

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 1022-11L4CS		
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 <input type="checkbox"/> Coalbed Methane Well: NO <input type="checkbox"/>				5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES		
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.				7. OPERATOR PHONE 720 929-6587		
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217				9. OPERATOR E-MAIL mary.mondragon@anadarko.com		
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) UO 01197A		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	286 FSL 409 FWL	SWSW	11	10.0 S	22.0 E	S
Top of Uppermost Producing Zone	1505 FSL 665 FWL	NWSW	11	10.0 S	22.0 E	S
At Total Depth	1505 FSL 665 FWL	NWSW	11	10.0 S	22.0 E	S
21. COUNTY UINTAH		22. DISTANCE TO NEAREST LEASE LINE (Feet) 665		23. NUMBER OF ACRES IN DRILLING UNIT 1674		
		25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 500		26. PROPOSED DEPTH MD: 8802 TVD: 8600		
27. ELEVATION - GROUND LEVEL 5179		28. BOND NUMBER 22013542		29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE Permit #43-8496		

ATTACHMENTS

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

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

NAME Kathy Schneebeck-Dulnoan	TITLE Staff Regulatory Analyst	PHONE 720 929-6007
SIGNATURE	DATE 11/07/2008	EMAIL Kathy.SchneebeckDulnoan@anadarko.com
API NUMBER ASSIGNED 43047502230000	APPROVAL  Permit Manager	

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	12.25	9.625	0	1915		
Pipe	Grade	Length	Weight			
	Grade J-55 LT&C	1915	36.0			
	Cement Interval	Top (MD)	Bottom (MD)			
		0	1900			
		Cement Description	Class	Sacks	Yield	Weight

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	8802		
Pipe	Grade	Length	Weight			
	Grade I-80 Buttress	8802	11.6			
	Cement Interval	Top (MD)	Bottom (MD)			
		0	8954			
		Cement Description	Class	Sacks	Yield	Weight

NBU 1022-11L4CS

Pad: NBU 1022-11M

Surface: 286' FSL 409' FWL (SW/4SW/4)

BHL: 1,505' FSL 665' FWL (NW/4SW/4)

Sec. 11 T10S R22E

Uintah, Utah

Mineral Lease: UO 01197A

ONSHORE ORDER NO. 1

DRILLING PROGRAM

An APD for this well was previously submitted as the NBU 1022-11L3S. After the onsite was conducted on April 28, 2009, the location was moved due to topography. The following information reflects those changes.

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

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 – Surface	
Green River	1,049'	
Birds Nest	1,357'	Water
Mahogany	1,714'	Water
Wasatch	4,133'	Gas
Mesaverde	6,379'	Gas
MVU2	7,376'	Gas
MVL1	7,933'	Gas
TVD	8,600'	
TD	8,802'	

3. Pressure Control Equipment (Schematic Attached)

Please refer to the attached Drilling Program.

4. Proposed Casing & Cementing Program:

Please refer to the attached Drilling Program.

5. Drilling Fluids Program:

Please refer to the attached Drilling Program.

6. Evaluation Program:

Please refer to the attached Drilling Program.

7. Abnormal Conditions:

Maximum anticipated bottomhole pressure calculated at 8,600' TVD, approximately equals 5,210 psi (calculated at 0.59 psi/foot).

Maximum anticipated surface pressure equals approximately 3,198 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. Anticipated Starting Dates:

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

9. Variances:

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

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

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

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

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

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

Background

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

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

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

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

Variance for BOPE Requirements

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

Variance for Mud Material Requirements

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

Variance for Special Drilling Operation (surface equipment placement) Requirements

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

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

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

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

Conclusion

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

10. Other Information:

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3,520	2,020	453,000
SURFACE	9-5/8"	0 to 1,915	36.00	J-55	LTC	1.04	2.25	8.36
PRODUCTION	4-1/2"	0 to 8,802	11.60	I-80	BTC	2.36	1.22	3.12

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)
 (Burst Assumptions: TD = 11.6 ppg) 0.22 psi/ft = gradient for partially evac wellbore
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MASP 3,198 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
 (Burst Assumptions: TD = 11.6 ppg) 0.59 psi/ft = bottomhole gradient
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MABHP 5,210 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	215	60%	15.60	1.18
Option 1	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele Premium cmt + 2% CaCl	380	0%	15.60	1.18
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized					
Option 2	LEAD	1,415'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	340	35%	12.60	1.81
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	35%	15.60	1.18
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	3,632'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	350	40%	11.00	3.38
	TAIL	5,170'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,270	40%	14.30	1.31

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

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

FLOAT EQUIPMENT & CENTRALIZERS

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

ADDITIONAL INFORMATION

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

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

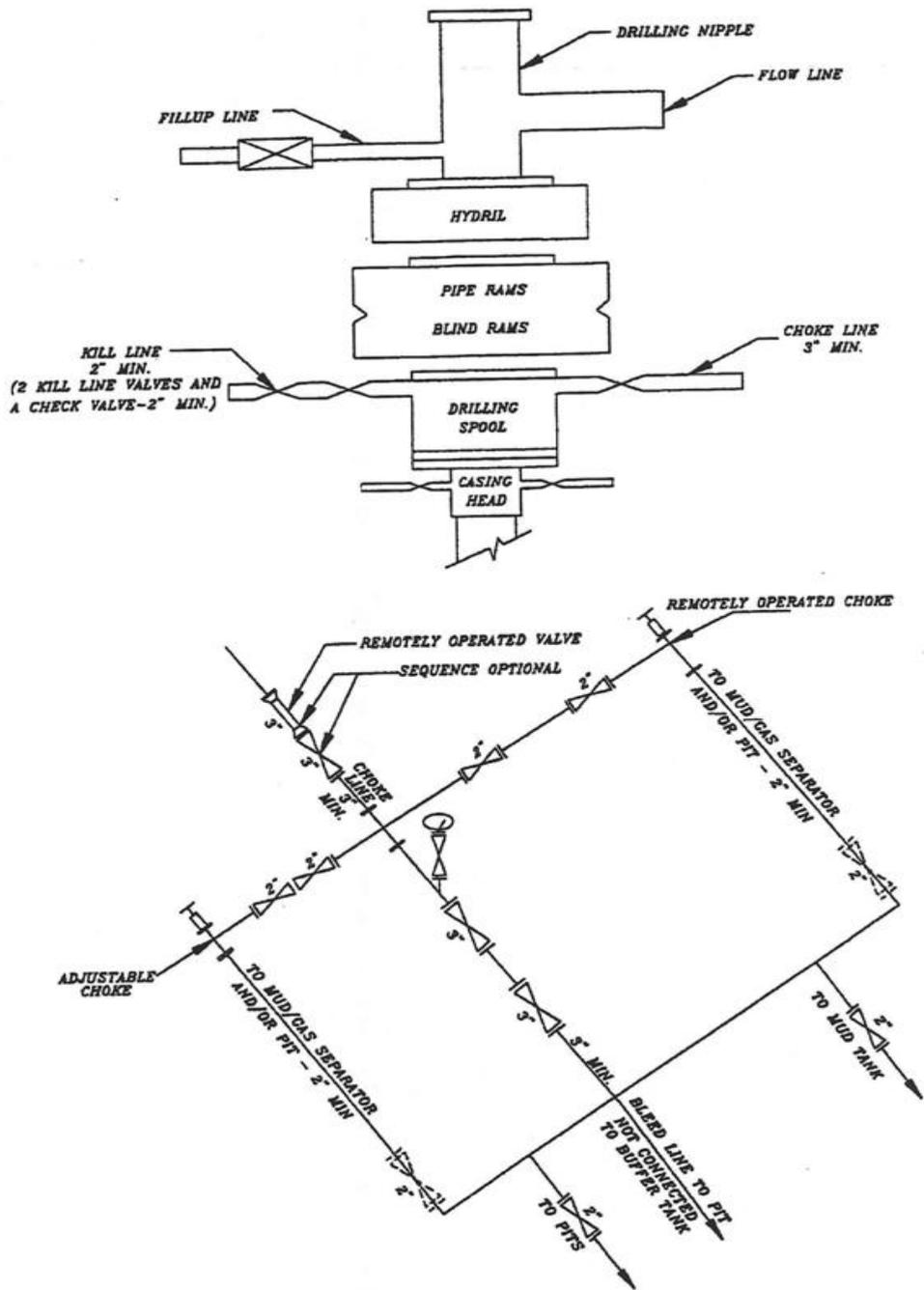
Surveys will be taken at 1,000' minimum intervals.

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

DRILLING ENGINEER: _____ **DATE:** _____
 John Huycke / Emile Goodwin

DRILLING SUPERINTENDENT: _____ **DATE:** _____
 John Merkel / Lovel Young

EXHIBIT A NBU 1022-11L4CS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

BOTTOM HOLE FOOTAGES

- NBU 1022-11M4CS
5' FSL & 665' FWL

- NBU 1022-11M4BS
505' FSL & 665' FWL

- NBU 1022-11M1BS
1005' FSL & 665' FWL

- NBU 1022-11L4CS
1505' FSL & 665' FWL

BASIS OF BEARINGS IS THE WEST LINE OF THE SW 1/4 OF SECTION 11, T10S, R22E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°06'14"W.



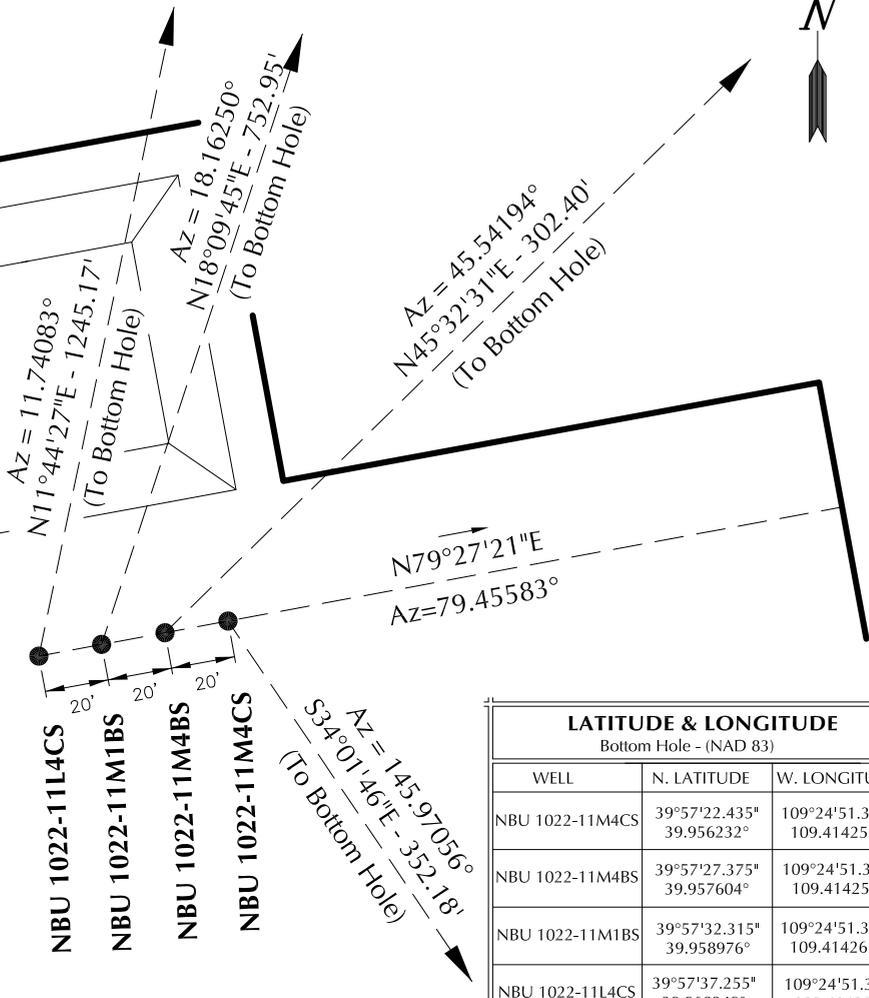
SURFACE POSITION FOOTAGES:

- NBU 1022-11M4CS
297' FSL & 468' FWL

- NBU 1022-11M4BS
293' FSL & 449' FWL

- NBU 1022-11M1BS
290' FSL & 429' FWL

- NBU 1022-11L4CS
286' FSL & 409' FWL



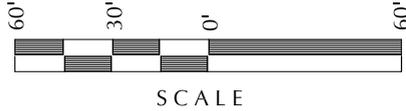
LATITUDE & LONGITUDE Surface Position - (NAD 83)		
WELL	N. LATITUDE	W. LONGITUDE
NBU 1022-11M4CS	39°57'25.320" 39.957033°	109°24'53.853" 109.414959°
NBU 1022-11M4BS	39°57'25.284" 39.957023°	109°24'54.105" 109.415029°
NBU 1022-11M1BS	39°57'25.248" 39.957013°	109°24'54.359" 109.415100°
NBU 1022-11L4CS	39°57'25.212" 39.957003°	109°24'54.612" 109.415170°

LATITUDE & LONGITUDE Surface Position - (NAD 27)		
WELL	N. LATITUDE	W. LONGITUDE
NBU 1022-11M4CS	39°57'25.443" 39.957068°	109°24'51.399" 109.414278°
NBU 1022-11M4BS	39°57'25.407" 39.957058°	109°24'51.652" 109.414348°
NBU 1022-11M1BS	39°57'25.372" 39.957048°	109°24'51.906" 109.414418°
NBU 1022-11L4CS	39°57'25.335" 39.957038°	109°24'52.157" 109.414488°

RELATIVE COORDINATES From Surface Position to Bottom Hole		
WELL	NORTH	EAST
NBU 1022-11M4CS	-292'	197'
NBU 1022-11M4BS	212'	216'
NBU 1022-11M1BS	715'	235'
NBU 1022-11L4CS	1,219'	253'

LATITUDE & LONGITUDE Bottom Hole - (NAD 83)		
WELL	N. LATITUDE	W. LONGITUDE
NBU 1022-11M4CS	39°57'22.435" 39.956232°	109°24'51.325" 109.414257°
NBU 1022-11M4BS	39°57'27.375" 39.957604°	109°24'51.333" 109.414259°
NBU 1022-11M1BS	39°57'32.315" 39.958976°	109°24'51.341" 109.414261°
NBU 1022-11L4CS	39°57'37.255" 39.960349°	109°24'51.349" 109.414264°

LATITUDE & LONGITUDE Bottom Hole - (NAD 27)		
WELL	N. LATITUDE	W. LONGITUDE
NBU 1022-11M4CS	39°57'22.559" 39.956266°	109°24'48.871" 109.413575°
NBU 1022-11M4BS	39°57'27.499" 39.957639°	109°24'48.879" 109.413578°
NBU 1022-11M1BS	39°57'32.439" 39.959011°	109°24'48.887" 109.413580°
NBU 1022-11L4CS	39°57'37.379" 39.960383°	109°24'48.895" 109.413582°



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

WELL PAD - NBU 1022-11M

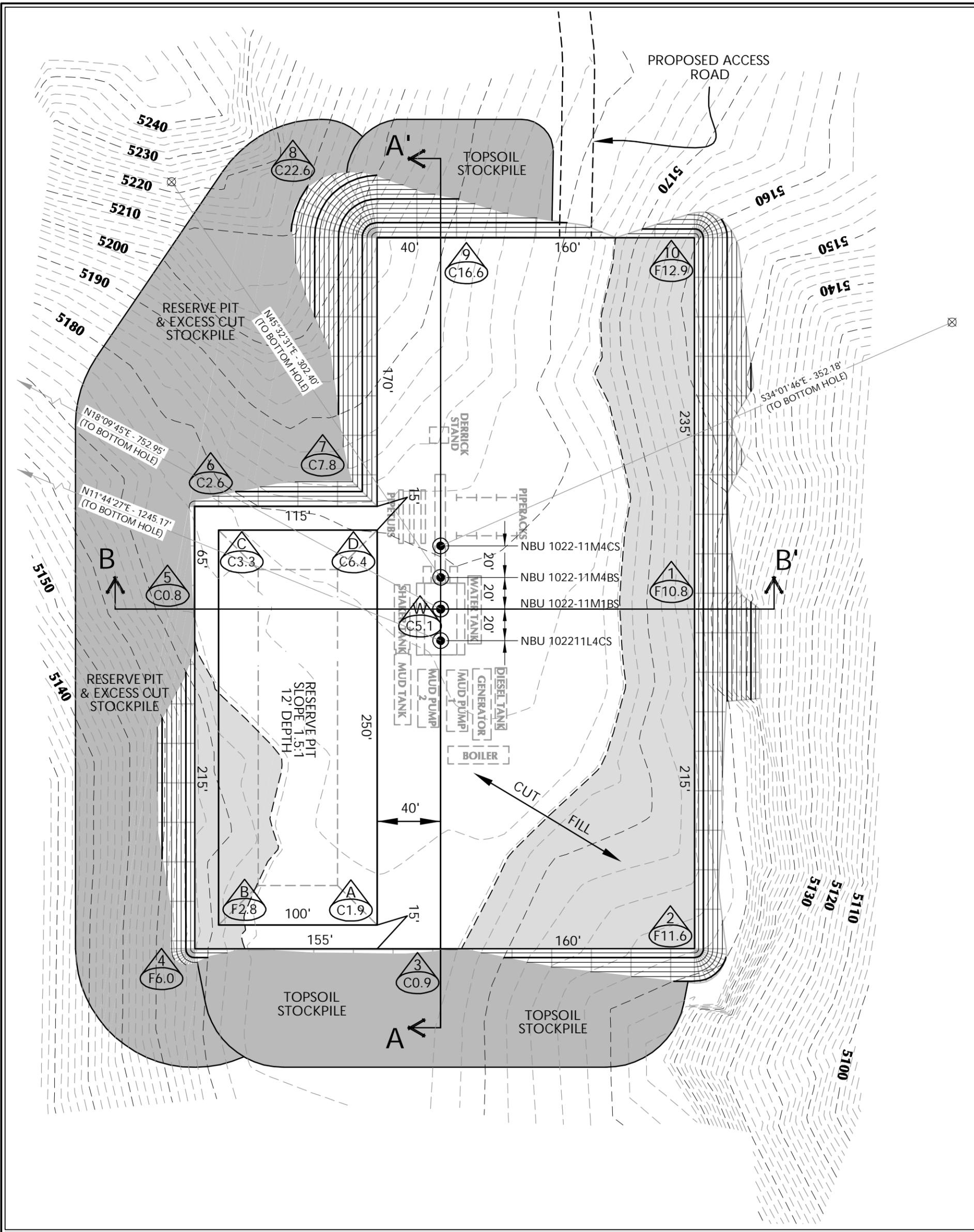
WELL PAD INTERFERENCE PLAT
WELLS - NBU 1022-11M4CS, NBU 1022-11M4BS,
NBU 1022-11M1BS & NBU 1022-11L4CS
LOCATED IN SECTION 11, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH.



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

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

DATE SURVEYED: 05-18-09	SURVEYED BY: M.S.B.	SHEET NO: 5
DATE DRAWN: 05-19-09	DRAWN BY: E.M.S.	
SCALE: 1" = 60'		Date Last Revised: 08-06-09
		5 OF 13



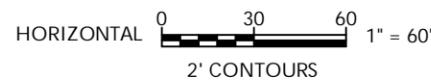
WELL PAD NBU 1022-11M QUANTITIES

EXISTING GRADE @ CENTER OF WELL PAD = 5178.8'
 FINISHED GRADE ELEVATION = 5173.7'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1

TOTAL CUT FOR WELL PAD = 17,357 C.Y.
 TOTAL FILL FOR WELL PAD = 11,822 C.Y.
 TOPSOIL @ 6" DEPTH = 2,825 C.Y.
 EXCESS MATERIAL = 5,535 C.Y.
 TOTAL DISTURBANCE = 3.50 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00
 RESERVE PIT CAPACITY (2' OF FREEBOARD)
 +/- 32,370 BARRELS
 RESERVE PIT VOLUME
 +/- 8,510 CY

WELL PAD LEGEND

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



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



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 371 Coffeen Avenue
 Sheridan WY 82801
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 Fax 307-674-0182

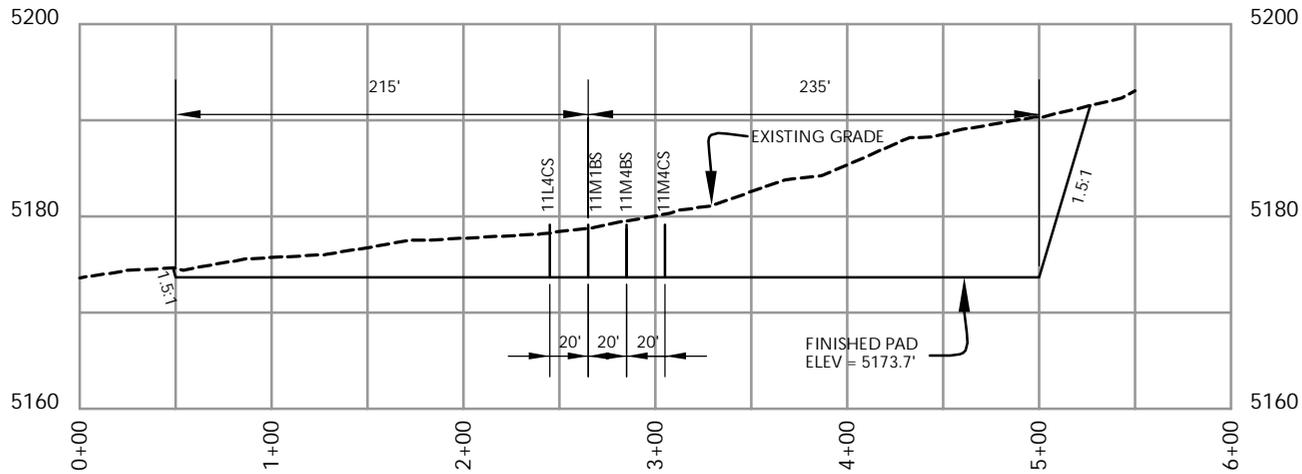
WELL PAD - NBU 1022-11M

WELL PAD - LOCATION LAYOUT
 NBU 1022-11M4CS, NBU 1022-11M4BS,
 NBU 1022-11M1BS & NBU 1022-11L4CS
 LOCATED IN SECTION 11, T10S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH.

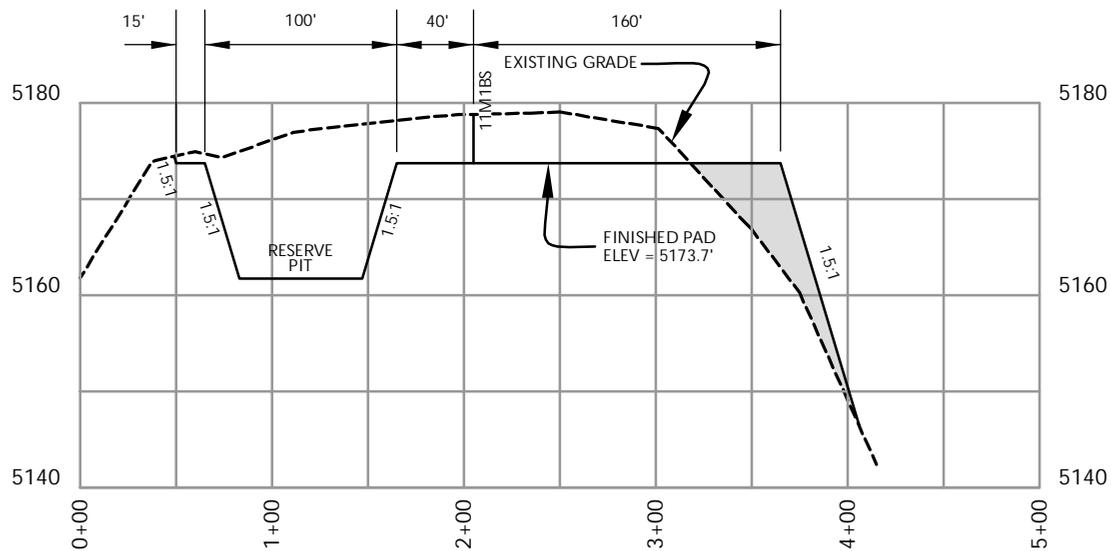
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REVISED:	

SHEET NO:
6
 6 OF 13

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



CROSS SECTION A-A'



CROSS SECTION B-B'

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

WELL PAD - NBU 1022-11M

WELL PAD - CROSS SECTIONS
NBU 1022-11M4CS, NBU 1022-11M4BS,
NBU 1022-11M1BS & NBU 1022-11L4CS
LOCATED IN SECTION 11, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH



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

Scale: 1"=100'

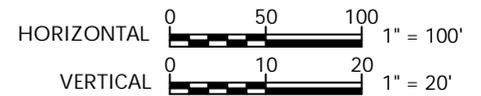
Date: 7/9/09

SHEET NO:

7

7 OF 13

REVISED:



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

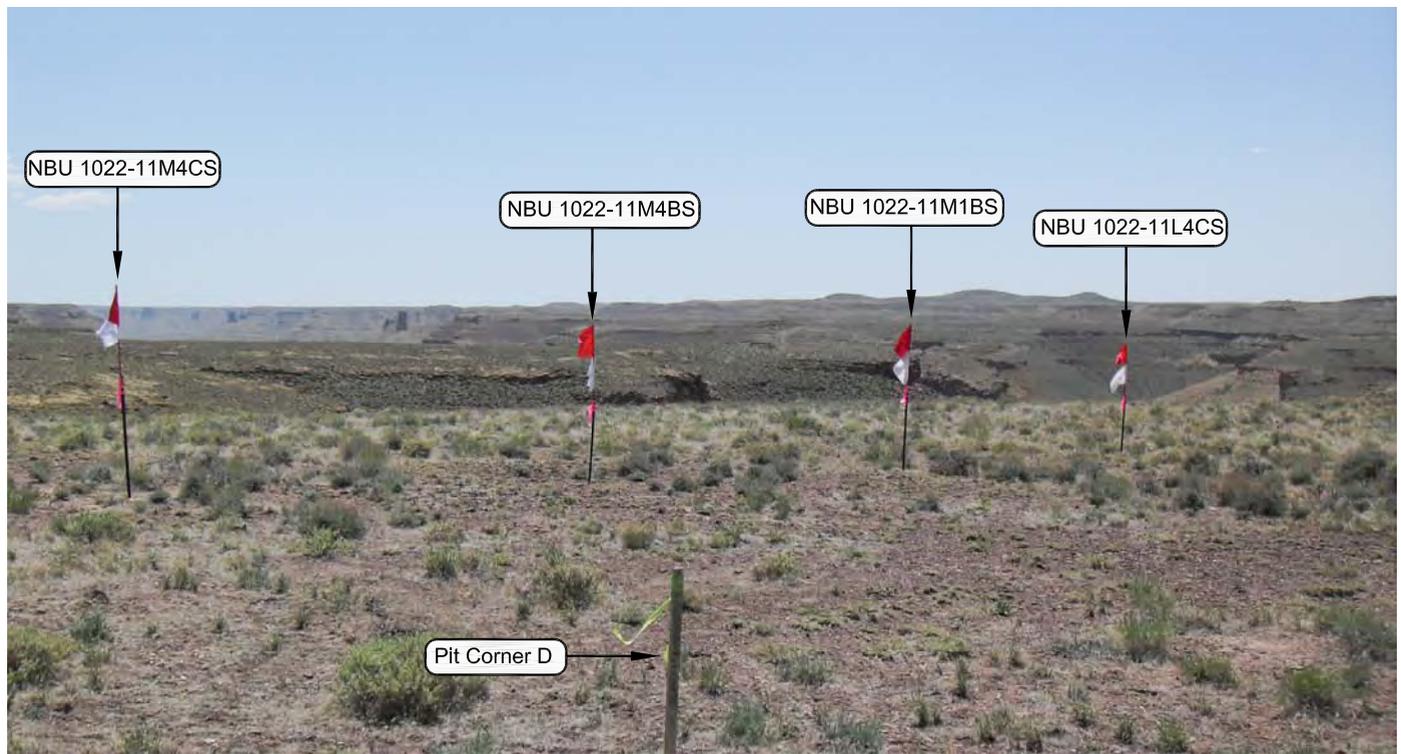


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKES

CAMERA ANGLE: SOUTHWESTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: WESTERLY

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

Well Pad - NBU 1022-11M

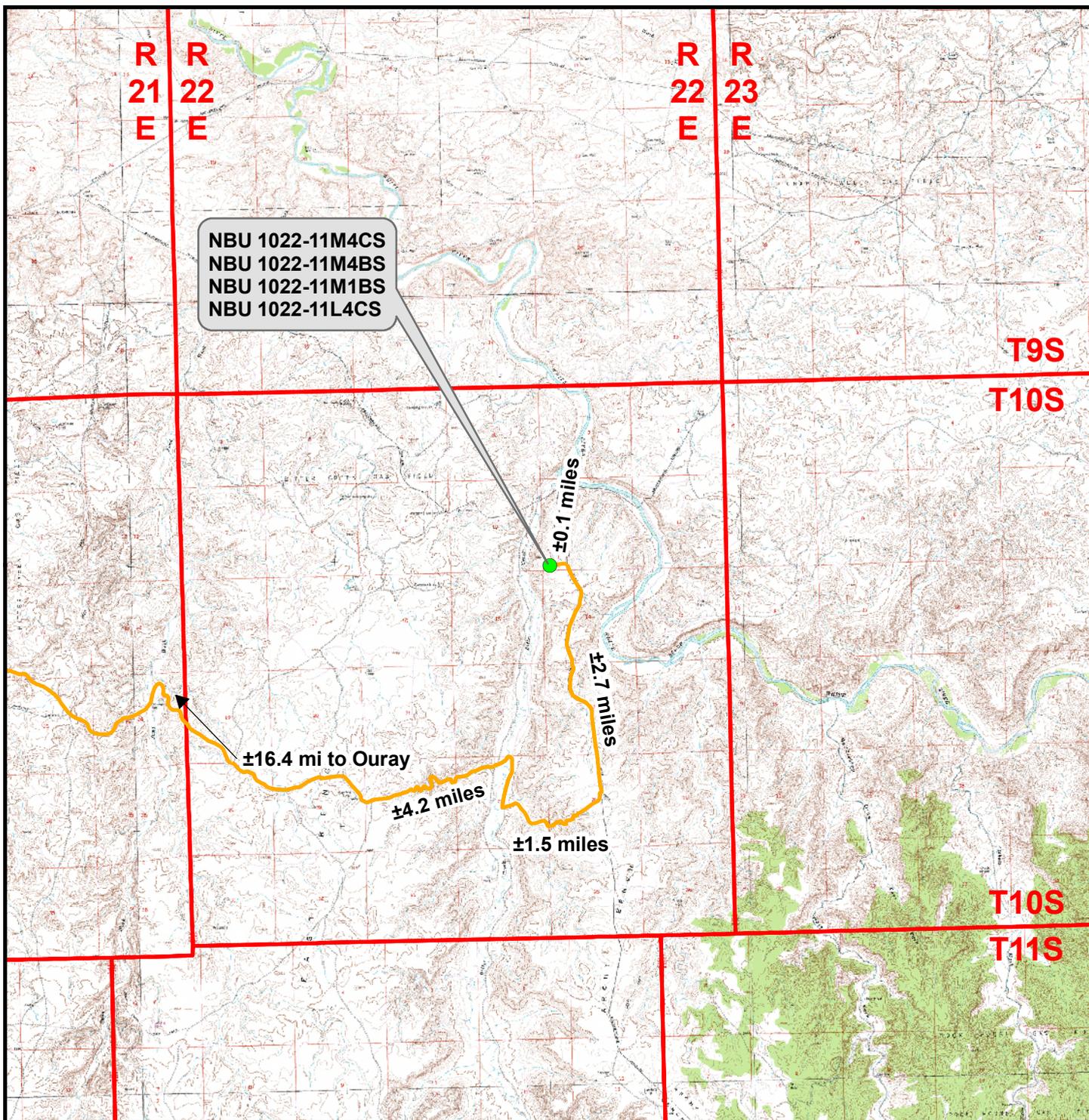
**NBU 1022-11M4CS, NBU 1022-11M4BS,
 NBU 1022-11M1BS & NBU 1022-11L4CS
 LOCATION PHOTOS
 LOCATED IN SECTION 11, T10S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH.**



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DATE PHOTOS TAKEN: 05-18-09	PHOTOS TAKEN BY: M.S.B.	SHEET NO: 8
DATE DRAWN: 05-19-09	DRAWN BY: E.M.S.	
Date Last Revised: 08-06-09		8 OF 13



Legend

- Proposed Well Location
- Access Route - Proposed

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

Well Pad - NBU 1022-11M

**NBU 1022-11M4CS, NBU 1022-11M4BS,
 NBU 1022-11M1BS & NBU 1022-11L4CS**

Topo A

**Located In Section 11, T10S, R22E
 S.L.B.&M., Uintah County, Utah**

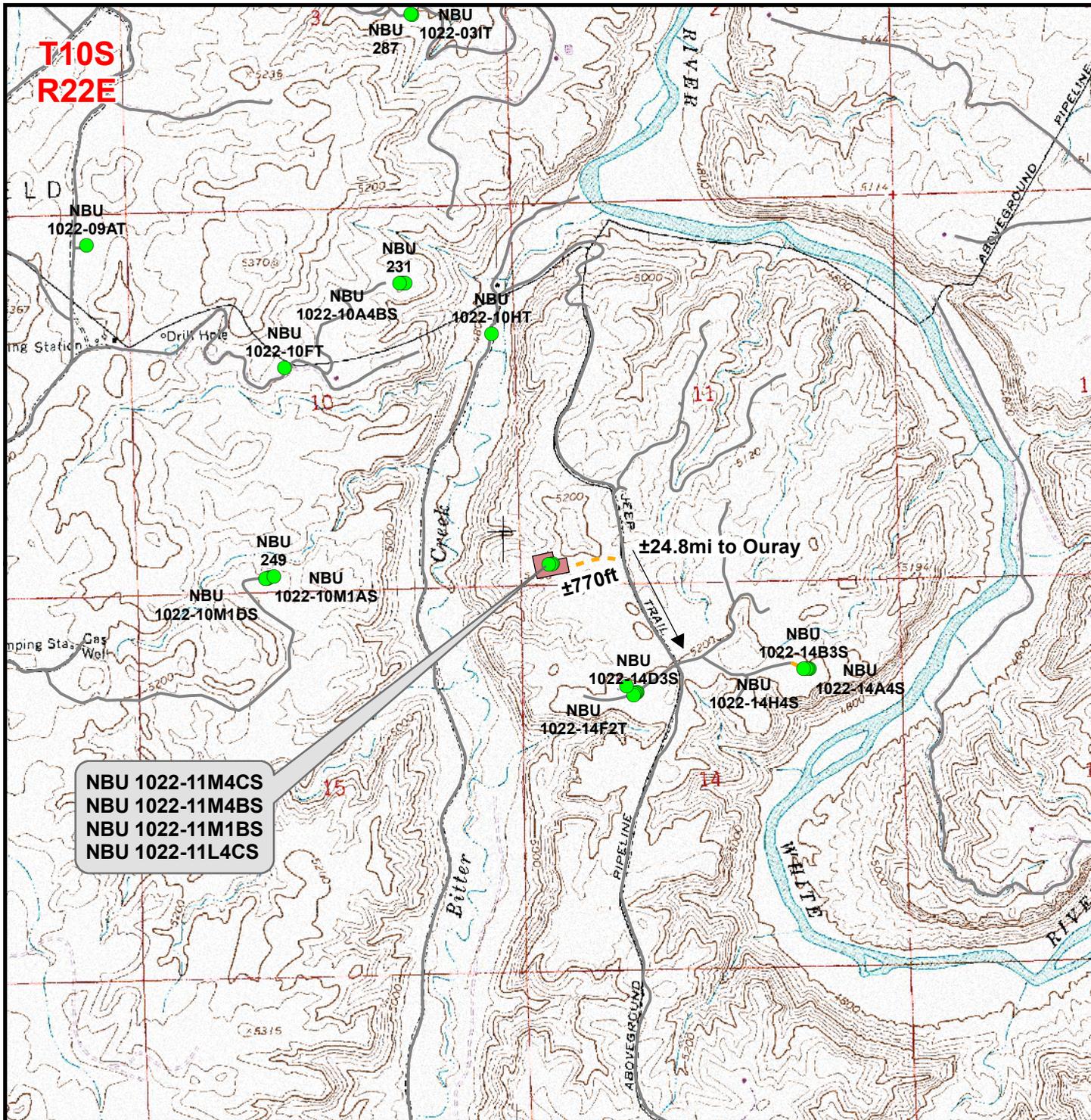


CONSULTING, LLC
 371 Coffeen Avenue
 Sheridan, WY 82801
 Phone (307) 674-0609
 Fax (307) 674-0182



