

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

FORM 3

AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL				1. WELL NAME and NUMBER NBU 1022-11K1T		
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>				3. FIELD OR WILDCAT NATURAL BUTTES		
4. TYPE OF WELL Gas Well Coalbed Methane Well: NO				5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES		
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.				7. OPERATOR PHONE 720 929-6587		
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217				9. OPERATOR E-MAIL mary.mondragon@anadarko.com		
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) ST UO 01197A		11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>		12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>		
13. NAME OF SURFACE OWNER (if box 12 = 'fee')				14. SURFACE OWNER PHONE (if box 12 = 'fee')		
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')				16. SURFACE OWNER E-MAIL (if box 12 = 'fee')		
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')		18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		19. SLANT VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>		
20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	2531 FSL 2209 FWL	NESW	11	10.0 S	22.0 E	S
Top of Uppermost Producing Zone	2531 FSL 2209 FWL	NESW	11	10.0 S	22.0 E	S
At Total Depth	2531 FSL 2209 FWL	NESW	11	10.0 S	22.0 E	S
21. COUNTY UINTAH		22. DISTANCE TO NEAREST LEASE LINE (Feet) 2209		23. NUMBER OF ACRES IN DRILLING UNIT 1674		
		25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 20		26. PROPOSED DEPTH MD: 8500 TVD: 8500		
27. ELEVATION - GROUND LEVEL 5115		28. BOND NUMBER 22013542		29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE Permit #43-8496		

ATTACHMENTS

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

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

NAME Kathy Schneebeck-Dulnoan	TITLE Staff Regulatory Analyst	PHONE 720 929-6007
SIGNATURE	DATE 11/07/2008	EMAIL Kathy.SchneebeckDulnoan@anadarko.com
API NUMBER ASSIGNED 43047502150000	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	4600			
		Cement Description	Class	Sacks	Yield	Weight

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	8500		
Pipe	Grade	Length	Weight			
	Grade I-80 LT&C	8500	11.6			
	Cement Interval	Top (MD)	Bottom (MD)			
		0	8500			
		Cement Description	Class	Sacks	Yield	Weight
			Premium Lite High Strength	390	3.38	11.0
			50/50 Poz	1380	1.31	14.3

**NBU 1022-11K1T
Twin to NBU #367
NESW Sec. 11 T10S R22E
UINTAH COUNTY, UTAH
ST UO 01197A**

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. Estimated Tops of Important Geologic Markers:

<u>Formation</u>	<u>Depth</u>
Uinta	0- Surface
Green River	932'
Birds Nest	1335'
Mahogany	1797'
Wasatch	4083'
Mesaverde	6277'
MVU2	7318'
MVL1	7862'
TD	8500'

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

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
	Green River	932'
Water	Birds Nest	1335'
Water	Mahogany	1797'
Gas	Wasatch	4083'
Gas	Mesaverde	6277'
Gas	MVU2	7318'
Gas	MVL1	7862'
Water	N/A	
Other Minerals	N/A	

3. Pressure Control Equipment (Schematic Attached)

Please refer to the attached Drilling Program.

4. Proposed Casing & Cementing Program:

Please refer to the attached Drilling Program.

5. Drilling Fluids Program:

Please refer to the attached Drilling Program.

6. Evaluation Program:

Please refer to the attached Drilling Program.

7. Abnormal Conditions:

Maximum anticipated bottomhole pressure calculated at 8500' TD, approximately equals 4325 psi (calculated at 0.51 psi/foot).

Maximum anticipated surface pressure equals approximately 2455 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. Anticipated Starting Dates:

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

9. Variances:

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

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

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

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

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

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

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet.

The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing.

The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface

formation is

not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

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

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

Variance for BOPE Requirements

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

Variance for Mud Material Requirements

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

Variance for Special Drilling Operation (surface equipment placement) Requirements

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

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

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations,

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

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

Conclusion

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

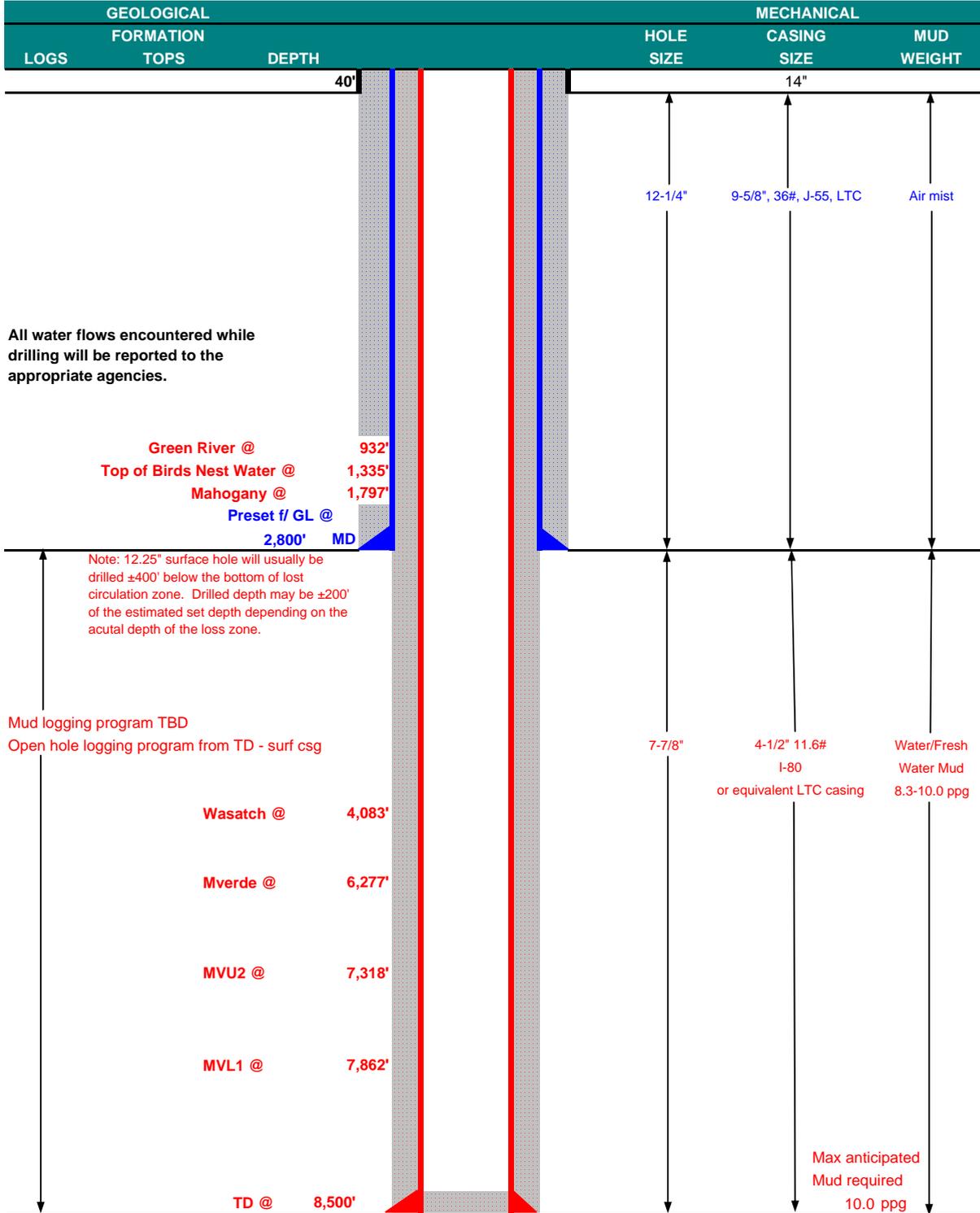
10. Other Information:

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	May 14, 2009	
WELL NAME	NBU 1022-11K1T		TD	8,500'	MD/TVD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
SURFACE LOCATION	NE/4 SW/4	2,531' FSL	2,209' FWL	Sec 11 T 10S R 22E	BHL Straight Hole
	Latitude: 39.963194	Longitude: -109.408078	NAD 27		
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals and Surface), Tri-County Health Dept.				





KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'						
						3,520	2,020	453,000
SURFACE	9-5/8"	0 to 2800	36.00	J-55	LTC	1.38	1.54	5.72
						7,780	6,350	201,000
PRODUCTION	4-1/2"	0 to 8500	11.60	I-80	LTC	3.05	1.44	2.34

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

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)
 (Burst Assumptions: TD = 10.0 ppg) 0.22 psi/ft = gradient for partially evac wellbore
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoys.Fact. of water)
MASP 2,455 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
 (Burst Assumptions: TD = 10.0 ppg) 0.51 psi/ft = bottomhole gradient
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoys.Fact. of water)
MABHP 4,325 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500	Premium cmt + 2% CaCl	215	60%	15.60	1.18
			+ .25 pps flocele				
Option 1	TOP OUT CMT (1)	200	20 gals sodium silicate + Premium cmt	50		15.60	1.18
			+ 2% CaCl + .25 pps flocele				
	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	1500	Prem cmt + 16% Gel + 10 pps gilsonite	170	35%	11.00	3.82
			+ .25 pps Flocele + 3% salt BWOC				
	TAIL	500	Premium cmt + 2% CaCl	180	35%	15.60	1.18
			+ .25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	3,580'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	390	60%	11.00	3.38
	TAIL	4,920'	50/50 Poz/G + 10% salt + 2% gel +.1% R-3	1380	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. 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.

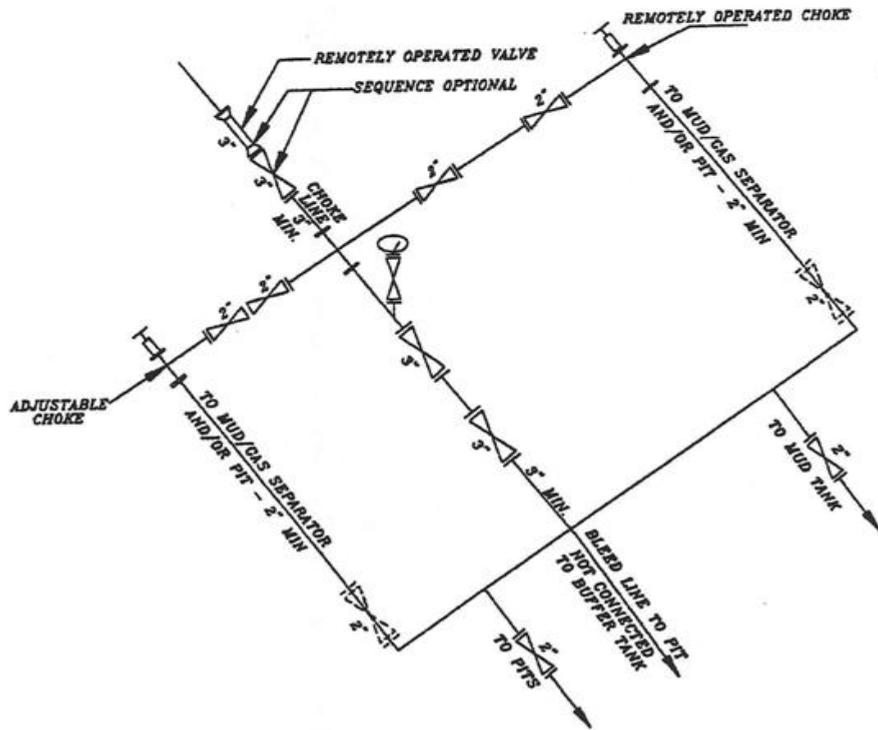
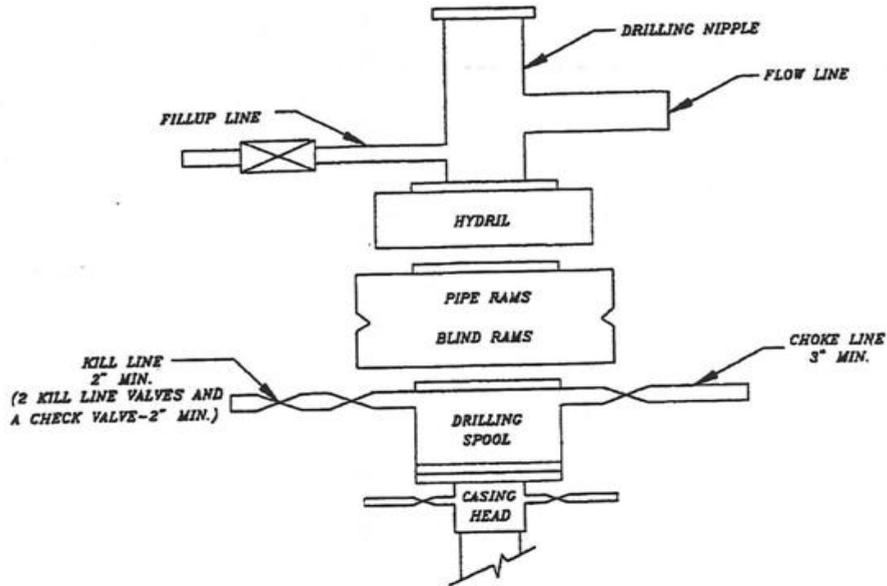
Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

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

DRILLING ENGINEER: _____ DATE: _____
 John Huycke / Grant Schluender

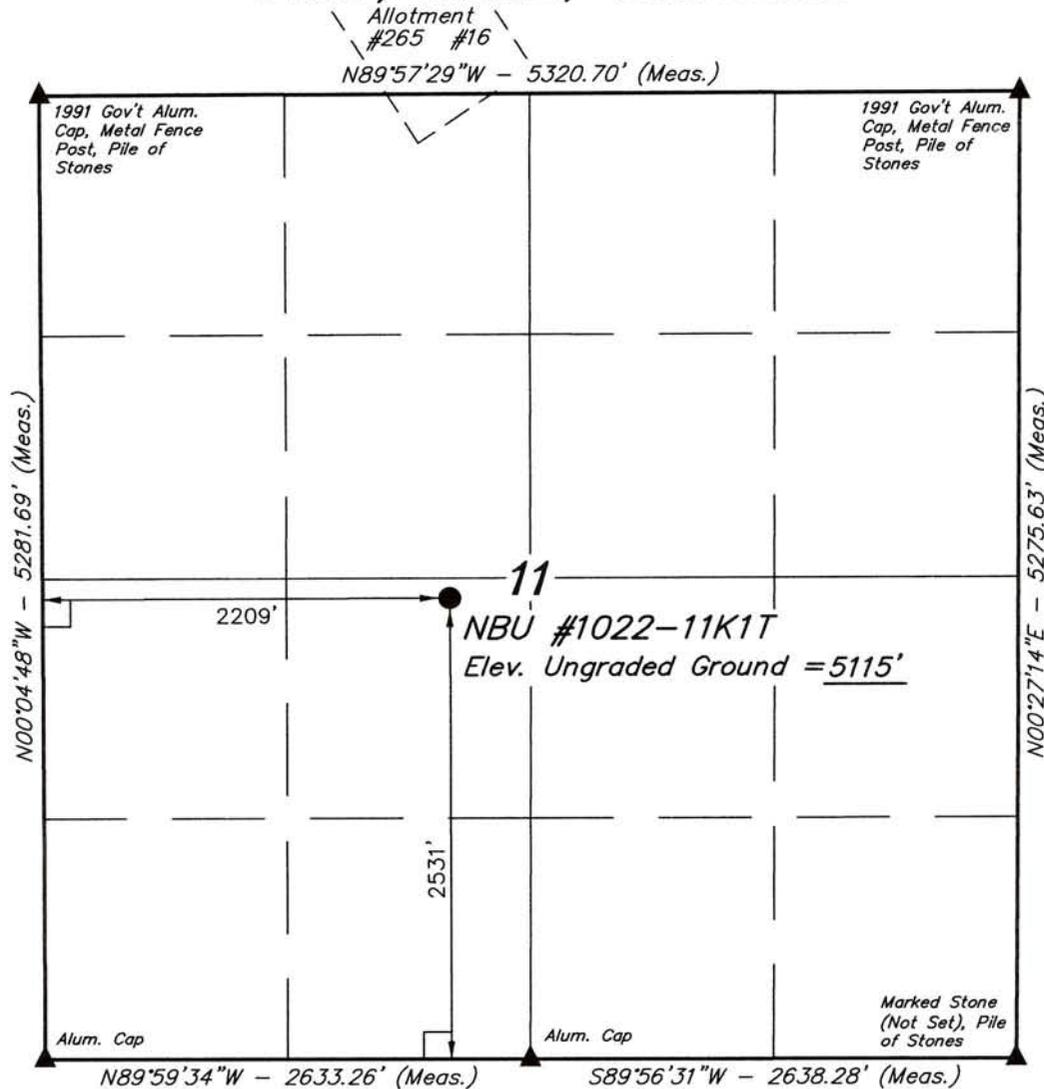
DRILLING SUPERINTENDENT: _____ DATE: _____
 John Merkel / Lovel Young

EXHIBIT A NBU 1022-11K1T



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

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



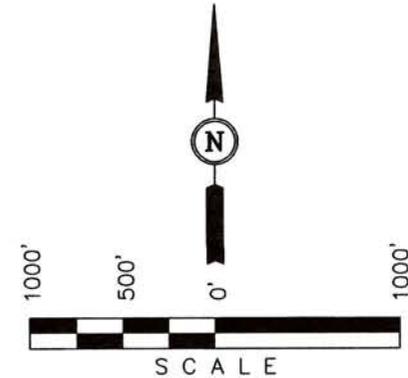
Kerr-McGee Oil & Gas Onshore LP
 Well location, NBU #1022-11K1T, located as shown in the NE 1/4 SE 1/4 of Section 11, T10S, R22E, S.L.B.&M., Uintah County, Utah.

BASIS OF ELEVATION

TWO WATER TRIANGULATION STATION LOCATED IN THE NW 1/4 CORNER OF SECTION 1, T10S, R21E, S.L.B.&M. TAKEN FROM THE BIG PACK MTN NE, QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5238 FEET.

BASIS OF BEARINGS

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



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.

