

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

FORM 3

AMENDED REPORT **APPLICATION FOR PERMIT TO DRILL**

2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>		1. WELL NAME and NUMBER NBU 920-12LT	
4. TYPE OF WELL Gas Well Coalbed Methane Well: NO		3. FIELD OR WILDCAT NATURAL BUTTES	
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.		5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES	
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217		7. OPERATOR PHONE 720 929-6587	
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) UTU-0144868B		9. OPERATOR E-MAIL mary.mondragon@anadarko.com	
11. MINERAL OWNERSHIP FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input checked="" type="checkbox"/> STATE <input 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') Ute		18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>	
19. SLANT VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>			
20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION
LOCATION AT SURFACE	1538 FSL 792 FWL	NWSW	12
Top of Uppermost Producing Zone	1538 FSL 792 FWL	NWSW	12
At Total Depth	1538 FSL 792 FWL	NWSW	12
21. COUNTY UINTAH	22. DISTANCE TO NEAREST LEASE LINE (Feet) 792	23. NUMBER OF ACRES IN DRILLING UNIT 600	
	25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 20	26. PROPOSED DEPTH MD: 10700 TVD:	
27. ELEVATION - GROUND LEVEL 4697	28. BOND NUMBER WYB000291	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 type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP

NAME Kevin McIntyre	TITLE Regulatory Analyst I	PHONE 720 929-6226
SIGNATURE	DATE 10/21/2008	EMAIL Kevin.McIntyre@anadarko.com
API NUMBER ASSIGNED 43047501620000	APPROVAL  Permit Manager	

Proposed Hole, Casing, and Cement

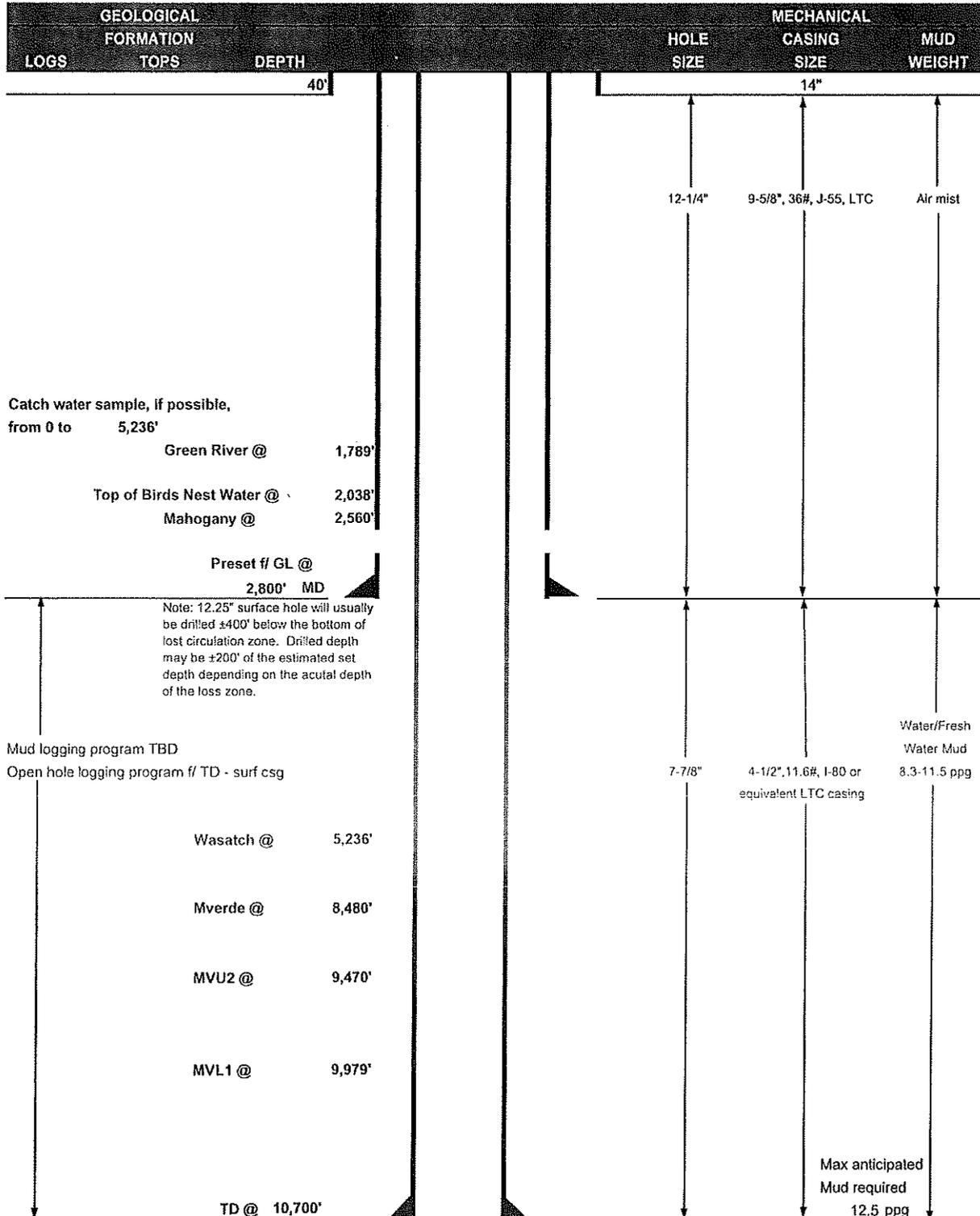
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	12.25	9.625	0	2800		
Pipe	Grade	Length	Weight			
	Grade J-55 LT&C	2800	36.0			
	Cement Interval	Top (MD)	Bottom (MD)			
		0	2800			
		Cement Description	Class	Sacks	Yield	Weight
			Premium Foamed Cement	315	1.18	15.6

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	10700		
Pipe	Grade	Length	Weight			
	Grade I-80 LT&C	10700	11.6			
	Cement Interval	Top (MD)	Bottom (MD)			
		0	10700			
		Cement Description	Class	Sacks	Yield	Weight
			Premium Lite High Strength	520	3.38	11.0
			Pozzuolanic Cement	1670	1.31	14.3



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	September 29, 2008
WELL NAME	NBU 920-12LT	TD	10,700' MD/TVD
FIELD	Natural Buttes	COUNTY	Uintah
		STATE	Utah
		ELEVATION	4,697' GL
			KB 4,712'
SURFACE LOCATION	NWSW 1538' FSL & 792' FWL, Sec. 12, T 9S R 20E		BHL
	Latitude: 40.046940	Longitude: -109.621220	NAD 27
OBJECTIVE ZONE(S)	Mesaverde/Wasatch		
ADDITIONAL INFO	Regulatory Agencies: BLM (MINERALS), BIA (SURFACE), UDOGM, Tri-County Health Dept.		



DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3520	2020	453000
SURFACE	9-5/8"	0 to 2,800'	36.00	J-55	LTC	0.77	1.54	5.13
						7780	6350	201000
PRODUCTION	4-1/2"	0 to 10700	11.60	I-80	LTC	1.69	0.91	1.86

- 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 - (.22 psi/ft-partial evac gradient x TD)
 (Burst Assumptions: TD = 12.5 ppg) .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 4280 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500	Premium cmt + 2% CaCl + .25 pps flocele	215	60%	15.60	1.18
Option 1	TOP OUT CMT (1)	250	20 gals sodium silicate + Premium cmt + 2% CaCl + .25 pps flocele	100		15.60	1.18
	TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized					
Option 2	LEAD	2000	Prem cmt + 16% Gel + 10 pps gilsonite + .25 pps Flocele + 3% salt BWOC	230	35%	11.00	3.82
	TAIL	500	Premium cmt + 2% CaCl + .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	4,730'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	520	60%	11.00	3.38
	TAIL	5,970'	50/50 Poz/G + 10% salt + 2% gel +.1% R-3	1670	60%	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. Centralize first 3 joints & every third joint to top of tail cement with bow spring centralizers.

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. Test to 5,000 psi (annular to 2,500 psi) prior to drilling out. Record on chart recorder & tour sheet. Function test rams on each trip. Maintain safety valve & inside BOP on rig floor at all times. Kelly to be equipped with upper & lower kelly valves.
 Drop Tolco surveys every 2000'. Maximum allowable hole angle is 5 degrees.
 Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER: _____ DATE: _____
 Brad Laney
 DRILLING SUPERINTENDENT: _____ DATE: _____
 Randy Bayne

**NBU 920-12LT
Twin to NBU #45N
NWSW Sec. 12, T9S,R20E
UINTAH COUNTY, UTAH
UTU-0144868B**

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. Estimated Tops of Important Geologic Markers:

<u>Formation</u>	<u>Depth</u>
Uinta	0- Surface
Green River	1789'
Bird's Nest	2038'
Mahogany	2560'
Wasatch	5236'
Mesaverde	8480'
MVU2	9470'
MVL1	9979'
TD	10,700'

2. Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
	Green River	1789'
	Bird's Nest	2038'
	Mahogany	2560'
Gas	Wasatch	5236'
Gas	Mesaverde	8480'
Gas	MVU2	9470'
Gas	MVL1	9979'
Water	N/A	
Other Minerals	N/A	

3. Pressure Control Equipment (Schematic Attached)

Please see the Natural Buttes Unit Standard Operating Procedure (SOP).

4. Proposed Casing & Cementing Program:

Please see the Natural Buttes Unit SOP. See attached drilling diagram.

5. Drilling Fluids Program:

Please see the Natural Buttes Unit SOP.

6. **Evaluation Program:**

Please see the Natural Buttes Unit SOP.

7. **Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 10,700' TD, approximately equals 6634 psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 4280 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 see Natural Buttes Unit SOP 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.

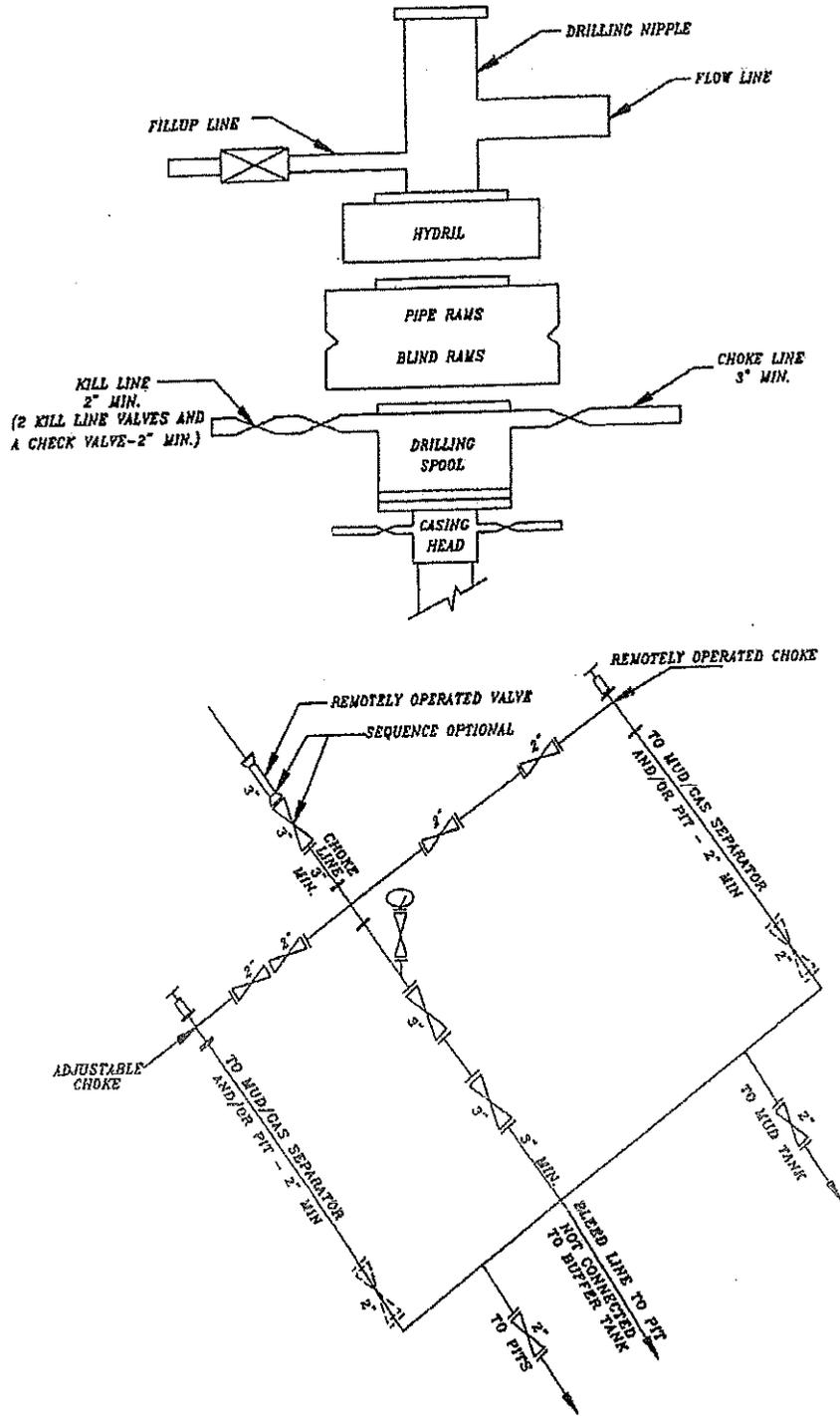
Conclusion

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 see Natural Buttes Unit SOP.

EXHIBIT A



SCHMATIC DIAGRAM OF 5,000 PSI BOP STACK

**NBU 920-12LT
Twin to NBU #45N
NWSW Sec. 12 ,T9S,R20E
UINTAH COUNTY, UTAH
UTU-0144868B**

ONSHORE ORDER NO. 1

MULTI-POINT SURFACE USE & OPERATIONS PLAN

1. Existing Roads:

Refer to the attached location directions.

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

2. Planned Access Roads:

No new access road is planned, as this is a twin location. Refer to Topo Map B.

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.

Please see the Natural Buttes Unit Standard Operating Procedure (SOP).

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

Please refer to Topo Map C.

4. Location of Existing & Proposed Facilities:

Please see the Natural Buttes Unit SOP.

Refer to Topo Map D for the location of the proposed pipelines.

A right-of-way is required for the pipeline. The pipeline is approximately 25' in length and 30' in width. A 4" surface steel pipeline will be constructed utilizing existing disturbance where possible. The pipeline will be butt-welded together and pulled into place with a rubber tired tractor.

Variations to Best Management Practices (BMPs) Requested:

Approximately 25' of 4" steel pipeline will be installed on surface within the access corridor for the well location. As a Best Management Practice (BMP), the pipeline would be buried within the access road corridor if possible. The construction of pipelines requires the corridor of 30 feet.

This exception to the BMP should be granted by the BLM Authorized Officer because indurated bedrock, such as sandstone, is at or within 2 feet of the surface and the soil has a poor history for successful rehabilitation.

All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The requested color is Shadow gray (2.5Y 6/2), a non-reflective earthtone.

Interim Surface Reclamation Plan:

This exception is requested due to the current twin and multi-well program. If determined that this well will not be a candidate for either twinning &/or multi-well the operator shall spread the topsoil pile on the location up to the rig anchor points. The location will be reshaped to the original contour to the extent possible. The operator will reseed the area using the BLM recommended seed mixture and reclamation methods.

5. Location and Type of Water Supply:

Please see the Natural Buttes SOP.

6. Source of Construction Materials:

Please see the Natural Buttes SOP.

7. Methods of Handling Waste Materials:

Please see the Natural Buttes SOP.

A plastic reinforced liner is to be used as discussed during on-site inspection. It will be a minimum of 20 mil thick and felt, with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the liner will be disposed of in the pit.

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, Sec. 5, T9S, R22E, NBU #159, Sec. 35, T9S R21E, Ace Oilfield, Sec. 2, T6S, R20E, MC&MC, Sec. 12, T6S, R19E, Pipeline Facility Sec. 36, T9S, R20E, Goat Pasture Evaporation Pond SW/4 Sec. 16, T10S, R22E, Bonanza Evaporation Pond Sec. 2, T10S, R23E (*Request is in lieu of filing Form 3160-5, after initial production*).

8. Ancillary Facilities:

Please see the Natural Buttes SOP.

9. **Well Site Layout:** (See Location Layout Diagram)

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills, and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

Location size may change prior to the drilling of the well due to the current rig availability. If the proposed location is not large enough to accommodate the drilling rig. The location will be re-surveyed and a form 3160-5 will be submitted.

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

Please see the Natural Buttes SOP.

Upon reclamation of the pit the following seed mixture will be used. A total of 12 lbs/acre will be used if the seeds are drilled (24 lbs/acre if the seeds are broadcast). The per acre requirements for *drilled* seed are:

Crested Wheatgrass 12 lbs.

Operator shall call the BLM for the seed mixture when final reclamation occurs.

11. **Surface/Mineral Ownership:**

The well pad and access road are located on lands owned by:

Ute Indian Tribe
P.O. Box 70
Fort Duchesne, Utah 84026
(435) 722-5141

The mineral ownership is listed below:

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

12. Stipulations/Notices/Mitigation:

There are no stipulations or notices for this location.

13. Other Information:

A Class III archaeological survey and a paleontological survey (Report IPC #08-152 dated 7/8/2008) have been performed and will be submitted.

This location is not within 460' from the boundary of the Natural Buttes Unit, nor is it within 460' of any non-committed tract lying within the boundaries of the Unit.

14. Lessee's or Operator's Representative & Certification:

Kevin McIntyre
Regulatory Analyst
Kerr-McGee Oil & Gas Onshore LP
P.O. Box 173779
Denver, CO 80217-3779
(720) 929-6226

Randy Bayne
Drilling Manager
Kerr-McGee Oil & Gas Onshore LP
1368 South 1200 East
Vernal, UT 84078
(435) 781-7018

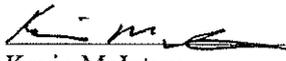
Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

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 the terms and conditions of the lease for the operations conducted upon leased lands.

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.

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

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that 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 by the Operator, its contractors, and subcontractors in conformity with this plan and the terms and conditions under which it is approved.


Kevin McIntyre

9/29/2008

Date

T9S, R20E, S.L.B.&M.

S89°20'W 79.02 (G.L.O.)

S89°19'55"W - 2606.52' (Meas.)

S89°21'44"W - 2608.33' (Meas.)

Found 1968
Brass Cap.

Found 1968
Brass Cap.

Found 1968
Brass Cap.
Pile of Stones.

N00°23'35"E - 2659.69' (Meas.)

N00°15'42"W - 2665.17' (Meas.)

N01°7'W 40.38 (G.L.O.)

NBU 920-12LT (Proposed Well Head)
 NAD 83 LATITUDE = 40.04677' (40° 02' 48.84")
 LONGITUDE = 109.62191' (109° 37' 18.87")
 NAD 27 LATITUDE = 40.04694' (40° 02' 48.97")
 LONGITUDE = 109.62122' (109° 37' 16.38")

Found 1968
Brass Cap.
Pile of Stones.

12

**WELL LOCATION:
NBU 920-12LT**

ELEV. UNGRADED GROUND = 4697.1'

Proposed
Well

792'

1538'

N0°21'E 80.60 (G.L.O.)

N00°21'43"E - 2659.80' (Meas.)

N00°27'12"W - 2615.05' (Meas.)

N0°28'W 39.69 (G.L.O.)

Found 1968
Brass Cap.
Pile of Stones.

S88°55'40"W (Basis of Bearings)
2670.83' (Measured)
S88°53'W 40.48 (G.L.O.)

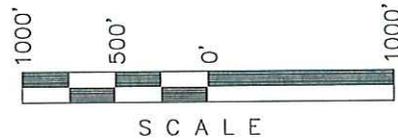
Found 1968
Brass Cap.
Pile of Stones.

S88°55'55"W - 2612.51' (Meas.)
S88°55'W 39.58 (G.L.O.)

Found 1968
Brass Cap.
Pile of Stones.

NOTES:

- ▲ = Section Corners Located
- 1. Well footages are measured at right angles to the Section Lines.
- 2. G.L.O. distances are shown in feet or chains. 1 chain = 66 feet.
- 3. Bearings are based on Global Positioning Satellite observations.
- 4. Basis of elevation is the Northwest Corner of Section 12, T9S, R20E, S.L.B.&M. The elevation of this Section Corner is shown on the Ouray SE 7.5 Min. Quadrangle as being 4676'.

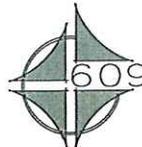


SURVEYOR'S CERTIFICATE

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

John R. Saugh
 REGISTERED LAND SURVEYOR
 REGISTRATION No. 362251
 STATE OF UTAH

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

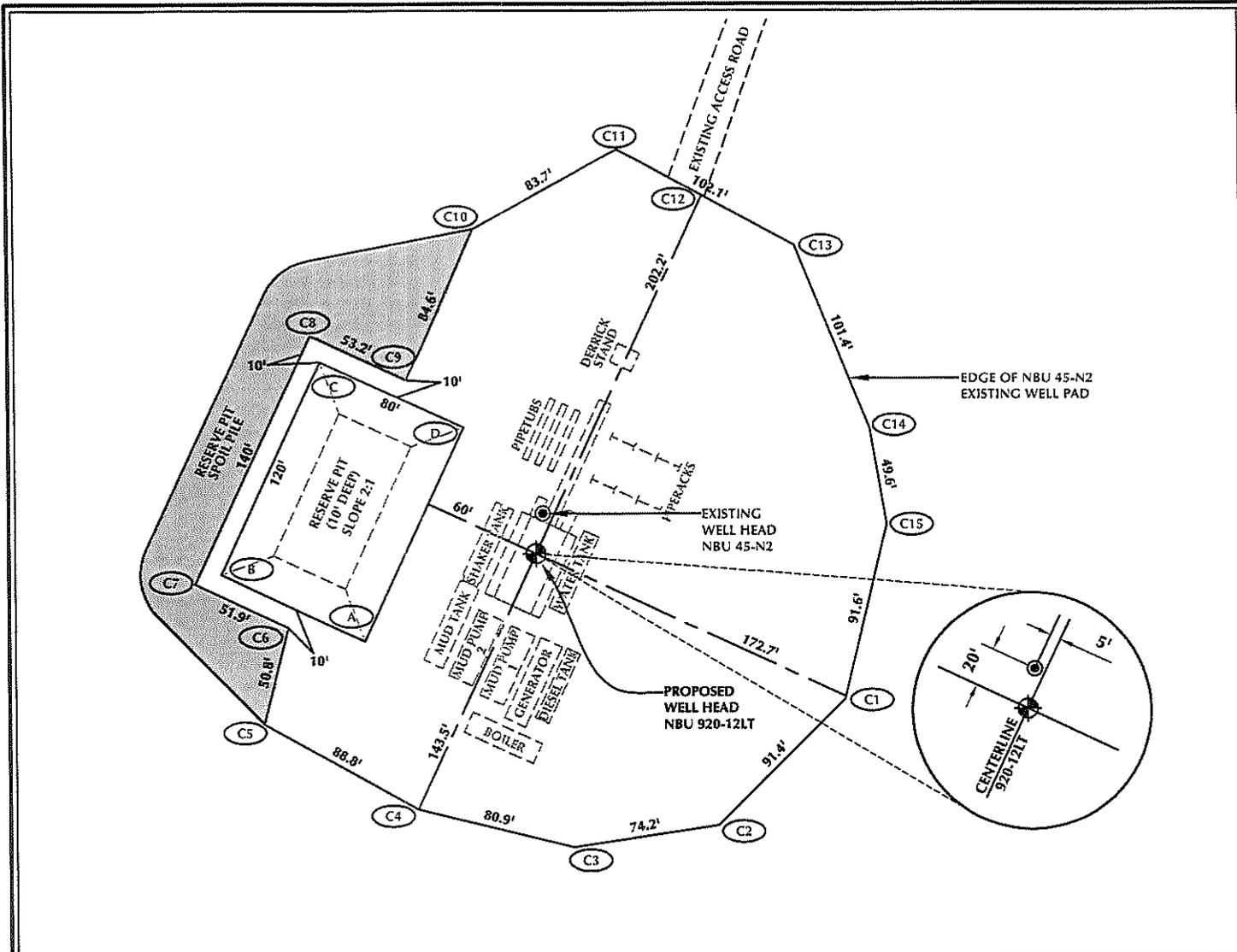


NBU 920-12LT
 WELL PLAT
 1538' FSL, 792' FWL
 NW ¼ SW ¼ OF SECTION 12, T9S, R20E,
 S.L.B.&M. UTAH COUNTY, UTAH.

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

TIMBERLINE (435) 789-1365
 ENGINEERING & LAND SURVEYING, INC.
 38 WEST 100 NORTH - VERNAL, UTAH 84078

DATE SURVEYED: 06-23-08	SURVEYED BY: M.S.B.	SHEET 1 OF 8
DATE DRAWN: 07-03-08	DRAWN BY: B.R.B.	
SCALE: 1" = 1000'	Date Last Revised:	



WELL PAD LEGEND

	EXISTING WELL LOCATION
	PROPOSED WELL LOCATION
	WELL PAD CORNER NUMBER

WELL PAD NBU 920-12LT
 EXISTING GRADE @ LOC. STAKE = 4,697.1'
 RESERVE PIT CAPACITY (2' OF FREEBOARD)
 +/- 9,120 BARRELS
 RESERVE PIT VOLUME
 +/- 2,370 CY

NOTES:
 THE NBU 920-12LT WELL WILL BE DRILLED ON THE NBU 45-N2 EXISTING WELL PAD.
 NEW DISTURBANCE WILL BE LIMITED TO THE EXCAVATION OF THE RESERVE PIT.