Scale: 1:100,000	NAD83 USP Central
Drawn: JELo	Date: 9 July 2009
Revised: JELo	Date: 17 Aug 2009

Sheet No:
9
9 of 13



Legend

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

Total Proposed Road Length: ±770ft

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

Well Pad - NBU 1022-11M

**NBU 1022-11M4CS, NBU 1022-11M4BS,
 NBU 1022-11M1BS & NBU 1022-11L4CS**

Topo B

**Located In Section 11, T10S, R22E
 S.L.B.&M., Uintah County, Utah**

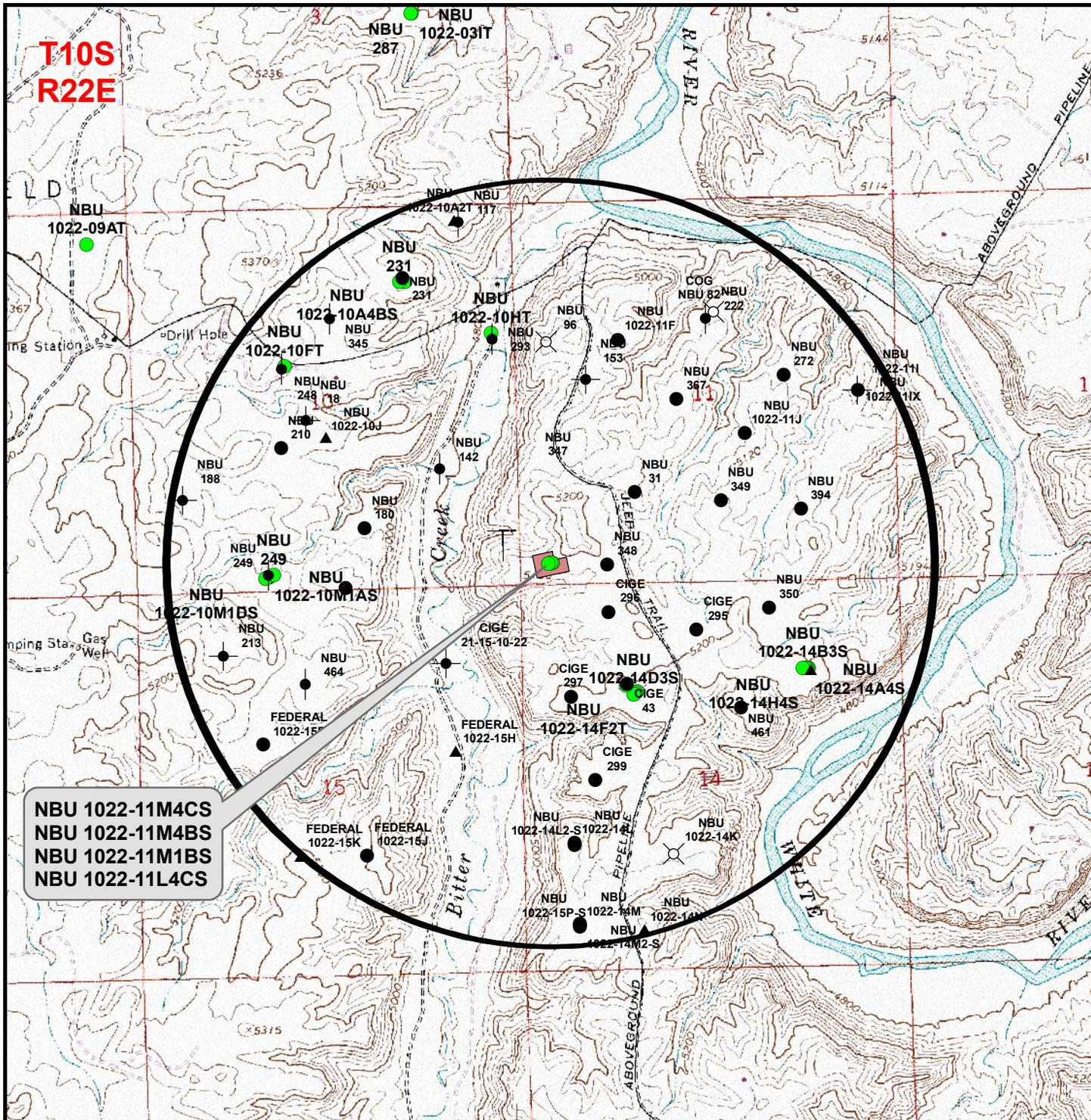


CONSULTING, LLC
 371 Coffeen Avenue
 Sheridan, WY 82801
 Phone (307) 674-0609
 Fax (307) 674-0182



Scale: 1" = 2,000ft	NAD83 USP Central
Drawn: JELo	Date: 9 July 2009
Revised: JELo	Date: 17 Aug 2009

Sheet No: 10 10 of 13



NBU 1022-11M4CS
 NBU 1022-11M4BS
 NBU 1022-11M1BS
 NBU 1022-11L4CS

Legend

- Well - Proposed
- Well - 1 Mile Radius
- Well Pad
- Producing
- ▲ Approved permit (APD); not yet spudded
- Spudded (Drilling commenced: Not yet comple
- ⊗ Location Abandoned
- Shut-In
- Temporarily-Abandoned
- Plugged and Abandoned

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

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

Well Pad - NBU 1022-11M

**NBU 1022-11M4CS, NBU 1022-11M4BS,
 NBU 1022-11M1BS & NBU 1022-11L4CS**

Topo C

**Located In Section 11, T10S, R22E
 S.L.B.&M., Uintah County, Utah**

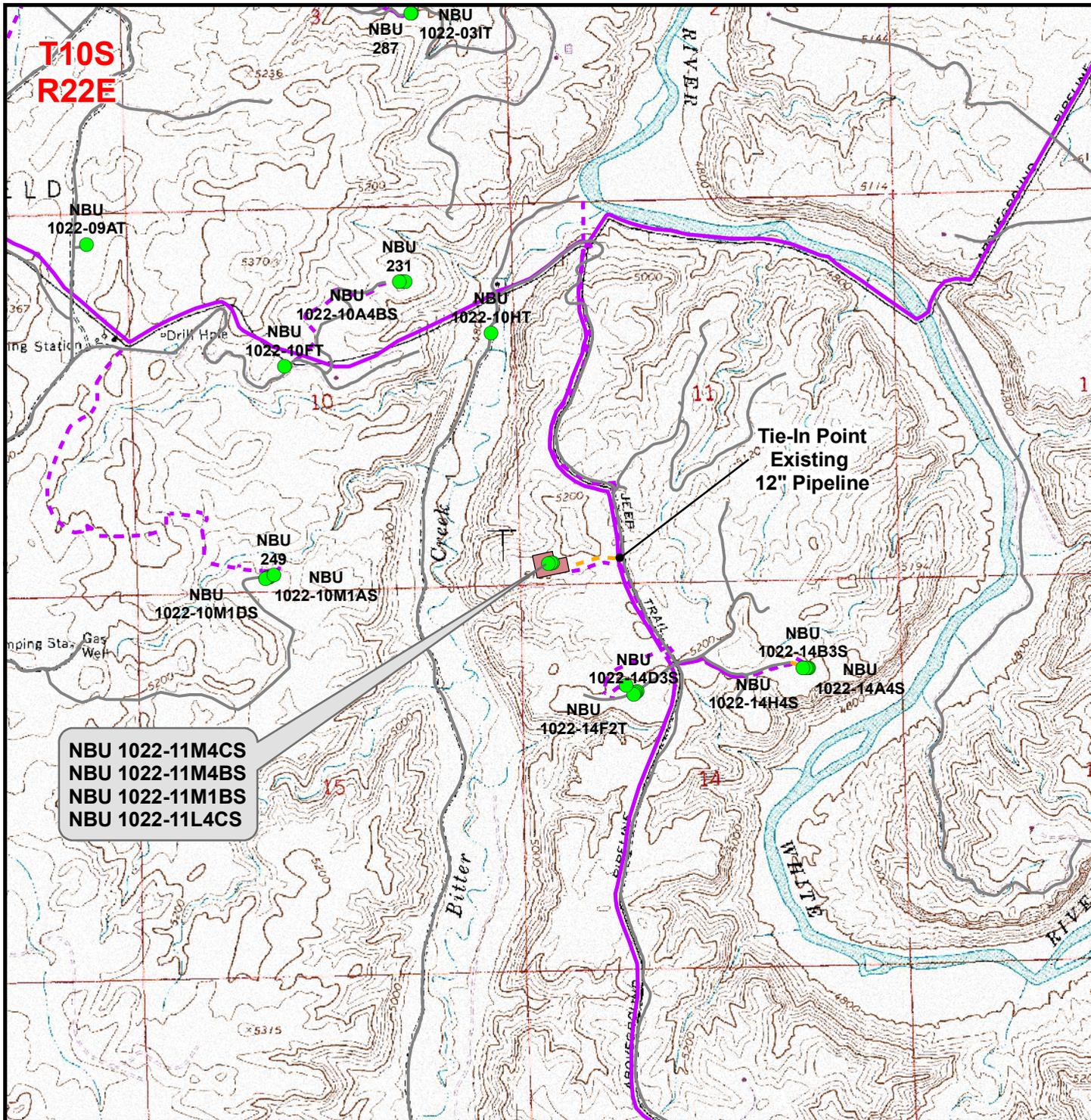


609 CONSULTING, LLC
 371 Coffeen Avenue
 Sheridan, WY 82801
 Phone (307) 674-0609
 Fax (307) 674-0182



Scale: 1" = 2,000ft NAD83 USP Central
 Drawn: JELO Date: 9 July 2009
 Revised: JELO Date: 17 Aug 2009

Sheet No:
11 11 of 13



Legend

- Well - Proposed
- Well Pad
- Road - Proposed
- Pipeline - Proposed
- Road - Existing
- Pipeline - Existing

Proposed Pipeline Length From Tie-In Point To Edge Of Pad: ±770ft
 Proposed Pipeline Length Around Pad: ±660ft

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

Well Pad - NBU 1022-11M

**NBU 1022-11M4CS, NBU 1022-11M4BS,
 NBU 1022-11M1BS & NBU 1022-11L4CS**

Topo D

**Located In Section 11, T10S, R22E
 S.L.B.&M., Uintah County, Utah**



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



Scale: 1" = 2,000ft	NAD83 USP Central
Drawn: JELo	Date: 9 July 2009
Revised: JELo	Date: 17 Aug 2009

Sheet No:
12 12 of 13

Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – NBU 1022-11M
WELLS - NBU 1022-11M4CS, NBU 1022-11M4BS,
NBU 1022-11M1BS & NBU 1022-11L4CS
Section 11, T10S, R22E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 11.2 MILES TO THE INTERSECTION OF THE GLEN BENCH ROAD (COUNTY B ROAD 3260). EXIT LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY DIRECTION ALONG THE GLEN BENCH ROAD APPROXIMATELY 5.2 MILES TO THE INTERSECTION OF THE BITTER CREEK ROAD (COUNTY B ROAD 4120). EXIT RIGHT AND PROCEED IN A SOUTHEASTERLY, THEN NORTHEASTERLY, THEN SOUTHERLY DIRECTION ALONG THE BITTER CREEK ROAD APPROXIMATELY 4.2 MILES TO THE INTERSECTION 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 ARCHY BENCH ROAD (COUNTY B ROAD 4150). EXIT LEFT AND PROCEED IN A NORTHERLY DIRECTION ALONG THE ARCHY BENCH ROAD APPROXIMATELY 2.7 MILES TO A TO THE PROPOSED ACCESS ROAD. FOLLOW ROAD FLAGS IN A WESTERLY DIRECTION APPROXIMATELY 770 FEET TO THE PROPOSED WELL LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE WELL LOCATION IS APPROXIMATELY 55.6 MILES IN A SOUTHERLY DIRECTION.



ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)

NBU-11M PAD

NBU 1022-11L4CS

NBU 1022-11L4CS

Plan: Design #1

Standard Planning Report

14 September, 2009



Weatherford®



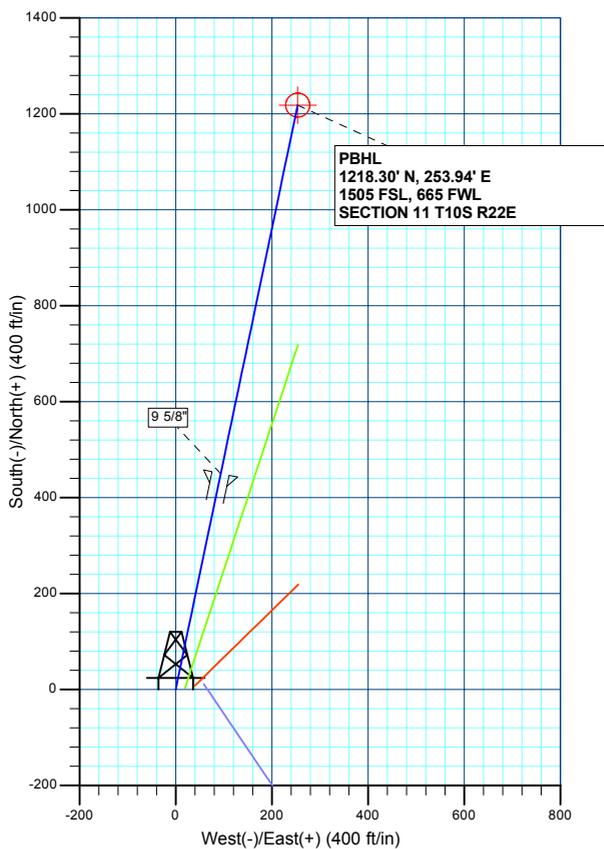
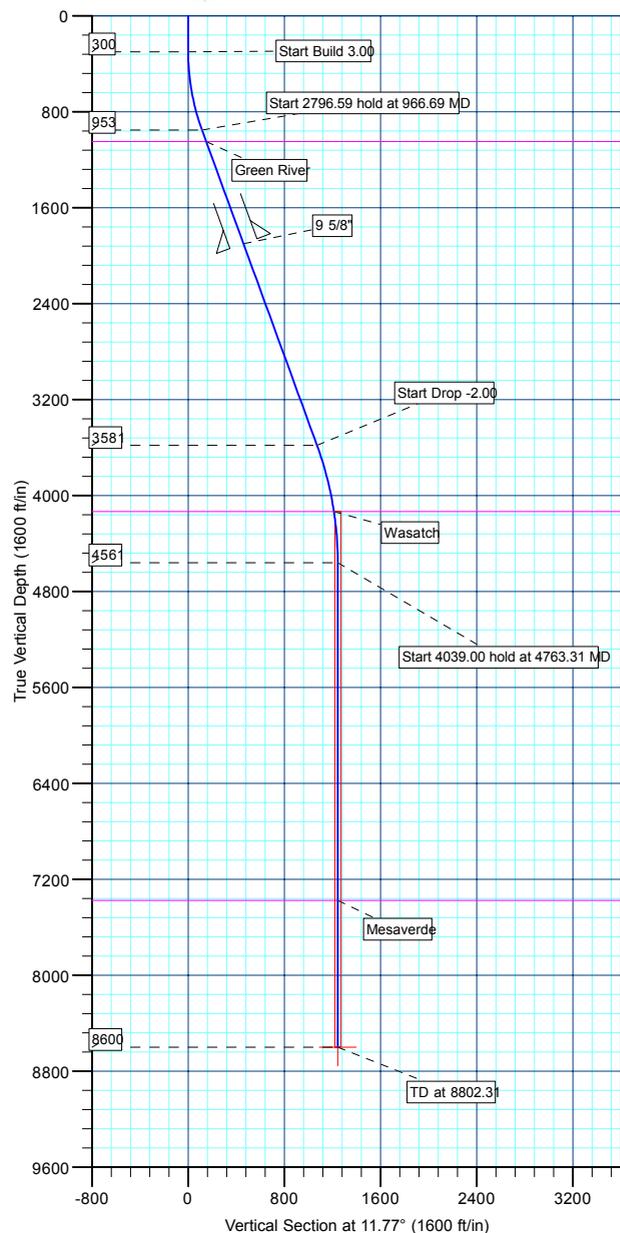
WELL DETAILS: NBU 1022-11L4CS						
+N/-S	+E/-W	Northing	Ground Level:	5179.00	Longitude	Slot
0.00	0.00	14514349.23	Easting	2084740.67	39° 57' 25.337 N	109° 24' 52.157 W

WELLBORE TARGET DETAILS (LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	8600.00	1218.30	253.94	39° 57' 37.379 N	109° 24' 48.895 W	Circle (Radius: 25.00)

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
966.69	20.00	11.77	953.23	112.76	23.50	3.00	11.77	115.19	
3763.28	20.00	11.77	3581.16	1049.16	218.68	0.00	0.00	1071.70	
4763.31	0.00	0.00	4561.00	1218.30	253.94	2.00	180.00	1244.48	
8802.31	0.00	0.00	8600.00	1218.30	253.94	0.00	0.00	1244.48	PBHL



KB ELEV: WELL @ 5193.00ft (Original Well Elev)
 GRD ELEV: 5179.00



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1049.00	1068.60	Green River
4133.00	4333.70	Wasatch
7376.00	7578.31	Mesaverde

CASING DETAILS			
TVD	MD	Name	Size
1900.00	1974.22	9 5/8"	9.62

Plan: Design #1 (NBU 1022-11L4CS/NBU 1022-11L4CS)
 Created By: Robert H. Scott



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well NBU 1022-11L4CS
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 5193.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	MD Reference:	WELL @ 5193.00ft (Original Well Elev)
Site:	NBU-11M PAD	North Reference:	True
Well:	NBU 1022-11L4CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 1022-11L4CS		
Design:	Design #1		

Project	UINTAH COUNTY, UTAH (nad 27),		
Map System:	Universal Transverse Mercator (US Survey Fee	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	NBU-11M PAD, SECTION 11 T10S R22E				
Site Position:		Northing:	14,514,361.20ft	Latitude:	39° 57' 25.445 N
From:	Lat/Long	Easting:	2,084,799.33ft	Longitude:	109° 24' 51.401 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	1.02 °

Well	NBU 1022-11L4CS					
Well Position	+N/-S	-10.93 ft	Northing:	14,514,349.23 ft	Latitude:	39° 57' 25.337 N
	+E/-W	-58.86 ft	Easting:	2,084,740.67 ft	Longitude:	109° 24' 52.157 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,179.00 ft

Wellbore	NBU 1022-11L4CS				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	9/14/2009	11.29	65.92	52,500

Design	Design #1			
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	11.77

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	
966.69	20.00	11.77	953.23	112.76	23.50	3.00	3.00	0.00	11.77	
3,763.28	20.00	11.77	3,581.16	1,049.16	218.68	0.00	0.00	0.00	0.00	
4,763.31	0.00	0.00	4,561.00	1,218.30	253.94	2.00	-2.00	0.00	180.00	
8,802.31	0.00	0.00	8,600.00	1,218.30	253.94	0.00	0.00	0.00	0.00	PBHL_NBU 1022-1



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well NBU 1022-11L4CS
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 5193.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	MD Reference:	WELL @ 5193.00ft (Original Well Elev)
Site:	NBU-11M PAD	North Reference:	True
Well:	NBU 1022-11L4CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 1022-11L4CS		
Design:	Design #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Start Build 3.00									
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	3.00	11.77	399.95	2.56	0.53	2.62	3.00	3.00	0.00
500.00	6.00	11.77	499.63	10.24	2.13	10.46	3.00	3.00	0.00
600.00	9.00	11.77	598.77	23.02	4.80	23.51	3.00	3.00	0.00
700.00	12.00	11.77	697.08	40.86	8.52	41.74	3.00	3.00	0.00
800.00	15.00	11.77	794.31	63.71	13.28	65.08	3.00	3.00	0.00
900.00	18.00	11.77	890.18	91.51	19.07	93.48	3.00	3.00	0.00
Start 2796.59 hold at 966.69 MD									
966.69	20.00	11.77	953.23	112.76	23.50	115.19	3.00	3.00	0.00
1,000.00	20.00	11.77	984.53	123.92	25.83	126.58	0.00	0.00	0.00
Green River									
1,068.60	20.00	11.77	1,049.00	146.89	30.62	150.04	0.00	0.00	0.00
1,100.00	20.00	11.77	1,078.50	157.40	32.81	160.78	0.00	0.00	0.00
1,200.00	20.00	11.77	1,172.47	190.88	39.79	194.99	0.00	0.00	0.00
1,300.00	20.00	11.77	1,266.44	224.37	46.77	229.19	0.00	0.00	0.00
1,400.00	20.00	11.77	1,360.41	257.85	53.75	263.39	0.00	0.00	0.00
1,500.00	20.00	11.77	1,454.38	291.33	60.72	297.59	0.00	0.00	0.00
1,600.00	20.00	11.77	1,548.35	324.82	67.70	331.80	0.00	0.00	0.00
1,700.00	20.00	11.77	1,642.32	358.30	74.68	366.00	0.00	0.00	0.00
1,800.00	20.00	11.77	1,736.28	391.78	81.66	400.20	0.00	0.00	0.00
1,900.00	20.00	11.77	1,830.25	425.27	88.64	434.41	0.00	0.00	0.00
9 5/8"									
1,974.22	20.00	11.77	1,900.00	450.12	93.82	459.79	0.00	0.00	0.00
2,000.00	20.00	11.77	1,924.22	458.75	95.62	468.61	0.00	0.00	0.00
2,100.00	20.00	11.77	2,018.19	492.23	102.60	502.81	0.00	0.00	0.00
2,200.00	20.00	11.77	2,112.16	525.72	109.58	537.02	0.00	0.00	0.00
2,300.00	20.00	11.77	2,206.13	559.20	116.56	571.22	0.00	0.00	0.00
2,400.00	20.00	11.77	2,300.10	592.68	123.54	605.42	0.00	0.00	0.00
2,500.00	20.00	11.77	2,394.07	626.17	130.52	639.62	0.00	0.00	0.00
2,600.00	20.00	11.77	2,488.04	659.65	137.50	673.83	0.00	0.00	0.00
2,700.00	20.00	11.77	2,582.00	693.13	144.47	708.03	0.00	0.00	0.00
2,800.00	20.00	11.77	2,675.97	726.62	151.45	742.23	0.00	0.00	0.00
2,900.00	20.00	11.77	2,769.94	760.10	158.43	776.44	0.00	0.00	0.00
3,000.00	20.00	11.77	2,863.91	793.58	165.41	810.64	0.00	0.00	0.00
3,100.00	20.00	11.77	2,957.88	827.07	172.39	844.84	0.00	0.00	0.00
3,200.00	20.00	11.77	3,051.85	860.55	179.37	879.05	0.00	0.00	0.00
3,300.00	20.00	11.77	3,145.82	894.03	186.35	913.25	0.00	0.00	0.00
3,400.00	20.00	11.77	3,239.79	927.52	193.33	947.45	0.00	0.00	0.00
3,500.00	20.00	11.77	3,333.76	961.00	200.31	981.65	0.00	0.00	0.00
3,600.00	20.00	11.77	3,427.72	994.48	207.29	1,015.86	0.00	0.00	0.00
3,700.00	20.00	11.77	3,521.69	1,027.97	214.27	1,050.06	0.00	0.00	0.00
Start Drop -2.00									
3,763.28	20.00	11.77	3,581.16	1,049.16	218.68	1,071.70	0.00	0.00	0.00
3,800.00	19.27	11.77	3,615.74	1,061.23	221.20	1,084.04	2.00	-2.00	0.00
3,900.00	17.27	11.77	3,710.70	1,091.92	227.60	1,115.38	2.00	-2.00	0.00
4,000.00	15.27	11.77	3,806.69	1,119.34	233.31	1,143.39	2.00	-2.00	0.00
4,100.00	13.27	11.77	3,903.60	1,143.46	238.34	1,168.03	2.00	-2.00	0.00
4,200.00	11.27	11.77	4,001.31	1,164.26	242.67	1,189.28	2.00	-2.00	0.00
4,300.00	9.27	11.77	4,099.71	1,181.70	246.31	1,207.10	2.00	-2.00	0.00
Wasatch									
4,333.70	8.59	11.77	4,133.00	1,186.82	247.38	1,212.33	2.00	-2.00	0.00
4,400.00	7.27	11.77	4,198.66	1,195.78	249.24	1,221.48	2.00	-2.00	0.00



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well NBU 1022-11L4CS
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 5193.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	MD Reference:	WELL @ 5193.00ft (Original Well Elev)
Site:	NBU-11M PAD	North Reference:	True
Well:	NBU 1022-11L4CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 1022-11L4CS		
Design:	Design #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,500.00	5.27	11.77	4,298.06	1,206.46	251.47	1,232.39	2.00	-2.00	0.00
4,600.00	3.27	11.77	4,397.78	1,213.74	252.99	1,239.83	2.00	-2.00	0.00
4,700.00	1.27	11.77	4,497.70	1,217.61	253.80	1,243.78	2.00	-2.00	0.00
Start 4039.00 hold at 4763.31 MD									
4,763.31	0.00	0.00	4,561.00	1,218.30	253.94	1,244.48	2.00	-2.00	0.00
4,800.00	0.00	0.00	4,597.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
4,900.00	0.00	0.00	4,697.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
5,000.00	0.00	0.00	4,797.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
5,100.00	0.00	0.00	4,897.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
5,200.00	0.00	0.00	4,997.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
5,300.00	0.00	0.00	5,097.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
5,400.00	0.00	0.00	5,197.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
5,500.00	0.00	0.00	5,297.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
5,600.00	0.00	0.00	5,397.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
5,700.00	0.00	0.00	5,497.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
5,800.00	0.00	0.00	5,597.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
5,900.00	0.00	0.00	5,697.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
6,000.00	0.00	0.00	5,797.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
6,100.00	0.00	0.00	5,897.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
6,200.00	0.00	0.00	5,997.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
6,300.00	0.00	0.00	6,097.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
6,400.00	0.00	0.00	6,197.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
6,500.00	0.00	0.00	6,297.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
6,600.00	0.00	0.00	6,397.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
6,700.00	0.00	0.00	6,497.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
6,800.00	0.00	0.00	6,597.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
6,900.00	0.00	0.00	6,697.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
7,000.00	0.00	0.00	6,797.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
7,100.00	0.00	0.00	6,897.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
7,200.00	0.00	0.00	6,997.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
7,300.00	0.00	0.00	7,097.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
7,400.00	0.00	0.00	7,197.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
7,500.00	0.00	0.00	7,297.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
Mesaverde									
7,578.31	0.00	0.00	7,376.00	1,218.30	253.94	1,244.48	0.00	0.00	0.00
7,600.00	0.00	0.00	7,397.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
7,700.00	0.00	0.00	7,497.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
7,800.00	0.00	0.00	7,597.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
7,900.00	0.00	0.00	7,697.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
8,000.00	0.00	0.00	7,797.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
8,100.00	0.00	0.00	7,897.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
8,200.00	0.00	0.00	7,997.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
8,300.00	0.00	0.00	8,097.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
8,400.00	0.00	0.00	8,197.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
8,500.00	0.00	0.00	8,297.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
8,600.00	0.00	0.00	8,397.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
8,700.00	0.00	0.00	8,497.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
8,800.00	0.00	0.00	8,597.69	1,218.30	253.94	1,244.48	0.00	0.00	0.00
PBHL_NBU 1022-11L4CS(1505 FSL, 665 FWL)25' TGT RAD									
8,802.31	0.00	0.00	8,600.00	1,218.30	253.94	1,244.48	0.00	0.00	0.00



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well NBU 1022-11L4CS
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 5193.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	MD Reference:	WELL @ 5193.00ft (Original Well Elev)
Site:	NBU-11M PAD	North Reference:	True
Well:	NBU 1022-11L4CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 1022-11L4CS		
Design:	Design #1		

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL_NBU 1022-11L - hit/miss target - Shape - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,600.00	1,218.30	253.94	14,515,571.85	2,084,972.91	39° 57' 37.379 N	109° 24' 48.895 W

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,974.22	1,900.00	9 5/8"	9.62	12.25

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,068.60	1,049.00	Green River			
4,333.70	4,133.00	Wasatch			
7,578.31	7,376.00	Mesaverde			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
300.00	300.00	0.00	0.00	Start Build 3.00	
966.69	953.23	112.76	23.50	Start 2796.59 hold at 966.69 MD	
3,763.28	3,581.16	1,049.16	218.68	Start Drop -2.00	
4,763.31	4,561.00	1,218.30	253.94	Start 4039.00 hold at 4763.31 MD	
8,802.31	8,600.00	1,218.30	253.94	TD at 8802.31	



ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)

NBU-11M PAD

NBU 1022-11L4CS

NBU 1022-11L4CS

Design #1

Anticollision Report

14 September, 2009



Weatherford®



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 1022-11L4CS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5193.00ft (Original Well Elev)
Reference Site:	NBU-11M PAD	MD Reference:	WELL @ 5193.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 1022-11L4CS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 1022-11L4CS	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference	Design #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	0.00 to 20,000.00ft	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 9/14/2009			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	8,802.31	Design #1 (NBU 1022-11L4CS)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
NBU-11M PAD						
NBU 1022-11M1BS - NBU 1022-11M1BS - Design #1	470.09	469.86	18.46	16.60	9.906	CC, ES
NBU 1022-11M1BS - NBU 1022-11M1BS - Design #1	500.00	499.63	18.69	16.69	9.335	SF
NBU 1022-11M4BS - NBU 1022-11M4BS - Design #1	540.62	539.99	36.93	34.73	16.761	CC, ES
NBU 1022-11M4BS - NBU 1022-11M4BS - Design #1	700.00	697.08	45.51	42.49	15.055	SF
NBU 1022-11M4CS - NBU 1022-11M4CS - Design #1	594.80	593.63	55.39	52.92	22.415	CC
NBU 1022-11M4CS - NBU 1022-11M4CS - Design #1	600.00	598.77	55.40	52.90	22.186	ES
NBU 1022-11M4CS - NBU 1022-11M4CS - Design #1	700.00	697.08	58.57	55.53	19.250	SF