Robert Kay
 REGISTERED LAND SURVEYOR
 REGISTRATION NO. 161319
 STATE OF UTAH

LEGEND:

- └─┘ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

(NAD 83)
 LATITUDE = 39°57'47.38" (39.963161)
 LONGITUDE = 109°24'31.53" (109.408758)
 (NAD 27)
 LATITUDE = 39°57'47.50" (39.963194)
 LONGITUDE = 109°24'29.08" (109.408078)

UINTAH ENGINEERING & LAND SURVEYING
 85 SOUTH 200 EAST - VERNAL, UTAH 84078
 (435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 08-19-08	DATE DRAWN: 09-09-08
PARTY D.S. E.D. C.C.	REFERENCES G.L.O. PLAT	
WEATHER HOT	FILE Kerr-McGee Oil & Gas Onshore LP	

R
22
E

PROPOSED LOCATION:
NBU #1022-11K2S, #1022-11K1T,
#1022-11J3S & #1022-11F4S

0.5 MI. +/-

OURAY 27.9 MI. +/-
SEEP RIDGE ROAD 16.7 MI. +/-

T10S

LEGEND:
- - - - - PROPOSED ACCESS ROAD
————— EXISTING ROAD

Kerr-McGee Oil & Gas Onshore LP
NBU #1022-11K2S, #1022-11K1T,
#1022-11J3S & #1022-11F4S
SECTION 11, T10S, R22E, S.L.B.&M.
NE 1/4 SW 1/4

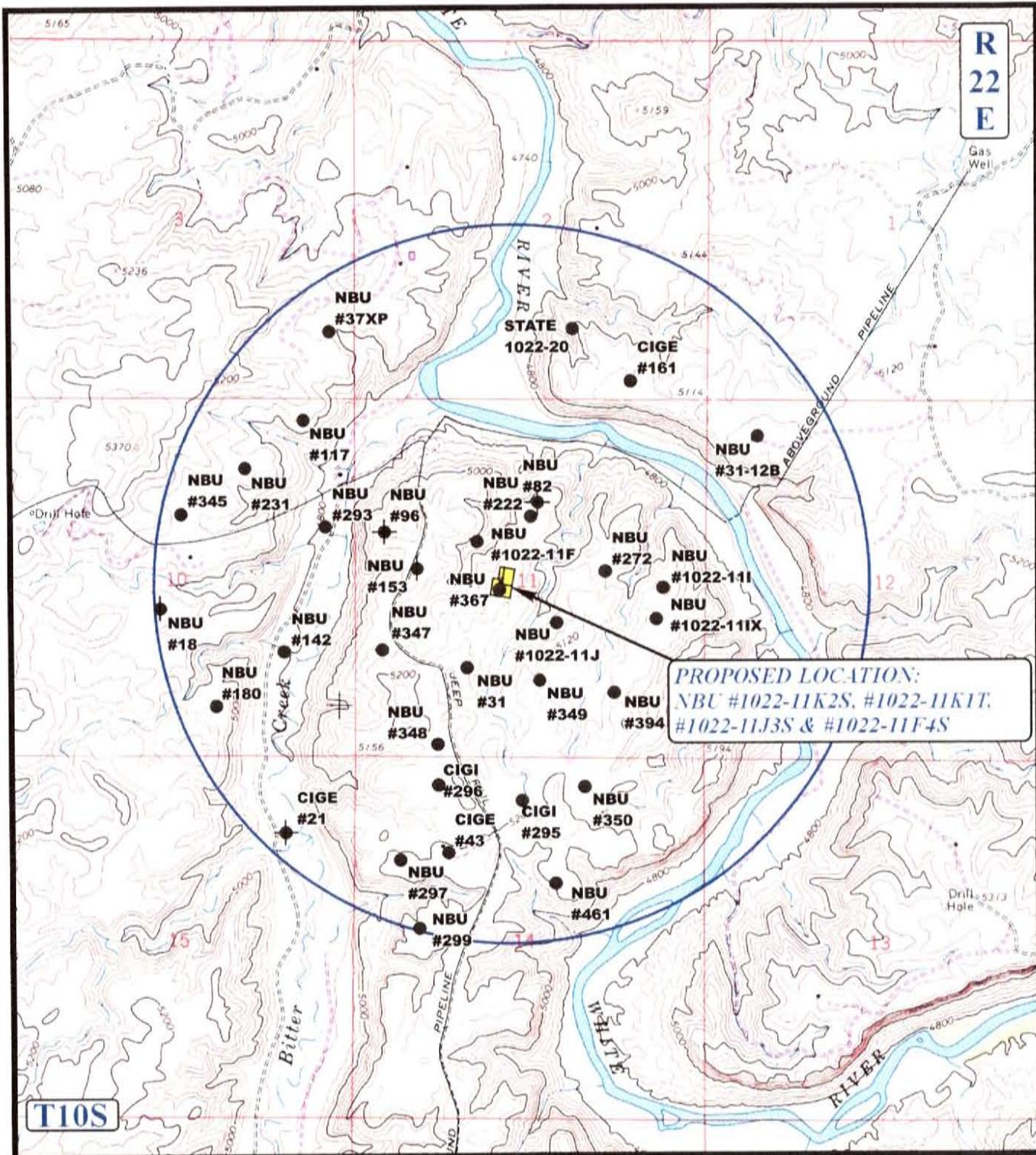
UELS Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP 09 15 08
MONTH DAY YEAR
SCALE: 1" = 2000' DRAWN BY: J.J.H. REVISED: 00-00-00

B
TOPO

'APIWellNo:43047502150000'

R
22
E



PROPOSED LOCATION:
 NBU #1022-11K2S, #1022-11KIT,
 #1022-11J3S & #1022-11F4S

LEGEND:

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

Kerr-McGee Oil & Gas Onshore LP

NBU #1022-11K2S, #1022-11KIT,
 #1022-11J3S & #1022-11F4S
 SECTION 11, T10S, R22E, S.L.B.&M.
 NE 1/4 SW 1/4

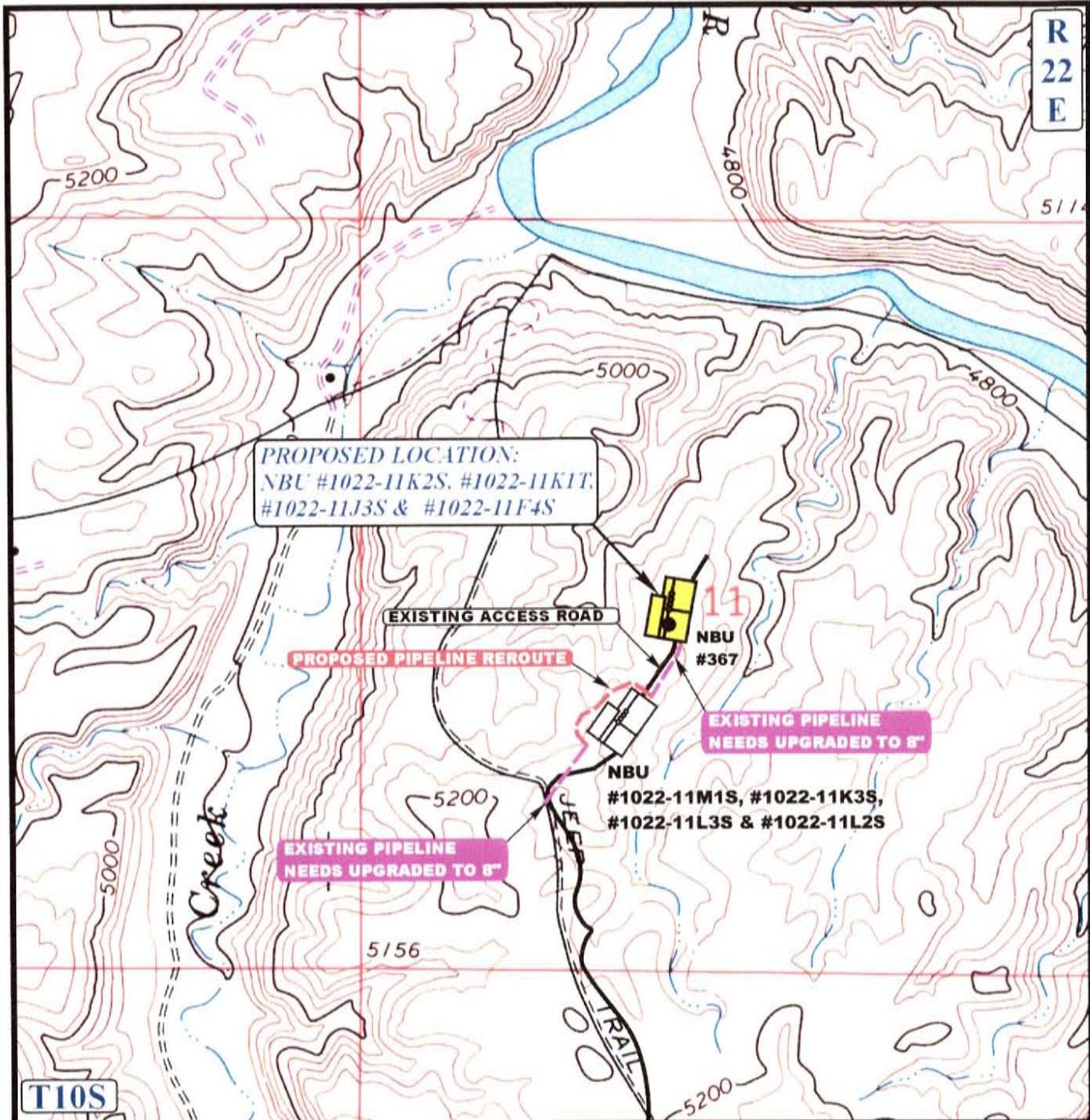
UEIS Utah Engineering & Land Surveying
 85 South 200 East Vernal, Utah 84078
 (435) 789-1017 * FAX (435) 789-1813



TOPOGRAPHIC MAP 09 15 08
 MONTH DAY YEAR
 SCALE: 1" = 2000' DRAWN BY: J.J.H. REVISED: 00-00-00



APIWellNo:43047502150000



APPROXIMATE TOTAL UPGRADED PIPELINE DISTANCE = 1,900' +/-

APPROXIMATE TOTAL UPGRADED PIPELINE DISTANCE = 1,700' +/-

LEGEND:

- EXISTING PIPELINE
- EXISTING PIPELINE NEEDS UPGRADED TO 8"
- PROPOSED PIPELINE REROUTE
- PROPOSED ACCESS



Kerr-McGee Oil & Gas Onshore LP

NBU #1022-11K2S, #1022-11KIT,
 #1022-11J3S & #1022-11F4S
 SECTION 11, T10S, R22E, S.L.B.&M.
 NE 1/4 SW 1/4

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

TOPOGRAPHIC MAP 09 15 08
 MONTH DAY YEAR
 SCALE: 1" = 1000' DRAWN BY: J.H. REVISED: 00-00-00 **D TOPO**

APIWellNo:43047502150000

Kerr-McGee Oil & Gas Onshore LP
NBU #1022-11K2S, #1022-11K1T,
#1022-11J3S & #1022-114FS
SECTION 11, T10S, R22E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 14.0 MILES TO THE JUNCTION OF STATE HIGHWAY 88; EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.0 MILES TO OURAY, UTAH; PROCEED IN A SOUTHERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 11.2 MILES ALONG THE SEEP RIDGE ROAD TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 9.2 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 1.2 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN LEFT AND PROCEED IN A NORTHEASTERLY DIRECTION APPROXIMATELY 1.8 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN RIGHT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 0.5 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN LEFT AND PROCEED IN A SOUTHEASTERLY, THEN EASTERLY, THEN NORTHEASTERLY DIRECTION APPROXIMATELY 1.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTH; TURN LEFT AND PROCEED IN A NORTHERLY, THEN NORTHWESTERLY, THEN NORTHERLY DIRECTION APPROXIMATELY 2.7 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN LEFT AND PROCEED IN A NORTHWESTERLY THEN NORTHEASTERLY DIRECTION APPROXIMATELY 0.5 MILES TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 59.4 MILES.

Kerr-McGee Oil & Gas Onshore LP

NBU #1022-11K2S, #1022-11K1T,

#1022-11J3S & #1022-114FS

LOCATED IN UTAH COUNTY, UTAH

SECTION 11, T10S, R22E, S.L.B.&M.



PHOTO: VIEW FROM CORNER 5 TO LOCATION STAKES

CAMERA ANGLE: SOUTHEASTERLY



PHOTO: VIEW FROM EXISTING ACCESS

CAMERA ANGLE: NORTHEASTERLY



Utah Engineering & Land Surveying

85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

LOCATION PHOTOS

09 15 08
MONTH DAY YEAR

PHOTO

TAKEN BY: D.K.

DRAWN BY: J.H.

REVISED: 00-00-00

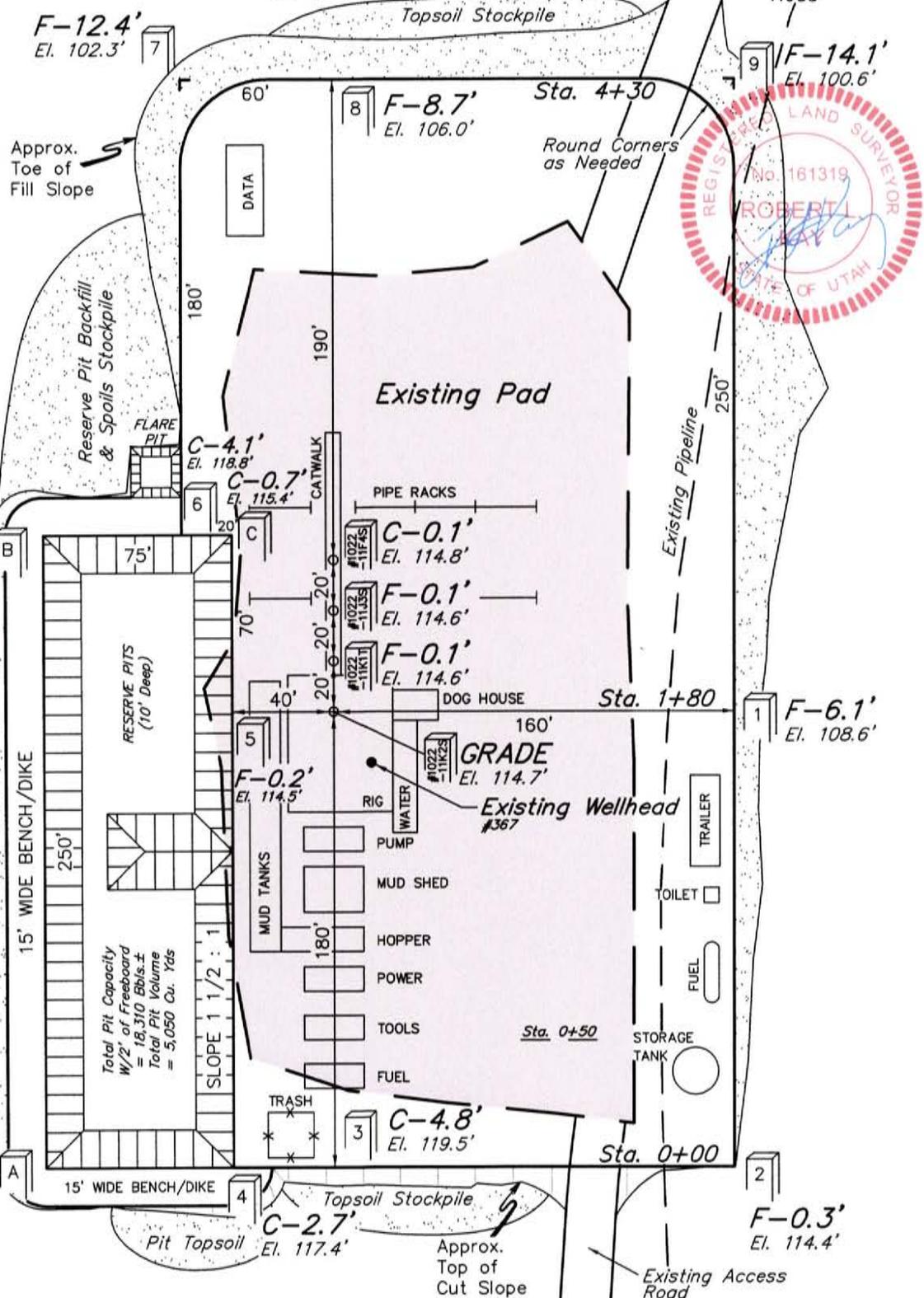
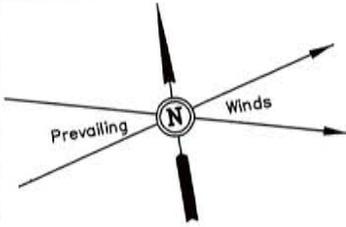
Kerr-McGee Oil & Gas Onshore LP

LOCATION LAYOUT FOR

NBU #1022-11K2S, #1022-11K1T,
 #1022-11J3S & #1022-11F4S
 SECTION 11, T10S, R22E, S.L.B.&M.
 NE 1/4 SW 1/4

FIGURE #1

SCALE: 1" = 60'
 DATE: 09-09-08
 Drawn By: C.C.



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

Elev. Ungraded Ground at #1022-11K2S Location Stake = 5114.7'
 Elev. Graded Ground at #1022-11K2S Location Stake = 5114.7'

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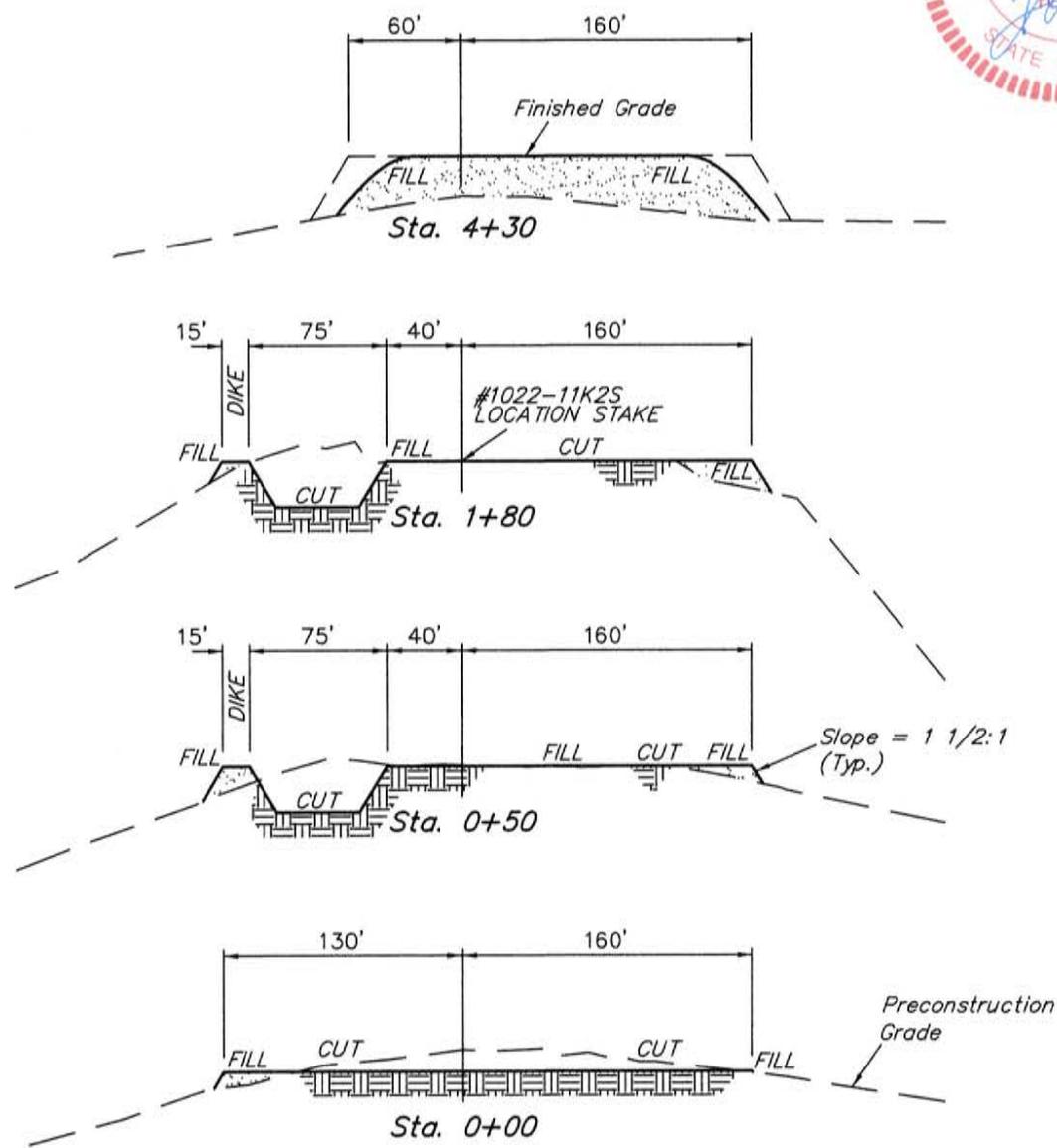
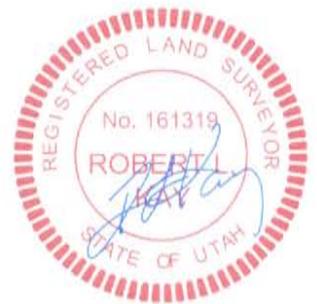
APIWellNo:43047502150000

Kerr-McGee Oil & Gas Onshore LP

FIGURE #2

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

TYPICAL CROSS SECTIONS FOR
 NBU #1022-11K2S, #1022-11K1T,
 #1022-11J3S & #1022-11F4S
 SECTION 11, T10S, R22E, S.L.B.&M.
 NE 1/4 SW 1/4



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

* NOTE:
 FILL QUANTITY INCLUDES 5% FOR COMPACTION

APPROXIMATE YARDAGES

(6") Topsoil Stripping (New Construction Only)	= 1,160 Cu. Yds.
Remaining Location	= 6,270 Cu. Yds.
TOTAL CUT	= 7,430 CU.YDS.
FILL	= 11,020 CU.YDS.

DEFICIT MATERIAL	= <3,590> Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	= 3,690 Cu. Yds.
DEFICIT UNBALANCE (After Interim Rehabilitation)	= <7,280> Cu. Yds.

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 85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017

APIWellNo:43047502150000

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

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

By:

Jacki A. Montgomery

Prepared For:

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

Prepared Under Contract With:

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

Prepared By:

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

MOAC Report No. 08-268

October 16, 2008

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

Public Lands Policy Coordination Office
Archaeological Survey Permit No. 117

INTRODUCTION

A Class I literature review was completed by Montgomery Archaeological Consultants, Inc. (MOAC) in October 2008 of Kerr-McGee Onshore's 73 proposed NBU well locations in Township 10S, Range 22E. The project area is situated south of the White River and southeast of the Ouray, Uintah County, Utah. The wells are designated NBU 1022-1I, 1022-1J, 1022-1N, 1022-1P, 1022-2A2T, 1022-2A3S, 1022-2A4S, 1022-2B2S, 1022-2D, 1022-2F, 1022-2J1T, 1022-2J2S, 1022-2J3S, 1022-2O2S, 1022-03A2T, 1022-03A3S, 1022-03B2S, 1022-03B4T, 1022-03C1S, 1022-04H2CS, 1022-04H3BS, 1022-03H2T, 1022-03L4BS, 1022-03L3DS, 1022-03M1DS, 1022-03M2DS, 1022-03J3T, 1022-03L2T, 1022-03N4T, 1022-03P4T, 1022-03O3T, 1022-04K3S, 1022-04M1S, 1022-05H2BS, 1022-05H2CS, 1022-05E4S, 1022-05F2S, 1022-05K1S, 1022-05L1S, 1022-05IT, 1022-06DT, 1022-06ET, 1022-06FT, 1022-06I3AS, 1022-06J4CS, 1022-06O1BS, 1022-06P1CS, 1022-7AT, 1022-7A4BS, 1022-7A4CS, 1022-7B2DS, 1022-08GT, 1022-08IT, 1022-09AT, 1022-11F4S, 1022-11J3S, 1022-11K1T, 1022-11K2S, 1022-11K3S, 1022-11L2S, 1022-11L3S, 1022-11M1S, 1022-13H, 1022-24O, 1022-24O2S, 1022-24P2S, 1022-24P4S, 1022-25H, 1022-32B3S, 1022-32D1S, 1022-32D4AS, 1022-32D4DS, and 1022-35M.

