T10S, R22E,
 S.L.B.&M., Uintah County, Utah.



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

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

DATE PHOTOS TAKEN: 01-10-11	PHOTOS TAKEN BY: M.S.B.	SHEET NO: 11
DATE DRAWN: 01-13-11	DRAWN BY: E.M.S.	
Date Last Revised:		11 OF 18



NBU 1022-11B4CS
 NBU 1022-11B4BS
 NBU 1022-11B1CS
 NBU 1022-11C4AS
 NBU 1022-11C4CS
 NBU 1022-11F4AS

T9S
 T10S

T10S
 T11S

±3.4 miles

±55.5 mi-to-Vernal
 ±1.5 miles

Legend

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

Distance From Well Pad - NBU 1022-11G2 To Unit Boundary: ±1,361ft

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

WELL PAD - NBU 1022-11G2

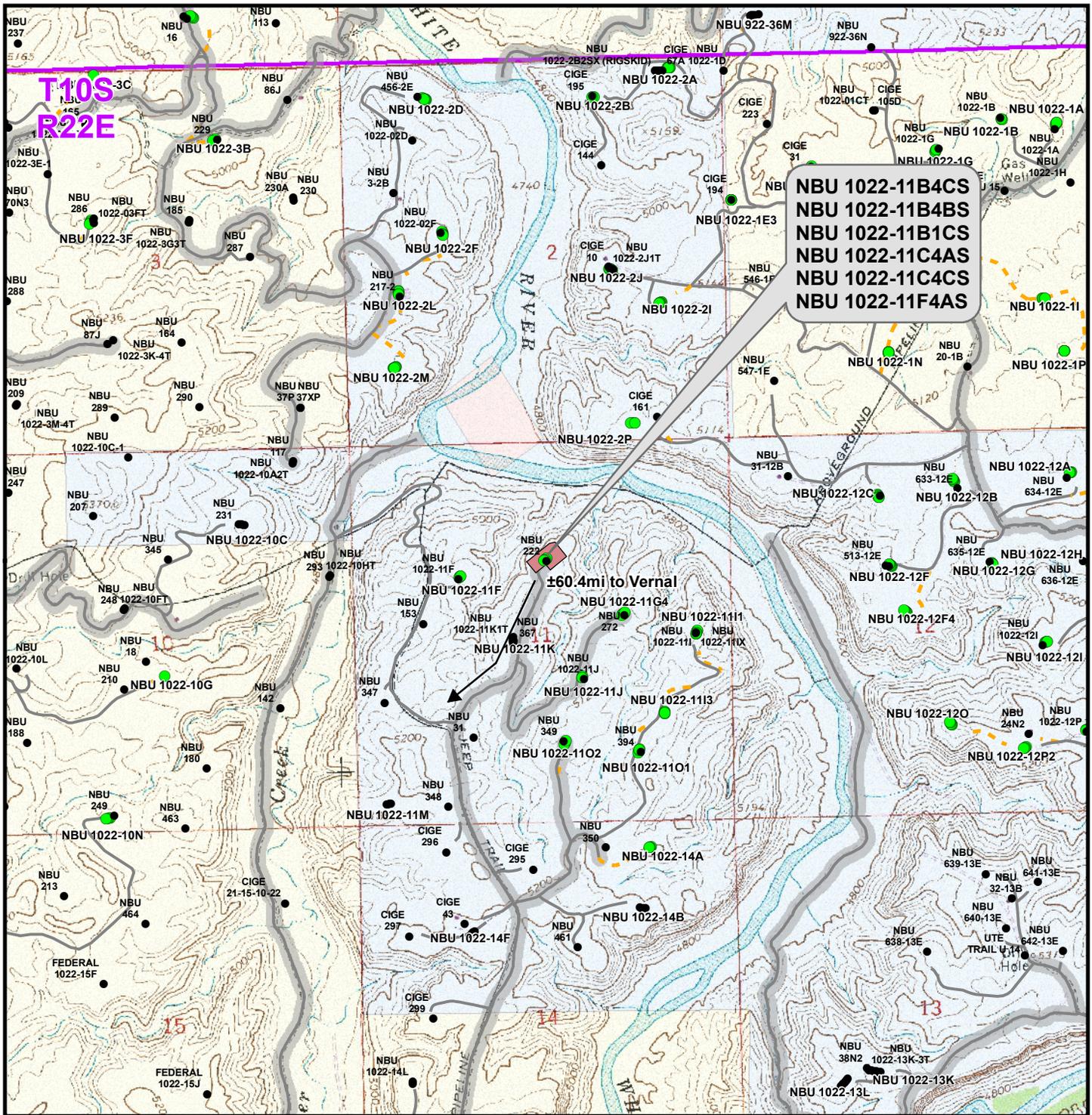
TOPO A

NBU 1022-11B4CS, NBU 1022-11B4BS,
 NBU 1022-11B1CS, NBU 1022-11C4AS,
 NBU 1022-11C4CS & NBU 1022-11F4AS
 LOCATED IN SECTION 11, 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	Sheet No:
Drawn: TL	Date: 3 Mar 2011	12
Revised:	Date:	



**NBU 1022-11B4CS
 NBU 1022-11B4BS
 NBU 1022-11B1CS
 NBU 1022-11C4AS
 NBU 1022-11C4CS
 NBU 1022-11F4AS**

±60.4mi to Vernal

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: ±0ft

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

WELL PAD - NBU 1022-11G2

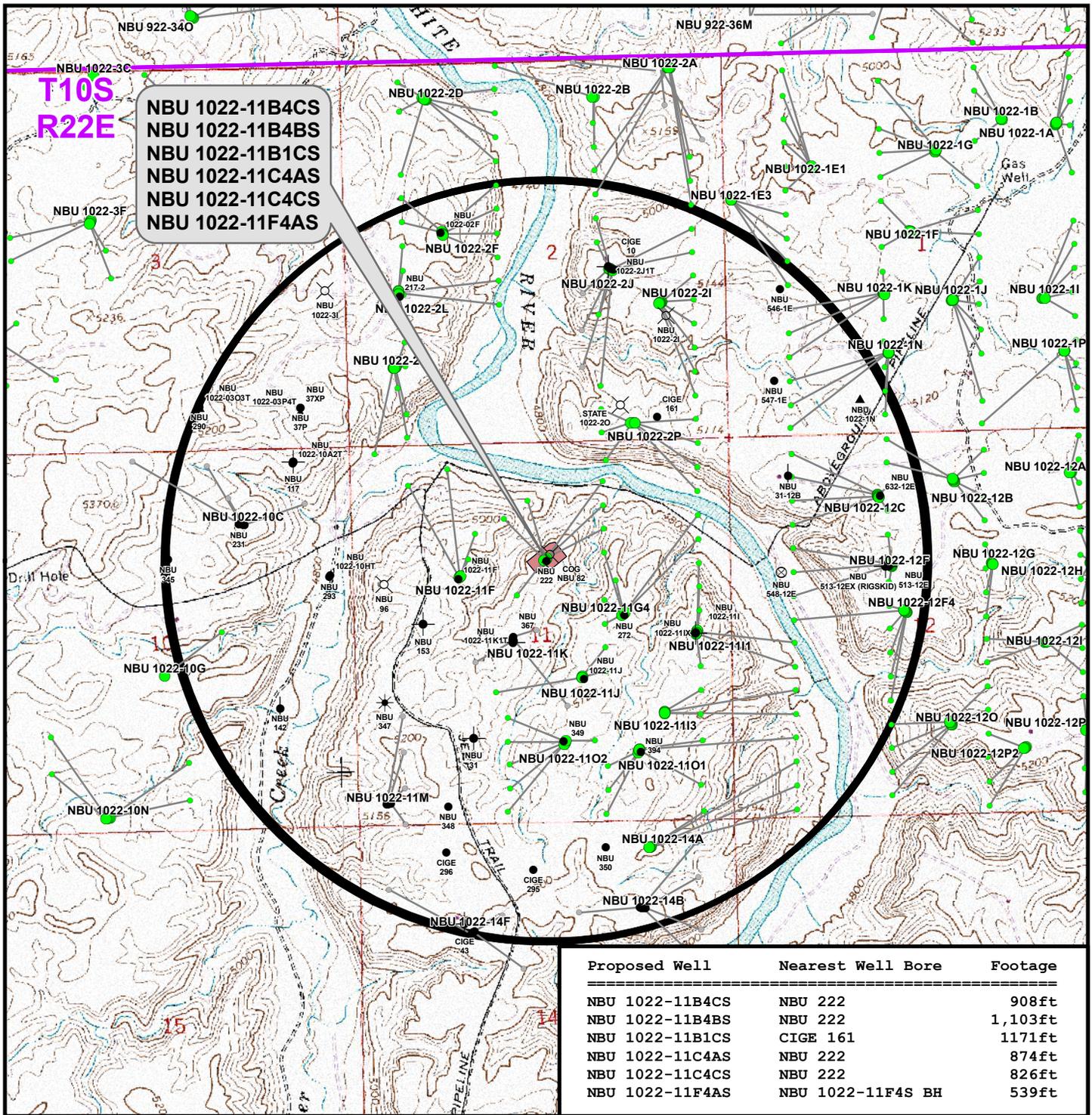
TOPO B
 NBU 1022-11B4CS, NBU 1022-11B4BS,
 NBU 1022-11B1CS, NBU 1022-11C4AS,
 NBU 1022-11C4CS & NBU 1022-11F4AS
 LOCATED IN SECTION 11, T10S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH



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:	13
Drawn: TL	Date: 3 Mar 2011	13 of 18	
Revised:	Date:		



Proposed Well	Nearest Well Bore	Footage
NBU 1022-11B4CS	NBU 222	908ft
NBU 1022-11B4BS	NBU 222	1,103ft
NBU 1022-11B1CS	CIGE 161	1171ft
NBU 1022-11C4AS	NBU 222	874ft
NBU 1022-11C4CS	NBU 222	826ft
NBU 1022-11F4AS	NBU 1022-11F4S BH	539ft

Legend

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

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

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

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

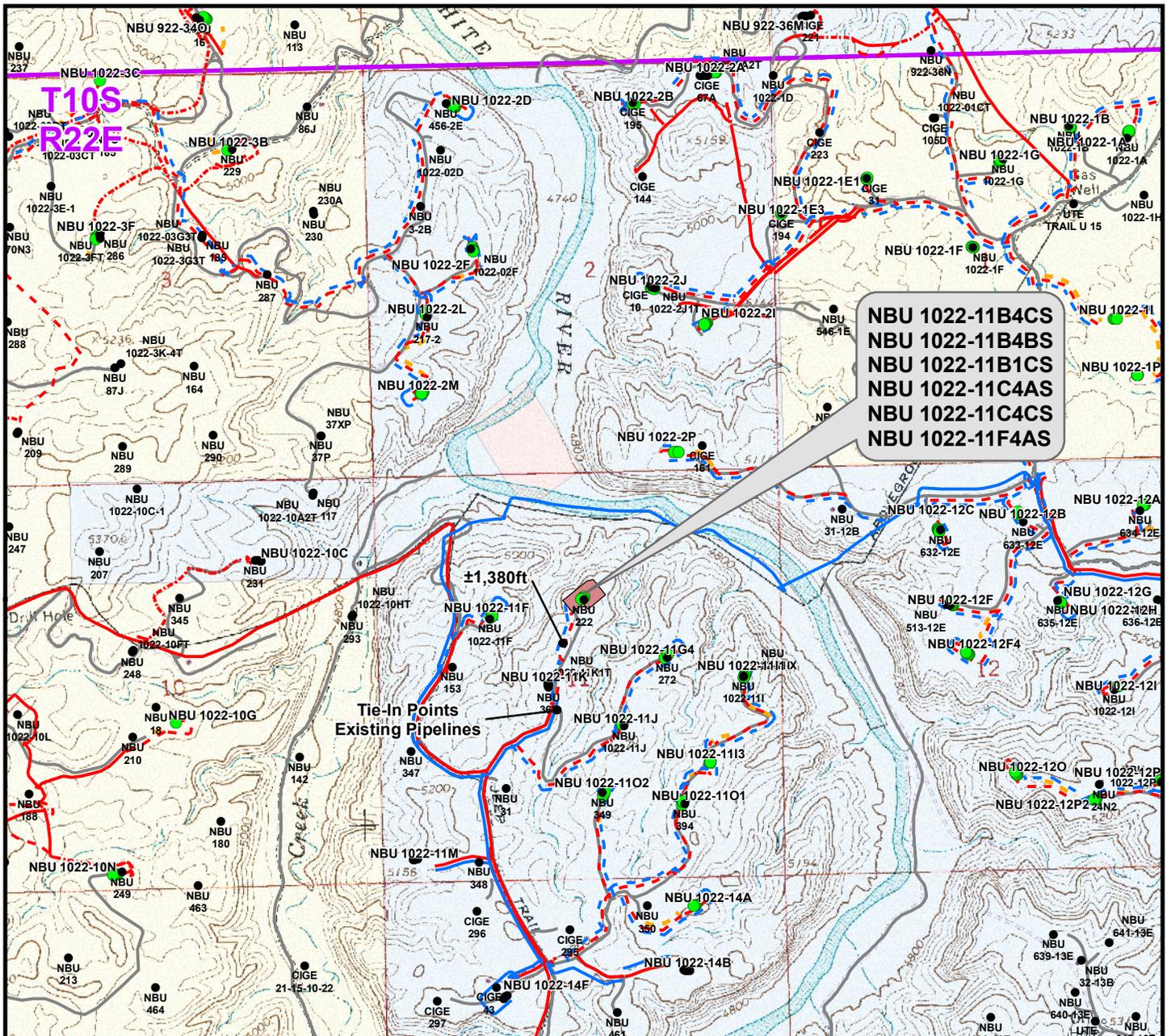
WELL PAD - NBU 1022-11G2

TOPO C
NBU 1022-11B4CS, NBU 1022-11B4BS,
NBU 1022-11B1CS, NBU 1022-11C4AS,
NBU 1022-11C4CS & NBU 1022-11F4AS
LOCATED IN SECTION 11, 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
Drawn: TL	Date: 3 Mar 2011	14 of 18
Revised:	Date:	



**NBU 1022-11B4CS
NBU 1022-11B4BS
NBU 1022-11B1CS
NBU 1022-11C4AS
NBU 1022-11C4CS
NBU 1022-11F4AS**

**Tie-In Points
Existing Pipelines**

Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±575ft	Proposed 6" (Meter House to Edge of Pad)	±575ft
Proposed 6" (Max.) (Edge of Pad to Existing Liquid Pipeline)	±1,380ft	Proposed 6" (Edge of Pad to Existing 8" Gas Pipeline)	±1,380ft
TOTAL PROPOSED LIQUID PIPELINE =	±1,955ft	TOTAL PROPOSED GAS PIPELINE =	±1,955ft

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 1022-11G2

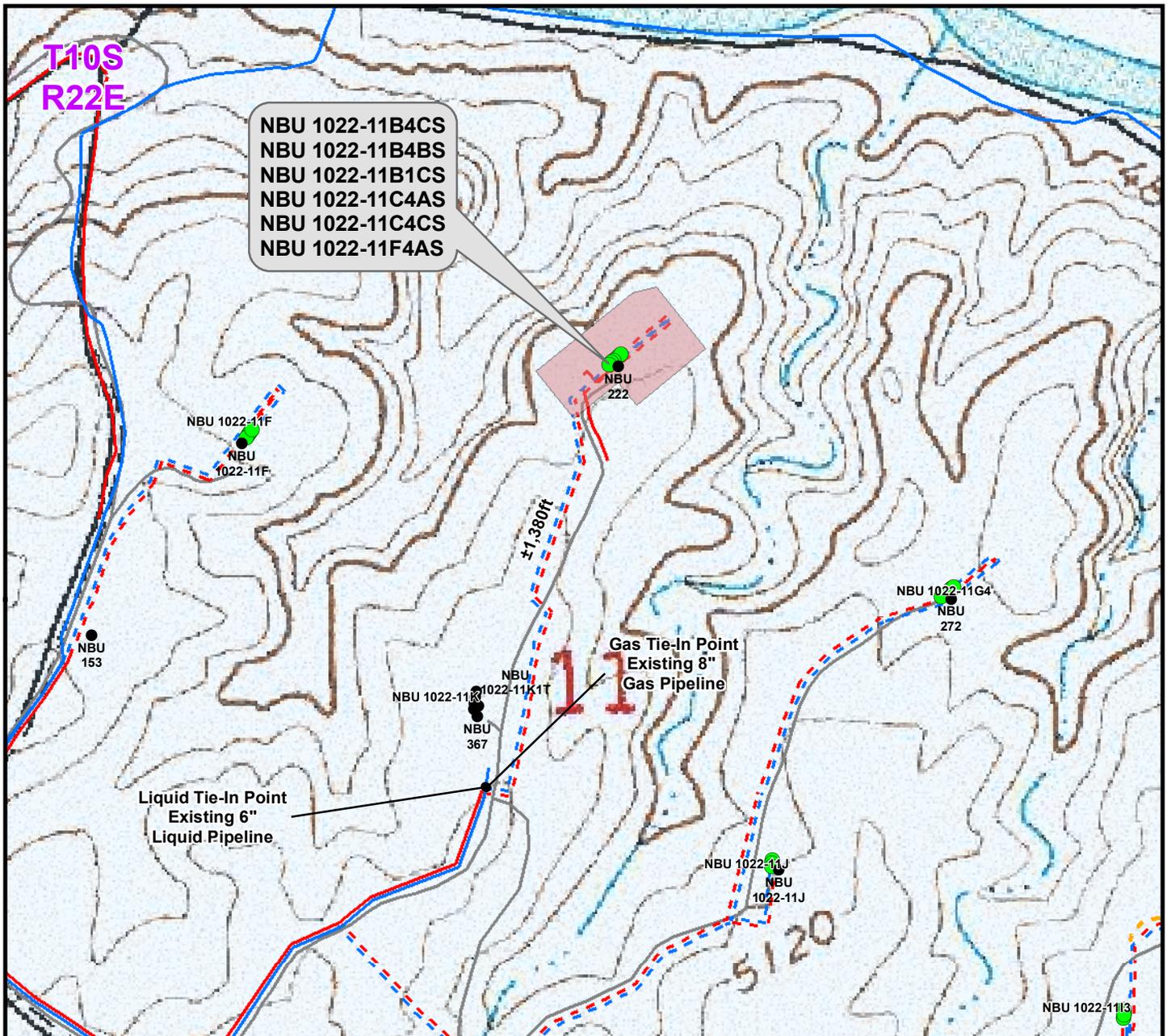
TOPO D
NBU 1022-11B4CS, NBU 1022-11B4BS,
NBU 1022-11B1CS, NBU 1022-11C4AS,
NBU 1022-11C4CS & NBU 1022-11F4AS
LOCATED IN SECTION 11, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

609

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



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: 15 15 of 18
Drawn: JFE	Date: 8 Feb 2011	
Revised:	Date:	



Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±575ft	Proposed 6" (Meter House to Edge of Pad)	±575ft
Proposed 6" (Max.) (Edge of Pad to Existing Liquid Pipeline)	±1,380ft	Proposed 6" (Edge of Pad to Existing 8" Gas Pipeline)	±1,380ft
TOTAL PROPOSED LIQUID PIPELINE =	±1,955ft	TOTAL PROPOSED GAS PIPELINE =	±1,955ft