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	79.48	3.64	19.62	19.96					
100.00	100.00	100.00	100.00	0.10	0.10	79.48	3.64	19.62	19.96	19.76	0.19	103.239		
200.00	200.00	200.00	200.00	0.32	0.32	79.48	3.64	19.62	19.96	19.31	0.64	31.044		
300.00	300.00	300.00	300.00	0.55	0.55	79.48	3.64	19.62	19.96	18.86	1.09	18.269		
400.00	399.95	399.95	399.95	0.78	0.77	75.01	3.64	19.62	19.12	17.58	1.54	12.398		
470.09	469.86	469.86	469.86	0.95	0.93	90.00	3.64	19.62	18.46	16.60	1.86	9.906	CC, ES	
500.00	499.63	499.63	499.63	1.02	0.99	98.86	3.64	19.62	18.69	16.69	2.00	9.335	SF	
600.00	598.77	598.77	598.77	1.28	1.22	130.46	3.64	19.62	24.40	21.90	2.50	9.775		
700.00	697.08	697.08	697.08	1.61	1.44	151.08	3.64	19.62	38.84	35.85	2.98	13.022		
800.00	794.31	794.31	794.31	2.02	1.66	161.61	3.64	19.62	60.40	56.95	3.45	17.487		
900.00	890.18	890.18	890.18	2.52	1.87	167.26	3.64	19.62	87.87	83.95	3.92	22.406		
966.69	953.23	953.23	953.23	2.90	2.01	169.65	3.64	19.62	109.19	104.96	4.23	25.794		
1,000.00	984.53	984.53	984.53	3.10	2.08	170.62	3.64	19.62	120.43	116.04	4.39	27.424		
1,100.00	1,078.50	1,078.50	1,078.50	3.72	2.30	172.69	3.64	19.62	154.32	149.45	4.88	31.655		
1,200.00	1,172.47	1,172.47	1,172.47	4.36	2.51	174.01	3.64	19.62	188.32	182.96	5.37	35.083		
1,300.00	1,266.44	1,266.44	1,266.44	5.00	2.72	174.93	3.64	19.62	222.39	216.52	5.87	37.901		
1,400.00	1,360.41	1,360.41	1,360.41	5.65	2.93	175.61	3.64	19.62	256.49	250.12	6.37	40.249		
1,500.00	1,454.38	1,454.38	1,454.38	6.30	3.14	176.12	3.64	19.62	290.61	283.73	6.88	42.232		
1,600.00	1,548.35	1,548.35	1,548.35	6.96	3.35	176.53	3.64	19.62	324.75	317.36	7.39	43.925		
1,700.00	1,642.32	1,642.32	1,642.32	7.61	3.56	176.86	3.64	19.62	358.91	351.00	7.91	45.386		
1,800.00	1,736.28	1,736.28	1,736.28	8.27	3.77	177.13	3.64	19.62	393.07	384.64	8.42	46.658		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 1022-11L4CS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5193.00ft (Original Well Elev)
Reference Site:	NBU-11M PAD	MD Reference:	WELL @ 5193.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 1022-11L4CS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 1022-11L4CS	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
1,900.00	1,830.25	1,830.25	1,830.25	8.93	3.99	177.36	3.64	19.62	427.24	418.29	8.94	47.774		
2,000.00	1,924.22	1,924.22	1,924.22	9.59	4.20	177.56	3.64	19.62	461.41	451.95	9.46	48.762		
2,100.00	2,018.19	2,024.47	2,024.47	10.26	4.42	177.74	3.79	19.67	495.47	485.48	10.00	49.567		
2,200.00	2,112.16	2,154.24	2,154.07	10.92	4.72	177.83	9.56	21.56	525.29	514.71	10.58	49.648		
2,300.00	2,206.13	2,289.00	2,287.90	11.58	5.02	177.77	24.38	26.43	548.49	537.31	11.18	49.054		
2,400.00	2,300.10	2,427.63	2,424.07	12.25	5.37	177.57	48.94	34.50	564.76	552.95	11.81	47.819		
2,500.00	2,394.07	2,568.79	2,560.42	12.91	5.79	177.21	83.52	45.86	573.86	561.39	12.47	46.027		
2,600.00	2,488.04	2,697.80	2,682.47	13.57	6.28	176.76	123.18	58.89	576.00	562.88	13.12	43.901		
2,700.00	2,582.00	2,797.73	2,776.37	14.24	6.71	176.39	155.65	69.56	576.43	562.72	13.72	42.024		
2,800.00	2,675.97	2,897.66	2,870.27	14.90	7.18	176.01	188.12	80.23	576.89	562.56	14.33	40.269		
2,900.00	2,769.94	2,997.58	2,964.17	15.57	7.69	175.63	220.59	90.90	577.37	562.42	14.94	38.633		
3,000.00	2,863.91	3,097.51	3,058.07	16.23	8.21	175.26	253.06	101.56	577.87	562.30	15.57	37.105		
3,100.00	2,957.88	3,197.44	3,151.97	16.90	8.75	174.88	285.53	112.23	578.40	562.19	16.21	35.676		
3,200.00	3,051.85	3,297.36	3,245.87	17.57	9.31	174.51	318.00	122.90	578.96	562.10	16.86	34.338		
3,300.00	3,145.82	3,397.29	3,339.77	18.23	9.89	174.13	350.47	133.56	579.54	562.02	17.52	33.083		
3,400.00	3,239.79	3,497.22	3,433.67	18.90	10.47	173.76	382.94	144.23	580.14	561.96	18.18	31.906		
3,500.00	3,333.76	3,597.14	3,527.57	19.56	11.07	173.39	415.41	154.90	580.77	561.91	18.86	30.799		
3,600.00	3,427.72	3,697.07	3,621.47	20.23	11.67	173.02	447.88	165.57	581.42	561.88	19.54	29.757		
3,700.00	3,521.69	3,797.00	3,715.37	20.90	12.28	172.65	480.35	176.23	582.10	561.87	20.23	28.774		
3,763.28	3,581.16	3,860.23	3,774.79	21.32	12.67	172.41	500.90	182.98	582.54	561.87	20.67	28.181		
3,800.00	3,615.74	3,896.92	3,809.27	21.53	12.89	172.27	512.82	186.90	582.57	561.63	20.94	27.818		
3,900.00	3,710.70	3,996.81	3,903.13	22.02	13.51	171.86	545.28	197.56	580.30	558.65	21.64	26.811		
4,000.00	3,806.69	4,084.90	3,986.13	22.47	14.02	171.45	573.34	206.78	575.33	553.08	22.25	25.852		
4,100.00	3,903.60	4,168.50	4,065.64	22.87	14.42	171.06	597.84	214.83	569.66	546.88	22.78	25.008		
4,200.00	4,001.31	4,252.24	4,146.01	23.24	14.78	170.69	620.16	222.17	563.38	540.12	23.26	24.225		
4,300.00	4,099.71	4,336.13	4,227.19	23.55	15.13	170.32	640.27	228.77	556.51	532.82	23.69	23.493		
4,400.00	4,198.66	4,420.19	4,309.11	23.83	15.46	169.96	658.15	234.65	549.04	524.97	24.07	22.807		
4,500.00	4,298.06	4,500.00	4,387.37	24.05	15.74	169.62	673.01	239.53	541.01	516.61	24.40	22.173		
4,600.00	4,397.78	4,588.86	4,474.98	24.23	16.02	169.26	687.11	244.16	532.34	507.64	24.70	21.552		
4,700.00	4,497.70	4,673.48	4,558.80	24.37	16.26	168.92	698.13	247.78	523.10	498.16	24.94	20.975		
4,763.31	4,561.00	4,727.17	4,612.14	24.43	16.40	-179.53	703.89	249.67	516.96	491.89	25.07	20.624		
4,800.00	4,597.69	4,758.34	4,643.16	24.46	16.47	-179.63	706.81	250.63	513.52	488.32	25.20	20.381		
4,900.00	4,697.69	4,843.60	4,728.16	24.54	16.66	-179.86	713.14	252.71	506.08	480.53	25.55	19.807		
5,000.00	4,797.69	4,929.18	4,813.63	24.63	16.81	179.99	717.07	254.00	501.48	475.60	25.88	19.376		
5,100.00	4,897.69	5,014.93	4,899.37	24.71	16.93	179.94	718.58	254.50	499.72	473.53	26.19	19.080		
5,137.80	4,935.49	5,051.05	4,935.49	24.75	16.98	179.94	718.60	254.50	499.70	473.39	26.31	18.992		
5,200.00	4,997.69	5,113.25	4,997.69	24.80	17.06	179.94	718.60	254.50	499.70	473.18	26.52	18.843		
5,300.00	5,097.69	5,213.25	5,097.69	24.89	17.19	179.94	718.60	254.50	499.70	472.83	26.87	18.598		
5,400.00	5,197.69	5,313.25	5,197.69	24.99	17.33	179.94	718.60	254.50	499.70	472.48	27.22	18.357		
5,500.00	5,297.69	5,413.25	5,297.69	25.08	17.47	179.94	718.60	254.50	499.70	472.13	27.58	18.121		
5,600.00	5,397.69	5,513.25	5,397.69	25.18	17.61	179.94	718.60	254.50	499.70	471.77	27.93	17.889		
5,700.00	5,497.69	5,613.25	5,497.69	25.27	17.76	179.94	718.60	254.50	499.70	471.41	28.29	17.661		
5,800.00	5,597.69	5,713.25	5,597.69	25.37	17.90	179.94	718.60	254.50	499.70	471.05	28.66	17.437		
5,900.00	5,697.69	5,813.25	5,697.69	25.47	18.05	179.94	718.60	254.50	499.70	470.68	29.02	17.218		
6,000.00	5,797.69	5,913.25	5,797.69	25.58	18.19	179.94	718.60	254.50	499.70	470.31	29.39	17.003		
6,100.00	5,897.69	6,013.25	5,897.69	25.68	18.34	179.94	718.60	254.50	499.70	469.94	29.76	16.792		
6,200.00	5,997.69	6,113.25	5,997.69	25.78	18.50	179.94	718.60	254.50	499.70	469.57	30.13	16.584		
6,300.00	6,097.69	6,213.25	6,097.69	25.89	18.65	179.94	718.60	254.50	499.70	469.20	30.50	16.381		
6,400.00	6,197.69	6,313.25	6,197.69	26.00	18.80	179.94	718.60	254.50	499.70	468.82	30.88	16.182		
6,500.00	6,297.69	6,413.25	6,297.69	26.11	18.96	179.94	718.60	254.50	499.70	468.44	31.26	15.986		
6,600.00	6,397.69	6,513.25	6,397.69	26.22	19.11	179.94	718.60	254.50	499.70	468.07	31.64	15.795		
6,700.00	6,497.69	6,613.25	6,497.69	26.33	19.27	179.94	718.60	254.50	499.70	467.68	32.02	15.606		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 1022-11L4CS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5193.00ft (Original Well Elev)
Reference Site:	NBU-11M PAD	MD Reference:	WELL @ 5193.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 1022-11L4CS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 1022-11L4CS	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
6,800.00	6,597.69	6,713.25	6,597.69	26.45	19.43	179.94	718.60	254.50	499.70	467.30	32.40	15.422		
6,900.00	6,697.69	6,813.25	6,697.69	26.56	19.59	179.94	718.60	254.50	499.70	466.92	32.79	15.241		
7,000.00	6,797.69	6,913.25	6,797.69	26.68	19.75	179.94	718.60	254.50	499.70	466.53	33.17	15.064		
7,100.00	6,897.69	7,013.25	6,897.69	26.80	19.92	179.94	718.60	254.50	499.70	466.14	33.56	14.889		
7,200.00	6,997.69	7,113.25	6,997.69	26.92	20.08	179.94	718.60	254.50	499.70	465.75	33.95	14.719		
7,300.00	7,097.69	7,213.25	7,097.69	27.04	20.25	179.94	718.60	254.50	499.70	465.36	34.34	14.551		
7,400.00	7,197.69	7,313.25	7,197.69	27.16	20.41	179.94	718.60	254.50	499.70	464.97	34.73	14.387		
7,500.00	7,297.69	7,413.25	7,297.69	27.28	20.58	179.94	718.60	254.50	499.70	464.58	35.13	14.226		
7,600.00	7,397.69	7,513.25	7,397.69	27.41	20.75	179.94	718.60	254.50	499.70	464.18	35.52	14.068		
7,700.00	7,497.69	7,613.25	7,497.69	27.54	20.92	179.94	718.60	254.50	499.70	463.79	35.92	13.912		
7,800.00	7,597.69	7,713.25	7,597.69	27.66	21.09	179.94	718.60	254.50	499.70	463.39	36.31	13.760		
7,900.00	7,697.69	7,813.25	7,697.69	27.79	21.26	179.94	718.60	254.50	499.70	462.99	36.71	13.611		
8,000.00	7,797.69	7,913.25	7,797.69	27.92	21.44	179.94	718.60	254.50	499.70	462.59	37.11	13.464		
8,100.00	7,897.69	8,013.25	7,897.69	28.05	21.61	179.94	718.60	254.50	499.70	462.19	37.51	13.320		
8,200.00	7,997.69	8,113.25	7,997.69	28.19	21.79	179.94	718.60	254.50	499.70	461.79	37.92	13.179		
8,300.00	8,097.69	8,213.25	8,097.69	28.32	21.96	179.94	718.60	254.50	499.70	461.38	38.32	13.041		
8,400.00	8,197.69	8,313.25	8,197.69	28.45	22.14	179.94	718.60	254.50	499.70	460.98	38.72	12.905		
8,500.00	8,297.69	8,413.25	8,297.69	28.59	22.32	179.94	718.60	254.50	499.70	460.58	39.13	12.771		
8,600.00	8,397.69	8,513.25	8,397.69	28.73	22.49	179.94	718.60	254.50	499.70	460.17	39.53	12.640		
8,700.00	8,497.69	8,613.25	8,497.69	28.86	22.67	179.94	718.60	254.50	499.70	459.76	39.94	12.511		
8,802.31	8,600.00	8,715.56	8,600.00	29.01	22.86	179.94	718.60	254.50	499.70	459.35	40.36	12.382		



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 1022-11L4CS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5193.00ft (Original Well Elev)
Reference Site:	NBU-11M PAD	MD Reference:	WELL @ 5193.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 1022-11L4CS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 1022-11L4CS	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	79.48	7.28	39.24	39.91					
100.00	100.00	100.00	100.00	0.10	0.10	79.48	7.28	39.24	39.91	39.72	0.19	206.478		
200.00	200.00	200.00	200.00	0.32	0.32	79.48	7.28	39.24	39.91	39.27	0.64	62.088		
300.00	300.00	300.00	300.00	0.55	0.55	79.48	7.28	39.24	39.91	38.82	1.09	36.537		
400.00	399.95	399.95	399.95	0.78	0.77	71.29	7.28	39.24	38.99	37.45	1.54	25.281		
500.00	499.63	499.63	499.63	1.02	0.99	82.82	7.28	39.24	37.22	35.22	2.00	18.597		
540.62	539.99	539.99	539.99	1.12	1.09	90.00	7.28	39.24	36.93	34.73	2.20	16.761 CC, ES		
600.00	598.77	598.77	598.77	1.28	1.22	102.63	7.28	39.24	37.87	35.37	2.50	15.164		
700.00	697.08	697.08	697.08	1.61	1.44	125.16	7.28	39.24	45.51	42.49	3.02	15.055 SF		
800.00	794.31	794.31	794.31	2.02	1.66	142.56	7.28	39.24	62.11	58.58	3.53	17.611		
900.00	890.18	890.18	890.18	2.52	1.87	153.63	7.28	39.24	86.61	82.60	4.00	21.628		
966.69	953.23	953.23	953.23	2.90	2.01	158.55	7.28	39.24	106.65	102.33	4.32	24.709		
1,000.00	984.53	984.53	984.53	3.10	2.08	160.57	7.28	39.24	117.40	112.93	4.47	26.249		
1,100.00	1,078.50	1,078.50	1,078.50	3.72	2.30	164.90	7.28	39.24	150.25	145.30	4.95	30.364		
1,200.00	1,172.47	1,172.47	1,172.47	4.36	2.51	167.67	7.28	39.24	183.60	178.17	5.43	33.788		
1,300.00	1,266.44	1,266.44	1,266.44	5.00	2.72	169.60	7.28	39.24	217.21	211.29	5.93	36.648		
1,400.00	1,360.41	1,360.41	1,360.41	5.65	2.93	171.00	7.28	39.24	250.99	244.56	6.43	39.056		
1,500.00	1,454.38	1,454.38	1,454.38	6.30	3.14	172.08	7.28	39.24	284.86	277.93	6.93	41.103		
1,600.00	1,548.35	1,548.35	1,548.35	6.96	3.35	172.93	7.28	39.24	318.81	311.37	7.44	42.859		
1,700.00	1,642.32	1,642.32	1,642.32	7.61	3.56	173.61	7.28	39.24	352.80	344.85	7.95	44.380		
1,800.00	1,736.28	1,736.28	1,736.28	8.27	3.77	174.17	7.28	39.24	386.83	378.37	8.46	45.707		
1,900.00	1,830.25	1,830.25	1,830.25	8.93	3.99	174.65	7.28	39.24	420.89	411.91	8.98	46.875		
2,000.00	1,924.22	1,929.78	1,929.77	9.59	4.21	175.05	7.45	39.41	454.82	445.32	9.51	47.844		
2,100.00	2,018.19	2,047.71	2,047.57	10.26	4.47	175.06	11.28	43.32	485.48	475.41	10.07	48.222		
2,200.00	2,112.16	2,168.94	2,168.05	10.92	4.74	174.52	20.52	52.74	511.45	500.79	10.65	48.004		
2,300.00	2,206.13	2,292.58	2,289.82	11.58	5.05	173.49	35.43	67.95	532.63	521.35	11.29	47.196		
2,400.00	2,300.10	2,417.65	2,411.33	12.25	5.41	171.99	56.10	89.03	549.08	537.09	11.99	45.805		
2,500.00	2,394.07	2,543.09	2,531.01	12.91	5.87	170.04	82.37	115.83	560.97	548.18	12.79	43.871		
2,600.00	2,488.04	2,641.52	2,623.61	13.57	6.28	168.29	105.72	139.64	570.29	556.73	13.56	42.060		
2,700.00	2,582.00	2,727.42	2,705.08	14.24	6.62	166.95	124.78	159.08	581.71	567.43	14.28	40.744		
2,800.00	2,675.97	2,813.39	2,787.40	14.90	6.95	165.84	142.14	176.78	595.54	580.56	14.98	39.753		
2,900.00	2,769.94	2,900.00	2,871.04	15.57	7.27	164.94	157.87	192.83	611.63	595.94	15.69	38.992		
3,000.00	2,863.91	2,984.94	2,953.69	16.23	7.58	164.28	171.57	206.80	629.82	613.45	16.37	38.477		
3,100.00	2,957.88	3,070.21	3,037.20	16.90	7.88	163.82	183.59	219.06	650.03	633.00	17.03	38.169		
3,200.00	3,051.85	3,154.94	3,120.66	17.57	8.15	163.56	193.81	229.48	672.16	654.49	17.66	38.059		
3,300.00	3,145.82	3,238.99	3,203.85	18.23	8.40	163.47	202.23	238.08	696.16	677.90	18.26	38.132		
3,400.00	3,239.79	3,322.23	3,286.54	18.90	8.63	163.54	208.89	244.86	721.99	703.18	18.82	38.373		
3,500.00	3,333.76	3,400.00	3,364.02	19.56	8.82	163.74	213.58	249.65	749.66	730.33	19.33	38.782		
3,600.00	3,427.72	3,485.78	3,449.65	20.23	9.00	164.08	217.05	253.19	779.09	759.27	19.82	39.307		
3,700.00	3,521.69	3,565.86	3,529.70	20.90	9.15	164.51	218.67	254.84	810.35	790.08	20.27	39.982		
3,763.28	3,581.16	3,617.32	3,581.16	21.32	9.24	164.84	218.89	255.07	831.06	810.52	20.54	40.458		
3,800.00	3,615.74	3,651.91	3,615.74	21.53	9.30	165.12	218.89	255.07	843.02	822.31	20.71	40.708		
3,900.00	3,710.70	3,746.86	3,710.70	22.02	9.46	165.81	218.89	255.07	873.45	852.32	21.14	41.320		
4,000.00	3,806.69	3,842.85	3,806.69	22.47	9.64	166.38	218.89	255.07	900.70	879.15	21.56	41.779		
4,100.00	3,903.60	3,939.77	3,903.60	22.87	9.82	166.85	218.89	255.07	924.72	902.75	21.96	42.106		
4,200.00	4,001.31	4,037.48	4,001.31	23.24	10.00	167.24	218.89	255.07	945.44	923.10	22.34	42.315		
4,300.00	4,099.71	4,135.87	4,099.71	23.55	10.18	167.55	218.89	255.07	962.85	940.15	22.70	42.417		
4,400.00	4,198.66	4,234.83	4,198.66	23.83	10.37	167.79	218.89	255.07	976.90	953.87	23.03	42.418		
4,500.00	4,298.06	4,334.23	4,298.06	24.05	10.56	167.97	218.89	255.07	987.57	964.24	23.33	42.327		
4,600.00	4,397.78	4,433.94	4,397.78	24.23	10.75	168.09	218.89	255.07	994.85	971.25	23.60	42.148		
4,700.00	4,497.70	4,533.86	4,497.70	24.37	10.94	168.15	218.89	255.07	998.72	974.88	23.84	41.884		
4,763.31	4,561.00	4,597.16	4,561.00	24.43	11.07	179.94	218.89	255.07	999.41	975.42	23.98	41.675		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 1022-11L4CS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5193.00ft (Original Well Elev)
Reference Site:	NBU-11M PAD	MD Reference:	WELL @ 5193.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 1022-11L4CS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 1022-11L4CS	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design NBU-11M PAD - NBU 1022-11M4BS - NBU 1022-11M4BS - Design #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,800.00	4,597.69	4,633.86	4,597.69	24.46	11.14	179.94	218.89	255.07	999.41	975.30	24.11	41.456		
4,900.00	4,697.69	4,733.86	4,697.69	24.54	11.33	179.94	218.89	255.07	999.41	974.94	24.47	40.848		
5,000.00	4,797.69	4,833.86	4,797.69	24.63	11.53	179.94	218.89	255.07	999.41	974.58	24.83	40.254		
5,100.00	4,897.69	4,933.86	4,897.69	24.71	11.73	179.94	218.89	255.07	999.41	974.21	25.19	39.672		
5,200.00	4,997.69	5,033.86	4,997.69	24.80	11.92	179.94	218.89	255.07	999.41	973.85	25.56	39.104		
5,300.00	5,097.69	5,133.86	5,097.69	24.89	12.12	179.94	218.89	255.07	999.41	973.48	25.93	38.547		
5,400.00	5,197.69	5,233.86	5,197.69	24.99	12.32	179.94	218.89	255.07	999.41	973.11	26.30	38.003		
5,500.00	5,297.69	5,333.86	5,297.69	25.08	12.52	179.94	218.89	255.07	999.41	972.73	26.67	37.471		
5,600.00	5,397.69	5,433.86	5,397.69	25.18	12.73	179.94	218.89	255.07	999.41	972.36	27.05	36.951		
5,700.00	5,497.69	5,533.86	5,497.69	25.27	12.93	179.94	218.89	255.07	999.41	971.98	27.42	36.442		
5,800.00	5,597.69	5,633.86	5,597.69	25.37	13.13	179.94	218.89	255.07	999.41	971.60	27.80	35.945		
5,900.00	5,697.69	5,733.86	5,697.69	25.47	13.34	179.94	218.89	255.07	999.41	971.22	28.19	35.458		
6,000.00	5,797.69	5,833.86	5,797.69	25.58	13.54	179.94	218.89	255.07	999.41	970.84	28.57	34.982		
6,100.00	5,897.69	5,933.86	5,897.69	25.68	13.74	179.94	218.89	255.07	999.41	970.45	28.95	34.517		
6,200.00	5,997.69	6,033.86	5,997.69	25.78	13.95	179.94	218.89	255.07	999.41	970.06	29.34	34.062		
6,300.00	6,097.69	6,133.86	6,097.69	25.89	14.16	179.94	218.89	255.07	999.41	969.68	29.73	33.617		
6,400.00	6,197.69	6,233.86	6,197.69	26.00	14.36	179.94	218.89	255.07	999.41	969.29	30.12	33.182		
6,500.00	6,297.69	6,333.86	6,297.69	26.11	14.57	179.94	218.89	255.07	999.41	968.89	30.51	32.756		
6,600.00	6,397.69	6,433.86	6,397.69	26.22	14.78	179.94	218.89	255.07	999.41	968.50	30.90	32.339		
6,700.00	6,497.69	6,533.86	6,497.69	26.33	14.99	179.94	218.89	255.07	999.41	968.11	31.30	31.932		
6,800.00	6,597.69	6,633.86	6,597.69	26.45	15.20	179.94	218.89	255.07	999.41	967.71	31.69	31.533		
6,900.00	6,697.69	6,733.86	6,697.69	26.56	15.41	179.94	218.89	255.07	999.41	967.31	32.09	31.142		
7,000.00	6,797.69	6,833.86	6,797.69	26.68	15.62	179.94	218.89	255.07	999.41	966.92	32.49	30.760		
7,100.00	6,897.69	6,933.86	6,897.69	26.80	15.83	179.94	218.89	255.07	999.41	966.52	32.89	30.387		
7,200.00	6,997.69	7,033.86	6,997.69	26.92	16.04	179.94	218.89	255.07	999.41	966.11	33.29	30.021		
7,300.00	7,097.69	7,133.86	7,097.69	27.04	16.25	179.94	218.89	255.07	999.41	965.71	33.69	29.662		
7,400.00	7,197.69	7,233.86	7,197.69	27.16	16.46	179.94	218.89	255.07	999.41	965.31	34.10	29.312		
7,500.00	7,297.69	7,333.86	7,297.69	27.28	16.67	179.94	218.89	255.07	999.41	964.90	34.50	28.968		
7,600.00	7,397.69	7,433.86	7,397.69	27.41	16.88	179.94	218.89	255.07	999.41	964.50	34.91	28.632		
7,700.00	7,497.69	7,533.86	7,497.69	27.54	17.09	179.94	218.89	255.07	999.41	964.09	35.31	28.302		
7,800.00	7,597.69	7,633.86	7,597.69	27.66	17.31	179.94	218.89	255.07	999.41	963.69	35.72	27.979		
7,900.00	7,697.69	7,733.86	7,697.69	27.79	17.52	179.94	218.89	255.07	999.41	963.28	36.13	27.663		
8,000.00	7,797.69	7,833.86	7,797.69	27.92	17.73	179.94	218.89	255.07	999.41	962.87	36.54	27.353		
8,100.00	7,897.69	7,933.86	7,897.69	28.05	17.95	179.94	218.89	255.07	999.41	962.46	36.95	27.050		
8,200.00	7,997.69	8,033.86	7,997.69	28.19	18.16	179.94	218.89	255.07	999.41	962.05	37.36	26.752		
8,300.00	8,097.69	8,133.86	8,097.69	28.32	18.37	179.94	218.89	255.07	999.41	961.64	37.77	26.460		
8,400.00	8,197.69	8,233.86	8,197.69	28.45	18.59	179.94	218.89	255.07	999.41	961.22	38.18	26.174		
8,500.00	8,297.69	8,333.86	8,297.69	28.59	18.80	179.94	218.89	255.07	999.41	960.81	38.60	25.894		
8,600.00	8,397.69	8,433.86	8,397.69	28.73	19.02	179.94	218.89	255.07	999.41	960.40	39.01	25.619		
8,700.00	8,497.69	8,533.86	8,497.69	28.86	19.23	179.94	218.89	255.07	999.41	959.98	39.43	25.349		
8,802.31	8,600.00	8,636.16	8,600.00	29.01	19.45	179.94	218.89	255.07	999.41	959.55	39.85	25.079		



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 1022-11L4CS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5193.00ft (Original Well Elev)
Reference Site:	NBU-11M PAD	MD Reference:	WELL @ 5193.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 1022-11L4CS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 1022-11L4CS	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design NBU-11M PAD - NBU 1022-11M4CS - NBU 1022-11M4CS - Design #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	79.48	10.93	58.86	59.87					
100.00	100.00	100.00	100.00	0.10	0.10	79.48	10.93	58.86	59.87	59.67	0.19	309.717		
200.00	200.00	200.00	200.00	0.32	0.32	79.48	10.93	58.86	59.87	59.23	0.64	93.132		
300.00	300.00	300.00	300.00	0.55	0.55	79.48	10.93	58.86	59.87	58.78	1.09	54.806		
400.00	399.95	399.95	399.95	0.78	0.77	70.09	10.93	58.86	58.93	57.38	1.54	38.199		
500.00	499.63	499.63	499.63	1.02	0.99	77.60	10.93	58.86	56.73	54.73	2.00	28.334		
594.80	593.63	593.63	593.63	1.27	1.21	90.00	10.93	58.86	55.39	52.92	2.47	22.415	CC	
600.00	598.77	598.77	598.77	1.28	1.22	90.82	10.93	58.86	55.40	52.90	2.50	22.186	ES	
700.00	697.08	697.08	697.08	1.61	1.44	108.57	10.93	58.86	58.57	55.53	3.04	19.250	SF	
800.00	794.31	794.31	794.31	2.02	1.66	126.46	10.93	58.86	69.74	66.14	3.60	19.391		
900.00	890.18	890.18	890.18	2.52	1.87	140.54	10.93	58.86	89.87	85.76	4.11	21.854		
966.69	953.23	953.23	953.23	2.90	2.01	147.48	10.93	58.86	107.80	103.36	4.44	24.300		
1,000.00	984.53	984.53	984.53	3.10	2.08	150.42	10.93	58.86	117.72	113.13	4.59	25.624		
1,100.00	1,078.50	1,078.50	1,078.50	3.72	2.30	156.88	10.93	58.86	148.77	143.71	5.07	29.368		
1,200.00	1,172.47	1,172.47	1,172.47	4.36	2.51	161.11	10.93	58.86	180.96	175.42	5.54	32.651		
1,300.00	1,266.44	1,266.44	1,266.44	5.00	2.72	164.07	10.93	58.86	213.78	207.76	6.03	35.475		
1,400.00	1,360.41	1,360.41	1,360.41	5.65	2.93	166.24	10.93	58.86	246.98	240.46	6.52	37.897		
1,500.00	1,454.38	1,454.38	1,454.38	6.30	3.14	167.90	10.93	58.86	280.41	273.40	7.01	39.981		
1,600.00	1,548.35	1,548.35	1,548.35	6.96	3.35	169.20	10.93	58.86	314.01	306.50	7.52	41.784		
1,700.00	1,642.32	1,642.32	1,642.32	7.61	3.56	170.26	10.93	58.86	347.73	339.71	8.02	43.356		
1,800.00	1,736.28	1,736.28	1,736.28	8.27	3.77	171.12	10.93	58.86	381.54	373.01	8.53	44.734		
1,900.00	1,830.25	1,830.25	1,830.25	8.93	3.99	171.85	10.93	58.86	415.41	406.37	9.04	45.950		
2,000.00	1,924.22	1,920.46	1,920.46	9.59	4.18	172.44	10.84	58.92	449.43	439.89	9.54	47.097		
2,100.00	2,018.19	2,000.00	1,999.95	10.26	4.34	172.69	8.76	60.33	485.66	475.64	10.02	48.451		
2,200.00	2,112.16	2,075.05	2,074.81	10.92	4.48	172.68	4.28	63.35	524.81	514.32	10.49	50.011		
2,300.00	2,206.13	2,149.28	2,148.57	11.58	4.62	172.46	-2.54	67.95	566.77	555.80	10.97	51.647		
2,400.00	2,300.10	2,221.27	2,219.76	12.25	4.76	172.09	-11.42	73.94	611.44	599.98	11.46	53.352		
2,500.00	2,394.07	2,300.00	2,297.08	12.91	4.94	171.55	-23.67	82.20	658.81	646.83	11.98	55.012		
2,600.00	2,488.04	2,358.23	2,353.84	13.57	5.09	171.07	-34.43	89.46	708.56	696.10	12.46	56.868		
2,700.00	2,582.00	2,423.08	2,416.57	14.24	5.28	170.47	-48.09	98.67	760.84	747.87	12.97	58.652		
2,800.00	2,675.97	2,485.50	2,476.37	14.90	5.49	169.86	-62.89	108.66	815.47	801.98	13.49	60.438		
2,900.00	2,769.94	2,545.48	2,533.26	15.57	5.72	169.23	-78.64	119.29	872.37	858.35	14.02	62.205		
3,000.00	2,863.91	2,617.74	2,601.20	16.23	6.03	168.47	-99.04	133.04	931.04	916.44	14.60	63.763		
3,100.00	2,957.88	2,697.89	2,676.52	16.90	6.41	167.72	-121.76	148.37	989.95	974.74	15.21	65.083		
3,200.00	3,051.85	2,788.14	2,761.40	17.57	6.85	166.97	-147.20	165.53	1,048.86	1,033.01	15.85	66.162		
3,300.00	3,145.82	2,907.71	2,875.02	18.23	7.39	166.24	-178.06	186.35	1,105.76	1,089.20	16.56	66.773		
3,400.00	3,239.79	3,033.65	2,996.25	18.90	7.93	165.75	-206.28	205.39	1,159.72	1,142.45	17.27	67.157		
3,500.00	3,333.76	3,165.93	3,125.08	19.56	8.47	165.47	-231.14	222.16	1,210.47	1,192.49	17.97	67.343		
3,600.00	3,427.72	3,304.46	3,261.32	20.23	8.97	165.39	-251.86	236.14	1,257.74	1,239.07	18.67	67.368		
3,700.00	3,521.69	3,448.99	3,404.58	20.90	9.42	165.50	-267.64	246.78	1,301.29	1,281.95	19.34	67.273		
3,763.28	3,581.16	3,543.39	3,498.58	21.32	9.67	165.67	-274.70	251.54	1,326.83	1,307.08	19.76	67.159		
3,800.00	3,615.74	3,599.29	3,554.37	21.53	9.81	165.87	-277.67	253.55	1,340.70	1,320.68	20.02	66.982		
3,900.00	3,710.70	3,755.69	3,710.70	22.02	10.11	166.46	-281.17	255.91	1,373.38	1,352.73	20.65	66.506		
4,000.00	3,806.69	3,851.69	3,806.69	22.47	10.27	166.85	-281.17	255.91	1,400.69	1,379.54	21.15	66.221		
4,100.00	3,903.60	3,948.60	3,903.60	22.87	10.44	167.19	-281.17	255.91	1,424.74	1,403.11	21.63	65.860		
4,200.00	4,001.31	4,046.31	4,001.31	23.24	10.61	167.47	-281.17	255.91	1,445.49	1,423.41	22.08	65.455		
4,300.00	4,099.71	4,144.70	4,099.71	23.55	10.79	167.69	-281.17	255.91	1,462.91	1,440.40	22.50	65.010		
4,400.00	4,198.66	4,243.66	4,198.66	23.83	10.97	167.87	-281.17	255.91	1,476.96	1,454.08	22.89	64.528		
4,500.00	4,298.06	4,343.06	4,298.06	24.05	11.15	168.01	-281.17	255.91	1,487.64	1,464.40	23.24	64.011		
4,600.00	4,397.78	4,442.78	4,397.78	24.23	11.33	168.10	-281.17	255.91	1,494.92	1,471.36	23.56	63.461		
4,700.00	4,497.70	4,542.69	4,497.70	24.37	11.51	168.14	-281.17	255.91	1,498.79	1,474.95	23.84	62.877		
4,763.31	4,561.00	4,606.00	4,561.00	24.43	11.63	179.92	-281.17	255.91	1,499.47	1,475.48	24.00	62.490		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Weatherford International Ltd.
Anticollision Report