The purpose of this Class I review is to identify, classify, and evaluate the previously conducted cultural resource inventories and archaeological sites in the project area in order to comply with Section 106 of 36 CFR 800, the National Historic Preservation Act of 1966 (as amended). Also, the inventory was implemented to attain compliance with a number of federal and state mandates, including the National Environmental Policy Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979, the American Indian Religious Freedom Act of 1978, and the Utah State Antiquities Act of 1973 (amended 1990).

The project area in which Kerr-McGee Onshore's 73 proposed NBU well locations occur was previously inventoried by MOAC in 2007 for the Class III inventory of Township 10 South, Range 22 East (Montgomery 2008; U-07-MQ-1438b,s,p). A file search was completed by consulting MOAC's Class I existing data review of 459 square miles (293,805 acres) covering the Greater NBU study area between Bonanza and Ouray in Uintah County, northeastern Utah (Patterson et al. 2008). Kerr-McGee Oil & Gas Onshore LP proposes to explore and develop oil and natural gas resources throughout the area. Record searches were performed for this Class I project by Marty Thomas at the Utah State Historic Preservation Office (SHPO) on various dates between June 14, 2006 and January 27, 2007. The results of this Class I data review and Class III inventory indicated that no previously recorded sites occur in the current project area.

DESCRIPTION OF THE PROJECT AREA

The project area is situated west of the White River and both sides of Bitter Creek in the Uinta Basin. The legal description is Township 10S, Range 22E, Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 24, 25, 32, 36; Township 11S, Range 22E, Sections 1 and 2 (Figures 1, 2 and 3; Table 1). Land status is public land administered by the Bureau of Land Management (BLM) Vernal Field Office and School and Institutional Trust Lands Administration (SITLA) property.

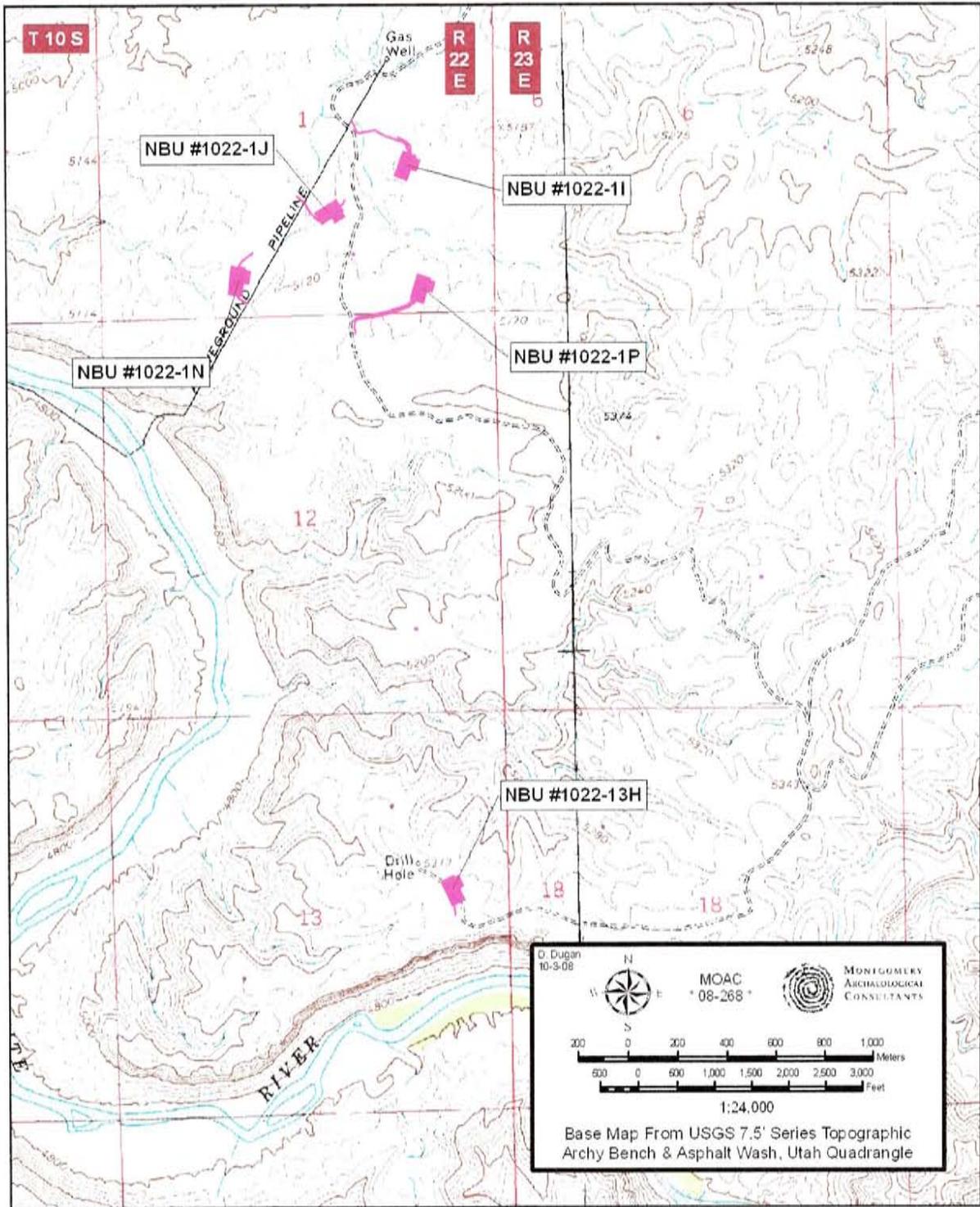
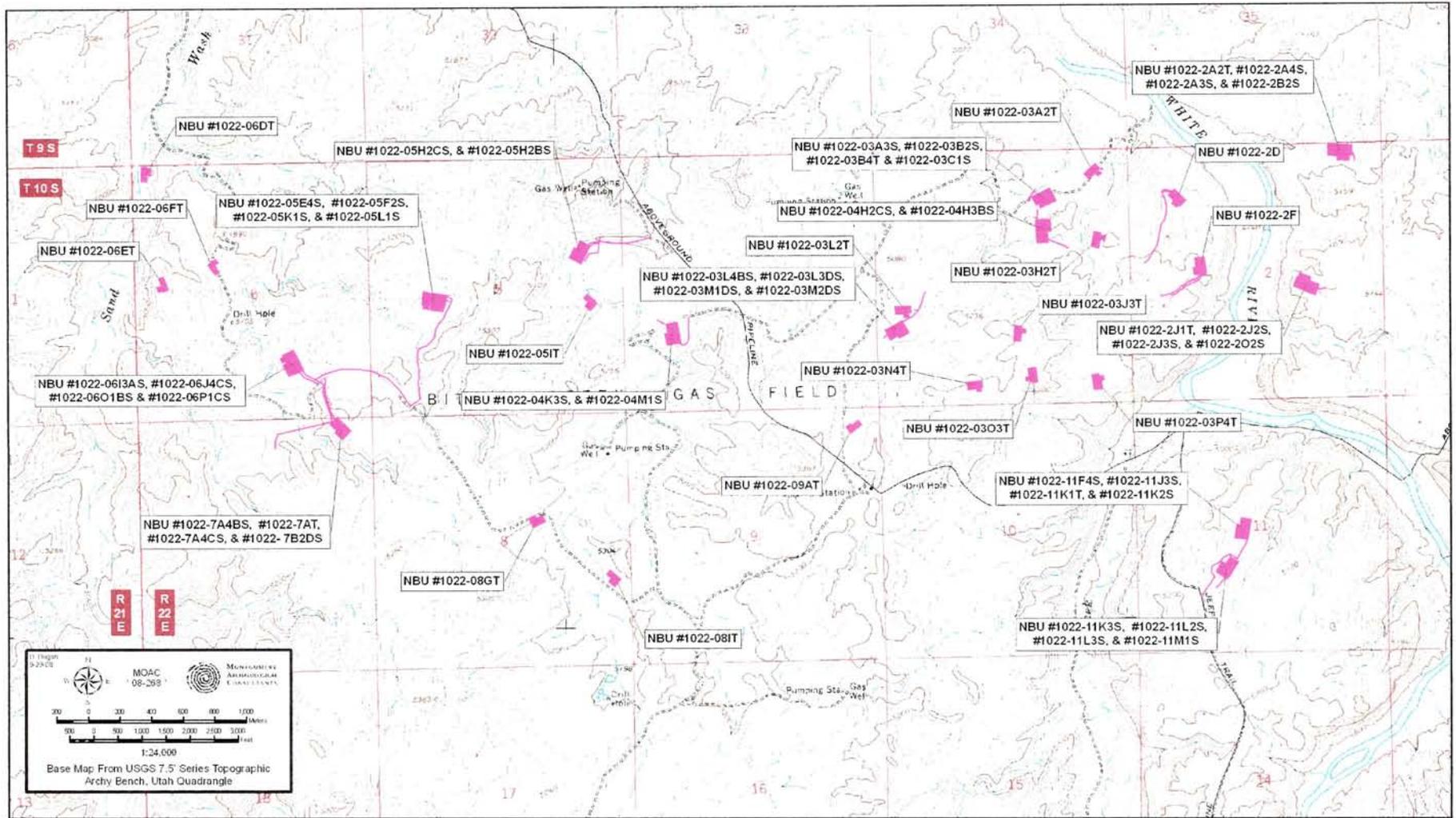


Figure 1. Location of Kerr-McGee Onshore's Well Pads in T10S, R22E.



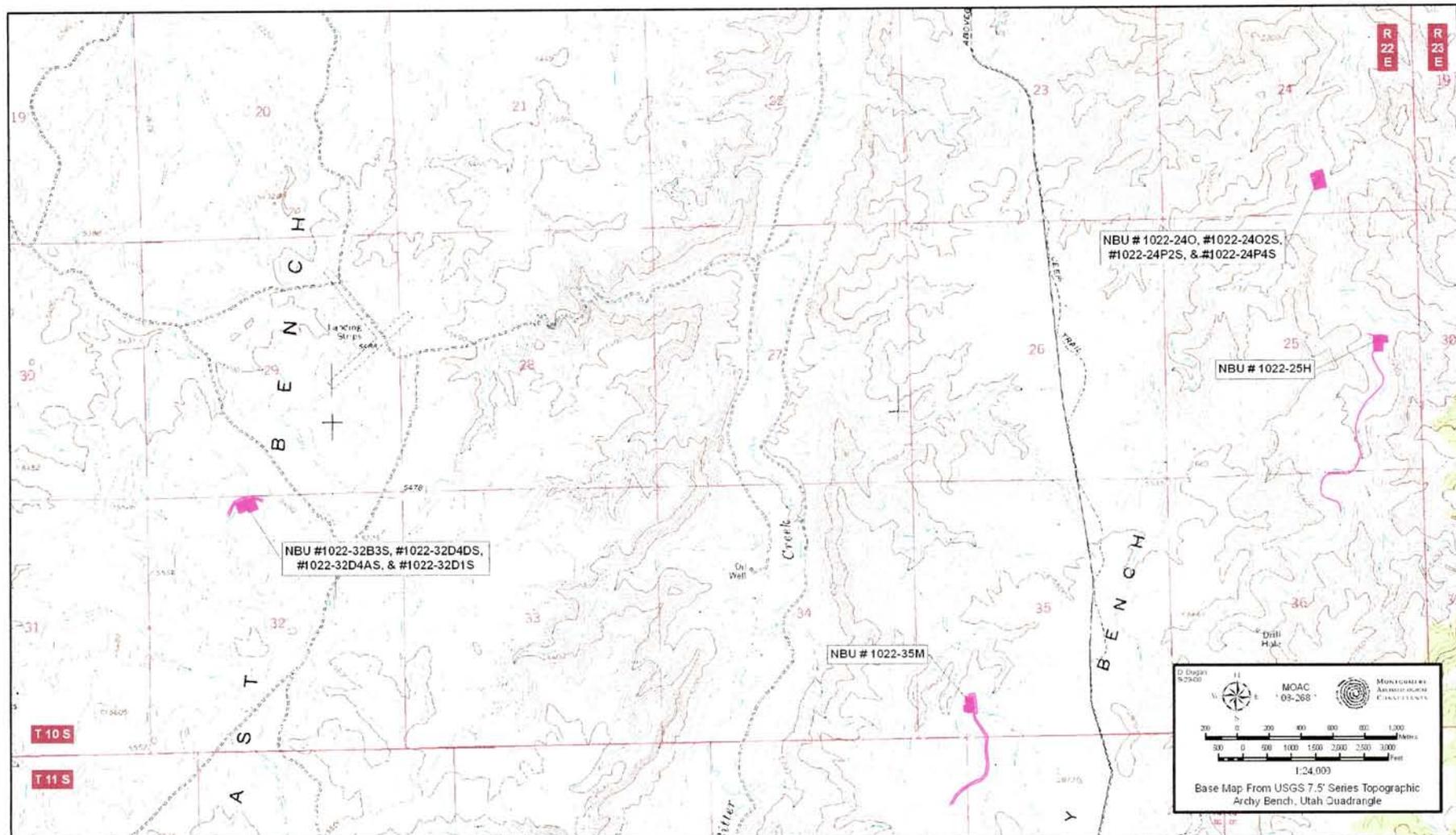


Table 1. Kerr-McGee Onshore's 73 NBU Well Locations.

Well Designation	Legal Description	Access/Pipeline Corridor	Cultural Resources
NBU 1022-1I	T10S, R22E, Sec. 1 NE/SE	Pipeline: 1000 ft Access: 200 ft	None
NBU 1022-1J	T10S, R22E, Sec. 1 NW/SE	Pipeline: 400 ft Access: 50 ft	None
NBU 1022-1N	T10S, R22E, Sec. 1 SE/SW	Pipeline: 150 ft Access: 200 ft	None
NBU 1022-1P	T10S, R22E, Sec. 1 SE/SE	Pipeline: 1050 ft Access: 1000 ft	None
NBU 1022-2A2T, 1022-2A4S 1022-243S, 1022-2B2S	T10S, R22E, Sec. 2 NE/NE	Access: 200 ft	None
NBU 1022-2D	T10S, R22E, Sec. 2 NW/NW	Pipeline: 1600 ft	None
NBU 1022-2F	T10S, R22E, Sec. 2 SE/NW	Pipeline: 800 ft Access: 1000 ft	None
NBU 1022-2J1T, 1022-2J2S, 1022-2J3S, 1022-202S	T10S, R22E, Sec. 2 NW/SE	Pipeline: 200 ft	None
NBU 1022-03A2T	T10S, R22E, Sec. 3 NE/NE	None	None
NBU1022-03A3S, 1022-03B2S 1022-03B4T, 1022-03C1S	T10S, R22E, Sec. 3 NW/NE	None	None
NBU 1022-04H2CS 1022-04H3BS	T10S, R22E, Sec. 3 SW/NE	Pipeline: 450 ft Access: 200 ft	None
NBU 1022-03H2T	T10S, R22E, Sec. 3 SE/NE	None	None
NBU 1022-03J3T	T10S, R22E, Sec. 3 NW/SE	None	None
NBU 1022-03L2T	T10S, R22E, Sec. 3 NW/SW	None	None
NBU 1022-03L4BS, 1022-03L3DS 1022-03M1DS, 1022-03M2DS	T10S, R22E, Sec. 3 NW/SW	Pipeline: 800 ft Access: 100 ft	None
NBU 1022-03N4T	T10S, R22E, Sec. 3 SE/SW	None	None
NBU 1022-03O3T	T10S, R22E, Sec. 3 SW/SE	None	None
NBU 1022-03P4T	T10S, R22E, Sec. 3 SE/SE	None	None

Well Designation	Legal Description	Access/Pipeline Corridor	Cultural Resources
NBU 1022-04K3S, 1022-04M1S	T10S, R22E, Sec. 4 NW/SW	Pipeline: 200 ft Access: 600 ft	None
NBU 1022-05H2CS, 1022-05H2BS	T10S, R22E, Sec. 5 SE/NE	Pipeline: 800 ft Access: 1200 ft	None
NBU 1022-05E4S, 1022-05F2S 1022-05K1S, 1022-05L1S	T10S, R22E Sec. 5 NE/SW	Pipeline: 4800 ft Access: 100 ft	None
NBU 1022-05IT	T10S, R22E, Sec. 5 NE/SE	None	None
NBU 1022-06DT	T10S, R22E, Sec. 6 NW/NW	None	None
NBU 1022-06ET	T10S, R22E, Sec. 6 SW/NW	None	None
NBU 1022-06FT	T10S, R22E, Sec. 6 SE/NW	None	None
NBU 1022-06I3AS, 1022-06J4CS 1022-06O1BS, 1022-06P1CS	T10S, R22E, Sec. 6 SW/SE	Pipeline: 1400 ft Access: 450 ft	None
NBU 1022-7A4BS, 1022-7AT 1022-7A4CS, 1022-7B2DS	T10S, R22E, Sec. 7 NE/NE	Pipeline: 1300 ft Access: 1000 ft	None
NBU 1022-08GT	T10SS, R22E, Sec. 8 SW/NE	None	None
NBU 1022-08IT	T10S, R22E, Sec. 8 NE/SE	None	None
NBU 1022-09AT	T10S, R22E, Sec. 9 NE/NE	None	None
NBU 1022-11F4S, 1022-11J3S, 1022-11K1T, 1022-11K2S	T10S, R22E, Sec. 11 NE/SW	Pipeline: 1600 ft	None
NBU 1022-11K3S, 1022-11L2S, 1022-11L3S, 1022-11M1S	T10S, R22E, Sec. 11 NE/SW	Pipeline: 500 ft Access: 250 ft	None
NBU 1022-13H	T10S, R22E, Sec. 13 SE/NE	Pipeline: 100 ft	
NBU 1022-24O, 1022-24O2S 1022-24P2S, 1022-24P4S	T10S, R22E, Sec. 24 SW/SE	None	None
NBU 1022-25H	T10S, R22E, Sec. 25 SE/NE	Pipeline: 4000 ft	None

Well Designation	Legal Description	Access/Pipeline Corridor	Cultural Resources
NBU 1022-32B3S, 1022-32D4DS 1022-3-2D4AS, 1022-32D1S	T10S, R22E, Sec. 32 NE/NW	Pipeline: 900 ft Access: 800 ft	None
NBU 1022-35M	T10S, R22E, Sec. 35 SW/SW	Pipeline: 2750 ft Access: 2200 ft	None

Environmental Setting

The study area lies within the Uinta Basin physiographic unit, a distinctly bowl-shaped geologic structure (Stokes 1986:231). The Uinta Basin ecosystem is within the Green River drainage, considered to be the northernmost extension of the Colorado Plateau. The geology is comprised of Tertiary age deposits, which include Paleocene age deposits and Eocene age fluvial and lacustrine sedimentary rocks. The Uinta Formation, which is predominate in the project area, occurs as eroded outcrops (formed by fluvial deposited, stream laid interbedded sandstone and mudstone), and is known for its prolific paleontological localities. Specifically, the inventory area is situated south of the White River and on both sides of Cottonwood Wash. Elevation ranges from 5080 to 5680 ft asl. The project occurs within the Upper Sonoran Desert Shrub Association which includes sagebrush, shadscale, greasewood, mat saltbush, snakeweed, rabbitbrush, and prickly pear cactus. Modern disturbances include livestock grazing, roads, and oil/gas development.

CLASS I RESULTS AND RECOMMENDATIONS

The Class I literature review of Kerr-McGee Onshore's 73 proposed NBU well locations and associated pipeline/access corridors in Township 10S, Range 22E resulted in the location of no cultural resources. Based on the findings, a determination of "no adverse impact" is recommended for the undertaking pursuant to Section 106, CFR 800.

REFERENCES CITED

- Montgomery, J. A.
2007 Cultural Resource Management Report for Kerr-McGee Oil and Gas Onshore LP's Greater NBU Blocks in Township 10 South, Range 22 East, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-07-MQ-1438bsp.
- Patterson, J. J., J. Fritz, K. Lower-Eskelson, R. Stash and A. Thomas
2008 NBU Class I Existing Data Review for Kerr-McGee Oil & Gas Onshore LP, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah.
- Stokes, W. L.
1986 *Geology of Utah*. Utah Museum of Natural History and Utah Geological and Mineral Survey, Salt Lake City.