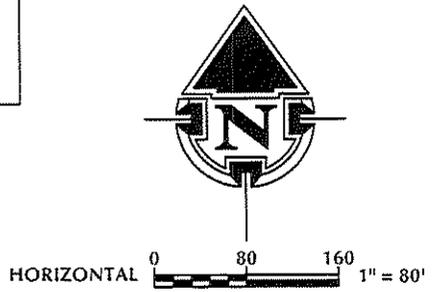
KERR-MCGEE OIL & GAS
ONSHORE L.P.
 1099 18th Street - Denver, Colorado 80202



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

NBU 920-12LT
WELL PAD - LOCATION LAYOUT
 1538' FSL, 792' FWL
 NW1/4SW1/4, SECTION 12, T.9S., R.20E.
 S.L.B.&M., UINTAH COUNTY, UTAH

Scale: 1"=80'	Date: 9/9/08	SHEET NO:
REVISED:	BY DATE	2 2 OF 8



Timberline (435) 789-1365
Engineering & Land Surveying, Inc.
 38 WEST 100 NORTH VERNAL, UTAH 84078



PHOTO VIEW: FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: WESTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: SOUTHERLY

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

NBU 920-12LT
 1538' FSL, 792' FWL
 NW $\frac{1}{4}$ SW $\frac{1}{4}$ OF SECTION 12, T9S, R20E,
 S.L.B.&M. UINTAH COUNTY, UTAH.



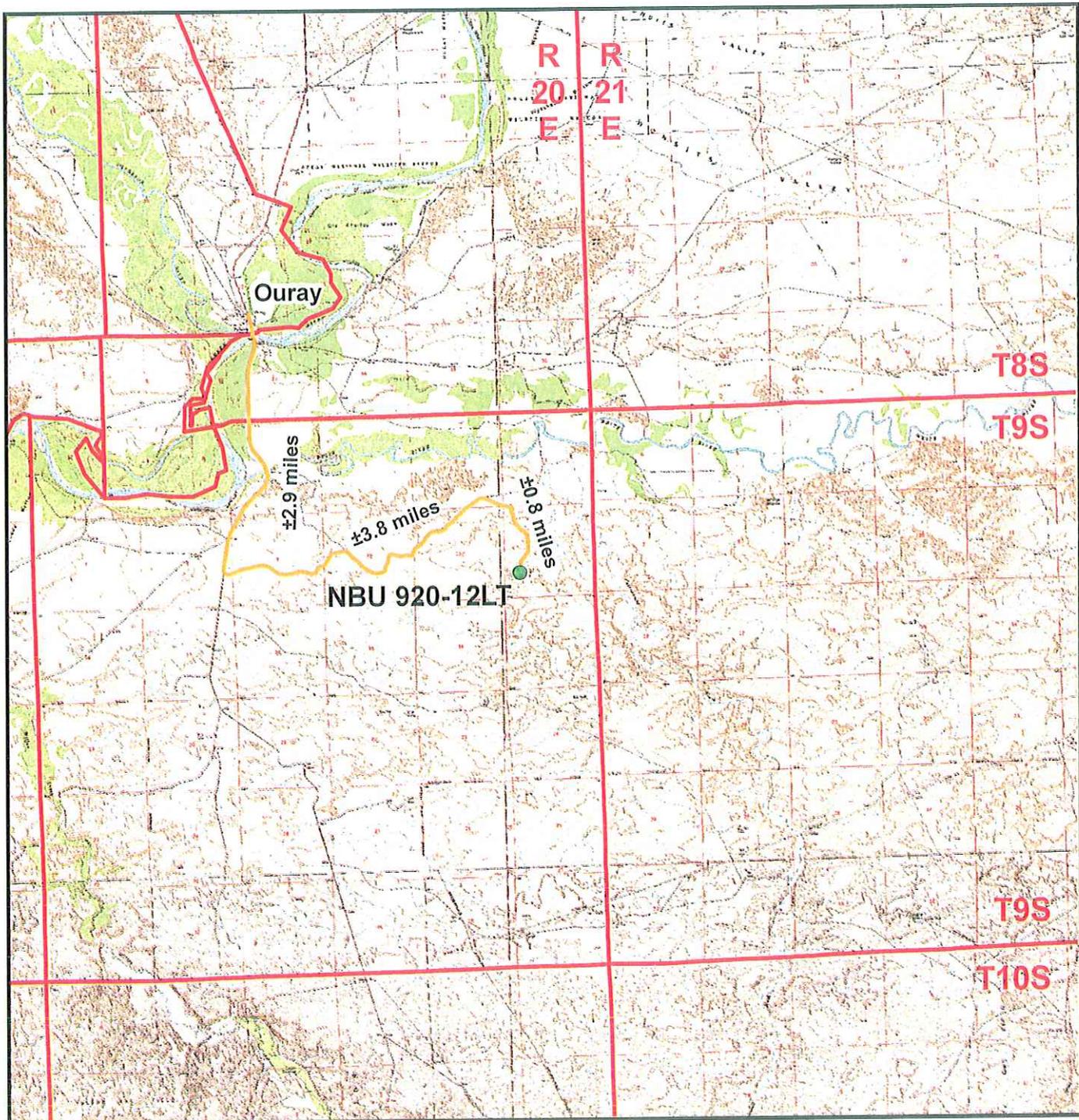
CONSULTING, LLC
 371 Colfeen Avenue
 Sheridan WY 82801
 Phone 307-674-0609
 Fax 307-674-0182

LOCATION PHOTOS		DATE TAKEN: 06-25-08
		DATE DRAWN: 08-03-08
TAKEN BY: M.S.B	DRAWN BY: J.R.S.	REVISED:
Timberline Engineering & Land Surveying, Inc. 38 WEST 100 NORTH VERNAL, UTAH 84078		(435) 789-1363 SHEET 3 OF 8

Kerr-McGee Oil & Gas Onshore, LP
NBU 920-12LT
Section 12, T9S, R20E, 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 2.9 MILES TO THE INTERSECTION OF AN EXISTING ROAD TO THE EAST. EXIT LEFT AND PROCEED IN A NORTHEASTERLY DIRECTION ALONG EXISTING ROAD APPROXIMATELY 3.8 MILES TO THE INTERSECTION OF AN EXISTING ROAD TO THE SOUTH. EXIT RIGHT AND PROCEED IN A SOUTHERLY DIRECTION ALONG EXISTING ROAD APPROXIMATELY 0.8 MILES TO THE NBU 45N EXISTING WELL LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 38.2 MILES IN A SOUTHERLY DIRECTION.



Legend

-  Proposed NBU 920-12LT Well Location
-  Access Route - Proposed

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

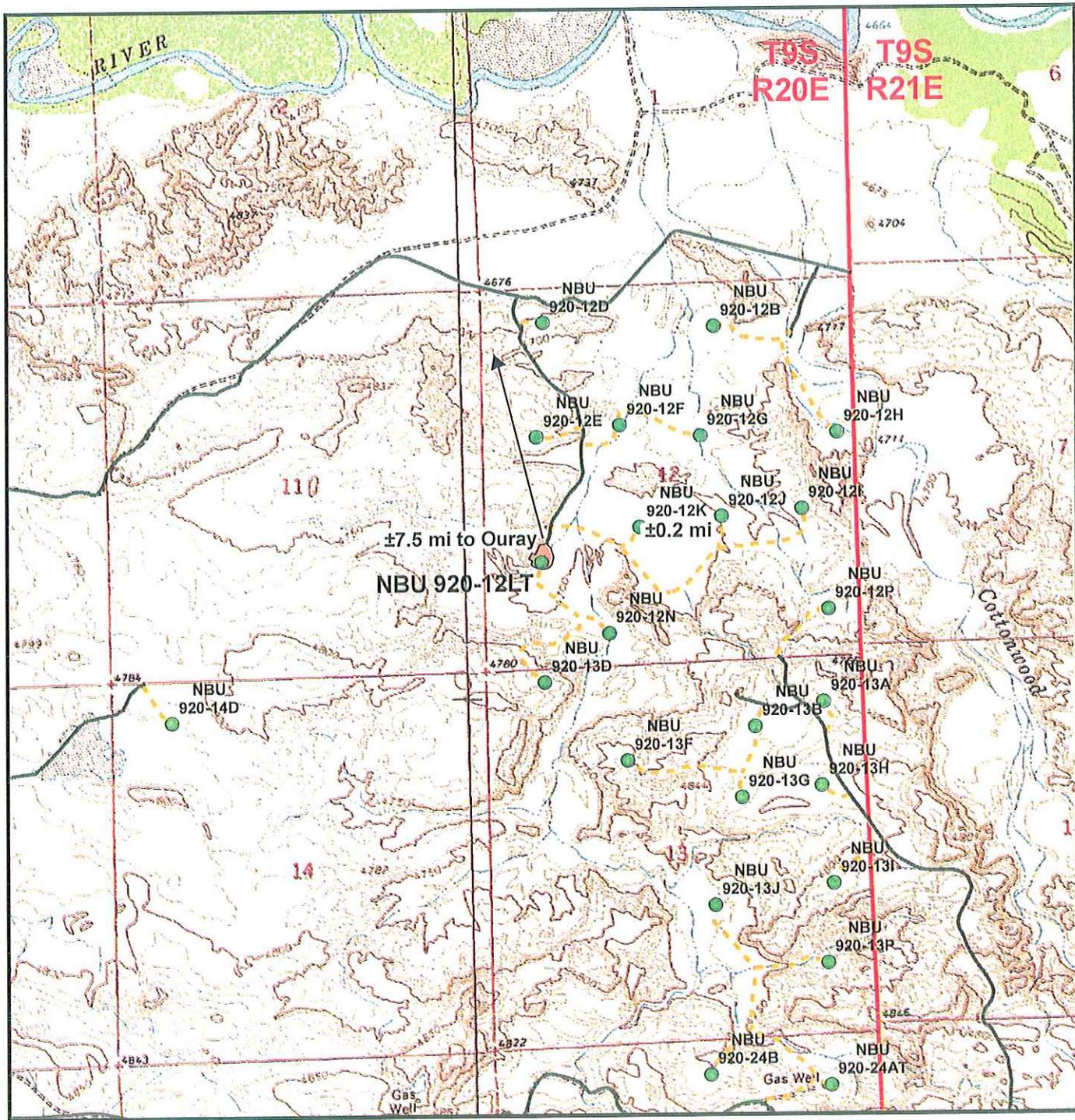
NBU 920-12LT
Topo A
 1538' FSL, 792' FWL
 NW¼ SW¼, Section 12, T9S, R20E
 S.L.B.&M., Uintah County, Utah



CONSULTING, LLC
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 Sheridan, WY 82801
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 Fax (307) 674-0182



Scale: 1:100,000	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 8 Sept 2008	4 4 of 8
Revised:	Date:	



Legend

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

Total Proposed Road Length = ±0 ft

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1099 18th Street, Denver, Colorado 80202

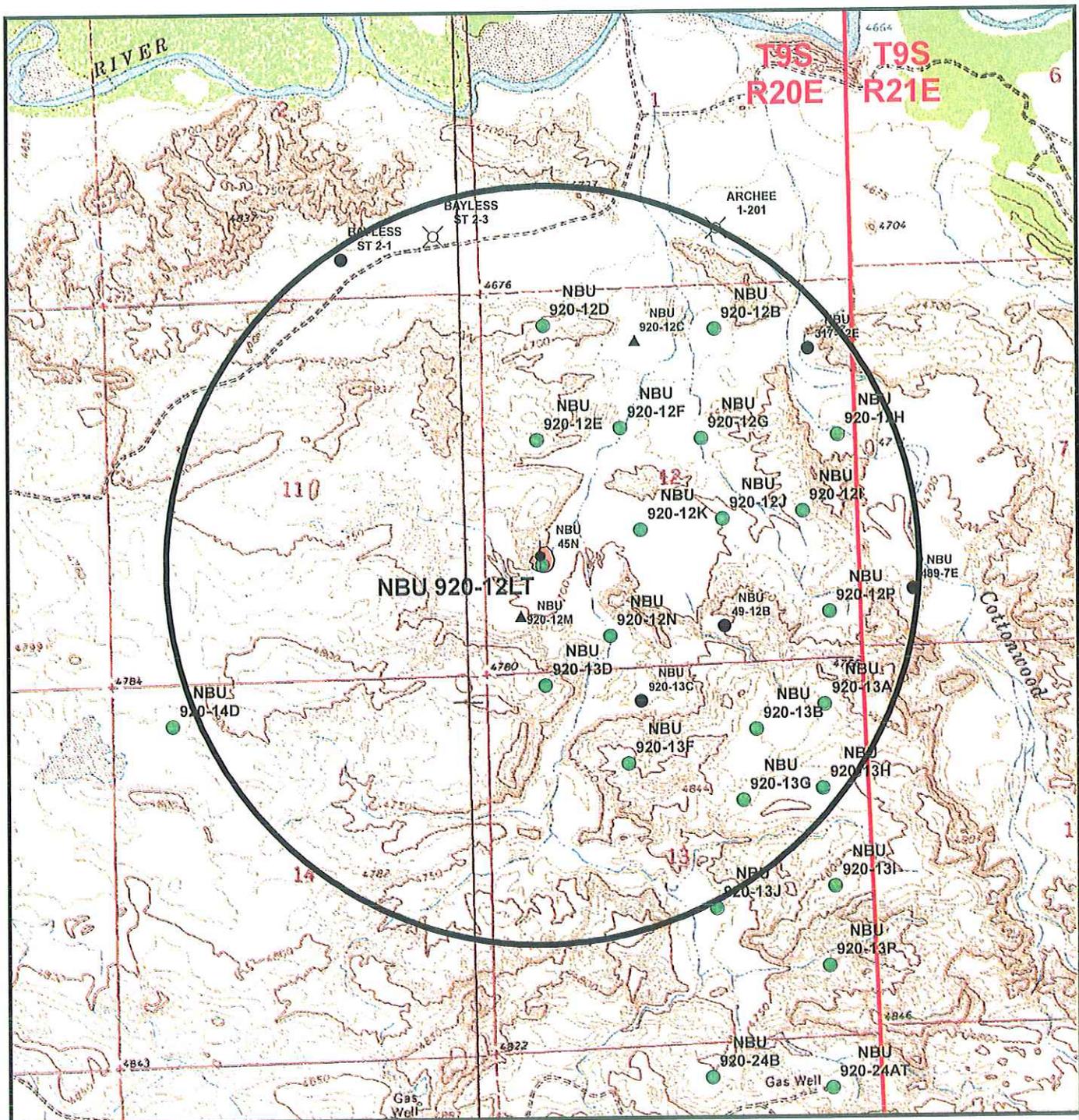
NBU 920-12LT
Topo B
1538' FSL, 792' FWL
NW¼ SW¼, Section 12, T9S, R20E
S.L.B.&M., Uintah County, Utah



CONSULTING, LLC
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Scale: 1" = 2000ft	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 8 Sept 2008	5 5 of 8
Revised:	Date:	



Legend

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

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

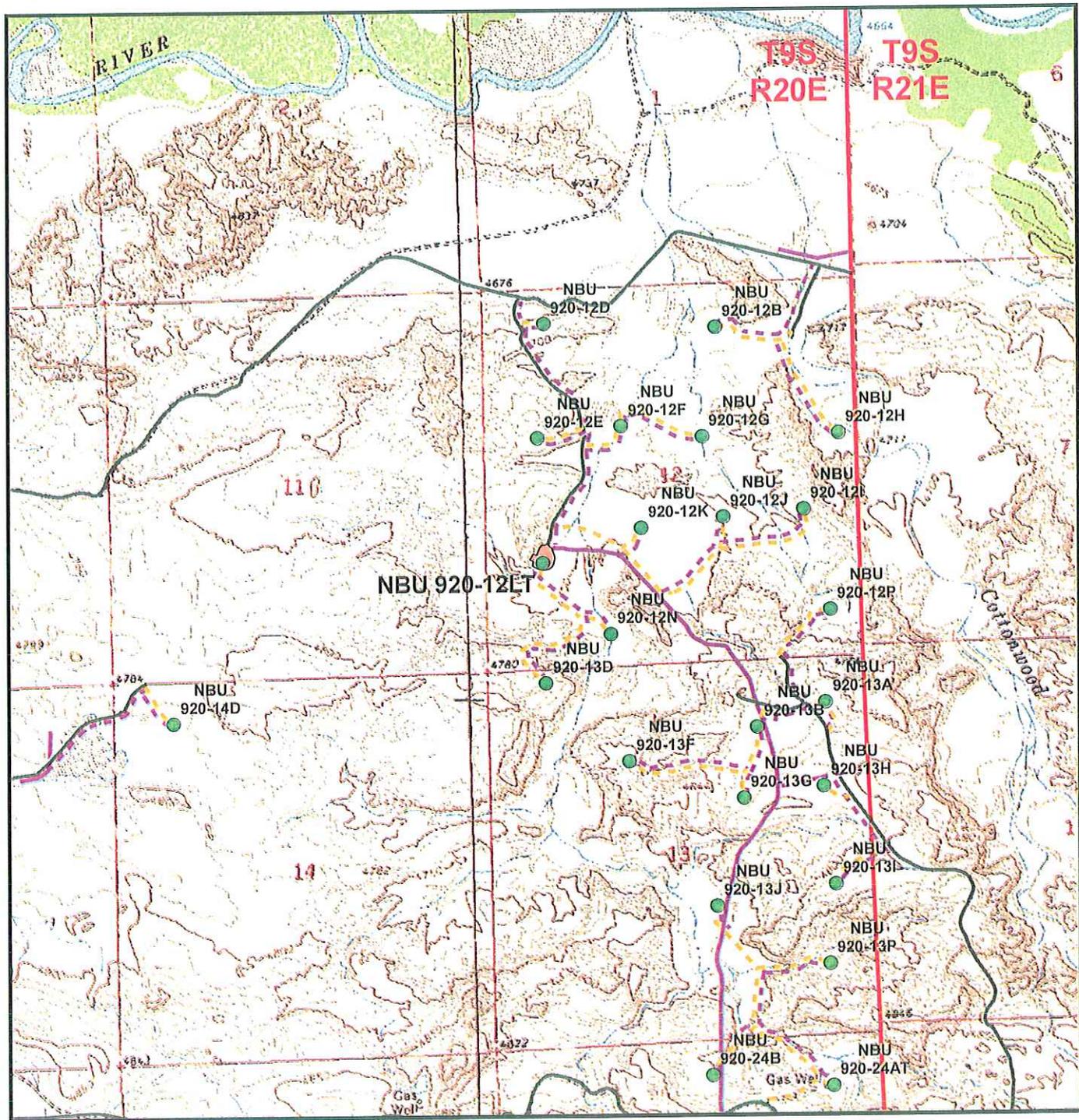
Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

NBU 920-12LT
Topo C
1538' FSL, 792' FWL
NW¼ SW¼, Section 12, T9S, R20E
S.L.B.&M., Uintah County, Utah



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Scale: 1" = 2000ft	NAD83 USP Central	Sheet No:
Drawn: JELo	Date: 8 Sept 2008	6
Revised:	Date:	



Total Proposed Pipeline Length: ±25ft

Legend

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

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

NBU 920-12LT
 Topo D
 1538' FSL, 792' FWL
 NW¼ SW¼, Section 12, T9S, R20E
 S.L.B.&M., Uintah County, Utah



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Scale: 1" = 2000ft	NAD83 USP Central	Sheet No: 7	
Drawn: JELo	Date: 8 Sept 2008	7	7 of 8
Revised:	Date:		

IPC #08-152

Paleontological Reconnaissance Survey Report

**Survey of Kerr McGee's Proposed Well Pads, Access Roads, and
Pipelines for "NBU #920-12LT, 12N, 13D, 13F, 13G, 13J,
24AT & 24B" (Sec. 12, 13 & 24, T 9 S, R 20 E)**

Ouray SE
Topographic Quadrangle
Uintah County, Utah

July 8, 2008

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

INTRODUCTION

At the request of Raleen White of Kerr McGee Onshore LP and authorized by Bruce Pargeets of the Ute Indian Tribe and by Lynn Becker, EMD Land Division Manager of the Ute Indian Tribe's Energy and Minerals Department, a paleontological reconnaissance survey of Kerr McGee's proposed well pads, access roads, and pipelines for "NBU #920-12LT, 12N, 13D, 13F, 13G, 13J, 24AT & 24B" (Sec. 12, 13 & 24, T 9 S, R 20 E) was conducted by Stephen Sandau and Daniel Burk on July 1, 2008. The survey was conducted under the Ute Indian Tribe Business License FY 2008, #A08-1308 and the accompanying Access Permit (effective 3/26/2008 through 9/30/2008). This survey to locate, identify, and evaluate paleontological resources was done to meet requirements of the National Environmental Policy Act of 1969 and other State and Federal laws and regulations that protect paleontological resources.

FEDERAL AND STATE REQUIREMENTS

As mandated by the Federal and State government, paleontologically sensitive geologic formations on State lands that are considered for exchange or may be impacted due to ground disturbance require paleontological evaluation. This requirement complies with:

- 1) The National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 et. Seq., P.L. 91-190);
- 2) The Federal Land Policy and Management Act (FLPMA) of 1976 (90 Stat. 2743, 43 U.S.C. § 1701-1785, et. Seq., P.L. 94-579) and
- 3) The National Historic Preservation Act. 16 U.S.C. § 470-1, P.L. 102-575 in conjunction with 42 U.S.C. § 5320

The new Potential Fossil Yield Classification (PFYC) System (October, 2007) replaces the Condition Classification System from Handbook H-8270-1. Geologic units are classified based on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts, with a higher class number indicating a higher potential.

- **Class 1 – Very Low.** Geologic units (igneous, metamorphic, or Precambrian) not likely to contain recognizable fossil remains.
- **Class 2 – Low.** Sedimentary geologic units not likely to contain vertebrate fossils or scientifically significant non-vertebrate fossils. (Including modern eolian, fluvial, and colluvial deposits etc...)
- **Class 3 – Moderate or Unknown.** Fossiliferous sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence; or sedimentary units of unknown fossil potential.
 - **Class 3a – Moderate Potential.** The potential for a project to be sited on or impact a significant fossil locality is low, but is somewhat higher for common fossils.
 - **Class 3b – Unknown Potential.** Units exhibit geologic features and preservational conditions that suggest significant fossils could be present, but little information about the paleontological resources of the unit or the area is known.

- **Class 4 – High.** Geologic units containing a high occurrence of vertebrate fossils or scientifically significant invertebrate or plant fossils, but may vary in abundance and predictability.
 - **Class 4a** – Outcrop areas with high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
 - **Class 4b** – Areas underlain by geologic units with high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.
- **Class 5 – Very High.** Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils.
 - **Class 5a** - Outcrop areas with very high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
 - **Class 5b** - Areas underlain by geologic units with very high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.

It should be noted that many fossils, though common and unimpressive in and of themselves, can be important paleo-environmental, depositional, and chronostratigraphic indicators.

LOCATION

Kerr McGee's proposed well pads, access roads, and pipelines for "NBU #920-12LT, 12N, 13D, 13F, 13G, 13J, 24AT & 24B" (Sec. 12, 13 & 24, T 9 S, R 20 E) are located on Ute Indian Reservation land some 2.5 miles south of the White River and 5 miles southeast of Ouray, Utah. The project area can be found on the Ouray SE 7.5 minute U. S. Geological Survey Quadrangle Map, Uintah County, Utah.

PREVIOUS WORK

The basins of western North America have long produced some of the richest fossil collections in the world. Early Cenozoic sediments are especially well represented throughout the western interior. Paleontologists started field work in Utah's Uinta Basin as early as 1870 (Betts, 1871; Marsh, 1871, 1875a, 1875b). The Uinta Basin is located in the northeastern corner of Utah and covers approximately 31,000 sq. km (12,000 sq. miles) ranging in elevation from 1,465 to 2,130 m (4,800 to 7,000 ft) (Marsell, 1964; Hamblin et al., 1987). Middle to late Eocene time marked a period of dramatic change in the climate, flora, (Stucky, 1992) and fauna (Black and Dawson, 1966) of North America.

GEOLOGICAL AND PALEONTOLOGICAL OVERVIEW

Early in the geologic history of Utah, some 1,000 to 600 Ma, an east-west trending basin developed creating accommodation for 25,000 feet of siliclastics. Uplift of that filled-basin during the early Cenozoic formed the Uinta Mountains (Rasmussen et al., 1999). With the rise of the Uinta Mountains the asymmetrical synclinal Uinta Basin is thought to have formed through the effects of down warping in connection with the uplift. Throughout the Paleozoic and Mesozoic deposition fluctuated between marine and non-marine environments laying down a thick succession of sediments in the area now occupied by the Uinta Basin. Portions of these beds crop out on the margins of the basin due to tectonic events during the late Mesozoic.

Early Tertiary Uinta Basin sediments were deposited in alternating lacustrine and fluvial environments. Large shallow lakes periodically covered most of the basin and surrounding areas during early to mid Eocene time (Abbott, 1957). These lacustrine sediments show up in the western part of the basin, dipping 2-3 degrees to the northeast and are lost in the subsurface on the east side. The increase of cross-bedded, coarse-grained sandstone and conglomerates preserved in paleo-channels indicates a transition to a fluvial environment toward the end of the epoch.

Four Eocene formations are recognized in the Uinta Basin: the Wasatch, Green River, Uinta and Duchesne River, respectively (Wood, 1941). The Uinta Formation is subdivided into two lithostratigraphic units namely: the Wagonhound Member (Wood, 1934), formerly known as Uinta A and B (Osborn, 1895, 1929) and the Myton Member previously regarded as the Uinta C.

Within the Uinta Basin in northeast Utah, the Uinta Formation in the western part of the basin is composed primarily of lacustrine sediments inter-fingering with over-bank deposits of silt, and mudstone and westward flowing channel sands and fluvial clays, muds, and sands in the east (Bryant et al, 1990; Ryder et al, 1976). Stratigraphic work done by early geologists and paleontologists within the Uinta Formation focused on the definition of rock units and attempted to define a distinction between early and late Uintan faunas (Riggs, 1912; Peterson and Kay, 1931; Kay 1934). More recent work focused on magnetostratigraphy, radioscopic chronology, and continental biostratigraphy (Flynn, 1986; Prothero, 1996). Well-known for its fossiliferous nature and distinctive mammalian fauna of mid-Eocene Age, the Uinta Formation is the type formation for the Uintan Land Mammal Age (Wood et al, 1941).