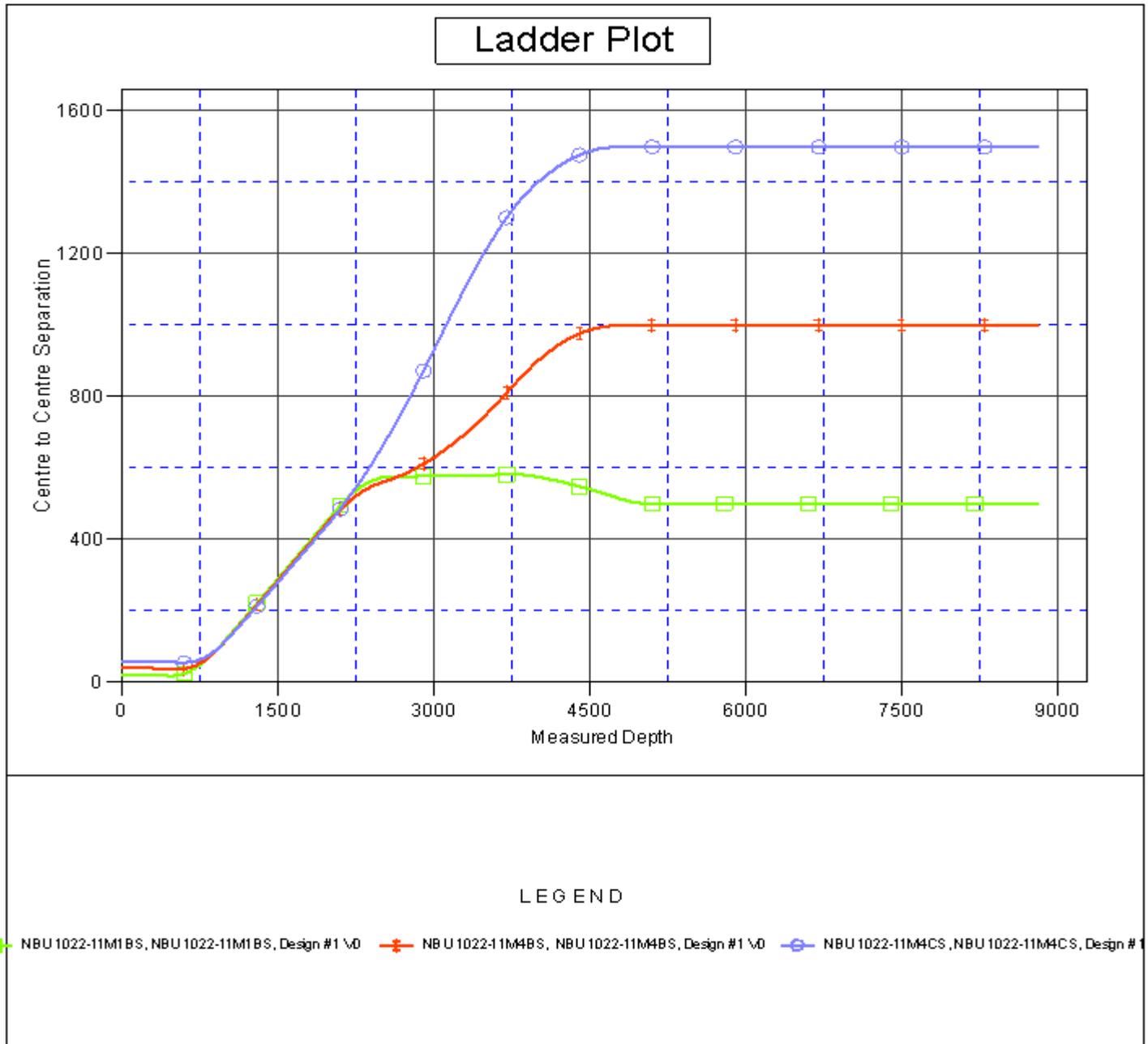
Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 1022-11L4CS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5193.00ft (Original Well Elev)
Reference Site:	NBU-11M PAD	MD Reference:	WELL @ 5193.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 1022-11L4CS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 1022-11L4CS	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,800.00	4,597.69	4,642.69	4,597.69	24.46	11.70	179.92	-281.17	255.91	1,499.47	1,475.35	24.12	62.162		
4,900.00	4,697.69	4,742.69	4,697.69	24.54	11.89	179.92	-281.17	255.91	1,499.47	1,474.99	24.48	61.250		
5,000.00	4,797.69	4,842.69	4,797.69	24.63	12.07	179.92	-281.17	255.91	1,499.47	1,474.63	24.84	60.358		
5,100.00	4,897.69	4,942.69	4,897.69	24.71	12.26	179.92	-281.17	255.91	1,499.47	1,474.26	25.21	59.485		
5,200.00	4,997.69	5,042.69	4,997.69	24.80	12.45	179.92	-281.17	255.91	1,499.47	1,473.90	25.57	58.632		
5,300.00	5,097.69	5,142.69	5,097.69	24.89	12.65	179.92	-281.17	255.91	1,499.47	1,473.53	25.94	57.797		
5,400.00	5,197.69	5,242.69	5,197.69	24.99	12.84	179.92	-281.17	255.91	1,499.47	1,473.16	26.32	56.981		
5,500.00	5,297.69	5,342.69	5,297.69	25.08	13.03	179.92	-281.17	255.91	1,499.47	1,472.78	26.69	56.183		
5,600.00	5,397.69	5,442.69	5,397.69	25.18	13.23	179.92	-281.17	255.91	1,499.47	1,472.41	27.07	55.403		
5,700.00	5,497.69	5,542.69	5,497.69	25.27	13.42	179.92	-281.17	255.91	1,499.47	1,472.03	27.44	54.639		
5,800.00	5,597.69	5,642.69	5,597.69	25.37	13.62	179.92	-281.17	255.91	1,499.47	1,471.65	27.82	53.893		
5,900.00	5,697.69	5,742.69	5,697.69	25.47	13.82	179.92	-281.17	255.91	1,499.47	1,471.27	28.20	53.164		
6,000.00	5,797.69	5,842.69	5,797.69	25.58	14.01	179.92	-281.17	255.91	1,499.47	1,470.88	28.59	52.450		
6,100.00	5,897.69	5,942.69	5,897.69	25.68	14.21	179.92	-281.17	255.91	1,499.47	1,470.50	28.97	51.752		
6,200.00	5,997.69	6,042.69	5,997.69	25.78	14.41	179.92	-281.17	255.91	1,499.47	1,470.11	29.36	51.070		
6,300.00	6,097.69	6,142.69	6,097.69	25.89	14.61	179.92	-281.17	255.91	1,499.47	1,469.72	29.75	50.402		
6,400.00	6,197.69	6,242.69	6,197.69	26.00	14.82	179.92	-281.17	255.91	1,499.47	1,469.33	30.14	49.750		
6,500.00	6,297.69	6,342.69	6,297.69	26.11	15.02	179.92	-281.17	255.91	1,499.47	1,468.94	30.53	49.111		
6,600.00	6,397.69	6,442.69	6,397.69	26.22	15.22	179.92	-281.17	255.91	1,499.47	1,468.55	30.93	48.486		
6,700.00	6,497.69	6,542.69	6,497.69	26.33	15.42	179.92	-281.17	255.91	1,499.47	1,468.15	31.32	47.875		
6,800.00	6,597.69	6,642.69	6,597.69	26.45	15.63	179.92	-281.17	255.91	1,499.47	1,467.76	31.72	47.277		
6,900.00	6,697.69	6,742.69	6,697.69	26.56	15.83	179.92	-281.17	255.91	1,499.47	1,467.36	32.11	46.692		
7,000.00	6,797.69	6,842.69	6,797.69	26.68	16.04	179.92	-281.17	255.91	1,499.47	1,466.96	32.51	46.119		
7,100.00	6,897.69	6,942.69	6,897.69	26.80	16.24	179.92	-281.17	255.91	1,499.47	1,466.56	32.91	45.559		
7,200.00	6,997.69	7,042.69	6,997.69	26.92	16.45	179.92	-281.17	255.91	1,499.47	1,466.16	33.31	45.010		
7,300.00	7,097.69	7,142.69	7,097.69	27.04	16.65	179.92	-281.17	255.91	1,499.47	1,465.76	33.72	44.473		
7,400.00	7,197.69	7,242.69	7,197.69	27.16	16.86	179.92	-281.17	255.91	1,499.47	1,465.35	34.12	43.947		
7,500.00	7,297.69	7,342.69	7,297.69	27.28	17.07	179.92	-281.17	255.91	1,499.47	1,464.95	34.52	43.432		
7,600.00	7,397.69	7,442.69	7,397.69	27.41	17.28	179.92	-281.17	255.91	1,499.47	1,464.54	34.93	42.928		
7,700.00	7,497.69	7,542.69	7,497.69	27.54	17.48	179.92	-281.17	255.91	1,499.47	1,464.14	35.34	42.434		
7,800.00	7,597.69	7,642.69	7,597.69	27.66	17.69	179.92	-281.17	255.91	1,499.47	1,463.73	35.74	41.950		
7,900.00	7,697.69	7,742.69	7,697.69	27.79	17.90	179.92	-281.17	255.91	1,499.47	1,463.32	36.15	41.476		
8,000.00	7,797.69	7,842.69	7,797.69	27.92	18.11	179.92	-281.17	255.91	1,499.47	1,462.91	36.56	41.012		
8,100.00	7,897.69	7,942.69	7,897.69	28.05	18.32	179.92	-281.17	255.91	1,499.47	1,462.50	36.97	40.556		
8,200.00	7,997.69	8,042.69	7,997.69	28.19	18.53	179.92	-281.17	255.91	1,499.47	1,462.09	37.38	40.110		
8,300.00	8,097.69	8,142.69	8,097.69	28.32	18.74	179.92	-281.17	255.91	1,499.47	1,461.68	37.80	39.673		
8,400.00	8,197.69	8,242.69	8,197.69	28.45	18.95	179.92	-281.17	255.91	1,499.47	1,461.26	38.21	39.244		
8,500.00	8,297.69	8,342.69	8,297.69	28.59	19.16	179.92	-281.17	255.91	1,499.47	1,460.85	38.62	38.824		
8,600.00	8,397.69	8,442.69	8,397.69	28.73	19.37	179.92	-281.17	255.91	1,499.47	1,460.44	39.04	38.412		
8,700.00	8,497.69	8,542.69	8,497.69	28.86	19.59	179.92	-281.17	255.91	1,499.47	1,460.02	39.45	38.008		
8,802.31	8,600.00	8,645.00	8,600.00	29.01	19.80	179.92	-281.17	255.91	1,499.47	1,459.60	39.88	37.602		



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 1022-11L4CS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5193.00ft (Original Well Elev)
Reference Site:	NBU-11M PAD	MD Reference:	WELL @ 5193.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 1022-11L4CS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 1022-11L4CS	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

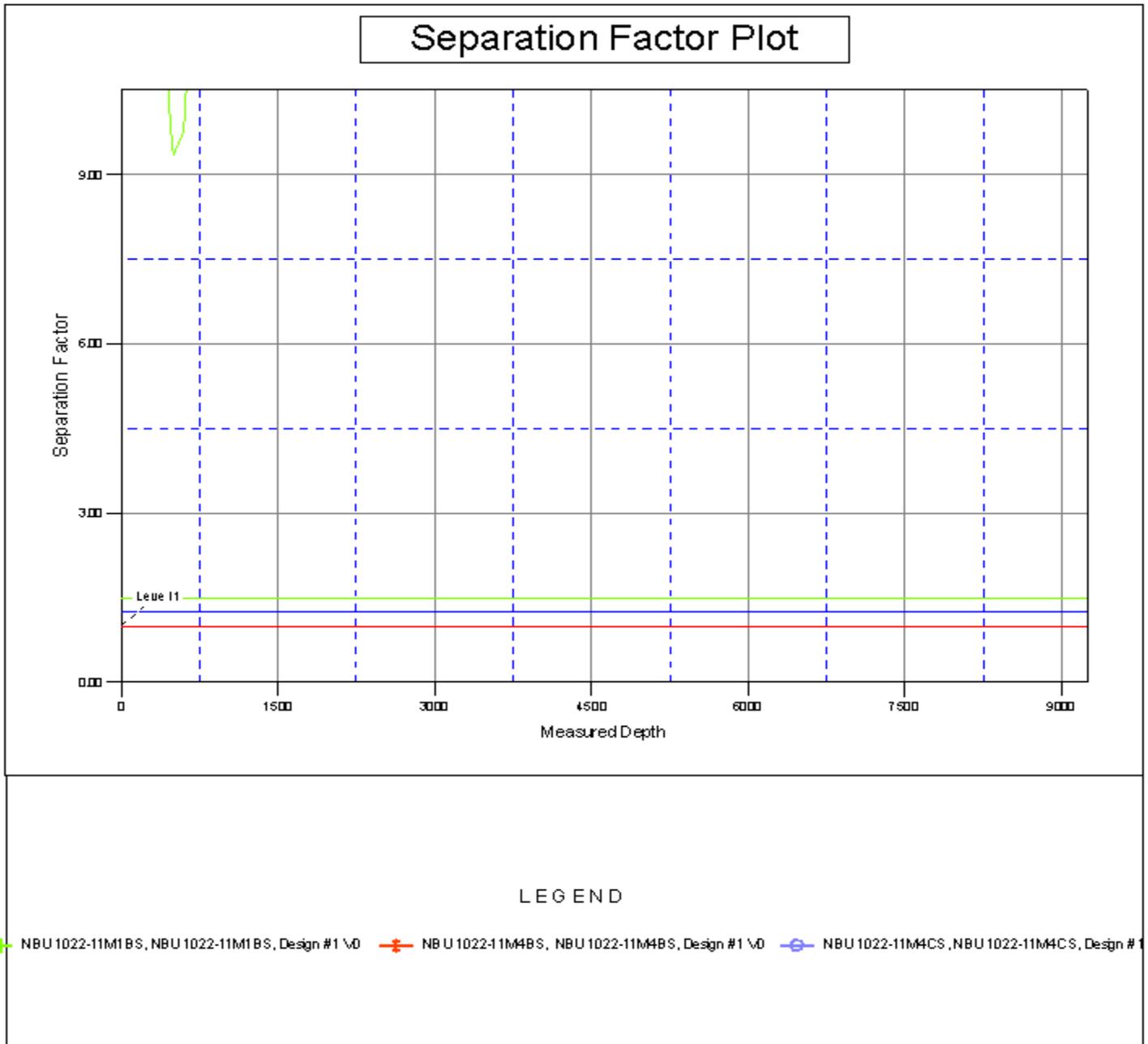
Reference Depths are relative to WELL @ 5193.00ft (Original Well Elev) Coordinates are relative to: NBU 1022-11L4CS
 Offset Depths are relative to Offset Datum Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N
 Central Meridian is 111° 0' 0.000 W ° Grid Convergence at Surface is: 1.02°





Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 1022-11L4CS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5193.00ft (Original Well Elev)
Reference Site:	NBU-11M PAD	MD Reference:	WELL @ 5193.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 1022-11L4CS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 1022-11L4CS	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5193.00ft (Original Well Elev) Coordinates are relative to: NBU 1022-11L4CS
 Offset Depths are relative to Offset Datum Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N
 Central Meridian is 111° 0' 0.000 W ° Grid Convergence at Surface is: 1.02°





Kerr-McGee Oil & Gas Onshore LP
P.O. Box 173779
Denver, CO 80217-3779

September 29, 2009

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

Re: Directional Drilling R649-3-11
NBU 1022-11L4CS
T10S-R22E
Section 11: SWSW
Surface: 286' FSL, 409' FWL
Bottom Hole: 1505' FSL, 665' FWL
Uintah County, Utah

Dear Ms. Mason:

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

- Kerr-McGee's NBU 1022-11L4CS 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 that reads 'Jessy Pink'.

Jessy Pink
Landman

From: Jim Davis
To: Bonner, Ed; Mason, Diana
Date: 12/8/2008 4:38 PM
Subject: KMG well approvals.

CC: Garrison, LaVonne
The following wells have been cleared by SITLA including arch and paleo clearance.

NBU 922-29P1BS a.k.a NBU 922-29I3DS API 43-047-50079 The name of this well has changed- the API has remained constant.

NBU 1022-11L2S 43-047-50221
NBU 1022-11L3S 43-047-50223
NBU 1022-11M1S 43-047-50220
NBU 1022-11K3S 43-047-50222

-Jim

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

NBU 1022-11L4CS

Surface: 286' FSL 409' FWL (SW/4SW/4)
BHL: 1,505' FSL 665' FWL (NW/4SW/4)

NBU 1022-11M1BS

Surface: 290' FSL 429' FWL (SW/4SW/4)
BHL: 1,005' FSL 665' FWL (SW/4SW/4)

NBU 1022-11M4BS

Surface: 293' FSL 449' FWL (SW/4SW/4)
BHL: 505' FSL 665' FWL (SW/4SW/4)

NBU 1022-11M4CS

Surface: 297' FSL 468' FWL (SW/4SW/4)
BHL: 5' FSL 665' FWL (SW/4SW/4)

Pad: NBU 1022-11M
Sec. 11 T10S R22E
Mineral Lease: UO 01197A

Uintah, Utah

ONSHORE ORDER NO. 1

***MULTI-POINT SURFACE USE & OPERATIONS PLAN
SUBMITTED WITH SITE-SPECIFIC INFORMATION***

APDs for these locations were previously submitted to UDOGM with the following names:

NBU 1022-11L3S (NBU 1022-11L4CS)
NBU 1022-11L2S (NBU 1022-11M1BS)
NBU 1022-11M1S (NBU 1022-11M4BS)
NBU 1022-11K3S (NBU 1022-11M4CS)

After an onsite was conducted on April 28, 2009, the locations were moved due to topography. The following information reflects those changes.

Directional Drilling:

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

A. Existing Roads:

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

B. Planned Access Roads:

See MDP for additional details on road construction.

Approximately $\pm 770'$ (± 0.15 mile) of access road is proposed. Please refer to the attached Topo Map B. No pipelines will be crossed with the new construction.

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

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

Please refer to Topo Map C.

D. Location of Existing and Proposed Facilities:

See MDP for additional details on Existing and Proposed Facilities.

The following guidelines will apply if the well is productive.

Approximately $\pm 1,430'$ (± 0.27 miles) of pipeline is proposed. Please refer to Topo map D for the existing pipeline. Pipeline segments will be welded or zaplocked together on disturbed areas in or near the location, whenever possible, and dragged into place.

E. Location and Type of Water Supply:

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

Water for drilling purposes will be obtained from 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.

F. Source of Construction Materials:

See MDP for additional details on Source of Construction Materials.

G. Methods of Handling Waste Materials:

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

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

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

H. Ancillary Facilities:

See MDP for additional details on Ancillary Facilities.

None are anticipated.

I. Well Site Layout: (See Location Layout Diagram)

See MDP for additional details on Well Site Layout.

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

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

J. Plans for Reclamation of the Surface:

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

K. Surface/Mineral Ownership:

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

L. Other Information:

See MDP for additional details on Other Information.

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

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

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

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

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

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

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

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



Kathy Schneebeck Dulnoan

September 23, 2009

Date

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS
ONSHORE LP'S PROPOSED NBU 1022-11M4CS, 1022-11M4BS,
1022-11M1BS, AND 1022-11L4CS DRILL LOCATIONS
(TOWNSHIP 10S, RANGE 22E SECTION 11)
UINTAH COUNTY, UTAH

By:

Jacki A. Montgomery

Prepared For:

State of Utah
School and Institutional
Trust Lands Administration

Prepared Under Contract With:

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

Prepared By:

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

MOAC Report No. 08-268b

August 25, 2009

Public Lands Policy Coordination Office
Archaeological Survey Permit No. 117

IPC #09-107

Paleontological Reconnaissance Survey Report

**Survey of Kerr McGee's Proposed Well Pads, Access Road, Pipeline
& Pipeline Upgrade for "NBU #1022-11M, M4CS, M4BS, M1BS
& L4CS" (Sec. 11, T 10 S, R 22 E) & "Bonanza #1023-18L2S
& L3S" (Sec. 18, T 10 S, R 23 E)**

Archy Bench & Asphalt Wash
Topographic Quadrangles
Uintah County, Utah

June 4, 2009

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

From: Jim Davis
To: Mason, Diana
Date: 10/29/2009 4:54 PM
Subject: The following wells have been approved by SITLA including arch and paleo clearance.

CC: Bonner, Ed; Garrison, LaVonne; Raleen.White@anadarko.com
The following wells have been approved by SITLA including arch and paleo clearance.

NBU 1022-11M4C (4304750222)
NBU 1022- 11M4Bs (4304750220)
NBU 1022- 11M1BS(4304750221)
NBU 1022- 11L4CS (4304750223).

-Jim

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

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)

October 30, 2009

Memorandum

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

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, Kerr McGee has asked that the following wells locations and names be changed. Original names and locations are outlined in our memo dated November 12, 2008. The wells are planned for calendar year 2009 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ Wasatch/MesaVerde)		
43-047-50220	NBU 1022-11M4BS	Sec 11 T10S R22E 0293 FSL 0449 FWL BHL Sec 11 T10S R22E 0505 FSL 0665 FWL
43-047-50221	NBU 1022-11M1BS	Sec 11 T10S R22E 0290 FSL 0429 FWL BHL Sec 11 T10S R22E 1005 FSL 0665 FWL
43-047-50222	NBU 1022-11M4CS	Sec 11 T10S R22E 0297 FSL 0468 FWL BHL Sec 11 T10S R22E 0005 FSL 0665 FWL
43-047-50223	NBU 1022-11L4CS	Sec 11 T10S R22E 0286 FSL 0409 FWL BHL Sec 11 T10S R22E 1505 FSL 0665 FWL

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

/s/ Michael L. Coulthard

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

MCoulthard:mc:10-30-09

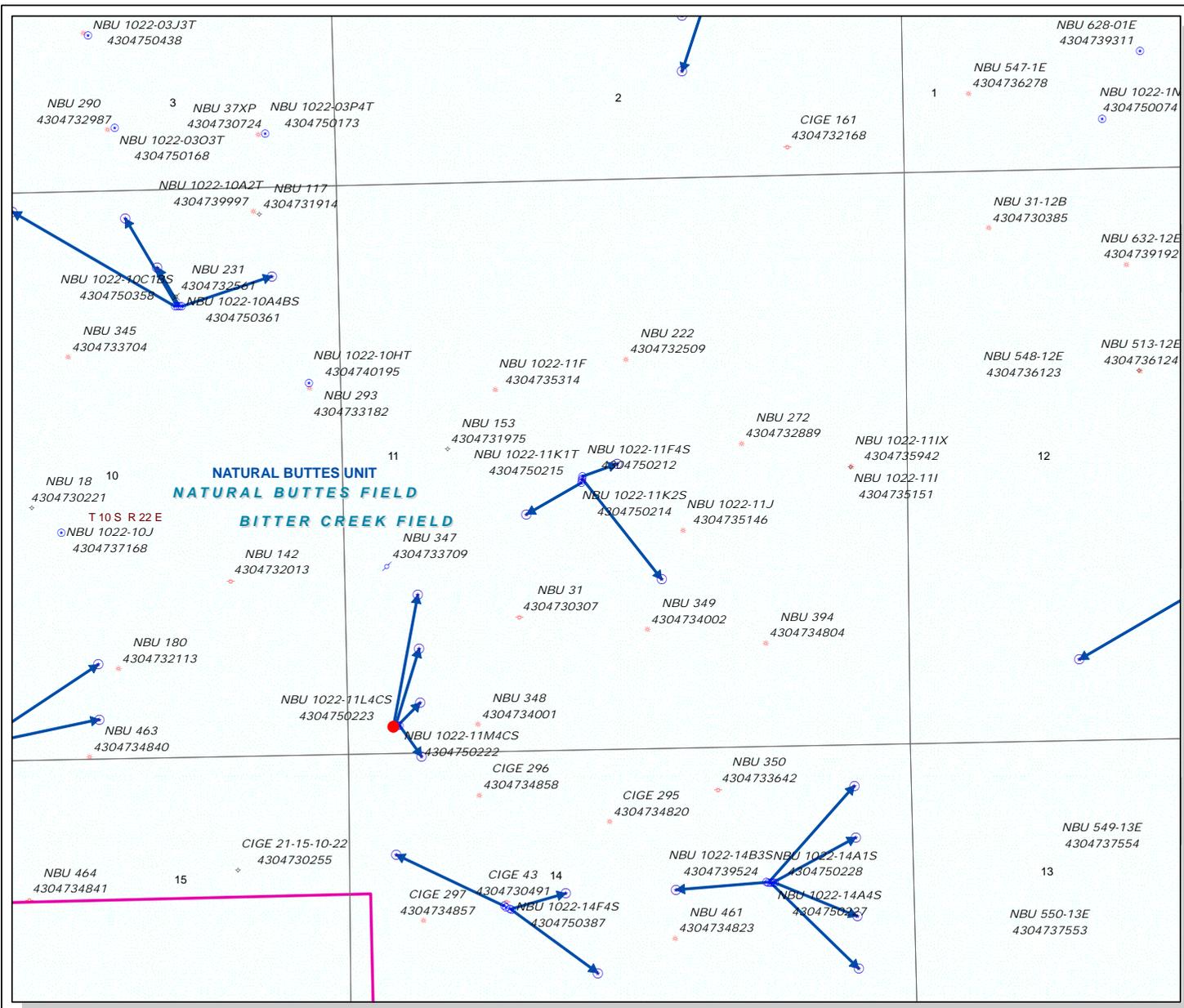
API Number: 4304750808
Well Name: NBU 1022-11L4CS
Township 10.0 S Range 22.0 E Section 11
Meridian: SLBM
Operator: KERR-MCGEE OIL & GAS ONSHO

Map Prepared:
 Map Produced by Diana Mason

- | | | | |
|--|---------------------|--|----------------|
| | GAS INJECTION | | Units |
| | GAS STORAGE | | Spacing Index |
| | NEW LOCATION | | ACTIVE FIELD |
| | PLUGGED & ABANDONED | | COMBINED FIELD |
| | PRODUCING GAS | | |
| | PRODUCING OIL | | |
| | SHUT-IN GAS | | |
| | SHUT-IN OIL | | |
| | TEMP. ABANDONED | | |
| | TEST WELL | | |
| | WATER INJECTION | | |
| | WATER SUPPLY | | |
| | WATER DISPOSAL | | |



1:11,294



Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 1022-11L4CS 430475022		
String	Surf	Prod	
Casing Size(")	9.625	4.500	
Setting Depth (TVD)	1915	8600	
Previous Shoe Setting Depth (TVD)	0	1915	
Max Mud Weight (ppg)	8.4	11.6	
BOPE Proposed (psi)	500	5000	
Casing Internal Yield (psi)	3520	7780	
Operators Max Anticipated Pressure (psi)	5074	11.3	

Calculations	Surf String	9.625	"
Max BHP (psi)	$.052 * \text{Setting Depth} * \text{MW} =$	836	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$	606	NO
MASP (Gas/Mud) (psi)	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$	415	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$	415	NO Reasonable depth in area
Required Casing/BOPE Test Pressure=		1915	psi
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient

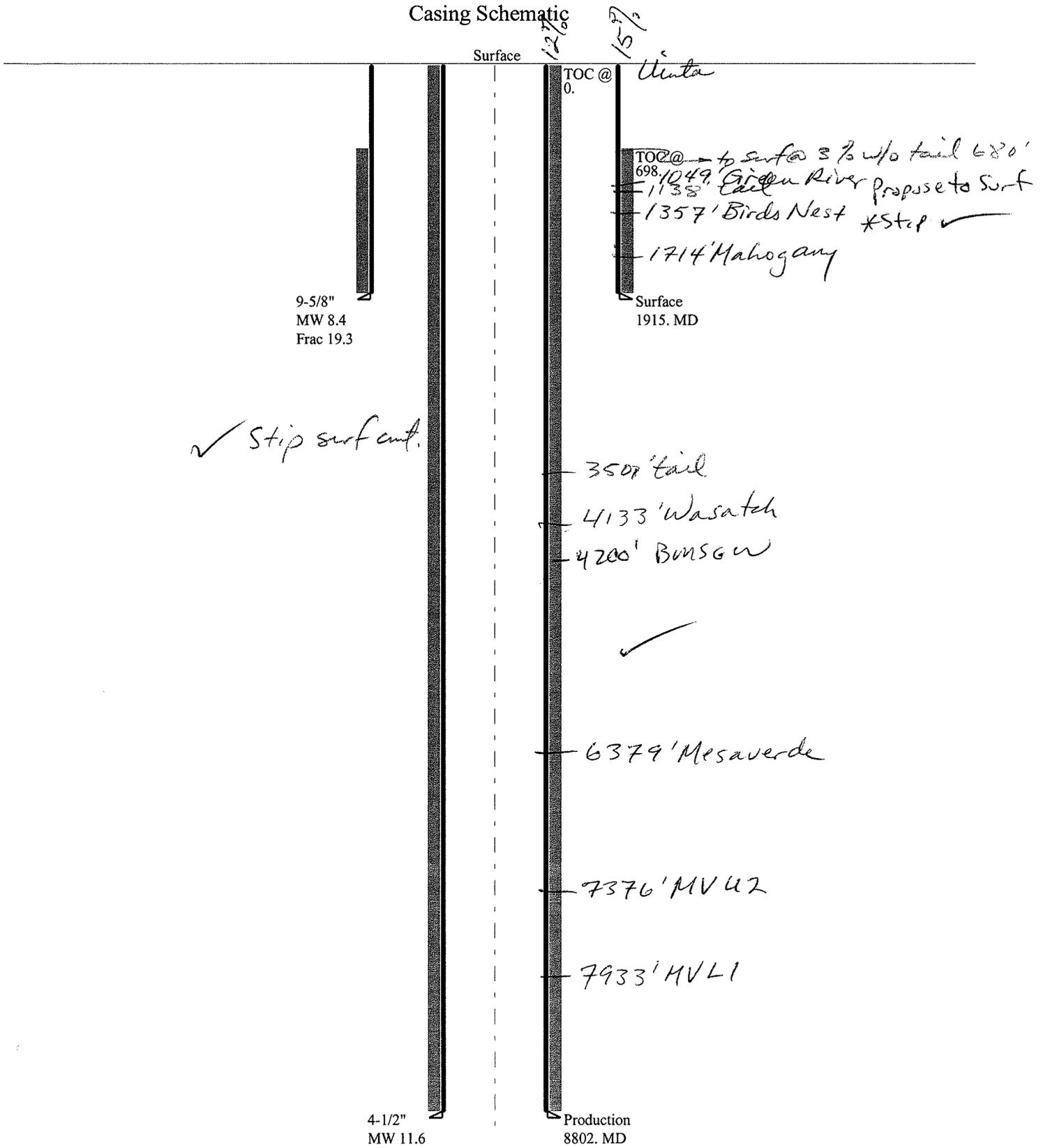
Calculations	Prod String	4.500	"
Max BHP (psi)	$.052 * \text{Setting Depth} * \text{MW} =$	5188	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$	4156	YES
MASP (Gas/Mud) (psi)	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$	3296	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$	3717	NO Reasonable for area
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		1915	psi *Assumes 1psi/ft frac gradient

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

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

43047502230000 NBU 1022-11 L4CS

Casing Schematic



9-5/8"
MW 8.4
Frac 19.3

✓ Stop surf cut.

4-1/2"
MW 11.6

Production
8802. MD

Surface

TOC @
0.

TOC @
698

Surface
1915. MD

3507' tail

4133' Wasatch

4200' BUNSGW

6379' Mesaverde

7376' MV U2

7933' MV L1

Well name:	43047502230000 NBU 1022-11L 4ES	
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.	
String type:	Surface	Project ID: 43-047-50223
Location:	UINTAH COUNTY	

Design parameters:

Collapse

Mud weight: 8.400 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: 75 °F
Bottom hole temperature: 102 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,000 ft

Cement top: 698 ft

Burst

Max anticipated surface pressure: 1,685 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 1,915 psi

No backup mud specified.

Tension:

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

Tension is based on air weight.
Neutral point: 1,677 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 8,802 ft
Next mud weight: 11.600 ppg
Next setting BHP: 5,304 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 1,915 ft
Injection pressure: 1,915 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	1915	9.625	36.00	J-55	LT&C	1915	1915	8.796	15660

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	836	2020	2.417	1915	3520	1.84	68.9	453	6.57 J

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

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

Date: October 29, 2009
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 1915 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:	43047502230000 NBU 1022-11L4CS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Production	Project ID:	43-047-50223
Location:	UINTAH	COUNTY	

Design parameters:

Collapse

Mud weight: 11.600 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: 75 °F
 Bottom hole temperature: 198 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 1,000 ft

Cement top: Surface

Burst

Max anticipated surface pressure: 3,368 psi
 Internal gradient: 0.220 psi/ft
 Calculated BHP 5,304 psi

No backup mud specified.

Tension:

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

Tension is based on air weight.
 Neutral point: 7,276 ft

Non-directional string.

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	8802	4.5	11.60	I-80	LT&C	8802	8802	3.875	116186
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	5304	6360	1.199	5304	7780	1.47	102.1	212	2.08 J

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

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

Date: October 29, 2009
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 8802 ft, a mud weight of 11.6 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.

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.
Well Name NBU 1022-11L4CS
API Number 43047502230000 **APD No** 1157 **Field/Unit** NATURAL BUTTES
Location: 1/4,1/4 SWSW **Sec** 11 **Tw** 10.0S **Rng** 22.0E 286 FSL 409 FWL
GPS Coord (UTM) 635440 4423984 **Surface Owner**

Participants

Floyd Bartlett (DOGM), Raleen White, Clay Einerson, Tony Kazeck, Laura Gianakos, Joe Bowden, Lovell Young, Jeff Samuels, Shelia Wopsock, Andy Lytle (Kerr McGee), Alex Hansen (UDWR), Mitch Batty, Dee Slaugh, (Timberline Engineering and Land Surveying).

Regional/Local Setting & Topography

The general area is in the southeast portion of the Natural Buttes Unit on 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 45 air miles to the northwest. Access from Vernal is approximately 55.6 road miles following Utah State, Uintah County and oilfield development roads. Approximately 770 feet of new road will be constructed to reach the location.

Four wells will be directionally drilled from this location to be constructed. They are the NBU 1022-11M4CS, NBU 1022-11M4BS, NBU 1022-11M1BS AND NBU 1022-11L4CS. The location runs in an east-west direction along the top and sides of a narrow ridge. This ridge breaks off sharply into rugged secondary canyons especially on the south side. Here it was agreed to narrow the width of the pad up to 10 feet to reduce the overcast of the toe of the fill toward the edge of a bench that breaks off sharply to the south. Ten to 12 feet of fill will occur along this side. The top of the ridge will be lowered up to 16 feet to obtain the needed fill and width for the pad. The northwest corner, Corner B, of the reserve pit will be on 2.8 feet of fill. With the provided 2 feet of freeboard, the outside bench and the proposed liner, the pit should be stable. No drainage concerns exist. And no diversions will be needed. The pad as modified should be stable and is the only suitable location in the immediate area.

Both the surface and minerals are owned by SITLA. Ed Bonner and Jim Davis of SITLA were invited by phone and email to the pre-site evaluation. Neither attended.

Surface Use Plan

Current Surface Use

- Grazing
- Recreational
- Wildlife Habitat

New Road Miles	Well Pad	Src Const Material	Surface Formation
0.05	Width 305 Length 440	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate? Y

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

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

Sheep, antelope, raptors and small mammals and birds.

Soil Type and Characteristics

Soils are a shallow rocky sandy loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diversion Required? N

Berm Required? N

Erosion Sedimentation Control Required? N

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

Reserve Pit

Site-Specific Factors

Site Ranking

Distance to Groundwater (feet)	>200	0
Distance to Surface Water (feet)	>1000	0
Dist. Nearest Municipal Well (ft)	>5280	0
Distance to Other Wells (feet)		20
Native Soil Type	High permeability	20
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		45

1 Sensitivity Level

Characteristics / Requirements

The reserve pit is planned in an area of cut in the northwest corner of the location. Dimensions are 100' x 250' x 12' deep with 2' of freeboard. Kerr McGee agreed to line the pit with a double 30-mil liner and 2 layers of felt.

Closed Loop Mud Required? N Liner Required? Y Liner Thickness 60 Pit Underlayment Required? Y

Other Observations / Comments

Floyd Bartlett
Evaluator

10/27/2009
Date / Time

Application for Permit to Drill Statement of Basis

11/2/2009

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
1157	43047502230000	LOCKED	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		Surface Owner-APD		
Well Name	NBU 1022-11L4CS	Unit		NATURAL BUTTES	
Field	NATURAL BUTTES	Type of Work		DRILL	
Location	SWSW 11 10S 22E S 286 FSL 409 FWL		GPS Coord (UTM)	635437E	4423972N

Geologic Statement of Basis

Kerr McGee proposes to set 1,915' 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 4,200'. 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

10/29/2009
Date / Time

Surface Statement of Basis

The general area is in the southeast portion of the Natural Buttes Unit on 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 45 air miles to the northwest. Access from Vernal is approximately 55.6 road miles following Utah State, Uintah County and oilfield development roads. Approximately 770 feet of new road will be constructed to reach the location.