Paleontological Reconnaissance Survey Report

**Survey of Kerr McGee's Proposed Multi Well Pads and Pipeline
Upgrades for "NBU #1022-03M4DS, 03M1DS, 03L3DS & 03L4BS"
& "NBU #1022-11K1T" (Sec. 3 & 11, T 10 S, R 22 E)**

Archy Bench
Topographic Quadrangle
Uintah County, Utah

October 10, 2008

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

INTRODUCTION

At the request of Raleen White of Kerr McGee Onshore LP and authorized by the BLM Vernal Field Office and James Kirkland of the Office of the State Paleontologist, a paleontological reconnaissance survey of Kerr McGee's proposed multi-well pads and pipeline upgrades for "NBU #1022-03M4DS, 03M1DS, 03L3DS & 03L4BS" & "NBU #1022-11K1T" (Sec. 3 & 11, T 10 S, R 22 E) was conducted by Simon Masters and Jason Klimek on October 8, 2008. The reconnaissance survey was conducted under the Utah BLM Paleontological Resources Use Permit #UT08-006C and Utah Paleontological Investigations Permit #07-356. 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);
- 3) The National Historic Preservation Act. 16 U.S.C. § 470-1, P.L. 102-575 in conjunction with 42 U.S.C. § 5320; and
- 4) The Utah Geological Survey. S. C. A.: 63-73-1. (1-21) and U.C.A.: 53B-17-603

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 multi-well pads and pipeline upgrades for “NBU #1022-03M4DS, 03M1DS, 03L3DS & 03L4BS” & “NBU #1022-11K1T” (Sec. 3 & 11, T 10 S, R 22 E) are on lands managed by the BLM and the State of Utah Trust Lands Administration (SITLA), above Bitter Creek just west of the White River, and about 44 miles southeast of Bonanza, UT. The project area can be found on the Archy Bench 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 pipeline upgrades

NBU #1022-03M4DS, 03M1DS, 03L3DS & 03L4BS, pipeline upgrade from 4-inch to 6-inch
The proposed well site is situated in the SW/SW quarter-quarter section of Sec. 3, T 10 S, R 22 E, and is approached from the south by a proposed access road that diverges from an existing access (Figure 1). The pad is staked in a gentle saddle between two small hills to the east and west. The pit is staked in the southeast corner of the pad. The proposed well is also connected by a proposed pipeline that departs from the east side of the pad and travels northeast for approximately one hundred meters and connects to an existing pipeline. The proposed pipeline upgrade trends north-northwest for approximately eight hundred meters before terminating in the NE/NE corner of the section. The geology of the proposed area consists of thick paleo-channels of tan fluvial sandstone underlain by green mudstone that is typically obscured by a thick layer

of sandy colluvium. Ichnofossils (*Planolites*) consisting of vertical burrows were discovered within the sandstone along the southern edge of the proposed pad. No other fossils were found.

NBU #1022-11K1T, and pipeline re-route and upgrade to 8-inch

The project area is situated in the NE/SW quarter-quarter section of Sec. 11, T 10 S, R 22 E, and is staked on an existing pad (Figure 1). The proposed new well is connected from the southwest by an existing pipeline that will be moved to the northwest side of the road and upgraded in diameter. The geology of the proposed area consists of alternating beds of grey mudstone, grey siltstone, and maroon siltstone. No fossils were discovered on or surrounding the proposed location or pipeline re-route/upgrade.

SURVEY RESULTS

PROJECT	GEOLOGY	PALEONTOLOGY
<p>“NBU #1022-03M4DS, 03M1DS, 03L3DS & 03L4BS” (Sec. 3, T 10 S, R 22 E)</p>	<p>The pad is staked in a gentle saddle between two small hills to the east and west. The pit is staked in the southeast corner of the pad. The proposed well is also connected by a proposed pipeline that departs from the east side of the pad and travels northeast for approximately one hundred meters and connects to an existing pipeline. The proposed pipeline upgrade trends north-northwest for approximately eight hundred meters before terminating in the NE/NE corner of the section. The geology of the proposed area consists of thick paleo-channels of tan fluvial sandstone underlain by green mudstone that is typically obscured by a thick layer of sandy colluvium.</p>	<p>Ichnofossils (<i>Planolites</i>) consisting of vertical burrows were discovered within the sandstone along the southern edge of the proposed pad. No other fossils were found. Class 3a</p>
<p>“NBU #1022-11K1T” (Sec 11, T 10 S, R 22 E)</p>	<p>The geology of the proposed area consists of alternating beds of grey mudstone, grey siltstone, and maroon siltstone.</p>	<p>No fossils were discovered on or surrounding the proposed location or pipeline re-route/upgrade. Class 3a</p>

RECOMMENDATIONS

A reconnaissance survey was conducted for Kerr McGee's proposed well pads, access roads, and pipelines for "NBU #1022-03M4DS, 03M1DS, 03L3DS & 03L4BS" & "NBU #1022-11K1T" (Sec. 3 & 11, T 10 S, R 22 E). The multi-well pads and pipelines covered in this report showed no signs of vertebrate fossils. Therefore, we recommend that no paleontological restrictions should be placed on the development of the projects included in this report.

Buried pipeline will encounter Uinta formational sediments along most of the staked pipeline corridors yet indications from surface fossils predict that little if any vertebrate fossils will be disturbed.

Nevertheless, if any vertebrate fossil(s) are found during construction within the project area, Operator (Lease Holder) will report all occurrences of paleontological resources discovered to a geologist with the Vernal Field Office of the BLM and the Office of the State Paleontologist. The operator is responsible for informing all persons in the areas who are associated with this project of the requirements for protecting paleontological resources. Paleontological resources found on the public lands are recognized by the BLM and State as constituting a fragile and nonrenewable scientific record of the history of life on earth, and so represent an important and critical component of America's natural heritage. These resources are afforded protection under 43 CFR 3802 and 3809, and penalties possible for the collection of vertebrate fossils are under 43 CFR 8365.1-5.

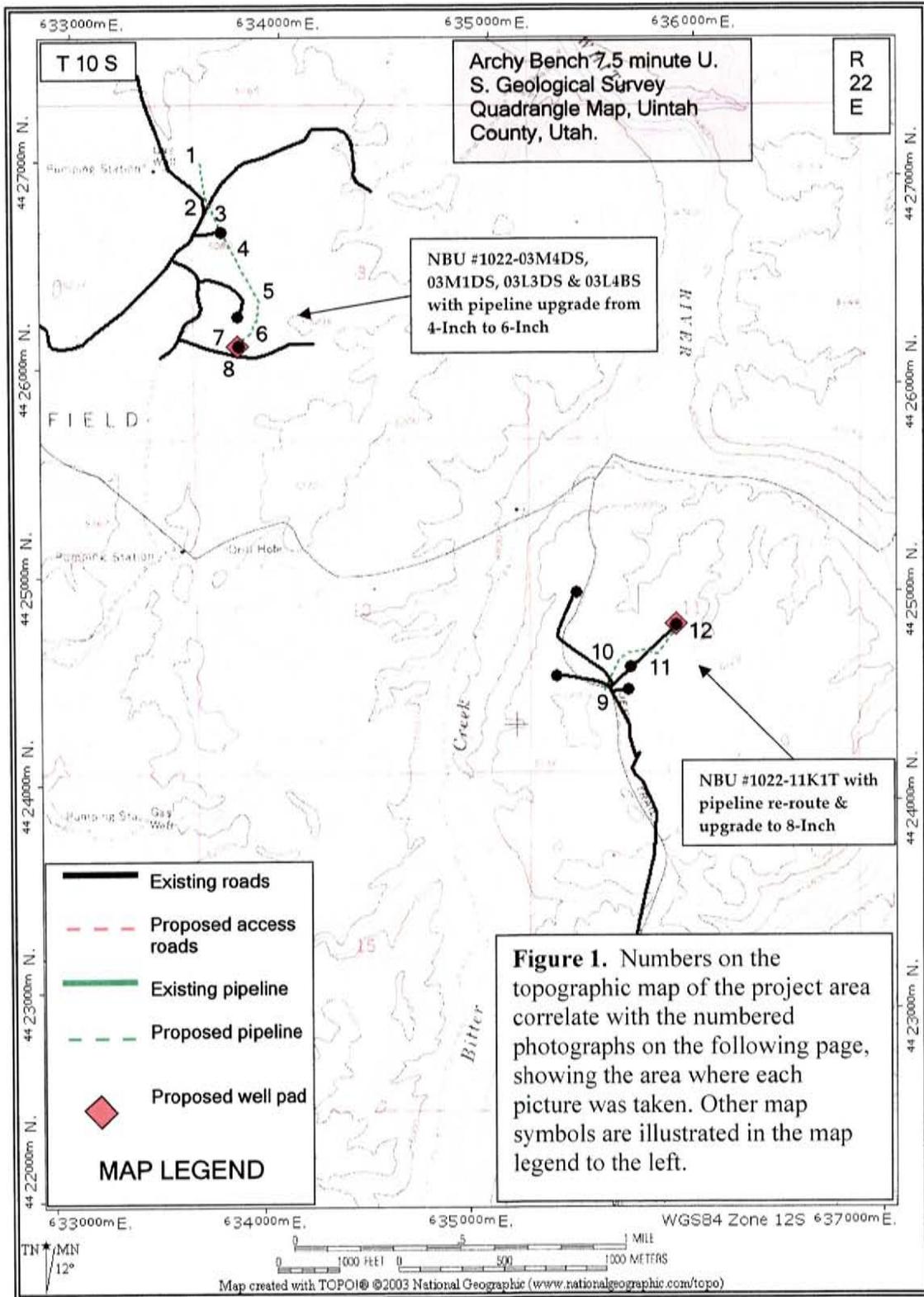
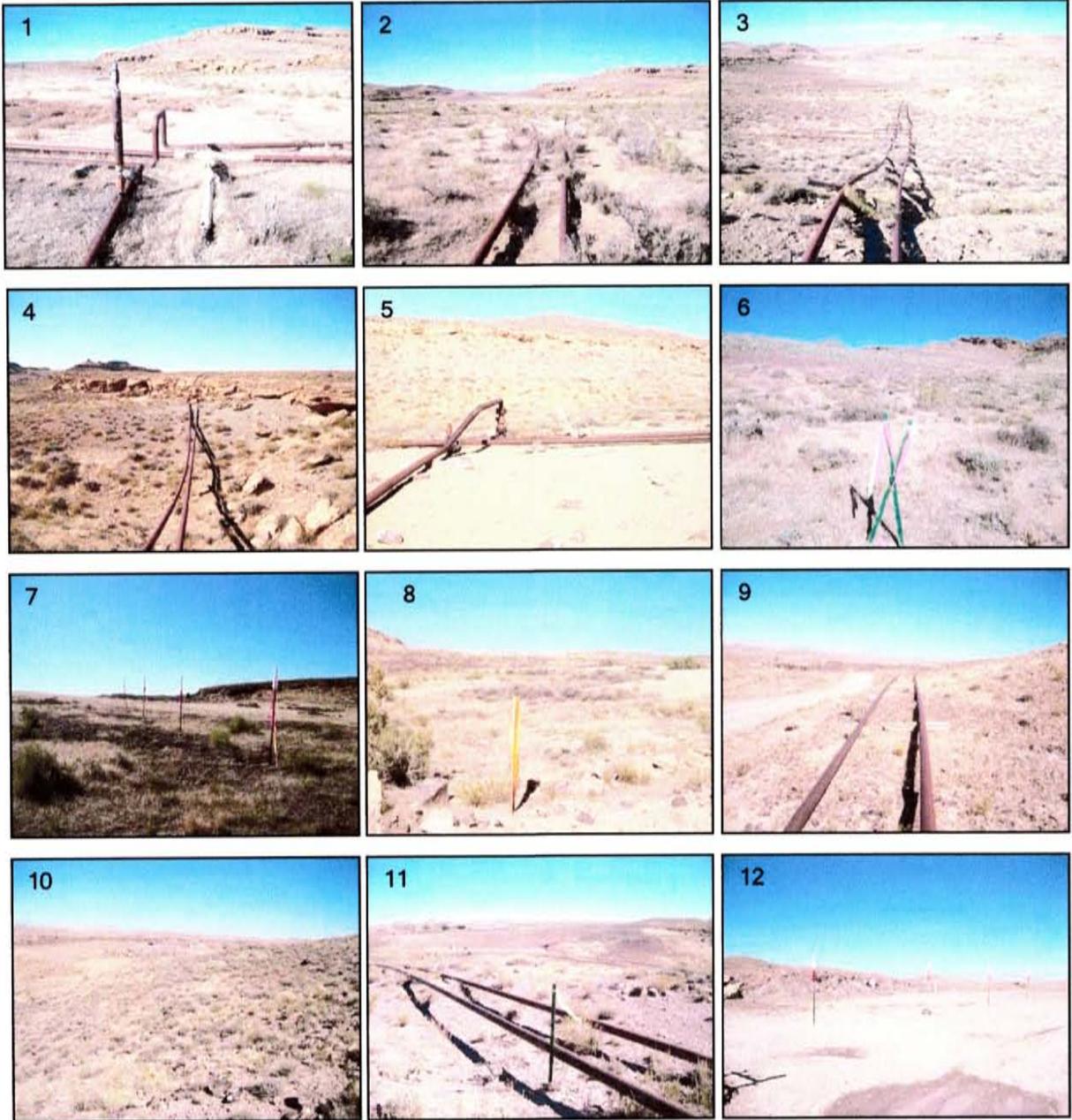


Figure 1. *continued...*



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API Number: 4304750215

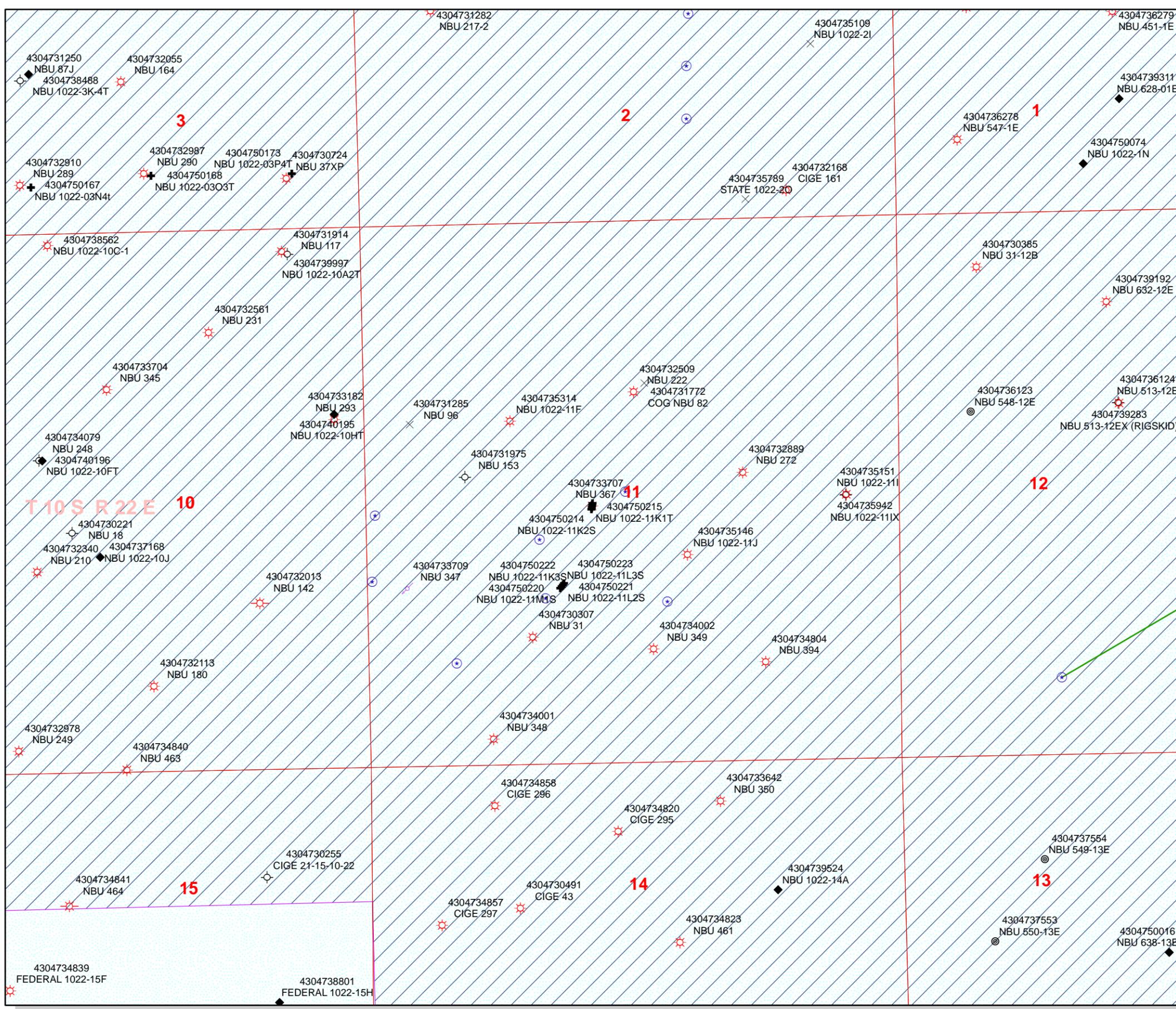
Well Name: NBU 1022-11K1T

Township 10.0 S Range 22.0 E Section 11

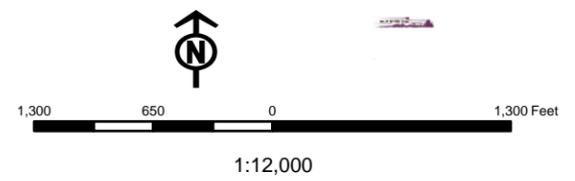
Meridian: SLBM

Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
Map Produced by Diana Mason



Units	Wells Query Events
ACTIVE	<all other values>
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
ACTIVE	RET
COMBINED	SGW
Sections	SOW
Township	TA
	TW
	WD
	WI
	WS



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)

November 12, 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-MESA VERDE)		
43-047-50212	NBU 1022-11F4S	Sec 11 T10S R22E 2571 FSL 2215 FWL BHL Sec 11 T10S R22E 2615 FNL 2540 FWL
43-047-50213	NBU 1022-11J3S	Sec 11 T10S R22E 2551 FSL 2212 FWL BHL Sec 11 T10S R22E 1600 FSL 2340 FEL
43-047-50214	NBU 1022-11K2S	Sec 11 T10S R22E 2512 FSL 2206 FWL BHL Sec 11 T10S R22E 2230 FSL 1690 FWL
43-047-50215	NBU 1022-11K1T	Sec 11 T10S R22E 2531 FSL 2209 FWL
43-047-50216	NBU 1022-2O2S	Sec 02 T10S R22E 2354 FSL 1593 FEL BHL Sec 02 T10S R22E 1010 FSL 2055 FEL
43-047-50217	NBU 1022-2J3S	Sec 02 T10S R22E 2362 FSL 1612 FEL BHL Sec 02 T10S R22E 1525 FSL 2050 FEL
43-047-50218	NBU 1022-2J2S	Sec 02 T10S R22E 2377 FSL 1648 FEL BHL Sec 02 T10S R22E 2035 FSL 2025 FEL
43-047-50219	NBU 1022-2J1T	Sec 02 T10S R22E 2370 FSL 1630 FEL

Page 2

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-50220	NBU 1022-11M1S	Sec 11 T10S R22E 1750 FSL 1885 FWL BHL Sec 11 T10S R22E 1035 FSL 0850 FWL
43-047-50221	NBU 1022-11L2S	Sec 11 T10S R22E 1798 FSL 1921 FWL BHL Sec 11 T10S R22E 2495 FSL 0080 FWL
43-047-50222	NBU 1022-11K3S	Sec 11 T10S R22E 1766 FSL 1897 FWL BHL Sec 11 T10S R22E 1655 FSL 1735 FWL
43-047-50223	NBU 1022-11L3S	Sec 11 T10S R22E 1782 FSL 1909 FWL BHL Sec 11 T10S R22E 1850 FSL 0040 FWL

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

/s/ Michael L. Coulthard

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

MCoulthard:mc:11-12-08

From: Jim Davis
To: Bonner, Ed; Mason, Diana
Date: 12/2/2008 11:11 AM
Subject: Well approvals NBU 746-31E and NBU 1022-11K1T

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

4304750090	NBU 746-31E	EOG Resources	Natural Buttes	NWSE	31	090S	210E	S
	UINTAH							
4304750215	NBU 1022-11K1T	Kerr-McGee Oil & Gas	Natural Buttes	NESW	11	100S	220E	
	S							
	UINTAH							

-Jim

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

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 1022-11K1T 4304750215		
String	Surf	Prod	
Casing Size(")	9.625	4.500	
Setting Depth (TVD)	2800	8500	
Previous Shoe Setting Depth (TVD)	40	2800	
Max Mud Weight (ppg)	8.3	10.0	
BOPE Proposed (psi)	500	5000	
Casing Internal Yield (psi)	3520	7780	
Operators Max Anticipated Pressure (psi)	4325	9.8	