The Duchesne River Formation of the Uinta Basin in northeastern Utah is composed of a succession of fluvial and flood plain deposits composed of mud, silt, and sandstone. The source area for these late Eocene deposits is from the Uinta Mountains indicated by paleocurrent data (Anderson and Picard, 1972). In Peterson's (1931c) paper, the name "Duchesne Formation" was applied to the formation and it was later changed to the "Duchesne River Formation" by Kay (1934). The formation is divided up into four members: the Brennan Basin, Dry Gulch Creek, LaPoint, and Starr Flat (Anderson and Picard, 1972). Debates concerning the Duchesne River Formation, as to whether its age was late Eocene or early Oligocene, have surfaced throughout the literature of the last century (Wood et al., 1941; Scott 1945). Recent paleo-magnetostratigraphic work (Prothero, 1996) shows that the Duchesne River Formation is late Eocene in time.

FIELD METHODS

In order to determine if the proposed project area contained any paleontological resources, a reconnaissance survey was performed. An on-site observation of the proposed areas undergoing surficial disturbance is necessary because judgments made from topographic maps alone are often unreliable. Areas of low relief have potential to be erosional surfaces with the possibility of bearing fossil materials rather than surfaces covered by unconsolidated sediment or soils.

When found within the proposed construction areas, outcrops and erosional surfaces were checked to determine if fossils were present and to assess needs. Careful effort is made during surveys to identify and evaluate significant fossil materials or fossil horizons when they are found. Microvertebrates, although rare, are occasionally found in anthills or upon erosional surfaces and are of particular importance.

PROJECT AREA

The project area is situated in the Wagonhound Member (Uinta A & B) of the Uinta Formation. The following list provides a description of the individual wells and their associated pipelines and access roads.

NBU #920-12LT

The proposed twin is located on the pad of existing well "NBU #920-12L" in the NW/SW quarter-quarter section of Sec. 12, T 9 S, R 20 E (Figure 1). The proposed twin is located among hills with outcrops of inter-bedded sand and siltstones. The sandstones are tan and maroon, fine to medium-grained, and 3 to 4 meters thick. The siltstones are green and purple and 2 to 3 meters thick. No fossils were found.

NBU #920-12N

The proposed pipeline and access road begin at existing well "NBU #920-12L" in the NW/SW quarter-quarter section of Sec. 12, T 9 S, R 20 E, then travel southeast for approximately 0.2 miles where they enter the proposed well pad in the SE/SW quarter-quarter section of Sec. 12, T 9 S, R 20 E (Figure 1). The proposed pipeline, access road, and well pad are located on muddy colluvium among hills with outcrops of inter-bedded sand and siltstones. The sandstones are tan and maroon, fine to medium-grained, and 3 to 4 meters thick. The siltstones are green and purple and 2 to 3 meters thick. Scattered, unidentifiable bone fragments and turtle shell fragments were found weathering out of the outcrops directly to the east of the staked area, but no other fossils were found.

NBU #920-13D

The proposed pipeline and access road begin near the proposed well "NBU #920-12N" in the SW/ SW quarter-quarter section of Sec. 12, T 9 S, R 20 E and travel southwest for approximately 0.3 miles where they enter the proposed well pad in the NW/NW quarter-quarter section of Sec. 13, T 9 S, R 20 E (Figure 1). The proposed pipeline, access road, and well pad are located on hills with outcrops of inter-bedded sand and siltstones. The sandstones are tan and maroon, fine

to medium-grained, and 1 to 2 meters thick. The siltstones are green and purple and 3 to 4 meters thick. Scattered, isolated turtle shell fragments were found on the well pad. Very dense concentrations of turtle shell and limb fragments (*Echmatemys sp.?*) were found just to the north of the proposed access road weathering out of green siltstone.

NBU #920-13F

The proposed access road begins at an existing road in the SE/NE quarter-quarter section of Sec. 13, T 9 S, R 20 E and travels west approximately 0.1 miles. The proposed pipeline begins here and travels with the access road west approximately 0.4 miles where they enter the well pad in the NE/NW quarter-quarter section of Sec. 13, T 9 S, R 20 E (Figure 1). The proposed pipeline, access road, and well pad are located among rolling hills with outcrops of gray-green and tan sandstone. Dense concentrations of weathered turtle shell fragments were found all along the staked access road, especially where the road crosses sandstone outcrops.

NBU #920-13G

The proposed pipeline and access road begin at the proposed access road for "NBU #920-13F" and travel south >0.1 miles where they enter the proposed well pad in the SW/NE quarter-quarter section of Sec. 13, T 9 S, R 20 E (Figure 1). The proposed pipeline, access road, and well pad are located on rolling hills of sandy colluvium derived from underlying sandstone. A few small, tan, sandstone outcrops are located within the staked area. Scattered turtle shell fragments were found on the proposed well pad.

NBU #920-13J

The proposed access road begins at an existing road in the NW/NE quarter-quarter section of Sec. 24, T 9 S, R 20 E and travels in a generally northward direction for approximately 0.8 miles where it meets the proposed pipeline tie-in. Together the proposed access road and pipeline travel north for >0.1 miles where they enter the proposed well pad in the NW/SE quarter-quarter section of Sec. 13, T 9 S, R 20 E (Figure 1). The proposed pipeline, access road, and well pad are located among hills with outcrops of inter-bedded sand and siltstones. The sandstones are tan and maroon, fine to medium-grained, and 3 to 4 meters thick. The siltstones are green and purple and 2 to 3 meters thick. The proposed access road is located on an abandoned access road for the first 0.5 miles. Scattered turtle shell fragments were found all along the staked area with greater concentrations on the actual outcrops.

NBU #920-24AT

The proposed access road begins at the proposed road for "NBU #920-13J" and travels east >0.1 miles to the well pad in the NE/NE quarter-quarter section of Sec. 24, T 9 S, R 20 E (Figure 1). The proposed pipeline begins near the proposed well pad "NBU #920-24B" in the NW/NE quarter-quarter section of Sec. 24, T 9 S, R 20 E and travels in a generally eastern direction approximately 0.4 miles where it enters the well pad in the NE/NE quarter-quarter section of Sec. 24, T 9 S, R 20 E. The proposed pipeline, access road, and well pad are located among hills with outcrops of inter-bedded sand and siltstones. The sandstones are tan and maroon, fine to medium-grained, and 3 to 4 meters thick. The siltstones are green and purple and 2 to 3 meters thick. Scattered turtle shell fragments were found on the well pad.

NBU #920-24B

The proposed access road begins along the proposed access road for "NBU #920-13J" in the SW/SE quarter-quarter section of Sec. 13, T 9 S, R 20 E and travels SW approximately 0.2 miles to where it is joined by the proposed pipeline (Figure 1). The proposed access road and pipeline then travel southwest together for >0.1 miles where they enter the proposed well pad in the NW/NE quarter-quarter section of Sec. 24, T 9 S, R 20 E. The proposed pipeline, access road, and well pad are located among hills with outcrops of inter-bedded sand and siltstones. The sandstones are tan and maroon, fine to medium-grained, and 3 to 4 meters thick. The siltstones are green and purple and 2 to 3 meters thick. The proposed access road crosses a significant drainage near its start. Scattered turtle shell fragments were found over a wide area on the well pad.

SURVEY RESULTS

PROJECT	GEOLOGY	PALEONTOLOGY
"NBU #920-12LT" (Sec. 12, T 9 S, R 20 E)	The proposed twin is located among hills with outcrops of inter-bedded sand and siltstones. The sandstones are tan and maroon, fine to medium-grained, and 3 to 4 meters thick. The siltstones are green and purple and 2 to 3 meters thick.	No fossils were found. Class 3a
"NBU #920-12N" (Sec. 12, T 9 S, R 20 E)	The proposed pipeline, access road, and well pad are located on muddy colluvium among hills with outcrops of inter-bedded sand and siltstones. The sandstones are tan and maroon, fine to medium-grained, and 3 to 4 meters thick. The siltstones are green and purple and 2 to 3 meters thick.	Scattered, unidentifiable bone fragments and turtle shell fragments were found weathering out of the outcrops directly to the east of the staked area, but no other fossils were found. Class 3a
"NBU #920-13D" (Sec. 12 & 13, T 9 S, R 20 E)	The proposed pipeline, access road, and well pad are located on hills with outcrops of inter-bedded sand and siltstones. The sandstones are tan and maroon, fine to medium grained, and 1 to 2 meters thick. The siltstones are green and purple and 3-4 meters thick.	Scattered and isolated turtle shell fragments were found on the well pad. Very dense concentrations of turtle shell and limb fragments (<i>Echmatemys sp.?</i>) were found just to the north of the proposed access road weathering out of green siltstone. Class 4a
"NBU #920-13F" (Sec. 13, T 9 S, R 20 E)	The proposed pipeline, access road, and well pad are located among rolling hills with outcrops of gray-green and tan sandstone.	Dense concentrations of weathered turtle shell fragments were found all along the staked access road especially where the road crosses sandstone outcrops. Class 4a

<p>“NBU #920-13G” (Sec. 13, T 9 S, R 20 E)</p>	<p>The proposed pipeline, access road, and well pad are located on rolling hills of sandy colluvium derived from underlying sandstone. A few small tan sandstone outcrops are located within the staked area.</p>	<p>Scattered turtle shell fragments were found on the proposed well pad. Class 4b</p>
<p>“NBU #920-13J” (Sec. 13, T 9 S, R 20 E)</p>	<p>The proposed pipeline, access road, and well pad are located among hills with outcrops of inter-bedded sand and siltstones. The sandstones are tan and maroon, fine to medium grained, and 3 to 4 meters thick. The siltstones are green and purple and 2 to 3 meters thick. The proposed access road is located on an abandoned access road for the first 0.5 miles.</p>	<p>Scattered turtle shell fragments were found all along the staked area with greater concentrations on the actual outcrops. Class 4a</p>
<p>“NBU #920-24AT” (Sec. 24, T 9 S, R 20 E)</p>	<p>The proposed pipeline, access road, and well pad are located among hills with outcrops of inter-bedded sand and siltstones. The sandstones are tan and maroon, fine to medium-grained, and 3 to 4 meters thick. The siltstones are green and purple and 2 to 3 meters thick.</p>	<p>Scattered turtle shell fragments were found on the well pad. Class 3a</p>
<p>“NBU #920-24B” (Sec. 24, T 9 S, R 20 E)</p>	<p>The proposed pipeline, access road, and well pad are located among hills with outcrops of inter-bedded sand and siltstones. The sandstones are tan and maroon, fine to medium-grained, and 3 to 4 meters thick. The siltstones are green and purple and 2 to 3 meters thick. The proposed access road crosses a significant drainage near its start.</p>	<p>Scattered turtle shell fragments were found over a wide area on the well pad. Class 3a</p>

RECOMMENDATIONS

A reconnaissance survey was conducted for Kerr McGee's proposed well pads, access roads, and pipelines for "NBU #920-12LT, 12N, 13D, 13F, 13G, 13J, 24AT & 24B" (Sec. 12, 13 & 24, T 9 S, R 20 E). The proposed well pads and the associated access roads and pipelines covered in this report showed some signs of vertebrate fossils, therefore, we advise the following recommendations.

We recommend that due to the number of vertebrate fossils found, that the proposed access roads, pipelines and well pads for "NBU #920-13D" and "NBU #920-13F" be monitored during the construction process.

We recommend that no other paleontological restrictions should be placed on the development of the remainder of the projects included in this report.

Nevertheless, if any vertebrate fossil(s) are found during construction within the project area, recommendations are that a paleontologist is immediately notified in order to collect fossil materials in danger of being destroyed. Any vertebrate fossils found should be carefully moved outside of the construction areas to be check by a permitted paleontologist.

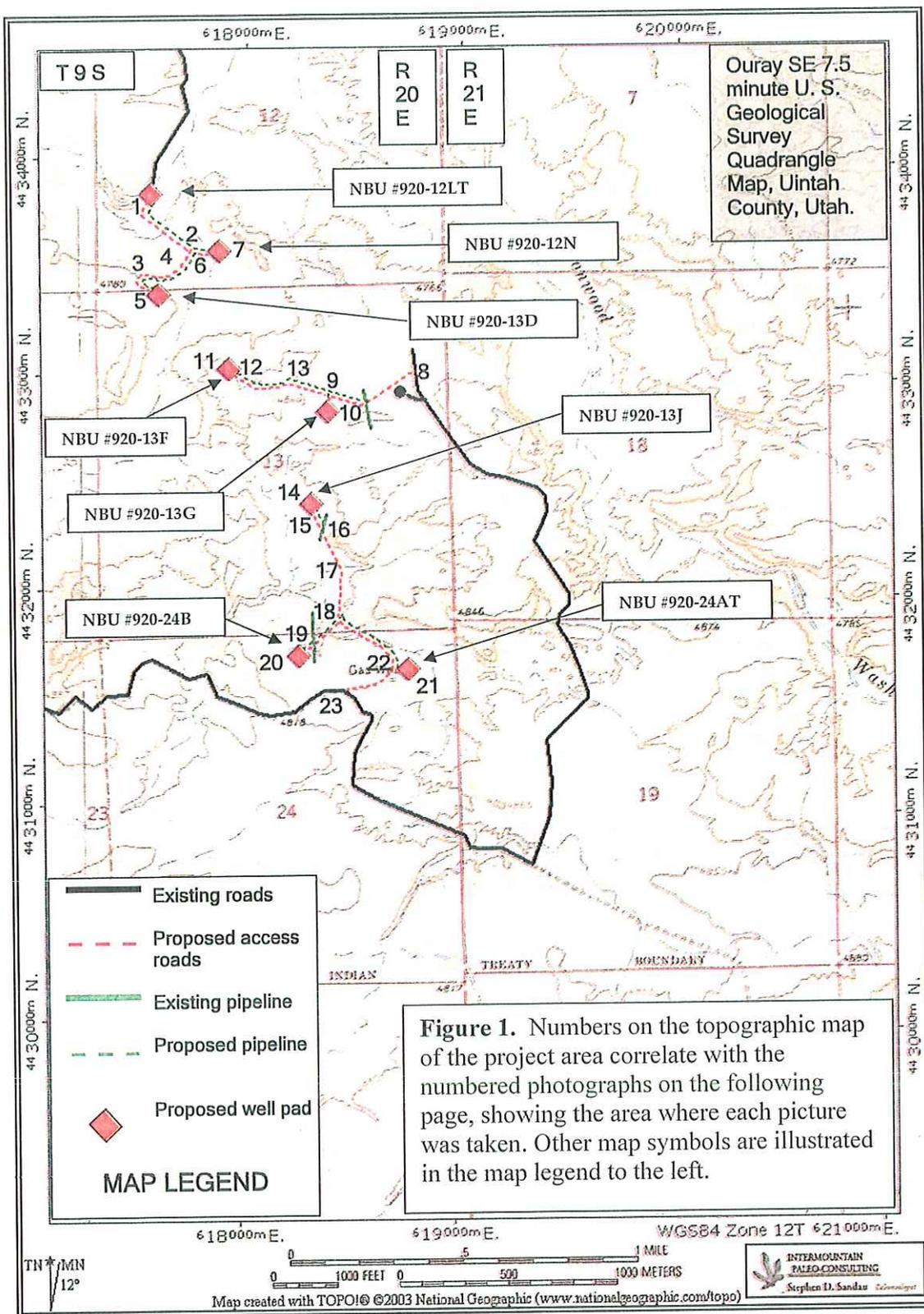


Figure 1. *continued...*

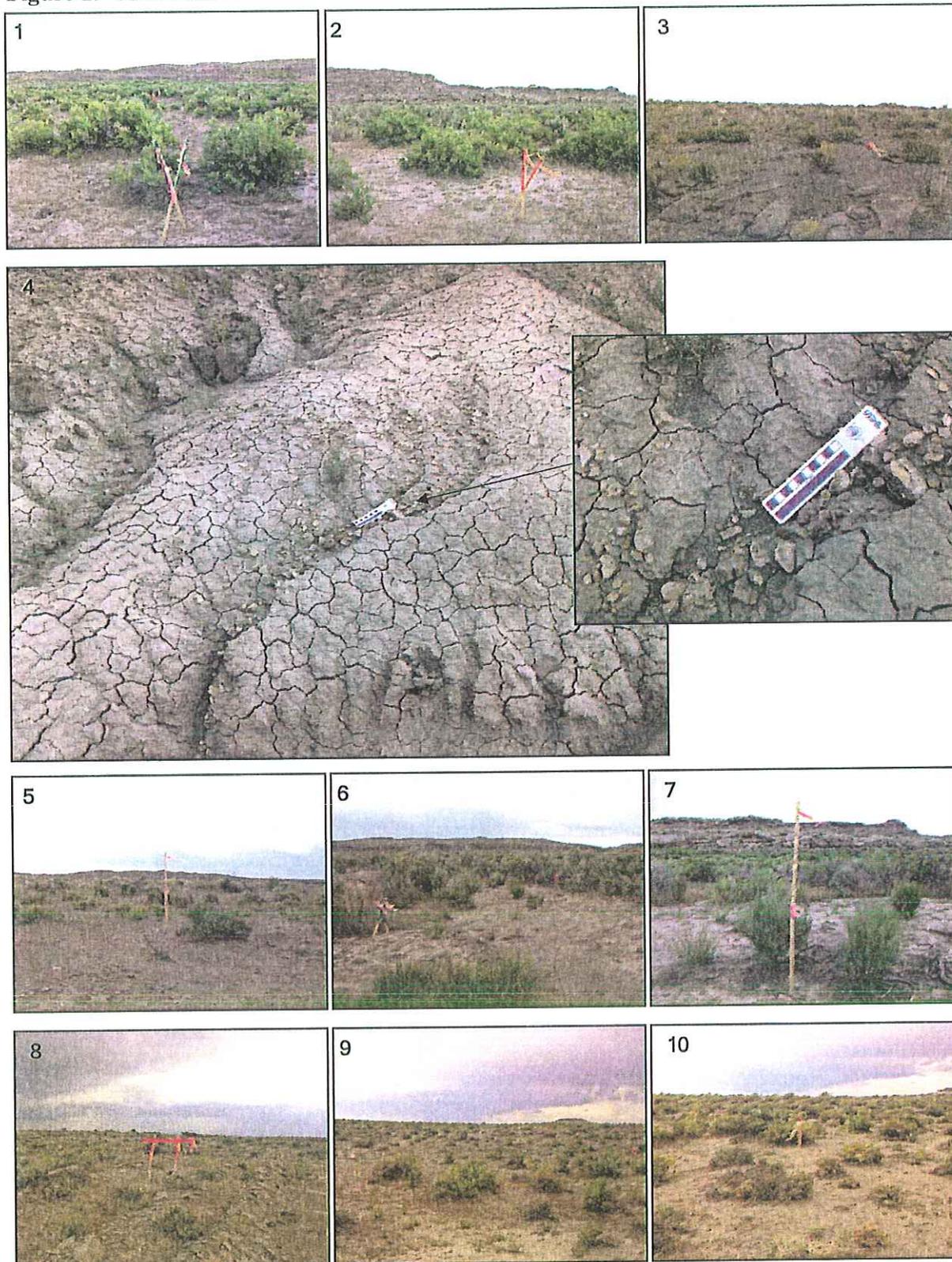


Figure 1. *continued...*

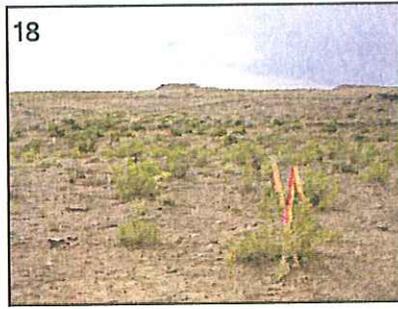
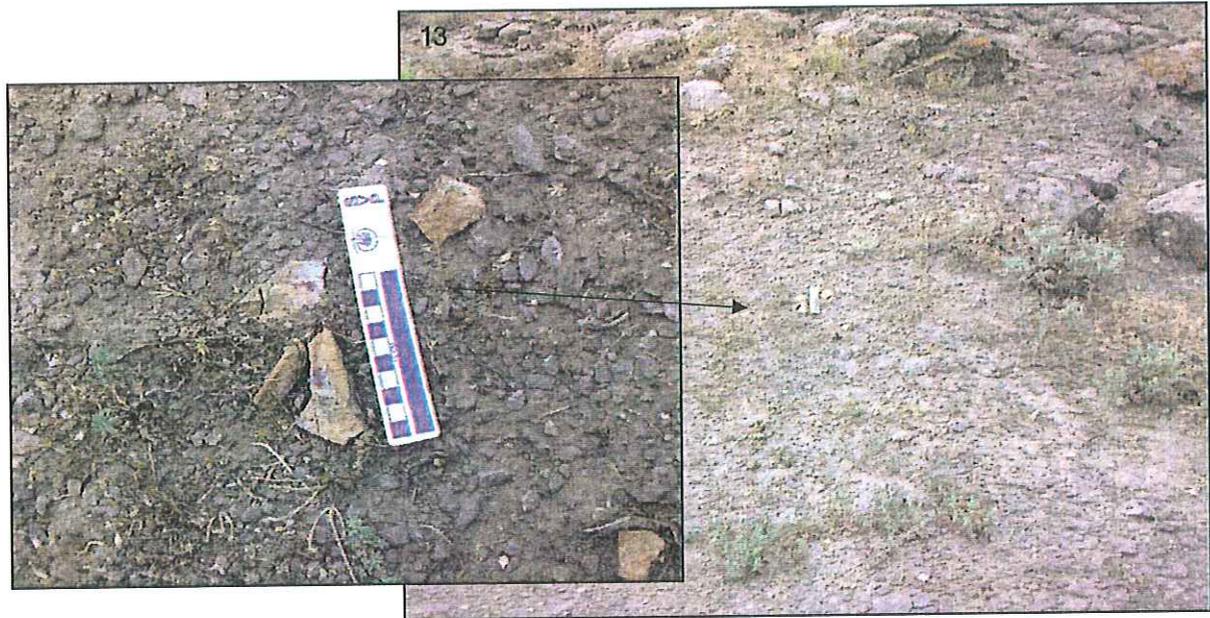
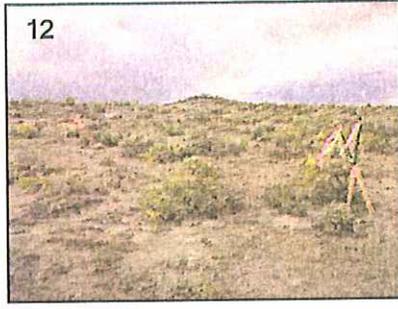
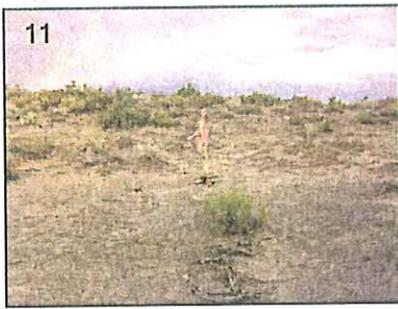
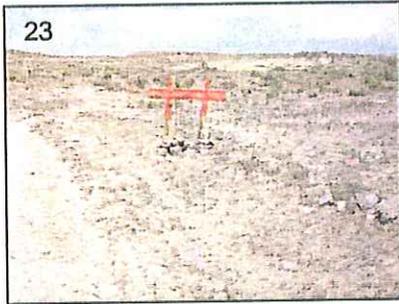
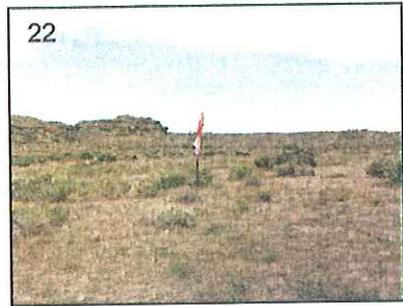
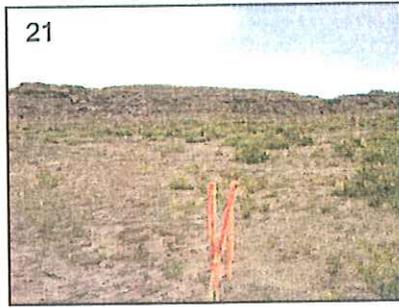
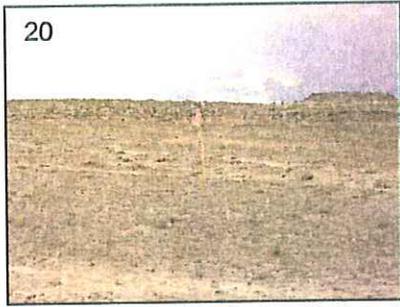


Figure 1. *continued...*



REFERENCES CITED

- Abbott, W., 1957, Tertiary of the Uinta Basin: Intermountain Assoc. Petroleum Geologists Guidebook, Eighth Ann. Field Conf., p. 102-109.
- Anderson, D. W., and Picard, M. D., 1972, Stratigraphy of the Duchesne River Formation (Eocene-Oligocene?), northern Uinta Basin, northeastern Utah: Utah Geological and Mineralogical Survey Bulletin 97, p. 1-28.
- Betts, C. W., 1871, The Yale College expedition of 1870: Harper's New Monthly Magazine, v. 43, p. 663-671.
- Black, C. C. and Dawson, M. R., 1966, A Review of Late Eocene Mammalian Faunas from North America: American Journal of Science, v. 264, p. 321-349.
- Bryant, B., Naeser C. W., Marvin R. F., Mahner H. H., 1989, Cretaceous and Paleogene Sedimentary Rocks and Isotopic Ages of Paleogene Tuffs, Uinta basin, Utah. And Ages of Late Paleogene and Neogene Tuffs and the Beginning of Rapid Regional Extension, Eastern Boundary of the Basin and Range Province near Salt lake City, Utah: In: Evolution of Sedimentary basins-Uinta and Piceance Basins. U. S. Geological Survey Bulletin 1787-J, K.
- Flynn, J. J., 1986, Correlation and geochronology of middle Eocene strata from the western United States: Palaeogeographic, Palaeoclimatology, Palaeoecology, v. 55, p. 335-406.
- Hamblin, A. H. and Miller, W. E., 1987, Paleogeography and Paleoecology of the Myton Pocket, Uinta Basin, Utah (Uinta Formation-Upper Eocene): Brigham Young University Geology Studies, v. 34, p 33-60.
- Kay, J. L., 1934, Tertiary formations of the Uinta Basin, Utah: Annals of Carnegie Museum, v. 23, p. 357-371.
- Marsell, R. E., 1964, Geomorphology of the Uinta Basin-A Brief Sketch: Thirteenth annual Field Conference. Association of Petroleum Geologists, p. 34-46.
- Marsh, O. C., 1871, on the geology of the Eastern Uintah Mountains: American Journal of Science and Arts, v. 1, p. 1-8.
- _____ 1875a, Ancient lake basins of the Rocky Mountain region: American Journal of Science and Arts, v. 9, p. 49-52.
- _____ 1875b, Notice of new Tertiary mammals, IV: American Journal of Science and Arts, Third Series, v. 9, p. 239-250.