Four wells will be directionally drilled from this location to be constructed. They are the NBU 1022-11M4CS, NBU 1022-11M4BS, NBU 1022-11M1BS AND NBU 1022-11L4CS. The location runs in an east-west direction along the top and sides of a narrow ridge. This ridge breaks off sharply into rugged secondary canyons especially on the south side. Here it was agreed to narrow the width of the pad up to 10 feet to reduce the overcast of the toe of the fill toward the edge of a bench that breaks off sharply to the south. Ten to 12 feet of fill will occur along this side. The top of the ridge will be lowered up to 16 feet to obtain the needed fill and width for the pad. The northwest corner, Corner B, of the reserve pit will be on 2.8 feet of fill. With the provided 2 feet of freeboard, the outside bench and the proposed liner, the pit should be stable. No drainage concerns exist. And no diversions will be needed. The pad as modified should be stable and is the only suitable location in the immediate area.

Both the surface and minerals are owned by SITLA. Ed Bonner and Jim Davis of SITLA were invited by phone and email to the pre-site evaluation. Neither attended. Kerr McGee was told to consult with SITLA for reclamation standards including seeding mixes to be used.

Alex Hansen of the Utah Division of Wildlife Resources attended. He stated that the area was yearlong antelope habitat but recommended no stipulations. Also the general area is known raptor-nesting habitat. He did not have data on the specific locations with him but suggested a stipulation to cover the critical nesting period from April 15th to July 15th. During this period, road and pad construction, drilling and the use of work-over rigs

Application for Permit to Drill Statement of Basis

11/2/2009

Utah Division of Oil, Gas and Mining

Page 2

should not occur. No other wildlife is expected to be significantly affected.

Floyd Bartlett
Onsite Evaluator

10/27/2009
Date / Time

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A double synthetic liner each with a minimum thickness of 30 mils and an appropriate thickness of felt sub-liner to cushion the liners shall be properly installed and maintained in the reserve pit.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/7/2008

API NO. ASSIGNED: 43047502230000

WELL NAME: NBU 1022-11L4CS

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

PHONE NUMBER: 720 929-6007

CONTACT: Kathy Schneebeck-Dulnoan

PROPOSED LOCATION: SWSW 11 100S 220E

Permit Tech Review:

SURFACE: 0286 FSL 0409 FWL

Engineering Review:

BOTTOM: 1505 FSL 0665 FWL

Geology Review:

COUNTY: UINTAH

LATITUDE: 39.95695

LONGITUDE: -109.41441

UTM SURF EASTINGS: 635437.00

NORTHINGS: 4423972.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: UO 01197A

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

SURFACE OWNER: 3 - State

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

- PLAT
- Bond: STATE/FEE - 22013542
- Potash
- Oil Shale 190-5
- Oil Shale 190-3
- Oil Shale 190-13
- Water Permit: Permit #43-8496
- RDCC Review:
- Fee Surface Agreement
- Intent to Commingle

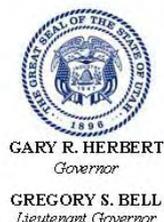
Commingle Approved

LOCATION AND SITING:

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

Comments: Presite Completed

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



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 1022-11L4CS
API Well Number: 43047502230000
Lease Number: UO 01197A
Surface Owner: STATE
Approval Date: 11/2/2009

Issued to:

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

Authority:

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

Duration:

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

Commingle:

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

General:

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

Conditions of Approval:

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

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

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

Surface casing shall be cemented to the surface.

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 <https://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):

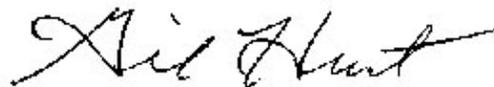
- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office
801-942-0871 - after office hours

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:



Gil Hunt
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 Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197A
	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 1022-11L4CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047502230000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0286 FSL 0409 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 11 Township: 10.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
	COUNTY: UINTAH
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 11/19/2009	<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 type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: Frac Factory and Pit Re

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

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 a Frac Factory staging pit to be utilized for other completion operations in the area. There will be a 2-400 bbl skim tanks placed on the location. The trucks will unload water into these tanks before the water is placed into the refurbished pit. The purpose of the skim 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 area. Thank you.

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

Date: November 17, 2009

By: 

NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 11/17/2009	



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 43047502230000

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

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

Date: November 17, 2009

By: 

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197A
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4. LOCATION OF WELL FOOTAGES AT SURFACE: 0286 FSL 0409 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 11 Township: 10.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES COUNTY: UINTAH STATE: UTAH

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

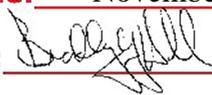
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 11/23/2009 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER:

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

Based on the comments from the on-site held on October 27, 2009, Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests a minor adjustment to the pad design, by trimming 10 feet on corner 1. A facilities diagram was also added to the survey plat package. Please see the attached revised survey plats for additional information. All of the original information remains the same. Please contact the undersigned with any questions and/or comments. Thank you.

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

Date: November 24, 2009

By: 

NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 11/19/2009	

BOTTOM HOLE FOOTAGES

- NBU 1022-11M4CS
5' FSL & 665' FWL

- NBU 1022-11M4BS
505' FSL & 665' FWL

- NBU 1022-11M1BS
1005' FSL & 665' FWL

- NBU 1022-11L4CS
1505' FSL & 665' FWL

BASIS OF BEARINGS IS THE WEST LINE OF THE SW 1/4 OF SECTION 11, T10S, R22E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°06'14"W.



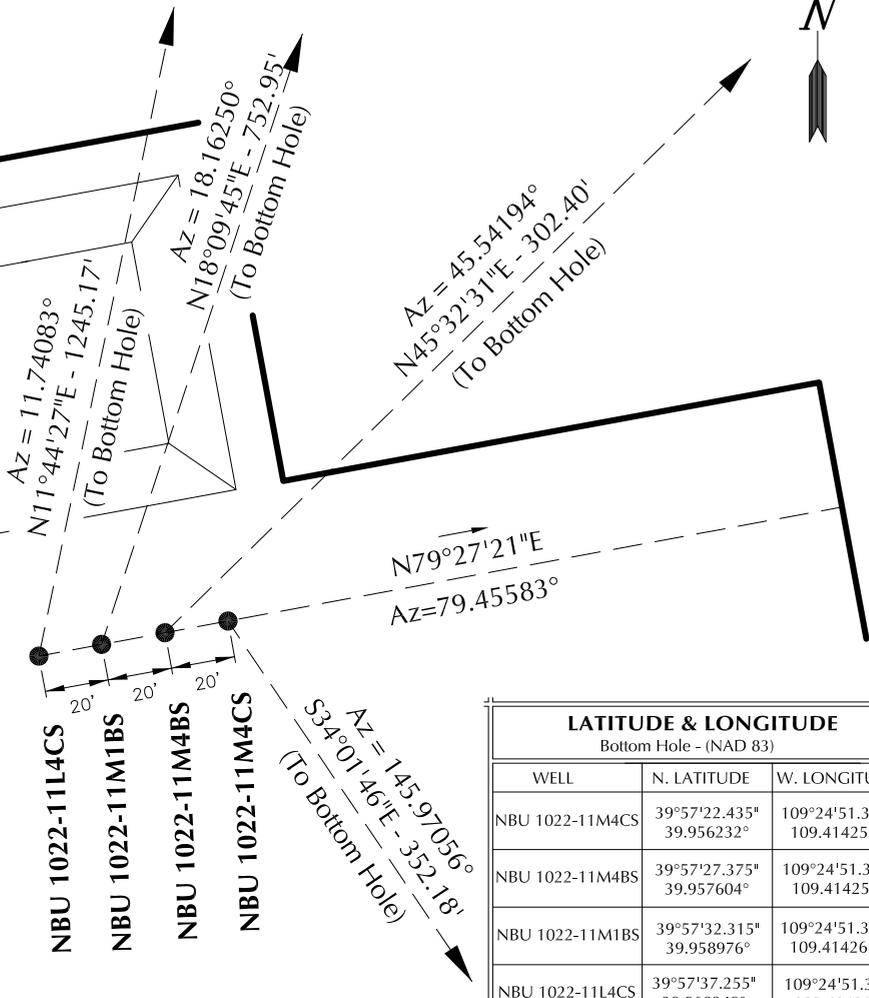
SURFACE POSITION FOOTAGES:

- NBU 1022-11M4CS
297' FSL & 468' FWL

- NBU 1022-11M4BS
293' FSL & 449' FWL

- NBU 1022-11M1BS
290' FSL & 429' FWL

- NBU 1022-11L4CS
286' FSL & 409' FWL



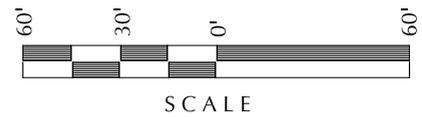
LATITUDE & LONGITUDE Surface Position - (NAD 83)		
WELL	N. LATITUDE	W. LONGITUDE
NBU 1022-11M4CS	39°57'25.320" 39.957033°	109°24'53.853" 109.414959°
NBU 1022-11M4BS	39°57'25.284" 39.957023°	109°24'54.105" 109.415029°
NBU 1022-11M1BS	39°57'25.248" 39.957013°	109°24'54.359" 109.415100°
NBU 1022-11L4CS	39°57'25.212" 39.957003°	109°24'54.612" 109.415170°

LATITUDE & LONGITUDE Surface Position - (NAD 27)		
WELL	N. LATITUDE	W. LONGITUDE
NBU 1022-11M4CS	39°57'25.443" 39.957068°	109°24'51.399" 109.414278°
NBU 1022-11M4BS	39°57'25.407" 39.957058°	109°24'51.652" 109.414348°
NBU 1022-11M1BS	39°57'25.372" 39.957048°	109°24'51.906" 109.414418°
NBU 1022-11L4CS	39°57'25.335" 39.957038°	109°24'52.157" 109.414488°

RELATIVE COORDINATES From Surface Position to Bottom Hole		
WELL	NORTH	EAST
NBU 1022-11M4CS	-292'	197'
NBU 1022-11M4BS	212'	216'
NBU 1022-11M1BS	715'	235'
NBU 1022-11L4CS	1,219'	253'

LATITUDE & LONGITUDE Bottom Hole - (NAD 83)		
WELL	N. LATITUDE	W. LONGITUDE
NBU 1022-11M4CS	39°57'22.435" 39.956232°	109°24'51.325" 109.414257°
NBU 1022-11M4BS	39°57'27.375" 39.957604°	109°24'51.333" 109.414259°
NBU 1022-11M1BS	39°57'32.315" 39.958976°	109°24'51.341" 109.414261°
NBU 1022-11L4CS	39°57'37.255" 39.960349°	109°24'51.349" 109.414264°

LATITUDE & LONGITUDE Bottom Hole - (NAD 27)		
WELL	N. LATITUDE	W. LONGITUDE
NBU 1022-11M4CS	39°57'22.559" 39.956266°	109°24'48.871" 109.413575°
NBU 1022-11M4BS	39°57'27.499" 39.957639°	109°24'48.879" 109.413578°
NBU 1022-11M1BS	39°57'32.439" 39.959011°	109°24'48.887" 109.413580°
NBU 1022-11L4CS	39°57'37.379" 39.960383°	109°24'48.895" 109.413582°



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

WELL PAD - NBU 1022-11M

WELL PAD INTERFERENCE PLAT
WELLS - NBU 1022-11M4CS, NBU 1022-11M4BS,
NBU 1022-11M1BS & NBU 1022-11L4CS
LOCATED IN SECTION 11, T10S, R22E,
S.L.B.&M., Uintah County, Utah.

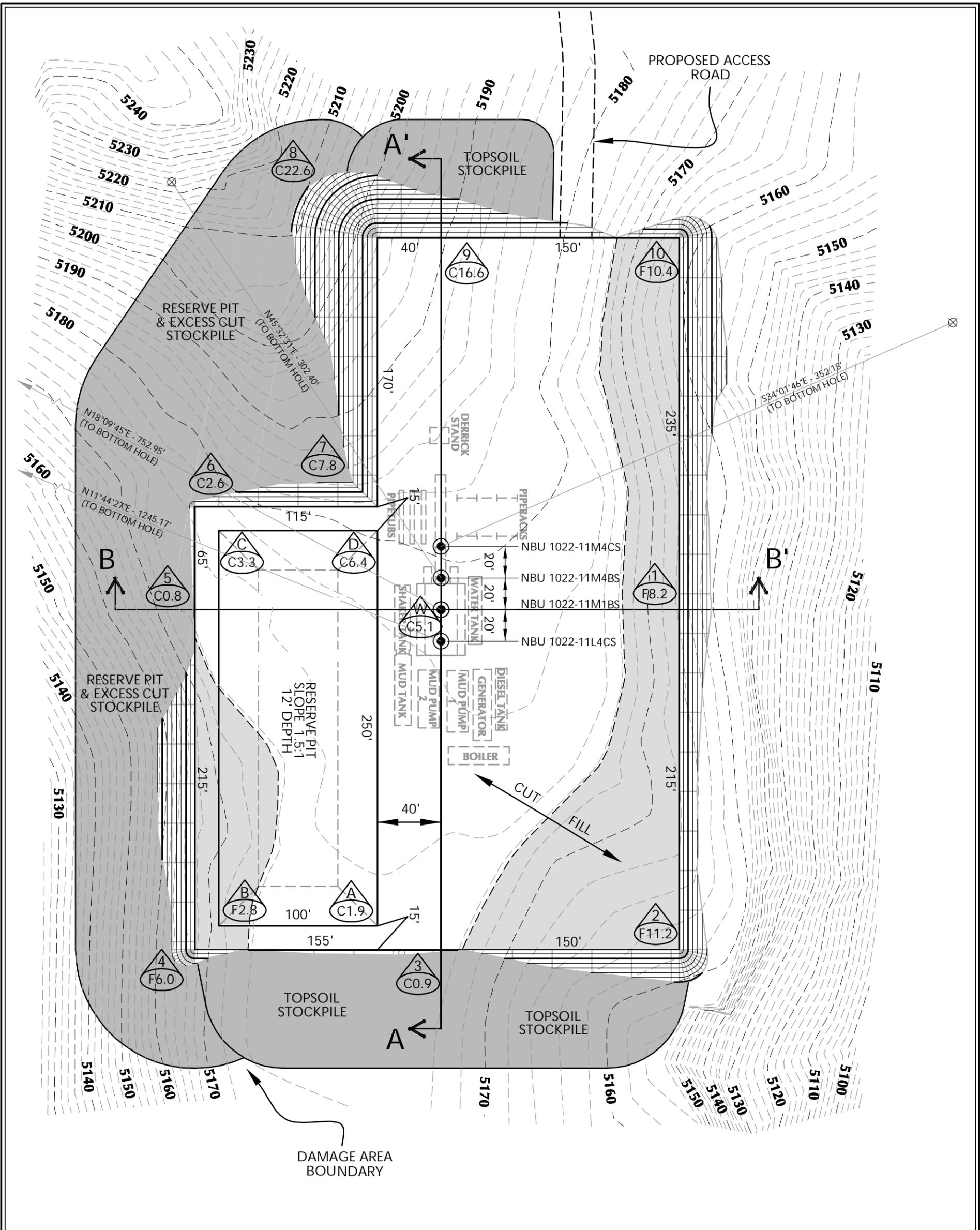


CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE (435) 789-1365

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

DATE SURVEYED: 05-18-09	SURVEYED BY: M.S.B.	SHEET NO: 5
DATE DRAWN: 05-19-09	DRAWN BY: E.M.S.	
SCALE: 1" = 60'	Date Last Revised: 08-06-09	5 OF 13



WELL PAD - NBU 1022-11M DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5178.8'
 FINISHED GRADE ELEVATION = 5173.7'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.31 ACRES
 TOTAL DAMAGE AREA = 5.58 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 17,368 C.Y.
 TOTAL FILL FOR WELL PAD = 8,823 C.Y.
 TOPSOIL @ 6" DEPTH = 2,670 C.Y.
 EXCESS MATERIAL = 8,545 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT +/- 8,510 CY
 RESERVE PIT CAPACITY (2' OF FREEBOARD) +/- 32,370 BARRELS

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



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

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

(435) 789-1365

WELL PAD LEGEND

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



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

WELL PAD - NBU 1022-11M

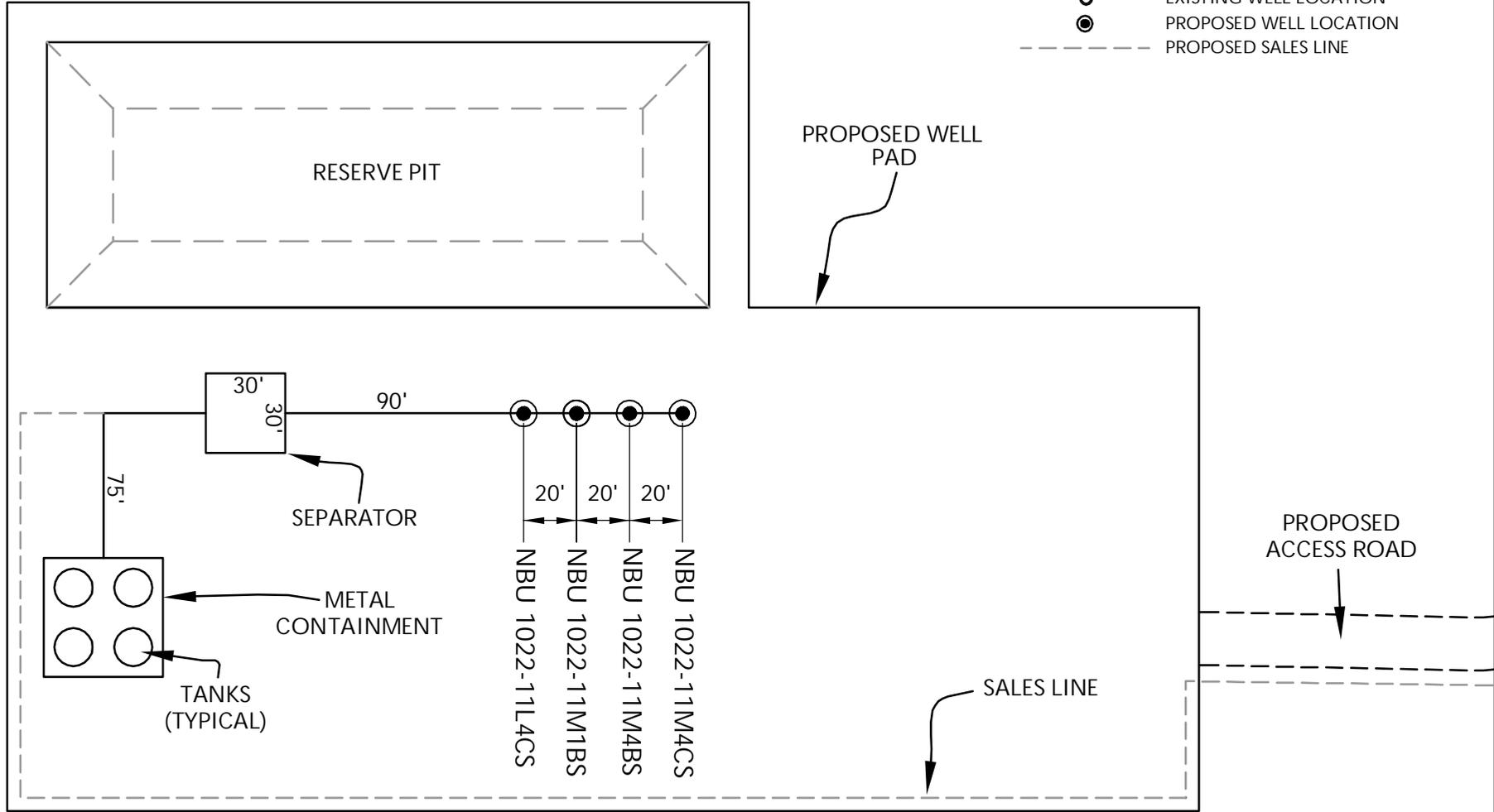
WELL PAD - LOCATION LAYOUT
 NBU 1022-11M4CS, NBU 1022-11M4BS,
 NBU 1022-11M1BS & NBU 1022-11L4CS
 LOCATED IN SECTION 11, T10S, R22E,
 S.L.B.&M., Uintah County, UTAH.

Scale: 1"=60' Date: 10/29/09 SHEET NO:
 REVISED: 6 6 OF 13

K:\ANADARKO\2009_11_NBU_Directional\UELS_Edits\DWGS\NBU 1022-11M\1022-11M.dwg FACILITIES LAYOUT, 10/20/09 3:59:14 PM

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- - - PROPOSED SALES LINE



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

WELL PAD - NBU 1022-11M

WELL PAD - FACILITIES DIAGRAM
NBU 1022-11M4CS, NBU 1022-11M4BS,
NBU 1022-11M1BS & NBU 1022-11L4CS
LOCATED IN SECTION 11, T10S, R22E,
S.L.B.&M., Uintah County, Utah



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



HORIZONTAL 0 30' 60' 1" = 60'

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

(435) 789-1365

Scale: 1"=60'

Date: 10/29/09

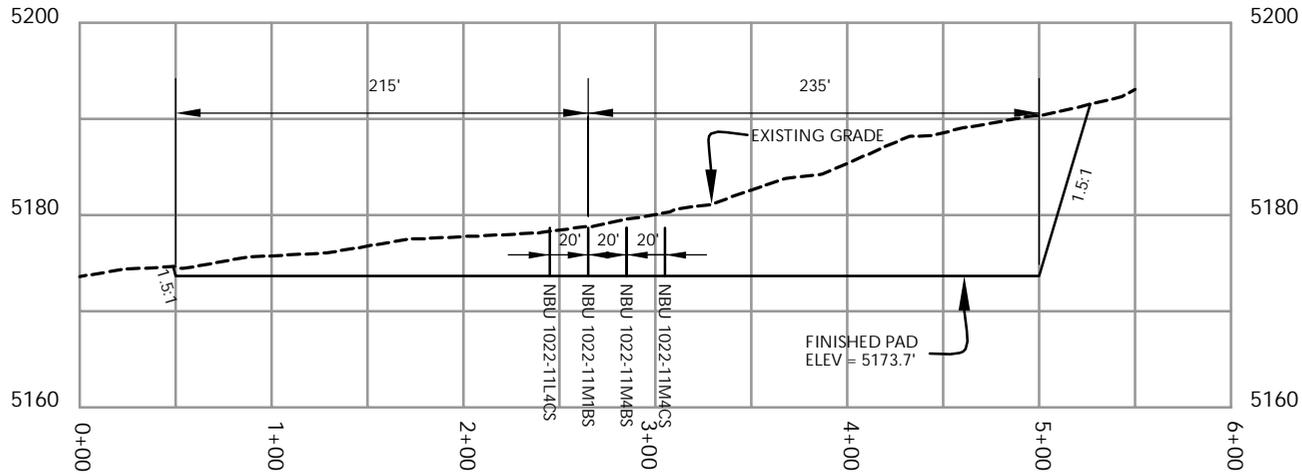
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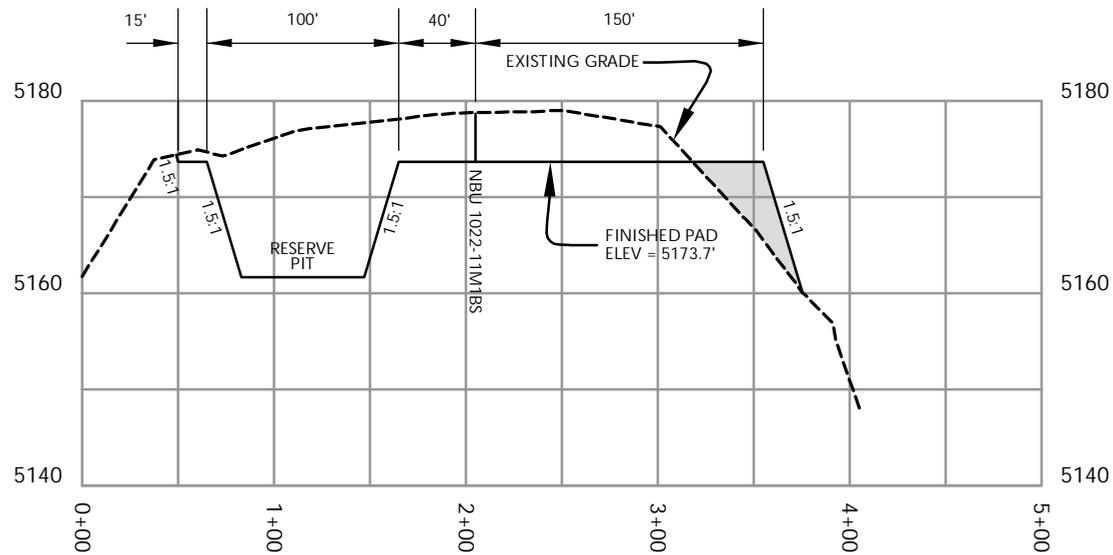
BY
DATE

6B 6B OF 13

RECEIVED November 19, 2009



CROSS SECTION A-A'



CROSS SECTION B-B'

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

WELL PAD - NBU 1022-11M

WELL PAD - CROSS SECTIONS
NBU 1022-11M4CS, NBU 1022-11M4BS,
NBU 1022-11M1BS & NBU 1022-11L4CS
LOCATED IN SECTION 11, T10S, R22E,
S.L.B.&M., Uintah County, Utah



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

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

(435) 789-1365

Scale: 1"=100'

Date: 10/29/09

SHEET NO:

REVISED:

7

7 OF 13





STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197A
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4. LOCATION OF WELL FOOTAGES AT SURFACE: 0286 FSL 0409 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 11 Township: 10.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES COUNTY: UINTAH STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 3/4/2010 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER:

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

Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee) respectfully requests to change the surface casing size for this well from FROM: 9-5/8" TO: 8-5/8". Additionally, Kerr-McGee requests to change the cement program for this well due to a revised drilling procedure. The production casing will still be cemented it's entire length to the surface. Please see the attached drilling program for additional details. All other information remains the same. Please contact the undersigned with any questions and/or comments. Thank you.

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

Date: February 25, 2010

By: *Danielle Piernot*

NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 2/24/2010	



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'						
						3,390	1,880	348,000
SURFACE	8-5/8"	0 to 1,865	28.00	IJ-55	LTC	1.01	2.15	6.60
						7,780	6,350	278,000
PRODUCTION	4-1/2"	0 to 8,802	11.60	I-80	BTC	2.36	1.22	3.12

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)
 (Burst Assumptions: TD = 11.6 ppg) 0.22 psi/ft = gradient for partially evac wellbore
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoys.Fact. of water)
MASP 3,198 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
 (Burst Assumptions: TD = 11.6 ppg) 0.59 psi/ft = bottomhole gradient
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoys.Fact. of water)
MABHP 5,210 psi

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 Premium cmt + 2% CaCl	310	0%	15.80	1.15
SURFACE			NOTE: If well will circulate water to surface, option 2 will be utilized				
Option 2	LEAD	1,365'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	130	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	3,632'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	300	40%	11.00	3.38
	TAIL	5,170'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,270	40%	14.30	1.31

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

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

FLOAT EQUIPMENT & CENTRALIZERS

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

ADDITIONAL INFORMATION

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

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

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

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

DRILLING ENGINEER: _____ **DATE:** _____
 John Huycke / Emile Goodwin

DRILLING SUPERINTENDENT: _____ **DATE:** _____
 John Merkel / Lovel Young

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197A
---	--

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 1022-11L4CS
------------------------------------	--

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047502230000
---	---

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

4. LOCATION OF WELL FOOTAGES AT SURFACE: 0286 FSL 0409 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW 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 checked="" type="checkbox"/> SPUD REPORT Date of Spud: 3/4/2010	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER:

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

MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'.
 RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL LOCATION ON 3/4/2010 AT 15:00 HRS.

Accepted by the
 Utah Division of
 Oil, Gas and Mining
FOR RECORD ONLY
 March 08, 2010

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 3/4/2010	

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

FORM 6

ENTITY ACTION FORM

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

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750223	NBU 1022-11L4CS		SWSW	11	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
B	99999	2900	3/4/2010			3/8/10	
Comments: MIRU PETE MARTIN BUCKET RIG. <i>WSMVD</i> SPUD WELL LOCATION ON 3/4/2010 AT 15:00 HRS. <i>BHL = NWSW</i>							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
Comments:							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
Comments:							

ACTION CODES:

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

ANDY LYTLE

Name (Please Print)

[Signature]
Signature

REGULATORY ANALYST

3/4/2010

Title

Date

RECEIVED

MAR 04 2010

(5/2000)

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197A
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 1022-11L4CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047502230000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0286 FSL 0409 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 11 Township: 10.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES COUNTY: UINTAH STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 3/17/2010	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER:

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

MIRU PROPETRO AIR RIG ON 3/15/2010. DRILLED 11" SURFACE HOLE TO 1944'. RAN 8-5/8" 28# J-55 SURFACE CASING. PUMP 20 BBLS OF GEL WATER. PUMP 225 SX CLASS G TAIL CMT @ 15.8 PPG, 1.15 YIELD. DROP PLUG ON FLY AND DISPLACE WITH 119.3 BBLS FRESH WATER, 100 PSI LIFT, NO RETURNS. BUMP PLUG W/500 PSI, FLOAT HELD. TOP OUT W/125 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YIELD. WAIT 2 HRS AND PUMP 100 SX SAME CMT. NO CMT TO SURFACE. WILL REDIMIX. WORT.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 March 18, 2010

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 3/18/2010	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197A
	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 1022-11L4CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047502230000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0286 FSL 0409 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 11 Township: 10.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
	COUNTY: UINTAH
	STATE: UTAH

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

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	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: _____

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

Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee) respectfully requests to change the surface casing size for this well from FROM: 9-5/8" TO: 8-5/8". Additionally, Kerr-McGee requests to change the cement program for this well due to a revised drilling procedure. The production casing will still be cemented it's entire length to the surface. Please see the attached drilling program for additional details. All other information remains the same. Please contact the undersigned with any questions and/or comments. Thank you.

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

Date: February 25, 2010

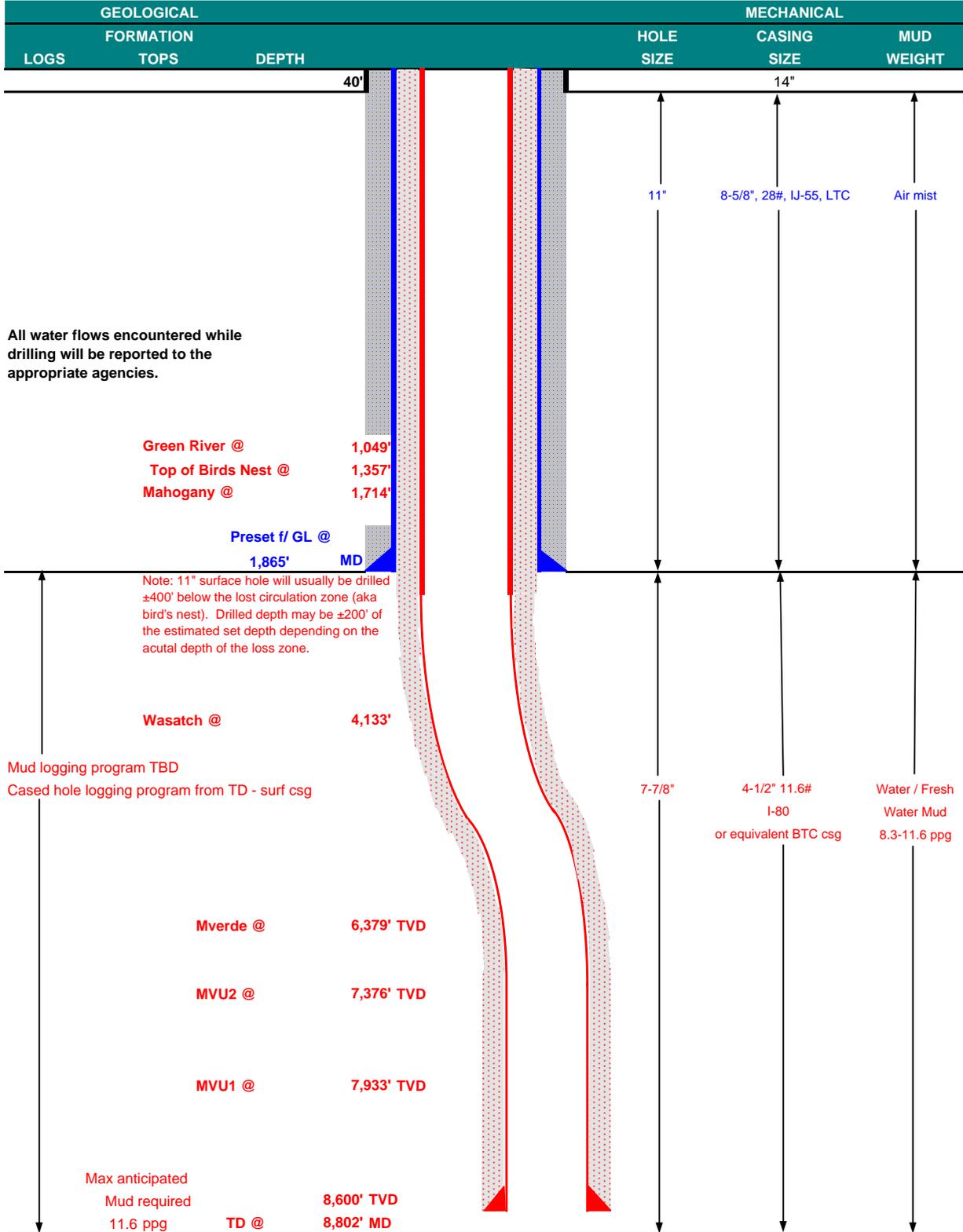
By: Daniel Piernot

NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 2/24/2010	



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	February 24, 2010	
WELL NAME	NBU 1022-11L4CS		TD	8,600'	8,802' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
SURFACE LOCATION	SW/4 SW/4	286' FSL	409' FWL	Sec 11	T 10S R 22E
	Latitude:	39.957038	Longitude:	-109.414488	NAD 27
BTM HOLE LOCATION	NW/4 SW/4	1,505' FSL	665' FWL	Sec 11	T 10S R 22E
	Latitude:	39.960383	Longitude:	-109.413582	NAD 27
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: SITLA (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.				





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

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'						
						3,390	1,880	348,000
SURFACE	8-5/8"	0 to 1,865	28.00	IJ-55	LTC	1.01	2.15	6.60
						7,780	6,350	278,000
PRODUCTION	4-1/2"	0 to 8,802	11.60	I-80	BTC	2.36	1.22	3.12

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)
 (Burst Assumptions: TD = 11.6 ppg) 0.22 psi/ft = gradient for partially evac wellbore
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MASP 3,198 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
 (Burst Assumptions: TD = 11.6 ppg) 0.59 psi/ft = bottomhole gradient
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MABHP 5,210 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1			+ 0.25 pps flocele				
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	310	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
			Premium cmt + 2% CaCl				
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized					
Option 2	LEAD	1,365'	65/35 Poz + 6% Gel + 10 pps gilsonite	130	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	3,632'	Premium Lite II +0.25 pps	300	40%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	5,170'	50/50 Poz/G + 10% salt + 2% gel	1,270	40%	14.30	1.31
			+ 0.1% R-3				

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

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

FLOAT EQUIPMENT & CENTRALIZERS

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

ADDITIONAL INFORMATION

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

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

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

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

DRILLING ENGINEER: _____ **DATE:** _____
 John Huycke / Emile Goodwin

DRILLING SUPERINTENDENT: _____ **DATE:** _____
 John Merkel / Lovel Young

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197A
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1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 1022-11L4CS
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047502230000
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11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 3/4/2010	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER:

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

MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'.
 RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL LOCATION ON 3/4/2010 AT 15:00 HRS.