Calculations	Surf String	9.625	"
Max BPH (psi)	$.052 * \text{Setting Depth} * \text{MW} =$	1213	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$	877	NO
MASP (Gas/Mud) (psi)	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$	597	NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$	606	NO No expected pressure, common in area although a bit deeper
Required Casing/BOPE Test Pressure=		2464	psi
*Max Pressure Allowed @ Previous Casing Shoe=		40	psi *Assumes 1psi/ft frac gradient

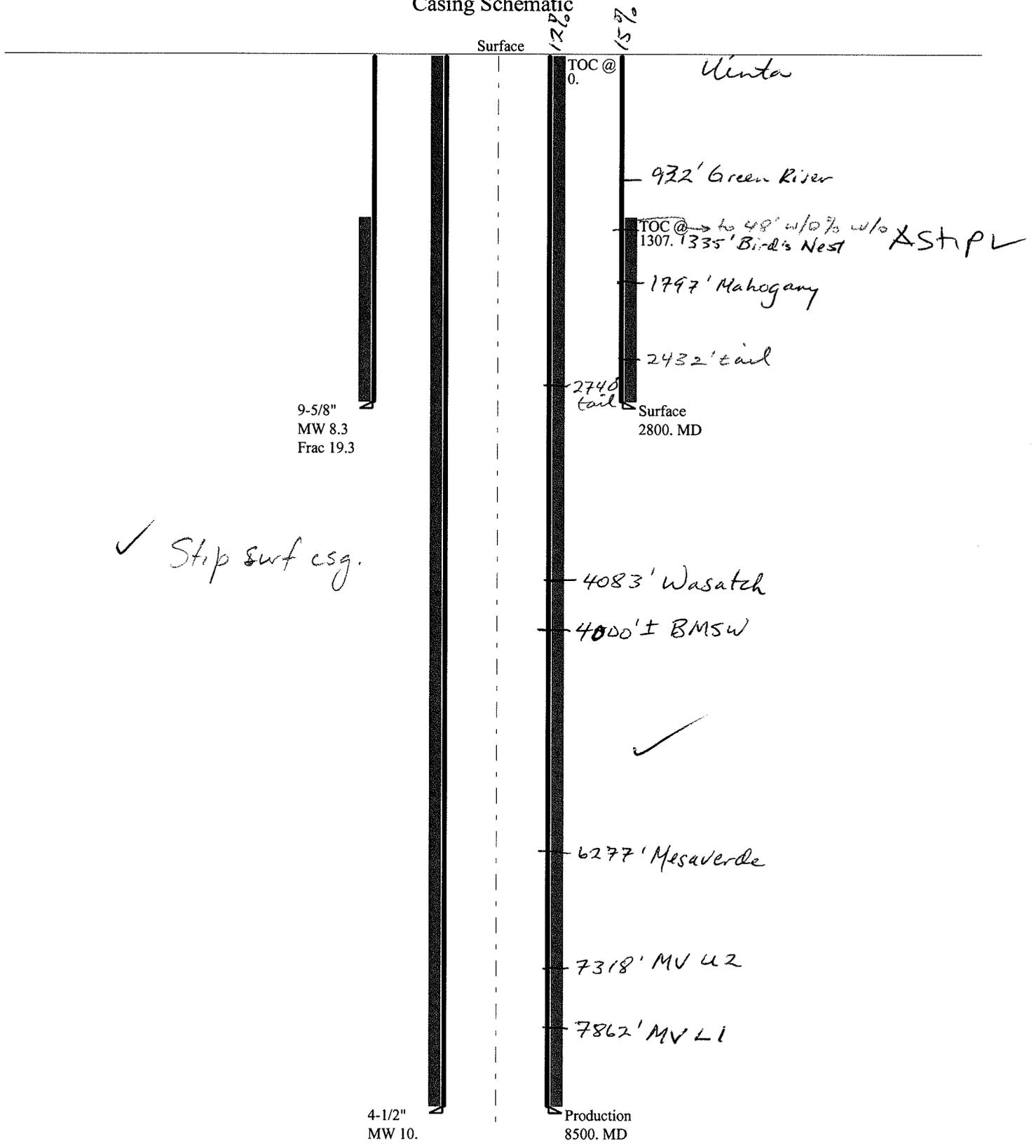
Calculations	Prod String	4.500	"
Max BPH (psi)	$.052 * \text{Setting Depth} * \text{MW} =$	4420	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$	3400	YES
MASP (Gas/Mud) (psi)	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$	2550	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$	3166	NO OK
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2800	psi *Assumes 1psi/ft frac gradient

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

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

43047502150000 NBU 1022-11K1T

Casing Schematic



✓ Stip surf csg.

Uinta

932' Green River

TOC @ 1307.1335' Bird's Nest to 48' w/o 75 w/o *STIPV

1797' Mahogany

2432' tail

2740' tail

Surface 2800. MD

4083' Wasatch

4000'± BMSW

6277' Mesaverde

7318' MV U2

7862' MV L1

9-5/8"
MW 8.3
Frac 19.3

4-1/2"
MW 10.

Production
8500. MD

Surface

TOC @

12%
15%

Well name:	43047502150000 NBU 1022-11K1T		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Surface	Project ID:	43-047-50215
Location:	UINTAH COUNTY		

Design parameters:

Collapse

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

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
 Surface temperature: 75 °F
 Bottom hole temperature: 114 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 1,000 ft

Cement top: 1,307 ft

Burst

Max anticipated surface pressure: 2,464 psi
 Internal gradient: 0.120 psi/ft
 Calculated BHP 2,800 psi

No backup mud specified.

Tension:

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

Tension is based on air weight.
 Neutral point: 2,455 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 8,500 ft
 Next mud weight: 10,000 ppg
 Next setting BHP: 4,416 psi
 Fracture mud wt: 19,250 ppg
 Fracture depth: 2,800 ft
 Injection pressure: 2,800 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2800	9.625	36.00	J-55	LT&C	2800	2800	8.796	22897
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	1212	2020	1.667	2800	3520	1.26	100.8	453	4.49 J

Prepared by: Steven Schiess
 Div of Oil, Gas & Mining

Phone: 801 538-7462
 FAX: 801-359-3940

Date: June 1, 2009
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2800 ft, a mud weight of 8.33 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:	43047502150000 NBU 1022-11K1T	
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.	
String type:	Production	Project ID: 43-047-50215
Location:	UINTAH COUNTY	

Design parameters:

Collapse

Mud weight: 10.000 ppg
Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 194 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,000 ft
Cement top: Surface

Burst

Max anticipated surface pressure: 2,546 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 4,416 psi

No backup mud specified.

Tension:

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

Non-directional string.

Tension is based on air weight.
Neutral point: 7,229 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	8500	4.5	11.60	I-80	LT&C	8500	8500	3.875	112199
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	4416	6360	1.440	4416	7780	1.76	98.6	212	2.15 J

Prepared by: Steven Schiess
Div of Oil, Gas & Mining

Phone: 801 538-7462
FAX: 801-359-3940

Date: June 1, 2009
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 8500 ft, a mud weight of 10 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.
Well Name NBU 1022-11K1T
API Number 43047502150000 **APD No** 1165 **Field/Unit** NATURAL BUTTES
Location: 1/4,1/4 NESW **Sec** 11 **Tw** 10.0S **Rng** 22.0E 2531 **FSL** 2209 **FWL**
GPS Coord (UTM) **Surface Owner**

Participants

Floyd Bartlett (DOGM), Ed Bonner (SITLA), Ramie Hoopes, Clay Einerson, Griz Oleen, Tony Kzneck, Charles Chase (Kerr McGee), Ben Williams (UDWR) and Kolby Kay (Timberline Engineering and Land Surveying).

Regional/Local Setting & Topography

The general area is in the southeast portion of the Natural Buttes Unit, which contains the White River and rugged drainages that drain into the White River. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River varies from ¼ mile to 2 miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 44 air miles to the northwest. Access from Vernal is approximately 59.4 road miles following Utah State, Uintah County and oilfield development roads to the location.

The location is proposed as a 4-well pad and encompasses the pad of the CIGE 367 gas well. The additional wells are the NBU 1022-11K1T, 11K2S, 11J3S and 11F4S. All except the 11K1T will be directionally drilled. Steep rough terrain limits the enlargement that is reasonable at the site. It is on the top of a narrow ridge that runs northerly toward an additional existing location and the White River. Bitter Creek, an ephemeral, drainage is about ½ mile to the west and the White River is about 1/2 mile to the northeast. The ridge is bordered on the northeast and the southwest by steep sided deep draws that become canyons with exposed bedrock cliffs. The location can be extended to the west and the rise in that area could be used to reduce the amount the existing pad will have to be lowered to obtain fill. Current plans are to lower the location about 1.5 feet. Location Corners 7 and 9 are planned to be rounded to reduce the fill along the north side of the pad. About 1.3 feet of fill will be required to construct the southeast corner, Pit Corner A, of the reserve pit. A 15' wide dike or bench and 2 feet of freeboard are provided. No drainage concerns exist. And no diversions will be needed. The existing pad shows no stability problems and the site has no apparent concerns for constructing an enlarged pad as modified and drilling and operating the planned wells. It is the only suitable location in the immediate area.

Both the surface and minerals are owned by SITLA. Ed Bonner of SITLA attended the pre-site and was agreeable to the modifications. He had no additional concerns regarding the proposal.

Surface Use Plan

Current Surface Use

- Grazing
- Recreational
- Wildlife Habitat
- Existing Well Pad

New Road Miles	Well Pad	Src Const Material	Surface Formation
0	Width 290 Length 370	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Area beyond the existing pad is poorly vegetated with cheatgrass, halogeton, black sagebrush, broom snakeweed, Sitanion hystrix , Indian Ricegrass, shadscale and annuals.

Sheep, deer, antelope, coyote, and other small mammals and birds.

Soil Type and Characteristics

Shallow rocky sandy loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diversion Required? N

Berm Required? N

Erosion Sedimentation Control Required? N

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

Reserve Pit

Site-Specific Factors		Site Ranking	
Distance to Groundwater (feet)	>200	0	
Distance to Surface Water (feet)	>1000	0	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)		20	
Native Soil Type	High permeability	20	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
Annual Precipitation (inches)		0	
Affected Populations			
Presence Nearby Utility Conduits	Not Present	0	
	Final Score	45	1 Sensitivity Level

Characteristics / Requirements

The reserve pit is planned primarily in an area of cut in the southwest corner of the location. Dimensions are 75' x 250' x 10' deep with 2' of freeboard. About 1.3 feet of fill will be required to construct the southeast corner, Pit Corner A, of the reserve pit. A 15' wide dike or bench and 2 feet of freeboard are provided. Because the length of time the reserve pit will be used and the roughness of the terrain, Kerr McGee committed to line it with a 30-mil.liner and an appropriate thickness of felt sub-liner to cushion the rock.

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

Other Observations / Comments

On 5/13/2009 the following met and discussed possible changes to be made in this pad. It was agreed that none would be made. Floyd Bartlett (DOGM), Clay Einerson, Lovell Young (Kerr McGee), and Kolby Kay (Timberline Engineering and Land Surveying).

Floyd Bartlett
Evaluator

4/28/2009
Date / Time

Application for Permit to Drill Statement of Basis

6/17/2009

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
1165	43047502150000	LOCKED	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		Surface Owner-APD		
Well Name	NBU 1022-11K1T		Unit	NATURAL BUTTES	
Field	NATURAL BUTTES		Type of Work	DRILL	
Location	NESW 11 10S 22E S 2531 FSL 2209 FWL GPS Coord (UTM)			635969E	4424667N

Geologic Statement of Basis

Kerr McGee proposes to set 2,800' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 4,000'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 11. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Production casing cement should be brought up above the base of the moderately saline ground water to isolate it from fresher waters uphole.

Brad Hill
APD Evaluator

5/19/2009
Date / Time

Surface Statement of Basis

The general area is in the southeast portion of the Natural Buttes Unit, which contains the White River and rugged drainages that drain into the White River. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River varies from ¼ mile to 2 miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 44 air miles to the northwest. Access from Vernal is approximately 59.4 road miles following Utah State, Uintah County and oilfield development roads to the location.

The location is proposed as a 4-well pad and encompasses the pad of the CIGE 367 gas well. The additional wells are the NBU 1022-11K1T, 11K2S, 11J3S and 11F4S. All except the 11K1T will be directionally drilled. Steep rough terrain limits the enlargement that is reasonable at the site. It is on the top of a narrow ridge that runs northerly toward an additional existing location and the White River. Bitter Creek, an ephemeral, drainage is about ½ mile to the west and the White River is about 1/2 mile to the northeast. The ridge is bordered on the northeast and the southwest by steep sided deep draws that become canyons with exposed bedrock cliffs. The location can be extended to the west and the rise in that area could be used to reduce the amount the existing pad will have to be lowered to obtain fill. Current plans are to lower the location about 1.5 feet. Location Corners 7 and 9 are planned to be rounded to reduce the fill along the north side of the pad. About 1.3 feet of fill will be required to construct the southeast corner, Pit Corner A, of the reserve pit. A 15' wide dike or bench and 2 feet of freeboard are provided. No drainage concerns exist. And no diversions will be needed. The existing pad shows no stability problems and the site has no apparent concerns for constructing an enlarged pad as modified and drilling and operating the planned wells. It is the only suitable location in the immediate area.

Both the surface and minerals are owned by SITLA. Ed Bonner of SITLA attended the pre-site and was agreeable to the modifications. He had no additional concerns regarding the proposal.

Ben Williams of the Utah Division of Wildlife Resources also attended the pre-site. Mr. Williams stated no wildlife values would be significantly affected by drilling and operating the wells at this location. He provided Ed Bonner of SITLA and Ramie Hoopes of Kerr McGee a written wildlife evaluation and a copy of a

Application for Permit to Drill Statement of Basis

6/17/2009

Utah Division of Oil, Gas and Mining

Page 2

recommended seed mix to be used for re-vegetating the disturbed area.

Floyd Bartlett
Onsite Evaluator

4/28/2009
Date / Time

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/7/2008

API NO. ASSIGNED: 43047502150000

WELL NAME: NBU 1022-11K1T

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

PHONE NUMBER: 720 929-6007

CONTACT: Kathy Schneebeck-Dulnoan

PROPOSED LOCATION: NESW 11 100S 220E

Permit Tech Review:

SURFACE: 2531 FSL 2209 FWL

Engineering Review:

BOTTOM: 2531 FSL 2209 FWL

Geology Review:

COUNTY: UINTAH

LATITUDE: 39.96311

LONGITUDE: -109.40804

UTM SURF EASTINGS: 635969.00

NORTHINGS: 4424667.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: ST UO 01197A

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

SURFACE OWNER: 3 - State

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

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

Commingle Approved

LOCATION AND SITING:

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

Comments: Presite Completed

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



JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: NBU 1022-11K1T
API Well Number: 43047502150000
Lease Number: ST UO 01197A
Surface Owner: STATE
Approval Date: 6/23/2009

Issued to:

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

Authority:

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

Duration:

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

Commingle:

In accordance with Board Cause No. 173-14, completion into and commingling of production from the Wasatch and Mesaverde formations is allowed.

General:

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

Conditions of Approval:

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

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

Surface casing shall be cemented to the surface.

Notification Requirements:

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

- 24 hours prior to cementing or testing casing - contact Dan Jarvis
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to spudding the well - contact Carol Daniels
- Within 24 hours of any emergency changes made to the approved drilling program - contact Dustin Doucet
- Prior to commencing operations to plug and abandon the well - contact Dan Jarvis

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

- Plugging and abandonment or significant plug back of this well - contact Dustin Doucet
- Any changes to the approved drilling plan - contact Dustin Doucet

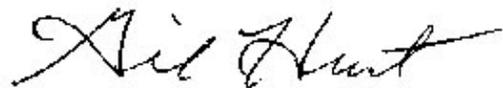
The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at: (801) 538-5338 office
(801) 942-0871 home
- Carol Daniels at: (801) 538-5284 office
- 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:



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: ST UO 01197A
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SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
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1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 1022-11K1T
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047502150000
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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
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4. LOCATION OF WELL FOOTAGES AT SURFACE: 2531 FSL 2209 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 11 Township: 10.0S Range: 22.0E 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 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: 4/8/2010	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
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	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER:

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

MIRU PROPETRO AIR RIG ON 4/7/2010. DRILLED 11" SURFACE HOLE TO 1950'. RAN 8-5/8" 28# J55 SURFACE CSG. PUMP 140 BBLS H2O, PUMP 20 BBLS GEL WATER. PUMP 225 SX CLASS G PREM LITE TAIL CMT @ 15.8 PPG, 1.15 YLD. DROP PLUG ON FLY, DISP W/115 BBLS FRESH WATER, 300 PSIG. LIFT NO RETURNS, BUMP PLUG W/550 PSI. TOP OUT CMT W/125 SX OF CLASS G PREM LITE CMT @ 15.8 PPG, 1.15 YLD. WAIT 2 HRS AND PUMP TOP OUT #2 W/100 SX SAME CMNT. NO CEMENT TO SURFACE WILL TOP OUT WITH REDIMIX. WORT.

Accepted by the
 Utah Division of
 Oil, Gas and Mining
FOR RECORD ONLY
 April 13, 2010

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A		DATE 4/13/2010

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ST UO 01197A
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1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 1022-11K1T
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047502150000
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<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 3/30/2010	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
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MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'.
 RAN 14" SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL LOCATION ON 3/30/2010 AT 16:00 HRS.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 April 01, 2010

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 4/1/2010	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ST UO 01197A
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1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 1022-11K1T
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047502150000
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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
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	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER:

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MIRU PROPETRO AIR RIG ON 4/7/2010. DRILLED 11" SURFACE HOLE TO 1950'. RAN 8-5/8" 28# J55 SURFACE CSG. PUMP 140 BBLS H2O, PUMP 20 BBLS GEL WATER. PUMP 225 SX CLASS G PREM LITE TAIL CMT @ 15.8 PPG, 1.15 YLD. DROP PLUG ON FLY, DISP W/115 BBLS FRESH WATER, 300 PSI LIFT NO RETURNS, BUMP PLUG W/550 PSI. TOP OUT CMT W/125 SX OF CLASS G PREM LITE CMT @ 15.8 PPG, 1.15 YLD. WAIT 2 HRS AND PUMP TOP OUT #2 W/100 SX SAME CMNT. NO CEMENT TO SURFACE WILL TOP OUT WITH REDIMIX. WORT.

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FOR RECORD ONLY
April 13, 2010

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 4/13/2010	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ST UO 01197A
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<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 7/6/2010	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
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FINISHED DRILLING FROM 1950 TO 8697' ON JULY 4, 2010. RAN 4 1/2" 11.6# I-80 PRODUCTION CSG. PUMP 40 BBLs SPACER, LEAD CEMENT W/ 600 850 SX CLASS G PREM LITE @ 13.0 PPG, 1.76 YD. TAILED CEMENT W/ 600 SX CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.31 YD. DISPLACED W/ 135.5 BBLs WATER W/ CLAYTREAT & MAGNACIDE TO BUMP PLUG W/ 3092 PSI LIFT PSI 2434. RECOVERED 40 OF 40 BBLs WATER SPACER, 8 BBLs LEAD CEMENT TO SURFACE. FULL CIRC THROUGH OUT JOB. RD CEMENTERS AND CLEANED PITS. RELEASED ENSIGN RIG #145 ON JULY 6, 2010 @ 13:30 HRS.

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

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 7/7/2010	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ST UO 01197A
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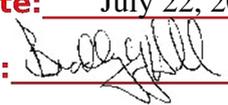
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

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

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

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

Approved by the
 Utah Division of
 Oil, Gas and Mining

Date: July 22, 2010
 By: 

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ST UO 01197A
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SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
--	--

1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 1022-11K1T
------------------------------------	---

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047502150000
---	---

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

4. LOCATION OF WELL FOOTAGES AT SURFACE: 2531 FSL 2209 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 11 Township: 10.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES COUNTY: UINTAH STATE: UTAH
---	---

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 9/10/2010	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input checked="" type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON SEPTEMBER 10, 2010
 AT 11:00 A.M. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

Accepted by the
 Utah Division of
 Oil, Gas and Mining
FOR RECORD ONLY
 September 13, 2010

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 9/10/2010	

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

AMENDED REPORT FORM 8
(highlight changes)

5. LEASE DESIGNATION AND SERIAL NUMBER:
ST UO 01197A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT or CA AGREEMENT NAME
UTU63047A

8. WELL NAME and NUMBER:
NBU 1022-11K1T

9. API NUMBER:
4304750215

10. FIELD AND POOL, OR WILDCAT
NATURAL BUTTES

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

12. COUNTY
UINTAH

13. STATE
UTAH

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

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

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

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

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

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: **NESW 2531 FSL 2209 FWL S11,T10S,R22E**
AT TOP PRODUCING INTERVAL REPORTED BELOW:
AT TOTAL DEPTH:

14. DATE SPUDDED: **3/30/2010** 15. DATE T.D. REACHED: **7/4/2010** 16. DATE COMPLETED: **9/10/2010** ABANDONED READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL):
5115GL

18. TOTAL DEPTH: MD **8,697** TVD **8,695** 19. PLUG BACK T.D.: MD **8,646** TVD **8,644** 20. IF MULTIPLE COMPLETIONS, HOW MANY? * 21. DEPTH BRIDGE MD PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
**GR/CBL-ACBL-CHI TRIPLE
COMBO-RMTEL-BHV-SDL/DSN/ACTR**

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

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

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#		40		28			
11"	8 5/8" IJ-55	28#		1,924		450			
7 7/8"	4 1/2" I-80	11.6#		8,689		1,450			

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	5,361							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A) WASATCH	5,568	5,630		
(B) MESAVERDE	6,775	8,550		
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
5,568 5,630	0.36	25	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
6,775 8,550	0.36	117	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
			Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
			Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

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

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
5568 - 8550	PUMP BBLS SLICK H2O & 329,580 LBS 30/50 SAND

29. ENCLOSED ATTACHMENTS:

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

30. WELL STATUS:

PROD

RECEIVED

NOV 02 2010

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 9/10/2010		TEST DATE: 9/13/2010		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 2,703	WATER – BBL: 288	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 1,800	CSG. PRESS. 2,325	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 2,703	WATER – BBL: 288	INTERVAL STATUS: PROD

INTERVAL B (As shown in item #26)

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

INTERVAL C (As shown in item #26)

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

INTERVAL D (As shown in item #26)

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

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

33. SUMMARY OF POROUS ZONES (Include Aquifers):

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

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
GREEN RIVER	936				
BIRD'S NEST	1,271				
MAHOGANY	1,765				
WASATCH	4,094				
MESAVERDE	6,357	8,697	TD		

34. FORMATION (Log) MARKERS:

35. ADDITIONAL REMARKS (Include plugging procedure)

Attached is the chronological well history and final survey. Completion chrono details individual frac stages. Topout on surface cement job finished with redimix.