- Osborn, H. F., 1895, Fossil mammals of the Uinta beds, expedition of 1894: American Museum of Natural History Bulletin, v. 7, p. 71-106.
- 1929, The Titanotheres of Ancient Wyoming, Dakota and Nebraska: Monograph of the U. S. Geological Survey, v. 55, p. 1-953.
- Peterson, O. A., 1931c, new species from the Oligocene of the Uinta: Annals of Carnegie Museum, v. 21, p. 61-78.
- Peterson, O. A. and Kay, J. L., 1931, The Upper Uinta Formation of Northeastern Utah: Annals of the Carnegie Museum, v. 20, p. 293-306.
- Prothero, D. R., 1996, Magnetic Stratigraphy and biostratigraphy of the middle Eocene Uinta Formation, Uinta Basin, Utah, *in* Prothero, D. R., and Emry, R. J. editors, The Terrestrial Eocene-Oligocene Transition in North America, p. 3-24.
- Rasmussen, D. T., Conroy, G. C., Friscia, A. R., Townsend, K. E. and Kinkel, M. D., 1999, Mammals of the middle Eocene Uinta Formation: Vertebrate Paleontology of Utah, p. 401-420.
- Riggs, E. S., 1912. New or Little Known Titanotheres from the Lower Uintah Formations: Field Museum of Natural History Geological Series, v. 159, p. 17-41.
- Ryder, R. T., Fouch, T. D., Elison, J. H., 1976, Early Tertiary sedimentation in the western Uinta Basin, Utah: Geological Society of America Bulletin v. 87, p. 496-512.
- Scott, W. B., 1945, The Mammalia of the Duchesne River Oligocene: Transactions of the American Philosophical Society, v. 34, p. 209-253.
- Stucky, R. K., 1992, Mammalian faunas in North America of Bridgerian to early Arikareean "age" (Eocene and Oligocene), *in* Prothero, D. R., and Berggren, W. A., eds., Eocene-Oligocene climatic and biotic evolution: Princeton University Press, p. 464-493.
- Wood, H. E., 1934, Revision of the Hyrachyidae: American Museum of Natural History Bulletin, v. 67, p. 181-295.
- and others, 1941, Nomenclature and Correlation of the North America Continental Tertiary: Geol. Soc. Amer. Bull., v. 52, no. 1, Jan. 1, p. 1-48. 52, no. 1, Jan. 1, p. 1-48.

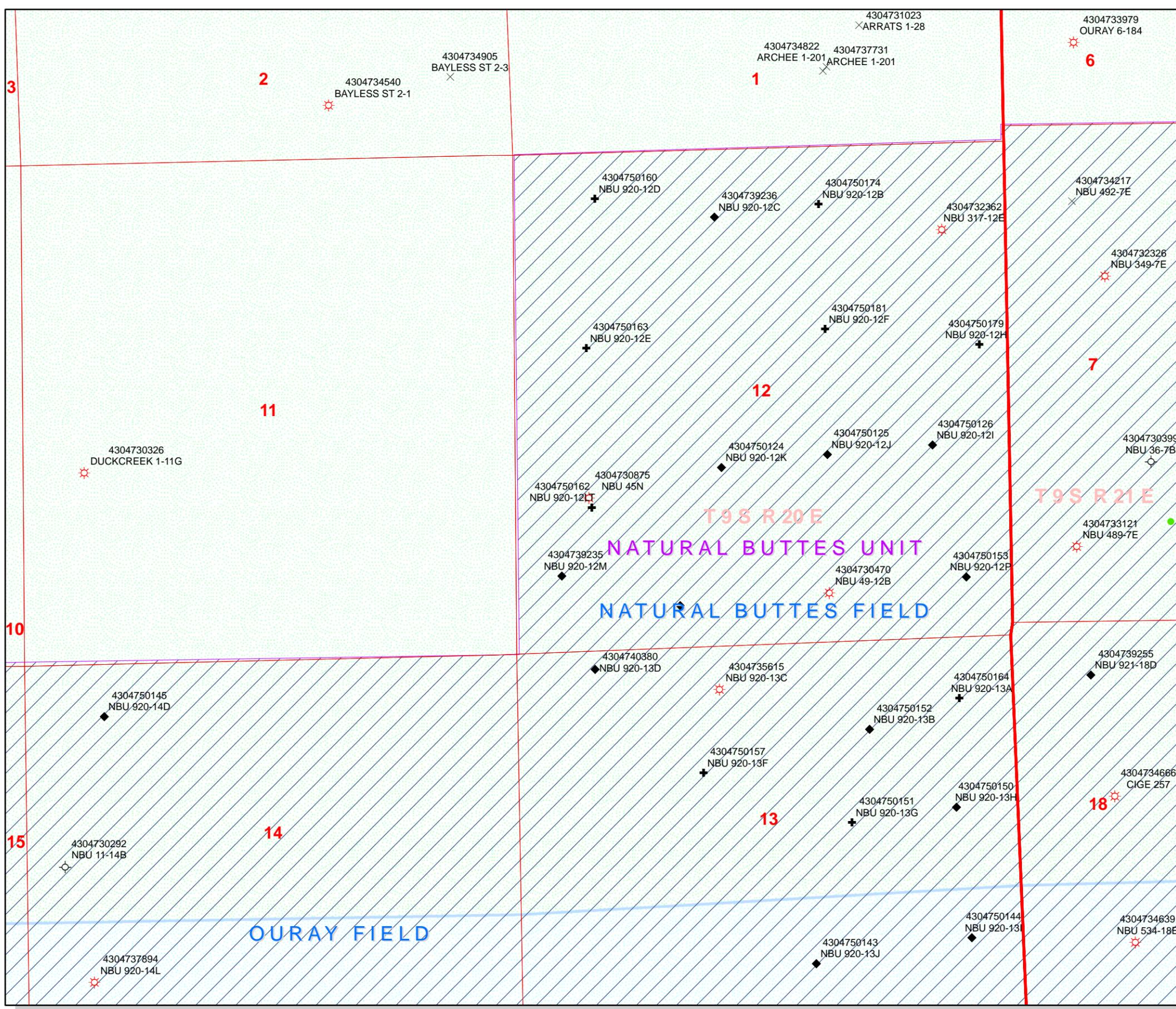
API Number: 4304750162
Well Name: NBU 920-12LT
Township 09.0 S Range 20.0 E Section 12
Meridian: SLBM
 Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
 Map Produced by Diana Mason

Units	Wells Query Events
STATUS	✕ <all other values>
ACTIVE	GIS_STAT_TYPE
EXPLORATORY	<Null>
GAS STORAGE	◆ APD
NF PP OIL	⊙ DRL
NF SECONDARY	⊙ GI
PI OIL	⊙ GS
PP GAS	⊙ LA
PP GEOTHERML	⊕ NEW
PP OIL	⊕ OPS
SECONDARY	⊙ PA
TERMINATED	⊙ PGW
Fields	⊙ POW
STATUS	⊙ RET
ACTIVE	⊙ SGW
COMBINED	⊙ SOW
Sections	⊙ TA
Township	⊙ TW
	⊙ WD
	⊙ WI
	⊙ WS
	⊙ Bottom Hole Location



1:13,066



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 14, 2008

Memorandum

To: Assistant District Manager Minerals, Vernal District
From: Michael Coulthard, Petroleum Engineer
Subject: 2008 Plan of Development Natural Buttes Unit
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2008 within the Natural Buttes Unit, Uintah County, Utah.

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESAVERDE)

43-047-50179 NBU 920-12H Sec 12 T09S R20E 2170 FNL 0279 FEL
43-047-50180 NBU 920-12G Sec 12 T09S R20E 2151 FNL 2191 FEL
43-047-50181 NBU 920-12F Sec 12 T09S R20E 1957 FNL 1922 FWL
43-047-50185 NBU 920-29A Sec 29 T09S R20E 0616 FNL 0927 FEL
43-047-50174 NBU 920-12B Sec 12 T09S R20E 0627 FNL 1964 FEL
43-047-50186 NBU 920-29D Sec 29 T09S R20E 0552 FNL 0859 FWL

(Proposed PZ MESAVERDE)

43-047-50162 NBU 920-12LT Sec 12 T09S R20E 1538 FSL 0792 FWL
43-047-50161 NBU 920-24AT Sec 24 T09S R20E 0709 FNL 0704 FEL

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:10-14-08

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 10/1/2008

API NO. ASSIGNED: 43047501620000

WELL NAME: NBU 920-12LT

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

PHONE NUMBER: 720 929-6226

CONTACT: Kevin McIntyre

PROPOSED LOCATION: NWSW 12 090S 200E

Permit Tech Review:

SURFACE: 1538 FSL 0792 FWL

Engineering Review:

BOTTOM: 1538 FSL 0792 FWL

Geology Review:

COUNTY: UINTAH

LATITUDE: 40.04688

LONGITUDE: -109.62117

UTM SURF EASTINGS: 617621.00

NORTHINGS: 4433661.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-0144868B

PROPOSED FORMATION: WSMVD

SURFACE OWNER: 2 - Indian

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

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

LOCATION AND SITING:

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

Comments: Presite Completed

Stipulations: 4 - Federal Approval - dmason
17 - Oil Shale 190-5(b) - dmason



JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: NBU 920-12LT
API Well Number: 43047501620000
Lease Number: UTU-0144868B
Surface Owner: INDIAN
Approval Date: 10/21/2008

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 173-14.

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

General:

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

Conditions of Approval:

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

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

Notification Requirements:

Notify the Division with 24 hours of spudding the well.

- Contact Carol Daniels at (801) 538-5284.

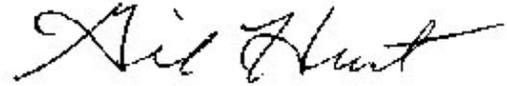
Notify the Division prior to commencing operations to plug and abandon the well.

- Contact Dustin Doucet at (801) 538-5281 office (801) 733-0983 home

Reporting Requirements:

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

Approved By:

A handwritten signature in black ink, appearing to read "Gil Hunt". The signature is written in a cursive style with a long, sweeping tail on the "t".

Gil Hunt
Associate Director, Oil & Gas

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868B
---	---

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: Ute 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
--	---

1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 920-12LT
------------------------------------	---

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047501620000
---	---

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: 1538 FSL 0792 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 12 Township: 09.0S Range: 20.0E Meridian: S	COUNTY: UINTAH STATE: UTAH
---	---

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 10/10/2009 <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 type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER:

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

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

Approved by the
 Utah Division of
 Oil, Gas and Mining

Date: October 08, 2009
 By: 

NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	TITLE Regulatory Analyst
SIGNATURE N/A		DATE 10/6/2009



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047501620000

API: 43047501620000

Well Name: NBU 920-12LT

Location: 1538 FSL 0792 FWL QTR NWSW SEC 12 TWNP 090S RNG 200E MER S

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

Date Original Permit Issued: 10/21/2008

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

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

Approved by the Utah Division of Oil, Gas and Mining

Signature: Danielle Piernot

Date: 10/6/2009

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

Date: October 08, 2009

By: 

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

APPLICATION FOR PERMIT TO DRILL OR REENTER 1 05

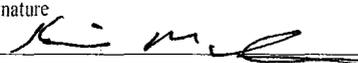
FORM APPROVED
 OMB No. 1004-0137
 Expires July 31, 2010

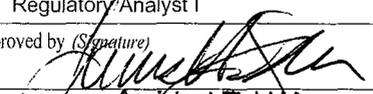
5. Lease Serial No. UTU-0144868B		6. If Indian, Allottee or Tribe Name Ute	
7. If Unit or CA Agreement, Name and No. 891008900A		8. Lease Name and Well No. NBU 920-12LT	
9. API Well No. 43-047-50162		10. Field and Pool, or Exploratory Natural Buttes Field	
11. Sec., T. R. M. or Blk. and Survey or Area Sec. 12, T 9S, R 20E		12. County or Parish Uintah	
13. State UT		14. Distance in miles and direction from nearest town or post office* 7.5 miles southeast of Ouray, Utah	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 792'	16. No. of acres in lease 600	17. Spacing Unit dedicated to this well Unit Well	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 20'	19. Proposed Depth 10,700'	20. BLM/BIA Bond No. on file WYB000291	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 4697.1' GL	22. Approximate date work will start*	23. Estimated duration 10 days	

24. Attachments

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

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

25. Signature 	Name (Printed/Typed) Kevin McIntyre	Date 09/29/2008
--	--	--------------------

Title Regulatory Analyst I		
Approved by (Signature) 	Name (Printed/Typed) James H. Sparger	Date APR 22 2010
Title ACTING Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

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

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

(Continued on page 2)

*(Instructions on page 2)

UDOGM

RECEIVED
 JUN 10 2010

DIV. OF OIL, GAS & MINING

092M0070A
 NOTICE OF APPROVAL

No Nos
 Protest: 10-20-08

CONDITIONS OF APPROVAL ATTACHED



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

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Kerr McGee Oil & Gas Onshore LP Location: NWSW, Sec. 12, T9S R20E
Well No: NBU 920-12LT Lease No: UTU-0144868B
API No: 43-047-50162 Agreement: Natural Buttes

OFFICE NUMBER: (435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

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

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

NOTIFICATION REQUIREMENTS

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	- The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	- Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.
Spud Notice (Notify BLM Petroleum Engineer)	- Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to running casing and cementing all casing strings to: ut_vn_opreport@blm.gov .
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify BLM Petroleum Engineer)	- Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

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

Site-Specific Conditions of Approval:

- Paint New facilities "shadow gray."
- Monitor location by a permitted archaeologist during the construction process.
- Clean out debris from drainage that follows the north and east sides of the well pad.
- Install riprap/boulders to support the sides of the drainage on the north and east sides of the well pad.
- Straight wall the pit on the west side of the cut into the hillside.
- Use appropriate erosion control BMPs on the cut into the hillside on the west side of the well pad.
- In accordance with the guidelines specified in the Utah BLM Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002 (See Appendix D), a raptor survey should be conducted prior to construction of the proposed location, pipeline, or access road if construction would take place during raptor nesting season (January 01 through September 30) and conduct its operations according to specification in the guidelines.
- If project construction operations are scheduled to occur after June 8, 2010, KMG will conduct additional biological surveys in accordance with the guidelines specified in the USFWS Rare Plant Conservation Measures for Uinta Basin hookless cactus (See Appendix D) and conduct its operation according to its specifications.

BIA Standard Conditions of Approval:

- Soil erosion will be mitigated by reseeding all disturbed areas.
- The gathering pipelines will be constructed to lie on the surface. The surface pipelines will not be bladed or cleared of vegetation. Where pipelines are constructed parallel to roads they may be welded on the road and then lifted from the road onto the right-of-way. Where pipelines do not parallel roads but cross-country between sites, they shall be welded in place at well sites or on access roads and then pulled between stations with a suitable piece of equipment. Traffic will be restricted along these areas so that the pipeline right-of-way will not be used as an access road.
- An open drilling system shall be used, unless otherwise specified in 10.0 Additional Stipulations of this document and in the Application for Permit to Drill. A closed drilling system shall be used in all flood plain areas, and other highly sensitive areas, recommended by the Ute Tribe Technician, BIA, and other agencies involved.
- The reserve pit shall be lined with a synthetic leak proof liner. After the drilling operation is complete, excess fluids shall be removed from the reserve pit and either hauled to an approved disposal site or shall be used to drill other wells. When the fluids are removed the pit shall be backfilled a minimum of 3.0' below the soil surface elevation.

- A closed production system shall be used. This means all produced water and oil field fluid wastes shall be contained in leak proof tanks. These fluids shall be disposed of in either approved injection wells or disposal pits.
- Major low water crossings will be armored with pit run material to protect them from erosion.
- All personnel should refrain from collecting any paleontological fossils and from disturbing any fossil resources in the area.
- If fossils are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.
- Before the site is abandoned the company will be required to restore the right-of-way to near its original state. The disturbed area will be reseeded with desirable perennial vegetation. If necessary, the Bureau of Indian Affairs or Bureau of Land Management will provide a suitable seed mixture.
- Noxious weeds will be controlled on all surface disturbances within the project area. If noxious weeds spread from the project area onto adjoining land, the company will also be responsible for their control.
- If project construction operations are scheduled to occur after December 31, 2009, KMG should conduct annual raptor surveys in accordance with the guidelines specified in the Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002 (See Appendix E) and conduct its operations according to applicable seasonal restrictions and spatial offsets.
- USFWS threatened and endangered plant and animal conservation measures will be followed, as appropriate to the species identified by the biological resource survey (See Appendix E).
- All personnel should refrain from collecting artifacts and from disturbing any significant cultural resources in the area.
- If artifacts or any culturally sensitive materials are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.

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

SITE SPECIFIC DOWNHOLE COAs:

- Kerr McGee and their contractors shall strictly adhere to all operating practices in the SOP (approved July 28, 2008) along with all Oil and Gas rules and requirements listed in the Code of Federal Regulations and all Federal Onshore Oil and Gas Orders except where variances have been granted.

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

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

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

(from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

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

OPERATING REQUIREMENT REMINDERS:

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

data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868B
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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: Ute 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
--	---

1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 920-12LT
------------------------------------	---

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047501620000
---	---

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
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4. LOCATION OF WELL FOOTAGES AT SURFACE: 1538 FSL 0792 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 12 Township: 09.0S Range: 20.0E Meridian: S	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: 10/20/2010 <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 type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>

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

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

Approved by the Utah Division of Oil, Gas and Mining

Date: October 25, 2010

By:

NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 10/19/2010	



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047501620000

API: 43047501620000

Well Name: NBU 920-12LT

Location: 1538 FSL 0792 FWL QTR NWSW SEC 12 TWNP 090S RNG 200E MER S

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

Date Original Permit Issued: 10/21/2008

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

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

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

Signature: Danielle Piernot

Date: 10/19/2010

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

Date: October 25, 2010

By: 

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868B
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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: Ute 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
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1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 920-12LT
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047501620000
---	---

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
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4. LOCATION OF WELL FOOTAGES AT SURFACE: 1538 FSL 0792 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 12 Township: 09.0S Range: 20.0E Meridian: S	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: 11/1/2010 <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 type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 50px;" type="text"/>

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 surface hole size FROM: 12-1/4" TO: 11". 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.

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

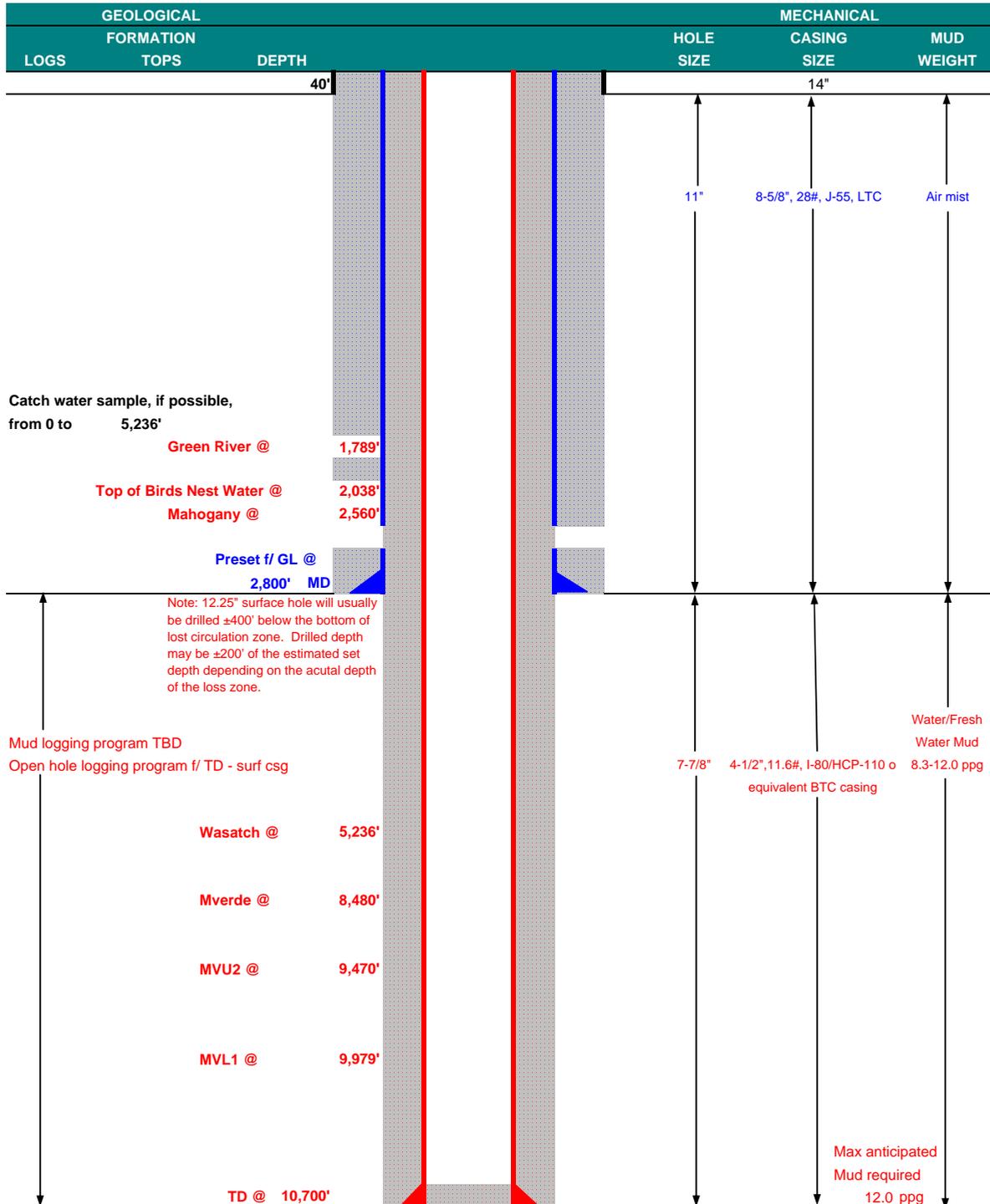
Date: November 10, 2010
 By: *Danielle Piernot*

NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 10/25/2010	



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME KERR-McGEE OIL & GAS ONSHORE LP DATE October 20, 2010
 WELL NAME NBU 920-12LT TD 10,700' MD/TVD
 FIELD Natural Buttes COUNTY Uintah STATE Utah ELEVATION 4,697' GL KB 4,712'
 SURFACE LOCATION NWSW 1538' FSL & 792' FWL, Sec. 12, T 9S R 20E BHL Straight Hole
 Latitude: 40.046940 Longitude: -109.621220 NAD 27
 OBJECTIVE ZONE(S) Mesaverde/Wasatch
 ADDITIONAL INFO Regulatory Agencies: BLM (MINERALS), BIA (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'						
SURFACE	9-5/8"	0 to 2,800'	36.00	J-55	LTC	3520	2020	453000
						0.81	1.54	5.13
PRODUCTION	4-1/2"	0 to 9600	11.60	I-80	BTC	7780	6350	201000
						1.80	0.95	1.86
PRODUCTION	4-1/2"	9600 to 10700	11.60	HCP-110	BTC	10690	8650	367000
						2.47	1.30	3.39

- 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 - (.22 psi/ft-partial evac gradient x TD)
 (Burst Assumptions: TD = 12.0 ppg) .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 4280 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE Option 1	LEAD	500	Premium cmt + 2% CaCl + .25 pps flocele	215	60%	15.60	1.18
	TOP OUT CMT (1)	250	20 gals sodium silicate + Premium cmt + 2% CaCl + .25 pps flocele	100		15.60	1.18
	TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
NOTE: If well will circulate water to surface, option 2 will be utilized							
SURFACE Option 2	LEAD	2000	Prem cmt + 16% Gel + 10 pps gilsonite +.25 pps Flocele + 3% salt BWOC	230	35%	11.00	3.82
	TAIL	500	Premium cmt + 2% CaCl + .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	4,730'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	520	60%	12.50	3.38
	TAIL	5,970'	50/50 Poz/G + 10% salt + 2% gel +.1% R-3	1670	60%	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. Centralize first 3 joints & every third joint to top of tail cement with bow spring centralizers.

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. Test to 5,000 psi (annular to 2,500 psi) prior to drilling out. Record on chart recorder & tour sheet. Function test rams on each trip. Maintain safety valve & inside BOP on rig floor at all times. Kelly to be equipped with upper & lower kelly valves.
 Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.
 Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER: _____ DATE: _____
 Emile Goodwin

DRILLING SUPERINTENDENT: _____ DATE: _____
 NBU 920-12LT Drilling Diagram REVISED 10/20/10

RECEIVED October 25, 2010

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868B
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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: Ute 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
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1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 920-12LT
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047501620000
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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: 1538 FSL 0792 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 12 Township: 09.0S Range: 20.0E Meridian: S	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: 1/11/2011 <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 checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>

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

Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee) respectfully requests to change the surface hole size FROM: 11" TO: 12 1/4". 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.