Accepted by the
 Utah Division of
 Oil, Gas and Mining
FOR RECORD ONLY
 March 08, 2010

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 3/4/2010	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197A
	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 1022-11L4CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047502230000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0286 FSL 0409 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 11 Township: 10.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
	COUNTY: UINTAH
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 3/17/2010	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER:

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

MIRU PROPETRO AIR RIG ON 3/15/2010. DRILLED 11" SURFACE HOLE TO 1944'. RAN 8-5/8" 28# J-55 SURFACE CASING. PUMP 20 BBLS OF GEL WATER. PUMP 225 SX CLASS G TAIL CMT @ 15.8 PPG, 1.15 YIELD. DROP PLUG ON FLY AND DISPLACE WITH 119.3 BBLS FRESH WATER, 100 PSI LIFT, NO RETURNS. BUMP PLUG W/500 PSI, FLOAT HELD. TOP OUT W/125 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YIELD. WAIT 2 HRS AND PUMP 100 SX SAME CMT. NO CMT TO SURFACE. WILL REDIMIX. WORT.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 March 18, 2010

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 3/18/2010	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197A
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 1022-11L4CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047502230000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0286 FSL 0409 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 11 Township: 10.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES COUNTY: UINTAH STATE: UTAH

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

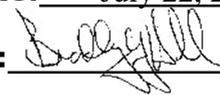
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 7/19/2010 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER	<input 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: Update Water Source Ir

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

Kerr-McGee Oil & Gas Onshore, LP respectfully requests to update the water source for this location to Permit Numbers 49-2306 and 49-2319, both obtained by R.N. Industries. Please contact the undersigned for with any questions.

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

Date: July 22, 2010

By: 

NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 7/19/2010	

<p>STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING</p>	<p>FORM 9</p>
<p>SUNDRY NOTICES AND REPORTS ON WELLS</p> <p>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.</p>	<p>5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197A</p>
<p>1. TYPE OF WELL Gas Well</p>	<p>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</p>
<p>2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.</p>	<p>7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES</p>
<p>3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779</p>	<p>8. WELL NAME and NUMBER: NBU 1022-11L4CS</p>
<p>4. LOCATION OF WELL FOOTAGES AT SURFACE: 0286 FSL 0409 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 11 Township: 10.0S Range: 22.0E Meridian: S</p>	<p>9. API NUMBER: 43047502230000</p> <p>9. FIELD and POOL or WILDCAT: NATURAL BUTTES</p> <p>COUNTY: UINTAH</p> <p>STATE: UTAH</p>
<p>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</p>	

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: 8/23/2010	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

FINISHED DRILLING FROM 1944' TO 8750' ON AUGUST 22, 2010. RAN 4 1/2" 11.6# I-80 PRODUCTION CSG. LEAD CEMENT W/ 460 SX CLASS G ECONOCEM @ 12.5 PPG, 1.98 YD. TAILED CEMENT W/ 1070 SX CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.26 YD. DISPLACED W/ 135 BBLs WATER W/ CLAYFIX & ALDACIDE, FULL RETURNS. BUMPED PLUG TO 3359, FINAL LIFT 2850, 509 PSI OVER, 1.5 BBL BACK TO TRUCK. EST TOP OF LEAD @ 35', TOP OF TAIL @ 5206'. GOT 9 BBLs WATER TO PIT. FLOATS HELD. RD CEMENTERS AND CLEANED PITS. RELEASED ENSIGN RIG #145 ON AUGUST 23, 2010 @ 20:00 HRS.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
August 25, 2010

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 8/24/2010	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197A
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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 1022-11L4CS
------------------------------------	--

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047502230000
---	---

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext
---	--

4. LOCATION OF WELL FOOTAGES AT SURFACE: 0286 FSL 0409 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 11 Township: 10.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES COUNTY: UINTAH STATE: UTAH
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11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 9/7/2010	<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 type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: <input type="text" value="ACTS Notification"/>

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

Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee) is notifying that the Drilling Rig moved off of the NBU 1022-11M well pad location on August 26, 2010. This location is being utilized as part of the Anadarko Completions Transport System (ACTS) process and was granted approval to be an ACTS staging area by UDOGM on November 17, 2009. Please contact the undersigned with any questions and/or comments. Thank you.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
 September 09, 2010

NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 9/1/2010	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197A
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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 1022-11L4CS
------------------------------------	--

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047502230000
---	---

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

4. LOCATION OF WELL FOOTAGES AT SURFACE: 0286 FSL 0409 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW 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: 10/3/2010	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input checked="" type="checkbox"/> 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.

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON OCTOBER 3, 2010 AT 11:15 A.M. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 October 06, 2010

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 10/4/2010	

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:
UO 01197A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

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

7. UNIT or CA AGREEMENT NAME
UTU63047A

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

8. WELL NAME and NUMBER:
NBU 1022-11L4CS

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

9. API NUMBER:
4304750223

3. ADDRESS OF OPERATOR: P.O. BOX 173779 CITY DENVER STATE CO ZIP 80217 PHONE NUMBER: (720) 929-6100

10. FIELD AND POOL, OR WILDCAT
NATURAL BUTTES

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: SWSW 286 FSL 409 FWL S11,T10S,R22E *BHL Reviewed by HSM*
AT TOP PRODUCING INTERVAL REPORTED BELOW: NWSW 1504 FSL 762 FWL S11,T10S,R22E
AT TOTAL DEPTH: NWSW 1515 FSL ⁶⁸⁷ FWL S11,T10S,R22E

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

12. COUNTY: UINTAH 13. STATE: UTAH

14. DATE SPURRED: 3/4/2010 15. DATE T.D. REACHED: 8/22/2010 16. DATE COMPLETED: 10/3/2010

ABANDONED READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL):
5174 GL

18. TOTAL DEPTH: MD 8,750 TVD 8,545 19. PLUG BACK T.D.: MD 8,720 TVD 8,515

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)
ACBL-CHI TRIPLE COMBO-RAW

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

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

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#		40		28			
11"	8 5/8" IJ-55	28#		1,926		450			
7 7/8"	4 1/2" I-80	11.6#		8,742		1,530			

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	8,201							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A) MESAVERDE	6,972	8,596			6,972 8,596	0.36	163	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(B) <i>Wsmvb</i>								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

27. PERFORATION RECORD

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

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
6972 - 8596	PUMP 9,203 BBLS SLICK H2O & 342,586 LBS 30/50 SAND

RECEIVED
NOV 09 2010
DIV. OF OIL, GAS & MINING

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

30. WELL STATUS:
PROD

31. INITIAL PRODUCTION

INTERVAL A (As shown in Item #26)

DATE FIRST PRODUCED: 10/3/2010		TEST DATE: 10/5/2010		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 2,077	WATER – BBL: 528	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 1,345	CSG. PRESS. 2,250	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 2,077	WATER – BBL: 528	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.

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
GREEN RIVER	1,043	8,802	TD		
BIRD'S NEST	1,352				
MAHOGANY	1,709				
WASATCH	4,337				
MESAVERDE	6,612				

34. FORMATION (Log) MARKERS:

35. ADDITIONAL REMARKS (Include plugging procedure)

Attached is the chronological well history & final survey. Completion chrono details individual frac stages. Surface cement job topped out with redimix.

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

NAME (PLEASE PRINT) ANDREW LYTLE

TITLE REGULATORY ANALYST

SIGNATURE 

DATE 11/4/2010

This report must be submitted within 30 days of

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

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

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

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

Phone: 801-538-5340

Fax: 801-359-3940

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DIV. OF OIL, GAS & MINING

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-11L4CS GREEN Spud Conductor: 3/4/2010 Spud Date: 3/16/2010
 Project: UTAH-UJINTAH Site: NBU 1022-11M PAD Rig Name No: PROPETRO/, ENSIGN 145/145
 Event: DRILLING Start Date: 3/3/2010 End Date: 8/23/2010
 Active Datum: RKB @5,187.00ft (above Mean Sea Level) UWI: SW/SW/0/10/S/22/E/11/0/0/6/PM/S/286.00/W/0/409.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/15/2010	0:00 - 7:00	7.00	DRLSUR	08	B	Z		FINISH UP REPAIRS ON RIG
	7:00 - 14:00	7.00	DRLSUR	01	A	P		MOVE RIG TO THE NBU 1022-11L4CS
	14:00 - 18:30	4.50	DRLSUR	08	A	Z		WHEN DOING RIG INSPECTION DRILLER FOUND THE LIFT CARRIDGE GUIDE PIN KEEPER BRACKET HAD BROKEN, WAIT ON AND REPAIR W/ WELDER
	18:30 - 22:30	4.00	DRLSUR	01	B	P		DRESS CONDUCTOR, INSTALL AIR BOWL, RIG UP BOWIE LINE, RIG UP RIG., BUILD DITCH, RIG UP PUMPS, DOG HOUSE, AIR COMPRESSOR AND BOOSTER
	22:30 - 0:00	1.50	DRLSUR	06	A	P		P/U BIT # 1 Q507-SN=7018431- 2ND RUN BIT, STRAP & P/U 1.83 BENT MTR (STRAP AND CALIPER BHA)
3/16/2010	0:00 - 1:30	1.50	DRLSUR	02	D	P		SPUD 11" HOLE 03/16/2010 @ 00:01- DRLG / F/ 44' TO 150'
	1:30 - 4:30	3.00	DRLSUR	06	A	P		LD/ 6" P/U DIR TOOLS ORIENT AND SCRIBE TOOLS
	4:30 - 5:00	0.50	DRLSUR	02	D	P		DRLG F/ 150' TO 200'=50'(100' HR)WOB=22,ROT=55,MM RPM=104,PP ON BTM=1400,OFF BTM=1100
	5:00 - 8:00	3.00	DRLSUR	08	A	Z		,GPM=650,UP/DWN/ROT/=55/55/55 HYDROLIC HOSE GOING TO BRAKES, RUPTURED WAIT ON AND REPLACE SAME
	8:00 - 16:30	8.50	DRLSUR	02	D	P		DRLG-SLIDE- F/ 200' TO 1050' = 850'(100' HR) WOB=22,ROT=55,MM RPM=104,PP ON BTM=1400,OFF BTM=1100
	16:30 - 21:30	5.00	DRLSUR	08	B	Z		,GPM=650,UP/DWN/ROT/=50/50/50, BRACKET HOLDING STANDPIPE MANIFOLD, BROKE DUE TO VIBRATION, PULL TO BHA AND REPAIR, TRIP IN HOLE
	21:30 - 0:00	2.50	DRLSUR	02	D	P		DRL/SLIDE F/ 1050' TO 1290' = 240'(96'HR)WOB=22,ROT=55,MM RPM=104,PP ON BTM=1400,OFF BTM=1100
3/17/2010	0:00 - 8:00	8.00	DRLSUR	02	C	P		,GPM=650,UP/DWN/ROT/=55/55/55, 368' TOTAL SLIDES,3.67HRS
	8:00 - 10:00	2.00	DRLSUR	05	C	P		DRL/SLIDE F/ 1290' TO1944'TD = 654'(82'HR)WOB=22,ROT=55,MM RPM=104,PP ON BTM=1400,OFF BTM=1100
	10:00 - 13:30	3.50	DRLSUR	06	D	P		,GPM=650,UP/DWN/ROT/=65/65/65, 86' TOTAL SLIDES, 1.17 HRS
	13:30 - 16:30	3.00	DRLSUR	12	C	P		CIRC TO LDDS,
	16:30 - 20:30	4.00	DRLSUR	12	E	P		LDDS, BHA AND DIR TOOLS
								HELD SAFETY MTNG,RUN 43 JOINTS 8 5/8 28# J-55 CSNG SHOE @ 1917.26' BAFFLE IN THE TOP OF SHOE JOINT @ 1874.06' RELEASE RIG TO THE NBU-1022-11M4BS-03/17/2010 @ 16:30, HELD SAFETY MTNG,PRESS TEST TO 2000 PSI,PUMP 105 BBLs H2O,PUMP 20 BBLs GEL WATER,PUMP 225 SX (46 BBLs) 15.8 # 1.15 YLD 5 GAL/SK TAIL CMNT DROP PLUG ON FLY DISP W/ 119.3 BBLs FRESH WATER-100 PSI LIFT NO RETURNS, BUMP PLUG W /500 PSI, FLOAT HELD. TOP OUT 125 SX (25.6 BBLs) OF 15.8#. 1.15 YLD 5 GAL SK 4% CALC CMNT, . WAIT 2 HRS. PUMP 100 SX OF SAME CEMENT. NO CMNT TO SURFACE,WILLTOP OUT ON NEXT JOB.

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US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-11L4CS GREEN Spud Conductor: 3/4/2010 Spud Date: 3/16/2010
 Project: UTAH-UINTAH Site: NBU 1022-11M PAD Rig Name No: PROPETRO/, ENSIGN 145/145
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 Active Datum: RKB @5,187.00ft (above Mean Sea Level) UWI: SW/SW/0/10/S/22/E/11/0/0/6/PM/S/286.00/W/0/409.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
8/16/2010	6:00 - 8:30	2.50	MIRU	01	C	P		WALK RIG BACKWARD OVER 1ST WELL ON PAD. CENTER AND LEVER RIG OVER WELL.
	8:30 - 10:00	1.50	MIRU	14	A	P		NIPPLE UP BOP'S. RE- INSTALL FLARE LINE, AND FLOW LINES.
	10:00 - 10:30	0.50	MIRU	15	A	P		START TEST ON BOP'S. BOTTOM SEAL ON BOP'S LEAKED. P/U BOP'S. CRUSH PLATE WAS NOT SCREW ALL THE WAY ONTO WELL HEAD. SCREW CRUSH PLATE DOWN SO THAT QUICK CONNECT RUBBER WILL SEAL.
	10:30 - 14:30	4.00	MIRU	15	A	P		TEST BLIND RAMS, INSIDE OUTSIDE BOP VALVES, CHOKE LINE, KILL LINE AND KILL LINE VALVES, CHOKE MANIFOLD, HCR VALVE, UPPER STRING VALVE, FLOOR VALVE AND DART VALVE TO 5000 PSI FOR 10 MIN AND 250 PSI FOR 5 MIN. TESTED CSG TO 1500 PSI FOR 30 MIN. CHECKED PIPE RAMS. PIPE RAMS LEAKED.
	14:30 - 18:00	3.50	MAINT	08	C	Z		OPEN PIPE RAM DOORS ON BOP'S. TAKE OUT RAMS. PULL RUBBERS OFF OF RAMS. WAIT FOR PIPE RAMS RUBBERS FOR SCHAFFER BOP'S. RUBBERS HOT SHOTTING FROM CASPER WYOMING.
	18:00 - 20:00	2.00	MIRU	09	A	P		SLIP AND CUT DRILL LINE. WHILE WAITING FOR BOP'S RUBBERS.
	20:00 - 0:00	4.00	MAINT	08	C	Z		WAIT FOR PIPE RAM RUBBERS. RECIEVE PIPE RAM RUBBERS 23:00. INSTALL PIPE RAM RUBBERS.
8/17/2010	0:00 - 1:30	1.50	MIRU	15	A	P		TEST PIPE RAMS TO 5000 HIGH FOR 10 MIN AND 250 LOW FOR 5 MIN. TESTED ANNULAR TO 2500 PSI FOR 10 MIN AND 250 PSI LOW. FUNCTION TESTED BOP'S.
	1:30 - 2:00	0.50	MIRU	14	B	P		RUN IN WEAR BUSHING. PERFORM PRE DRILL SAFETY INSPECTION.
	2:00 - 4:00	2.00	MIRU	06	A	P		P/U SDI 1.5 BH .28 RPG MOTOR. M/U Q506Z SN. 7129647. SCRIBE MOTOR. P/U DIRECTIONAL TOOLS. P/U MWD TOOLS. TRIP IN HOLE. TAG CEMENT 1800'.
	4:00 - 5:30	1.50	DRLPRO	02	F	P		SPUD 8/17/2010 04:00 DRILL CEMENT AND FE. 1800'-1953. SHOE @ 1926'. WOB 15K. 40 RPM, 100 SPM.
	5:30 - 8:30	3.00	DRLPRO	02	D	P		DRILL 1953'-2306' (353', 118'/HR) WOB 12-20K , RPM 50, MM 135, SPM 107, GPM 482, PU/SO/ROT 115/90/101 , TOR ON/OFF 9-6, PSI ON/OFF 1450/11000, DIFF 450. CIRC RESERVE PIT W/ WATER WT 8.7 VIS 26. SLID 70'@ 100'/HR. SLID 30% ROT 70%. SLIDING TO HOLD ANGLE @ 20 DEGREES.
	8:30 - 12:30	4.00	DRLPRO	23		P		TRIP BACK TO SHOE, CIRC 20 SPM. TRAVEL TO ANADARKO SAFETY STAND DOWN. ATTEND SAFETY MEETING. TRAVEL BACK TO RIG. TRIP BACK TO 2306'.
	12:30 - 13:00	0.50	DRLPRO	07	A	P		RIG SERVICE.
13:00 - 0:00	11.00	DRLPRO	02	D	P		DRILL F/ 2306' TO 3480' = 1174' = 117 FPH / WOB 12 TO 25, STKS #1 & #2 PUMPS 105/000, 495 GPM 473 / PSI OFF BOTTOM / ON BOTTOM 1250/1525, MOTOR RPM ROTARY RPM, 132/65, TQ ON / OFF BOTTOM 14K/12K FT/LBS, PU / SO / ROT WT 130 / 105 / 115, ROTATING = 60% FOOTAGE DRILLED, SLIDING = 40% FOOTAGE DRILLED, CONNECTION & SURVEY TIME = 1.0 HOUR, ACTUAL DRILL TIME 10.0 HOURS, NO LOSSES.	

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US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-11L4CS GREEN Spud Conductor: 3/4/2010 Spud Date: 3/16/2010
 Project: UTAH-UINTAH Site: NBU 1022-11M PAD Rig Name No: PROPETRO/, ENSIGN 145/145
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 Active Datum: RKB @5,187.00ft (above Mean Sea Level) UWI: SW/SW/0/10/S/22/E/11/0/0/6/PM/S/286.00/W/0/409.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
8/18/2010	0:00 - 23:30	23.50	DRLPRO	02	D	P		DRILL F/ 3480' TO 5929' = 2449' = 104 FPH / WOB 15 TO 25, STKS #1 & #2 PUMPS 105/000, 495 GPM 473 / PSI OFF BOTTOM / ON BOTTOM 1800/2050, MOTOR RPM ROTARY RPM, 132/55, TQ ON / OFF BOTTOM 18K/16K FT/LBS, PU / SO / ROT WT 180 / 130 / 153, ROTATING = 95% FOOTAGE DRILLED, SLIDING = 5% FOOTAGE DRILLED, CONNECTION & SURVEY TIME = 2.5 HOUR, ACTUAL DRILL TIME 21.0 HOURS, NO LOSSES.
	23:30 - 0:00	0.50	DRLPRO	07	A	P		DAILY RIG SERVICE
8/19/2010	0:00 - 23:30	23.50	DRLPRO	02	D	P		DRILL F/ 5929' TO 7197' = 1268' = 54 FPH / WOB 15 TO 25, STKS #1 & #2 PUMPS 105/000, GPM 473 / PSI OFF BOTTOM / ON BOTTOM 2150/2450, MOTOR RPM ROTARY RPM, 132/55, TQ ON / OFF BOTTOM 19K/17K FT/LBS, PU / SO / ROT WT 196 / 146 / 169, ROTATING = 100% FOOTAGE DRILLED, SLIDING = 0% FOOTAGE DRILLED, CONNECTION & SURVEY TIME = 1.5 HOUR, ACTUAL DRILL TIME 22.0 HOURS, NO LOSSES.
	23:30 - 0:00	0.50	DRLPRO	07	A	P		DAILY RIG SERVICE
8/20/2010	0:00 - 1:00	1.00	DRLPRO	05	F	P		CIRCULATE HIGH VIS LCM SWEEP TO CLEAN HOLE PRIOR TO TRIP
	1:00 - 7:00	6.00	DRLPRO	06	H	P		REAM 15 STANDS OUT FOR HOLE CONDITIONING CHECK FOR FLOW, TRIP OUT TO CHANGE MWD TOOL AND BHA. LAY DOWN BIT, MOTOR AND MWD TOOL
	7:00 - 12:00	5.00	DRLPRO	06	A	P		PICK UP BIT #2, MOTOR, MWD TOOL AND SCRIBE, TRIP IN HOLE BREAK CIRCULATION AT SHOE AND 4575, REAM LAST STAND
	12:00 - 20:00	8.00	DRLPRO	06	H	Z		TOOK SURVEY ON BOTTOM SURVEY DID NOT MATCH FOR THE LAST 3 SURVEYS PULL THREE STANDS, TOOK CHECK SHOT SURVEY WAS BAD, PULLED TO THE TANGIT SECTION TO CHECK THE HIGH SIDE SURVEYS TOOK THREE CHECK SHOTS ALL WERE GOOD, TRIP BACK IN HOLE TAKING CHECK SHOTS EVERY STAND ONCE INTO VERTICAL UNDER 3 DEG @ 4608 THE SURVEYS WERE BAD CONTINUE TRIP IN HOLE CHANGING THE SURVEYS EVERY STAND. ALL SURVEYS HAVE BEEN CHANGED IN THE REPORT AND RETRANSFERED.
	20:00 - 23:30	3.50	DRLPRO	02	D	P		DRILL F/ 7197' TO 7310' = 113' = 32 FPH / WOB 20 TO 28, STKS #1 & #2 PUMPS 105/000, GPM 473 / PSI OFF BOTTOM / ON BOTTOM 2150/2450, MOTOR RPM ROTARY RPM, 132/55, TQ ON / OFF BOTTOM 25K/19K FT/LBS, PU / SO / ROT WT 196 / 146 / 169, ROTATING = 25% FOOTAGE DRILLED, SLIDING = 75% FOOTAGE DRILLED, CONNECTION & SURVEY TIME = .0 HOUR, ACTUAL DRILL TIME 3.5 HOURS, NO LOSSES.
	23:30 - 0:00	0.50	DRLPRO	07	A	P		DAILY RIG SERVICE
8/21/2010	0:00 - 15:00	15.00	DRLPRO	02	D	P		DRILL F/ 7310' TO 7927' = 617' = 41 FPH / WOB 27 TO 30, STKS #1 & #2 PUMPS 105/000, GPM 473 / PSI OFF BOTTOM / ON BOTTOM 2150/2450, MOTOR RPM ROTARY RPM, 132/60, TQ ON / OFF BOTTOM 25K/19K FT/LBS
								PU / SO / ROT WT 210 / 140 / 173, ROTATING = 75% FOOTAGE DRILLED, SLIDING = 25% FOOTAGE DRILLED, CONNECTION & SURVEY TIME = .50 HOUR, ACTUAL DRILL TIME 14.5 HOURS, NO LOSSES.
	15:00 - 15:30	0.50	DRLPRO	07	A	P		DAILY RIG SERVICE

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US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-11L4CS GREEN Spud Conductor: 3/4/2010 Spud Date: 3/16/2010
 Project: UTAH-UINTAH Site: NBU 1022-11M PAD Rig Name No: PROPETRO/, ENSIGN 145/145
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 Active Datum: RKB @5,187.00ft (above Mean Sea Level) UWI: SW/SW/0/10/S/22/E/11/0/0/6/PM/S/286.00/W/0/409.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	15:30 - 0:00	8.50	DRLPRO	02	D	P		DRILL F/ 7927' TO 8271' = 344' = 43 FPH / WOB 25 TO 27 200 TO 300 DIFF, STKS #1 & #2 PUMPS 105/000, GPM 473 / PSI OFF BOTTOM / ON BOTTOM 2350/2650, MOTOR RPM ROTARY RPM, 132/60, TQ ON / OFF BOTTOM 25K/19K FT/LBS PU / SO / ROT WT 225 / 150 / 180, ROTATING = 75% FOOTAGE DRILLED, SLIDING = 25% FOOTAGE DRILLED, CONNECTION & SURVEY TIME = .50 HOUR, ACTUAL DRILL TIME 8 HOURS, NO LOSSES.
8/22/2010	0:00 - 11:00	11.00	DRLPRO	02	D	P		DRILL F/ 8271' TO 8750' = 479' = 43 FPH / WOB 25 TO 27 200 TO 300 DIFF, STKS #1 & #2 PUMPS 105/000, GPM 473 / PSI OFF BOTTOM / ON BOTTOM 2350/2650, MOTOR RPM ROTARY RPM, 132/50, TQ ON / OFF BOTTOM 25K/19K FT/LBS PU / SO / ROT WT 225 / 155 / 185, ROTATING = 100% FOOTAGE DRILLED, SLIDING = 0% FOOTAGE DRILLED, CONNECTION & SURVEY TIME = .50 HOUR, ACTUAL DRILL TIME 10 HOURS, NO LOSSES. TD MUD WT 12.3 IN 12.2 OUT
	11:00 - 15:00	4.00	DRLPRO	05	F	P		CIRCULATE 30 bbl HIGH VIS WIEGHTED PILL RECEPICATION 90' UNTIL HOLE IS CLEAN, CHECK FLOW WELL WAS FLOWING AT 12.3 IN & OUT, HAD THIN SLIVERS OF SHALE COMING BACK, WEIGHTED UP TO 12.6 IN 12.5 OUT FLOW CHECK NO FLOW SHACKERS CLEAN
	15:00 - 0:00	9.00	DRLPRO	06	D	P		TRIP OUT FULL STANDS ROTATING OUT, PU/267 ROT/185, SO/150 ALL ROTATING, TO 6502, START LAYING DOWN SINGLES, 22:00 TRIP SET BACK PIPE IN HOLE AND LAY DOWN
8/23/2010	0:00 - 3:30	3.50	DRLPRO	06	A	P		FINISH LAYING DOWN DRILL PIPE
	3:30 - 11:30	8.00	DRLPRO	12	C	P		HELD SAFTEY MEETING WITH WEATHERFORD CASING CREW, RIG UP CASING CREW AND RUN DCT SHOE,FLOAT, 15 CENTRALIZERS, 213 JOINTS 4.5,11.6, I-80, BTC CASING, MANDREL ASSEMBLY & LANDING JOINT. CASING LANDED AT MD 8742,' FLOAT TOP AT 8718' MD, FILLED PIPE @ SHOE & FILLED @ 4869' CIRCULATE 5 MIN TO CLEAR FLOAT EQUI @ 83STKS, PSI 550, WASH THROUGH BRIDGE @ 7000', 8200', 8350', LANDED CASING WITH 164K
	11:30 - 13:30	2.00	DRLPRO	05	D	P		CIRCULATE CASING WITH RIG PUMPS, HELD SAFTEY MEETING RIG DOWN CASERS, SPOT HALLIBURTON TRUCKS, LOAD PLUG IN CEMENT HEAD HELD SAFTEY MEETING WITH HALLIBURTON, SHUT DOWN RIG PUMPS, NO FLARE MUD WT 12.5 IN & OUT.
	13:30 - 15:30	2.00	DRLPRO	12	E	P		INSTALL HALLIBURTON HEAD, HOOK UP IRON TO HEAD, TEST LINES TO 5100 PSI, PUMP 20 BBL FRESH WATER AHEAD LEAD 162 BBL 460 SKS ECONCEM 12.5PPG, 1.98 YEILD, 10.71 GPS WATER TAIL 240 BBL 1070 SKS POZ PREMIUM 50/50 14.3 PPG 1.26 YEILD, 5.41 GPS WATER DISPLACE WITH 135 BLL FRESH WATER WITH CLAY FIX & ALDACIDE, FULL RETURNS, BUMP PLUG TO 3359, FINAL LIFT 2850, 509 PSI OVER, 1.5 BBL BACK TO TRUCK, EST TOP OF LEAD @ 33', TOP OF TAIL @ 5206, GOT 9 BBL WATER SPACER TO PIT
	15:30 - 20:00	4.50	DRLPRO	14	A	P		BACK OUT LANDING JOINT,NIPPLE DOWN BOP,SET PACK OFF,CLEAN PITS

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US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-11L4CS GREEN Spud Conductor: 3/4/2010 Spud Date: 3/16/2010
 Project: UTAH-UINTAH Site: NBU 1022-11M PAD Rig Name No: PROPETRO/, ENSIGN 145/145
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Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
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20:00 - 20:00 0.00 DRLPRO

CONDUCTOR CASING:
 Cond. Depth set: 40'
 Cement sx used: 28

SPUD DATE/TIME: 3/16/2010 0:01

SURFACE HOLE:
 Surface From depth: 40'
 Surface To depth: 1,944
 Total SURFACE hours: 21.00
 Surface Casing size: 8-5/8"
 # of casing joints ran: 43
 Casing set MD: 1,917.0
 # sx of cement: 225
 Cement blend (ppg): TAIL 15.8#, NO LEAD
 Cement yield (ft3/sk): TAIL 1.15 YD, NO LEAD
 # of bbls to surface: 0 BBLS
 Describe cement issues: NO CEMENT TO SUR.
 TOP OUT W/125 SXS
 Describe hole issues: NONE

PRODUCTION:
 Rig Move/Skid start date/time: 8/16/2010 6:00
 Rig Move/Skid finish date/time: 8/17/2010 0:01
 Total MOVE hours: 18.0
 Prod Rig Spud date/time: 8/17/2010 4:00
 Rig Release date/time: 8/23/2010 20:00
 Total SPUD to RR hours: 160.0
 Planned depth MD 8,744
 Planned depth TVD 8,542
 Actual MD: 8,750
 Actual TVD: 8,545
 Open Wells \$: \$704,144
 AFE \$: \$700,617
 Open wells \$/ft: \$80.47

PRODUCTION HOLE:
 Prod. From depth: 1,953
 Prod. To depth: 8,750
 Total PROD hours: 88
 Log Depth: NO LOGS
 Production Casing size: 4 1/2
 # of casing joints ran: 208
 Casing set MD: 8,742.0
 # sx of cement: 1,605
 Cement blend (ppg): LEAD 12.5#, TAIL 14.3#
 Cement yield (ft3/sk): LEAD 1.98 YD, TAIL 1.26 YD
 Est. TOC (Lead & Tail) or 2 Stage : LEAD 33', TAIL 5206'
 Describe cement issues: FULL RETURNS, 9 BBLS WATER TO SURFACE
 Describe hole issues: SLOUGHING SHALE W/12.3 STOP WITH 12.6

DIRECTIONAL INFO:
 KOP: 40
 Max angle: 22.45
 Departure: 1260.51
 Max dogleg MD: 4.65

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US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-11L4CS	GREEN	Spud Conductor: 3/4/2010	Spud Date: 3/16/2010
Project: UTAH-UINTAH	Site: NBU 1022-11M PAD		Rig Name No: SWABBCO 1/1
Event: COMPLETION	Start Date: 9/24/2010	End Date: 9/30/2010	
Active Datum: RKB @5,187.00ft (above Mean Sea Level)	UWI: SW/SW/0/10/S/22/E/11/0/0/6/PM/S/286.00/W/0/409.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation

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Well: NBU 1022-11L4CS GREEN Spud Conductor: 3/4/2010 Spud Date: 3/16/2010
 Project: UTAH-UINTAH Site: NBU 1022-11M PAD Rig Name No: SWABBCO 1/1
 Event: COMPLETION Start Date: 9/24/2010 End Date: 9/30/2010
 Active Datum: RKB @5,187.00ft (above Mean Sea Level) UWI: SW/SW/0/10/S/22/E/11/0/0/6/PM/S/286.00/W/0/409.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
9/27/2010	7:30 - 18:00	10.50	COMP	36	B	P		<p>PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH PERF F/ 8593'-96', 3 SPF, 9 HOLES. 8485'-87', 4 SPF, 8 HOLES. 8470'-72', 3 SPF, 6 HOLES. (23 HOLES.) POOH, X-OVER FOR FRAC SERV.</p> <p>FRAC STG 1)WHP 285 PSI, BRK 3720 PSI @ 4.0 BPM. ISIP 2393 PSI, FG .71. PUMP 100 BBLS @ 50 BPM @ 5874 PSI = 100% HOLES OPEN. ISIP 2501 PSI, FG .71, NPI 108 PSI. MP 6267 PSI, MR 51.5 BPM, AP 4700 PSI, AR 51 BPM, PMP 784 BBLS SW & 15,570 LBS OF 30/50 SND & 5,000 LBS OF 20/40 SLC SND. TOTAL PROP 20,570 LBS, SWI, X-OVER FOR WL.</p> <p>PERF STG 2)PU 4 1/2 8K WEATHERFORD CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 8386' P/U PERF F/ 8284'-86', 3 SPF, 6 HOLES. 8268'-70', 3 SPF, 6 HOLES. 8241'-43', 4 SPF, 8 HOLES. 8224'-25', 4 SPF, 4 HOLES. 24 HOLES. POOH, X-OVER FOR FRAC CREW.</p> <p>FRAC STG 2)WHP 1954 PSI, BRK 2883 PSI @ 4.6 BPM. ISIP 2450 PSI, FG .74. PUMP 100 BBLS @ 50.6 BPM @ 5423 PSI = 100% HOLES OPEN. ISIP 2558 PSI, FG .74, NPI 370 PSI. MP 5463 PSI, MR 51.5 BPM, AP 4400 PSI, AR 50.75 BPM, PMP 2077 BBLS SW & 74,907 LBS OF 30/50 SND & 5,000 LBS OF 20/40 SLC SND. TOTAL PROP 79,907 LBS, SWI, X-OVER FOR WL.</p> <p>PERF STG 3)PU 4 1/2 8K WEATHERFORD CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 8177' P/U PERF F/ 8145'-47', 3 SPF, 6 HOLES. 8066'-69', 3 SPF, 9 HOLES. 8047'-48', 4 SPF, 4 HOLES. 8010'-11', 4 SPF, 4 HOLES. 23 HOLES.</p> <p>FRAC STG 3)WHP 2269 PSI, BRK 2814 PSI @ 5.9 BPM. ISIP 2364 PSI, FG .73. PUMP 100 BBLS @ 50.9 BPM @ 4791 PSI = 100% HOLES OPEN. ISIP 2723 PSI, FG .73, NPI 359 PSI. MP 5207 PSI, MR 51.9 BPM, AP 4100 PSI, AR 51 BPM, PMP 2008 BBLS SW & 71,887 LBS OF 30/50 SND & 5,000 LBS OF 20/40 SLC SND. TOTAL PROP 76,887 LBS, SWI, 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 & 120 DEG PHASING. RIH SET CBP @ 7956' P/U PERF F/ 7854'-56', 3 SPF, 6 HOLES. 7820'-22', 3 SPF, 6 HOLES. 7714'-15', 4 SPF, 4 HOLES. 7648'-50', 4 SPF, 8 HOLES. 24 HOLES. POOH, X-OVER FOR FRAC CREW.</p>