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

NAME (PLEASE PRINT) ANDREW LYTLETITLE REGULATORY ANALYSTSIGNATURE DATE 10/25/2010

This report must be submitted within 30 days of

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

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

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

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

Phone: 801-538-5340

Fax: 801-359-3940

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-11K1T BLUE		Spud Conductor: 3/30/2010	Spud Date: 4/7/2010
Project: UTAH-UINTAH		Site: NBU 1022-11K PAD	Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLING		Start Date: 4/5/2010	End Date: 7/6/2010
Active Datum: RKB @5,128.00ft (above Mean Sea Level)		UWI: NE/SW/0/10/S/22/E/11/0/0/6/PM/S/2,531.00/W/0/2,209.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
4/7/2010	17:00 - 18:00	1.00	DRLSUR	02	B	P		SPUD WELL 4-7-2010 @ 1700 DRILL F 40' -180'
	18:00 - 20:00	2.00	DRLSUR	06	A	P		PICK UP DIRECTIONAL TOOLS ORIENT MOTOR
	20:00 - 0:00	4.00	DRLSUR	02	B	P		DRILL F/ 180' - 759" 550 GPM 15-20K WOB 60-65 ROT 93.5 DHR AVERAGE ROP 91.5
4/8/2010	0:00 - 13:00	13.00	DRLSUR	02	B	P		DRILL F/ 759' - 1950' T.D. 4-8-2010 @ 1300 550 GPM 15-20K WOB 60-65 ROT 93.5 DHR AVERAGE ROP 91.5 USING WEATHORFORD FOR VERTICAL CONTROL
	13:00 - 14:00	1.00	DRLSUR	05	C	P		CIRCULATE AND CONDITION MUD PRIOR TO TRIP
	14:00 - 17:00	3.00	DRLSUR	06	A	P		LDDS, L/D DIRECTIONAL TOOLS AND MUD MOTOR AND BIT
	17:00 - 18:00	1.00	DRLSUR	12	A	P		RIG UP TO RUN CASING
	18:00 - 22:00	4.00	DRLSUR	12	C	P		RUN 44 JOINTS 8.625 28# J-55 8RD-LTC CASING SHOE AT 1909' BAFFLE AT 1865' RELEASE RIG @ 2300 4-8-2010
	22:00 - 0:00	2.00	DRLSUR	12	E	P		HELD SAFETY MTNG,PRESS TEST TO 2000 PSI,PUMP 140 BBLs H2O,PUMP 20 BBLs GEL WATER,PUMP 225 SX 15.8 # 1.15 YLD 5 GAL/SK TAIL CMNT DROP PLUG ON FLY DISP W/ 115 BBLs FRESH WATER 300 PSI LIFT NO RETURNS, BUMP PLUG W / 550 PSI, TOP OUT 125 SX OF 15.8#. 1.15 YLD 5 GAL SK 4% CALC CMNT, WAIT 2 HRS PUMP 100 SX SAME CMNT. NO CEMENT TO SURFACE WILL TOP OUT WITH REDIMIX
	6/27/2010	20:30 - 23:00	2.50	MIRU	01	C	P	
6/28/2010	23:00 - 0:00	1.00	MIRU	14	A	P		NIPPLE UP BOPS, INSTALL FLOWLINES, RECONNECT FLARE LINES.
	0:00 - 6:00	6.00	DRLPRO	15	A	P		PRESSURE TEST PIPE RAMS, BLIND RAMS, BOP, FLOOR VALVE, KILL LINE, & KILL LINE VALVES, BOP WING VALVES, HCR VALVE, CHOKE LINE INNER & OUTER CHOKE VALVES, & MANIFOLD 250 PSI LOW/ 5 MINUTES, 5K HIGH FOR 10 MINUTES, TEST ANNULAR 250 LOW/5 MINUTES, 2500 HIGH/10 MINUTES, TEST SUPER CHOKE & CSG TO 1500 PSI FOR 30 MINUTES. FUNCTION TEST CLOSING UNIT.
	6:00 - 21:00	15.00	MAINT	08	A	Z		REPLACE GENERATOR. MOVE WATER TANK, MOVE SCR HOUSE, PULL OUT GENERATOR HOUSE. PULL GENERATOR OUT OF HOUSE. REFAB BRACKETS FOR NEW GENERATOR. PUT GENERATOR BACK IN HOUSE. SPOT BUILDING BACK IN PLACE. RECONNECT ALL ELECTRICAL LINES.
6/29/2010	21:00 - 22:30	1.50	DRLPRO	06	A	P		P/U "ROP TECH MOTOR" ADJUSTABLE 7/8 LOBE 5 STAGE .28 RPG MOTOR. MOTOR SET TO 1.78. ADJUST MOTOR TO 1.5 DEG BENT HOUSE. M/U 7-7/8" Q506F W/ 6-13'S JETS. P/U NMDC AND SCIENTIFIC DIRECTIONAL TOOLS. SCRIBE MOTOR.
	22:30 - 0:00	1.50	DRLPRO	06	A	P		TRIPPING IN HOLE @ REPORT TIME. (400')
	0:00 - 1:30	1.50	DRLPRO	06	A	P		TRIP IN HOLE AND TAG CEMENT 1838'.

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-11K1T BLUE		Spud Conductor: 3/30/2010		Spud Date: 4/7/2010	
Project: UTAH-UINTAH		Site: NBU 1022-11K PAD		Rig Name No: PROPETRO/, ENSIGN 145/145	
Event: DRILLING		Start Date: 4/5/2010		End Date: 7/6/2010	
Active Datum: RKB @5,128.00ft (above Mean Sea Level)			UWI: NE/SW/0/10/S/22/E/11/0/0/6/PM/S/2,531.00/W/0/2,209.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	1:30 - 2:30	1.00	DRLPRO	02	F	P		DRILL CEM. AND FE.1838'-1959'. WOB 10-15K, SEEN SOME HIGH TORQUE FROM DRILL STRING AFTER DRILLING OUT OF SHOE. WHERE IBS MAY HAVE BEEN CATCHING AND RELEASING ON CSG SHOE.
	2:30 - 12:00	9.50	DRLPRO	02	D	P		DRILL SLIDE/ ROTATE 1959'-3308' (1349',142'/HR) MOTOR RPM-134, ROTARY RPM 65, WOB-15-18K, SPP ON/OFF- 1700 1250, DIFF-450, TQE ON/OFF- 20/5, HOOK LOAD UP/DOWN/ROT -118/113/107 DRAG-5K, 480 GPM, #1-106 SPM, #2-0, ROTATE 94% SLIDE 6%. 80' SLIDE @ 93'/HR. SLIDE TO KICK DIRECTION OF WELL TO NORTH WEST QUADRANT OF TARGET. CIRC RESERVE PIT 8.4 WT 26 VIS. SWEEPING HOLE W/ POLYMER ON CONNECTIONS. HELD EVAC. DRILL
	12:00 - 12:30	0.50	DRLPRO	07	A	P		RIG SERVICE. FUNCTION TEST PIPE RAMS AND ANNULAR.
	12:30 - 13:30	1.00	MAINT	08	A	Z		GENERATOR WOULD NOT START BACK UP AFTER DAILY RIG SERVICE. CHANGE OUT BATTERIES TO RESTART GENERATOR.
	13:30 - 18:30	5.00	DRLPRO	02	D	P		DRILL SLIDE/ ROTATE 3308'-4122' (814'- 162'/HR) MOTOR RPM-134, ROTARY RPM 65, WOB-15-18K, SPP ON/OFF- 1800/1300, DIFF-500, TQE ON/OFF- 20/6, HOOK LOAD UP/DOWN/ROT -130/123/118 DRAG-8K, 480 GPM, #1-106 SPM, #2-0, ROTATE 97% SLIDE 3% . 22' SLIDE @ 85'/HR. SLIDE TO MAINTAIN DIRECTION OF WELL TO NORTH WEST QUADRANT OF TARGET. CIRC RESERVE PIT 8.4 WT 26 VIS. SWEEPING HOLE W/ HIGH VIS SWEEP WHEN NEEDED. POLYMER ON CONNECTIONS. BOP DRILL @ 05:30 45 SEC.
	18:30 - 0:00	5.50	DRLPRO	02	D	P		DRILL SLIDE/ ROTATE 4122-4903' (781', 142'/HR) MOTOR RPM-134, ROTARY RPM 50- 65, WOB-15-20K, SPP ON/OFF- 1800/1300, DIFF-500, TQE ON/OFF- 20/6, HOOK LOAD UP/DOWN/ROT -150/138/145 DRAG-5K, 480 GPM, #1-106 SPM, #2-0, ROTATE 97% SLIDE 2% . 12' SLIDE @ 80'/HR. SLIDE TO MAINTAIN DIRECTION OF WELL TO NORTH WEST QUADRANT OF TARGET. CIRC RESERVE PIT 8.4 WT 26 VIS. SWEEPING HOLE W/ HIGH VIS SWEEP WHEN NEEDED. POLYMER ON CONNECTIONS. BOP DRILL 19:30 48 SEC.
6/30/2010	0:00 - 8:00	8.00	DRLPRO	02	D	P		DRILL SLIDE / ROTATE 4903'-5762' (859', 107'/HR) MOTOR RPM-134, ROTARY RPM 50- 65, WOB-18-23K, SPP ON/OFF- 2000/1600, DIFF-400, TQE ON/OFF- 19/7 HOOK LOAD UP/DOWN/ROT -162/150/156 DRAG-6K, 480 GPM, #1-107 SPM, #2-0, ROTATE 97% SLIDE 3% . 23' OF SLIDE @ 50'HR. MUDDER UP @ 5500'. TO 9.3 WT 34 VIS.
	8:00 - 13:30	5.50	DRLPRO	02	D	P		DRILL SLIDE/ ROTATE 5762'-6207' (445', 81'/HR) MOTOR RPM-134, ROTARY RPM 50- 65, WOB-18-23K, SPP ON/OFF- 2000/1600, DIFF-400, TQE ON/OFF- 19/7 HOOK LOAD UP/DOWN/ROT -165/152/158 DRAG-7K, 480 GPM, #1-107 SPM, #2-0, ROTATE 97% SLIDE 3% . 12' OF SLIDE @ 55'HR. MUD IN 39 VIS 9.5 WT OUT 39 VIS 9.5 OUT. 10% LCM. PRETREATED MUD FOR POSSIBLE LOSS ZONE 6234'- 6700'.
	13:30 - 14:00	0.50	DRLPRO	07	A	P		RIG SERVICE.. FUNCTION TEST BOP'S.

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-11K1T BLUE		Spud Conductor: 3/30/2010	Spud Date: 4/7/2010
Project: UTAH-UINTAH		Site: NBU 1022-11K PAD	Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLING		Start Date: 4/5/2010	End Date: 7/6/2010
Active Datum: RKB @5,128.00ft (above Mean Sea Level)		UWI: NE/SW/0/10/S/22/E/11/0/0/6/PM/S/2,531.00/W/0/2,209.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	14:00 - 0:00	10.00	DRLPRO	02	D	P		DRILL SLIDE / ROTATED 6207'-6888' (681', 68'/HR) MOTOR RPM-134, ROTARY RPM 50-65, WOB-18-23K, SPP ON/OFF- 2200/1800, DIFF-300-400, TQE ON/OFF- 17/6 HOOK LOAD UP/DOWN/ROT -175/160/168 DRAG-7K, 480 GPM, #1-107 SPM, #2-0, ROTATE 97% SLIDE 3% .15' OF SLIDE @ 40'HR. MUD IN 43 VIS 9.8 WT OUT 42 VIS 9.9 OUT. 12% LCM. LOSS 10 BBL MUD @ 6300'. RAISED LCM TO 12%. KELLY GRINOLD ENSIGN SAFETY HAND ON LOCATION. (INSPECTION OF RIG) SAFETY MEETING IN UPPER DOGHOUSE @ 15:00.
7/1/2010	0:00 - 16:30	16.50	DRLPRO	02	D	P		DRILL SLIDE / ROTATED 6888'-7777' (889', 54'/HR) MOTOR RPM-134, ROTARY RPM 50-65, WOB-18-23K, SPP ON/OFF- 2500/2100, DIFF-300-400, TQE ON/OFF- 20 / 7 HOOK LOAD UP/DOWN/ROT -189/175/180 DRAG-9K, 480 GPM, #1-107 SPM, #2-0, ROTATE 95% SLIDE 5% 45' OF SLIDE @ 40'HR. MUD IN 44VIS 10.5 WT. OUT 47 VIS 10.2 OUT. 10% LCM. NO LOSSES AT THIS TIME. STARTED BUILDING MUD WT FOR TD. USING LIQUID MUD TO WT UP. GAS ZONE @ 7650. 10' CONNECTION FLARE @ 10.6 MUD WT. AFTER CONN @ 7748'. MOTOR STARTED PSI SPIKING TO 3400 PSI. AT FIRST WITH 23 K ON BIT AND 400 DIFF. THEN DOWN TO 18K ON BIT WITH 300 DIFF.
	16:30 - 17:00	0.50	DRLPRO	05	A	P		CIRC AND CLEAN BIT. RAISE MUD WT TO 11. VIS 44 IN, 10.6 WT 43 VIS OUT. MUD GAS CUT.. 15' CONNECTION FLARE.
	17:00 - 18:30	1.50	DRLPRO	02	D	P		DRILL 7777'- 7818' (41', 27'/HR) TRY DRILLING WITH REDUCED WT AND DIFF. WHILE INCREASING MUD TO 11.2 WT AND 43 VIS 8% IN, 11.2 WT AND 43 VIS 8% LCM OUT. WEIGHTED MUD UP W/ 12.4 # LIQUID MUD. UNABLE TO KEEP BIT DRILLING.PSI SPIKES HAPPENING W/ 12K ON BIT AND 150 PSI DIFF. NO FLARE OR GAS. NO EXCESSIVE DRAG. BUILD 13.2# 40 BBL PILL AND PUMP FOR DRYJOB.
	18:30 - 0:00	5.50	DRLPRO	06	A	P		TRIP OUT OF HOLE . (ROP TECH. 1.5 BH .28 RPG. RAN W/ 480 GPM. 62 HRS) AT DIRECTIONAL TOOLS @ REPORT TIME.
7/2/2010	0:00 - 1:00	1.00	DRLPRO	06	A	P		TRIP OUT OF HOLE. PULL DIRECTIONAL TOOLS. LD BIT AND MOTOR. BIT WORE DOWN TO SHOULDER, AND MUD MOTOR W/ 3/16" MOVEMENT OF MANDREL WHEN SET ON. NO FLOW ON WELL. NO LOSS OR GAIN ON TRIP OUT. FUNCTION BLIND RAMS AND PIPE RAMS.
	1:00 - 6:30	5.50	DRLPRO	06	A	P		M/U SDI .14 RPG 1.5 DEG BENT HOUSE MOTOR (MUD MOTOR WITH 11 HRS). M/U Q506Z. 3-14'S AND 3-13'S TRIP IN HOLE. BREAK CIRC 2000' AND 5500'. TRIP IN HOLE TO 7668'. NO TIGHT HOLE ON TRIP.
	6:30 - 7:00	0.50	DRLPRO	03	D	P		WASH DOWN 7668'-7818'. PRECAUTIONARY. 15-20' FLARE BOTTOMS UP GAS. MUD WT 11.3 40 VIS IN, WT 10.7 VIS 46 OUT. NO LOSSES OR GAINS ON TRIP.

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-11K1T BLUE	Spud Conductor: 3/30/2010	Spud Date: 4/7/2010
Project: UTAH-UINTAH	Site: NBU 1022-11K PAD	Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLING	Start Date: 4/5/2010	End Date: 7/6/2010
Active Datum: RKB @5,128.00ft (above Mean Sea Level)		UWI: NE/SW/0/10/S/22/E/11/0/0/6/PM/S/2,531.00/W/0/2,209.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:00 - 16:00	9.00	DRLPRO	02	D	P		DRILL SLIDE/ ROTATE 7818'-8346' (528', 59'/HR) MOTOR RPM-134, ROTARY RPM 50-65, WOB-18-21K, SPP ON/OFF- 2800/2500, DIFF-300, TQE ON/OFF- 21/ 7 HOOK LOAD UP/DOWN/ROT -192/176/181 DRAG-11K, 480 GPM, #1-107 SPM, #2-0, ROTATE 100% SLIDE 0% . MUD IN 44VIS 12.8 WT. OUT 48 VIS 12.8 OUT. 10% LCM. NO LOSSES AT THIS TIME. INCREASING MUD WT TO 13# IN PREPERATION TO DRILL INTO SEGO.
	16:00 - 0:00	8.00	MAINT	08	B	Z		A MICRO BURST WITH EXTRA HIGH WINDS AND RAIN BLEW KELLY HOSE TO THE OUTSIDE OF DERRICK WHILE DRILLING. AS THEY DRILLED THE KELLY HOSE BECAME TRAPPED AND EVENTUALLY RUPTURED FROM THE STRESS OF THE DRILL STRING PULLING DOWN ON IT. WE WENT TO PULL OUT 5 STANDS AND THEY REALIZED THAT THE IRON DERRICK MAN'S RIGHT HINGE PIN WAS BROKEN ALSO IN THE MICRO BURST. LAY DOWN 1 JT. AND RIGGED UP 50' 2" HOSE. WE ARE CIRC. W/ 150 BBLs HR AND WORKING DRILL PIPE 30' EVERY 15 MIN. ESTIMATED TIME FOR REPAIR ON KELLY HOSE 11 A.M. JULY 3RD. AT THAT TIME WE WILL CONTINUE DRILLING HOLE WITH SINGLES WHILE IRON DERRICK MAN IS BEING REPAIRED. MUD 12.8 VIS 47 10% LCM. NO LOSSES AND HOLE STILL SEEMS IN GOOD SHAPE.
7/3/2010	0:00 - 14:00	14.00	MAINT	08	A	Z		CIRC. W/ 150 BBLs HR AND WORKING DRILL PIPE 30' EVERY 15 MIN. WAIT FOR KELLY HOSE TO ARRIVE FROM CASPER. ARRIVE @ 05:30. FIT KELLY HOSE W/ NEW UNIONS. PULL OLD KELLY HOSE OUT OF DERRICK. INSTALL NEW KELLY HOSE IN DERRICK.
	14:00 - 17:00	3.00	MAINT	08	A	Z		CRANE TO REMOVE IRON DERRICK MAN WAS LATE GETTING TO LOCATION. THE WEST SIDE SLOPE DOWN INTO BITTER CREEK ROAD. FELL IN ON CRANE. JC CRANE BROUGHT IN ANOTHER CRANE TO PICK THE CRANE UP AND OUT OF ROAD THAT WAS BAD. CRANE ARRIVE 12:30. RIG UP CRANE. AND REMOVE IRON DERRICK MAN FROM BOARD.
	17:00 - 22:30	5.50	DRLPRO	02	D	P		DRILL WITH SINGLES SLIDE/ ROTATE 8346'-8574' (228,42'/HR) MOTOR RPM-134, ROTARY RPM 50-65, WOB-18-21K, SPP ON/OFF- 2800/2500, DIFF-300, TQE ON/OFF- 21/ 7 HOOK LOAD UP/DOWN/ROT -199/176/184 DRAG-15K, 480 GPM, #1-107 SPM, #2-0, ROTATE 100% SLIDE 0% . MUD IN 47VIS 13.1 WT. OUT 50 VIS 13 OUT. 9% LCM. CHECKING FOR FLOW ON CONNECTIONS IN SEGO.
	22:30 - 0:00	1.50	MAINT	08	A	Z		FINISHED WITH IRON DERRICK MAN REPAIRS. INSTALL IRON DERRICK MAN BACK IN DERRICK. FINISHED WITH INSTALLATION @ 7/4/2010 01:30.
7/4/2010	0:00 - 1:30	1.50	MAINT	08	A	Z		FINISH INSTALLING IRON DERRICK HAND. RIG DOWN CRANE.