Accepted by the Utah Division of Oil, Gas and Mining

Date: 01/20/2011

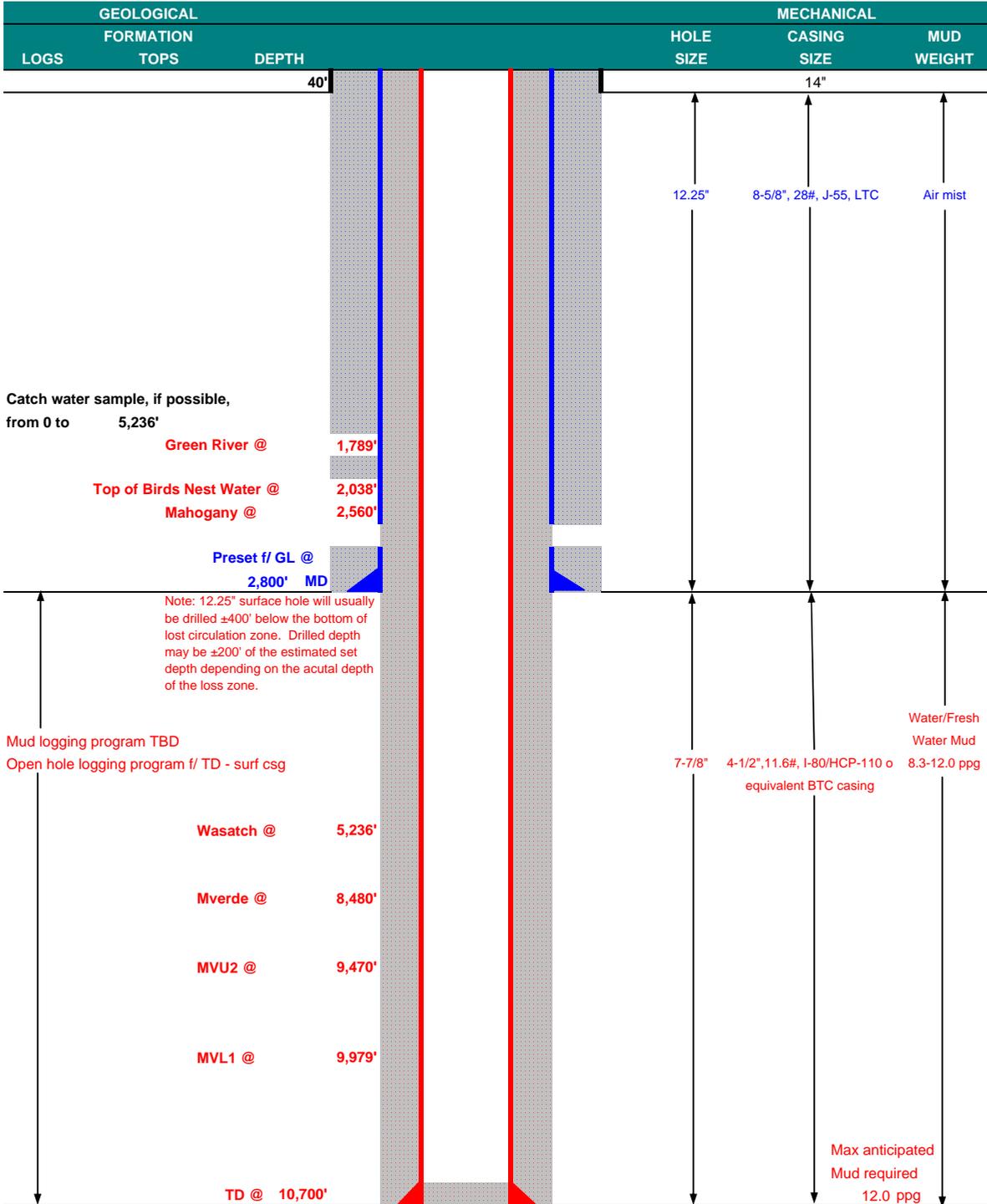
By:

NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 1/10/2011	



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME KERR-McGEE OIL & GAS ONSHORE LP DATE January 5, 2011
 WELL NAME NBU 920-12LT TD 10,700' MD/TVD
 FIELD Natural Buttes COUNTY Uintah STATE Utah ELEVATION 4,697' GL KB 4,712'
 SURFACE LOCATION NWSW 1538' FSL & 792' FWL, Sec. 12, T 9S R 20E BHL Straight Hole
 Latitude: 40.046940 Longitude: -109.621220 NAD 27
 OBJECTIVE ZONE(S) Mesaverde/Wasatch
 ADDITIONAL INFO Regulatory Agencies: BLM (MINERALS), BIA (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'						
SURFACE	8-5/8"	0 to 2,800'	28.00	J-55	LTC	3390	1880	437000
						7780	6350	201000
PRODUCTION	4-1/2"	0 to 9600	11.60	I-80	BTC	1.80	0.95	1.86
						10690	8650	367000
PRODUCTION	4-1/2"	9600 to 10700	11.60	HCP-110	BTC	2.47	1.30	3.39

- 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 - (.22 psi/ft - partial evac gradient x TD)
 (Burst Assumptions: TD = 12.0 ppg) .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 4280 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE Option 1	LEAD	500	Premium cmt + 2% CaCl + .25 pps flocele	280	60%	15.60	1.18
	TOP OUT CMT (1)	250	20 gals sodium silicate + Premium cmt + 2% CaCl + .25 pps flocele	100		15.60	1.18
	TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
NOTE: If well will circulate water to surface, option 2 will be utilized							
SURFACE Option 2	LEAD	2000	Prem cmt + 16% Gel + 10 pps gilsonite +.25 pps Flocele + 3% salt BWOC	300	35%	11.00	3.82
	TAIL	500	Premium cmt + 2% CaCl + .25 pps flocele	240	35%	15.60	1.18
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	4,730'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	520	60%	12.50	3.38
	TAIL	5,970'	50/50 Poz/G + 10% salt + 2% gel +.1% R-3	1670	60%	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. Centralize first 3 joints & every third joint to top of tail cement with bow spring centralizers.

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. Test to 5,000 psi (annular to 2,500 psi) prior to drilling out. Record on chart recorder & tour sheet. Function test rams on each trip. Maintain safety valve & inside BOP on rig floor at all times. Kelly to be equipped with upper & lower kelly valves.
 Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.
 Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER: _____ DATE: _____
 Emile Goodwin

DRILLING SUPERINTENDENT: _____ DATE: _____
 NBU 920-12LT Drilling Diagram REVISED 010511.xls

RECEIVED January 10, 2011

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
 Submitted By ANDY LYTLE Phone Number 720.929.6100
 Well Name/Number NBU 920-12LT
 Qtr/Qtr NWSW Section 12 Township 9S Range 20E
 Lease Serial Number UTU-0144868B
 API Number 4304750162

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

Date/Time 01/13/2011 08:00 HRS AM PM

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

- Surface Casing
 Intermediate Casing
 Production Casing
 Liner
 Other

RECEIVED
 JAN 11 2011
 DIV. OF OIL, GAS & MINING

Date/Time 04/01/2011 00:00 HRS AM PM

BOPE

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

Date/Time _____ AM PM

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT

435.828.0986 OR LOVELL YOUNG AT 435.781.7051

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868B	

SUNDRY NOTICES AND REPORTS ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute
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 920-12LT
------------------------------------	---

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047501620000
---	---

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: 1538 FSL 0792 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 12 Township: 09.0S Range: 20.0E 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"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 50px;" type="text"/>
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:			
<input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 1/14/2011			
<input type="checkbox"/> DRILLING REPORT Report Date:			

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

MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'.
 RAN 14" 36.7# SCHEDULE 10 CONDUCTOR PIPE. CMT W/28 SX READY MIX
 SPUD WELL LOCATION ON JANUARY 14, 2011 AT 9:00 HRS.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 01/18/2011

NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 1/14/2011	

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
4304750162	NBU 920-12LT		NWSW	12	9S	20E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<i>B</i>	99999	<i>2900</i>	1/14/2011			<i>1/26/2010</i>	
Comments: MIRU PETE MARTIN BUCKET RIG. <i>WSMVB</i> SPUD WELL LOCATION ON 01/14/2011 AT 9:00 HRS.							

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 new entity
- E - Other (Explain in 'comments' section)

GINA BECKER

Name (Please Print)

Gina Becker

Signature

REGULATORY ANALYST

1/14/2011

Title

Date

RECEIVED
JAN 18 2011

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868B
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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: Ute 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
--	---

1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 920-12LT
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047501620000
---	---

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: 1538 FSL 0792 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 12 Township: 09.0S Range: 20.0E Meridian: S	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: 1/19/2011 <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 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: <input style="width: 100px;" type="text"/>

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

Karr-McGee respectfully requests to revert back to the original APD and drill this well with 9 5/8" casing and not the 8 5/8" casing that was requested via sundry notice on 10/25/10. Thank you.

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

Date: 01/24/2011

By: *Danielle Piernot*

NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 1/19/2011	

<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: UTU-0144868B</p> <p>6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute</p> <p>7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES</p>
<p>1. TYPE OF WELL Gas Well</p>	<p>8. WELL NAME and NUMBER: NBU 920-12LT</p>
<p>2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.</p>	<p>9. API NUMBER: 43047501620000</p>
<p>3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779</p>	<p>PHONE NUMBER: 720 929-6515 Ext</p>
<p>4. LOCATION OF WELL FOOTAGES AT SURFACE: 1538 FSL 0792 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 12 Township: 09.0S Range: 20.0E Meridian: S</p>	<p>9. FIELD and POOL or WILDCAT: NATURAL BUTTES</p> <p>COUNTY: UINTAH</p> <p>STATE: UTAH</p>

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: 1/26/2011	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

MIRU CAPSTAR AIR RIG #11 ON JANUARY 23, 2011. DRILLED 12 1/4" SURFACE HOLE TO 2800'. RAN 9 5/8" 36# IJ-55 SURFACE CSG. PUMP 50 BBLS FRESH WATER. PUMP 20 BBLS GEL WATER. LEAD CEMENT W/ 260 SX CLASS G PREM @ 11.0 PPG, 3.52 YD. TAILED CEMENT W/ 225 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YD. DROP PLUG ON THE FLY, DISPLACED W/ 196 BBLS WATER. 490 PSI OF LIFT @ 2 BBLS/MIN. 30 BBLS LEAD TO SURFACE. BUMP PLUG W/ 900 PSI. FLOAT HELD. PUMP 65 SX SAME CEMENT DOWN BACK SIDE. CEMENT TO SURFACE. CEMENT FELL 10'. WILL TOP OUT W/ READY MIX. WORT.

**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 1/27/2011	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868B
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: Ute 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 920-12LT
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047501620000
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: 1538 FSL 0792 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 12 Township: 09.0S Range: 20.0E 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: 4/12/2011 <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 checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 50px;" type="text"/>

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

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests to change the total depth (TD) to include the Blackhawk formation, which is in the Mesaverde group for this well. Please see attached for additional details. Please contact the undersigned if you have any questions and/or comments.

Thank you.

Approved by the Utah Division of Oil, Gas and Mining

Date: 04/14/2011

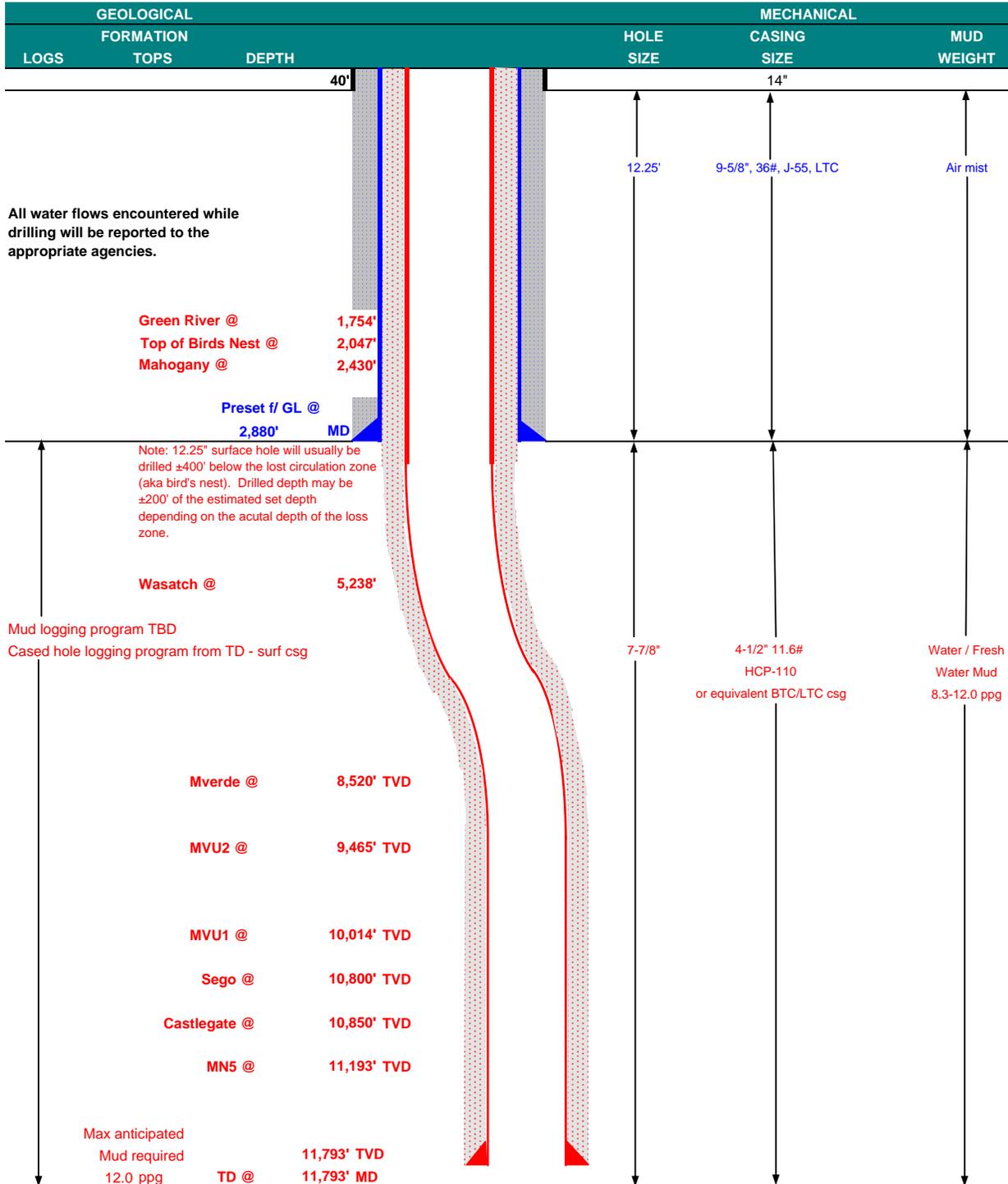
By:

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 4/12/2011	



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	April 12, 2011			
WELL NAME	NBU 920-12LT		TD	11,793'	TVD	11,793' MD	
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION	4,697'
SURFACE LOCATION	NWSW	1538 FSL	792 FWL	Sec 12	T 9S	R 20E	
	Latitude:	40.046770	Longitude:	-109.621910		NAD 83	
BTM HOLE LOCATION	NWSW	1538 FSL	792 FWL	Sec 12	T 9S	R 20E	
	Latitude:	40.046770	Longitude:	-109.621910		NAD 83	
OBJECTIVE ZONE(S)	Wasatch/Mesaverde						
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), Tribal (Surface), UDOGM Tri-County Health Dept.						





KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	LTC	BTC
								TENSION	
CONDUCTOR	14"	0-40'							
						3,520	2,020	452,000	N/A
SURFACE	9-5/8"	0 to 2,880	36.00	J-55	LTC	1.95	1.50	4.98	N/A
						10,690	8,650	279,000	367,000
PRODUCTION	4-1/2"	0 to 11,793	11.60	HCP-110	LTC or BTC	1.19	1.18	2.50	3.29

Surface casing:

(Burst Assumptions: TD = 12.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

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

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.61 psi/ft = bottomhole gradient

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

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	220	60%	15.80	1.15
Option 1			+ 0.25 pps flocele				
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	330	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized					
Option 2	LEAD	2,380'	65/35 Poz + 6% Gel + 10 pps gilsonite	270	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	190	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,733'	Premium Lite II +0.25 pps	340	10%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	7,060'	50/50 Poz/G + 10% salt + 2% gel	1,360	10%	14.30	1.31
			+ 0.1% R-3				

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

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

FLOAT EQUIPMENT & CENTRALIZERS

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

ADDITIONAL INFORMATION

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

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

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

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

DRILLING ENGINEER:

Nick Spence / Emile Goodwin

DATE:

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

DATE:



STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868B
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: Ute 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 920-12LT
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047501620000
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: 1538 FSL 0792 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 12 Township: 09.0S Range: 20.0E 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: 10/20/2011 <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 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 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: <input style="width: 50px;" type="text"/>

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

The Operator requests approval for changes in the drilling plan. Specifically, the Operator requests approval for a FIT wavier, closed loop drilling options and a production casing change. The production casing change includes a switch from 4-1/2 inch I-80 11.6 LB BTC/LTC casing to 4-1/2 inch I-80 11.6 LB Ultra DQX/LTC casing. All other aspects of the previously approved drilling plan will not change. These proposals do not deviate from previously submitted and approved plans. Please see attachment. Thank you.

Accepted by the Utah Division of Oil, Gas and Mining

Date: 11/10/2011

By: *Derek Quist*

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 10/20/2011	

Requested Drilling Changes:

Closed Loop

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

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

Variance for FIT Requirements

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868B
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: Ute 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
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Accepted by the Utah Division of Oil, Gas and Mining

Date: 11/10/2011

By: *Derek Quist*

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 10/20/2011	

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State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# PIONEER 54
Submitted By STUART NEILSON Phone Number 435-790-2921
Well Name/Number NBU 920-12LT
Qtr/Qtr NW/4 SW/4 Section 12 Township 9S Range 20E
Lease Serial Number UTU-0144868B
API Number 4304750162

Casing – Time casing run starts, not cementing times.

- Production Casing
 Other

Date/Time _ _ AM PM

BOPE

- Initial BOPE test at surface casing point
 Other

Date/Time 12/8/11 8 AM PM

Rig Move

Location To:

Date/Time _ _ AM PM

Remarks

RECEIVED
DEC 07 2011
DIV. OF OIL, GAS & MINING

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

FORM 9

5. LEASE DESIGNATION AND SERIAL NUMBER:
UTU-0144868B

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:
Ute

7. UNIT or CA AGREEMENT NAME:
NATURAL BUTTES

1. TYPE OF WELL
Gas Well

8. WELL NAME and NUMBER:
NBU 920-12LT

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

9. API NUMBER:
43047501620000

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:
1538 FSL 0792 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: NWSW Section: 12 Township: 09.0S Range: 20.0E 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: 12/19/2011	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<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 type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.
MIRU ROTARY RIG. FINISHED DRILLING FROM 2800' TO 11,790' ON DEC. 15, 2011. RAN 4-1/2" 11.6# P-110 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED PIONEER RIG 54 ON DEC. 19, 2011 @ 00:00 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES.

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regularatory Analyst
SIGNATURE N/A	DATE 12/19/2011	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868B
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3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6514	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1538 FSL 0792 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 12 Township: 09.0S Range: 20.0E Meridian: S	COUNTY: UINTAH	
	STATE: UTAH	
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 1/14/2012	<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 checked="" type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
<p>THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 01/14/2012 AT 1630 HRS. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.</p>		
<p>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 19, 2012</p>		
NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUMBER 435 781-7024	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 1/18/2012	

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
UTU0144868B

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

2. Name of Operator **KERR MCGEE OIL & GAS ONSHORE** Contact: JAIME L. SCHARNOWSKE
 Email: JAIME.SCHARNOWSKE@ANADARKO.COM

3. Address **PO BOX 173779 DENVER, CO 80217** 3a. Phone No. (include area code)
 Ph: 720-929-6304

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
 At surface **NWSW 1538FSL 792FWL 40.046904 N Lat, 109.621912 W Lon**
 At top prod interval reported below **NWSW 1538FSL 792FWL 40.046904 N Lat, 109.621912 W Lon**
 At total depth **NWSW 1538FSL 792FWL 40.046904 N Lat, 109.621912 W Lon**

6. If Indian, Allottee or Tribe Name _____
 7. Unit or CA Agreement Name and No.
UTU63047A
 8. Lease Name and Well No.
NBU 920-12LT
 9. API Well No.
43-047-50162
 10. Field and Pool, or Exploratory
NATURAL BUTTES
 11. Sec., T., R., M., or Block and Survey
 or Area **Sec 12 T9S R20E Mer SLB**
 12. County or Parish
UINTAH 13. State
UT
 14. Date Spudded
01/14/2011 15. Date T.D. Reached
12/15/2011 16. Date Completed
 D & A Ready to Prod.
01/14/2012 17. Elevations (DF, KB, RT, GL)*
4697 GL

18. Total Depth: MD **11790** TVD **11787** 19. Plug Back T.D.: MD **11737** TVD **11734** 20. Depth Bridge Plug Set: MD **11737** TVD **11734**

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
HDIL/ZDL/CNGR-SYN COM-RSL/SM-CBL/GR/COLLARS/TEMP

22. Was well cored? No Yes (Submit analysis)
 Was DST run? No Yes (Submit analysis)
 Directional Survey? No Yes (Submit analysis)

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

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20.000	14.000 STL	36.7	0	40		28			
12.250	9.625 J-55	36.0	0	2791		550		0	
7.875	4.500 P-110	11.6	0	11781		1975		2090	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	11283							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) MESAVERDE	9918	11616	9918 TO 11616	0.360	147	OPEN
B) WSMVD						
C)						
D)						

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

Depth Interval	Amount and Type of Material
9918 TO 11616	PUMP 16,070 BBLs SLICK H2O & 338,900 LBS TLC, 25,630 # 30/50 OTTAWA SAND

RECEIVED
FEB 28 2012

28. Production - Interval A

DIV. OF OIL, GAS & MINING

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
01/14/2012	01/17/2012	24	→	0.0	3065.0	815.0			FLows FROM WELL
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
24/64	SI 3355	3267.0	→	0	3065	815		PGW	

28a. Production - Interval B

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

28b. Production - Interval C

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

28c. Production - Interval D

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

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

30. Summary of Porous Zones (include Aquifers):

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

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
				GREEN RIVER	1744
				BIRD'S NEST	2039
				MAHOGANY	2554
				WASATCH	5232
				MESAVERDE	8525

32. Additional remarks (include plugging procedure):
 Attached is the chronological well history, perforation report & final survey.
 DQX csg was used to 5014'. LTC csg was used from 5014' to 11,781'.

33. Circle enclosed attachments:

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

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

**Electronic Submission #131292 Verified by the BLM Well Information System.
 For KERR MCGEE OIL & GAS ONSHORE,L, sent to the Vernal**

Name (please print) JAIME L. SCHARNOWSKE Title REGULATORY ANALYST

Signature (Electronic Submission) Date 02/21/2012

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

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

US ROCKIES REGION
Operation Summary Report

Well: NBU 920-12LT		Spud Conductor: 1/14/2011		Spud Date: 1/23/2011	
Project: UTAH-UINTAH			Site: NBU 920-12LT PAD		Rig Name No: CAPSTAR 311/311, PIONEER 54/54
Event: DRILLING			Start Date: 1/10/2011		End Date: 12/18/2011
Active Datum: RKB @4,716.00usft (above Mean Sea Level)			UWI: NW/SW/0/9/S/20/E/12/0/0/26/PM/S/1538/W/0/792/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/22/2011	19:30 - 0:00	4.50	DRLSUR	21	C	P		WAIT ON DAYLIGHT TO MOVE RIG TO NBU 920-12LT
1/23/2011	0:00 - 7:30	7.50	DRLSUR	21	C	P		WAIT ON DAYLIGHT TO MOVE RIG TO NBU 920-12LT
	7:30 - 12:30	5.00	DRLSUR	01	A	P		CONDUCT SAFETY MEETING AND MOVE RIG TO NBU 920-12LT
	12:30 - 14:30	2.00	DRLSUR	14	A	P		WELD ON CONDUCTOR AND RIG UP FLOW LINE FILL MUD TANKS AND PRE PARE TO SPUD
	14:30 - 16:00	1.50	DRLSUR	01	B	P		RIG UP BOILER AND WELD ON MUD TANKS PICK UP MUD MOTOR AND SHOCK SUB
	16:00 - 21:00	5.00	DRLSUR	02	B	P		SPUD WELL AT 1600 DRILL F/ 40' - 250' WOB 5-15 ROT 50-55 DHR 54 GPM 340 NO LOSSES SURVEY AT 134 1 DEG AVE ROP 50 FT HR
	21:00 - 22:00	1.00	DRLSUR	07	C	P		CHANGE ROT RUBBER
	22:00 - 0:00	2.00	DRLSUR	02	B	P		DRILL F/ 250' - 345' AVE ROP 50 FT HR GPM 620 DHR 95 WOB 15-20 NO LOSSES
1/24/2011	0:00 - 14:00	14.00	DRLSUR	02	B	P		DRILL F/ 345' - 1273' AVE ROP 66 FT HR WOB 16-19 ROT 45-55 DHR 99 GPM 620 NO LOSSES POLY SWEEPS EVERY OTHER CONNECTION LAST SURVEY .75 AT 1337'
	14:00 - 14:30	0.50	DRLSUR	07	A	P		DAILY RIG SERVICE
	14:30 - 0:00	9.50	DRLSUR	02	B	P		DRILL F/ 1273' - 1778' AVE ROP 61 FT HR WOB 16-19 ROT 45-55 DHR 99 GPM 620 NO LOSSES POLY SWEEPS EVERY OTHER CONNECTION LAST SURVEY 1 DEG AT 1747'
1/25/2011	0:00 - 18:30	18.50	DRLSUR	02	B	P		DRILL F/ 1778' - 2800' T.D. AVE ROP 55 FT HR WOB 14-18 ROT 40-50 DHR 99 GPM 620 NO LOSSES LAST SURVEY 1.5 DEG AT 2770' TOTAL ROT HRS 49
	18:30 - 19:00	0.50	DRLSUR	07	A	P		DAILY RIG SERVICE
	19:00 - 19:30	0.50	DRLSUR	05	C	P		CIRCULATE AND CONDITION MUD PRIOR TO LDDS
	19:30 - 0:00	4.50	DRLSUR	06	A	P		TOOH LAYING DOWN
1/26/2011	0:00 - 2:00	2.00	DRLSUR	06	A	P		FINISH TOOH LAYING DOWN
	2:00 - 11:30	9.50	DRLSUR	12	C	P		RIG UP AND RUN 67 JOINTS 9 5/8 36# J55 SURFACE CASING SHOE AT 2780'
	11:30 - 13:00	1.50	DRLSUR	12	E	P		HOLD SAFETY MEETING W/ SUPERIOR WELL SERVICES CEMENTERS. INSTALL CEMENT HEAD ON TOP OF LANDING JT. PRESSURE TEST LINE TO 2000 PSI. PUMP 50 BBLs OF WATER AHEAD, PUMP 20 BBLs OF GEL WATER. PUMP 260 SX OF 11#, 3.52 YD, 23 GAL/SK HI FILL LEAD, PUMP 225 SX OF 15.8# 1.15 YD, 5 GAL/SK TAIL PREM. CLASS G CEMENT. DROP PLUG ON FLY, DISPLACE W/ 196 BBLs OF WATER. 490 PSI OF LIFT @ 2 BBLs/MIN RATE. 30 BBLs OF LEAD TO SURFACE. BUMP PLUG W/ 900 PSI. FLOAT HELD.
	13:00 - 13:30	0.50	DRLSUR	14	A	P		CUT CONDUCTOR AND HANG OFF CASING