Legend

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

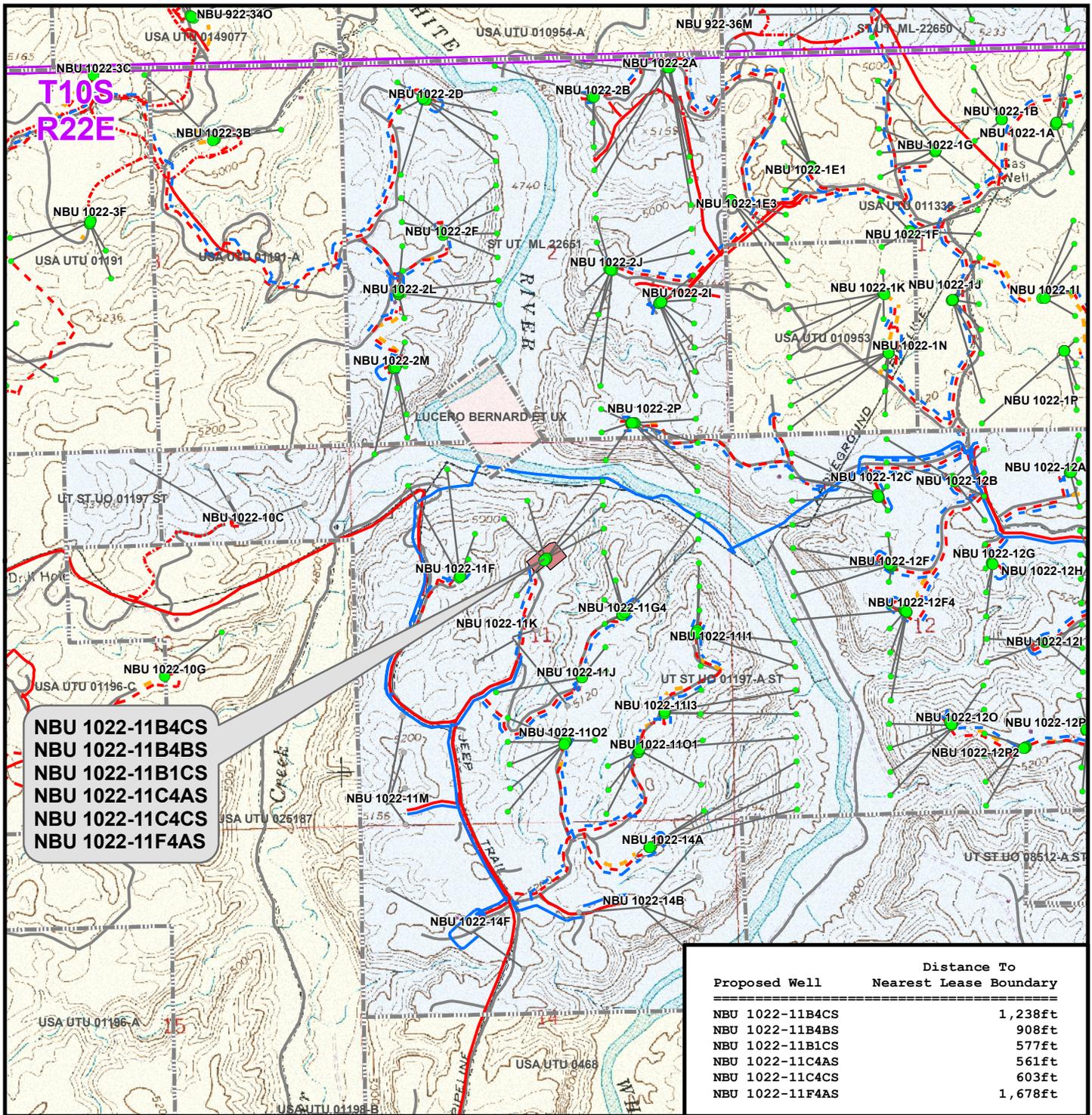
Kerr-McGee Oil & Gas Onshore, LP
 1099 18th Street, Denver, Colorado 80202

WELL PAD - NBU 1022-11G2

TOPO D2 (PAD & PIPELINE DETAIL)
 NBU 1022-11B4CS, NBU 1022-11B4BS,
 NBU 1022-11B1CS, NBU 1022-11C4AS,
 NBU 1022-11C4CS & NBU 1022-11F4AS
 LOCATED IN SECTION 11, 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

Scale: 1" = 500ft	NAD83 USP Central	Sheet No:
Drawn: JFE	Date: 8 Feb 2011	16 16 of 18
Revised:	Date:	



NBU 1022-11B4CS
NBU 1022-11B4BS
NBU 1022-11B1CS
NBU 1022-11C4AS
NBU 1022-11C4CS
NBU 1022-11F4AS

Proposed Well	Distance To Nearest Lease Boundary
NBU 1022-11B4CS	1,238ft
NBU 1022-11B4BS	908ft
NBU 1022-11B1CS	577ft
NBU 1022-11C4AS	561ft
NBU 1022-11C4CS	603ft
NBU 1022-11F4AS	1,678ft

Legend

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

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

WELL PAD - NBU 1022-11G2

TOPO E
 NBU 1022-11B4CS, NBU 1022-11B4BS,
 NBU 1022-11B1CS, NBU 1022-11C4AS,
 NBU 1022-11C4CS & NBU 1022-11F4AS
 LOCATED IN SECTION 11, T10S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH

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CONSULTING, LLC
 2155 North Main Street
 Sheridan, WY 82801
 Phone (307) 674-0609
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Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 8 Feb 2011	17
Revised:	Date:	

**Kerr-McGee Oil & Gas Onshore, LP
WELL PAD - NBU 1022-11G2
WELLS – NBU 1022-11B4CS, NBU 1022-11B4BS,
NBU 1022-11B1CS, NBU 1022-11C4AS,
NBU 1022-11C4CS & NBU 1022-11F4AS
Section 11, 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 8.2 miles to the junction of the Bitter Creek Cut Off Road (County B Road 4140). Exit left and proceed in an easterly direction along the Bitter Creek Cut Off Road approximately 1.5 miles to the junction of the Archy Bench Road (County D Road 4150). Exit left and proceed in a northerly direction along the Archy Bench Road, then an existing Class D County Road, approximately 3.4 miles to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 60.4 miles in a southerly direction.



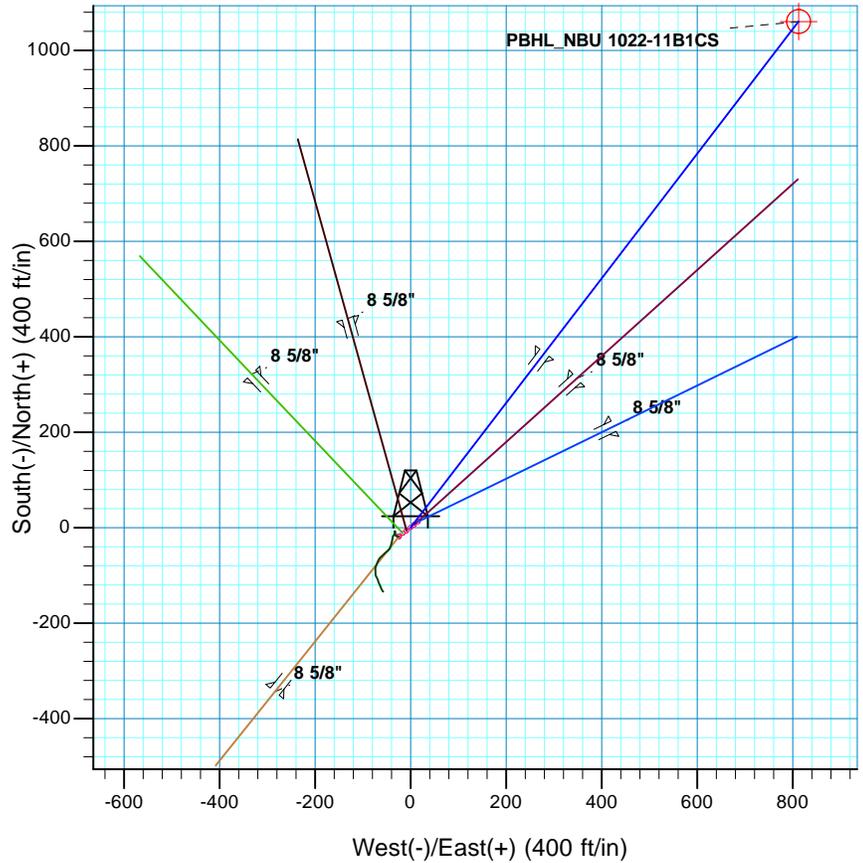
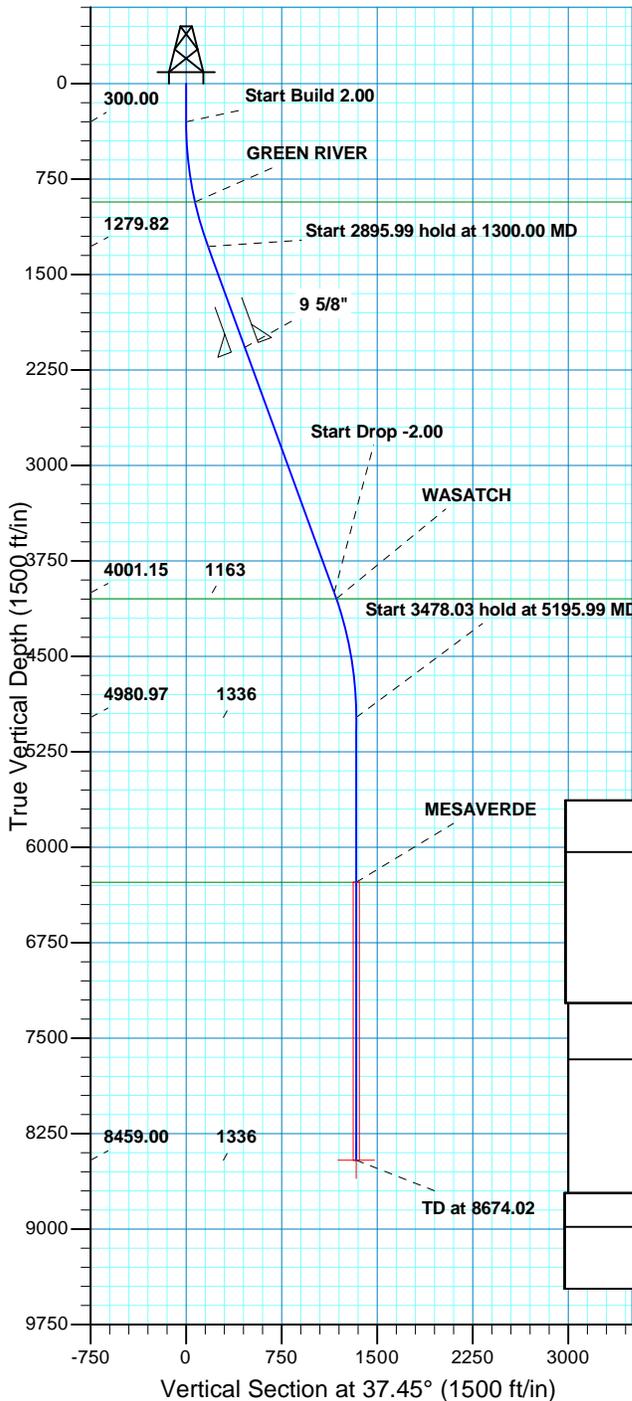
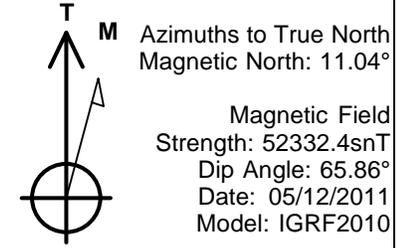
WELL DETAILS: NBU 1022-11B1CS

GL 5031 & KB 14 @ 5045.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14517739.40	2086962.07	39° 57' 58.450 N	109° 24' 22.853 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8459.00	1060.61	812.44	14518814.35	2087755.43	39° 58' 8.933 N	109° 24' 12.416 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	37.45	1279.82	137.15	105.06	2.00	37.45	172.77	
4195.99	20.00	37.45	4001.15	923.46	707.38	0.00	0.00	1163.25	
5195.99	0.00	0.00	4980.97	1060.61	812.44	2.00	180.00	1336.02	
8674.02	0.00	0.00	8459.00	1060.61	812.44	0.00	0.00	1336.02	PBHL_NBU 1022-11B1CS

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			930.00	935.19	GREEN RIVER
Ellipsoid: Clarke 1866			4047.00	4244.63	WASATCH
Zone: Zone 12N (114 W to 108 W)			6275.00	6490.02	MESAVERDE
Location: SECTION 11 T10S R22E					
System Datum: Mean Sea Level					

CASING DETAILS			
TVD	MD	Name	Size
2073.00	2144.09	9 5/8"	9.625

RECEIVED



Kerr McGee Oil and Gas Onshore LP

**Uintah County, UT UTM12
NBU 1022-11G2 PAD
NBU 1022-11B1CS**

OH

Plan: PLAN #1 5-12-11 RHS

Standard Planning Report

12 May, 2011





SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-11B1CS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 5031 & KB 14 @ 5045.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 5031 & KB 14 @ 5045.00ft (ASSUMED)
Site:	NBU 1022-11G2 PAD	North Reference:	True
Well:	NBU 1022-11B1CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 5-12-11 RHS		

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 1022-11G2 PAD, SECTION 11 T10S R22E				
Site Position:	Northing:	14,517,745.73 usft	Latitude:	39° 57' 58.511 N	
From: Lat/Long	Easting:	2,086,969.80 usft	Longitude:	109° 24' 22.752 W	
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	1.02 °

Well	NBU 1022-11B1CS, 1639 FNL 2609 FEL					
Well Position	+N/-S	-6.19 ft	Northing:	14,517,739.40 usft	Latitude:	39° 57' 58.450 N
	+E/-W	-7.85 ft	Easting:	2,086,962.07 usft	Longitude:	109° 24' 22.853 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,031.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	05/12/2011	11.04	65.86	52,332

Design	PLAN #1 5-12-11 RHS			
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	37.45

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	37.45	1,279.82	137.15	105.06	2.00	2.00	0.00	37.45	
4,195.99	20.00	37.45	4,001.15	923.46	707.38	0.00	0.00	0.00	0.00	
5,195.99	0.00	0.00	4,980.97	1,060.61	812.44	2.00	-2.00	0.00	180.00	
8,674.02	0.00	0.00	8,459.00	1,060.61	812.44	0.00	0.00	0.00	0.00	PBHL_NBU 1022-11E



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-11B1CS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 5031 & KB 14 @ 5045.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 5031 & KB 14 @ 5045.00ft (ASSUMED)
Site:	NBU 1022-11G2 PAD	North Reference:	True
Well:	NBU 1022-11B1CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 5-12-11 RHS		

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	37.45	399.98	1.39	1.06	1.75	2.00	2.00	2.00	0.00
500.00	4.00	37.45	499.84	5.54	4.24	6.98	2.00	2.00	2.00	0.00
600.00	6.00	37.45	599.45	12.46	9.54	15.69	2.00	2.00	2.00	0.00
700.00	8.00	37.45	698.70	22.13	16.95	27.88	2.00	2.00	2.00	0.00
800.00	10.00	37.45	797.47	34.55	26.47	43.52	2.00	2.00	2.00	0.00
900.00	12.00	37.45	895.62	49.70	38.07	62.60	2.00	2.00	2.00	0.00
935.19	12.70	37.45	930.00	55.67	42.65	70.13	2.00	2.00	2.00	0.00
GREEN RIVER										
1,000.00	14.00	37.45	993.06	67.55	51.75	85.10	2.00	2.00	2.00	0.00
1,100.00	16.00	37.45	1,089.64	88.10	67.49	110.98	2.00	2.00	2.00	0.00
1,200.00	18.00	37.45	1,185.27	111.31	85.26	140.21	2.00	2.00	2.00	0.00
1,300.00	20.00	37.45	1,279.82	137.15	105.06	172.77	2.00	2.00	2.00	0.00
Start 2895.99 hold at 1300.00 MD										
1,400.00	20.00	37.45	1,373.78	164.30	125.86	206.97	0.00	0.00	0.00	0.00
1,500.00	20.00	37.45	1,467.75	191.46	146.66	241.17	0.00	0.00	0.00	0.00
1,600.00	20.00	37.45	1,561.72	218.61	167.46	275.37	0.00	0.00	0.00	0.00
1,700.00	20.00	37.45	1,655.69	245.76	188.25	309.58	0.00	0.00	0.00	0.00
1,800.00	20.00	37.45	1,749.66	272.91	209.05	343.78	0.00	0.00	0.00	0.00
1,900.00	20.00	37.45	1,843.63	300.06	229.85	377.98	0.00	0.00	0.00	0.00
2,000.00	20.00	37.45	1,937.60	327.21	250.65	412.18	0.00	0.00	0.00	0.00
2,100.00	20.00	37.45	2,031.57	354.36	271.45	446.38	0.00	0.00	0.00	0.00
2,144.09	20.00	37.45	2,073.00	366.34	280.62	461.46	0.00	0.00	0.00	0.00
9 5/8"										
2,200.00	20.00	37.45	2,125.54	381.52	292.25	480.59	0.00	0.00	0.00	0.00
2,300.00	20.00	37.45	2,219.51	408.67	313.05	514.79	0.00	0.00	0.00	0.00
2,400.00	20.00	37.45	2,313.48	435.82	333.84	548.99	0.00	0.00	0.00	0.00
2,500.00	20.00	37.45	2,407.45	462.97	354.64	583.19	0.00	0.00	0.00	0.00
2,600.00	20.00	37.45	2,501.42	490.12	375.44	617.39	0.00	0.00	0.00	0.00
2,700.00	20.00	37.45	2,595.39	517.27	396.24	651.60	0.00	0.00	0.00	0.00
2,800.00	20.00	37.45	2,689.35	544.43	417.04	685.80	0.00	0.00	0.00	0.00
2,900.00	20.00	37.45	2,783.32	571.58	437.84	720.00	0.00	0.00	0.00	0.00
3,000.00	20.00	37.45	2,877.29	598.73	458.63	754.20	0.00	0.00	0.00	0.00
3,100.00	20.00	37.45	2,971.26	625.88	479.43	788.40	0.00	0.00	0.00	0.00
3,200.00	20.00	37.45	3,065.23	653.03	500.23	822.61	0.00	0.00	0.00	0.00
3,300.00	20.00	37.45	3,159.20	680.18	521.03	856.81	0.00	0.00	0.00	0.00
3,400.00	20.00	37.45	3,253.17	707.33	541.83	891.01	0.00	0.00	0.00	0.00
3,500.00	20.00	37.45	3,347.14	734.49	562.63	925.21	0.00	0.00	0.00	0.00
3,600.00	20.00	37.45	3,441.11	761.64	583.43	959.41	0.00	0.00	0.00	0.00
3,700.00	20.00	37.45	3,535.08	788.79	604.22	993.62	0.00	0.00	0.00	0.00
3,800.00	20.00	37.45	3,629.05	815.94	625.02	1,027.82	0.00	0.00	0.00	0.00
3,900.00	20.00	37.45	3,723.02	843.09	645.82	1,062.02	0.00	0.00	0.00	0.00
4,000.00	20.00	37.45	3,816.99	870.24	666.62	1,096.22	0.00	0.00	0.00	0.00
4,100.00	20.00	37.45	3,910.95	897.39	687.42	1,130.42	0.00	0.00	0.00	0.00
4,195.99	20.00	37.45	4,001.15	923.46	707.38	1,163.25	0.00	0.00	0.00	0.00
Start Drop -2.00										
4,200.00	19.92	37.45	4,004.93	924.54	708.21	1,164.62	2.00	-2.00	0.00	0.00
4,244.63	19.03	37.45	4,047.00	936.35	717.26	1,179.50	2.00	-2.00	0.00	0.00
WASATCH										