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OCT 28 2010

MICHAEL J. GIBSON

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-11L4CS	GREEN	Spud Conductor: 3/4/2010	Spud Date: 3/16/2010
Project: UTAH-UINTAH	Site: NBU 1022-11M PAD		Rig Name No: SWABBCO 1/1
Event: COMPLETION	Start Date: 9/24/2010	End Date: 9/30/2010	
Active Datum: RKB @5,187.00ft (above Mean Sea Level)		UWI: SW/SW/0/10/S/22/E/11/0/0/6/PM/S/286.00/W/0/409.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
								<p>FRAC STG 4)WHP 1971 PSI, BRK 3059 PSI @ 4.6 BPM. ISIP 2068 PSI, FG .70. PUMP 100 BBLS @ 51.2 BPM @ 4751 PSI = 100% HOLES OPEN. ISIP 2416 PSI, FG .74, NPI 348 PSI. MP 4785 PSI, MR 51.5 BPM, AP 3900 PSI, AR 51 BPM, PMP 978 BBLS SW & 32,026 LBS OF 30/50 SND & 5,000 LBS OF 20/40 SLC SND. TOTAL PROP 37,026 LBS, SWI, X-OVER FOR WL</p> <p>PERF STG 5)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIHSET CBP @7600' P/U PERF F/ 7567'-70', 3 SPF, 9 HOLES. 7506'-08', 4 SPF, 8 HOLES. 7466'-68', 3 SPF, 6 HOLES. 23 HOLES. POOH, X-OVER FOR FRAC CREW.</p> <p>FRAC STG 5)WHP 165 PSI, BRK 4808 PSI @ 4.6 BPM. ISIP 2404 PSI, FG .75. PUMP 100 BBLS @ 51.2 BPM @ 4757 PSI = 100% HOLES OPEN. ISIP 2586 PSI, FG .78, NPI 182 PSI. MP 5372 PSI, MR 51.6 BPM, AP 4100 PSI, AR 51 BPM, PMP 689 BBLS SW & 20,483 LBS OF 30/50 SND & 5,000 LBS OF 20/40 SLC SND. TOTAL PROP 25,483 LBS, SWI, 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 & 120 DEG PHASING. RIH SET CBP @ 7416' P/U PERF F/ 7357'-60', 3 SPF, 9 HOLE. 7318'-20', 3 SPF, 6 HOLES. 7268'-70', 4 SPF, 8 HOLES. 23 HOLES. POOH, SWFN.</p>

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US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-11L4CS GREEN Spud Conductor: 3/4/2010 Spud Date: 3/16/2010
 Project: UTAH-UINTAH Site: NBU 1022-11M PAD Rig Name No: SWABBCO 1/1
 Event: COMPLETION Start Date: 9/24/2010 End Date: 9/30/2010
 Active Datum: RKB @5,187.00ft (above Mean Sea Level) UWI: SW/SW/0/10/S/22/E/11/0/0/6/PM/S/286.00/W/0/409.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
9/28/2010	7:30 - 18:00	10.50	COMP	36	B	P		<p>FRAC STG 6)WHP 1401 PSI, BRK 3002 PSI @4.4 BPM. ISIP 1908 PSI, FG .69. PUMP 100 BBLS @51.3 BPM @ 4273 PSI = 100% HOLES OPEN. ISIP 2820 PSI, FG .82, NPI 912 PSI. MP 4996 PSI, MR 52.0 BPM, AP 3900 PSI, AR 51.0 BPM, PMP 759 BBLS SW & 22,455 LBS OF 30/50 SND & 5,000 LBS OF 20/40 SLC SND. TOTAL PROP 27,455 LBS, SWI X/O TO WL</p> <p>PERF STG 7)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN. 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 7150' P/U PERF F/ 7047'-50', 3 SPF, 9 HOLES. 6991'-93', 4 SPF, 8 HOLES. 6972'-74', 3 SPF, 6 HOLES. 23 HOLES. POOH, X-OVER FOR FRAC CREW.</p> <p>FRAC STG 7)WHP 832PSI, BRK 2336 PSI @ 4.6BPM. ISIP 1288PSI, FG .66. PUMP 100 BBLS @ 52.2 BPM @ 3868 PSI =100% HOLES OPEN. ISIP 2347 PSI, FG .81, NPI 1059 PSI. MP 4757 PSI, MR 42.25 BPM, AP 3500 PSI, AR 516BPM, PMP 1908 BBLS SW & 70,258 LBS OF 30/50 SND & 5,000 LBS OF 20/40 SLC SND. TOTAL PROP 75,258 LBS, SWI X/O TO WL</p> <p>SET KP @ 6922' SWI FRAC COMPLETED</p> <p>RDMO CASED HOLE SOLUTIONS & FRAC TECH SERVICES.</p> <p>TOTAL SANDS=342,586 # TOTAL CL FL= 9,203 BBLS TOTAL SCALE= TOTAL BIO= JSA= ROAD SAFETY</p>
9/29/2010	7:00 - 7:15	0.25	COMP	48		P		<p>MOVE RIG & EQUIP FROM BON 4E TO LOC SPOT RIG & EQUIP RU RIG FRAC VALVES NU BOPS RU PUMP PREP TO DRILL PLUGS COULDNT GET TUBING TILL MORN. SDFN JSA= PRESS CONTROL</p>
	7:15 - 15:00	7.75	COMP	30		P		
9/30/2010	7:00 - 7:15	0.25	COMP	48		P		

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**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-11L4CS GREEN Spud Conductor: 3/4/2010 Spud Date: 3/16/2010
 Project: UTAH-UINTAH Site: NBU 1022-11M PAD Rig Name No: SWABBCO 1/1
 Event: COMPLETION Start Date: 9/24/2010 End Date: 9/30/2010
 Active Datum: RKB @5,187.00ft (above Mean Sea Level) UWI: SW/SW/0/10/S/22/E/11/0/0/6/PM/S/286.00/W/0/409.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 - 18:30	11.25	COMP	30		P		SPOT IN TUBING PU SEALED BIT, POBS & 1.87XN SN TALLEY & PU TUBING TAG KILL PLUG @ 6922' PU PWR SWVL EST CIRC PRESS TEST TO 3000 PSI PLUG #1] DRILL THRU WEATHERFORD CBP @ 6922' IN 25 MIN W/ 0# INCREASE PLUG#2] CONTINUE TO RIH TAG SAND @ 7070'(30' FILL) C/O & DRILL THRU WEATHERFORD CBP @ 7100' IN 10 MIN W/ 100# INCREASE PLUG#3] CONTINUE TO RIH TAG SAND @ 7366' (50' FILL) C/O & DRILL THRU WEATHERFORD CBP @ 7416' IN 10 MIN W/ 100# INCREASE PLUG#4] CONTINUE TO RIH TAG SAND @7570' (30' FILL) C/O & DRILL THRU WEATHERFORD CBP @7600' IN 10 MIN W/ 100# INCREASE PLUG#5] CONTINUE TO RIH TAG SAND @7866' (40' FILL) C/O & DRILL THRU WEATHERFORD CBP @7906' IN 13 MIN W/ 100# INCREASE PLUG#6] CONTINUE TO RIH TAG SAND @8147' (30' FILL) C/O & DRILL THRU WEATHERFORD CBP @8177' IN 14 MIN W/ 50# INCREASE PLUG#7] CONTINUE TO RIH TAG SAND @8310' (30' FILL) C/O & DRILL THRU WEATHERFORD CBP @8340' IN 20 MIN W/ 100# INCREASE 350# ON WELL CONTINUE TO RIH TAG SAND @8654' C/O & DRILL TO PBD @ 8718' CIRC CLEAN POOH LD 17 JNTS LAND TUBIN ON HANGER W/ 259 JNTS OF 2-3/8" L-80 TUBING RD FLOOR & TUB EQUIP ND POBS NU WELLHEAD DROP BALL PUMP OFF BIT SUB @3000 PSI SHUT WELL IN 30 MIN ALLOW BIT TO FALL TURN WELL OVER TO FBC @18:30 W/ TOTAL PUMPED= 9203 BBLS RIG REC= 2000 BBLS LEFT TO REC= 7203 BBLS LANDING DETAIL= K.B.= 13.00 HANGER= 1.00 259 JNTS 2-3/8" L-80= 8185.10 POBS= 2.20 7 AM FLBK REPORT: CP 2850#, TP 1850#, 20/64" CK, 40 BWPH, MED SAND, - GAS TTL BBLS RECOVERED: 3897 BBLS LEFT TO RECOVER: 7089 7 AM FLBK REPORT: CP 2550#, TP 1750#, 20/64" CK, 35 BWPH, LIGHT SAND, - GAS TTL BBLS RECOVERED: 4793 BBLS LEFT TO RECOVER: 6193 WELL TURNED TO SALES @ 1115 HR ON 10/3/10 - 2000 MCFD, 864 BWPD, CP 2500#, FTP 1650#, CK 20/64"
10/2/2010	7:00 -			33	A			
10/3/2010	7:00 -			33	A			
	11:15 -		PROD	50				

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**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-11L4CS	GREEN	Spud Conductor: 3/4/2010	Spud Date: 3/16/2010
Project: UTAH-UINTAH	Site: NBU 1022-11M PAD		Rig Name No: SWABBCO 1/1
Event: COMPLETION	Start Date: 9/24/2010	End Date: 9/30/2010	
Active Datum: RKB @5,187.00ft (above Mean Sea Level)	UWI: SW/SW/0/10/S/22/E/11/0/0/6/PM/S/286.00/W/0/409.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
10/4/2010	7:00 -			33	A			7 AM FLBK REPORT: CP 2400#, TP 1600#, 20/64" CK, 28 BWPH, LIGHT SAND, - GAS TTL BBLS RECOVERED: 5555 BBLS LEFT TO RECOVER: 5431
10/5/2010	7:00 -			33	A			7 AM FLBK REPORT: CP 2250#, TP 1500#, 20/64" CK, 22 BWPH, TARCE SAND, - GAS TTL BBLS RECOVERED: 6163 BBLS LEFT TO RECOVER: 4823

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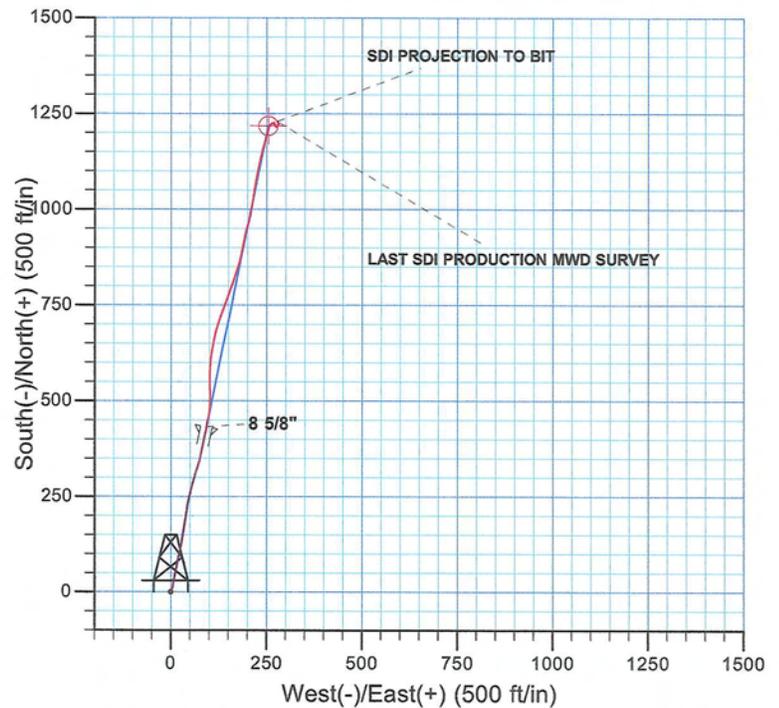
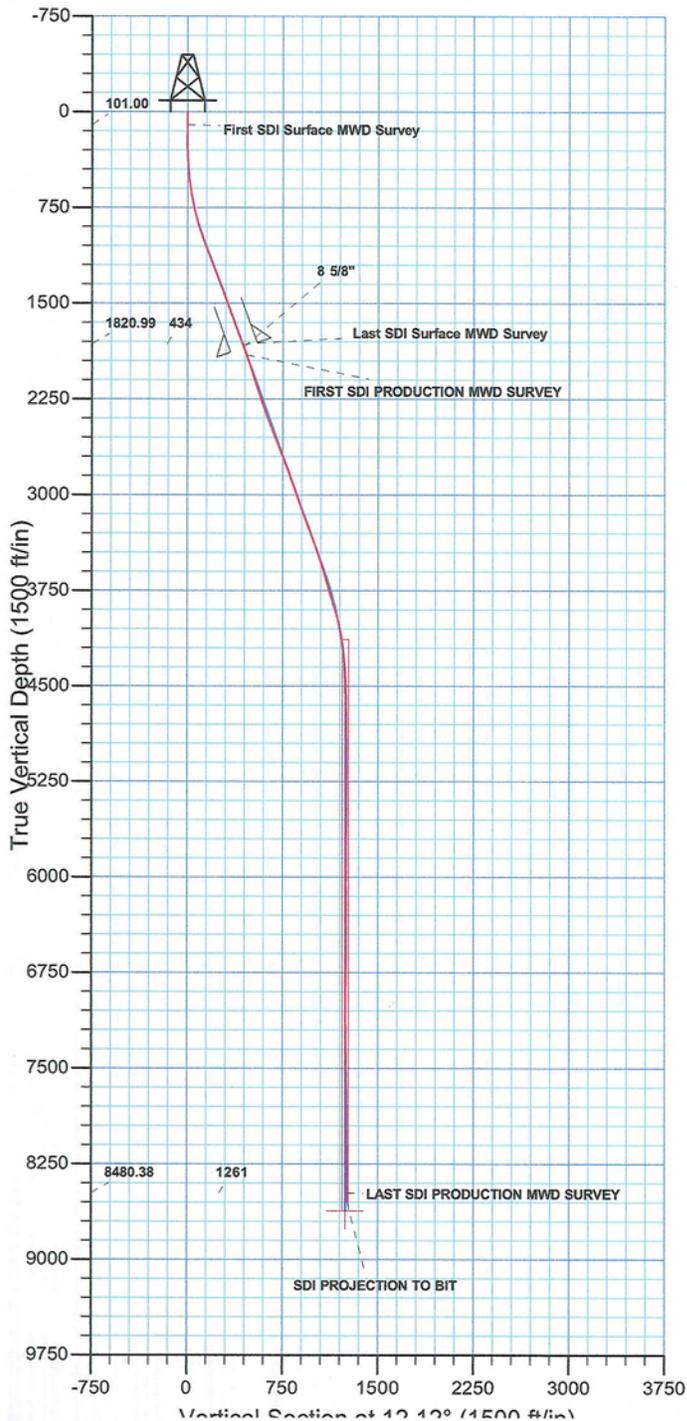
WELL DETAILS: NBU 1022-11L4CS

GL 5174 & RKB 14' @ 5188.00ft (ENSIGN 14S)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14514349.05	2084740.66	39° 57' 25.335 N	109° 24' 52.157 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8617.00	1218.50	253.97	14515571.87	2084972.93	39° 57' 37.379 N	109° 24' 48.895 W	Circle (Radius: 25.00)
- survey misses target center by 76.25ft at 8750.00ft MD (8545.37 TVD, 1229.12 N, 277.87 E)								



PROJECT DETAILS: Uintah County, UT UTM12
Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 - Western US
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: Sec 11 T10S R22E
System Datum: Mean Sea Level

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Kerr McGee Oil and Gas Onshore LP

**Uintah County, UT UTM12
NBU 1022-11M Pad
NBU 1022-11L4CS**

OH

Design: OH

Standard Survey Report

07 September, 2010

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Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT UTM12
Site: NBU 1022-11M Pad
Well: NBU 1022-11L4CS
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 1022-11L4CS
TVD Reference: GL 5174 & RKB 14' @ 5188.00ft (ENSIGN 145)
MD Reference: GL 5174 & RKB 14' @ 5188.00ft (ENSIGN 145)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

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 1022-11M Pad, Sec 11 T10S R22E				
Site Position:	Northing:	14,514,361.03 usft	Latitude:	39° 57' 25.443 N	
From:	Lat/Long	Easting:	2,084,799.47 usft	Longitude:	109° 24' 51.399 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	1.02 °

Well	NBU 1022-11L4CS, 286' FSL & 409' FWL					
Well Position	+N/-S	0.00 ft	Northing:	14,514,349.05 usft	Latitude:	39° 57' 25.335 N
	+E/-W	0.00 ft	Easting:	2,084,740.65 usft	Longitude:	109° 24' 52.157 W
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,174.00 ft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	07/24/2010	11.15	65.87	52,405

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	12.12	

Survey Program	Date 09/02/2010				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
10.00	1,891.00	Survey #1 - Surface (OH)	MWD SDI	MWD - Standard ver 1.0.1	
1,982.00	8,750.00	Survey #2-Production (OH)	MWD SDI	MWD - Standard ver 1.0.1	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10.00	0.00	1.02	10.00	0.00	0.00	0.00	0.00	0.00	0.00
101.00	0.61	180.29	101.00	-0.48	0.00	-0.47	0.67	0.67	0.00
First SDI Surface MWD Survey									
131.00	0.29	167.96	131.00	-0.72	0.01	-0.70	1.11	-1.07	-41.10
160.00	0.29	135.42	160.00	-0.84	0.08	-0.81	0.56	0.00	-112.21
189.00	0.75	57.09	189.00	-0.79	0.29	-0.71	2.58	1.59	-270.10
218.00	0.97	33.99	217.99	-0.48	0.59	-0.35	1.40	0.76	-79.66
247.00	1.19	30.95	246.99	-0.02	0.88	0.16	0.78	0.76	-10.48
275.00	1.21	31.67	274.98	0.48	1.18	0.72	0.09	0.07	2.57

Company: Kerr McGee Oil and Gas Onshore LP
 Project: Uintah County, UT UTM12
 Site: NBU 1022-11M Pad
 Well: NBU 1022-11L4CS
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well NBU 1022-11L4CS
 TVD Reference: GL 5174 & RKB 14' @ 5188.00ft (ENSIGN 145)
 MD Reference: GL 5174 & RKB 14' @ 5188.00ft (ENSIGN 145)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
304.00	1.91	24.63	303.97	1.18	1.55	1.48	2.50	2.41	-24.28
334.00	2.16	17.00	333.95	2.17	1.92	2.53	1.23	0.83	-25.43
363.00	2.53	20.72	362.93	3.29	2.31	3.70	1.38	1.28	12.83
392.00	3.32	19.09	391.89	4.69	2.81	5.17	2.74	2.72	-5.62
422.00	4.05	13.73	421.83	6.54	3.34	7.09	2.69	2.43	-17.87
451.00	4.59	10.46	450.74	8.67	3.80	9.28	2.05	1.86	-11.28
481.00	5.37	11.27	480.63	11.23	4.29	11.88	2.61	2.60	2.70
511.00	6.15	8.95	510.48	14.19	4.81	14.89	2.71	2.60	-7.73
541.00	6.86	10.48	540.29	17.54	5.39	18.28	2.44	2.37	5.10
571.00	7.53	8.04	570.05	21.25	5.99	22.04	2.45	2.23	-8.13
601.00	8.50	9.61	599.76	25.38	6.63	26.21	3.31	3.23	5.23
631.00	9.17	9.39	629.40	29.93	7.39	30.81	2.24	2.23	-0.73
661.00	10.28	10.24	658.97	34.92	8.26	35.88	3.73	3.70	2.83
691.00	10.88	11.76	688.46	40.33	9.31	41.38	2.21	2.00	5.07
721.00	11.86	11.95	717.87	46.12	10.53	47.30	3.27	3.27	0.63
751.00	12.42	11.74	747.20	52.29	11.82	53.61	1.87	1.87	-0.70
781.00	13.51	11.72	776.43	58.88	13.19	60.34	3.63	3.63	-0.07
811.00	14.30	11.51	805.55	65.94	14.64	67.55	2.64	2.63	-0.70
841.00	14.94	11.79	834.58	73.36	16.17	75.12	2.15	2.13	0.93
871.00	15.57	11.52	863.53	81.09	17.77	83.01	2.11	2.10	-0.90
901.00	16.81	11.49	892.34	89.29	19.44	91.38	4.13	4.13	-0.10
931.00	17.50	11.38	921.00	97.96	21.19	100.22	2.30	2.30	-0.37
961.00	18.72	12.27	949.51	107.08	23.10	109.55	4.17	4.07	2.97
991.00	19.68	11.59	977.84	116.74	25.14	119.41	3.29	3.20	-2.27
1,021.00	20.31	10.39	1,006.04	126.81	27.09	129.67	2.51	2.10	-4.00
1,111.00	20.93	9.14	1,090.27	158.04	32.46	161.34	0.84	0.69	-1.39
1,201.00	21.03	7.89	1,174.30	189.91	37.24	193.49	0.51	0.11	-1.39
1,291.00	20.76	11.61	1,258.39	221.53	42.66	225.55	1.50	-0.30	4.13
1,381.00	21.52	11.37	1,342.33	253.34	49.13	258.01	0.85	0.84	-0.27
1,471.00	20.67	15.11	1,426.30	284.86	56.52	290.38	1.77	-0.94	4.16
1,561.00	18.85	18.24	1,511.00	314.01	65.21	320.70	2.34	-2.02	3.48
1,651.00	20.78	14.19	1,595.67	343.30	73.68	351.11	2.63	2.14	-4.50
1,741.00	20.00	11.19	1,680.04	373.87	80.58	382.46	1.45	-0.87	-3.33
1,831.00	20.08	12.27	1,764.59	404.07	86.85	413.30	0.42	0.09	1.20
1,891.00	19.79	11.43	1,820.99	424.09	91.05	433.75	0.68	-0.48	-1.40
Last SDI Surface MWD Survey									
1,982.00	20.51	9.99	1,906.42	454.89	96.87	465.09	0.96	0.79	-1.58
FIRST SDI PRODUCTION MWD SURVEY									
2,072.00	19.41	3.97	1,991.02	485.34	100.64	495.65	2.59	-1.22	-6.69
2,163.00	17.77	359.38	2,077.28	514.31	101.54	524.17	2.41	-1.80	-5.04
2,253.00	18.05	358.23	2,162.92	541.98	100.96	551.10	0.50	0.31	-1.28
2,344.00	19.33	0.94	2,249.12	571.14	100.77	579.56	1.70	1.41	2.98
2,435.00	19.91	5.74	2,334.84	601.61	102.56	609.74	1.88	0.64	5.27

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Company: Kerr McGee Oil and Gas Onshore LP
 Project: Uintah County, UT UTM12
 Site: NBU 1022-11M Pad
 Well: NBU 1022-11L4CS
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well NBU 1022-11L4CS
 TVD Reference: GL 5174 & RKB 14' @ 5188.00ft (ENSIGN 145)
 MD Reference: GL 5174 & RKB 14' @ 5188.00ft (ENSIGN 145)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
2,525.00	20.42	9.60	2,419.33	632.34	106.71	640.66	1.58	0.57	4.29
2,616.00	20.93	11.59	2,504.47	663.92	112.63	672.77	0.95	0.56	2.19
2,706.00	21.51	16.91	2,588.37	695.46	120.66	705.29	2.23	0.64	5.91
2,796.00	22.45	21.07	2,671.84	727.28	131.63	738.71	2.02	1.04	4.62
2,888.00	21.89	19.90	2,757.03	759.80	143.78	773.06	0.78	-0.61	-1.27
2,978.00	20.88	19.29	2,840.84	790.72	154.79	805.59	1.15	-1.12	-0.68
3,069.00	19.09	20.00	2,926.35	820.01	165.24	836.42	1.98	-1.97	0.78
3,159.00	18.63	16.27	3,011.52	847.64	174.30	865.34	1.43	-0.51	-4.14
3,250.00	19.50	12.30	3,097.54	876.43	181.61	895.03	1.72	0.96	-4.36
3,341.00	20.22	11.95	3,183.12	906.66	188.10	925.94	0.80	0.79	-0.38
3,431.00	19.21	11.48	3,267.85	936.39	194.27	956.30	1.14	-1.12	-0.52
3,522.00	20.96	17.43	3,353.32	966.59	202.12	987.48	2.95	1.92	6.54
3,612.00	20.33	9.27	3,437.56	997.39	209.46	1,019.13	3.27	-0.70	-9.07
3,703.00	18.41	8.82	3,523.40	1,027.19	214.21	1,049.27	2.12	-2.11	-0.49
3,794.00	16.77	9.04	3,610.14	1,054.36	218.48	1,076.73	1.80	-1.80	0.24
3,884.00	14.70	10.37	3,696.77	1,078.42	222.57	1,101.11	2.33	-2.30	1.48
3,975.00	16.56	11.35	3,784.40	1,102.49	227.20	1,125.62	2.06	2.04	1.08
4,065.00	18.79	13.32	3,870.14	1,129.17	233.07	1,152.94	2.57	2.48	2.19
4,156.00	14.64	13.71	3,957.28	1,154.62	239.17	1,179.10	4.56	-4.56	0.43
4,247.00	11.59	17.27	4,045.90	1,174.53	244.61	1,199.70	3.47	-3.35	3.91
4,337.00	8.90	14.72	4,134.45	1,189.90	249.06	1,215.67	3.03	-2.99	-2.83
4,428.00	6.90	13.13	4,224.59	1,202.03	252.09	1,228.17	2.21	-2.20	-1.75
4,518.00	5.17	18.26	4,314.08	1,211.14	254.59	1,237.60	2.01	-1.92	5.70
4,608.00	2.40	30.03	4,403.88	1,216.63	256.81	1,243.43	3.18	-3.08	13.08
4,699.00	2.38	34.99	4,494.80	1,219.83	258.84	1,246.98	0.23	-0.02	5.45
4,790.00	1.98	34.79	4,585.74	1,222.66	260.82	1,250.17	0.44	-0.44	-0.22
4,880.00	1.05	66.56	4,675.70	1,224.27	262.47	1,252.09	1.36	-1.03	35.30
4,971.00	1.05	65.53	4,766.69	1,224.95	263.99	1,253.07	0.02	0.00	-1.13
5,061.00	0.87	66.37	4,856.68	1,225.56	265.37	1,253.96	0.20	-0.20	0.93
5,152.00	0.91	84.72	4,947.67	1,225.91	266.72	1,254.58	0.31	0.04	20.16
5,243.00	0.71	94.38	5,038.66	1,225.93	268.00	1,254.87	0.27	-0.22	10.62
5,333.00	0.80	96.34	5,128.65	1,225.82	269.18	1,255.01	0.10	0.10	2.18
5,424.00	0.41	331.27	5,219.65	1,226.03	269.66	1,255.32	1.20	-0.43	-137.44
5,514.00	0.44	256.97	5,309.64	1,226.24	269.17	1,255.42	0.57	0.03	-82.56
5,605.00	0.68	219.81	5,400.64	1,225.74	268.48	1,254.79	0.47	0.26	-40.84
5,696.00	0.67	188.62	5,491.63	1,224.80	268.05	1,253.78	0.40	-0.01	-34.27
5,786.00	0.57	171.41	5,581.63	1,223.84	268.04	1,252.84	0.23	-0.11	-19.12
5,877.00	0.59	165.64	5,672.62	1,222.94	268.23	1,252.00	0.07	0.02	-6.34
5,967.00	0.92	158.28	5,762.62	1,221.82	268.61	1,250.98	0.38	0.37	-8.18
6,058.00	0.48	172.11	5,853.61	1,220.76	268.93	1,250.02	0.51	-0.48	15.20
6,149.00	0.48	187.95	5,944.61	1,220.01	268.93	1,249.28	0.15	0.00	17.41
6,239.00	0.35	34.36	6,034.61	1,219.86	269.03	1,249.16	0.90	-0.14	-170.66
6,330.00	0.55	10.96	6,125.60	1,220.52	269.27	1,249.85	0.29	0.22	-25.71
6,420.00	0.47	41.85	6,215.60	1,221.22	269.60	1,250.60	0.31	-0.09	34.32

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Company: Kerr McGee Oil and Gas Onshore LP
 Project: Uintah County, UT UTM12
 Site: NBU 1022-11M Pad
 Well: NBU 1022-11L4CS
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well-NBU 1022-11L4CS
 TVD Reference: GL 5174 & RKB 14' @ 5188.00ft (ENSIGN 145)
 MD Reference: GL 5174 & RKB 14' @ 5188.00ft (ENSIGN 145)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,511.00	0.41	98.96	6,306.60	1,221.45	270.17	1,250.94	0.47	-0.07	62.76
6,602.00	0.33	116.28	6,397.59	1,221.28	270.73	1,250.90	0.15	-0.09	19.03
6,692.00	0.44	142.15	6,487.59	1,220.89	271.17	1,250.61	0.23	0.12	28.74
6,783.00	0.58	136.19	6,578.59	1,220.28	271.71	1,250.13	0.16	0.15	-6.55
6,874.00	0.64	145.98	6,669.58	1,219.53	272.31	1,249.52	0.13	0.07	10.76
6,964.00	0.65	155.27	6,759.58	1,218.65	272.81	1,248.76	0.12	0.01	10.32
7,054.00	0.86	158.38	6,849.57	1,217.56	273.27	1,247.79	0.24	0.23	3.46
7,145.00	1.13	159.11	6,940.56	1,216.08	273.84	1,246.47	0.30	0.30	0.80
7,236.00	0.66	143.16	7,031.55	1,214.83	274.47	1,245.38	0.58	-0.52	-17.53
7,326.00	0.89	27.55	7,121.54	1,215.03	275.11	1,245.71	1.46	0.26	-128.46
7,417.00	0.93	11.37	7,212.53	1,216.38	275.58	1,247.13	0.28	0.04	-17.78
7,507.00	1.11	31.27	7,302.52	1,217.84	276.18	1,248.68	0.44	0.20	22.11
7,598.00	0.79	41.34	7,393.50	1,219.07	277.05	1,250.06	0.40	-0.35	11.07
7,689.00	1.07	58.63	7,484.49	1,219.98	278.19	1,251.19	0.43	0.31	19.00
7,779.00	1.16	50.09	7,574.47	1,221.00	279.60	1,252.49	0.21	0.10	-9.49
7,870.00	1.17	15.35	7,665.46	1,222.49	280.56	1,254.15	0.76	0.01	-38.18
7,960.00	1.35	337.25	7,755.44	1,224.35	280.39	1,255.93	0.93	0.20	-42.33
8,051.00	1.27	346.13	7,846.41	1,226.32	279.73	1,257.72	0.24	-0.09	9.76
8,142.00	1.11	326.17	7,937.39	1,228.03	279.00	1,259.24	0.49	-0.18	-21.93
8,232.00	0.60	305.71	8,027.38	1,229.03	278.13	1,260.03	0.65	-0.57	-22.73
8,323.00	0.54	352.88	8,118.38	1,229.73	277.69	1,260.63	0.50	-0.07	51.84
8,413.00	0.03	319.97	8,208.38	1,230.17	277.63	1,261.04	0.57	-0.57	-36.57
8,504.00	0.08	198.43	8,299.38	1,230.13	277.59	1,260.99	0.11	0.05	-133.56
8,595.00	0.11	327.81	8,390.38	1,230.15	277.52	1,260.99	0.19	0.03	142.18
8,685.00	0.61	160.36	8,480.38	1,229.77	277.64	1,260.65	0.80	0.56	-186.06
LAST SDI PRODUCTION MWD SURVEY									
8,750.00	0.61	160.36	8,545.37	1,229.12	277.87	1,260.06	0.00	0.00	0.00
SDI PROJECTION TO BIT									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
NBU 1022-11L4CS PBH	0.00	0.00	8,617.00	1,218.50	253.97	14,515,571.87	2,084,972.92	39° 57' 37.379 N	109° 24' 48.895 W
- actual wellpath misses target center by 76.25ft at 8750.00ft MD (8545.37 TVD, 1229.12 N, 277.87 E)									
- Circle (radius 25.00)									

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT UTM12
Site: NBU 1022-11M Pad
Well: NBU 1022-11L4CS
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 1022-11L4CS
TVD Reference: GL 5174 & RKB 14' @ 5188.00ft (ENSIGN 145)
MD Reference: GL 5174 & RKB 14' @ 5188.00ft (ENSIGN 145)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
101.00	101.00	-0.48	0.00	First SDI Surface MWD Survey
1,891.00	1,820.99	424.09	91.05	Last SDI Surface MWD Survey
1,982.00	1,906.42	454.89	96.87	FIRST SDI PRODUCTION MWD SURVEY
8,685.00	8,480.38	1,229.77	277.64	LAST SDI PRODUCTION MWD SURVEY
8,750.00	8,545.37	1,229.12	277.87	SDI PROJECTION TO BIT

Checked By: _____ Approved By: _____ Date: _____

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 [Signature]
 SECTION SUPERVISOR



Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12
NBU 1022-11M Pad
NBU 1022-11L4CS

OH

Design: OH

Survey Report - Geographic

07 September, 2010

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DIV. OF OIL, GAS & MINING



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10/27/2010

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT UTM12
Site: NBU 1022-11M Pad
Well: NBU 1022-11L4CS
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 1022-11L4CS
TVD Reference: GL 5174 & RKB 14' @ 5188.00ft (ENSGN 145)
MD Reference: GL 5174 & RKB 14' @ 5188.00ft (ENSGN 145)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

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 1022-11M Pad, Sec 11 T10S R22E				
Site Position:	Northing:	14,514,361.03 usft	Latitude:	39° 57' 25.443 N	
From:	Lat/Long	Easting:	2,084,799.47 usft	Longitude:	109° 24' 51.399 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	1.02 °

Well	NBU 1022-11L4CS, 286' FSL & 409' FWL					
Well Position	+N/-S	0.00 ft	Northing:	14,514,349.05 usft	Latitude:	39° 57' 25.335 N
	+E/-W	0.00 ft	Easting:	2,084,740.65 usft	Longitude:	109° 24' 52.157 W
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,174.00 ft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	07/24/2010	11.15	65.87	52,405