US ROCKIES REGION
Operation Summary Report

Well: NBU 920-12LT Spud Conductor: 1/14/2011 Spud Date: 1/23/2011
 Project: UTAH-UINTAH Site: NBU 920-12LT PAD Rig Name No: CAPSTAR 311/311, PIONEER 54/54
 Event: DRILLING Start Date: 1/10/2011 End Date: 12/18/2011
 Active Datum: RKB @4,716.00usft (above Mean Sea Level) UWI: NWSW/09/S/20/E/12/0/0/26/PM/S/1538/W/0/792/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	13:30 - 14:00	0.50	DRLSUR	12	E	P		PUMP 65 SX OF 15.8# PREMIUM 3% CALC CEMENT DOWN 1" DOWN BACK SIDE. CEMENT TO SURFACE, CEMENT FELL 10' PETE MARTIN WILL TOP OUT WITH READY MIX TRUCK RELEASE RIG AT 14:00
12/5/2011	12:00 - 18:00	6.00	DRLPRO	01	A	P		MOVE RIG TO THE NBU 920-12LT, 11 MILE RIG MOVE, 8 HAUL, 2 BED & 1 POLE TRUCKS, 1 CRANE & 3 OILERS, 6 EXTRA RIG HANDS, 30% MOVED, 0% RIGGED UP
	18:00 - 0:00	6.00	DRLPRO	21	C	P		WAITING ON DAYLIGHT
12/6/2011	0:00 - 6:00	6.00	DRLPRO	21	C	P		WAITING ON DAYLIGHT
	6:00 - 18:00	12.00	DRLPRO	01	A	P		100% MOVED, 80% RIGGED UP, TRUCKS LEFT @ 17:00, CRANE @ 17:00
	18:00 - 0:00	6.00	DRLPRO	21	C	P		WAITING ON DAYLIGHT
12/7/2011	0:00 - 6:00	6.00	DRLPRO	21	C	P		WAIT ON DAYLIGHT
	6:00 - 16:30	10.50	DRLPRO	01	A	P		FINISH RIG MOB, TRUCKS LEFT @ 13:30, CRANE@ 16:30, DERRICK RAISED @ 13:30
	16:30 - 0:00	7.50	DRLPRO	01	B	P		RURT, STRATA, NOV
12/8/2011	0:00 - 2:00	2.00	DRLPRO	14	A	P		RUN FLARE LINES
	2:00 - 4:00	2.00	DRLPRO	14	A	P		N/U STRATA ORBIT VALVE, 4" & 2" LINES
	4:00 - 7:30	3.50	DRLPRO	14	A	P		N/U BOPE
	7:30 - 12:30	5.00	DRLPRO	15	A	P		TEST RAM & ALL VALVES 250 LOW 5000 HIGH, ANN 2500, CASING 1500 F/ 30 MIN
	12:30 - 13:30	1.00	DRLPRO	15	A	P		TEST STRATA TO 3000 PSI
	13:30 - 14:00	0.50	DRLPRO	14	B	P		INSTALL WEARBUSHING, PRE-SPUD INSPECTION
	14:00 - 19:30	5.50	DRLPRO	06	J	P		HPJSM W/ RIG, SDI & KIMZEY, R/U & P/U BIT #1, MM, DIR TOOLS & SCRIBE, P/U 30 HWDP INSTALL STRATA ROT HEAD, P/U D/P TAG CEMENT @ 2722', R/D KIMZEY
	19:30 - 21:00	1.50	DRLPRO	09	A	P		CUT & SLIP DRLG LINE, CHECK RIG FOR LEVEL & CENTER TOP DRIVE
	21:00 - 22:00	1.00	DRLPRO	02	F	P		DRLG CEMENT F/E & OPEN TO 2810, FLOAT @ 2738', SHOE @ 2780
	22:00 - 0:00	2.00	DRLPRO					DRLG F/ 2810 TO 3071', 281' @ 130.5' PH WOB / 18-20, RPM 60 SPM 200 - GPM 586 MW 8.6, VIS 32, LOW WT MUD TRQ ON/OFF = 6-4 K PSI ON /OFF =1400-1100 , DIFF 250-500 PU/SO/RT = 100-90-95 SLIDE = 16' IN .25 HRS = 64' PH ROT = 245' IN 1.75 HRS = 140' PH STRATA - OFF LINE 0 CONN FLARE, 0 B/G FLARE 31' S & 7.35' E OF TARGET CENTER

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 920-12LT	Spud Conductor: 1/14/2011	Spud Date: 1/23/2011
Project: UTAH-UINTAH	Site: NBU 920-12LT PAD	Rig Name No: CAPSTAR 311/311, PIONEER 54/54
Event: DRILLING	Start Date: 1/10/2011	End Date: 12/18/2011
Active Datum: RKB @4,716.00usft (above Mean Sea Level)	UWI: NWSW0/9/S/20/E/12/0/0/26/PM/S/1538/W/0/792/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/9/2011	0:00 - 17:00	17.00	DRLPRO	02	D	P		DRLG F/ 3071' TO 4942', 1871' @ 110' PH WOB / 18-22, RPM 60 SPM 200 - GPM 586 MW 8.6, VIS 32, LOW WT MUD TRQ ON/OFF = 6-4 K PSI ON /OFF =1600-1200 , DIFF 250-500 PU/SO/RT = 135-125-105 SLIDE = 173' IN 2.86 HRS = 60.5' PH ROT = 1698' IN 14.14 HRS = 120' PH STRATA - OFF LINE 0 CONN FLARE, 0 B/G FLARE 7.35 W & 0 N OF TARGET CENTER SERVICE RIG
	17:00 - 17:30	0.50	DRLPRO	07	A	P		
	17:30 - 0:00	6.50	DRLPRO	02	D	P		DRLG F/4942' TO 5507', 565' @ 86.9' PH WOB / 18-22, RPM 60 SPM 200 - GPM 586 MW 8.7, VIS 36, LOW WT MUD TRQ ON/OFF = 6-4 K PSI ON /OFF =1900-1400 , DIFF 250-500 PU/SO/RT = 135-132-128 SLIDE = 85' IN 1.92 HRS = 44.3' PH ROT = 480' IN 4.58 HRS = 104.8' PH STRATA - OFF LINE 0 CONN FLARE, 0 B/G FLARE 11' N & 4.6 W OF TARGET CENTER
12/10/2011	0:00 - 16:30	16.50	DRLPRO	02	D	P		DRLG F/5507' TO 7029', 1522' @ 92.3' PH WOB / 20-24, RPM 60 SPM 200 - GPM 586 MW 8.8, VIS 32, LOW WT MUD TRQ ON/OFF = 7-5 K PSI ON /OFF =2000-1600 , DIFF 250-500 PU/SO/RT = 165-145-152 SLIDE = 42' IN .92 HRS = 45.7' PH ROT = 1480' IN 15.58 HRS =95' PH STRATA - OFF LINE NOV ON LINE 10 CONN B/U FLARE, 5 B/G FLARE 25' N & 0 W OF TARGET CENTER
	16:30 - 17:00	0.50	DRLPRO	07	A	P		SERVICE RIG , RUN THOUGH STRATA TO MAKE SURE ALL IS WELL, PUT STRATA ON LINE @ 7029', FULL OPEN
	17:00 - 0:00	7.00	DRLPRO	02	D	P		DRLG F/7029' TO 7552', 523' @ 74.7' PH WOB / 20-24, RPM 60 SPM 200 - GPM 586 MW 8.8, VIS 34, LOW WT MUD TRQ ON/OFF = 8-6 K PSI ON /OFF =2000-1600 , DIFF 250-500 PU/SO/RT = 168-159-162 SLIDE = 36' IN 1.08 HRS = 33.3' PH ROT = 487' IN 5.92 HRS = 82.3' PH STRATA - ON LINE FULL OPEN DRILLING 125 PSI, HOLD 125 ON CONN NOV ON LINE 10 CONN B/U FLARE, 5 B/G FLARE 16' N & 2' E OF TARGET CENTER

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 920-12LT		Spud Conductor: 1/14/2011	Spud Date: 1/23/2011
Project: UTAH-UINTAH		Site: NBU 920-12LT PAD	Rig Name No: CAPSTAR 311/311, PIONEER 54/54
Event: DRILLING		Start Date: 1/10/2011	End Date: 12/18/2011
Active Datum: RKB @4,716.00usft (above Mean Sea Level)		UWI: NWSW0/9/S/20/E/12/0/0/26/PM/S/1538/W/0/792/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/11/2011	0:00 - 15:00	15.00	DRLPRO	02	D	P		DRLG F/ 7552' TO 8358', 806' @ 53.7' PH WOB / 20-24, RPM 60 SPM 200 - GPM 586 MW 8.9, VIS 35, LOW WT MUD TRQ ON/OFF = 8-6 K PSI ON /OFF =2100-1700 , DIFF 250-500 PU/SO/RT = 185-165-175 SLIDE = 40' IN 1.25 HRS = 32' PH ROT = 766' IN 13.75 HRS = 55.7' PH STRATA - ON LINE FULL OPEN DRILLING 125 PSI, HOLD 125 ON CONN NOV ON LINE, CONVENTIONAL, DE-WATER 2 CIRC,S W/ 1 PUMP 10 CONN B/U FLARE, 5 B/G FLARE 6' N & 1.5 E OF TARGET CENTER
	15:00 - 15:30	0.50	DRLPRO	07	A	P		SERVICE RIG, F/T ANN & HCR, BOP DRILL 73 SEC, CHECK CROWN-O-MATIC
	15:30 - 0:00	8.50	DRLPRO	02	D	P		DRLG F/8358' TO 8831', 473' @ 55.6' PH WOB / 22-24, RPM 60 SPM 200 - GPM 586 MW 9.0, VIS 37, LOW WT MUD TRQ ON/OFF = 8-6 K PSI ON /OFF =2200-1900 , DIFF 250-500 PU/SO/RT = 190-173-182 SLIDE = 35' IN 1.16 HRS = 30.2' PH ROT = 438' IN 7.34 HRS = 59.7' PH STRATA - ON LINE DRILLING 165 PSI, HOLD 175 ON CONN NOV ON LINE, CONVENTIONAL, DE-WATER 2 CIRC'S W/1PUMP 15 CONN B/U FLARE, 10 B/G FLARE 17' N & 5' W OF TARGET CENTER
12/12/2011	0:00 - 16:30	16.50	DRLPRO	02	D	P		DRLG F/8831' TO 9779', 948' @ 57.5' PH WOB / 22-24, RPM 60 SPM 200 - GPM 586 MW 9.2, VIS 37, LOW WT MUD TRQ ON/OFF = 9-7 K PSI ON /OFF =2200-1900 , DIFF 250-500 PU/SO/RT = 205-175-190 SLIDE = ROT = 100% STRATA - ON LINE DRILLING 140 PSI, HOLD 175 ON CONN NOV ON LINE, CONVENTIONAL, 15 CONN B/U FLARE, 10 B/G FLARE 17.5 N & 5.5 W OF TARGET CENTER
	16:30 - 17:00	0.50	DRLPRO	07	A	P		SERVICE RIG

US ROCKIES REGION
Operation Summary Report

Well: NBU 920-12LT	Spud Conductor: 1/14/2011	Spud Date: 1/23/2011
Project: UTAH-UINTAH	Site: NBU 920-12LT PAD	Rig Name No: CAPSTAR 311/311, PIONEER 54/54
Event: DRILLING	Start Date: 1/10/2011	End Date: 12/18/2011
Active Datum: RKB @4,716.00usft (above Mean Sea Level)	UWI: NWSW09/S/20/E/12/0/0/26/PM/S/1538/W/0/792/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	17:00 - 0:00	7.00	DRLPRO	02	D			DRLG F/9779' TO 10100',321' @ 45.9' PH WOB / 22-24, RPM 60 SPM 200 - GPM 586 MW 9.3, VIS 39, LOW WT MUD TRQ ON/OFF = 11-9 K PSI ON /OFF =2500-2100 , DIFF 250-500 PU/SO/RT = 215-175-195 SLIDE = ROT = 100% STRATA - ON LINE DRILLING 140 PSI, HOLD 175 ON CONN NOV ON LINE, CONVENTIONAL, 15 CONN B/U FLARE, 10 B/G FLARE 9' N & 3' W OF TARGET CENTER
12/13/2011	0:00 - 4:30	4.50	DRLPRO	02	D	P		DRLG F/10100' TO 10292', 192' @ 42.6' PH WOB / 22-24, RPM 60 SPM 200 - GPM 586 MW 9.3, VIS 39, LOW WT MUD TRQ ON/OFF = 11-9 K PSI ON /OFF =2500-2100 , DIFF 250-500 PU/SO/RT = 215-175-195 SLIDE = ROT = 100% STRATA - ON LINE DRILLING 140 PSI, HOLD 175 ON CONN NOV ON LINE, CONVENTIONAL, 15 CONN B/U FLARE, 10 B/G FLARE 9' N & 3' W OF TARGET CENTER
	4:30 - 6:00	1.50	DRLPRO	05	A	P		CIRC & COND HOLE F/ TRIP, BIULD & SPOT 75 BBL, 12.5 PPG PILL ON BOTTOM
	6:00 - 17:30	11.50	DRLPRO	06	A	P		TFNB & MM,TIGHT @ 5150', WORK CLEAN , DRIVE LINE ON MM WAS BROKE, BIT 2-3 GRADE P/U BIT #2 & MM #2, TIH, WASH TIGHT SPOTS @ 4600' & 5300', WASH & REAM 180' TO BOTTOM, 20' FILL, 30-40' FLARE TRIP GAS
	17:30 - 19:00	1.50	DRLPRO	02	D	P		DRLG F/ 10292 TO 10351', 59' @ 39.3' PH
	19:00 - 20:00	1.00	DRLPRO	08	C	Z		REPLACE ROT HEAD & BEARINGS
	20:00 - 0:00	4.00	DRLPRO	02	D	P		DRLG F/ 10351 TO 10645', 294' @ 73.5' PH WOB / 20-22, RPM 60 SPM 200 - GPM 586 MW 9.4, VIS 39, LOW WT MUD TRQ ON/OFF = 9-8 K PSI ON /OFF =2500-2100 , DIFF 250-500 PU/SO/RT = 225-185-205 SLIDE = ROT = 100% STRATA - ON LINE DRILLING 175 PSI, HOLD 300 ON CONN NOV ON LINE, CONVENTIONAL, 20 CONN B/U FLARE, 10 B/G FLARE 9' S, 0 W OF TARGET CENTER

US ROCKIES REGION
Operation Summary Report

Well: NBU 920-12LT		Spud Conductor: 1/14/2011		Spud Date: 1/23/2011	
Project: UTAH-UINTAH		Site: NBU 920-12LT PAD		Rig Name No: CAPSTAR 311/311, PIONEER 54/54	
Event: DRILLING		Start Date: 1/10/2011		End Date: 12/18/2011	
Active Datum: RKB @4,716.00usft (above Mean Sea Level)			UWI: NWSW09/S/20/E/12/0/0/26/PM/S/1538/W/0/792/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/14/2011	0:00 - 12:00	12.00	DRLPRO	02	D	P		DRLG F/ 10645' TO 11015', 370' @ 30.8' PH WOB / 20-22, RPM 60 SPM 200 - GPM 586 MW 9.4, VIS 39, LOW WT MUD TRQ ON/OFF = 9-8 K PSI ON /OFF =2500-2100 , DIFF 250-500 PU/SO/RT = 225-185-205 SLIDE = ROT = 100% STRATA - ON LINE DRILLING 175 PSI, HOLD 300 ON CONN NOV ON LINE, CONVENTIONAL, 20 CONN B/U FLARE, 10 B/G FLARE 18' S & 1.5 E OF TARGET CENTER SERVICE RIG
	12:00 - 12:30	0.50	DRLPRO	07	A	P		
	12:30 - 0:00	11.50	DRLPRO					DRLG F/11015' TO 11,287', 272' @ 23.6' PH WOB / 20-22, RPM 60 SPM 200 - GPM 586 MW 10, VIS 40, LOW WT MUD TRQ ON/OFF = 9-8 K PSI ON /OFF =2600-2300 , DIFF 250-500 PU/SO/RT = SLIDE = ROT = 100% STRATA - ON LINE DRILLING 135 PSI, HOLD 250 ON CONN NOV ON LINE, CONVENTIONAL, 10 CONN B/U FLARE, 5 B/G FLARE 35' S & 5.5 E OF TARGET CENTER
12/15/2011	0:00 - 17:30	17.50	DRLPRO	02	D	P		DRLG F/ 11,287' TO 11790', TD, 503' @ 28.7' PH WOB / 22-24, RPM 60 SPM 200 - GPM 586 MW 11.1, VIS 40, LOW WT MUD TRQ ON/OFF = 9-8 K PSI ON /OFF =2-2300 , DIFF 250-500 PU/SO/RT = 250-185-213 SLIDE = ROT = 100% STRATA - ON LINE DRILLING 135 PSI, HOLD 250 ON CONN NOV ON LINE, CONVENTIONAL, 10 CONN B/U FLARE, 5 B/G FLARE 35' S & 5.5 E OF TARGET CENTER SERVICE RIG
	17:30 - 18:00	0.50	DRLPRO	07	A	P		
	18:00 - 20:00	2.00	DRLPRO	05	C	P		CIRC & COND RAISE MT TO 11.3
	20:00 - 0:00	4.00	DRLPRO	06	E	P		SHOT TRIP TO SHOE
	0:00 - 4:00	4.00	DRLPRO	06	E	P		FINISH SHORT TRIP, REAM 100' @ 8800', 5' FILL
12/16/2011	4:00 - 5:00	1.00	DRLPRO	08	C	Z		REPLACE STRATA ROT HEAD & BEARINGS
	5:00 - 7:00	2.00	DRLPRO	05	C	P		CIRC & COND, RAISE MW TO 11.5 PPG
	7:00 - 12:00	5.00	DRLPRO	05	C	P		POOH FOR OPEN HOLE LOGS
	12:00 - 15:30	3.50	DRLPRO	11	C	P		HPJSM W/ RIG & LOGGERS, R/U & RUN IN TO 11,775', LOG OUT, TO 10,200'
	15:30 - 17:00	1.50	DRLPRO	22	L	Z		WIRELINE PARTED @ TENTION BAR, 10,200', POOH & R/D

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 920-12LT		Spud Conductor: 1/14/2011	Spud Date: 1/23/2011
Project: UTAH-UJINTAH		Site: NBU 920-12LT PAD	Rig Name No: CAPSTAR 311/311, PIONEER 54/54
Event: DRILLING		Start Date: 1/10/2011	End Date: 12/18/2011
Active Datum: RKB @4,716.00usft (above Mean Sea Level)		UWI: NWSW09/S/20/E/12/0/0/26/PM/S/1538/W/0/792/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/17/2011	17:00 - 18:00	1.00	DRLPRO	21	A	Z		WAIT ON FIDHING TOOLS
	18:00 - 0:00	6.00	DRLPRO	19	A	Z		MAKEUP FISHING TOOLS, TIH TO TOP OF FISH
	0:00 - 1:00	1.00	DRLPRO	19	A	Z		WASH OVER FISH @ 10,295
	1:00 - 8:00	7.00	DRLPRO	19	A	Z		POOH W/ FISH, L/D FISH & TOOLS
	8:00 - 9:00	1.00	DRLPRO	06	E	P		TIH W HWDP, INSTALL ROT RUBBER
	9:00 - 10:00	1.00	DRLPRO	09	A	P		CUT DRLG LINE
	10:00 - 13:30	3.50	DRLPRO	06	E	P		TIH
	13:30 - 15:00	1.50	DRLPRO	03	D	Z		WASH & REAM 420' TO BOTTOM, PUSHING CALIPER ARM TO BOTTOM
	15:00 - 16:00	1.00	DRLPRO	05	C	P		CIRC & COND HOLE
	16:00 - 23:00	7.00	DRLPRO	06	A	P		HPJSM W/ RIG & L/D CREWS, R/U & LDDS
12/18/2011	23:00 - 23:30	0.50	DRLPRO	14	B	P		PULL WEAR RING
	23:30 - 0:00	0.50	DRLPRO	12	A	P		HPJSM W/ RIG & KIMZEY, R/U
	0:00 - 11:00	11.00	DRLPRO	12	C	P		RUN 4.5" PROD CASING, R/D CASING CREW
	11:00 - 12:30	1.50	DRLPRO	05	D	P		CIRC OUT GAS
	12:30 - 15:30	3.00	DRLPRO	12	E	P		HPJSM W/ RIG & CEMENTING CREWS, R/U & PSI TEST LINES TO 4500 PSI, PUMP 25 BBLS WATER SPACER, LEAD 625 SX 12 PPG 2.26 YLD, TAIL 1350 SXS 14.3 PPG 1.31 YLD, DISPLACE W/ 182.4 BBLS WATER, FULL RETURNS THOUGHOUT JOB W/ 18 BBLS CEMENT TO PIT & 1.5 BACK TO TRUCK, TOP & BOTTOM PLUG USED, FLOAT @ 11737, SHOE @ 11780', R/D
	15:30 - 16:00	0.50	DRLPRO	14	B	P		SET C-22 SLIPS W/ 125 K
	16:00 - 17:00	1.00	DRLPRO	14	A	P		N/D BOPE, P/U STACK & MAKE ROUGH CUT
17:00 - 0:00	7.00	DRLPRO	01	E	P		N/D BOPE, CLEAN PITS, WINTERIZE RIG F/ MOVE, RELEASE RIG TO THE NBU 921-18P 12/19/11 00:00	

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 920-12LT	Wellbore No.	OH
Well Name	NBU 920-12LT	Wellbore Name	NBU 920-12LT
Report No.	1	Report Date	1/4/2012
Project	UTAH-UINTAH	Site	NBU 920-12LT PAD
Rig Name/No.	SWABBCO 8/8	Event	COMPLETION
Start Date	1/4/2012	End Date	1/14/2012
Spud Date	1/23/2011	Active Datum	RKB @4,716.00usft (above Mean Sea Level)
UWI	NW/SW/0/9/S/20/E/12/0/0/26/PM/S/1538/W/0/792/0/0		

1.3 General

Contractor	JW WIRELINE	Job Method	PERFORATE	Supervisor	STEVE WALL, SR.
Perforated Assembly	PRODUCTION CASING	Conveyed Method	WIRELINE		

1.4 Initial Conditions

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

1.5 Summary

Gross Interval	8,530.0 (usft)-11,616.0 (us)	Start Date/Time	1/11/2012 12:00AM
No. of Intervals	59	End Date/Time	1/13/2012 12:00AM
Total Shots	291	Net Perforation Interval	95.00 (usft)
Avg Shot Density	3.06 (shot/ft)	Final Surface Pressure	
		Final Press Date	

2 Intervals

2.1 Perforated Interval

Date	Formation/Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/Add. Shot	Diameter (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
	MESAVERDE/			8,530.0	8,532.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
	MESAVERDE/			8,560.0	8,561.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,584.0	8,586.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,640.0	8,643.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,736.0	8,738.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,818.0	8,820.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,870.0	8,872.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,912.0	8,914.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,032.0	9,034.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,072.0	9,074.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,110.0	9,112.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,145.0	9,147.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,206.0	9,207.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,232.0	9,233.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,253.0	9,254.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,358.0	9,359.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,404.0	9,405.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,426.0	9,427.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,503.0	9,504.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,529.0	9,530.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,554.0	9,555.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,595.0	9,596.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
	MESAVERDE/			9,609.0	9,610.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,663.0	9,664.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,699.0	9,700.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,718.0	9,719.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,754.0	9,755.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,777.0	9,778.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,816.0	9,818.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,838.0	9,839.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,853.0	9,854.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,876.0	9,878.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/13/2012 12:00AM	MESAVERDE/			9,918.0	9,919.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/13/2012 12:00AM	MESAVERDE/			9,947.0	9,948.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/13/2012 12:00AM	MESAVERDE/			9,978.0	9,980.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/13/2012 12:00AM	MESAVERDE/			10,048.0	10,049.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/13/2012 12:00AM	MESAVERDE/			10,097.0	10,098.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/13/2012 12:00AM	MESAVERDE/			10,125.0	10,126.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/13/2012 12:00AM	MESAVERDE/			10,137.0	10,138.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/13/2012 12:00AM	MESAVERDE/			10,246.0	10,248.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/13/2012 12:00AM	MESAVERDE/			10,288.0	10,290.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/13/2012 12:00AM	MESAVERDE/			10,372.0	10,374.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/13/2012 12:00AM	MESAVERDE/			10,412.0	10,414.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
1/12/2012 12:00AM	MESAVERDE/			11,233.0	11,235.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/12/2012 12:00AM	MESAVERDE/			11,246.0	11,250.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/12/2012 12:00AM	MESAVERDE/			11,266.0	11,268.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/12/2012 12:00AM	MESAVERDE/			11,300.0	11,301.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/12/2012 12:00AM	MESAVERDE/			11,308.0	11,310.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/12/2012 12:00AM	MESAVERDE/			11,330.0	11,331.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/12/2012 12:00AM	MESAVERDE/			11,340.0	11,342.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/12/2012 12:00AM	MESAVERDE/			11,361.0	11,363.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/12/2012 12:00AM	MESAVERDE/			11,398.0	11,402.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/12/2012 12:00AM	MESAVERDE/			11,410.0	11,412.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/12/2012 12:00AM	MESAVERDE/			11,426.0	11,428.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/11/2012 12:00AM	MESAVERDE/			11,514.0	11,516.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/11/2012 12:00AM	MESAVERDE/			11,529.0	11,531.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/11/2012 12:00AM	MESAVERDE/			11,545.0	11,547.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/11/2012 12:00AM	MESAVERDE/			11,557.0	11,558.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/11/2012 12:00AM	MESAVERDE/			11,614.0	11,616.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

3 Others

3.1 Remarks

PERFS THAT WERE SHOT ARE DATED WHEN SHOT.