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-11K1T BLUE	Spud Conductor: 3/30/2010	Spud Date: 4/7/2010
Project: UTAH-UINTAH	Site: NBU 1022-11K PAD	Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLING	Start Date: 4/5/2010	End Date: 7/6/2010
Active Datum: RKB @5,128.00ft (above Mean Sea Level)		UWI: NE/SW/0/10/S/22/E/11/0/0/6/PM/S/2,531.00/W/0/2,209.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	1:30 - 5:30	4.00	DRLPRO	02	D	P		DRILL SLIDE/ ROTATE 8574'-8697' (123',31'/HR) TD 7/4/2010 05:30 MOTOR RPM-134, ROTARY RPM 50-65, WOB-20-24K, SPP ON/OFF- 2800/2500, DIFF-300, TQE ON/OFF- 21/ 7 HOOK LOAD UP/DOWN/ROT -195/178/184 DRAG-11K, 480 GPM, #1-107 SPM, #2-0, ROTATE 100% SLIDE 0% . MUD IN 47VIS 13.1 WT. OUT 50 VIS 13 OUT. 9% LCM. CHECKING FOR FLOW ON CONNECTIONS IN SEGO. LOSS 30 BBLs OF MUD @ 8575'. INCREASED LCM TO 11%.
	5:30 - 7:30	2.00	EVALPR	05	A	P		CIRC AND CONDITION HOLE. CHECK WELL FOR FLOW. NO FLOW. BUILD 40 BBL 15.3# PILL AND PUMP DRY JOB.
	7:30 - 12:00	4.50	EVALPR	06	E	P		WIPER TRIP TO SHOE. AFTER GETTING TO SHOE. CHECK FLOW.. NO FLOW. 1 STAND TRIPPING BACK IN GUST OF WIND CAME UP AND BLEW SERVICE LOOP UNDER ELEVATORS BEFORE THE DRILLER COULD STOP, SEVERING 3 LINES. OF THE SERVICE LOOP. LOST TOP DRIVE FUNCTIONS.
	12:00 - 0:00	12.00	MAINT	08	A	Z		WAIT FOR LINES FROM CASPER. UNINSTALL BROKEN SERVICE LINES AND INSTALL NEW ONES. CIRC THROUGH 2" 125 GPM @ SHOE. CHECKING FOR FLOW . NO FLOW.
7/5/2010	0:00 - 5:00	5.00	MAINT	08	A	Z		REPAIR SERVICE LOOP. CIRC. HOLE W/ 150 GPM @ SHOE. MUD WT 13.1 VIS 47.
	5:00 - 9:30	4.50	EVALPR	06	E	P		WIPER TRIP BACK TO BOTTOM. BREAK CIRC EVERY 2000'. CHECKING FOR GOOD RETURNS. NO FLOW. AND NO LOSSES.
	9:30 - 11:30	2.00	EVALPR	05	F	P		CIRC CONDITION HOLE. SOME WATER FROM SEGO IN MUD BOTTOMS UP. CUT MUD TO 12.6 FOR 20 BBLs. MUD WT 13.1 VIS 47. LCM 9% MIX UP 40 BBL 15.1# PILL AND PUMP FOR DRY JOB.
	11:30 - 18:00	6.50	EVALPR	06	B	P		TRIP OUT FOR LOGS. PULL TO BHA, AND UNINSTALL ROT HEAD RUBBER.
	18:00 - 18:30	0.50	EVALPR	07	A	P		RIG SERVICE, FUNCTION TEST ANNULAR. SERVICE I.D.R. AND I. R.
	18:30 - 19:30	1.00	EVALPR	06	B	P		LD BHA,PULL DIRECTIONAL TOOLS, LD MUD MOTOR AND BIT. CHECK FOR FLOW. NO FLOW. FUNCTION BLIND AND PIPE RAMS. PULL WEAR BUSHING.
	19:30 - 0:00	4.50	EVALPR	11	D	P		HOLD SAFETY MEETING, RIG UP HALLIBURTON LOGGERS. RUN TRIPLE COMBO. LOGS BRIDGED OUT @ 8384'. 313' SHY OF TD. LOGGED UP FROM 8384. RUN REPEAT RUN. RIG DOWN LOGGERS. NO FLOW OR LOSS OF MUD DURING LOGS.
7/6/2010	0:00 - 0:30	0.50	EVALPR	11	D	P		RIG DOWN LOGGING CREW.
	0:30 - 1:00	0.50	CSG	12	A	P		HOLD SAFETY MEETING AND RIG UP WEATHERFORD TRS CSG CREW.
	1:00 - 8:00	7.00	CSG	12	C	P		RUN 206 JTS OF 4.5", I-80, 11.6# W BTC THREADS. LANDED FLOAT SHOE @ 8689' KB, FLOAT COLLAR 8644' KB, TOP OF MESA MARKER JT LANDED @ 6264' KB. FILL CSG 1200', 6100'. WASH CSG THROUGH BRIDGE @ 8537-8560'. CONTINUE RUNNING CSG TO LANDING PT. INSTALL ROT. HEAD RUBBER. NO TIGHT SPOT @ 8384'. CENTRALIZER RAN ON 1ST, 2 JTS AND THEN EVERY THIRD JT FOR A TOTAL OF 15 CENTRALIZERS.

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-11K1T BLUE	Spud Conductor: 3/30/2010	Spud Date: 4/7/2010
Project: UTAH-UINTAH	Site: NBU 1022-11K PAD	Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLING	Start Date: 4/5/2010	End Date: 7/6/2010
Active Datum: RKB @5,128.00ft (above Mean Sea Level)		UWI: NE/SW/0/10/S/22/E/11/0/0/6/PM/S/2,531.00/W/0/2,209.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	8:00 - 9:00	1.00	CSG	05	D	P		RIG UP BJ CEMENT HEAD. AND CIRC DOWN CSG W/ RIG PUMP. HOLD SAFETY MEETING AND FINISH RIGGING UP CEMENTERS. NO GAS ON BOTTOMS UP. WATER CUT ON BOTTOM MUD 13# TO 12.6# FOR 20 BBLS.
	9:00 - 11:30	2.50	CSG	12	E	P		PSI TEST LINES TO 5000 PSI. PERFORM POP OFF TEST 4000 PSI. PUMP 40 BBLS OF GEL WATER. LEAD W/ 850 SKS PL2 MIXED @ 13 PPG, YIELD 1.76 YD , 8.84 GAL/SK, TAIL W/ 600 SKS 50:50 POZ MIXED @ 14.3PPG, YIELD 1.31, 5.9 GAL/SK. WASH LINES, DROP PLUG & DISPLACE W/ 135.5 BBLS WATER W/ CLAYTREAT & MAGNACIDE TO BUMP PLUG W/ 3092 PSI, LIFT PSI 2434. RECOVERED 40 OF 40 BBLS WATER SPACER, 8 BBLS LEAD CEMENT TO SURFACE. FULL CIRC THROUGH OUT JOB. RIG DOWN CEMENT HEAD. NO ANNULAR FLOW.
	11:30 - 15:30	4.00	RDMO	14	A	P		FLUSH STACK WITH MUD THEN FRESH WATER. FLUSH GAS BUSTER. LD LANDING JT. NIPPLE DOWN BOP'S. CLEAN PITS.

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-11K1T BLUE	Spud Conductor: 3/30/2010	Spud Date: 4/7/2010
Project: UTAH-UINTAH	Site: NBU 1022-11K PAD	Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLING	Start Date: 4/5/2010	End Date: 7/6/2010
Active Datum: RKB @5,128.00ft (above Mean Sea Level)	UWI: NE/SW/0/10/S/22/E/11/0/0/6/PM/S/2,531.00/W/0/2,209.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	15:30 - 15:30	0.00	RDMO					<p>CONDUCTOR CASING: 14" Cond. Depth set: 40 Cement sx used: 28</p> <p>SPUD DATE/TIME: 4/7/2010 17:00</p> <p>SURFACE HOLE: 11 Surface From depth: 40 Surface To depth: 1,959 Total SURFACE hours: 29.00 Surface Casing size: 8.625" # of casing joints ran: 44 Casing set MD: 2,014.0 # sx of cement: 450 Cement blend (ppg): 15.8# TAIL Cement yield (ft3/sk): 1.15 YD # of bbls to surface: 0 Describe cement issues: NO CIRC. REDIMIXED TO SURFACE Describe hole issues: NONE</p> <p>PRODUCTION: 7.875 Rig Move/Skid start date/time: 6/27/2010 20:30 Rig Move/Skid finish date/time: 6/28/2010 0:00 Total MOVE hours: 3.5 Prod Rig Spud date/time: 6/29/2010 1:30 Rig Release date/time: 7/6/2010 14:00 Total SPUD to RR hours: 180.5 Planned depth MD 8,697 Planned depth TVD 8,697 Actual MD: 8,697 Actual TVD: 8,696 Open Wells \$: \$625,109 AFE \$: \$680,422 Open wells \$/ft: \$71.88</p> <p>PRODUCTION HOLE: Prod. From depth: 1,959 Prod. To depth: 8,697 Total PROD hours: 80.5 Log Depth: 8384 Production Casing size: 4 1/2 # of casing joints ran: 206 Casing set MD: 8,689.0 # sx of cement: 1450 SX Cement blend (ppg): LEAD 13, TAIL 14.3 Cement yield (ft3/sk): LEAD 1.76 /TAIL 1.31 Est. TOC (Lead & Tail) or 2 Stage : LEAD 13/ TAIL 5492' Describe cement issues: 8 BBLS OF GOOD LEAD TO SUR. FULL CIRC Describe hole issues: 60 HRS RIG REPAIR THIS HOLE, DRILLED INTO 200' INTO SEGO.</p> <p>DIRECTIONAL INFO: KOP: 44 Max angle: 2.29 Departure: -10.84 Max dogleg MD: 1.69</p>

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-11K1T BLUE Spud Co

Project: UTAH-UINTAH Site: NBU

Event: COMPLETION Start Date:

Active Datum: RKB @5,128.00ft (above Mean Sea Level)

Start Date: 3/30/2010 Spud Date: 4/7/2010

22-11K PAD Rig Name No: LEED 733/733

26/2010 End Date: 9/9/2010

Location: NE/SW/0/10/S/22/E/11/0/0/6/PM/S/2,531.00/W/0/2,209.00/0/0

Date	Time Start-End	Duration (hr)	Phase
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8/27/2010 8:00 - 15:00 7.00 COMP

8/30/2010 10:00 - 18:00 8.00 COMP

8/31/2010 8:00 - 18:00 10.00 COMP

Date	Sub Code	P/U	MD From (ft)	Operation
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7 B P RU B&C QUICK TEST & CUTTERS WL. PSI TEST CSG & BOTH FRAC VALVES T/ 7000#. BLEED OFF PSI. MOVE OVER T/ NEXT WELL. PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH PERF F/ 8542'-50', 3 SPF, 24 HOLES. POOH. SWIFWE.

3 B P FRAC STG 1)WHP 1681 PSI, BRK 2860 PSI @ 4.7 BPM. ISIP 2361 PSI, FG .71. PUMP 100 BBLS @ 48.1 BPM @ 6019 PSI = 67% HOLES OPEN. ISIP 2560 PSI, FG .74, NPI 199 PSI. MP 6456 PSI, MR 49.5 BPM, AP 5226 PSI, AR 46.2 BPM, PMP 1620 BBLS SW & 57,698 LBS OF 30/50 SND & 5,000 LBS OF 20/40 SLC SND. TOTAL PROP 62,698 LBS, SWI, X-OVER FOR WL. (RA TRACE THIS STG.)

3 B P PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8241' P/U PERF F/ 8138'-41', 3 SPF, 9 HOLES. 8023'-28', 3 SPF, 15 HOLES. 24 HOLES. FRAC STG 2)WHP 1350 PSI, BRK 3041 PSI @ 4.7 BPM. ISIP 1688 PSI, FG .65. PUMP 100 BBLS @ 49.7 BPM @ 5815 PSI = 67% HOLES OPEN. ISIP 2580 PSI, FG .76, NPI 892 PSI. MP 6465 PSI, MR 52 BPM, AP 5187 PSI, AR 51.1 BPM, PMP 2756 BBLS SW & 105,108 LBS OF 30/50 SND & 5,000 LBS OF 20/40 SLC SND. TOTAL PROP 110,108 LBS, ((CUT WHITE SAND 7000 LBS SHORT.)) SWI, X-OVER FOR WL.

PERF STG 3)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7973' P/U PERF F/ 7882'-88', 4 SPF, 24 HOLES. POOH, SWIFN.

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-11K1T BLUE Spud Code: 1022-11K1T
 Project: UTAH-UINTAH Site: NBU 1022-11K PAD
 Event: COMPLETION Start Date: 26/2010
 Active Datum: RKB @5,128.00ft (above Mean Sea Level)

Start Date: 3/30/2010 Spud Date: 4/7/2010
 Rig Name No: LEED 733/733
 End Date: 9/9/2010
 Location: NE/SW/0/10/S/22/E/11/0/0/6/PM/S/2,531.00/W/0/2,209.00/0/0

Date	Time Start-End	Duration (hr)	Phase
9/1/2010	8:00 - 18:00	10.00	COMP

Job	Sub Code	P/U	MD From (ft)	Operation
3	B	P		

FRAC STG 3)WHP 1500 PSI, BRK 3043 PSI @ 4.7 BPM. ISIP 2228 PSI, FG .78.
 PUMP 100 BBLS @ 40.5 BPM @ 5188 PSI = 65% HOLES OPEN.
 SCREEN OUT ON THIS STG. OPEN WELL T/ PIT FLOW BACK FOR 35 MIN. REFLUSH WELL PUMPED 16,755 LBS 30/50. FLOWED BACK 5000 LBS +/- TO THE PIT. TOTAL SAND IN FORMATION = 11,755 LBS.
 PMP 669 BBLS SW . DID NOT PUMP ANT SLC. TOTAL PROP 16,755 LBS, SWI, X-OVER FOR WL

PERF STG 4)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 7832' P/U PERF F/ 7772'-74', 3 SPF, 6 HOLES.
 7710'-12', 4 SPF, 8 HOLES.
 7665'-66', 4 SPF, 4 HOLES.
 7607'-08', 4 SPF, 4 HOLES. 22 HOLES.
 POOH, X-OVER FOR FRAC CREW.

FRAC STG 4)WHP 2140 PSI, BRK 4158 PSI @ 6.5 BPM. ISIP 2561 PSI, FG .77.
 PUMP 100 BBLS @ 40.7 BPM @ 5416 PSI = 68% HOLES OPEN.
 ISIP 2677 PSI, FG .79, NPI 116 PSI.
 MP 5893 PSI, MR 48.2 BPM, AP 5111 PSI, AR 44.9 BPM,
 PMP 1307 BBLS SW & 47,481 LBS OF 30/50 SND & 5,000 LBS OF 20/40 SLC SND. TOTAL PROP 52,481 LBS, SWI, X-OVER FOR WL.

PERF STG 5)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 7068' P/U PERF F/ 6966'-68', 4 SPF, 8 HOLES.
 6917'-18', 3 SPF, 3 HOLES.
 6896'-97', 4 SPF, 4 HOLES.
 6775'-77', 4 SPF, 8 HOLES. 23 HOLES.
 POOH, X-OVER FOR FRAC SERV.

FRAC STG 5)WHP 497 PSI, BRK 2224 PSI @ 4.7 BPM. ISIP 804 PSI, FG .56.
 PUMP 100 BBLS @ 44.8 BPM @ 4902 PSI = 68% HOLES OPEN.
 ISIP 2201 PSI, FG .76, NPI 1397 PSI.
 MP 6153 PSI, MR 49.2 BPM, AP 4834 PSI, AR 47.7 BPM,
 PMP 952 BBLS SW & 27,283 LBS OF 30/50 SND & 5,000 LBS OF 20/40 SLC SND. TOTAL PROP 32,283 LBS, SWI, X-OVER FOR WL.

PERF STG 6)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 5730' P/U PERF F/ 5626'-30', 3 SPF, 12 HOLES.
 5598'-99', 4 SPF, 4 HOLES.
 5568'-71', 3 SPF, 9 HOLES. 25 HOLES.
 POOH, X-OVER FOR FRAC CREW.

FRAC STG 6)WHP 240 PSI, BRK 2300 PSI @ 4.7 BPM. ISIP 380 PSI, FG .51.
 CALL JARED IN DENVER ABOUT LOW FG. (.51)
 DOWN SIZE SAND RAMP F/ 104,763 LBS T/ 52,000

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-11K1T BLUE Spud Co
 Project: UTAH-UINTAH Site: NBU
 Event: COMPLETION Start Date:
 Active Datum: RKB @5,128.00ft (above Mean Sea Level)

Operator: 3/30/2010 Spud Date: 4/7/2010
 22-11K PAD Rig Name No: LEED 733/733
 26/2010 End Date: 9/9/2010
 Location: NE/SW/0/10/S/22/E/11/0/0/6/PM/S/2,531.00/W/0/2,209.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Job	Sub Code	P/U	MD From (ft)	Operation
9/8/2010	7:00 - 7:15	0.25	COMP	3		P		LBS. PUMP 100 BBLS @ 50.6 BPM @ 3278 PSI = 74% HOLES OPEN. ISIP 1689 PSI, FG .74, NPI 1309 PSI. MP 4251 PSI, MR 51.3 BPM, AP 3467 PSI, AR 50.3 BPM, PMP 1393 BBLS SW & 50,255 LBS OF 30/50 SND & 5,000 LBS OF 20/40 SLC SND. TOTAL PROP 55,255 LBS, SWI, X-OVER FOR WL. PU 4 1/2 8K HAL CBP. RIH SET CBP @ 5518'. POOH. SWI. DONE FRACING THIS WELL. TOTAL SAND = 329,580 LBS. TOTAL CLFL = 8697 BBLS TOTAL SCALE = 714 GAL. TOTAL BIO = 167 GAL. JSA- RD/RU. PU TBG. RDSU FROM 11K2S. MOVE RIG OVER AND RUSU ON 11K1T. ND WH. NU BOP. RU FLOOR AND TBG EQUIP. P-TEST BLIND RAMS TO 2000#. GOOD. MU 3-7/8" BIT, FE POBS, 1.87" XN AND RIH AS MEAS AND PU 175-JTS2-3/8" L-80 TBG. TAG AT 5493'. RU DRLG EQUIP. P-TEST TO 3000#. GOOD. D/O PLUGS. #1- C/O 25' SAND TO CBP AT 5518'. D/O IN 5 MIN. 0# INC. RIH. #2- C/O 45' SAND TO CBP AT 5730'. D/O IN 13 MIN. 500# INC. RIH. #3- C/O 50' SAND TO CBP AT 7068'. D/O IN 3 MIN. 150# INC. RIH. #4- C/O 45' SAND TO CBP AT 7832'. D/O IN 5 MIN. 50# INC. RIH. #5- C/O 70' SAND TO CBP AT 7973'. D/O IN 8 MIN. 0# INC. RIH. #6- C/O 90' SAND TO CBP AT 8241'. D/O IN 10 MIN. 0# INC. HAD LOTS OF WTR COME BACK AFTER #6. RIH. PBTB- C/O 90' SAND TO PBTB AT 8641' W/ 273-JTS IN. CIRC CLEAN. RD PWR SWIVEL. POOH AS LD 20-JTS. HAVE 253-JTS IN, EOT AT 8004'. SDFN. JSA- LD TBG. LAND HANGER SITP 0, SICP 2900. OPEN CSG TO PIT. FCP 850. CONT POOH AS LD 83-JTS 2-3/8" TBG. PU 7" 5K HANGER. LUB IN AND LAND 169-JTS 2-3/8" L-80 TBG W/ EOT AT 5361.42'. RD FLOOR. ND BOP. NU WH. POBS AT 2700#. SHUT WELL IN FOR 30 MIN. TURN WELL OVER TO FBC. TO WINDY TO RDSU. TBG DETAIL KB 13.00 283-JTS DELIVERED 7" 5K HANGER 1.00 114-JTS RETURNED 169-JTS 2-3/8" L-80 TBG 5345.22 LOAD 8697 BBLS FE POBS W/ 1.87" XN 2.20 RCVR 2350 BBLS EOT 5361.42 LTR 6347 BBLS
	7:15 - 13:00	5.75	COMP	1	I	P		
	13:00 - 18:30	5.50	COMP	4	C	P		
9/9/2010	7:00 - 7:15	0.25	COMP	3		P		
	7:15 - 15:00	7.75	COMP	1	I	P		