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-11B1CS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 5031 & KB 14 @ 5045.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 5031 & KB 14 @ 5045.00ft (ASSUMED)
Site:	NBU 1022-11G2 PAD	North Reference:	True
Well:	NBU 1022-11B1CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 5-12-11 RHS		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,300.00	17.92	37.45	4,099.52	950.28	727.93	1,197.05	2.00	-2.00	0.00
4,400.00	15.92	37.45	4,195.18	973.39	745.63	1,226.15	2.00	-2.00	0.00
4,500.00	13.92	37.45	4,291.81	993.82	761.28	1,251.89	2.00	-2.00	0.00
4,600.00	11.92	37.45	4,389.27	1,011.57	774.88	1,274.25	2.00	-2.00	0.00
4,700.00	9.92	37.45	4,487.46	1,026.61	786.40	1,293.19	2.00	-2.00	0.00
4,800.00	7.92	37.45	4,586.24	1,038.92	795.83	1,308.70	2.00	-2.00	0.00
4,900.00	5.92	37.45	4,685.51	1,048.48	803.15	1,320.74	2.00	-2.00	0.00
5,000.00	3.92	37.45	4,785.13	1,055.29	808.37	1,329.32	2.00	-2.00	0.00
5,100.00	1.92	37.45	4,885.00	1,059.33	811.46	1,334.41	2.00	-2.00	0.00
5,195.99	0.00	0.00	4,980.97	1,060.61	812.44	1,336.02	2.00	-2.00	0.00
Start 3478.03 hold at 5195.99 MD									
5,200.00	0.00	0.00	4,984.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
5,300.00	0.00	0.00	5,084.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
5,400.00	0.00	0.00	5,184.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
5,500.00	0.00	0.00	5,284.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
5,600.00	0.00	0.00	5,384.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
5,700.00	0.00	0.00	5,484.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
5,800.00	0.00	0.00	5,584.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
5,900.00	0.00	0.00	5,684.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
6,000.00	0.00	0.00	5,784.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
6,100.00	0.00	0.00	5,884.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
6,200.00	0.00	0.00	5,984.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
6,300.00	0.00	0.00	6,084.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
6,400.00	0.00	0.00	6,184.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
6,490.02	0.00	0.00	6,275.00	1,060.61	812.44	1,336.02	0.00	0.00	0.00
MESAVERDE									
6,500.00	0.00	0.00	6,284.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
6,600.00	0.00	0.00	6,384.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
6,700.00	0.00	0.00	6,484.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
6,800.00	0.00	0.00	6,584.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
6,900.00	0.00	0.00	6,684.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
7,000.00	0.00	0.00	6,784.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
7,100.00	0.00	0.00	6,884.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
7,200.00	0.00	0.00	6,984.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
7,300.00	0.00	0.00	7,084.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
7,400.00	0.00	0.00	7,184.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
7,500.00	0.00	0.00	7,284.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
7,600.00	0.00	0.00	7,384.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
7,700.00	0.00	0.00	7,484.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
7,800.00	0.00	0.00	7,584.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
7,900.00	0.00	0.00	7,684.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
8,000.00	0.00	0.00	7,784.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
8,100.00	0.00	0.00	7,884.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
8,200.00	0.00	0.00	7,984.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
8,300.00	0.00	0.00	8,084.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
8,400.00	0.00	0.00	8,184.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
8,500.00	0.00	0.00	8,284.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
8,600.00	0.00	0.00	8,384.98	1,060.61	812.44	1,336.02	0.00	0.00	0.00
8,674.02	0.00	0.00	8,459.00	1,060.61	812.44	1,336.02	0.00	0.00	0.00
PBHL_NBU 1022-11B1CS									



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-11B1CS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 5031 & KB 14 @ 5045.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 5031 & KB 14 @ 5045.00ft (ASSUMED)
Site:	NBU 1022-11G2 PAD	North Reference:	True
Well:	NBU 1022-11B1CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 5-12-11 RHS		

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 1022-11B1C - hit/miss target - Shape - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,459.00	1,060.61	812.44	14,518,814.36	2,087,755.43	39° 58' 8.933 N	109° 24' 12.416 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,144.09	2,073.00	9 5/8"	9.625	12.250	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
935.19	721.00	GREEN RIVER			
4,244.63	3,838.00	WASATCH			
6,490.02	6,066.00	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	137.15	105.06	Start 2895.99 hold at 1300.00 MD	
4,195.99	4,001.15	923.46	707.38	Start Drop -2.00	
5,195.99	4,980.97	1,060.61	812.44	Start 3478.03 hold at 5195.99 MD	
8,674.02	8,459.00	1,060.61	812.44	TD at 8674.02	

NBU 1022-11B1CS			
Surface:	1639 FNL / 2609 FEL	SWNE	Lot
BHL:	577 FNL / 1805 FEL	NWNE	Lot
NBU 1022-11B4BS			
Surface:	1633 FNL / 2601 FEL	SWNE	Lot
BHL:	908 FNL / 1804 FEL	NWNE	Lot
NBU 1022-11B4CS			
Surface:	1627 FNL / 2594 FEL	SWNE	Lot
BHL:	1238 FNL / 1803 FEL	NWNE	Lot
NBU 1022-11C4AS			
Surface:	1645 FNL / 2617 FEL	SWNE	Lot
BHL:	825 FNL / 2462 FWL	NENW	Lot 1
NBU 1022-11C4CS			
Surface:	1651 FNL / 2625 FEL	SWNE	Lot
BHL:	1071 FNL / 2131 FWL	NENW	Lot 1
NBU 1022-11F4AS			
Surface:	1657 FNL / 2633 FEL	SWNE	Lot
BHL:	2138 FNL / 2288 FWL	SENE	Lot

Pad: 1022-11G2 PAD
Section 11 T10S R22E
Mineral Lease: UO1197A-ST

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:

No new access road is proposed.

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 222. The NBU 222 well location is a vertical producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of August 5, 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 $\pm 1,955'$ and the individual segments are broken up as follows:

$\pm 575'$ (0.11 miles) –New 6" buried gas pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

$\pm 1,380'$ (0.26 miles) –New 6" buried gas pipeline from the edge of pad to the tie-in at the existing 8" 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 $\pm 1,955'$ and the individual segments are broken up as follows:

$\pm 575'$ (0.11 miles) –New 6" (max) buried liquid pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

$\pm 1,380'$ (0.26 miles) –New 6" (max) buried liquid pipeline from the edge of pad to the tie-in at the existing 6" liquid pipeline. 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

August 5, 2011

Date



JOSEPH D. JOHNSON
LANDMAN

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

August 5, 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 1022-11B1CS
T10S-R22E
Section 11: SWNE
Surface: 1639' FNL, 2609' FEL
T10S-R22E
Section 11: NWNE
Bottom Hole: 577.0' FNL, 1805.0' FEL
Uintah County, Utah

Dear Ms. Mason:

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

- Kerr-McGee's NBU 1022-11B1CS 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

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 19, 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 1022-11F PAD

43-047-51797	NBU 1022-11C2CS	Sec 11 T10S R22E 1860 FNL 1499 FWL
	BHL	Sec 11 T10S R22E 0370 FNL 1365 FWL

43-047-51799	NBU 1022-11C3DS	Sec 11 T10S R22E 1852 FNL 1505 FWL
	BHL	Sec 11 T10S R22E 1268 FNL 1726 FWL

43-047-51800	NBU 1022-11D1CS	Sec 11 T10S R22E 1868 FNL 1493 FWL
	BHL	Sec 11 T10S R22E 0576 FNL 0818 FWL

43-047-51801	NBU 1022-11F2DS	Sec 11 T10S R22E 1844 FNL 1512 FWL
	BHL	Sec 11 T10S R22E 1622 FNL 1625 FWL

NBU 1022-11G2 PAD

43-047-51802	NBU 1022-11B4CS	Sec 11 T10S R22E 1627 FNL 2594 FEL
	BHL	Sec 11 T10S R22E 1238 FNL 1803 FEL

43-047-51813	NBU 1022-11B4BS	Sec 11 T10S R22E 1633 FNL 2601 FEL
	BHL	Sec 11 T10S R22E 0908 FNL 1804 FEL

43-047-51815	NBU 1022-11B1CS	Sec 11 T10S R22E 1639 FNL 2609 FEL
	BHL	Sec 11 T10S R22E 0577 FNL 1805 FEL

43-047-51817	NBU 1022-C4AS	Sec 11 T10S R22E 1645 FNL 2617 FEL
	BHL	Sec 11 T10S R22E 0825 FNL 2462 FWL

43-047-51818	NBU 1022-11C4CS	Sec 11 T10S R22E 1651 FNL 2625 FEL
	BHL	Sec 11 T10S R22E 1071 FNL 2131 FWL

RECEIVED: August 22, 2011

API #	WELL NAME	LOCATION						
(Proposed PZ WASATCH-MESA VERDE)								
43-047-51855	NBU 1022-11F4AS	Sec 11	T10S	R22E	1657	FNL	2633	FEL
	BHL	Sec 11	T10S	R22E	2138	FNL	2288	FWL
NBU 1022-2A PAD								
43-047-51803	NBU 1022-2G1CS	Sec 02	T10S	R22E	0165	FNL	0760	FEL
	BHL	Sec 02	T10S	R22E	1905	FNL	1814	FEL
43-047-51807	NBU 1022-2G1BS	Sec 02	T10S	R22E	0164	FNL	0770	FEL
	BHL	Sec 02	T10S	R22E	1573	FNL	1815	FEL
43-047-51808	NBU 1022-2H1BS	Sec 02	T10S	R22E	0167	FNL	0730	FEL
	BHL	Sec 02	T10S	R22E	1410	FNL	0494	FEL
43-047-51812	NBU 1022-2H1CS	Sec 02	T10S	R22E	0166	FNL	0740	FEL
	BHL	Sec 02	T10S	R22E	1743	FNL	0494	FEL
43-047-51825	NBU 1022-2H4BS	Sec 02	T10S	R22E	0165	FNL	0750	FEL
	BHL	Sec 02	T10S	R22E	2074	FNL	0493	FEL
NBU 1022-11G4 PAD								
43-047-51805	NBU 1022-11A4CS	Sec 11	T10S	R22E	2411	FNL	1535	FEL
	BHL	Sec 11	T10S	R22E	1075	FNL	0490	FEL
43-047-51814	NBU 1022-11H1BS	Sec 11	T10S	R22E	2405	FNL	1526	FEL
	BHL	Sec 11	T10S	R22E	1406	FNL	0490	FEL
43-047-51822	NBU 1022-11G4CS	Sec 11	T10S	R22E	2435	FNL	1566	FEL
	BHL	Sec 11	T10S	R22E	2559	FNL	1799	FEL
43-047-51823	NBU 1022-11G1BS	Sec 11	T10S	R22E	2423	FNL	1550	FEL
	BHL	Sec 11	T10S	R22E	1568	FNL	1802	FEL
43-047-51837	NBU 1022-11G1CS	Sec 11	T10S	R22E	2417	FNL	1542	FEL
	BHL	Sec 11	T10S	R22E	1954	FNL	1646	FEL
43-047-51853	NBU 1022-11G4BS	Sec 11	T10S	R22E	2429	FNL	1558	FEL
	BHL	Sec 11	T10S	R22E	2229	FNL	1800	FEL
NBU 1022-2I PAD								
43-047-51809	NBU 1022-2I4CS	Sec 02	T10S	R22E	1886	FSL	0949	FEL
	BHL	Sec 02	T10S	R22E	1576	FSL	0492	FEL
43-047-51810	NBU 1022-2P1BS	Sec 02	T10S	R22E	1881	FSL	0957	FEL
	BHL	Sec 02	T10S	R22E	1245	FSL	0492	FEL
43-047-51824	NBU 1022-2I1CS	Sec 02	T10S	R22E	1895	FSL	0931	FEL
	BHL	Sec 02	T10S	R22E	2240	FSL	0493	FEL
43-047-51829	NBU 1022-2I4BS	Sec 02	T10S	R22E	1890	FSL	0940	FEL
	BHL	Sec 02	T10S	R22E	1909	FSL	0492	FEL
43-047-51838	NBU 1022-2P4BS	Sec 02	T10S	R22E	1872	FSL	0975	FEL
	BHL	Sec 02	T10S	R22E	0581	FSL	0492	FEL
43-047-51852	NBU 1022-2P1CS	Sec 02	T10S	R22E	1877	FSL	0966	FEL
	BHL	Sec 02	T10S	R22E	0913	FSL	0492	FEL
NBU 1022-2B PAD								
43-047-51811	NBU 1022-2B1CS	Sec 02	T10S	R22E	0544	FNL	1813	FEL
	BHL	Sec 02	T10S	R22E	0579	FNL	1818	FEL

API #	WELL NAME	LOCATION						
(Proposed PZ WASATCH-MESA VERDE)								
43-047-51827	NBU 1022-2B4CS	Sec 02	T10S	R22E	0543	FNL	1793	FEL
		BHL Sec 02	T10S	R22E	1242	FNL	1816	FEL
43-047-51828	NBU 1022-2B4BS	Sec 02	T10S	R22E	0543	FNL	1803	FEL
		BHL Sec 02	T10S	R22E	0910	FNL	1817	FEL
43-047-51830	NBU 1022-2C1BS	Sec 02	T10S	R22E	0544	FNL	1823	FEL
		BHL Sec 02	T10S	R22E	0090	FNL	2158	FWL
NBU 1022-11J PAD								
43-047-51816	NBU 1022-11K4BS	Sec 11	T10S	R22E	1980	FSL	2131	FEL
		BHL Sec 11	T10S	R22E	1804	FSL	1963	FWL
43-047-51843	NBU 1022-11J1CS	Sec 11	T10S	R22E	1990	FSL	2130	FEL
		BHL Sec 11	T10S	R22E	2065	FSL	1797	FEL
43-047-51851	NBU 1022-11J1BS	Sec 11	T10S	R22E	2000	FSL	2129	FEL
		BHL Sec 11	T10S	R22E	2395	FSL	1798	FEL
NBU 1022-2J PAD								
43-047-51819	NBU 1022-2G4CS	Sec 02	T10S	R22E	2375	FSL	1639	FEL
		BHL Sec 02	T10S	R22E	2568	FNL	1813	FEL
43-047-51820	NBU 1022-2H4CS	Sec 02	T10S	R22E	2351	FSL	1584	FEL
		BHL Sec 02	T10S	R22E	2406	FNL	0493	FEL
43-047-51844	NBU 1022-2J4BS	Sec 02	T10S	R22E	2367	FSL	1621	FEL
		BHL Sec 02	T10S	R22E	1741	FSL	1811	FEL
43-047-51845	NBU 1022-2O1CS	Sec 02	T10S	R22E	2343	FSL	1566	FEL
		BHL Sec 02	T10S	R22E	0747	FSL	1808	FEL
43-047-51847	NBU 1022-2I1BS	Sec 02	T10S	R22E	2347	FSL	1575	FEL
		BHL Sec 02	T10S	R22E	2572	FSL	0493	FEL
43-047-51854	NBU 1022-2G4BS	Sec 02	T10S	R22E	2359	FSL	1602	FEL
		BHL Sec 02	T10S	R22E	2237	FNL	1814	FEL
NBU 1022-O1 PAD								
43-047-51821	NBU 1022-11O1CS	Sec 11	T10S	R22E	0944	FSL	1360	FEL
		BHL Sec 11	T10S	R22E	0744	FSL	1793	FEL
43-047-51831	NBU 1022-11O4CS	Sec 11	T10S	R22E	0925	FSL	1366	FEL
		BHL Sec 11	T10S	R22E	0079	FSL	1824	FEL
43-047-51832	NBU 1022-11P1BS	Sec 11	T10S	R22E	0973	FSL	1351	FEL
		BHL Sec 11	T10S	R22E	1068	FSL	0474	FEL
43-047-51833	NBU 1022-11P4BS	Sec 11	T10S	R22E	0954	FSL	1357	FEL
		BHL Sec 11	T10S	R22E	0456	FSL	0504	FEL
43-047-51836	NBU 1022-12M1BS	Sec 11	T10S	R22E	0963	FSL	1354	FEL
		BHL Sec 12	T10S	R22E	1077	FSL	0824	FWL
43-047-51856	NBU 1022-11O4BS	Sec 11	T10S	R22E	0935	FSL	1363	FEL
		BHL Sec 11	T10S	R22E	0413	FSL	1792	FEL

API #	WELL NAME	LOCATION									
(Proposed PZ WASATCH-MESA VERDE)											
NBU 1022-11I1 PAD											
43-047-51834	NBU 1022-11I1CS	Sec 11	T10S	R22E	2545	FSL	0532	FEL			
	BHL	Sec 11	T10S	R22E	2112	FSL	0481	FEL			
43-047-51835	NBU 1022-12L1CS	Sec 11	T10S	R22E	2554	FSL	0528	FEL			
	BHL	Sec 12	T10S	R22E	2070	0FSL	823	FWL			
43-047-51857	NBU 1022-11H4BS	Sec 11	T10S	R22E	2582	FSL	0518	FEL			
	BHL	Sec 11	T10S	R22E	2067	FNL	0489	FEL			
43-047-51858	NBU 1022-11H4CS	Sec 11	T10S	R22E	2592	FSL	0514	FEL			
	BHL	Sec 11	T10S	R22E	2398	FNL	0489	FEL			
43-047-51861	NBU 1022-12L1BS	Sec 11	T10S	R22E	2564	FSL	0525	FEL			
	BHL	Sec 12	T10S	R22E	2401	FSL	0822	FWL			
43-047-51863	NBU 1022-11H1CS	Sec 11	T10S	R22E	2573	FSL	0521	FEL			
	BHL	Sec 11	T10S	R22E	1737	FNL	0490	FEL			
NBU 1022-2P PAD											
43-047-51839	NBU 1022-2P4CS	Sec 02	T10S	R22E	0221	FSL	1342	FEL			
	BHL	Sec 02	T10S	R22E	0255	FSL	0496	FEL			
43-047-51841	NBU 1022-11B1BS	Sec 02	T10S	R22E	0221	FSL	1382	FEL			
	BHL	Sec 11	T10S	R22E	0280	FNL	1755	FEL			
43-047-51842	NBU 1022-11A1BS	Sec 02	T10S	R22E	0221	FSL	1352	FEL			
	BHL	Sec 11	T10S	R22E	0080	FNL	0473	FEL			
43-047-51846	NBU 1022-2O4CS	Sec 02	T10S	R22E	0220	FSL	1402	FEL			
	BHL	Sec 02	T10S	R22E	0095	FSL	1804	FEL			
43-047-51848	NBU 1022-11A4BS	Sec 02	T10S	R22E	0221	FSL	1372	FEL			
	BHL	Sec 11	T10S	R22E	0744	FNL	0490	FEL			
43-047-51849	NBU 1022-2O4BS	Sec 02	T10S	R22E	0221	FSL	1392	FEL			
	BHL	Sec 02	T10S	R22E	0415	FSL	1807	FEL			
43-047-51850	NBU 1022-11A1CS	Sec 02	T10S	R22E	0221	FSL	1362	FEL			
	BHL	Sec 11	T10S	R22E	0413	FNL	0491	FEL			
NBU 1022-14A PAD											
43-047-51840	NBU 1022-11P4CS	Sec 14	T10S	R22E	0379	FNL	1228	FEL			
	BHL	Sec 11	T10S	R22E	0088	FSL	0466	FEL			
43-047-51860	NBU 1022-12M1CS	Sec 14	T10S	R22E	0385	FNL	1236	FEL			
	BHL	Sec 12	T10S	R22E	0746	FSL	0825	FWL			
43-047-51868	NBU 1022-12M4BS	Sec 14	T10S	R22E	0391	FNL	1244	FEL			
	BHL	Sec 12	T10S	R22E	0415	FSL	0825	FWL			
43-047-51870	NBU 1022-12M4CS	Sec 14	T10S	R22E	0397	FNL	1252	FEL			
	BHL	Sec 12	T10S	R22E	0086	FSL	0819	FWL			
NBU 1022-11O2 PAD											
43-047-51859	NBU 1022-11K4CS	Sec 11	T10S	R22E	1103	FSL	2372	FEL			
	BHL	Sec 11	T10S	R22E	1442	FSL	2113	FWL			