4 Plots

US ROCKIES REGION
Operation Summary Report

Well: NBU 920-12LT	Spud Conductor: 1/14/2011	Spud Date: 1/23/2011
Project: UTAH-UJINTAH	Site: NBU 920-12LT PAD	Rig Name No: SWABBCO 8/8
Event: COMPLETION	Start Date: 1/4/2012	End Date: 1/14/2012
Active Datum: RKB @4,716.00usft (above Mean Sea Level)	UWI: NV/SW/0/9/S/20/E/12/0/0/26/PM/S/1538/W/0/792/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/4/2012	-							
1/9/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, RIGGING DOWN & RIGGING UP.
	7:30 - 12:00	4.50	COMP	30	A	P		RD OFF NBU 921-8K, MIRU.
	12:00 - 17:00	5.00	COMP	31	I	P		ND WH NU BOPS, RU FLOOR & TBG EQUIP. YALLY & PU 37/8 BIT & 268 JTS 23/8 L-80, EOT @ 8490' SW SDFN.
1/10/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, LAYING DWN TBG.
	7:30 - 15:00	7.50	COMP	31	I	P		POOH W/ 268 JTS 23/8 L-80 L/D BIT. ND BOPS NU FV, TEST CSG TO 1262 PSI FOR 15 MIN, LOST 16 # PSI. TEST TO 3575 PSI FOR 15 MIN. LOST 20# PSI. TEST TO 9035 PSI FOR 30 MIN LOST 112 PSI, GOOD TEST, RD B&G SW PREP TO PERF IN AM.
1/11/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, WORKING W/ WIRELINE.
	7:30 - 15:00	7.50	COMP	34	H	P		RU JW, RIH W/ 31/8 23 GRM, .36" HLS 120 DEG PHASING GNS & PERF 1ST STG AS OF PROCEDURE. POOH SW PREP TO FRAC IN AM.
1/12/2012	6:00 - 8:18	2.30	COMP	36	E	P		HSM W/ SUPERIOR, STAYING AWAY FROM HIGH PRESSURE LINES. PRIME PUMPS & LINES TEST TO 9500 PSI FOR 5 MIN LOST 110 PSI, SET POPOFF 8750 PSI, SET KICK OUTS #1 8800, #2 8775, #3 8750, # 4 8725, # 5 8700, # 6 8675.
								(STG #1) WHP 1330 PSI, BRK 4571 PSI @ 4.9 BPM. ISIP 3764 PSI, FG .76. SPOT ACID ON PERFS LET SOAK FOR 5 MIN. CALC HOLES OPEN @ 51.6 BPM @ 7846 PSI = 73% HOLES OPEN. MP 8615 PSI, MR 52.3 BPM, AP 7286 PSI, AR .78 BPM ISIP 3951 PSI, FG .78 NPI 187 PSI.
	8:18 - 12:33	4.25	COMP	36	E	P		(STG #2) PU 41/2 HAL 10-K CBP & 31/8 EXP 23 GRM .36" HLS, 120 DEG PHASING, SET CBP @ 11,458', PERF WELL AS OF PROCEDURE. WHP 3500 PSI, BRK 5144 PSI @ 4.7 BPM. ISIP 4166 PSI, FG .80. CALC HOLES OPEN @ 48.2 BPM @ 7792 PSI = 82% HOLES OPEN. MP 9063 PSI, MR 52.8 BPM, AP 7627 PSI, AR 50.2 BPM ISIP 4220 PSI, FG .81 NPI 54 PSI. SCREENED OUT ON FLUSH 105 BBLS SHORT, FLOW WELL BACK & REFLUSH.

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 920-12LT		Spud Conductor: 1/14/2011		Spud Date: 1/23/2011	
Project: UTAH-UINTAH		Site: NBU 920-12LT PAD		Rig Name No: SWABBCO 8/8	
Event: COMPLETION		Start Date: 1/4/2012		End Date: 1/14/2012	
Active Datum: RKB @4,716.00usft (above Mean Sea Level)			UWI: NW/SW/09/S/20/E/12/0/0/26/PM/S/1538/W/0/792/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	12:33 - 16:06	3.55	COMP	36	E			(STG # 3) PU 41/2 HAL 10-K CBP & 31/8 EXP 23 GRM .36" HLS, 120 DEG PHASING, SET CBP @ 11,388', PERF WELL AS OF PROCEDURE. WHP 3300 PSI, BRK 4755 PSI @ 4.5 BPM. ISIP 3873 PSI, FG .78. CALC HOLES OPEN @ 53.0 BPM @ 7739 PSI = 91% HOLES OPEN. MP 8437 PSI, MR 53.7 BPM, AP 7157 PSI, AR 50.8 BPM ISIP 3805 PSI, FG .77 NPI 68 PSI.
	16:06 - 17:30	1.40	COMP	34	H	P		(STG # 4) PU 41/2 HAL 10-K CBP & 31/8 EXP 23 GRM .36" HLS, 120 DEG PHASING, SET CBP @ 11,290', PERF WELL AS OF PROCEDURE. POOH SW SDFN
1/13/2012	7:00 - 8:09	1.15	COMP	36	E	P		HSM W/ SUPERIOR, HAD 2 FRAC TNKS LEAK OVER NIGHT. (STG # 4) WHP 3165 PSI, BRK 5302 PSI @ 4.8 BPM. ISIP 3834 PSI, FG .78. CALC HOLES OPEN @ 49.7 BPM @ 7650 PSI = 82 % HOLES OPEN. MP 8339 PSI, MR 52.0 BPM, AP 7408 PSI, AR 50.8 BPM ISIP 3927 PSI, FG .79 NPI 93 PSI.
	8:09 - 16:33	8.40	COMP	36	E	P		(STG # 5) PU 41/2 HAL 8-K CBP & 31/8 EXP 23 GRM .36" HLS, 120 DEG PHASING, SET CBP @ 10,444', PLUG WOULDN'T SET, POOH SLOW. CHECK OUT EQUIP, BAD DIOID THEY THINK, RIH SAME THING WOULDN'T GO OFF, POOH 100 FT MIN. PULL OFF 600' LINE, REHEAD CHECK EQUIP, RIH AGAIN, SET PLUG & PERF WELL AS OF PROCEDURE. (8 HRS WIRE LINE PROBLEMS) WHP 1723 PSI, BRK 3400 PSI @ 4.6 BPM. ISIP 2569 PSI, FG .69. CALC HOLES OPEN @ 47.1 BPM @ 6589 PSI = 69% HOLES OPEN. MP 7119 PSI, MR 52.9 BPM, AP 6232 PSI, AR 50.1 BPM ISIP 3330 PSI, FG .76 NPI 761 PSI.
	16:33 - 18:12	1.65	COMP	36	E	P		(STG # 6) PU 41/2 HAL 8-K CBP & 31/8 EXP 23 GRM .36" HLS, 120 DEG PHASING, SET CBP @ 10,168', PERF WELL AS OF PROCEDURE. WHP 1945 PSI, BRK 4080 PSI @ 4.7 BPM. ISIP 2905 PSI, FG .73. CALC HOLES OPEN @ 41.5 BPM @ 6683 PSI = 60% HOLES OPEN. MP 8073 PSI, MR 51.3 BPM, AP 7147 PSI, AR 47.0 BPM ISIP 3187 PSI, FG .76 NPI 282 PSI.
	18:12 - 20:30	2.30	COMP	34	I	P		338,900 LBS 30/50 TLC 25,630 LBS 30/50 OTTAWA 16,070 BBLs WTR 835 GALS SCALE INH 309 GALS BIOCIDE (KILL PLUG) RIH 41/2 8-K CBP & SET @ 9908' POOH SWI RD WIRE LINE & FRAC CREW. SDFN

US ROCKIES REGION
Operation Summary Report

Well: NBU 920-12LT		Spud Conductor: 1/14/2011	Spud Date: 1/23/2011
Project: UTAH-UINTAH		Site: NBU 920-12LT PAD	Rig Name No: SWABBCO 8/8
Event: COMPLETION		Start Date: 1/4/2012	End Date: 1/14/2012
Active Datum: RKB @4,716.00usft (above Mean Sea Level)		UWI: NW/SW09/S/20/E/12/0/0/26/PM/S/1538/W/0/792/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/14/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, TRIPPING TBG & DRILLING PLUGS.
	7:30 - 10:30	3.00	COMP	31	I	P		ND FV, NU 10-K BOPS, RU FLOOR & EQUIP. RIH W/ 37/8 BIT, POBS, 1.875 X/N & 268 JTS 23/8 L-80 OUT OF DERICK, PU 44 JTS OFF FLOAT. RU DRLG EQUIP. BROKE CIRC CONVENTIONAL, TEST BOPS TO 3,000# FOR 15 MIN NO PSI LOSS. RIH.
	10:30 - 17:00	6.50	COMP	44	C	P		C/O 30' SAND TAG 1ST PLUG @ 9908' DRL PLG IN 8 MIN, 800# PSI INCREASE RIH. C/O 20' SAND TAG 2ND PLUG @ 10,168' DRL PLG IN 5 MIN, 1500# PSI INCREASE RIH. C/O 15' SAND TAG 3RD PLUG @ 10,460' DRL PLG IN 3 MIN, 1000# PSI INCREASE RIH. C/O 15' SAND TAG 4TH PLUG @ 11,290' DRL PLG IN 15 MIN, 1000# PSI INCREASE RIH C/O 20' SAND TAG 5TH PLUG @ 11,388' DRL PLG IN 10 MIN, 800# PSI INCREASE RIH C/O 30' SAND TAG 6TH PLUG @ 11,458' DRL PLG IN 10 MIN, 600# PSI INCREASE RIH C/O TO 11,736', CIRC CLN, L/D 14 JTS. LAND TBG ON 355 JTS 23/8 L-80. ND BOPS NU WH, PUMP OFF BIT, TURN WELL OVER TO FB CREW. SDFWE KB= 19' (SURFACE OPEN W/ POPOFF) HANGER = .83' SICIP 3000 PSI, FTP 100 PSI 355 JTS 23/8 L-80 = 11,261.13' POBS W/ 1.875 X/N = 2.20' (TEST LINE TO HAL 9000 TO 4500) EOT @ 11,283.16' TWTR 16,270 BBLs TWR 1250 BBLs TWLTR 15,020 BBLs 375 JTD HAULED OUT 355 LANDED 20 TO RETURN
1/17/2012	7:00 -		PROD	50				WELL IP'D ON 1/17/12 - 3065 MCFD, 0 BOPD, 815 BWPD, CP 3267 #, FTP 3355#, CK 24/64", LP 104#, 24 HRS

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 920-12LT
Project:	UTAH - UTM (foot), NAD27, Zono 12N	TVD Reference:	GL 4697 & KB 19 @ 4716.00ft (ASSUMED)
Site:	NBU 920-12LT	MD Reference:	GL 4697 & KB 19 @ 4716.00ft (ASSUMED)
Well:	NBU 920-12LT	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

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

Site	NBU 920-12LT, SECTION 12 T9S T20E				
Site Position:		Northing:	14,546,124.56 usft	Latitude:	40° 2' 48.984 N
From:	Lat/Long	Easting:	2,026,297.42 usft	Longitude:	109° 37' 16.392 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.89 °

Well	NBU 920-12LT, 1538 FSL 762 FEL					
Well Position	+N-S	0.00 ft	Northing:	14,546,124.56 usft	Latitude:	40° 2' 48.984 N
	+E-W	0.00 ft	Easting:	2,026,297.42 usft	Longitude:	109° 37' 16.392 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,697.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/30/11	11.07	65.87	52,294

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	185.30	

Survey Program	Date	01/18/12			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
119.00	2,719.00	Survey #1 (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	
2,893.00	11,790.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI 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	
119.00	0.32	162.81	119.00	-0.32	0.10	0.31	0.27	0.27	0.00	
FIRST MS GYRO SURVEY										
219.00	0.32	223.64	219.00	-0.79	-0.01	0.78	0.32	0.00	60.83	
319.00	0.09	231.45	319.00	-1.04	-0.27	1.06	0.23	-0.23	7.81	
419.00	0.17	63.50	419.00	-1.02	-0.19	1.03	0.26	0.08	-167.95	
519.00	0.28	150.95	519.00	-1.17	0.06	1.16	0.32	0.11	87.45	
619.00	0.41	136.71	618.99	-1.64	0.42	1.60	0.15	0.13	-14.24	
719.00	0.44	164.95	718.99	-2.27	0.77	2.19	0.21	0.03	28.24	
819.00	0.36	193.35	818.99	-2.95	0.79	2.86	0.21	-0.08	28.40	

Company: US ROCKIES REGION PLANNING
 Project: UTAH - UTM (foot), NAD27, Zone 12N
 Site: NBU 920-12LT
 Well: NBU 920-12LT
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well NBU 920-12LT
 TVD Reference: GL 4697 & KB 19 @ 4716.00ft (ASSUMED)
 MD Reference: GL 4697 & KB 19 @ 4716.00ft (ASSUMED)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Single User Db

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)	
919.00	0.22	210.90	918.99	-3.42	0.62	3.35	0.16	-0.14	17.55	
1,019.00	0.20	225.39	1,018.99	-3.71	0.40	3.65	0.06	-0.02	14.49	
1,119.00	0.10	74.28	1,118.99	-3.81	0.36	3.76	0.29	-0.10	-151.11	
1,219.00	0.15	47.62	1,218.99	-3.69	0.54	3.63	0.08	0.05	-26.66	
1,319.00	0.25	87.64	1,318.99	-3.60	0.85	3.50	0.17	0.10	40.02	
1,419.00	0.13	161.01	1,418.99	-3.70	1.11	3.58	0.25	-0.12	73.37	
1,519.00	0.29	170.51	1,518.99	-4.05	1.19	3.93	0.16	0.16	9.50	
1,619.00	0.60	183.25	1,618.98	-4.82	1.20	4.69	0.32	0.31	12.74	
1,719.00	0.82	180.93	1,718.98	-6.06	1.16	5.93	0.22	0.22	-2.32	
1,819.00	1.04	181.23	1,818.96	-7.69	1.13	7.55	0.22	0.22	0.30	
1,919.00	1.28	177.53	1,918.94	-9.71	1.16	9.56	0.25	0.24	-3.70	
2,019.00	1.43	180.81	2,018.91	-12.07	1.19	11.91	0.17	0.15	3.28	
2,119.00	1.50	188.03	2,118.88	-14.62	0.99	14.46	0.20	0.07	7.22	
2,219.00	1.54	191.53	2,218.85	-17.23	0.53	17.11	0.10	0.04	3.50	
2,319.00	1.66	188.91	2,318.81	-19.98	0.04	19.89	0.14	0.12	-2.62	
2,419.00	1.62	189.89	2,418.77	-22.80	-0.43	22.74	0.05	-0.04	0.98	
2,519.00	1.60	199.23	2,518.73	-25.51	-1.13	25.51	0.26	-0.02	9.34	
2,619.00	1.58	193.42	2,618.69	-28.17	-1.91	28.23	0.16	-0.02	-5.81	
2,719.00	2.11	200.60	2,718.64	-31.23	-2.88	31.37	0.58	0.53	7.18	
LAST MS GYRO SURVEY										
2,893.00	1.23	202.67	2,892.56	-35.96	-4.72	36.24	0.51	-0.51	1.19	
FIRST SDI MWD PRODUCTION SURVEY										
2,988.00	1.23	190.10	2,987.54	-37.90	-5.29	38.23	0.28	0.00	-13.23	
3,083.00	0.88	204.69	3,082.52	-39.57	-5.78	39.93	0.46	-0.37	15.36	
3,178.00	0.18	344.70	3,177.52	-40.09	-6.12	40.48	1.08	-0.74	147.38	
3,273.00	1.41	356.83	3,272.51	-38.77	-6.23	39.18	1.30	1.29	12.77	
3,368.00	2.46	352.26	3,367.45	-35.59	-6.57	36.04	1.12	1.11	-4.81	
3,463.00	2.46	353.14	3,462.37	-31.54	-7.08	32.06	0.04	0.00	0.93	
3,558.00	1.85	0.61	3,557.30	-27.99	-7.31	28.54	0.71	-0.64	7.86	
3,652.00	1.49	9.58	3,651.26	-25.26	-7.09	25.81	0.47	-0.38	9.54	
3,747.00	1.06	19.42	3,746.23	-23.22	-6.59	23.73	0.51	-0.45	10.36	
3,842.00	2.15	35.36	3,841.20	-20.93	-5.27	21.33	1.23	1.15	16.78	
3,937.00	1.88	36.87	3,936.14	-18.23	-3.30	18.46	0.29	-0.28	1.59	
4,031.00	1.83	14.89	4,030.09	-15.55	-1.99	15.67	0.75	-0.05	-23.38	
4,127.00	1.32	15.47	4,126.05	-13.00	-1.30	13.07	0.53	-0.53	0.60	
4,221.00	2.02	350.42	4,220.01	-10.33	-1.29	10.40	1.06	0.74	-26.65	
4,316.00	1.14	359.38	4,314.98	-7.73	-1.58	7.84	0.96	-0.93	9.43	
4,411.00	1.23	355.51	4,409.96	-5.77	-1.67	5.90	0.13	0.09	-4.07	
4,506.00	0.53	346.20	4,504.94	-4.33	-1.85	4.48	0.75	-0.74	-9.80	
4,601.00	0.09	15.20	4,599.94	-3.83	-1.94	3.99	0.48	-0.46	30.53	
4,695.00	0.79	147.57	4,693.94	-4.30	-1.57	4.43	0.91	0.74	140.82	
4,790.00	0.62	183.69	4,788.93	-5.37	-1.25	5.46	0.49	-0.18	38.02	
4,887.00	0.70	273.42	4,885.93	-5.86	-1.88	6.00	0.96	0.08	92.51	

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (foot), NAD27, Zono 12N
Site: NBU 920-12LT
Well: NBU 920-12LT
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 920-12LT
TVD Reference: GL 4697 & KB 19 @ 4716.00ft (ASSUMED)
MD Reference: GL 4697 & KB 19 @ 4716.00ft (ASSUMED)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)	
4,982.00	1.23	311.66	4,980.92	-5.14	-3.22	5.42	0.85	0.56	40.25	
5,077.00	0.88	299.18	5,075.90	-4.11	-4.62	4.52	0.44	-0.37	-13.14	
5,172.00	0.62	344.97	5,170.89	-3.26	-5.39	3.74	0.66	-0.27	48.20	
5,266.00	1.06	350.15	5,264.88	-1.91	-5.67	2.43	0.47	0.47	5.51	
5,361.00	1.06	15.29	5,359.87	-0.20	-5.59	0.71	0.49	0.00	26.46	
5,456.00	2.02	6.41	5,454.83	2.31	-5.17	-1.83	1.04	1.01	-9.35	
5,551.00	1.23	12.21	5,549.79	4.97	-4.77	-4.51	0.85	-0.83	6.11	
5,645.00	2.15	0.86	5,643.75	7.72	-4.53	-7.27	1.04	0.98	-12.07	
5,740.00	1.79	359.55	5,738.69	10.99	-4.51	-10.53	0.38	-0.38	-1.38	
5,835.00	1.32	356.48	5,833.66	13.57	-4.59	-13.08	0.50	-0.49	-3.23	
5,930.00	1.76	354.46	5,928.62	16.11	-4.80	-15.60	0.47	0.46	-2.13	
6,025.00	1.49	352.53	6,023.59	18.79	-5.10	-18.23	0.29	-0.28	-2.03	
6,120.00	1.32	356.04	6,118.56	21.10	-5.34	-20.52	0.20	-0.18	3.69	
6,215.00	1.23	2.46	6,213.53	23.21	-5.37	-22.62	0.18	-0.09	6.76	
6,310.00	0.97	7.20	6,308.52	25.03	-5.22	-24.44	0.29	-0.27	4.99	
6,405.00	1.06	15.55	6,403.50	26.67	-4.89	-26.11	0.18	0.09	8.79	
6,500.00	0.53	33.75	6,498.49	27.89	-4.41	-27.36	0.61	-0.56	19.16	
6,594.00	0.26	83.23	6,592.49	28.27	-3.96	-27.79	0.44	-0.29	52.64	
6,689.00	0.53	100.19	6,687.49	28.22	-3.31	-27.79	0.31	0.28	17.85	
6,784.00	0.53	93.07	6,782.48	28.12	-2.44	-27.77	0.07	0.00	-7.49	
6,878.00	0.79	134.21	6,876.48	27.64	-1.54	-27.38	0.56	0.28	43.77	
6,974.00	0.79	142.91	6,972.47	26.65	-0.67	-26.48	0.12	0.00	9.06	
7,124.00	1.32	148.97	7,122.44	24.35	0.85	-24.32	0.36	0.35	4.04	
7,219.00	0.62	154.07	7,217.43	22.95	1.64	-23.00	0.74	-0.74	5.37	
7,258.00	1.06	165.14	7,256.42	22.41	1.82	-22.48	1.20	1.13	28.38	
7,353.00	1.06	169.01	7,351.41	20.70	2.22	-20.81	0.08	0.00	4.07	
7,449.00	0.26	225.70	7,447.40	19.67	2.23	-19.80	0.98	-0.83	59.05	
7,543.00	0.62	188.79	7,541.40	19.02	2.00	-19.13	0.47	0.38	-39.27	
7,638.00	0.79	174.64	7,636.39	17.86	1.98	-17.97	0.25	0.18	-14.89	
7,733.00	1.06	185.36	7,731.38	16.34	1.96	-16.45	0.34	0.28	11.28	
7,828.00	0.97	174.28	7,826.36	14.66	1.96	-14.78	0.23	-0.09	-11.66	
7,923.00	1.32	181.23	7,921.35	12.77	2.01	-12.90	0.40	0.37	7.32	
8,018.00	1.41	175.51	8,016.32	10.51	2.08	-10.66	0.17	0.09	-8.02	
8,113.00	1.58	175.16	8,111.29	8.04	2.28	-8.21	0.18	0.18	-0.37	
8,208.00	0.79	194.32	8,206.27	6.10	2.23	-6.28	0.92	-0.83	20.17	
8,303.00	0.79	302.69	8,301.26	5.82	1.52	-5.93	1.35	0.00	114.07	
8,397.00	1.23	341.45	8,395.25	7.12	0.65	-7.15	0.84	0.47	41.23	
8,492.00	1.06	342.24	8,490.23	8.93	0.06	-8.89	0.18	-0.18	0.83	
8,587.00	0.79	345.41	8,585.21	10.40	-0.37	-10.32	0.29	-0.28	3.34	
8,682.00	1.49	322.64	8,680.20	12.01	-1.29	-11.84	0.86	0.74	-23.97	
8,776.00	1.23	315.44	8,774.17	13.70	-2.74	-13.39	0.33	-0.28	-7.66	
8,871.00	1.23	316.14	8,869.15	15.16	-4.16	-14.72	0.02	0.00	0.74	
8,966.00	1.14	304.10	8,964.13	16.43	-5.65	-15.84	0.28	-0.09	-12.67	
9,061.00	0.70	325.10	9,059.12	17.44	-6.76	-16.74	0.58	-0.46	22.11	

Company: US ROCKIES REGION PLANNING
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North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
9,155.00	0.79	326.25	9,153.11	18.45	-7.45	-17.68	0.10	0.10	1.22	
9,250.00	0.53	339.52	9,248.10	19.40	-7.97	-18.58	0.32	-0.27	13.97	
9,345.00	0.18	348.48	9,343.10	19.96	-8.15	-19.12	0.37	-0.37	9.43	
9,440.00	0.09	71.45	9,438.10	20.13	-8.11	-19.29	0.20	-0.09	87.34	
9,535.00	0.35	142.82	9,533.10	19.92	-7.86	-19.11	0.35	0.27	75.13	
9,629.00	0.88	134.03	9,627.09	19.19	-7.17	-18.45	0.57	0.56	-9.35	
9,725.00	1.23	145.90	9,723.08	17.83	-6.06	-17.19	0.43	0.36	12.36	
9,819.00	1.23	159.69	9,817.05	16.04	-5.15	-15.50	0.31	0.00	14.67	
9,914.00	0.88	162.59	9,912.04	14.39	-4.58	-13.91	0.37	-0.37	3.05	
10,008.00	0.97	169.45	10,006.03	12.92	-4.21	-12.48	0.15	0.10	7.30	
10,103.00	1.37	156.86	10,101.01	11.09	-3.62	-10.70	0.50	0.42	-13.25	
10,198.00	1.58	158.02	10,195.97	8.83	-2.68	-8.54	0.22	0.22	1.22	
10,294.00	1.85	172.26	10,291.93	6.06	-1.98	-5.86	0.52	0.28	14.83	
10,388.00	1.76	183.42	10,385.89	3.12	-1.86	-2.93	0.39	-0.10	11.87	
10,483.00	1.81	178.26	10,480.84	0.16	-1.90	0.01	0.18	0.05	-5.43	
10,577.00	1.76	171.74	10,574.79	-2.75	-1.65	2.89	0.22	-0.05	-6.94	
10,672.00	2.02	168.04	10,669.74	-5.83	-1.09	5.91	0.30	0.27	-3.89	
10,767.00	2.37	169.19	10,764.67	-9.40	-0.38	9.39	0.37	0.37	1.21	
10,862.00	2.73	167.60	10,859.58	-13.54	0.48	13.43	0.39	0.38	-1.67	
10,957.00	2.73	170.68	10,954.47	-17.98	1.33	17.78	0.15	0.00	3.24	
11,051.00	2.64	170.50	11,048.37	-22.32	2.05	22.04	0.10	-0.10	-0.19	
11,146.00	2.55	165.32	11,143.27	-26.52	2.94	26.14	0.26	-0.09	-5.45	
11,241.00	2.46	162.51	11,238.18	-30.51	4.09	30.01	0.16	-0.09	-2.96	
11,336.00	2.64	161.36	11,333.09	-34.53	5.40	33.88	0.20	0.19	-1.21	
11,451.00	2.64	157.06	11,447.96	-39.48	7.28	38.64	0.17	0.00	-3.74	
11,526.00	2.46	156.79	11,522.89	-42.55	8.59	41.57	0.24	-0.24	-0.36	
11,621.00	2.51	158.03	11,617.80	-46.35	10.17	45.22	0.08	0.05	1.31	
11,716.00	2.46	159.69	11,712.71	-50.19	11.66	48.90	0.09	-0.05	1.75	
LAST SDI MWD PRODUCTION SURVEY										
11,790.00	2.50	158.50	11,786.64	-53.18	12.80	51.78	0.09	0.05	-1.61	
SDI PROJECTION TO BIT										