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	12.12	

Survey Program	Date	09/02/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
10.00	1,891.00	Survey #1 - Surface (OH)	MWD SDI	MWD - Standard ver 1.0.1	
1,982.00	8,750.00	Survey #2-Production (OH)	MWD SDI	MWD - Standard ver 1.0.1	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,514,349.05	2,084,740.65	39° 57' 25.335 N	109° 24' 52.157 W
10.00	0.00	1.02	10.00	0.00	0.00	14,514,349.05	2,084,740.65	39° 57' 25.335 N	109° 24' 52.157 W
101.00	0.61	180.29	101.00	-0.48	0.00	14,514,348.57	2,084,740.66	39° 57' 25.330 N	109° 24' 52.157 W
First SDI Surface MWD Survey									
131.00	0.29	167.96	131.00	-0.72	0.01	14,514,348.34	2,084,740.68	39° 57' 25.328 N	109° 24' 52.157 W
160.00	0.29	135.42	160.00	-0.84	0.08	14,514,348.21	2,084,740.75	39° 57' 25.327 N	109° 24' 52.156 W
189.00	0.75	57.09	189.00	-0.79	0.29	14,514,348.27	2,084,740.96	39° 57' 25.327 N	109° 24' 52.153 W
218.00	0.97	33.99	217.99	-0.48	0.59	14,514,348.58	2,084,741.25	39° 57' 25.330 N	109° 24' 52.149 W
247.00	1.19	30.95	246.99	-0.02	0.88	14,514,349.05	2,084,741.53	39° 57' 25.335 N	109° 24' 52.146 W
275.00	1.21	31.67	274.98	0.48	1.18	14,514,349.55	2,084,741.83	39° 57' 25.340 N	109° 24' 52.142 W
304.00	1.91	24.63	303.97	1.18	1.55	14,514,350.26	2,084,742.18	39° 57' 25.347 N	109° 24' 52.137 W

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MD Reference: GL 5174 & RKB 14' @ 5188.00ft (ENSIGN 145)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
334.00	2.16	17.00	333.95	2.17	1.92	14,514,351.26	2,084,742.53	39° 57' 25.356 N	109° 24' 52.132 W
363.00	2.53	20.72	362.93	3.29	2.31	14,514,352.39	2,084,742.90	39° 57' 25.368 N	109° 24' 52.127 W
392.00	3.32	19.09	391.89	4.69	2.81	14,514,353.79	2,084,743.38	39° 57' 25.381 N	109° 24' 52.121 W
422.00	4.05	13.73	421.83	6.54	3.34	14,514,355.65	2,084,743.88	39° 57' 25.400 N	109° 24' 52.114 W
451.00	4.59	10.46	450.74	8.67	3.80	14,514,357.79	2,084,744.29	39° 57' 25.421 N	109° 24' 52.108 W
481.00	5.37	11.27	480.63	11.23	4.29	14,514,360.36	2,084,744.74	39° 57' 25.446 N	109° 24' 52.102 W
511.00	6.15	8.95	510.48	14.19	4.81	14,514,363.33	2,084,745.21	39° 57' 25.475 N	109° 24' 52.095 W
541.00	6.86	10.48	540.29	17.54	5.39	14,514,366.69	2,084,745.73	39° 57' 25.508 N	109° 24' 52.088 W
571.00	7.53	8.04	570.05	21.25	5.99	14,514,370.41	2,084,746.26	39° 57' 25.545 N	109° 24' 52.080 W
601.00	8.50	9.61	599.76	25.38	6.63	14,514,374.55	2,084,746.83	39° 57' 25.586 N	109° 24' 52.072 W
631.00	9.17	9.39	629.40	29.93	7.39	14,514,379.11	2,084,747.51	39° 57' 25.631 N	109° 24' 52.062 W
661.00	10.28	10.24	658.97	34.92	8.26	14,514,384.12	2,084,748.29	39° 57' 25.680 N	109° 24' 52.051 W
691.00	10.88	11.76	688.46	40.33	9.31	14,514,389.54	2,084,749.25	39° 57' 25.734 N	109° 24' 52.037 W
721.00	11.86	11.95	717.87	46.12	10.53	14,514,395.35	2,084,750.36	39° 57' 25.791 N	109° 24' 52.022 W
751.00	12.42	11.74	747.20	52.29	11.82	14,514,401.55	2,084,751.54	39° 57' 25.852 N	109° 24' 52.005 W
781.00	13.51	11.72	776.43	58.88	13.19	14,514,408.16	2,084,752.80	39° 57' 25.917 N	109° 24' 51.988 W
811.00	14.30	11.51	805.55	65.94	14.64	14,514,415.25	2,084,754.12	39° 57' 25.987 N	109° 24' 51.969 W
841.00	14.94	11.79	834.58	73.36	16.17	14,514,422.69	2,084,755.52	39° 57' 26.060 N	109° 24' 51.949 W
871.00	15.57	11.52	863.53	81.09	17.77	14,514,430.45	2,084,756.98	39° 57' 26.137 N	109° 24' 51.929 W
901.00	16.81	11.49	892.34	89.29	19.44	14,514,438.67	2,084,758.50	39° 57' 26.218 N	109° 24' 51.907 W
931.00	17.50	11.38	921.00	97.96	21.19	14,514,447.37	2,084,760.10	39° 57' 26.303 N	109° 24' 51.885 W
961.00	18.72	12.27	949.51	107.08	23.10	14,514,456.53	2,084,761.85	39° 57' 26.393 N	109° 24' 51.860 W
991.00	19.68	11.59	977.84	116.74	25.14	14,514,466.22	2,084,763.71	39° 57' 26.489 N	109° 24' 51.834 W
1,021.00	20.31	10.39	1,006.04	126.81	27.09	14,514,476.32	2,084,765.49	39° 57' 26.588 N	109° 24' 51.809 W
1,111.00	20.93	9.14	1,090.27	158.04	32.46	14,514,507.65	2,084,770.30	39° 57' 26.897 N	109° 24' 51.740 W
1,201.00	21.03	7.89	1,174.30	189.91	37.24	14,514,539.59	2,084,774.51	39° 57' 27.212 N	109° 24' 51.679 W
1,291.00	20.76	11.61	1,258.39	221.53	42.66	14,514,571.31	2,084,779.37	39° 57' 27.525 N	109° 24' 51.609 W
1,381.00	21.52	11.37	1,342.33	253.34	49.13	14,514,603.22	2,084,785.27	39° 57' 27.839 N	109° 24' 51.526 W
1,471.00	20.67	15.11	1,426.30	284.86	56.52	14,514,634.87	2,084,792.10	39° 57' 28.151 N	109° 24' 51.431 W
1,561.00	18.85	18.24	1,511.00	314.01	65.21	14,514,664.17	2,084,800.27	39° 57' 28.439 N	109° 24' 51.319 W
1,651.00	20.78	14.19	1,595.67	343.30	73.68	14,514,693.61	2,084,808.22	39° 57' 28.728 N	109° 24' 51.211 W
1,741.00	20.00	11.19	1,680.04	373.87	80.58	14,514,724.30	2,084,814.57	39° 57' 29.030 N	109° 24' 51.122 W
1,831.00	20.08	12.27	1,764.59	404.07	86.85	14,514,754.60	2,084,820.31	39° 57' 29.329 N	109° 24' 51.042 W
1,891.00	19.79	11.43	1,820.99	424.09	91.05	14,514,774.69	2,084,824.15	39° 57' 29.527 N	109° 24' 50.988 W
Last SDI Surface MWD Survey									
1,982.00	20.51	9.99	1,906.42	454.89	96.87	14,514,805.59	2,084,829.42	39° 57' 29.831 N	109° 24' 50.913 W
FIRST SDI PRODUCTION MWD SURVEY									
2,072.00	19.41	3.97	1,991.02	485.34	100.64	14,514,836.11	2,084,832.65	39° 57' 30.132 N	109° 24' 50.864 W
2,163.00	17.77	359.38	2,077.28	514.31	101.54	14,514,865.09	2,084,833.03	39° 57' 30.419 N	109° 24' 50.853 W
2,253.00	18.05	358.23	2,162.92	541.98	100.96	14,514,892.75	2,084,831.96	39° 57' 30.692 N	109° 24' 50.860 W
2,344.00	19.33	0.94	2,249.12	571.14	100.77	14,514,921.89	2,084,831.25	39° 57' 30.980 N	109° 24' 50.863 W
2,435.00	19.91	5.74	2,334.84	601.61	102.56	14,514,952.40	2,084,832.51	39° 57' 31.282 N	109° 24' 50.840 W
2,525.00	20.42	9.60	2,419.33	632.34	106.71	14,514,983.19	2,084,836.11	39° 57' 31.585 N	109° 24' 50.786 W
2,616.00	20.93	11.59	2,504.47	663.92	112.63	14,515,014.87	2,084,841.46	39° 57' 31.897 N	109° 24' 50.710 W
2,706.00	21.51	16.91	2,588.37	695.46	120.66	14,515,046.55	2,084,848.93	39° 57' 32.209 N	109° 24' 50.607 W
2,796.00	22.45	21.07	2,671.84	727.28	131.63	14,515,078.56	2,084,859.34	39° 57' 32.524 N	109° 24' 50.466 W
2,888.00	21.89	19.90	2,757.03	759.80	143.78	14,515,111.29	2,084,870.91	39° 57' 32.845 N	109° 24' 50.310 W
2,978.00	20.88	19.29	2,840.84	790.72	154.79	14,515,142.39	2,084,881.37	39° 57' 33.151 N	109° 24' 50.169 W
3,069.00	19.09	20.00	2,926.35	820.01	165.24	14,515,171.87	2,084,891.29	39° 57' 33.440 N	109° 24' 50.035 W
3,159.00	18.63	16.27	3,011.52	847.64	174.30	14,515,199.66	2,084,899.86	39° 57' 33.713 N	109° 24' 49.918 W
3,250.00	19.50	12.30	3,097.54	876.43	181.61	14,515,228.58	2,084,906.65	39° 57' 33.998 N	109° 24' 49.824 W
3,341.00	20.22	11.95	3,183.12	906.66	188.10	14,515,258.91	2,084,912.61	39° 57' 34.297 N	109° 24' 49.741 W
3,431.00	19.21	11.48	3,267.85	936.39	194.27	14,515,288.74	2,084,918.24	39° 57' 34.591 N	109° 24' 49.662 W
3,522.00	20.96	17.43	3,353.32	966.59	202.12	14,515,319.08	2,084,925.56	39° 57' 34.889 N	109° 24' 49.561 W
3,612.00	20.33	9.27	3,437.56	997.39	209.46	14,515,350.01	2,084,932.35	39° 57' 35.193 N	109° 24' 49.467 W

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT UTM12
Site: NBU 1022-11M Pad
Well: NBU 1022-11L4CS
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 1022-11L4CS
TVD Reference: GL 5174 & RKB 14' @ 5188.00ft (ENSIGN 145)
MD Reference: GL 5174 & RKB 14' @ 5188.00ft (ENSIGN 145)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
3,703.00	18.41	8.82	3,523.40	1,027.19	214.21	14,515,379.89	2,084,936.57	39° 57' 35.488 N	109° 24' 49.406 W
3,794.00	16.77	9.04	3,610.14	1,054.36	218.48	14,515,407.13	2,084,940.35	39° 57' 35.757 N	109° 24' 49.351 W
3,884.00	14.70	10.37	3,696.77	1,078.42	222.57	14,515,431.25	2,084,944.02	39° 57' 35.994 N	109° 24' 49.298 W
3,975.00	16.56	11.35	3,784.40	1,102.49	227.20	14,515,455.41	2,084,948.22	39° 57' 36.232 N	109° 24' 49.239 W
4,065.00	18.79	13.32	3,870.14	1,129.17	233.07	14,515,482.19	2,084,953.61	39° 57' 36.496 N	109° 24' 49.163 W
4,156.00	14.64	13.71	3,957.28	1,154.62	239.17	14,515,507.74	2,084,959.26	39° 57' 36.748 N	109° 24' 49.085 W
4,247.00	11.59	17.27	4,045.90	1,174.53	244.61	14,515,527.74	2,084,964.35	39° 57' 36.944 N	109° 24' 49.015 W
4,337.00	8.90	14.72	4,134.45	1,189.90	249.06	14,515,543.19	2,084,968.53	39° 57' 37.096 N	109° 24' 48.958 W
4,428.00	6.90	13.13	4,224.59	1,202.03	252.09	14,515,555.37	2,084,971.34	39° 57' 37.216 N	109° 24' 48.919 W
4,518.00	5.17	18.26	4,314.08	1,211.14	254.59	14,515,564.53	2,084,973.68	39° 57' 37.306 N	109° 24' 48.887 W
4,608.00	2.40	30.03	4,403.88	1,216.63	256.81	14,515,570.05	2,084,975.79	39° 57' 37.360 N	109° 24' 48.859 W
4,699.00	2.38	34.99	4,494.80	1,219.83	258.84	14,515,573.29	2,084,977.77	39° 57' 37.392 N	109° 24' 48.832 W
4,790.00	1.98	34.79	4,585.74	1,222.66	260.82	14,515,576.16	2,084,979.70	39° 57' 37.420 N	109° 24' 48.807 W
4,880.00	1.05	66.56	4,675.70	1,224.27	262.47	14,515,577.79	2,084,981.32	39° 57' 37.436 N	109° 24' 48.786 W
4,971.00	1.05	65.53	4,766.69	1,224.95	263.99	14,515,578.50	2,084,982.83	39° 57' 37.443 N	109° 24' 48.766 W
5,061.00	0.87	66.37	4,856.68	1,225.56	265.37	14,515,579.14	2,084,984.19	39° 57' 37.449 N	109° 24' 48.749 W
5,152.00	0.91	84.72	4,947.67	1,225.91	266.72	14,515,579.50	2,084,985.54	39° 57' 37.452 N	109° 24' 48.731 W
5,243.00	0.71	94.38	5,038.66	1,225.93	268.00	14,515,579.55	2,084,986.82	39° 57' 37.452 N	109° 24' 48.715 W
5,333.00	0.80	96.34	5,128.65	1,225.82	269.18	14,515,579.46	2,084,988.00	39° 57' 37.451 N	109° 24' 48.700 W
5,424.00	0.41	331.27	5,219.65	1,226.03	269.66	14,515,579.68	2,084,988.48	39° 57' 37.453 N	109° 24' 48.693 W
5,514.00	0.44	256.97	5,309.64	1,226.24	269.17	14,515,579.88	2,084,987.98	39° 57' 37.455 N	109° 24' 48.700 W
5,605.00	0.68	219.81	5,400.64	1,225.74	268.48	14,515,579.37	2,084,987.30	39° 57' 37.451 N	109° 24' 48.709 W
5,696.00	0.67	188.62	5,491.63	1,224.80	268.05	14,515,578.43	2,084,986.89	39° 57' 37.441 N	109° 24' 48.714 W
5,786.00	0.57	171.41	5,581.63	1,223.84	268.04	14,515,577.46	2,084,986.90	39° 57' 37.432 N	109° 24' 48.714 W
5,877.00	0.59	165.64	5,672.62	1,222.94	268.23	14,515,576.56	2,084,987.10	39° 57' 37.423 N	109° 24' 48.712 W
5,967.00	0.92	158.28	5,762.62	1,221.82	268.61	14,515,575.45	2,084,987.50	39° 57' 37.412 N	109° 24' 48.707 W
6,058.00	0.48	172.11	5,853.61	1,220.76	268.93	14,515,574.40	2,084,987.84	39° 57' 37.401 N	109° 24' 48.703 W
6,149.00	0.48	187.95	5,944.61	1,220.01	268.93	14,515,573.65	2,084,987.86	39° 57' 37.394 N	109° 24' 48.703 W
6,239.00	0.35	34.36	6,034.61	1,219.86	269.03	14,515,573.50	2,084,987.96	39° 57' 37.392 N	109° 24' 48.701 W
6,330.00	0.55	10.96	6,125.60	1,220.52	269.27	14,515,574.16	2,084,988.19	39° 57' 37.399 N	109° 24' 48.698 W
6,420.00	0.47	41.85	6,215.60	1,221.22	269.60	14,515,574.87	2,084,988.51	39° 57' 37.406 N	109° 24' 48.694 W
6,511.00	0.41	98.96	6,306.60	1,221.45	270.17	14,515,575.11	2,084,989.07	39° 57' 37.408 N	109° 24' 48.687 W
6,602.00	0.33	116.28	6,397.59	1,221.28	270.73	14,515,574.95	2,084,989.63	39° 57' 37.406 N	109° 24' 48.680 W
6,692.00	0.44	142.15	6,487.59	1,220.89	271.17	14,515,574.57	2,084,990.08	39° 57' 37.403 N	109° 24' 48.674 W
6,783.00	0.58	136.19	6,578.59	1,220.28	271.71	14,515,573.97	2,084,990.63	39° 57' 37.397 N	109° 24' 48.667 W
6,874.00	0.64	145.98	6,669.58	1,219.53	272.31	14,515,573.23	2,084,991.24	39° 57' 37.389 N	109° 24' 48.659 W
6,964.00	0.65	155.27	6,759.58	1,218.65	272.81	14,515,572.36	2,084,991.75	39° 57' 37.380 N	109° 24' 48.653 W
7,054.00	0.86	158.38	6,849.57	1,217.56	273.27	14,515,571.27	2,084,992.24	39° 57' 37.370 N	109° 24' 48.647 W
7,145.00	1.13	159.11	6,940.56	1,216.08	273.84	14,515,569.81	2,084,992.83	39° 57' 37.355 N	109° 24' 48.640 W
7,236.00	0.66	143.16	7,031.55	1,214.83	274.47	14,515,568.56	2,084,993.49	39° 57' 37.343 N	109° 24' 48.632 W
7,326.00	0.89	27.55	7,121.54	1,215.03	275.11	14,515,568.78	2,084,994.12	39° 57' 37.345 N	109° 24' 48.623 W
7,417.00	0.93	11.37	7,212.53	1,216.38	275.58	14,515,570.14	2,084,994.57	39° 57' 37.358 N	109° 24' 48.617 W
7,507.00	1.11	31.27	7,302.52	1,217.84	276.18	14,515,571.61	2,084,995.14	39° 57' 37.372 N	109° 24' 48.610 W
7,598.00	0.79	41.34	7,393.50	1,219.07	277.05	14,515,572.85	2,084,995.99	39° 57' 37.385 N	109° 24' 48.599 W
7,689.00	1.07	58.63	7,484.49	1,219.98	278.19	14,515,573.78	2,084,997.11	39° 57' 37.394 N	109° 24' 48.584 W
7,779.00	1.16	50.09	7,574.47	1,221.00	279.60	14,515,574.83	2,084,998.51	39° 57' 37.404 N	109° 24' 48.566 W
7,870.00	1.17	15.35	7,665.46	1,222.49	280.56	14,515,576.33	2,084,999.44	39° 57' 37.418 N	109° 24' 48.553 W
7,960.00	1.35	337.25	7,755.44	1,224.35	280.39	14,515,578.20	2,084,999.24	39° 57' 37.437 N	109° 24' 48.556 W
8,051.00	1.27	346.13	7,846.41	1,226.32	279.73	14,515,580.15	2,084,998.54	39° 57' 37.456 N	109° 24' 48.564 W
8,142.00	1.11	326.17	7,937.39	1,228.03	279.00	14,515,581.85	2,084,997.78	39° 57' 37.473 N	109° 24' 48.573 W
8,232.00	0.60	305.71	8,027.38	1,229.03	278.13	14,515,582.83	2,084,996.90	39° 57' 37.483 N	109° 24' 48.585 W
8,323.00	0.54	352.88	8,118.38	1,229.73	277.69	14,515,583.53	2,084,996.44	39° 57' 37.490 N	109° 24' 48.590 W
8,413.00	0.03	319.97	8,208.38	1,230.17	277.63	14,515,583.97	2,084,996.37	39° 57' 37.494 N	109° 24' 48.591 W
8,504.00	0.08	198.43	8,299.38	1,230.13	277.59	14,515,583.92	2,084,996.33	39° 57' 37.494 N	109° 24' 48.592 W
8,595.00	0.11	327.81	8,390.38	1,230.15	277.52	14,515,583.94	2,084,996.27	39° 57' 37.494 N	109° 24' 48.592 W

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT UTM12
Site: NBU 1022-11M Pad
Well: NBU 1022-11L4CS
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 1022-11L4CS
TVD Reference: GL 5174 & RKB 14' @ 5188.00ft (ENSIGN 145)
MD Reference: GL 5174 & RKB 14' @ 5188.00ft (ENSIGN 145)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,685.00	0.61	160.36	8,480.38	1,229.77	277.64	14,515,583.56	2,084,996.39	39° 57' 37.490 N	109° 24' 48.591 W
LAST SDI PRODUCTION MWD SURVEY									
8,750.00	0.61	160.36	8,545.37	1,229.12	277.87	14,515,582.91	2,084,996.63	39° 57' 37.484 N	109° 24' 48.588 W
SDI PROJECTION TO BIT									

Design Targets

Target Name	- hit/miss target	- Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
NBU 1022-11L4CS PBH			0.00	0.00	8,617.00	1,218.50	253.97	14,515,571.87	2,084,972.92	39° 57' 37.379 N	109° 24' 48.895 W
- actual wellpath misses target center by 76.25ft at 8750.00ft MD (8545.37 TVD, 1229.12 N, 277.87 E)											
- Circle (radius 25.00)											

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
101.00	101.00	-0.48	0.00	First SDI Surface MWD Survey
1,891.00	1,820.99	424.09	91.05	Last SDI Surface MWD Survey
1,982.00	1,906.42	454.89	96.87	FIRST SDI PRODUCTION MWD SURVEY
8,685.00	8,480.38	1,229.77	277.64	LAST SDI PRODUCTION MWD SURVEY
8,750.00	8,545.37	1,229.12	277.87	SDI PROJECTION TO BIT

Checked By: _____ Approved By: _____ Date: _____

RECEIVED
 10/21/10
 10:27:00 AM

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197A
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 1022-11L4CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047502230000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6515 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0286 FSL 0409 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 11 Township: 10.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES COUNTY: UINTAH STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 4/11/2011 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER	<input checked="" type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 50px;" type="text" value="Wellhead"/>

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

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

Approved by the Utah Division of Oil, Gas and Mining

Date: 04/13/2011

By: *Derek Duff*

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 4/8/2011	

WORKORDER # 88119330

Name: NBU 1022-11L4CS - 1022-11M PAD 3/30/11
 Surface Location: SWSW Sec. 11, T10S, R22E
 Uintah County, UT

API: 4304750223 LEASE#: UO-01197A

ELEVATIONS: 5174' GL 5187' KB

TOTAL DEPTH: 8750' PBD: 8720'

SURFACE CASING: 8 5/8", 28# IJ-55 @ 1926'

PRODUCTION CASING: 4 1/2", 11.6#, I-80 @ 8742'
 T.O.C.@ ~270 per CBL

PERFORATIONS: Mesaverde 6972' - 8596'

Tubular/Borehole	Drift inches	Collapse psi	Burst psi	Capacities		
				Gal./ft.	Cuft/ft.	Bbl./ft.
2.375" 4.7# J-55 tbg.	1.901	8100	7700	0.1624	0.02171	0.00387
4.5" 11.6# I-80	3.875	6350	7780	0.6528	0.0872	0.0155
8.625" 28# J-55	8.097	1370	2950	2.6223	0.3505	0.0624
Annular Capacities						
2.375" tbg. X 4 1/2" 11.6# csg				0.4227	0.0565	0.01

GEOLOGICAL TOPS:

1043' Green River
 1352' Bird's Nest
 1709' Mahogany
 4337' Wasatch
 6612' Mesaverde

NBU 1022-11L4CS- WELLHEAD REPLACEMENT PROCEDURE -

PREP-WORK PRIOR TO MIRU:

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

WORKOVER PROCEDURE:

1. MIRU workover rig.
2. Kill well with 10# brine / KCL (dictated by well pressure).
3. Remove tree, install double BOP with blind and 2 3/8" pipe rams, with accumulator closing unit and manual back-ups. Function test BOP system.
4. POOH w/ tubing laying down extra tubing.
5. Rig up wireline service. RIH and set CBP @ ~6922'. Dump bail 4 sx cement on top of plug. POOH and RD wireline service. TIH w/ tubing and seating nipple. Land tubing ±60' above cement. RDMO.
6. Monitor well pressures. If surface casing is dead. MIRU. ND WH and NU BOP. POOH w/ tubing.
7. Depending on conditions at wellsite, continue with either CUT/PATCH Procedure or BACK-OFF Procedure.

CUT/PATCH PROCEDURE:

1. PU internal casing cutters and RIH. Cut casing at +/- 30' from surface.
2. POOH, LD cutters and casing.
3. PU 7 3/8" overshoot with 4 1/2" right hand standard wicker grapple, 1 - 4 3/4" drill collar with 3 1/2" IF threads, pup joint, manual bumper sub, and crossovers. If casing cut is deeper than ±30' utilize >7000 ft-lb torque pipe as needed. Pull a minimum of 10,000# to keep grapple engaged if cement top is high (<~900'). If cement top is low (>~900'), more weight will be required to put casing in neutral. Torque casing string to ±7000 ft-lbs, count number of turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place ±7000 ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out, release overshoot, POOH, and lay down.
4. TIH w/ skirted mill and dress off the fish top for approximately 1/2 hour. TOOH.
5. PU & RIH w/ 4 1/2" 10k external casing patch on 4 1/2" P-110 casing. Ensure that sliding sleeve assembly shifts ±3' and casing tags no-go portion of patch. NOTE: Shear pins will shear at 3500 to 4500 lbs.
6. Latch fish, PU to 100,000# tension. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.
7. Install slips. Land casing w/ 80,000# tension.
8. Cut-off and dress 4 1/2" casing stub.
9. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~6872'. Clean out to PBTD (8720').
10. POOH, land tbg and pump off POBS.
11. NUWH, RDMO. Turn well over to production ops.

BACK-OFF PROCEDURE:

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

6. PU new casing joint with buttress threads and entry guide and RIH. Tag casing top. Thread into casing and torque up to ± 7000 ft-lbs, count number of additional turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place ± 7000 ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out go to step 7.
7. PU 100,000# tension string weight. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.
8. Install slips. Land casing w/ 80,000# tension.
9. Cut-off and dress 4 1/2" casing stub.
10. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~6872'. Clean out to PBTD (8720').
11. POOH, land tbg and pump off POBS.
12. NUWH, RDMO. Turn well over to production ops.

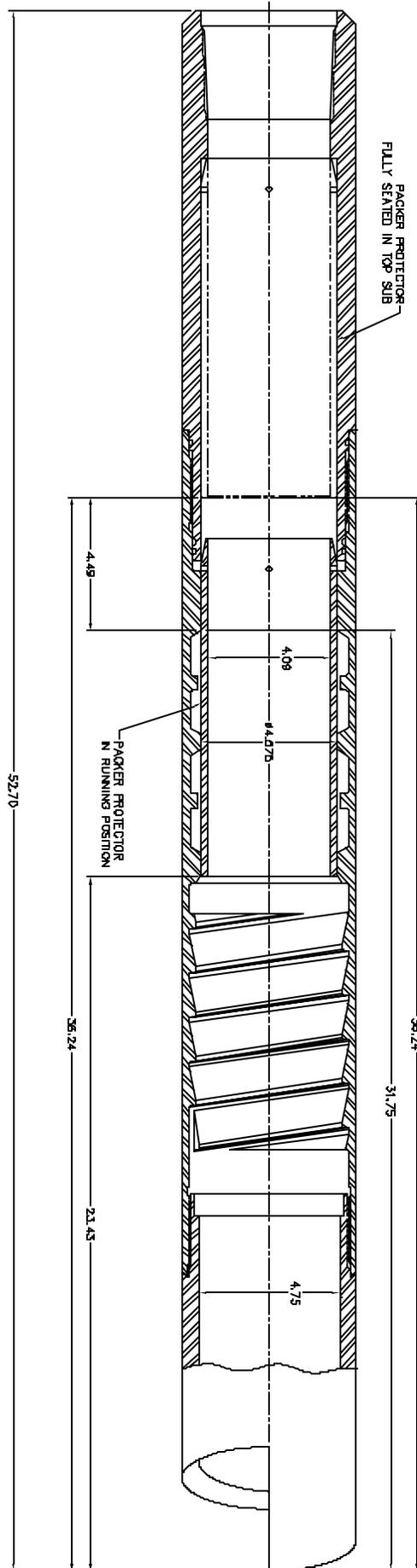


Logan High Pressure Casing Patches Assembly Procedure

All parts should be thoroughly greased before being assembled.

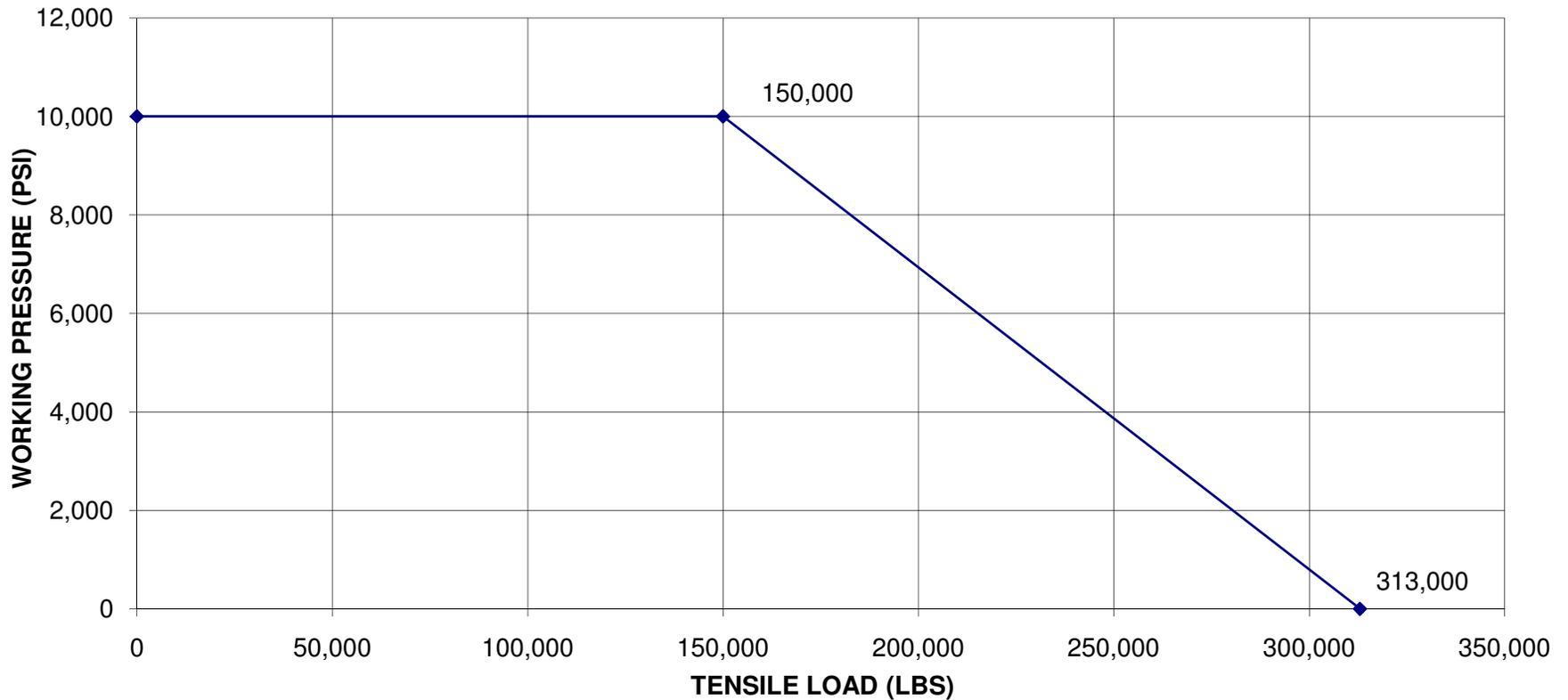
1. Install all four Logan Type "L" Packers in the spaces provided in the Casing Patch Bowl. Refer to diagram provided for proper installation.
2. Install Packer Protector from the Basket Grapple end of the Bowl. The beveled end of the Packer Protector goes in first. Carefully push the Packer Protector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

Follow recommended Make-Up Torque as provided in chart.



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

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



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

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

DATA BY SLS 11/16/2009

RECEIVED Apr. 08, 2011

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
		5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197A
SUNDRY NOTICES AND REPORTS ON WELLS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
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.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well		8. WELL NAME and NUMBER: NBU 1022-11L4CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		9. API NUMBER: 43047502230000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0286 FSL 0409 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW 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 checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 5/20/2011 <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER	
	<input checked="" type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input type="text" value="Wellhead Repair"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
The operator has concluded wellhead/casing repairs on the subject well location. Please see the attached chronological history for details of the operations.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY		
NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II
SIGNATURE N/A		DATE 5/20/2011

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-11L4CS		GREEN	Spud Conductor: 3/4/2010		Spud Date: 3/16/2010			
Project: UTAH-UINTAH			Site: NBU 1022-11M PAD			Rig Name No: SWABBCO 6/6		
Event: WELL WORK EXPENSE			Start Date: 5/5/2011		End Date: 5/9/2011			
Active Datum: RKB @5,187.00ft (above Mean Sea Level)			UWI: SW/SW/0/10/S/22/E/11/0/0/6/PM/S/286.00/W/0/409.00/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
5/5/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA= RIG MOVE
	7:15 - 16:00	8.75	WO/REP	30		P		MOVE RIG & EQUIP FROM 14F PAD TO 11M PAD RU RIG SPOT EQUIP PMP 20 BBLs TMAC DWN TUB TO CONTROL WELL ND WELLHEAD NU BOPS RU FLOOR & TUBING EQUIP UNLAND TUB LD HNGR POOH W/ 259 JNTS LD BHA RU W/L RIH W/ GAUGE RNG TO 7000' POOH PU 10K CBP RIH SET @ 6920' POOH PU DUMP BAILER MAKE 2 RUNS SPOT 4 SKS CEM ON CBP FILL HOLE TEST PLG 1000# PREP TO REPAIR W/H IN AM
5/6/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA= TESTING SAFETY
	7:15 - 17:00	9.75	WO/REP	30		P		0 PSI ON WELL ND BOPS ND WELLHEAD PU INT CUTTER CUT CSG 8' FROM SURFACE LD CUTTER CAP ON HEAD WOULD NOT THREAD OFF HEAT W/ TORCHES FOR 1 HR START TO TURN OFF PU OVER SHOT CATCH CSG RU W/L & CSG TONGS RIH W/ STRING SHOT APPLY LH TORQUE B/O CSG 1 JNT DOWN RD W/L POOH W/ 1 JNT CSG LAY ALL DOWN PU SKIRTED JNT & 10' PUP RIH THREAD ONTO CSG STRING TORQUE TO 7000# 21 ROUNDS RU TESTERS TEST TO 3500 PSI LOST 40# IN 30 MIN RD TESTERS PULL 90000# ON STRING SET SLIPS NU W/H NU BOPS RU FLOOR & TUBING EQUIP RIH TAG CEM RU PWR SWVL PREP TO D/O ON MON SIW SDFW
5/9/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA= FOAMING
	7:15 - 17:00	9.75	WO/REP	30		P		0 PSI ON WELL EST CIRC W/ FOAMER C/O & DRILL THRU CEM & CBP @ 6920' 150 PSI INCREASE CIRC CLEAN CONTINUE TO RIH TAG @ 8690' CIRC CLEAN POOH W/ BIT PU 1.87XN NPL RIH W/ PROD 259 JNTS LAND TUBING ON HNGR EOT @ 8200.15' RD FLOOR & TUBING EQUIP ND BOPS NU WELLHEAD PREP TO RD IN AM