API #	WELL NAME	LOCATION					
(Proposed PZ WASATCH-MESA VERDE)							
43-047-51862	NBU 1022-11N1BS	Sec 11	T10S	R22E	1094	FSL 2377	FEL
		BHL Sec 11	T10S	R22E	1111	FSL 2105	FWL
43-047-51864	NBU 1022-11N1CS	Sec 11	T10S	R22E	1085	FSL 2382	FEL
		BHL Sec 11	T10S	R22E	0801	FSL 2127	FWL
43-047-51865	NBU 1022-11N4BS	Sec 11	T10S	R22E	1077	FSL 2387	FEL
		BHL Sec 11	T10S	R22E	0462	FSL 2127	FWL
43-047-51867	NBU 1022-11N4CS	Sec 11	T10S	R22E	1068	FSL 2392	FEL
		BHL Sec 11	T10S	R22E	0146	FSL 2084	FWL
43-047-51869	NBU 1022-11O2AS	Sec 11	T10S	R22E	1111	FSL 2367	FEL
		BHL Sec 11	T10S	R22E	1102	FSL 1964	FEL
NBU 1022-11I3 PAD							
43-047-51866	NBU 1022-11I4BS	Sec 11	T10S	R22E	1489	FSL 0996	FEL
		BHL Sec 11	T10S	R22E	1774	FSL 0485	FEL
43-047-51871	NBU 1022-11I4CS	Sec 11	T10S	R22E	1459	FSL 0997	FEL
		BHL Sec 11	T10S	R22E	1443	FSL 0497	FEL
43-047-51872	NBU 1022-12L4BS	Sec 11	T10S	R22E	1479	FSL 0996	FEL
		BHL Sec 12	T10S	R22E	1739	FSL 0823	FWL
43-047-51873	NBU 1022-12L4CS	Sec 11	T10S	R22E	1469	FSL 0996	FEL
		BHL Sec 12	T10S	R22E	1408	FSL 0824	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: 2011.08.19 08:43:17 -06'00'

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

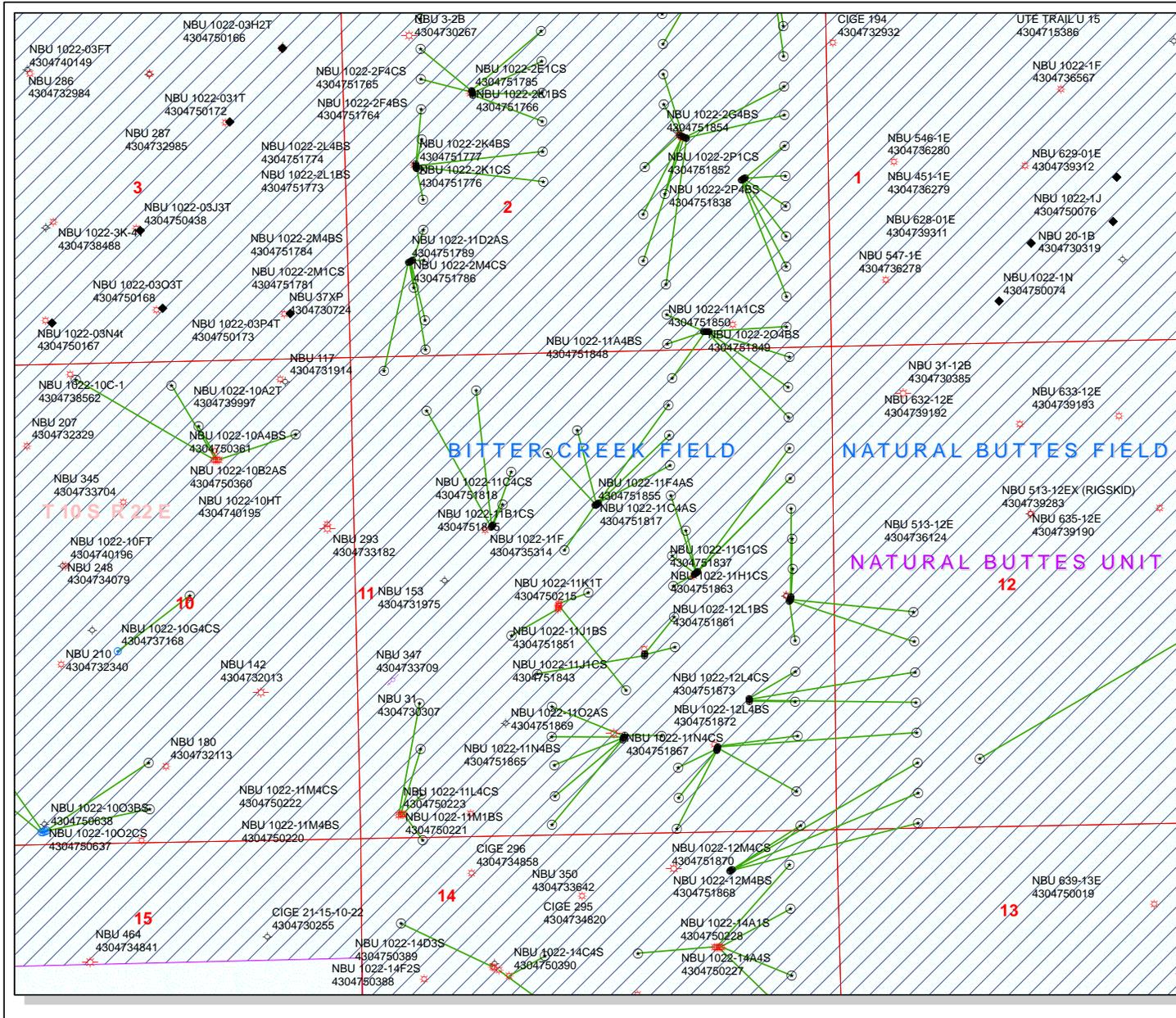
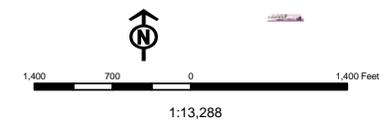
MCoulthard:mc:8-19-11

API Number: 4304751815
Well Name: NBU 1022-11B1CS
 Township T1.0 . Range R2.2 . Section 11
Meridian: SLBM
 Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
 Map Produced by Diana Mason

Units STATUS	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 GEOTHERMAL	PA - Plugged Abandoned
PP OIL	PGW - Producing Gas Well
SECONDARY	POW - Producing Oil Well
TERMINATED	RET - Returned APD
	SGW - Shut-in Gas Well
	SOW - Shut-in Oil Well
	TA - Temp. Abandoned
	TW - Test Well
	WDW - Water Disposal
	WIW - Water Injection Well
	WSW - Water Supply Well

Fields STATUS
Unknown
ABANDONED
ACTIVE
COMBINED
INACTIVE
STORAGE
TERMINATED
Sections
Township



Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 1022-11B1C			
String	SURF	PROD		
Casing Size(")	8.625	4.500		
Setting Depth (TVD)	2003	8459		
Previous Shoe Setting Depth (TVD)	40	2003		
Max Mud Weight (ppg)	8.3	12.5		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	7780		
Operators Max Anticipated Pressure (psi)	5414	12.3		

Calculations	SURF String	8.625	"
Max BHP (psi)	.052*Setting Depth*MW=	864	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	624	NO <input type="checkbox"/> air drill
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	423	YES <input type="checkbox"/> OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	432	NO <input type="checkbox"/> Reasonable depth in area
Required Casing/BOPE Test Pressure=		2003	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=	5498	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4483	YES <input type="checkbox"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3637	YES <input type="checkbox"/> OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	4078	NO <input type="checkbox"/> Reasonable
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2003	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="checkbox"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO <input type="checkbox"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO <input type="checkbox"/>
Required Casing/BOPE Test Pressure=			psi
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient

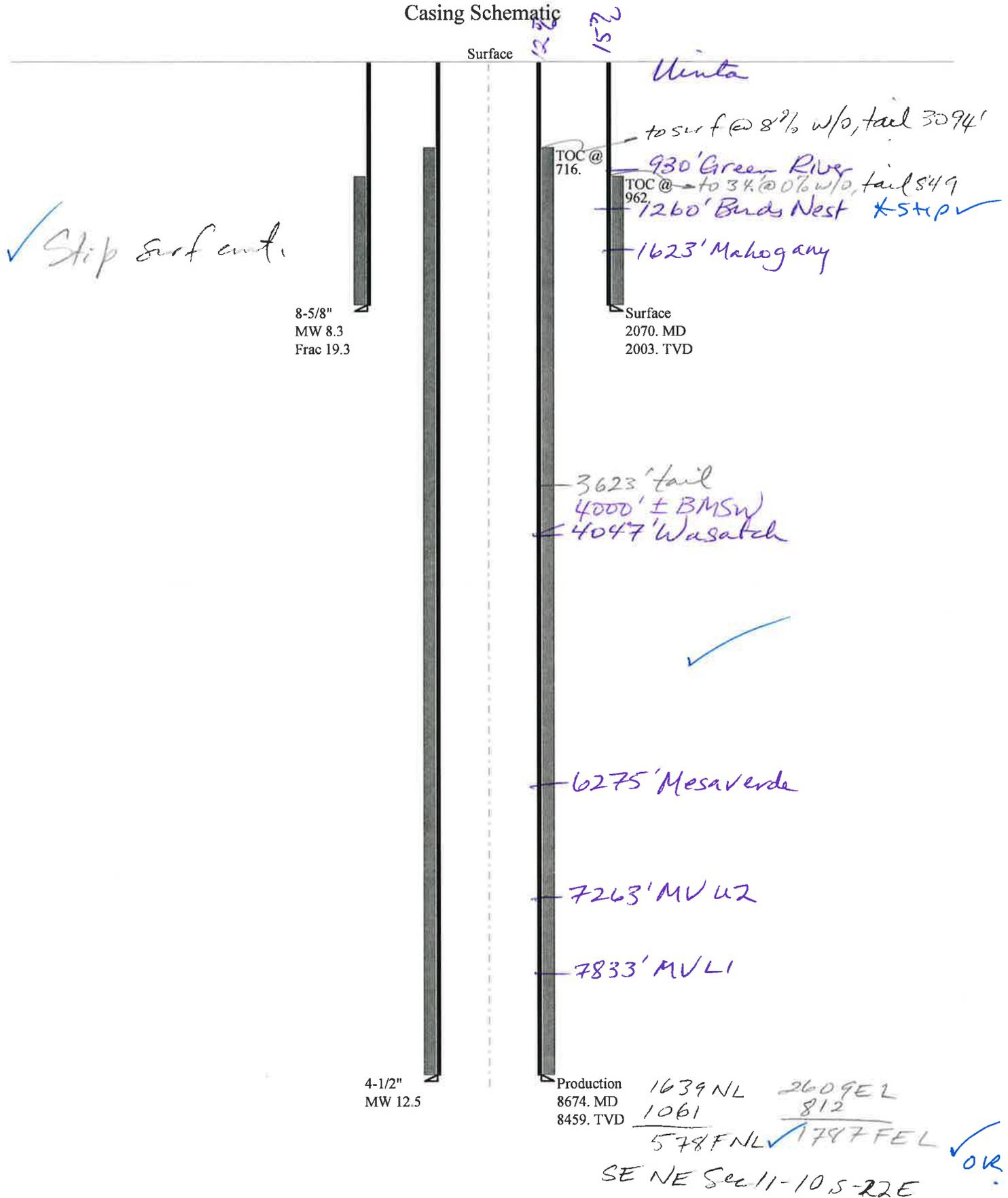
Calculations	String		"
Max BHP (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO <input type="checkbox"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO <input type="checkbox"/>
			*Can Full Expected Pressure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

API Well Number: 43047518150000

*Max Pressure Allowed @ Previous Casing Shoe=	<input type="text"/>	psi *Assumes 1psi/ft frac gradient
---	----------------------	------------------------------------

43047518150000 NBU 1022-11B1CS

Casing Schematic



✓ Step Surf cont.

8-5/8"
MW 8.3
Frac 19.3

4-1/2"
MW 12.5

Production
8674. MD
8459. TVD

1639 NL 2609 EL
 1061 812
 578 FNL ✓ 1787 FEL ✓
 SE NE Sec 11-10 S-22 E ✓ OK

Well name:	43047518150000 NBU 1022-11B1CS	
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.	
String type:	Surface	Project ID: 43-047-51815
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: 102 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 962 ft

Burst

Max anticipated surface pressure: 1,822 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,062 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: 1,808 ft

Directional Info - Build & Drop

Kick-off point 300 ft
Departure at shoe: 436 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 20 °

Re subsequent strings:

Next setting depth: 8,674 ft
Next mud weight: 12.500 ppg
Next setting BHP: 5,632 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,070 ft
Injection pressure: 2,070 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	2070	8.625	28.00	I-55	LT&C	2003	2070	7.892	81972

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	867	1880	2.169	2062	3390	1.64	56.1	348	6.20 J

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

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

Date: August 29, 2011
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2003 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:	43047518150000 NBU 1022-11B1CS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Production	Project ID:	43-047-51815
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: 192 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 100 ft
 Cement top: 716 ft

Burst

Max anticipated surface pressure: 3,632 psi
 Internal gradient: 0.220 psi/ft
 Calculated BHP 5,493 psi

No backup mud specified.

Tension:

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

Directional Info - Build & Drop

Kick-off point 300 ft
 Departure at shoe: 1336 ft
 Maximum dogleg: 2 °/100ft
 Inclination at shoe: 0 °

Tension is based on air weight.
 Neutral point: 7,093 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	8674	4.5	11.60	I-80	LT&C	8459	8674	3.875	114497
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	5493	6360	1.158	5493	7780	1.42	98.1	212	2.16 J

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

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

Date: August 29, 2011
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 8459 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

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

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.
Well Name NBU 1022-11B1CS
API Number 43047518150000 **APD No** 4367 **Field/Unit** NATURAL BUTTES
Location: 1/4,1/4 SWNE **Sec** 11 **Tw** 10.0S **Rng** 22.0E 1639 FNL 2609 FEL
GPS Coord (UTM) 636107 4425017 **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, (DOGMA).

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 60.4 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 222). 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 adequate and will be used. The location runs in a northeast-southwest direction along the top of a flat topped ridge. This ridge breaks off sharply into rugged secondary canyons on the north, west 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 east side 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	Width 292 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 east side of the location. Dimensions are 100' x 260' 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

10/19/2011

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
4367	43047518150000	SITLA	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		Surface Owner-APD		
Well Name	NBU 1022-11B1CS	Unit		NATURAL BUTTES	
Field	NATURAL BUTTES	Type of Work		DRILL	
Location	SWNE 11 10S 22E S 1639 FNL 2609 FEL GPS Coord (UTM) 636036E 4425216N				

Geologic Statement of Basis

Kerr McGee proposes to set 2,070' 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 4,000'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 11. 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

8/30/2011
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 60.4 road miles following Utah State, Uintah County and oilfield development roads. The existing access road will be adequate and will be used.

Six wells will be directionally drilled from this location. They are the NBU 1022-11B4CS, NBU 1022-11B4BS, NBU 1022-11B1CS, NBU 1022-11C4AS, NBU 1022-11C4CS and the NBU 1022-11F4AS. The existing location has one existing well. This well is the NBU 222, 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 northeast-southwest direction. This ridge breaks off sharply into rugged secondary canyons on the north, west 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 east and south sides of the location. 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

Conditions of Approval / Application for Permit to Drill

RECEIVED: October 19, 2011

Application for Permit to Drill Statement of Basis

10/19/2011

Utah Division of Oil, Gas and Mining

Page 2

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 east side of the location.

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 8/10/2011**API NO. ASSIGNED:** 43047518150000**WELL NAME:** NBU 1022-11B1CS**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)**PHONE NUMBER:** 720 929-6100**CONTACT:** Andy Lytle**PROPOSED LOCATION:** SWNE 11 100S 220E**Permit Tech Review:** **SURFACE:** 1639 FNL 2609 FEL**Engineering Review:** **BOTTOM:** 0577 FNL 1805 FEL**Geology Review:** **COUNTY:** UINTAH**LATITUDE:** 39.96620**LONGITUDE:** -109.40646**UTM SURF EASTINGS:** 636036.00**NORTHINGS:** 4425216.00**FIELD NAME:** NATURAL BUTTES**LEASE TYPE:** 3 - State**LEASE NUMBER:** UO1197A-ST**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 1022-11B1CS
API Well Number: 43047518150000
Lease Number: UO1197A-ST
Surface Owner: STATE
Approval Date: 10/19/2011

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.

Surface casing shall be cemented to the surface.