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N-S (ft)	+E-W (ft)	
119.00	119.00	-0.32	0.10	FIRST MS GYRO SURVEY
2,719.00	2,718.64	-31.23	-2.88	LAST MS GYRO SURVEY
2,893.00	2,892.56	-35.96	-4.72	FIRST SDI MWD PRODUCTION SURVEY
11,716.00	11,712.71	-50.19	11.66	LAST SDI MWD PRODUCTION SURVEY
11,790.00	11,786.64	-53.18	12.80	SDI PROJECTION TO BIT

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (foot), NAD27, Zono 12N
Site: NBU 920-12LT
Well: NBU 920-12LT
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 920-12LT
TVD Reference: GL 4697 & KB 19 @ 4716.00ft (ASSUMED)
MD Reference: GL 4697 & KB 19 @ 4716.00ft (ASSUMED)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Checked By: _____ Approved By: _____ Date: _____



Scientific Drilling
Rocky Mountain Operations

US ROCKIES REGION PLANNING

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

NBU 920-12LT

NBU 920-12LT

OH

Design: OH

Survey Report - Geographic

24 January, 2012

Anadarko 
Petroleum Corporation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 920-12LT
Project:	UTAH - UTM (foot), NAD27, Zono 12N	TVD Reference:	GL 4697 & KB 19 @ 4716.00ft (ASSUMED)
Site:	NBU 920-12LT	MD Reference:	GL 4697 & KB 19 @ 4716.00ft (ASSUMED)
Well:	NBU 920-12LT	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

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

Site	NBU 920-12LT, SECTION 12 T9S T20E				
Site Position:		Northing:	14,546,124.56 usft	Latitude:	40° 2' 48.984 N
From:	Lat/Long	Easting:	2,026,297.42 usft	Longitude:	109° 37' 16.392 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.89 °

Well	NBU 920-12LT, 1538 FSL 762 FEL					
Well Position	+N-S	0.00 ft	Northing:	14,546,124.56 usft	Latitude:	40° 2' 48.984 N
	+E-W	0.00 ft	Easting:	2,026,297.42 usft	Longitude:	109° 37' 16.392 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,697.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	11/30/11	(°)	(°)	(nT)
			11.07	65.87	52,294

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.00	0.00	0.00	185.30	

Survey Program	Date	01/18/12			
From	To	Survey (Wellbore)	Tool Name	Description	
(ft)	(ft)				
119.00	2,719.00	Survey #1 (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	
2,893.00	11,790.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

Survey										
Measured	Inclination	Azimuth	Vertical	+N-S	+E-W	Map	Map	Latitude	Longitude	
Depth	(°)	(°)	Depth	(ft)	(ft)	Northing	Easting			
(ft)			(ft)			(usft)	(usft)			
0.00	0.00	0.00	0.00	0.00	0.00	14,546,124.56	2,026,297.42	40° 2' 48.984 N	109° 37' 16.392 W	
119.00	0.32	162.81	119.00	-0.32	0.10	14,546,124.24	2,026,297.53	40° 2' 48.981 N	109° 37' 16.391 W	
FIRST MS GYRO SURVEY										
219.00	0.32	223.64	219.00	-0.79	-0.01	14,546,123.77	2,026,297.42	40° 2' 48.976 N	109° 37' 16.392 W	
319.00	0.09	231.45	319.00	-1.04	-0.27	14,546,123.52	2,026,297.17	40° 2' 48.974 N	109° 37' 16.395 W	
419.00	0.17	63.50	419.00	-1.02	-0.19	14,546,123.53	2,026,297.24	40° 2' 48.974 N	109° 37' 16.395 W	
519.00	0.28	150.95	519.00	-1.17	0.06	14,546,123.39	2,026,297.50	40° 2' 48.972 N	109° 37' 16.391 W	
619.00	0.41	136.71	618.99	-1.64	0.42	14,546,122.92	2,026,297.87	40° 2' 48.968 N	109° 37' 16.387 W	
719.00	0.44	164.95	718.99	-2.27	0.77	14,546,122.30	2,026,298.22	40° 2' 48.962 N	109° 37' 16.382 W	
819.00	0.36	193.35	818.99	-2.95	0.79	14,546,121.62	2,026,298.26	40° 2' 48.955 N	109° 37' 16.382 W	
919.00	0.22	210.90	918.99	-3.42	0.62	14,546,121.15	2,026,298.10	40° 2' 48.950 N	109° 37' 16.384 W	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 920-12LT
Project:	UTAH - UTM (foot), NAD27, Zono 12N	TVD Reference:	GL 4697 & KB 19 @ 4716.00ft (ASSUMED)
Site:	NBU 920-12LT	MD Reference:	GL 4697 & KB 19 @ 4716.00ft (ASSUMED)
Well:	NBU 920-12LT	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
1,019.00	0.20	225.39	1,018.99	-3.71	0.40	14,546,120.86	2,026,297.88	40° 2' 48.947 N	109° 37' 16.387 W	
1,119.00	0.10	74.28	1,118.99	-3.81	0.36	14,546,120.76	2,026,297.84	40° 2' 48.946 N	109° 37' 16.387 W	
1,219.00	0.15	47.62	1,218.99	-3.69	0.54	14,546,120.87	2,026,298.02	40° 2' 48.947 N	109° 37' 16.385 W	
1,319.00	0.25	87.64	1,318.99	-3.60	0.85	14,546,120.97	2,026,298.33	40° 2' 48.948 N	109° 37' 16.381 W	
1,419.00	0.13	161.01	1,418.99	-3.70	1.11	14,546,120.88	2,026,298.59	40° 2' 48.947 N	109° 37' 16.378 W	
1,519.00	0.29	170.51	1,518.99	-4.05	1.19	14,546,120.52	2,026,298.67	40° 2' 48.944 N	109° 37' 16.377 W	
1,619.00	0.60	183.25	1,618.98	-4.82	1.20	14,546,119.75	2,026,298.70	40° 2' 48.936 N	109° 37' 16.377 W	
1,719.00	0.82	180.93	1,718.98	-6.06	1.16	14,546,118.51	2,026,298.67	40° 2' 48.924 N	109° 37' 16.377 W	
1,819.00	1.04	181.23	1,818.96	-7.69	1.13	14,546,116.89	2,026,298.67	40° 2' 48.908 N	109° 37' 16.378 W	
1,919.00	1.28	177.53	1,918.94	-9.71	1.16	14,546,114.87	2,026,298.73	40° 2' 48.888 N	109° 37' 16.377 W	
2,019.00	1.43	180.81	2,018.91	-12.07	1.19	14,546,112.50	2,026,298.79	40° 2' 48.865 N	109° 37' 16.377 W	
2,119.00	1.50	188.03	2,118.88	-14.62	0.99	14,546,109.96	2,026,298.63	40° 2' 48.840 N	109° 37' 16.379 W	
2,219.00	1.54	191.53	2,218.85	-17.23	0.53	14,546,107.34	2,026,298.22	40° 2' 48.814 N	109° 37' 16.385 W	
2,319.00	1.66	188.91	2,318.81	-19.98	0.04	14,546,104.58	2,026,297.77	40° 2' 48.787 N	109° 37' 16.391 W	
2,419.00	1.62	189.89	2,418.77	-22.80	-0.43	14,546,101.75	2,026,297.35	40° 2' 48.759 N	109° 37' 16.397 W	
2,519.00	1.60	199.23	2,518.73	-25.51	-1.13	14,546,099.03	2,026,296.69	40° 2' 48.732 N	109° 37' 16.407 W	
2,619.00	1.58	193.42	2,618.69	-28.17	-1.91	14,546,096.36	2,026,295.95	40° 2' 48.706 N	109° 37' 16.417 W	
2,719.00	2.11	200.60	2,718.64	-31.23	-2.88	14,546,093.28	2,026,295.03	40° 2' 48.675 N	109° 37' 16.429 W	
LAST MS GYRO SURVEY										
2,893.00	1.23	202.67	2,892.56	-35.96	-4.72	14,546,088.53	2,026,293.26	40° 2' 48.629 N	109° 37' 16.453 W	
FIRST SDI MWD PRODUCTION SURVEY										
2,988.00	1.23	190.10	2,987.54	-37.90	-5.29	14,546,086.58	2,026,292.72	40° 2' 48.609 N	109° 37' 16.460 W	
3,083.00	0.88	204.69	3,082.52	-39.57	-5.78	14,546,084.91	2,026,292.26	40° 2' 48.593 N	109° 37' 16.466 W	
3,178.00	0.18	344.70	3,177.52	-40.09	-6.12	14,546,084.38	2,026,291.92	40° 2' 48.588 N	109° 37' 16.471 W	
3,273.00	1.41	356.83	3,272.51	-38.77	-6.23	14,546,085.69	2,026,291.80	40° 2' 48.601 N	109° 37' 16.472 W	
3,368.00	2.46	352.26	3,367.45	-35.59	-6.57	14,546,088.87	2,026,291.41	40° 2' 48.632 N	109° 37' 16.476 W	
3,463.00	2.46	353.14	3,462.37	-31.54	-7.08	14,546,092.91	2,026,290.83	40° 2' 48.672 N	109° 37' 16.483 W	
3,558.00	1.85	0.61	3,557.30	-27.99	-7.31	14,546,096.46	2,026,290.55	40° 2' 48.707 N	109° 37' 16.486 W	
3,652.00	1.49	9.58	3,651.26	-25.26	-7.09	14,546,099.19	2,026,290.72	40° 2' 48.734 N	109° 37' 16.483 W	
3,747.00	1.06	19.42	3,746.23	-23.22	-6.59	14,546,101.24	2,026,291.19	40° 2' 48.755 N	109° 37' 16.477 W	
3,842.00	2.15	35.36	3,841.20	-20.93	-5.27	14,546,103.54	2,026,292.48	40° 2' 48.777 N	109° 37' 16.460 W	
3,937.00	1.88	36.87	3,936.14	-18.23	-3.30	14,546,106.27	2,026,294.40	40° 2' 48.804 N	109° 37' 16.434 W	
4,031.00	1.83	14.89	4,030.09	-15.55	-1.99	14,546,108.98	2,026,295.67	40° 2' 48.830 N	109° 37' 16.418 W	
4,127.00	1.32	15.47	4,126.05	-13.00	-1.30	14,546,111.53	2,026,296.32	40° 2' 48.855 N	109° 37' 16.409 W	
4,221.00	2.02	350.42	4,220.01	-10.33	-1.29	14,546,114.21	2,026,296.29	40° 2' 48.882 N	109° 37' 16.409 W	
4,316.00	1.14	359.38	4,314.98	-7.73	-1.58	14,546,116.80	2,026,295.96	40° 2' 48.908 N	109° 37' 16.412 W	
4,411.00	1.23	355.51	4,409.96	-5.77	-1.67	14,546,118.76	2,026,295.84	40° 2' 48.927 N	109° 37' 16.413 W	
4,506.00	0.53	346.20	4,504.94	-4.33	-1.85	14,546,120.20	2,026,295.63	40° 2' 48.941 N	109° 37' 16.416 W	
4,601.00	0.09	15.20	4,599.94	-3.83	-1.94	14,546,120.70	2,026,295.54	40° 2' 48.946 N	109° 37' 16.417 W	
4,695.00	0.79	147.57	4,693.94	-4.30	-1.57	14,546,120.23	2,026,295.92	40° 2' 48.941 N	109° 37' 16.412 W	
4,790.00	0.62	183.69	4,788.93	-5.37	-1.25	14,546,119.17	2,026,296.25	40° 2' 48.931 N	109° 37' 16.408 W	
4,887.00	0.70	273.42	4,885.93	-5.86	-1.88	14,546,118.67	2,026,295.63	40° 2' 48.926 N	109° 37' 16.416 W	
4,982.00	1.23	311.66	4,980.92	-5.14	-3.22	14,546,119.36	2,026,294.28	40° 2' 48.933 N	109° 37' 16.433 W	
5,077.00	0.88	299.18	5,075.90	-4.11	-4.62	14,546,120.37	2,026,292.87	40° 2' 48.943 N	109° 37' 16.451 W	
5,172.00	0.62	344.97	5,170.89	-3.26	-5.39	14,546,121.21	2,026,292.08	40° 2' 48.952 N	109° 37' 16.461 W	
5,266.00	1.06	350.15	5,264.88	-1.91	-5.67	14,546,122.56	2,026,291.78	40° 2' 48.965 N	109° 37' 16.465 W	
5,361.00	1.06	15.29	5,359.87	-0.20	-5.59	14,546,124.27	2,026,291.84	40° 2' 48.982 N	109° 37' 16.464 W	
5,456.00	2.02	6.41	5,454.83	2.31	-5.17	14,546,126.79	2,026,292.22	40° 2' 49.007 N	109° 37' 16.458 W	
5,551.00	1.23	12.21	5,549.79	4.97	-4.77	14,546,129.46	2,026,292.58	40° 2' 49.033 N	109° 37' 16.453 W	
5,645.00	2.15	0.86	5,643.75	7.72	-4.53	14,546,132.21	2,026,292.77	40° 2' 49.060 N	109° 37' 16.450 W	
5,740.00	1.79	359.55	5,738.69	10.99	-4.51	14,546,135.47	2,026,292.74	40° 2' 49.093 N	109° 37' 16.450 W	
5,835.00	1.32	356.48	5,833.66	13.57	-4.59	14,546,138.05	2,026,292.62	40° 2' 49.118 N	109° 37' 16.451 W	
5,930.00	1.76	354.46	5,928.62	16.11	-4.80	14,546,140.59	2,026,292.37	40° 2' 49.143 N	109° 37' 16.454 W	
6,025.00	1.49	352.53	6,023.59	18.79	-5.10	14,546,143.26	2,026,292.03	40° 2' 49.170 N	109° 37' 16.458 W	
6,120.00	1.32	356.04	6,118.56	21.10	-5.34	14,546,145.57	2,026,291.76	40° 2' 49.193 N	109° 37' 16.461 W	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 920-12LT
Project:	UTAH - UTM (foot), NAD27, Zone 12N	TVD Reference:	GL 4697 & KB 19 @ 4716.00ft (ASSUMED)
Site:	NBU 920-12LT	MD Reference:	GL 4697 & KB 19 @ 4716.00ft (ASSUMED)
Well:	NBU 920-12LT	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
6,215.00	1.23	2.46	6,213.53	23.21	-5.37	14,546,147.68	2,026,291.69	40° 2' 49.213 N	109° 37' 16.461 W	
6,310.00	0.97	7.20	6,308.52	25.03	-5.22	14,546,149.50	2,026,291.81	40° 2' 49.231 N	109° 37' 16.459 W	
6,405.00	1.06	15.55	6,403.50	26.67	-4.89	14,546,151.15	2,026,292.12	40° 2' 49.248 N	109° 37' 16.455 W	
6,500.00	0.53	33.75	6,498.49	27.89	-4.41	14,546,152.37	2,026,292.58	40° 2' 49.260 N	109° 37' 16.449 W	
6,594.00	0.26	83.23	6,592.49	28.27	-3.96	14,546,152.76	2,026,293.03	40° 2' 49.263 N	109° 37' 16.443 W	
6,689.00	0.53	100.19	6,687.49	28.22	-3.31	14,546,152.72	2,026,293.68	40° 2' 49.263 N	109° 37' 16.435 W	
6,784.00	0.53	93.07	6,782.48	28.12	-2.44	14,546,152.63	2,026,294.55	40° 2' 49.262 N	109° 37' 16.423 W	
6,878.00	0.79	134.21	6,876.48	27.64	-1.54	14,546,152.17	2,026,295.46	40° 2' 49.257 N	109° 37' 16.412 W	
6,974.00	0.79	142.91	6,972.47	26.65	-0.67	14,546,151.20	2,026,296.34	40° 2' 49.247 N	109° 37' 16.401 W	
7,124.00	1.32	148.97	7,122.44	24.35	0.85	14,546,148.92	2,026,297.89	40° 2' 49.225 N	109° 37' 16.381 W	
7,219.00	0.62	154.07	7,217.43	22.95	1.64	14,546,147.53	2,026,298.70	40° 2' 49.211 N	109° 37' 16.371 W	
7,258.00	1.06	165.14	7,256.42	22.41	1.82	14,546,146.99	2,026,298.90	40° 2' 49.206 N	109° 37' 16.369 W	
7,353.00	1.06	169.01	7,351.41	20.70	2.22	14,546,145.29	2,026,299.32	40° 2' 49.189 N	109° 37' 16.364 W	
7,449.00	0.26	225.70	7,447.40	19.67	2.23	14,546,144.26	2,026,299.35	40° 2' 49.178 N	109° 37' 16.363 W	
7,543.00	0.62	188.79	7,541.40	19.02	2.00	14,546,143.61	2,026,299.13	40° 2' 49.172 N	109° 37' 16.366 W	
7,638.00	0.79	174.64	7,636.39	17.86	1.98	14,546,142.45	2,026,299.13	40° 2' 49.161 N	109° 37' 16.367 W	
7,733.00	1.06	185.36	7,731.38	16.34	1.96	14,546,140.92	2,026,299.13	40° 2' 49.145 N	109° 37' 16.367 W	
7,828.00	0.97	174.28	7,826.36	14.66	1.96	14,546,139.25	2,026,299.15	40° 2' 49.129 N	109° 37' 16.367 W	
7,923.00	1.32	181.23	7,921.35	12.77	2.01	14,546,137.35	2,026,299.24	40° 2' 49.110 N	109° 37' 16.366 W	
8,018.00	1.41	175.51	8,016.32	10.51	2.08	14,546,135.10	2,026,299.34	40° 2' 49.088 N	109° 37' 16.365 W	
8,113.00	1.58	175.16	8,111.29	8.04	2.28	14,546,132.63	2,026,299.58	40° 2' 49.063 N	109° 37' 16.363 W	
8,208.00	0.79	194.32	8,206.27	6.10	2.23	14,546,130.69	2,026,299.56	40° 2' 49.044 N	109° 37' 16.363 W	
8,303.00	0.79	302.69	8,301.26	5.82	1.52	14,546,130.40	2,026,298.85	40° 2' 49.041 N	109° 37' 16.372 W	
8,397.00	1.23	341.45	8,395.25	7.12	0.65	14,546,131.69	2,026,297.97	40° 2' 49.054 N	109° 37' 16.384 W	
8,492.00	1.06	342.24	8,490.23	8.93	0.06	14,546,133.48	2,026,297.35	40° 2' 49.072 N	109° 37' 16.391 W	
8,587.00	0.79	345.41	8,585.21	10.40	-0.37	14,546,134.95	2,026,296.89	40° 2' 49.087 N	109° 37' 16.397 W	
8,682.00	1.49	322.64	8,680.20	12.01	-1.29	14,546,136.55	2,026,295.95	40° 2' 49.103 N	109° 37' 16.409 W	
8,776.00	1.23	315.44	8,774.17	13.70	-2.74	14,546,138.22	2,026,294.47	40° 2' 49.119 N	109° 37' 16.427 W	
8,871.00	1.23	316.14	8,869.15	15.16	-4.16	14,546,139.66	2,026,293.03	40° 2' 49.134 N	109° 37' 16.445 W	
8,966.00	1.14	304.10	8,964.13	16.43	-5.65	14,546,140.90	2,026,291.52	40° 2' 49.146 N	109° 37' 16.465 W	
9,061.00	0.70	325.10	9,059.12	17.44	-6.76	14,546,141.89	2,026,290.39	40° 2' 49.156 N	109° 37' 16.479 W	
9,155.00	0.79	326.25	9,153.11	18.45	-7.45	14,546,142.88	2,026,289.69	40° 2' 49.166 N	109° 37' 16.488 W	
9,250.00	0.53	339.52	9,248.10	19.40	-7.97	14,546,143.83	2,026,289.16	40° 2' 49.176 N	109° 37' 16.494 W	
9,345.00	0.18	348.48	9,343.10	19.96	-8.15	14,546,144.39	2,026,288.96	40° 2' 49.181 N	109° 37' 16.497 W	
9,440.00	0.09	71.45	9,438.10	20.13	-8.11	14,546,144.56	2,026,289.00	40° 2' 49.183 N	109° 37' 16.496 W	
9,535.00	0.35	142.82	9,533.10	19.92	-7.86	14,546,144.35	2,026,289.25	40° 2' 49.181 N	109° 37' 16.493 W	
9,629.00	0.88	134.03	9,627.09	19.19	-7.17	14,546,143.63	2,026,289.95	40° 2' 49.174 N	109° 37' 16.484 W	
9,725.00	1.23	145.90	9,723.08	17.83	-6.06	14,546,142.29	2,026,291.08	40° 2' 49.160 N	109° 37' 16.470 W	
9,819.00	1.23	159.69	9,817.05	16.04	-5.15	14,546,140.52	2,026,292.03	40° 2' 49.143 N	109° 37' 16.458 W	
9,914.00	0.88	162.59	9,912.04	14.39	-4.58	14,546,138.88	2,026,292.62	40° 2' 49.126 N	109° 37' 16.451 W	
10,008.00	0.97	169.45	10,006.03	12.92	-4.21	14,546,137.41	2,026,293.01	40° 2' 49.112 N	109° 37' 16.446 W	
10,103.00	1.37	156.86	10,101.01	11.09	-3.62	14,546,135.59	2,026,293.63	40° 2' 49.094 N	109° 37' 16.439 W	
10,198.00	1.58	158.02	10,195.97	8.83	-2.68	14,546,133.34	2,026,294.60	40° 2' 49.071 N	109° 37' 16.427 W	
10,294.00	1.85	172.26	10,291.93	6.06	-1.98	14,546,130.59	2,026,295.35	40° 2' 49.044 N	109° 37' 16.417 W	
10,388.00	1.76	183.42	10,385.89	3.12	-1.86	14,546,127.65	2,026,295.51	40° 2' 49.015 N	109° 37' 16.416 W	
10,483.00	1.81	178.26	10,480.84	0.16	-1.90	14,546,124.69	2,026,295.52	40° 2' 48.986 N	109° 37' 16.416 W	
10,577.00	1.76	171.74	10,574.79	-2.75	-1.65	14,546,121.78	2,026,295.81	40° 2' 48.957 N	109° 37' 16.413 W	
10,672.00	2.02	168.04	10,669.74	-5.83	-1.09	14,546,118.71	2,026,296.42	40° 2' 48.926 N	109° 37' 16.406 W	
10,767.00	2.37	169.19	10,764.67	-9.40	-0.38	14,546,115.15	2,026,297.19	40° 2' 48.891 N	109° 37' 16.397 W	
10,862.00	2.73	167.60	10,859.58	-13.54	0.48	14,546,111.03	2,026,298.11	40° 2' 48.850 N	109° 37' 16.386 W	
10,957.00	2.73	170.68	10,954.47	-17.98	1.33	14,546,106.60	2,026,299.03	40° 2' 48.806 N	109° 37' 16.375 W	
11,051.00	2.64	170.50	11,048.37	-22.32	2.05	14,546,102.27	2,026,299.81	40° 2' 48.763 N	109° 37' 16.366 W	
11,146.00	2.55	165.32	11,143.27	-26.52	2.94	14,546,098.08	2,026,300.78	40° 2' 48.722 N	109° 37' 16.354 W	
11,241.00	2.46	162.51	11,238.18	-30.51	4.09	14,546,094.11	2,026,301.99	40° 2' 48.682 N	109° 37' 16.339 W	
11,336.00	2.64	161.36	11,333.09	-34.53	5.40	14,546,090.11	2,026,303.36	40° 2' 48.643 N	109° 37' 16.322 W	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 920-12LT
Project:	UTAH - UTM (foot), NAD27, Zono 12N	TVD Reference:	GL 4697 & KB 19 @ 4716.00ft (ASSUMED)
Site:	NBU 920-12LT	MD Reference:	GL 4697 & KB 19 @ 4716.00ft (ASSUMED)
Well:	NBU 920-12LT	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
11,451.00	2.64	157.06	11,447.96	-39.48	7.28	14,546,085.19	2,026,305.32	40° 2' 48.594 N	109° 37' 16.298 W	
11,526.00	2.46	156.79	11,522.89	-42.55	8.59	14,546,082.14	2,026,306.67	40° 2' 48.563 N	109° 37' 16.282 W	
11,621.00	2.51	158.03	11,617.80	-46.35	10.17	14,546,078.37	2,026,308.31	40° 2' 48.526 N	109° 37' 16.261 W	
11,716.00	2.46	159.69	11,712.71	-50.19	11.66	14,546,074.55	2,026,309.86	40° 2' 48.488 N	109° 37' 16.242 W	
LAST SDI MWD PRODUCTION SURVEY										
11,790.00	2.50	158.50	11,786.64	-53.18	12.80	14,546,071.58	2,026,311.05	40° 2' 48.458 N	109° 37' 16.227 W	
SDI PROJECTION TO BIT										

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N-S (ft)	+E-W (ft)		
119.00	119.00	-0.32	0.10	FIRST MS GYRO SURVEY	
2,719.00	2,718.64	-31.23	-2.88	LAST MS GYRO SURVEY	
2,893.00	2,892.56	-35.96	-4.72	FIRST SDI MWD PRODUCTION SURVEY	
11,716.00	11,712.71	-50.19	11.66	LAST SDI MWD PRODUCTION SURVEY	
11,790.00	11,786.64	-53.18	12.80	SDI PROJECTION TO BIT	

Checked By: _____	Approved By: _____	Date: _____
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