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

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: UO1197A-ST
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		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 1022-11B1CS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047518150000	
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: 1639 FNL 2609 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNE Section: 11 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"/> SUBSEQUENT REPORT Date of Work Completion: <input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 1/14/2012 <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE <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"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> OTHER OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL ON 01/14/2012 AT 1100 HRS.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 20, 2012		
NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUMBER 435 781-7024	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 1/18/2012	

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# CAPSTAR #310
 Submitted By GINA BECKER Phone Number 720.929.6086
 Well Name/Number NBU 1022-11B1CS
 Qtr/Qtr SWNE Section 11 Township 10S Range 22E
 Lease Serial Number UO 01197A ST
 API Number 4304751815

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

Date/Time 01/12/2012 13:00 HRS AM PM

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

- Surface Casing
 Intermediate Casing
 Production Casing
 Liner
 Other

RECEIVED

JAN 11 2012

DIV. OF OIL, GAS & MINING

Date/Time 01/24/2012 08:00 HRS AM PM

BOPE

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

Date/Time _____ AM PM

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT

435.828.0986 OR LOVEL YOUNG AT 435.781.7051

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

FORM 6

ENTITY ACTION FORM

Operator: KERR McGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995
 Address: 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
4304751802	NBU 1022-11B4CS		SWNE	11	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	1/12/2012		1/18/2012		
Comments: MIRU PETE MARTIN BUCKET RIG. <i>WSMVD</i> SPUD WELL ON 01/12/2012 AT 1200 HRS <i>BHL = NWNE</i>							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751813	NBU 1022-11B4BS		SWNE	11	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	1/12/2012		1/18/2012		
Comments: MIRU PETE MARTIN BUCKET RIG. <i>WSMVD</i> SPUD WELL ON 01/12/2012 AT 1500 HRS <i>BHL = NWNE</i>							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751815	NBU 1022-11B1CS		SWNE	11	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	1/14/2012		1/18/2012		
Comments: MIRU PETE MARTIN BUCKET RIG. <i>WSMVD</i> SPUD WELL ON 01/14/2012 AT 1100 HRS. <i>BHL = NWNE</i>							

ACTION CODES:

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

SHEILA WOPSOCK

Name (Please Print)

Signature

REGULATORY ANALYST

Title

1/16/2012

Date

(5/2000)

RECEIVED

JAN 17 2012

DIV. OF OIL, GAS & MINING *Er*

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
		5. LEASE DESIGNATION AND SERIAL NUMBER: UO1197A-ST
SUNDRY NOTICES AND REPORTS ON WELLS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
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		STATE: UTAH
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	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input type="text" value="Pit Refurb/ ACTS Lines"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
<p>Kerr-McGee Oil & Gas Onshore, LP is requesting to refurb the existing pit on this multi-well pad for completion operations. The refurb pit will be relined per the requirements in the COA of the APD. Upon completion of the wells on this pad, Kerr-McGee is also requesting to utilize this pit as an ACTS staging pit to be utilized for other completion operations in the area. The trucks will unload water into these tanks before the water is placed into the refurbished pit. The purpose of the frac tanks is to collect any hydro-carbons that may have been associated with the other completion operations before releasing into the pit. We plan to keep this pit open for 1 year. During this time the surrounding well location completion fluids will be recycled in this pit and utilized for other frac jobs in the surrounding sections. Thank you.</p>		<p>Approved by the Utah Division of Oil, Gas and Mining</p> <p>Date: <u>January 31, 2012</u></p> <p>By: <u></u></p>
NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 1/18/2012	



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Sundry Conditions of Approval Well Number 43047518150000

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
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COUNTY: UINTAH	
STATE: UTAH	

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TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<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: 1/30/2012	<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
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	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

MIRU AIR RIG ON JAN. 28, 2012. DRILLED SURFACE HOLE TO 2245'.
 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
 January 31, 2012

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 1/31/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS	
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	STATE: UTAH

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TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 1/17/2012	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
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	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

The Operator requests approval for changes in the drilling plan. Specifically, the Operator 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: February 02, 2012

By: *Derek Duff*

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regularatory Analyst
SIGNATURE N/A	DATE 1/17/2012	

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 1022-11B1CS**

Surface:	1639 FNL / 2609 FEL	SWNE
BHL:	577 FNL / 1805 FEL	NWNE

Section 11 T10S R22E

Uintah County, Utah
Mineral Lease: UO1197A-ST

ONSHORE ORDER NO. 1**DRILLING PROGRAM**

1. & 2. **Estimated Tops of Important Geologic Markers:**
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	930'	
Birds Nest	1,260'	Water
Mahogany	1,623'	Water
Wasatch	4,047'	Gas
Mesaverde	6,275'	Gas
MVU2	7,263'	Gas
MVL1	7,833'	Gas
TVD	8,459'	
TD	8,674'	

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 8459' TVD, approximately equals
5,414 psi 0.64 psi/ft = actual bottomhole gradient

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

Maximum anticipated surface pressure equals approximately 3,541 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.



KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	LTC		DQX TENSION
							COLLAPSE		
CONDUCTOR	14"	0-40'							
						3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,070	28.00	IJ-55	LTC	2.61	1.94	6.86	N/A
						7,780	6,350	223,000	267,035
PRODUCTION	4-1/2"	0 to 5,000	11.60	I-80	DQX	1.11	1.15		3.28
	4-1/2"	5,000 to 8,674'	11.60	I-80	LTC	1.11	1.15	6.47	

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
SURFACE			NOTE: If well will circulate water to surface, option 2 will be utilized				
Option 2	LEAD	1,570'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	150	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	3,544'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	280	35%	12.00	3.38
	TAIL	5,130'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,210	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

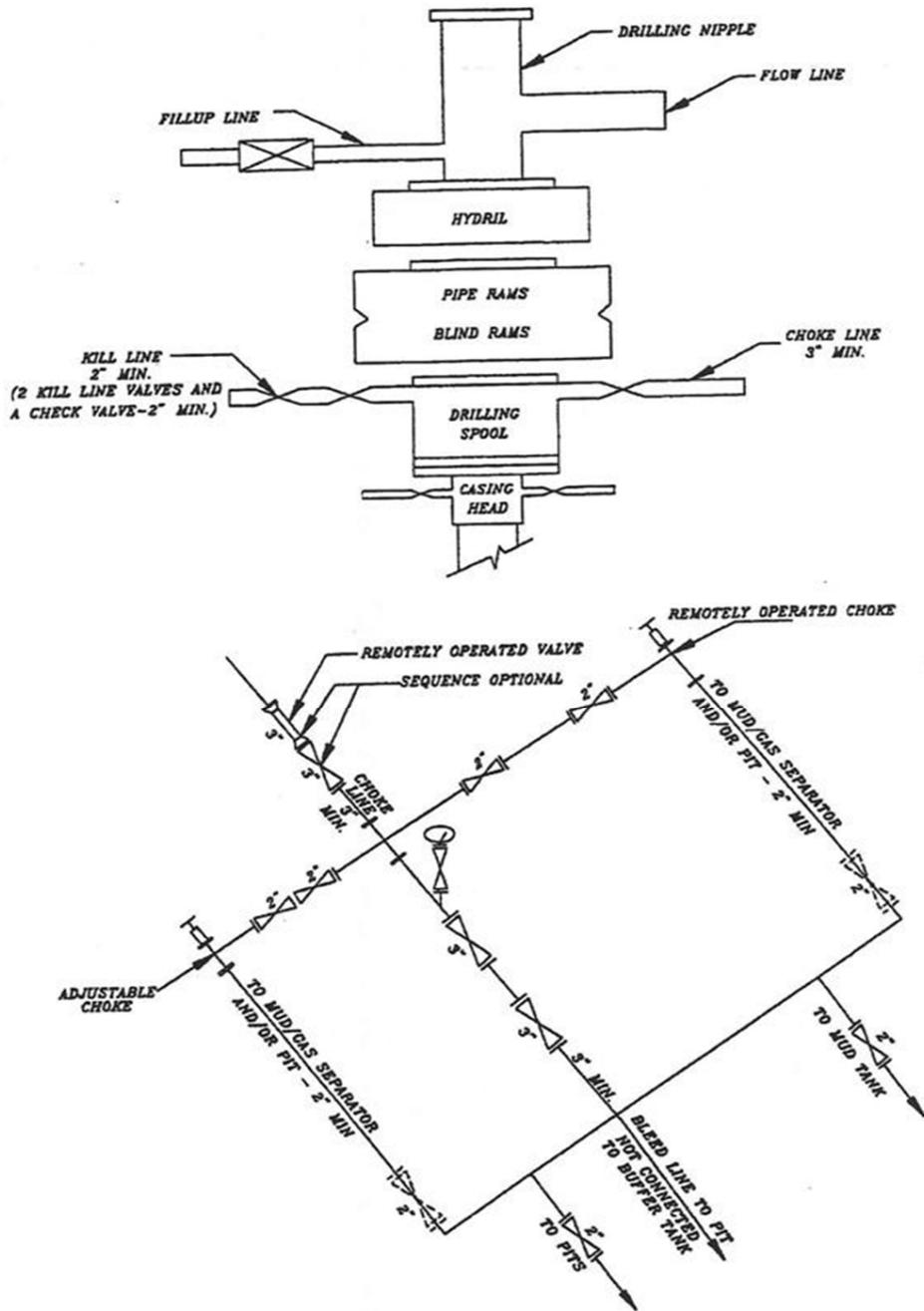
DATE:

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

DATE:

EXHIBIT A
NBU 1022-11B1CS



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 5.LEASE DESIGNATION AND SERIAL NUMBER: UO1197A-ST
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 1022-11B1CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047518150000
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: 1639 FNL 2609 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNE Section: 11 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: 2/27/2012	<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 ROTARY RIG. FINISHED DRILLING FROM 2,245' TO 8,704' ON FEBRUARY 25, 2012. RAN 4-1/2" 11.6# I-80 PRODUCING CASING . CEMENTED PRODUCTION CASING. RELEASED ENSIGN 146 RIG ON FEBRUARY 27, 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
 March 06, 2012

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regularatory Analyst
SIGNATURE N/A	DATE 2/28/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: UO1197A-ST	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
8. WELL NAME and NUMBER: NBU 1022-11B1CS	
9. API NUMBER: 43047518150000	
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: 1639 FNL 2609 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNE Section: 11 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 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: 5/1/2012	<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 MAY 1, 2012 AT 1100 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
 May 08, 2012

NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 5/2/2012	

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

5. LEASE DESIGNATION AND SERIAL NUMBER:
UO1197A-ST

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT or CA AGREEMENT NAME
UTU63047A

8. WELL NAME and NUMBER:
NBU 1022-11B1CS

9. API NUMBER:
4304751815

10. FIELD AND POOL, OR WILDCAT
NATURAL BUTTES

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

12. COUNTY
UINTAH

13. STATE
UTAH

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: **SWNE 1639 FNL 2609 FEL**
AT TOP PRODUCING INTERVAL REPORTED BELOW: **NWNE 569 FNL 1805 FEL**
AT TOTAL DEPTH: **NWNE 598 FNL 1802 FEL BHL by HSM**

14. DATE SPURRED: **1/14/2012** 15. DATE T.D. REACHED: **2/25/2012** 16. DATE COMPLETED: **5/1/2012** ABANDONED READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL): **5031 GL**

18. TOTAL DEPTH: MD **8,704** TVD **8,453** 19. PLUG BACK T.D.: MD **8,644** TVD **8,393** 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)
HDIL/ZDL/CNGR-BHP-CBL/CM/GR/CCL

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	2,229		600		0	
7 7/8"	4 1/2" I-80	11.6#	0	8,704		1,660		150	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	7,944							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A) MESAVERDE	6,562	8,447		
(B)				
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
6,562 8,447	0.36	168	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
6562-8447	PUMP 9,329 BBLs SLICK H2O & 196,123 LBS 30/50 OTTAWA SAND
	7 STAGES

29. ENCLOSED ATTACHMENTS:

ELECTRICAL/MECHANICAL LOGS GEOLOGIC REPORT DST REPORT DIRECTIONAL SURVEY

SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION CORE ANALYSIS OTHER: _____

30. WELL STATUS:
PROD

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 5/1/2012		TEST DATE: 5/10/2012		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 3,688	WATER - BBL: 120	PROD. METHOD:
CHOKE SIZE: 16/64	TBG. PRESS. 1,900	CSG. PRESS. 2,300	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 3,688	WATER - BBL: 120	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	930
				BIRD'S NEST	1,256
				MAHOGANY	1,641
				WASATCH	4,297
				MESAVERDE	6,493

35. ADDITIONAL REMARKS (Include plugging procedure)

The first 160' of the surface hole was drilled with a 12 1/4" bit. The remainder of surface hole was drilled with an 11" bit. DQX csg was run from surface to 4925'; LTC csg was run from 4925' to 8704'. 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 6/13/2012

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
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340
Fax: 801-359-3940

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-11B1CS YELLOW Spud Date: 1/29/2012
 Project: UTAH-UINTAH Site: NBU 1022-11G2 PAD Rig Name No: ENSIGN 146/146, CAPSTAR 310/310
 Event: DRILLING Start Date: 11/22/2011 End Date: 2/27/2012
 Active Datum: RKB @5,045.00usft (above Mean Sea Level) UWI: SW/NE/0/10/S/22/E/11/0/0/26/PM/N/1639/E/0/2609/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/28/2012	19:00 - 20:00	1.00	MIRU	01	E	P		RIG DOWN PREPARE FOR RIG SKID
	20:00 - 22:00	2.00	MIRU	01	C	P		CONDUCT SAFETY MEETING AND SKID RIG TO WELL # 3/6 NBU 1022-11B1CS
	22:00 - 23:00	1.00	MIRU	14	A	P		WELD ON CONDUCTOR AND RIG UP FLOW LINE
	23:00 - 0:00	1.00	MIRU	01	B	P		FINISH RIG UP PUT BHA ON RACKS AND AIR OUT PUMPS
1/29/2012	0:00 - 1:00	1.00	DRLSUR	06	A	P		PICK UP BHA MAKE UP 12.25" BIT AND PREP TO SPUD
	1:00 - 2:00	1.00	DRLSUR	02	C	P		SPUD 12.25" HOLE DRILL F/ 40' - 160' WOB 9-25 ROT 45-65 DHR 122 GPM 340 - 680 NO LOSSES
	2:00 - 5:30	3.50	DRLSUR	06	A	P		TOOH PICK UP DIRECTIONAL TOOLS INSTALL MWD TOOL AND MAKE UP 11" BIT ORIENT MWD TOOLS TO MUD MOTOR AND TIH
	5:30 - 7:00	1.50	DRLSUR	02	C	P		DRILL 11" HOLE F/ 160' - 386' WOB 22-28 ROT 45-65 DHR 122 GPM 680 NO LOSSES
	7:00 - 8:30	1.50	DRLSUR	08	A	Z		WORK ON SWVEL LOCK ON TOP DRIVE
	8:30 - 9:30	1.00	DRLSUR	02	C	P		DRILL 11" HOLE F/ 386' - 415' WOB 22-28 ROT 45-65 DHR 122 GPM 680 NO LOSSES HAVING TROUBLE WITH TOP DRIVE LOCK
	9:30 - 10:00	0.50	DRLSUR	08	A	Z		WORK ON DIRECTIONAL TOOLS TROUBLE SHOOT MWD TOOL
	10:00 - 13:00	3.00	DRLSUR	02	C	P		DRILL 11" HOLE F/ 415' - 915' WOB 22-28 ROT 45-65 DHR 122 GPM 680 NO LOSSES AVE ROP 167 FT HR LAST SURVEY 10.9 DEG 34.69 AZI
	13:00 - 13:30	0.50	DRLSUR	07	A	P		RIG SERVICE
	13:30 - 14:00	0.50	DRLSUR	08	A	Z		CHANGE OUT TOP DRIVE LOCK
	14:00 - 0:00	10.00	DRLSUR	02	C	P		DRILL 11" HOLE F/ 915' - 1731' WOB 22-28 ROT 45-65 DHR 122 GPM 680 KICK AIR ON AT 950' AT 800 CFM AVE ROP 81 FT HR LAST SURVEY 21.72 DEG 29.41 AZI 12' LEFT 6' RIGHT OF LINE SLIDE 26%
1/30/2012	0:00 - 6:00	6.00	DRLSUR	02	C	P		DRILL F/ 1731' - 2245' T.D. AVE ROP 86 FT HR WOB 20-24 ROT 45-55 DHR 122 GPM 680 AIR ON AT 1000 CFM LAST SURVEY 22.07 DEG 32.14 AZI 15' LEFT 11' LOW SLIDING 26%
	6:00 - 7:00	1.00	DRLSUR	05	C	P		CIRCULATE AND CONDITION MUD PRIOR TO LDDS
	7:00 - 10:30	3.50	DRLSUR	06	A	P		TOOH LAYING DOWN BREAK DOWN DIRECTIONAL TOOLS AND MWD TOOL BREAK BIT AND BLOW OUT MUD MOTOR
	10:30 - 13:00	2.50	DRLSUR	12	C	P		RIG UP AND RUN 50 JOINTS 8.625 28# J55 SURFACE CASING SHOE AT 2224' BAFFLE AT 2180'
	13:00 - 13:30	0.50	DRLSUR	12	B	P		CIRCULATE AND CONDITION MUD WHILE RIGGING UP CEMENTERS

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-11B1CS YELLOW

Spud Date: 1/29/2012

Project: UTAH-UINTAH

Site: NBU 1022-11G2 PAD

Rig Name No: ENSIGN 146/146, CAPSTAR 310/310

Event: DRILLING

Start Date: 11/22/2011

End Date: 2/27/2012

Active Datum: RKB @5,045.00usft (above Mean Sea Level)

UWI: SW/NE/0/10/S/22/E/11/0/0/26/PM/N/1639/E/0/2609/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	13:30 - 15:00	1.50	DRLSUR	12	E	P		PRESSURE TEST LINES TO 1500 PSI. PUMP 20 BBLS OF WATER AHEAD. PUMP 20 BBLS OF 8.3# GEL WATER AHEAD. PUMP (300 SX) 61.4 BBLS OF 15.8# 1.15 YD 5 GAL/SK PREMIUM CEMENT. DROP PLUG ON FLY. DISPLACE W/ 136 BBLS OF H2O. FINAL LIFT OF 250 PSI AT 4 BBL/MIN. BUMP PLUG W/550 PSI HELD FOR 1 MIN. FLOAT DID HOLD.
	15:00 - 15:30	0.50	DRLSUR	14	A	P		CUT CONDUCTOR AND HANG OFF CASING ENSURING CASING SET IN MIDDLE OF CONDUCTOR
	15:30 - 16:30	1.00	DRLSUR	12	E	P		PUMP (300 SX) 26 BBLS OF SAME TAIL CEMENT W/ 4% CALC. (2 TOPOUTS)DOWN BACKSIDE. WAIT 1 HOURS, IN BETWEEN EACH TOPOUT, SHUT DOWN AND CLEAN TRUCK. NO CEMENT TO SURFACE. WILL TOP OUT ON NEXT JOB RELEASE RIG @ 16:30
2/22/2012	18:00 - 19:00	1.00	RDMO	01	C	P		HPJSM SKID RIG, TO THE NBU 1022-11B1CS WELL 4/6
	19:00 - 20:00	1.00	DRLPRO	14	A	P		N/UP BOPE
	20:00 - 23:30	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 (NO TEST), CASING 1500
	23:30 - 0:00	0.50	DRLPRO	14	B	P		SET WEARBUSHING
2/23/2012	0:00 - 3:00	3.00	DRLPRO	06	A	P		P/UP SECURITY BIT , WETHERFORD MM 1.83 deg .20 RPG, DIRECTIONAL BHA SCRIBE & ORIENT, RIH TAG CEMENT @2120'
	3:00 - 4:00	1.00	DRLPRO	07	B	P		LEVEL DERRICK - INSTALL ROTATING HEAD
	4:00 - 5:30	1.50	DRLPRO	02	F	P		DRILL CEMENT, FE & RATHOLE F/2120' TO 2250'
	5:30 - 12:30	7.00	DRLPRO	02	D	P		DRILL/SLIDE F/2250' TO 3223' (973' @ 139fph) MW 8.4, VIS 28, WOB 20, RPM 45, MM RPM 115, TQ 5/7, SPM 112, GPM 550 PSI OFF/ON 1380/1707, PU 125, SO 108, ROT 110, (SLIDE 149' 15.5% 1.75 HRS) (ROT 814' / 4.0 hrs 84.5 %) NOV ON LINE
	12:30 - 13:00	0.50	DRLPRO	07		P		LUBE TOP DRIVE BLOCKS
	13:00 - 0:00	11.00	DRLPRO	02	D	P		DRILL/SLIDE F/ 3223' TO 4855 (1632' @ 148 fph) MW 8.4, VIS 28, WOB 20, RPM 45, MM RPM 115, TQ 9/10, SPM 112, GPM 550 PSI OFF/ON 2050/2500, PU 164, SO 121, ROT 141, (SLIDE 195' 11.9%) (ROT 1632' NOV ON LINE

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-11B1CS YELLOW

Spud Date: 1/29/2012

Project: UTAH-UINTAH

Site: NBU 1022-11G2 PAD

Rig Name No: ENSIGN 146/146, CAPSTAR 310/310

Event: DRILLING

Start Date: 11/22/2011

End Date: 2/27/2012

Active Datum: RKB @5,045.00usft (above Mean Sea Level)

UWI: SW/NE/0/10/S/22/E/11/0/0/26/PM/N/1639/E/0/2609/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
2/24/2012	0:00 - 13:00	13.00	DRLPRO	02	D	P		DRILL/SLIDE F/ 4855 TO 6578 (1723') (@ 132 fph) MW 8.6, VIS 28, WOB 20, RPM , MM RPM 133, TQ 9/11, SPM 100, GPM 490 PSI ON/OFF 2060/1760, PU 202, SO 135, ROT 163, (SLIDE 65' 38% 1.08 HRS) (ROT 1658' 96.2% 11.3 HRS) NOV ON LINE
	13:00 - 13:30	0.50	DRLPRO	07		P		LUBE TOP DRIVE BLOCKS
	13:30 - 0:00	10.50	DRLPRO	02	D	P		DRILL/SLIDE F/ 6578 TO 7590' (1012') (@ 96.3 fph) MW 11.5, VIS 38, WOB 20, RPM , MM RPM 133, TQ 10/12, SPM 100, GPM 490 PSI ON/OFF 2300/1950, PU 217, SO 142, ROT 174, (SLIDE 32' 3.2% .42 HRS) (ROT 997' 96.8% 10.33 HRS) NOV OFF LINE NO FLAIR
2/25/2012	0:00 - 12:30	12.50	DRLPRO	02	D	P		DRILL/SLIDE F/ 7590' TO 8346 (756') (@ 60.48 fph) MW 11.7, VIS 40, WOB 22, RPM , MM RPM 133, TQ 10/12, SPM 100, GPM 490 PSI ON/OFF 2600/2425, PU 236, SO 148, ROT 183, ROT 100% NOV OFF LINE NO FLAIR
	12:30 - 13:00	0.50	DRLPRO	07		P		LUBE TOP DRIVE BLOCKS
	13:00 - 19:30	6.50	DRLPRO	02	D	P		DRILL/SLIDE F/ 8346 TO 8704' (358') (@ 55.07 fph) MW 11.7, VIS 40, WOB 22, RPM , MM RPM 133, TQ 10/12, SPM 100, GPM 490 PSI ON/OFF 2600/2425, PU 236, SO 148, ROT 183, ROT 100% NOV OFF LINE NO FLAIR
	19:30 - 21:00	1.50	DRLPRO	05	A	P		CIRC BOTTOM / 11.9 MW.38 VIS NO GAS
	21:00 - 0:00	3.00	DRLPRO	06	E	P		WIPER TRIP TO SHOE (PUMPED OUT F/8704 TO 8617' PUMP PILL TRIP OUT TO SHOE. TIGHT SPOTS @ 4200' / 3900' / 3850'.

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-11B1CS YELLOW

Spud Date: 1/29/2012

Project: UTAH-UINTAH

Site: NBU 1022-11G2 PAD

Rig Name No: ENSIGN 146/146, CAPSTAR 310/310

Event: DRILLING

Start Date: 11/22/2011

End Date: 2/27/2012

Active Datum: RKB @5,045.00usft (above Mean Sea Level)

UWI: SW/NE/0/10/S/22/E/11/0/0/26/PM/N/1639/E/0/2609/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
2/26/2012	0:00 - 6:00	6.00	DRLPRO	06	E	P		FINISH WPER TRIP TO SHOE (PUMPED OUT F/8704 TO 8617' PUMP PILL TRIP OUT TO SHOE. TIGHT SPOTS @ 4200' / 3900' / 3850' TRIP IN HOLE FILL PIPE @2500' & 5400' HIT TIGHT SPOT @ 3650' & 4750' TIH TO 8704'
	6:00 - 7:30	1.50	DRLPRO	05	B	P		CIRC BOTTOMS UP NO FLAIR.
	7:30 - 13:30	6.00	DRLPRO	06	E	P		TRIP OUT OF HOLE FOR LOGS. PUMP F/8600' TO 5200' PUMP PILL TRIP OUT OF HOLE. LAY DOWN DIR TOOLS,BIT,M.M
	13:30 - 14:00	0.50	DRLPRO	14	B	P		PULL WEAR BUSHING
	14:00 - 18:30	4.50	DRLPRO	11	E	P		HELD S/M & R/U BAKER ATLAS & RUN TRIPLE COMBO LOGS. LOG F/ 8706' TO SURFACE.
	18:30 - 0:00	5.50	DRLPRO	12	C	P		HPJSM R/U CASERS AND RUN 4.5 CASING RUN 197 JTS PLUS TWO MARKERS & SHOE SET @ 8690' & F/C @ 8644.43
2/27/2012	0:00 - 3:00	3.00	DRLPRO	12	C	P		FINISH RUNNIG 4.5 CASING RUN 197 JTS PLUS TWO MARKERS & SHOE SET @ 8690' & F/C @ 8644.43
	3:00 - 5:00	2.00	DRLPRO	05	D	P		CIRC BTM UP
	5:00 - 6:00	1.00	DRLPRO	13	A	Z		WAIT ON CEMENT TRUCK TO UNLOAD TRUCK HE DIDN'T HAVE THE RIGHT HAMMER UNIONS TO BLOW OFF CEMENT HAD TO RIG UP NEW ONES
	6:00 - 9:30	3.50	DRLPRO	12	E	P		HPJSM, R/UP BJ & CEMENT 4.5" PROD CASING, TEST LINES 4300 PSI, PUMP 25 BBLS FRESH WATER 440 SKS LEAD 12 PPG 2.02 YIELD, TAIL 1220 SKS 14.3 PPG, 1.31 YIELD. DROPPED PLUG & DISPLACED W/ 134.4 BBLS FRESH WATER W/0.1 gal/bbl CLAYFIX II & 0.01 gal/bbl ALDACIDE G LIFT PSI /2400 PSI, BUMPED PLUG @ 3150 PSI FLOATS HELD W/ 54 BBLS / CMT TO PITS GOOD RETURNS DURING CMT JOB. TOP OF TAIL CMT 3775' LEAD 3775' TO SURF.
	9:30 - 11:00	1.50	DRLPRO	14	A	P		WASH OUT STACK & N/D SET C-22 SLIPS @ 90 K - ROUGH CUT 4.5 CASING - TRANS MUD TO UPRIGHT TANKS & RELEASED RIG @ 11:00 HRS ON 2/27/2012

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 1022-11B1CS YELLOW	Wellbore No.	OH
Well Name	NBU 1022-11B1CS	Wellbore Name	NBU 1022-11B1CS
Report No.	1	Report Date	4/5/2012
Project	UTAH-UINTAH	Site	NBU 1022-11G2 PAD
Rig Name/No.		Event	COMPLETION
Start Date	4/5/2012	End Date	5/1/2012
Spud Date	1/29/2012	Active Datum	RKB @5,045.00usft (above Mean Sea Level)
UWI	SW/NE/0/10/S/22/E/11/0/0/26/PM/N/1639/E/0/2609/0/0		

1.3 General

Contractor	CASED HOLE SOLUTIONS	Job Method		Supervisor	DAVE DANIELS
Perforated Assembly	PRODUCTION CASING	Conveyed Method			

1.4 Initial Conditions

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

1.5 Summary

Gross Interval	6,562.0 (usft)-8,447.0 (usft)	Start Date/Time	4/9/2012 12:00AM
No. of Intervals	35	End Date/Time	4/9/2012 12:00AM
Total Shots	168	Net Perforation Interval	44.00 (usft)
Avg Shot Density	3.82 (shot/ft)	Final Surface Pressure	
		Final Press Date	

2 Intervals

2.1 Perforated Interval

Date	Formation/Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
4/9/2012 12:00AM	MESAVERDE/			6,562.0	6,563.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
4/9/2012 12:00AM	MESAVERDE/			6,680.0	6,682.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			6,732.0	6,733.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			6,742.0	6,743.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			6,774.0	6,775.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			6,860.0	6,862.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			6,881.0	6,883.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			6,904.0	6,906.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			6,985.0	6,986.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			7,005.0	7,006.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			7,015.0	7,016.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			7,075.0	7,076.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			7,119.0	7,121.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			7,179.0	7,180.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			7,225.0	7,226.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			7,296.0	7,297.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			7,374.0	7,376.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			7,403.0	7,404.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			7,536.0	7,537.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			7,589.0	7,590.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			7,626.0	7,627.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			7,714.0	7,715.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
4/9/2012 12:00AM	MESAVERDE/			7,772.0	7,773.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			7,790.0	7,791.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			7,982.0	7,983.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			7,994.0	7,995.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			8,035.0	8,036.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			8,083.0	8,084.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			8,094.0	8,095.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			8,114.0	8,116.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			8,179.0	8,180.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			8,241.0	8,243.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			8,305.0	8,307.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			8,432.0	8,433.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
4/9/2012 12:00AM	MESAVERDE/			8,446.0	8,447.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

3 Plots

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-11B1CS YELLOW		Spud Date: 1/29/2012	
Project: UTAH-UINTAH		Site: NBU 1022-11G2 PAD	Rig Name No: MILES 3/3
Event: COMPLETION		Start Date: 4/5/2012	End Date: 5/1/2012
Active Datum: RKB @5,045.00usft (above Mean Sea Level)		UWI: SW/NE/0/10/S/22/E/11/0/0/26/PM/N/1639/E/0/2609/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/29/2012	-							
4/5/2012	11:00 - 12:30	1.50	COMP	33		P		<p>FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 24 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 24 PSI. 1ST PSI TEST T/ 7000 PSI. HELD FOR 30 MIN LOST 71 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. MOVE T/ NEXT WELL. SWIFW</p>
4/14/2012	7:00 - 10:00	3.00	COMP	37		P		<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. SWIFW</p> <p>NOTE : SCHLUMBERGER DIDN'T CORRELATE TO OPEN HOLE LOG THER WAS A 28' CORRECTION</p>
4/16/2012	7:00 - 18:00	11.00	COMP	36	B	P		<p>FRAC STG 1)WHP 1838 PSI, BRK 4038 PSI @ 4.7 BPM. ISIP 2433 PSI, FG .73 CALC HOLES OPEN @ 50.2 BPM @ 5175 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 2517 PSI, FG .74, NPI 84 PSI. MP 6316 PSI, MR 50.6 BPM, AP 4970 PSI, AR 50.1 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR WL</p> <p>PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8210' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 2)WHP 1388 PSI, BRK 2176 PSI @ 4.1 BPM. ISIP 1336 PSI, FG .60. CALC HOLES OPEN @ 50.2 BPM @ 4740 PSI = 81% HOLES OPEN. (19/24 HOLES OPEN) ISIP 2734 PSI, FG .78, NPI 1598 PSI. MP 5823 PSI, MR 50.5 BPM, AP 5094 PSI, AR 50.2 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE SWIFN</p>
4/17/2012	-							

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-11B1CS YELLOW		Spud Date: 1/29/2012	
Project: UTAH-UINTAH		Site: NBU 1022-11G2 PAD	Rig Name No: MILES 3/3
Event: COMPLETION		Start Date: 4/5/2012	End Date: 5/1/2012
Active Datum: RKB @5,045.00usft (above Mean Sea Level)		UWI: SW/NE/0/10/S/22/E/11/0/0/26/PM/N/1639/E/0/2609/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:00 - 18:00	11.00	COMP	36	B	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 @ 7821' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 3)WHP 1355 PSI, BRK 3238 PSI @ 4.8 BPM. ISIP 2089 PSI, FG .71. CALC HOLES OPEN @ 50.3 BPM @ 5112 PSI = 89% HOLES OPEN. (21/24 HOLES OPEN) ISIP 2279 PSI, FG .74, NPI 190 PSI. MP 5759 PSI, MR 50.5 BPM, AP 4949 PSI, AR 50.3 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR WL</p> <p>PERF STG 4)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7434' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 4)WHP 1582 PSI, BRK 3027 PSI @ 4.4 BPM. ISIP 1834 PSI, FG .69. CALC HOLES OPEN @ 50.1 BPM @ 5161 PSI = 79% HOLES OPEN. (19/24 HOLES OPEN) ISIP 2278 PSI, FG .75, NPI 444 PSI. MP 5545 PSI, MR 50.7 BPM, AP 5015 PSI, AR 50.3 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE. SWIFN</p>

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-11B1CS YELLOW

Spud Date: 1/29/2012

Project: UTAH-UINTAH

Site: NBU 1022-11G2 PAD

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 4/5/2012

End Date: 5/1/2012

Active Datum: RKB @5,045.00usft (above Mean Sea Level)

UWI: SW/NE/0/10/S/22/E/11/0/0/26/PM/N/1639/E/0/2609/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
4/18/2012	7:00 - 18:00	11.00	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 @ 7151' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 5)WHP 609 PSI, BRK 3143 PSI @ 4.5 BPM. ISIP 1568 PSI, FG .66 CALC HOLES OPEN @ 50.5 BPM @ 4504 PSI = 89% HOLES OPEN. (21/24 HOLES OPEN) ISIP 2165 PSI, FG .75, NPI 597 PSI. MP 5242 PSI, MR 50.7 BPM, AP 4411 PSI, AR 50.5 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR WL</p> <p>PERF STG 6)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 6936' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 6)WHP 1009 PSI, BRK 2210 PSI @ 4.3 BPM. ISIP 1498 PSI, FG .66. CALC HOLES OPEN @ 50.3 BPM @ 4390 PSI = 88% HOLES OPEN. (21/24 HOLES OPEN) ISIP 2143 PSI, FG .75, NPI 645 PSI. MP 5062 PSI, MR 50.7 BPM, AP 4164 PSI, AR 50.2 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR WL</p> <p>PERF STG 7)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 6805' P/U PERF AS PER PERF DESIGN. POOH. SWIFN</p>
4/19/2012	7:00 - 15:00	8.00	COMP	36	B	P		<p>FRAC STG 7)WHP 157 PSI, BRK 2283 PSI @ 4.1 BPM. ISIP 845 PSI, FG .57 CALC HOLES OPEN @ 50.2 BPM @ 4007 PSI = 81% HOLES OPEN. (19/24 HOLES OPEN) ISIP 2094 PSI, FG .75, NPI 1249 PSI. MP 4758 PSI, MR 50.4 BPM, AP 4037 PSI, AR 50.2 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR WL</p> <p>PU 4 1/2" CBP RIH SET KILL PLUG @ 6512, RD FRAC & WL CREWS SWIFN</p>
4/30/2012	7:00 - 7:15	0.25	COMP	48		P		TOTAL SAND= 196,123#
	7:15 - 10:30	3.25	COMP	30	A	P		<p>TOTAL CLFL= 9,329 BBLs JSA- RUSU. PU TBG. RUSU. RIG STARTED TO SINK. RDSU AND PULL AHEAD. FILL IN W/ DIRT. SPOT RIG. RUSU. ND WH. NU BOP. RU FLOOR AND TBG EQUIP.</p>

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-11B1CS YELLOW

Spud Date: 1/29/2012

Project: UTAH-UINTAH

Site: NBU 1022-11G2 PAD

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 4/5/2012

End Date: 5/1/2012

Active Datum: RKB @5,045.00usft (above Mean Sea Level)

UWI: SW/NE/0/10/S/22/E/11/0/0/26/PM/N/1639/E/0/2609/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	10:30 - 14:00	3.50	COMP	31	I	P		MU 3-7/8" BIT, POBS, AND 1.87" XN. RIH AS MEAS AND PU 2-3/8" L-80 TBG. TAG AT 6492' W/ 204-JTS IN. RU DRLG EQUIP. FILL TBG AND PRES TEST CSG TO 3000#. GOOD. EST CIRC AND D/O PLUGS.
	14:00 - 17:30	3.50	COMP	44	C	P		#1- C/O 20' SAND TO CBP AT 6512'. D/O IN 5 MIN. -300# INC. 0# FCP. RIH. #2- C/O 75' SAND TO CBP AT 6805'. D/O IN 5 MIN. 300# INC. 0-600# FCP. RIH. #3- C/O 30' SAND TO CBP AT 6930'. D/O IN 5 MIN. 500# INC. 400-700# FCP. RIH. #4- C/O 15' SAND TO CBP AT 7151'. D/O IN 6 MIN. 400# INC. 500-700# FCP. RIH W/ 1 JT. HAVE 227-JTS IN, EOT AT 7200'. FLOW CLEAN. SDFN JSA- BWD. D/O PLUGS. LAND HANGER.
5/1/2012	7:00 - 7:15	0.25	COMP	40		P		SITP 0, SICP 2600#. BWD TO PIT. EST CIRC. RIH AS CONT D/O PLUGS.
	7:15 - 11:00	3.75	COMP	44	C	P		#5- C/O 25' SAND TO CBP AT 7434'. D/O IN 5 MIN. 300# INC. 300-800# FCP. RIH. #6- C/O 35' SAND TO CBP AT 7821'. D/O IN 6 MIN. 400# INC. 500-1200# FCP. RIH. #7- C/O 90' SAND TO CBP AT 8210'. D/O IN 7 MIN. 500# INC. 500-700# FCP. RIH. PBTD AT 8643'. BTM PERF 8547'. C/O TO 8566' W/ 270-JTS IN (119' RATHOLE). CIRC CLEAN. RD PWR SWIVEL. POOH AS LD 20-JTS TBG. PU 4" 10K HANGER. LUB IN AND LAND 250-JTS 2-3/8" W/ EOT AT 7943.57'. RD FLOOR. ND BOP. NU WH. HOOK UP FLOW LINES. POBS AT 1200#. PRES TEST LINES TO 3000#. SITP 50#. SICP 1900#. TURN OVER TO FBC AND SALES. RDSU. TBG DETAIL KB 14.00 4" 10K HANGER .83 250-JTS 2-3/8" L-80 7926.54 1.87" XN POBS 2.20 EOT 7943.57 283-JTS DELIVERED, 33-JTS RETURNED. TLTR 9329, TLR 1500, LLTR 7829. WELL TURNED TO SALES @ 11:00 HR ON 5/1/2012- 1700MCFD, 1800 BWPD, FCP 2000#, FTP 1781#, 20/64"
	11:00 - 11:00	0.00	COMP	50				WELL IP'D ON 5/6/2012 - 2740 MCFD, 0 BOPD, 360 BWPD, CP 1862#, FTP 1487#, CK 20/64, LP 168#, 24 HRS
5/6/2012	0:00 -			50				
5/7/2012	-							

Project: UTAH - UTM (feet), NAD27, Zone 12N
 Site: UINTAH_NBU 1022-11G2 Pad
 Well: NBU 1022-11B1CS
 Wellbore: NBU 1022-11B1CS
 Section:
 SHL:
 Design: NBU 1022-11B1CS
 Latitude: 39.966236
 Longitude: -109.406348
 GL: 5031.00
 KB: 9' rkb + 5031' gl @ 5040.00ft

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4038.00	4280.61	WASATCH
4638.00	4885.73	top of cylinder
6271.00	6518.76	MESAVERDE
8456.00	8703.81	SEGO

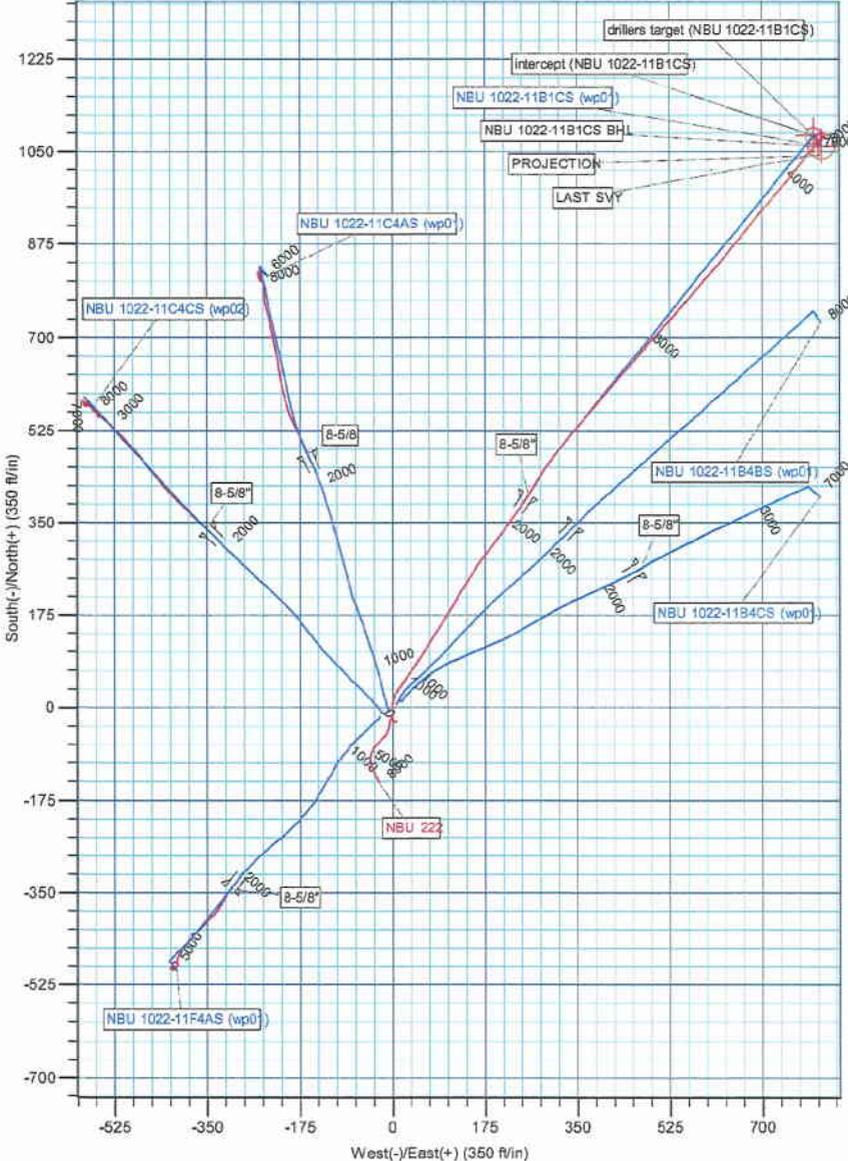
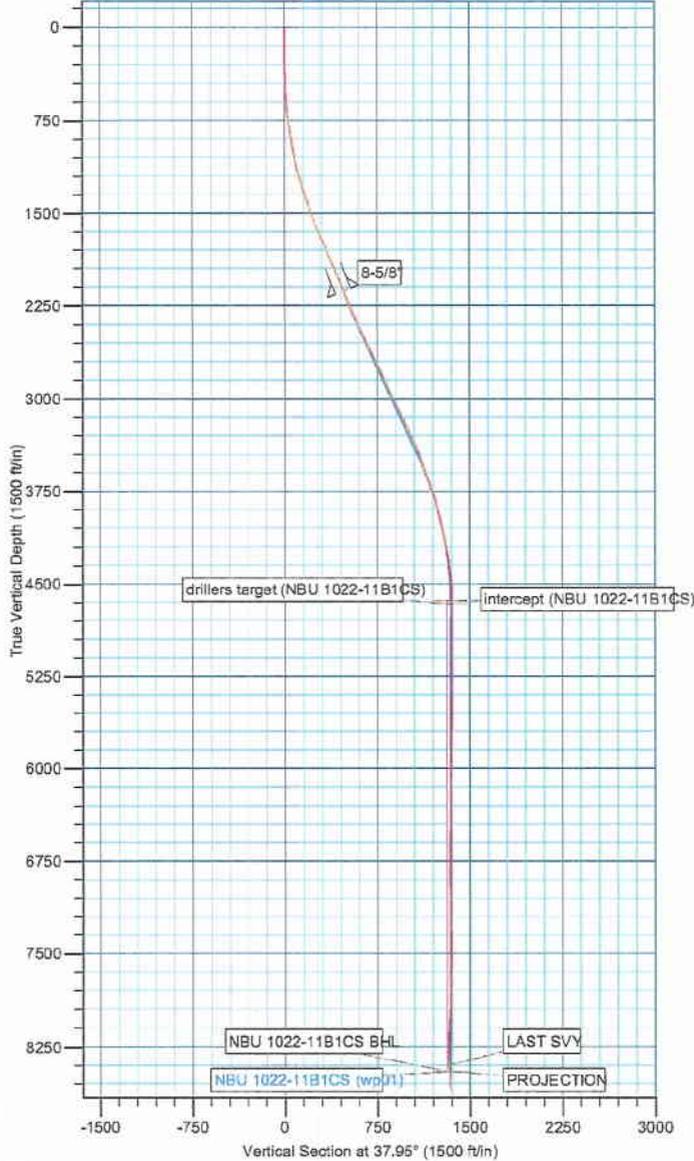
WELL DETAILS: NBU 1022-11C4CS				
+N/-S	+E/-W	Northing	Ground Level: Easting	Slot
-12.02	-15.97	14517727.10	5031.00 Latitude 39.966203	
			Longitude	
			-109.406405	

CASING DETAILS			
TVD	MD	Name	Size
2139.47	2219.05	8-5/8"	8-5/8

Azimuths to True North
 Magnetic North: 10.96°
 Magnetic Field
 Strength: 52260.2e nT
 Dip Angle: 65.84°
 Date: 2/1/2012
 Model: IGRF2010

DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Intercept (NBU 1022-11B1CS)	4638.00	1080.51	797.36	14518833.98	2087740.00	39.969203	-109.403503	Point
drillers target (NBU 1022-11B1CS)	4665.00	1080.61	797.44	14518834.08	2087740.07	39.969203	-109.403503	Circle (Radius: 15.00)
NBU 1022-11B1CS BHL	8456.00	1060.61	812.44	14518814.35	2087755.43	39.969148	-109.403449	Circle (Radius: 25.00)

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
2175.00	22.07	32.14	2098.65	391.62	249.58	0.00	0.00	462.67	
2325.00	22.07	32.14	2237.66	439.35	279.57	0.00	0.00	518.79	
2519.76	24.76	39.24	2416.40	501.94	324.85	2.00	49.63	596.01	
3674.61	24.76	39.24	3465.07	630.82	630.82	0.00	0.00	1079.50	
4912.73	0.00	0.00	4665.00	1080.61	797.44	2.00	180.00	1342.78	
5040.85	0.38	143.13	4793.12	1080.27	797.70	0.30	143.13	1342.66	
8703.81	0.38	143.13	8456.00	1060.61	812.44	0.00	0.00	1336.02	



Anadarko Petroleum Corp
Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-11B1CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	14' RKB + 5031' GL @ 5045.00ft
Site:	UINTAH_NBU 1022-11G2 Pad	MD Reference:	14' RKB + 5031' GL @ 5045.00ft
Well:	NBU 1022-11B1CS	North Reference:	True
Wellbore:	NBU 1022-11B1CS	Survey Calculation Method:	Minimum Curvature
Design:	NBU 1022-11B1CS	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 1022-11G2 Pad				
Site Position:		Northing:	14,517,752.07 usft	Latitude:	39.966270
From:	Lat/Long	Easting:	2,086,977.54 usft	Longitude:	-109.406292
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	1.02 °

Well	NBU 1022-11B1CS					
Well Position	+N/-S	0.00 ft	Northing:	14,517,739.40 usft	Latitude:	39.966236
	+E/-W	0.00 ft	Easting:	2,086,962.07 usft	Longitude:	-109.406348
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,031.00 ft

Wellbore	NBU 1022-11B1CS				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/1/2012	10.95	65.84	52,260

Design	NBU 1022-11B1CS				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	5.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	5.00	0.00	0.00	37.95	

Survey Program	Date	2/28/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
136.00	2,180.00	Survey #1 (NBU 1022-11B1CS)	MWD	MWD - Standard	
2,266.00	8,704.00	Survey #2 (NBU 1022-11B1CS)	MWD	MWD - Standard	

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)	
5.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
136.00	0.26	245.45	136.00	-0.12	-0.27	-0.26	0.20	0.20	0.00	0.00
231.00	0.18	230.86	231.00	-0.31	-0.58	-0.60	0.10	-0.08	-15.36	
322.00	0.97	8.23	321.99	0.36	-0.58	-0.07	1.22	0.87	150.96	
411.00	1.76	357.77	410.97	2.48	-0.53	1.63	0.93	0.89	-11.75	
505.00	3.43	359.97	504.87	6.73	-0.59	4.95	1.78	1.78	2.34	
598.00	4.84	7.26	597.63	13.41	-0.09	10.51	1.62	1.52	7.84	
693.00	5.80	26.34	692.22	21.68	2.55	18.66	2.10	1.01	20.08	
787.00	8.09	34.33	785.53	31.40	8.38	29.92	2.64	2.44	8.50	
881.00	9.23	35.65	878.46	42.99	16.51	44.05	1.23	1.21	1.40	

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-11B1CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	14' RKB + 5031' GL @ 5045.00ft
Site:	UINTAH_NBU 1022-11G2 Pad	MD Reference:	14' RKB + 5031' GL @ 5045.00ft
Well:	NBU 1022-11B1CS	North Reference:	True
Wellbore:	NBU 1022-11B1CS	Survey Calculation Method:	Minimum Curvature
Design:	NBU 1022-11B1CS	Database:	edmp

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Buidl Rate (°/100usft)	Turn Rate (°/100usft)
974.00	10.90	34.69	970.02	56.28	25.86	60.29	1.80	1.80	-1.03
1,068.00	12.75	33.98	1,062.02	72.19	36.72	79.51	1.97	1.97	-0.76
1,160.00	14.77	35.39	1,151.38	90.17	49.18	101.35	2.23	2.20	1.53
1,254.00	16.44	32.22	1,241.91	111.20	63.22	126.56	1.99	1.78	-3.37
1,349.00	17.57	30.79	1,332.76	134.89	77.72	154.17	1.27	1.19	-1.51
1,444.00	19.35	32.05	1,422.87	160.55	93.42	184.05	1.92	1.87	1.33
1,537.00	20.05	31.79	1,510.42	187.16	109.99	215.23	0.76	0.75	-0.28
1,634.00	21.72	29.41	1,601.05	216.93	127.57	249.51	1.93	1.72	-2.45
1,730.00	23.13	32.66	1,689.79	248.28	146.47	285.85	1.96	1.47	3.39
1,825.00	23.39	35.83	1,777.07	279.28	167.58	323.28	1.35	0.27	3.34
1,918.00	23.39	37.94	1,862.43	308.81	189.73	360.19	0.90	0.00	2.27
2,013.00	23.57	36.97	1,949.56	338.85	212.75	398.04	0.45	0.19	-1.02
2,107.00	22.44	34.90	2,036.09	368.58	234.32	434.74	1.48	-1.20	-2.20
2,180.00	22.07	32.14	2,103.65	391.62	249.58	462.30	1.52	-0.51	-3.78
2,266.00	22.11	29.89	2,183.34	419.34	266.25	494.40	0.98	0.05	-2.62
2,357.00	24.22	35.09	2,267.01	449.46	285.51	530.01	3.23	2.32	5.71
2,447.00	24.49	37.30	2,349.00	479.41	307.43	567.10	1.06	0.30	2.46
2,538.00	25.56	39.36	2,431.46	509.59	331.31	605.59	1.52	1.18	2.26
2,628.00	25.88	39.98	2,512.54	539.66	356.25	644.63	0.46	0.36	0.69
2,719.00	25.94	40.23	2,594.39	570.07	381.86	684.36	0.14	0.07	0.27
2,810.00	25.75	40.98	2,676.29	600.19	407.68	723.99	0.42	-0.21	0.82
2,900.00	25.44	41.86	2,757.46	629.34	433.40	762.80	0.55	-0.34	0.98
2,991.00	25.06	40.36	2,839.77	658.59	458.92	801.55	0.82	-0.42	-1.65
3,082.00	24.69	40.11	2,922.32	687.81	483.65	839.80	0.42	-0.41	-0.27
3,173.00	26.13	41.86	3,004.52	717.27	509.27	878.79	1.78	1.58	1.92
3,263.00	25.69	43.11	3,085.47	746.27	535.82	917.99	0.78	-0.49	1.39
3,354.00	26.25	41.61	3,167.29	775.72	562.67	957.72	0.95	0.62	-1.65
3,445.00	25.75	41.48	3,249.08	805.57	589.12	997.53	0.55	-0.55	-0.14
3,535.00	23.75	39.86	3,330.81	834.14	613.69	1,035.16	2.35	-2.22	-1.80
3,626.00	22.38	39.73	3,414.53	861.53	636.51	1,070.79	1.51	-1.51	-0.14
3,717.00	20.25	37.73	3,499.30	887.31	657.22	1,103.86	2.47	-2.34	-2.20
3,807.00	19.38	38.48	3,583.97	911.32	676.05	1,134.37	1.01	-0.97	0.83
3,898.00	17.56	39.23	3,670.28	933.77	694.12	1,163.19	2.02	-2.00	0.82
3,988.00	18.25	40.48	3,755.92	955.01	711.86	1,190.84	0.88	0.77	1.39
4,079.00	17.13	41.36	3,842.62	975.91	729.97	1,218.46	1.27	-1.23	0.97
4,170.00	14.56	40.11	3,930.15	994.72	746.19	1,243.27	2.85	-2.82	-1.37
4,260.00	13.06	38.86	4,017.55	1,011.29	759.86	1,264.74	1.70	-1.67	-1.39
4,351.00	11.69	37.11	4,106.43	1,026.65	771.88	1,284.24	1.56	-1.51	-1.92
4,442.00	10.69	37.73	4,195.70	1,040.67	782.60	1,301.90	1.11	-1.10	0.68
4,532.00	9.63	38.73	4,284.29	1,053.15	792.42	1,317.78	1.19	-1.18	1.11
4,623.00	7.94	43.23	4,374.22	1,063.67	801.49	1,331.65	2.00	-1.86	4.95
4,714.00	6.06	39.48	4,464.54	1,071.95	808.85	1,342.71	2.13	-2.07	-4.12
4,805.00	4.00	51.23	4,555.18	1,077.65	814.38	1,350.60	2.52	-2.26	12.91

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-11B1CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	14' RKB + 5031' GL @ 5045.00ft
Site:	UINTAH_NBU 1022-11G2 Pad	MD Reference:	14' RKB + 5031' GL @ 5045.00ft
Well:	NBU 1022-11B1CS	North Reference:	True
Wellbore:	NBU 1022-11B1CS	Survey Calculation Method:	Minimum Curvature
Design:	NBU 1022-11B1CS	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)	
4,892.13	1.51	73.84	4,642.21	1,079.87	817.85	1,354.49	3.06	-2.86	25.95	
intercept (NBU 1022-11B1CS)										
4,895.00	1.44	75.86	4,645.08	1,079.89	817.92	1,354.55	3.06	-2.47	70.23	
4,919.82	1.15	73.85	4,669.69	1,080.04	818.46	1,354.99	1.21	-1.20	-8.16	
drillers target (NBU 1022-11B1CS)										
4,986.00	0.38	52.86	4,736.06	1,080.35	819.27	1,355.74	1.21	-1.15	-31.62	
5,077.00	0.38	68.86	4,827.06	1,080.65	819.79	1,356.29	0.12	0.00	17.58	
5,167.00	0.31	98.73	4,917.06	1,080.72	820.31	1,356.67	0.21	-0.08	33.19	
5,258.00	0.19	155.98	5,008.06	1,080.54	820.62	1,356.72	0.29	-0.13	62.91	
5,349.00	0.25	185.48	5,099.06	1,080.21	820.66	1,356.48	0.14	0.07	32.42	
5,440.00	0.75	249.11	5,190.06	1,079.80	820.09	1,355.80	0.74	0.55	69.92	
5,530.00	1.00	237.11	5,280.05	1,079.16	818.88	1,354.56	0.34	0.28	-13.33	
5,621.00	1.06	231.11	5,371.03	1,078.20	817.55	1,352.99	0.14	0.07	-6.59	
5,712.00	1.06	224.86	5,462.02	1,077.07	816.31	1,351.33	0.13	0.00	-6.87	
5,802.00	1.06	217.98	5,552.00	1,075.83	815.21	1,349.67	0.14	0.00	-7.64	
5,893.00	1.19	217.61	5,642.98	1,074.42	814.11	1,347.88	0.14	0.14	-0.41	
5,984.00	1.19	206.61	5,733.96	1,072.82	813.11	1,346.01	0.25	0.00	-12.09	
6,074.00	1.44	191.11	5,823.94	1,070.88	812.47	1,344.09	0.48	0.28	-17.22	
6,165.00	1.38	283.73	5,914.92	1,070.02	811.19	1,342.62	2.24	-0.07	101.78	
6,256.00	1.19	278.98	6,005.90	1,070.42	809.19	1,341.71	0.24	-0.21	-5.22	
6,346.00	1.19	265.98	6,095.88	1,070.50	807.34	1,340.63	0.30	0.00	-14.44	
6,437.00	1.06	262.86	6,186.86	1,070.33	805.56	1,339.41	0.16	-0.14	-3.43	
6,528.00	0.75	266.98	6,277.85	1,070.20	804.13	1,338.42	0.35	-0.34	4.53	
6,618.00	0.81	246.98	6,367.84	1,069.92	802.95	1,337.48	0.31	0.07	-22.22	
6,709.00	0.56	229.23	6,458.84	1,069.37	802.03	1,336.48	0.36	-0.27	-19.51	
6,800.00	0.50	192.11	6,549.83	1,068.70	801.61	1,335.68	0.38	-0.07	-40.79	
6,891.00	0.69	188.11	6,640.83	1,067.77	801.45	1,334.85	0.21	0.21	-4.40	
6,981.00	0.19	58.98	6,730.83	1,067.31	801.50	1,334.52	0.91	-0.56	-143.48	
7,072.00	0.38	113.98	6,821.82	1,067.26	801.90	1,334.73	0.34	0.21	60.44	
7,163.00	1.50	359.58	6,912.81	1,068.33	802.17	1,335.74	1.86	1.23	-125.71	
7,253.00	1.38	357.36	7,002.79	1,070.59	802.11	1,337.49	0.15	-0.13	-2.47	
7,344.00	1.31	354.73	7,093.76	1,072.72	801.96	1,339.08	0.10	-0.08	-2.89	
7,435.00	1.13	352.11	7,184.74	1,074.64	801.75	1,340.46	0.21	-0.20	-2.88	
7,525.00	1.06	0.86	7,274.72	1,076.36	801.64	1,341.74	0.20	-0.08	9.72	
7,616.00	0.31	24.86	7,365.72	1,077.42	801.75	1,342.65	0.86	-0.82	26.37	
7,707.00	0.19	111.23	7,456.72	1,077.59	802.00	1,342.94	0.39	-0.13	94.91	
7,797.00	0.75	131.61	7,546.71	1,077.14	802.58	1,342.94	0.64	0.62	22.64	
7,887.00	1.25	155.36	7,636.70	1,075.86	803.43	1,342.45	0.71	0.56	26.39	
7,978.00	1.50	164.36	7,727.67	1,073.81	804.16	1,341.29	0.36	0.27	9.89	
8,069.00	2.06	171.36	7,818.63	1,071.05	804.73	1,339.46	0.66	0.62	7.69	
8,159.00	2.75	183.36	7,908.55	1,067.29	804.84	1,336.57	0.95	0.77	13.33	
8,250.00	2.69	179.98	7,999.45	1,062.98	804.72	1,333.09	0.19	-0.07	-3.71	
8,341.00	2.75	175.11	8,090.34	1,058.67	804.90	1,329.81	0.26	0.07	-5.35	
8,431.00	2.88	177.86	8,180.24	1,054.26	805.17	1,326.49	0.21	0.14	3.06	

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-11B1CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	14' RKB + 5031' GL @ 5045.00ft
Site:	UINTAH_NBU 1022-11G2 Pad	MD Reference:	14' RKB + 5031' GL @ 5045.00ft
Well:	NBU 1022-11B1CS	North Reference:	True
Wellbore:	NBU 1022-11B1CS	Survey Calculation Method:	Minimum Curvature
Design:	NBU 1022-11B1CS	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)	
8,522.00	2.75	174.86	8,271.13	1,049.80	805.45	1,323.15	0.22	-0.14	-3.30	
8,613.00	2.75	174.86	8,362.02	1,045.45	805.84	1,319.96	0.00	0.00	0.00	
8,654.00	2.53	167.78	8,402.98	1,043.59	806.12	1,318.66	0.96	-0.54	-17.27	
LAST SVY										
8,704.00	2.53	167.78	8,452.93	1,041.43	806.59	1,317.25	0.00	0.00	0.00	
PROJECTION - NBU 1022-11B1CS BHL										

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
8,654.00	8,402.98	1,043.59	806.12	LAST SVY	
8,704.00	8,452.93	1,041.43	806.59	PROJECTION	

Checked By: _____	Approved By: _____	Date: _____
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US ROCKIES REGION PLANNING

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

UINTAH_NBU 1022-11G2 Pad

NBU 1022-11B1CS

NBU 1022-11B1CS

Design: NBU 1022-11B1CS

Survey Report - Geographic

28 February, 2012

Anadarko Petroleum Corp
Survey Report - Geographic

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-11B1CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	14' RKB + 5031' GL @ 5045.00ft
Site:	UINTAH_NBU 1022-11G2 Pad	MD Reference:	14' RKB + 5031' GL @ 5045.00ft
Well:	NBU 1022-11B1CS	North Reference:	True
Wellbore:	NBU 1022-11B1CS	Survey Calculation Method:	Minimum Curvature
Design:	NBU 1022-11B1CS	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 1022-11G2 Pad				
Site Position:		Northing:	14,517,752.07 usft	Latitude:	39.966270
From:	Lat/Long	Easting:	2,086,977.54 usft	Longitude:	-109.406292
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	1.02 °

Well	NBU 1022-11B1CS					
Well Position	+N-S	0.00 ft	Northing:	14,517,739.40 usft	Latitude:	39.966236
	+E-W	0.00 ft	Easting:	2,086,962.07 usft	Longitude:	-109.406348
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,031.00 ft

Wellbore	NBU 1022-11B1CS				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	2/1/2012	(°)	(°)	(nT)
			10.95	65.84	52,260

Design	NBU 1022-11B1CS				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	5.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	5.00	0.00	0.00	37.95	

Survey Program	Date	2/28/2012			
From	To	Survey (Wellbore)	Tool Name	Description	
(ft)	(ft)				
136.00	2,180.00	Survey #1 (NBU 1022-11B1CS)	MWD	MWD - Standard	
2,266.00	8,704.00	Survey #2 (NBU 1022-11B1CS)	MWD	MWD - Standard	

Survey										
Measured	Inclination	Azimuth	Vertical	+N-S	+E-W	Map	Map	Latitude	Longitude	
Depth	(°)	(°)	Depth	(ft)	(ft)	Northing	Easting			
(ft)			(ft)	(ft)	(ft)	(usft)	(usft)			
5.00	0.00	0.00	5.00	0.00	0.00	14,517,739.40	2,086,962.07	39.966236	-109.406348	
136.00	0.26	245.45	136.00	-0.12	-0.27	14,517,739.28	2,086,961.80	39.966236	-109.406349	
231.00	0.18	230.86	231.00	-0.31	-0.58	14,517,739.09	2,086,961.49	39.966235	-109.406350	
322.00	0.97	8.23	321.99	0.36	-0.58	14,517,739.76	2,086,961.48	39.966237	-109.406350	
411.00	1.76	357.77	410.97	2.48	-0.53	14,517,741.87	2,086,961.50	39.966243	-109.406350	
505.00	3.43	359.97	504.87	6.73	-0.59	14,517,746.12	2,086,961.36	39.966255	-109.406350	
598.00	4.84	7.26	597.63	13.41	-0.09	14,517,752.81	2,086,961.74	39.966273	-109.406349	
693.00	5.80	26.34	692.22	21.68	2.55	14,517,761.13	2,086,964.23	39.966296	-109.406339	
787.00	8.09	34.33	785.53	31.40	8.38	14,517,770.95	2,086,969.89	39.966322	-109.406318	
881.00	9.23	35.65	878.46	42.99	16.51	14,517,782.68	2,086,977.81	39.966354	-109.406289	
974.00	10.90	34.69	970.02	56.28	25.86	14,517,796.14	2,086,986.92	39.966391	-109.406256	

Anadarko Petroleum Corp

Survey Report - Geographic

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-11B1CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	14' RKB + 5031' GL @ 5045.00ft
Site:	UINTAH_NBU 1022-11G2 Pad	MD Reference:	14' RKB + 5031' GL @ 5045.00ft
Well:	NBU 1022-11B1CS	North Reference:	True
Wellbore:	NBU 1022-11B1CS	Survey Calculation Method:	Minimum Curvature
Design:	NBU 1022-11B1CS	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
1,068.00	12.75	33.98	1,062.02	72.19	36.72	14,517,812.24	2,086,997.49	39.966434	-109.406217
1,160.00	14.77	35.39	1,151.38	90.17	49.18	14,517,830.44	2,087,009.63	39.966484	-109.406173
1,254.00	16.44	32.22	1,241.91	111.20	63.22	14,517,851.71	2,087,023.29	39.966541	-109.406123
1,349.00	17.57	30.79	1,332.76	134.89	77.72	14,517,875.66	2,087,037.37	39.966606	-109.406071
1,444.00	19.35	32.05	1,422.87	160.55	93.42	14,517,901.60	2,087,052.60	39.966677	-109.406015
1,537.00	20.05	31.79	1,510.42	187.16	109.99	14,517,928.50	2,087,068.70	39.966750	-109.405956
1,634.00	21.72	29.41	1,601.05	216.93	127.57	14,517,958.58	2,087,085.74	39.966832	-109.405893
1,730.00	23.13	32.66	1,689.79	248.28	146.47	14,517,990.26	2,087,104.08	39.966918	-109.405826
1,825.00	23.39	35.83	1,777.07	279.28	167.58	14,518,021.63	2,087,124.63	39.967003	-109.405750
1,918.00	23.39	37.94	1,862.43	308.81	189.73	14,518,051.55	2,087,146.25	39.967084	-109.405671
2,013.00	23.57	36.97	1,949.56	338.85	212.75	14,518,082.00	2,087,168.73	39.967166	-109.405589
2,107.00	22.44	34.90	2,036.09	368.58	234.32	14,518,112.11	2,087,189.78	39.967248	-109.405512
2,180.00	22.07	32.14	2,103.65	391.62	249.58	14,518,135.42	2,087,204.62	39.967311	-109.405458
2,266.00	22.11	29.89	2,183.34	419.34	266.25	14,518,163.43	2,087,220.78	39.967387	-109.405398
2,357.00	24.22	35.09	2,267.01	449.46	285.51	14,518,193.90	2,087,239.51	39.967470	-109.405330
2,447.00	24.49	37.30	2,349.00	479.41	307.43	14,518,224.23	2,087,260.88	39.967552	-109.405251
2,538.00	25.56	39.36	2,431.46	509.59	331.31	14,518,254.83	2,087,284.22	39.967635	-109.405166
2,628.00	25.88	39.98	2,512.54	539.66	356.25	14,518,285.34	2,087,308.61	39.967718	-109.405077
2,719.00	25.94	40.23	2,594.39	570.07	381.86	14,518,316.20	2,087,333.68	39.967801	-109.404986
2,810.00	25.75	40.98	2,676.29	600.19	407.68	14,518,346.78	2,087,358.96	39.967884	-109.404894
2,900.00	25.44	41.86	2,757.46	629.34	433.40	14,518,376.39	2,087,384.15	39.967964	-109.404802
2,991.00	25.06	40.36	2,839.77	658.59	458.92	14,518,406.08	2,087,409.15	39.968044	-109.404711
3,082.00	24.69	40.11	2,922.32	687.81	483.65	14,518,435.74	2,087,433.35	39.968125	-109.404623
3,173.00	26.13	41.86	3,004.52	717.27	509.27	14,518,465.66	2,087,458.44	39.968205	-109.404531
3,263.00	25.69	43.11	3,085.47	746.27	535.82	14,518,495.13	2,087,484.47	39.968285	-109.404436
3,354.00	26.25	41.61	3,167.29	775.72	562.67	14,518,525.05	2,087,510.78	39.968366	-109.404341
3,445.00	25.75	41.48	3,249.08	805.57	589.12	14,518,555.37	2,087,536.70	39.968448	-109.404246
3,535.00	23.75	39.86	3,330.81	834.14	613.69	14,518,584.37	2,087,560.76	39.968526	-109.404158
3,626.00	22.38	39.73	3,414.53	861.53	636.51	14,518,612.17	2,087,583.08	39.968602	-109.404077
3,717.00	20.25	37.73	3,499.30	887.31	657.22	14,518,638.31	2,087,603.33	39.968672	-109.404003
3,807.00	19.38	38.48	3,583.97	911.32	676.05	14,518,662.65	2,087,621.72	39.968738	-109.403936
3,898.00	17.56	39.23	3,670.28	933.77	694.12	14,518,685.43	2,087,639.40	39.968800	-109.403871
3,988.00	18.25	40.48	3,755.92	955.01	711.86	14,518,706.98	2,087,656.75	39.968858	-109.403808
4,079.00	17.13	41.36	3,842.62	975.91	729.97	14,518,728.20	2,087,674.48	39.968916	-109.403744
4,170.00	14.56	40.11	3,930.15	994.72	746.19	14,518,747.29	2,087,690.37	39.968967	-109.403686
4,260.00	13.06	38.86	4,017.55	1,011.29	759.86	14,518,764.11	2,087,703.74	39.969013	-109.403637
4,351.00	11.69	37.11	4,106.43	1,026.65	771.88	14,518,779.68	2,087,715.48	39.969055	-109.403594
4,442.00	10.69	37.73	4,195.70	1,040.67	782.60	14,518,793.89	2,087,725.95	39.969093	-109.403556
4,532.00	9.63	38.73	4,284.29	1,053.15	792.42	14,518,806.54	2,087,735.54	39.969128	-109.403521
4,623.00	7.94	43.23	4,374.22	1,063.67	801.49	14,518,817.22	2,087,744.42	39.969156	-109.403488
4,714.00	6.06	39.48	4,464.54	1,071.95	808.85	14,518,825.64	2,087,751.63	39.969179	-109.403462
4,805.00	4.00	51.23	4,555.18	1,077.65	814.38	14,518,831.43	2,087,757.06	39.969195	-109.403442
4,892.13	1.51	73.84	4,642.21	1,079.87	817.85	14,518,833.72	2,087,760.49	39.969201	-109.403430
Intercept (NBU 1022-11B1CS)									
4,895.00	1.44	75.86	4,645.08	1,079.89	817.92	14,518,833.74	2,087,760.56	39.969201	-109.403430
4,919.62	1.15	73.85	4,669.69	1,080.04	818.46	14,518,833.89	2,087,761.10	39.969201	-109.403428
Drillers target (NBU 1022-11B1CS)									
4,986.00	0.38	52.86	4,736.06	1,080.35	819.27	14,518,834.22	2,087,761.90	39.969202	-109.403425
5,077.00	0.38	68.86	4,827.06	1,080.65	819.79	14,518,834.52	2,087,762.42	39.969203	-109.403423
5,167.00	0.31	98.73	4,917.06	1,080.72	820.31	14,518,834.60	2,087,762.94	39.969203	-109.403421
5,258.00	0.19	155.98	5,008.06	1,080.54	820.62	14,518,834.43	2,087,763.25	39.969203	-109.403420
5,349.00	0.25	185.48	5,099.06	1,080.21	820.66	14,518,834.10	2,087,763.30	39.969202	-109.403420
5,440.00	0.75	249.11	5,190.06	1,079.80	820.09	14,518,833.68	2,087,762.73	39.969201	-109.403422
5,530.00	1.00	237.11	5,280.05	1,079.16	818.88	14,518,833.02	2,087,761.53	39.969199	-109.403426
5,621.00	1.06	231.11	5,371.03	1,078.20	817.55	14,518,832.04	2,087,760.22	39.969196	-109.403431

Anadarko Petroleum Corp

Survey Report - Geographic

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-11B1CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	14' RKB + 5031' GL @ 5045.00ft
Site:	UINTAH_NBU 1022-11G2 Pad	MD Reference:	14' RKB + 5031' GL @ 5045.00ft
Well:	NBU 1022-11B1CS	North Reference:	True
Wellbore:	NBU 1022-11B1CS	Survey Calculation Method:	Minimum Curvature
Design:	NBU 1022-11B1CS	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
5,712.00	1.06	224.86	5,462.02	1,077.07	816.31	14,518,830.89	2,087,759.00	39.969193	-109.403435
5,802.00	1.06	217.98	5,552.00	1,075.83	815.21	14,518,829.62	2,087,757.92	39.969190	-109.403439
5,893.00	1.19	217.61	5,642.98	1,074.42	814.11	14,518,828.19	2,087,756.85	39.969186	-109.403443
5,984.00	1.19	206.61	5,733.96	1,072.82	813.11	14,518,826.58	2,087,755.88	39.969182	-109.403447
6,074.00	1.44	191.11	5,823.94	1,070.88	812.47	14,518,824.63	2,087,755.28	39.969176	-109.403449
6,165.00	1.38	283.73	5,914.92	1,070.02	811.19	14,518,823.74	2,087,754.01	39.969174	-109.403454
6,256.00	1.19	278.98	6,005.90	1,070.42	809.19	14,518,824.11	2,087,752.00	39.969175	-109.403461
6,346.00	1.19	265.98	6,095.88	1,070.50	807.34	14,518,824.16	2,087,750.15	39.969175	-109.403467
6,437.00	1.06	262.86	6,186.86	1,070.33	805.56	14,518,823.96	2,087,748.37	39.969175	-109.403474
6,528.00	0.75	266.98	6,277.85	1,070.20	804.13	14,518,823.80	2,087,746.94	39.969174	-109.403479
6,618.00	0.81	246.98	6,367.84	1,069.92	802.95	14,518,823.50	2,087,745.78	39.969174	-109.403483
6,709.00	0.56	229.23	6,458.84	1,069.37	802.03	14,518,822.94	2,087,744.86	39.969172	-109.403486
6,800.00	0.50	192.11	6,549.83	1,068.70	801.61	14,518,822.25	2,087,744.45	39.969170	-109.403488
6,891.00	0.69	188.11	6,640.83	1,067.77	801.45	14,518,821.32	2,087,744.31	39.969168	-109.403489
6,981.00	0.19	58.98	6,730.83	1,067.31	801.50	14,518,820.86	2,087,744.36	39.969166	-109.403488
7,072.00	0.38	113.98	6,821.82	1,067.26	801.90	14,518,820.82	2,087,744.77	39.969166	-109.403487
7,163.00	1.50	359.58	6,912.81	1,068.33	802.17	14,518,821.89	2,087,745.02	39.969169	-109.403486
7,253.00	1.38	357.36	7,002.79	1,070.59	802.11	14,518,824.15	2,087,744.92	39.969176	-109.403486
7,344.00	1.31	354.73	7,093.76	1,072.72	801.96	14,518,826.28	2,087,744.74	39.969181	-109.403487
7,435.00	1.13	352.11	7,184.74	1,074.64	801.75	14,518,828.20	2,087,744.48	39.969187	-109.403487
7,525.00	1.06	0.86	7,274.72	1,076.36	801.64	14,518,829.91	2,087,744.34	39.969191	-109.403488
7,616.00	0.31	24.86	7,365.72	1,077.42	801.75	14,518,830.98	2,087,744.44	39.969194	-109.403487
7,707.00	0.19	111.23	7,456.72	1,077.59	802.00	14,518,831.15	2,087,744.68	39.969195	-109.403487
7,797.00	0.75	131.61	7,546.71	1,077.14	802.58	14,518,830.72	2,087,745.27	39.969194	-109.403484
7,887.00	1.25	155.36	7,636.70	1,075.86	803.43	14,518,829.45	2,087,746.14	39.969190	-109.403481
7,978.00	1.50	164.36	7,727.67	1,073.81	804.16	14,518,827.41	2,087,746.91	39.969184	-109.403479
8,069.00	2.06	171.36	7,818.63	1,071.05	804.73	14,518,824.66	2,087,747.53	39.969177	-109.403477
8,159.00	2.75	183.36	7,908.55	1,067.29	804.84	14,518,820.91	2,087,747.71	39.969166	-109.403476
8,250.00	2.69	179.98	7,999.45	1,062.98	804.72	14,518,816.59	2,087,747.66	39.969155	-109.403477
8,341.00	2.75	175.11	8,090.34	1,058.67	804.90	14,518,812.28	2,087,747.93	39.969143	-109.403476
8,431.00	2.88	177.86	8,180.24	1,054.26	805.17	14,518,807.88	2,087,748.27	39.969131	-109.403475
8,522.00	2.75	174.86	8,271.13	1,049.80	805.45	14,518,803.43	2,087,748.63	39.969118	-109.403474
8,613.00	2.75	174.86	8,362.02	1,045.45	805.84	14,518,799.09	2,087,749.10	39.969106	-109.403473
8,654.00	2.53	167.78	8,402.98	1,043.59	806.12	14,518,797.23	2,087,749.41	39.969101	-109.403472
LAST SVY									
8,704.00	2.53	167.78	8,452.93	1,041.43	806.59	14,518,795.08	2,087,749.92	39.969095	-109.403470

PROJECTION - NBU 1022-11B1CS BHL

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,654.00	8,402.98	1,043.59	806.12	LAST SVY
8,704.00	8,452.93	1,041.43	806.59	PROJECTION

Checked By: _____ Approved By: _____ Date: _____