US ROCKIES REGION

Operation Summary Report

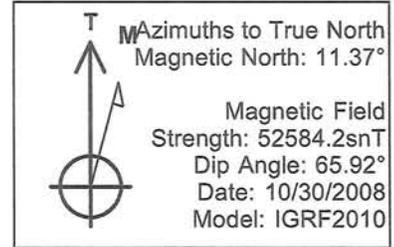
Well: NBU 1022-11K1T BLUE Spud Co
 Project: UTAH-UINTAH Site: NBU
 Event: COMPLETION Start Date:
 Active Datum: RKB @5,128.00ft (above Mean Sea Level)

Start Date: 3/30/2010 Spud Date: 4/7/2010
 22-11K PAD Rig Name No: LEED 733/733
 26/2010 End Date: 9/9/2010
 Location: NE/SW/0/10/S/22/E/11/0/0/6/PM/S/2,531.00/W/0/2,209.00/0/0

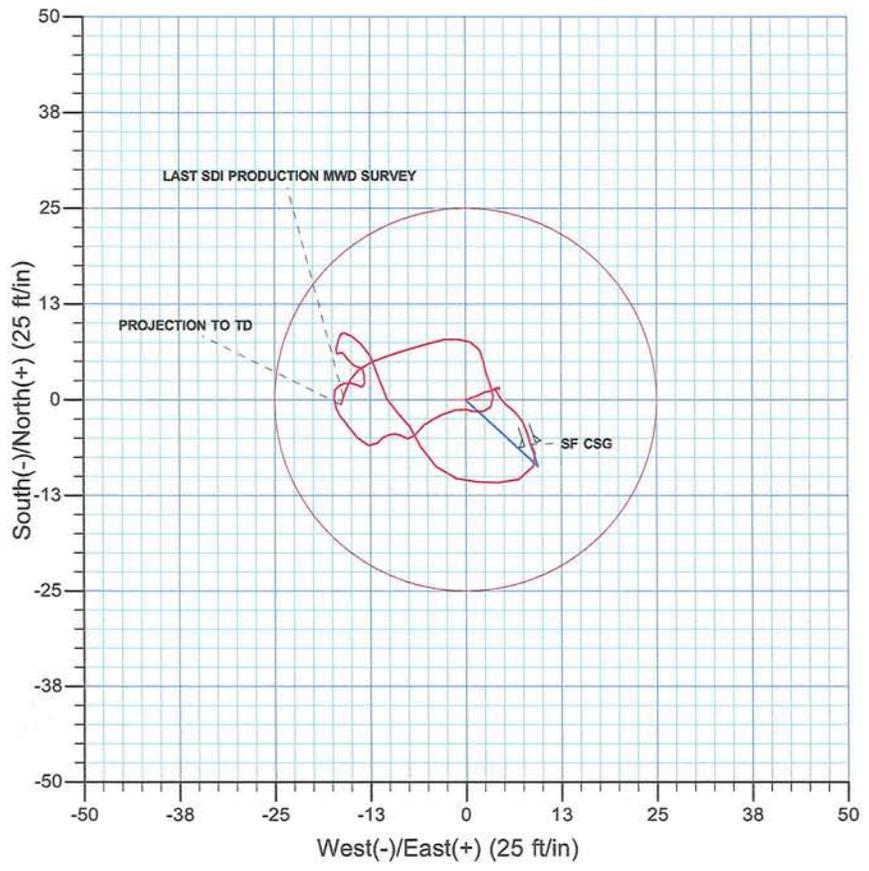
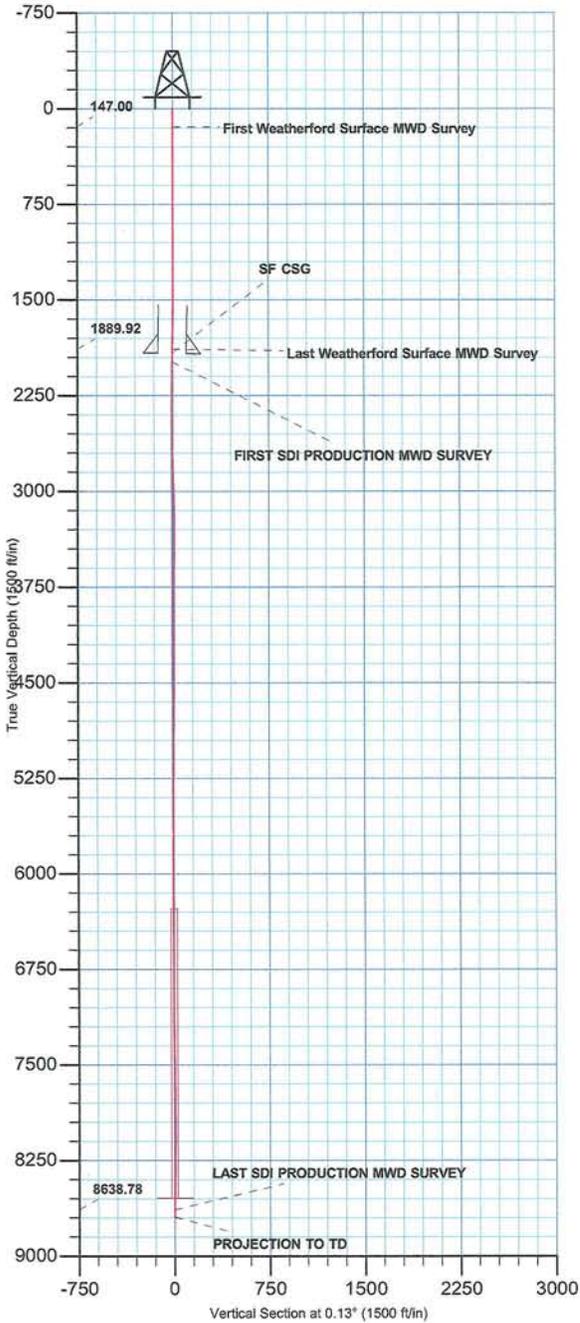
Date	Time Start-End	Duration (hr)	Phase
9/10/2010	7:00 -		
	11:00 -		PROD
9/11/2010	7:00 -		
9/12/2010	7:00 -		
9/13/2010	7:00 -		
	7:00 -		
9/17/2010	7:00 -		

Job	Sub Code	P/U	MD From (ft)	Operation
3	A			7 AM FLBK REPORT: CP 2850#, TP 2200#, 20/64" CK, 40 BWPH, HVY SAND, LIGHT GAS TTL BBLs RECOVERED: 3321 BBLs LEFT TO RECOVER: 5376
3	A			WELL TURNED TO SALES @ 1100 HR ON 9/10/10 - 2200 MCFD, 912 BWPD, CP 2800#, FTP 2200#, CK 20/64"
3	A			7 AM FLBK REPORT: CP 2650#, TP 2050#, 20/64" CK, 28 BWPH, MED SAND, - GAS TTL BBLs RECOVERED: 4112 BBLs LEFT TO RECOVER: 4585
3	A			7 AM FLBK REPORT: CP 2475#, TP 1925#, 20/64" CK, 23 BWPH, MED SAND, - GAS TTL BBLs RECOVERED: 4747 BBLs LEFT TO RECOVER: 3950
3	A			WELL IP'D ON 9/13/10 - 2703 MCFD, 0 BOPD, 288 BWPD, CP 2325#, FTP 1800#, CK 20/64", LP 78#, 24 HRS
3	A			7 AM FLBK REPORT: CP 2325#, TP 1800#, 20/64" CK, 20 BWPH, TRACE SAND, - GAS TTL BBLs RECOVERED: 5254 BBLs LEFT TO RECOVER: 3443
3	A			7 AM FLBK REPORT: CP 2775#, TP 2400#, 20/64" CK, 12 BWPH, TRACE SAND, - GAS TTL BBLs RECOVERED: 5598 BBLs LEFT TO RECOVER: 3099

WELL DETAILS: NBU 1022-11K1T					
GL 5113.2 & RKB 14' @ 5127.20ft (ENSGN 145)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	600495.58	2586297.84	39° 57' 47.500 N	109° 24' 29.080 W



DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
PBHL	8545.20	0.02	0.00	600495.60	2586297.84	39° 57' 47.500 N	109° 24' 29.080 W	Circle (Radius: 25.00)	
- actual wellpath misses target center by 15.47ft at 8546.33ft MD (8545.12 TVD, 2.01 N, -15.35 E)									



PROJECT DETAILS: Uintah County, UT NAD27
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Utah Central 4302
Location: Sec 11 T10S R22E
System Datum: Mean Sea Level



Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

**Uintah County, UT NAD27
NBU 1022-11K2 Pad
NBU 1022-11K1T**

OH

Design: OH

Standard Survey Report

19 August, 2010

Anadarko 
Petroleum Corporation

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT NAD27
Site: NBU 1022-11K2 Pad
Well: NBU 1022-11K1T
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 1022-11K1T
TVD Reference: GL 5113.2 & RKB 14' @ 5127.20ft (ENSGN 145)
MD Reference: GL 5113.2 & RKB 14' @ 5127.20ft (ENSGN 145)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Project	Uintah County, UT NAD27		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Utah Central 4302		

Site	NBU 1022-11K2 Pad, Sec 11 T10S R22E				
Site Position:		Northing:	600,476.33 usft	Latitude:	39° 57' 47.310 N
From:	Lat/Long	Easting:	2,586,295.18 usft	Longitude:	109° 24' 29.120 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	1.34 °

Well	NBU 1022-11K1T, 2531' FSL 2209' FWL					
Well Position	+N/-S	0.00 ft	Northing:	600,495.59 usft	Latitude:	39° 57' 47.500 N
	+E/-W	0.00 ft	Easting:	2,586,297.84 usft	Longitude:	109° 24' 29.080 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,113.20 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/30/2008	11.37	65.92	52,584

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	0.13	

Survey Program	Date	08/18/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
10.00	1,890.00	Survey #1 - Weatherford Surface MWD (OH)	MWD	MWD - Standard	
1,986.00	8,697.00	Survey #2-SDI Production MWD (OH)	MWD SDI	MWD - Standard ver 1.0.1	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10.00	0.00	1.34	10.00	0.00	0.00	0.00	0.00	0.00	0.00	
147.00	0.38	74.84	147.00	0.12	0.44	0.12	0.28	0.28	0.00	
First Weatherford Surface MWD Survey										
234.00	0.19	39.71	234.00	0.31	0.81	0.31	0.29	-0.22	-40.38	
321.00	0.38	80.46	321.00	0.46	1.19	0.47	0.31	0.22	46.84	
409.00	0.31	62.09	409.00	0.62	1.68	0.63	0.15	-0.08	-20.88	
499.00	0.25	55.59	498.99	0.85	2.06	0.85	0.08	-0.07	-7.22	

Company: Kerr McGee Oil and Gas Onshore LP
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Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 1022-11K1T
TVD Reference: GL 5113.2 & RKB 14' @ 5127.20ft (ENSIGN 145)
MD Reference: GL 5113.2 & RKB 14' @ 5127.20ft (ENSIGN 145)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
589.00	0.31	72.71	588.99	1.03	2.46	1.04	0.11	0.07	19.02
679.00	0.44	85.34	678.99	1.13	3.03	1.14	0.17	0.14	14.03
769.00	0.38	54.59	768.99	1.33	3.62	1.34	0.25	-0.07	-34.17
859.00	0.25	60.71	858.99	1.60	4.03	1.61	0.15	-0.14	6.80
949.00	0.25	116.59	948.99	1.61	4.38	1.62	0.26	0.00	62.09
1,039.00	0.19	259.34	1,038.99	1.50	4.41	1.51	0.46	-0.07	158.61
1,129.00	0.06	240.09	1,128.99	1.44	4.22	1.45	0.15	-0.14	-21.39
1,219.00	0.31	257.09	1,218.99	1.37	3.94	1.38	0.28	0.28	18.89
1,309.00	0.06	103.46	1,308.99	1.30	3.75	1.31	0.41	-0.28	-170.70
1,399.00	0.38	127.59	1,398.98	1.11	4.04	1.12	0.36	0.36	26.81
1,489.00	0.63	160.34	1,488.98	0.46	4.44	0.47	0.41	0.28	36.39
1,579.00	0.88	129.96	1,578.97	-0.45	5.13	-0.44	0.51	0.28	-33.76
1,669.00	1.06	130.71	1,668.96	-1.44	6.30	-1.42	0.20	0.20	0.83
1,759.00	1.13	148.71	1,758.94	-2.74	7.39	-2.72	0.39	0.08	20.00
1,849.00	1.31	167.09	1,848.92	-4.50	8.08	-4.48	0.48	0.20	20.42
1,890.00	1.00	160.71	1,889.92	-5.29	8.30	-5.27	0.82	-0.76	-15.56
Last Weatherford Surface MWD Survey									
1,986.00	1.14	148.64	1,985.90	-6.90	9.07	-6.88	0.28	0.15	-12.57
FIRST SDI PRODUCTION MWD SURVEY									
2,076.00	1.58	214.29	2,075.88	-8.69	8.84	-8.67	1.69	0.49	72.94
2,167.00	1.67	242.59	2,166.84	-10.34	6.96	-10.32	0.88	0.10	31.10
2,258.00	1.85	276.78	2,257.80	-10.77	4.32	-10.76	1.15	0.20	37.57
2,348.00	1.76	266.94	2,347.76	-10.68	1.50	-10.67	0.36	-0.10	-10.93
2,439.00	1.85	290.32	2,438.71	-10.24	-1.27	-10.24	0.81	0.10	25.69
2,529.00	2.02	309.30	2,528.66	-8.73	-3.86	-8.74	0.73	0.19	21.09
2,620.00	2.29	334.53	2,619.60	-6.07	-5.89	-6.09	1.07	0.30	27.73
2,711.00	1.49	325.30	2,710.55	-3.46	-7.34	-3.48	0.94	-0.88	-10.14
2,801.00	1.32	313.17	2,800.53	-1.79	-8.76	-1.81	0.38	-0.19	-13.48
2,892.00	1.85	328.20	2,891.49	0.18	-10.30	0.15	0.74	0.58	16.52
2,982.00	2.11	346.57	2,981.44	3.02	-11.45	3.00	0.76	0.29	20.41
3,073.00	1.49	330.04	3,072.39	5.68	-12.43	5.65	0.88	-0.68	-18.16
3,164.00	1.14	313.43	3,163.37	7.32	-13.68	7.29	0.56	-0.38	-18.25
3,254.00	0.97	303.85	3,253.35	8.36	-14.96	8.33	0.27	-0.19	-10.64
3,345.00	0.44	263.07	3,344.35	8.75	-15.95	8.71	0.77	-0.58	-44.81
3,435.00	0.35	207.26	3,434.35	8.47	-16.42	8.43	0.42	-0.10	-62.01
3,526.00	0.62	190.47	3,525.34	7.73	-16.64	7.70	0.33	0.30	-18.45
3,617.00	0.88	198.74	3,616.33	6.59	-16.95	6.55	0.31	0.29	9.09
3,707.00	0.44	70.94	3,706.33	6.05	-16.85	6.01	1.33	-0.49	-142.00
3,798.00	0.26	85.71	3,797.33	6.18	-16.31	6.14	0.22	-0.20	16.23
3,888.00	0.35	134.58	3,887.33	6.00	-15.91	5.96	0.29	0.10	54.30
3,979.00	0.88	144.42	3,978.32	5.24	-15.31	5.20	0.59	0.58	10.81
4,070.00	0.26	117.61	4,069.32	4.57	-14.72	4.54	0.72	-0.68	-29.46

Company: Kerr McGee Oil and Gas Onshore LP
 Project: Uintah County, UT NAD27
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 Well: NBU 1022-11K1T
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well NBU 1022-11K1T
 TVD Reference: GL 5113.2 & RKB 14' @ 5127.20ft (ENSIGN 145)
 MD Reference: GL 5113.2 & RKB 14' @ 5127.20ft (ENSIGN 145)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,160.00	0.35	114.98	4,159.32	4.36	-14.29	4.33	0.10	0.10	-2.92
4,251.00	0.18	102.76	4,250.32	4.21	-13.89	4.18	0.20	-0.19	-13.43
4,341.00	0.18	106.80	4,340.31	4.14	-13.62	4.11	0.01	0.00	4.49
4,432.00	0.35	164.28	4,431.31	3.83	-13.41	3.80	0.32	0.19	63.16
4,523.00	0.53	169.47	4,522.31	3.15	-13.26	3.12	0.20	0.20	5.70
4,613.00	0.79	184.67	4,612.31	2.12	-13.23	2.09	0.35	0.29	16.89
4,704.00	0.44	305.43	4,703.30	1.70	-13.57	1.67	1.19	-0.38	132.70
4,794.00	0.62	286.10	4,793.30	2.03	-14.32	2.00	0.28	0.20	-21.48
4,885.00	0.44	279.42	4,884.29	2.23	-15.13	2.19	0.21	-0.20	-7.34
4,976.00	0.44	254.72	4,975.29	2.19	-15.82	2.16	0.21	0.00	-27.14
5,066.00	0.62	237.23	5,065.29	1.84	-16.56	1.80	0.27	0.20	-19.43
5,157.00	0.53	206.38	5,156.28	1.19	-17.16	1.15	0.35	-0.10	-33.90
5,247.00	0.79	168.76	5,246.28	0.21	-17.22	0.17	0.55	0.29	-41.80
5,338.00	0.88	168.33	5,337.27	-1.09	-16.96	-1.13	0.10	0.10	-0.47
5,429.00	0.53	129.21	5,428.26	-2.04	-16.49	-2.08	0.63	-0.38	-42.99
5,519.00	0.70	145.65	5,518.26	-2.75	-15.86	-2.79	0.27	0.19	18.27
5,610.00	0.79	143.45	5,609.25	-3.72	-15.17	-3.75	0.10	0.10	-2.42
5,700.00	1.32	138.97	5,699.23	-5.00	-14.12	-5.03	0.60	0.59	-4.98
5,791.00	0.97	100.47	5,790.22	-5.93	-12.68	-5.96	0.91	-0.38	-42.31
5,882.00	0.79	41.32	5,881.21	-5.60	-11.51	-5.62	0.97	-0.20	-65.00
5,972.00	0.53	55.91	5,971.20	-4.90	-10.75	-4.92	0.34	-0.29	16.21
6,063.00	0.53	72.70	6,062.20	-4.54	-10.00	-4.56	0.17	0.00	18.45
6,153.00	0.44	92.48	6,152.19	-4.43	-9.26	-4.45	0.21	-0.10	21.98
6,244.00	0.53	111.72	6,243.19	-4.60	-8.52	-4.62	0.20	0.10	21.14
6,335.00	0.79	116.29	6,334.19	-5.03	-7.56	-5.05	0.29	0.29	5.02
6,425.00	1.14	30.34	6,424.18	-4.53	-6.56	-4.55	1.49	0.39	-95.50
6,516.00	1.06	55.21	6,515.16	-3.27	-5.41	-3.29	0.53	-0.09	27.33
6,606.00	0.88	60.92	6,605.15	-2.46	-4.12	-2.47	0.23	-0.20	6.34
6,697.00	0.97	64.53	6,696.13	-1.79	-2.81	-1.80	0.12	0.10	3.97
6,788.00	0.97	78.24	6,787.12	-1.30	-1.36	-1.31	0.25	0.00	15.07
6,878.00	0.97	97.05	6,877.11	-1.24	0.14	-1.24	0.35	0.00	20.90
6,969.00	0.18	178.43	6,968.10	-1.48	0.91	-1.48	1.05	-0.87	89.43
7,059.00	0.62	73.49	7,058.10	-1.48	1.38	-1.48	0.77	0.49	-116.60
7,150.00	0.62	102.93	7,149.10	-1.45	2.33	-1.45	0.35	0.00	32.35
7,241.00	0.97	37.02	7,240.09	-0.95	3.27	-0.94	1.00	0.38	-72.43
7,331.00	1.06	352.28	7,330.08	0.49	3.62	0.50	0.86	0.10	-49.71
7,422.00	0.97	335.23	7,421.06	2.02	3.18	2.03	0.34	-0.10	-18.74
7,512.00	1.06	343.84	7,511.05	3.51	2.63	3.52	0.20	0.10	9.57
7,603.00	0.97	352.10	7,602.04	5.08	2.29	5.09	0.19	-0.10	9.08
7,694.00	1.06	329.16	7,693.02	6.57	1.76	6.57	0.45	0.10	-25.21
7,785.00	0.97	289.70	7,784.01	7.55	0.60	7.55	0.76	-0.10	-43.36
7,875.00	1.06	277.75	7,873.99	7.92	-0.94	7.92	0.25	0.10	-13.28

Company: Kerr McGee Oil and Gas Onshore LP
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MD Reference: GL 5113.2 & RKB 14' @ 5127.20ft (ENSIGN 145)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,966.00	1.23	260.70	7,964.98	7.88	-2.74	7.87	0.42	0.19	-18.74
8,056.00	1.76	254.02	8,054.95	7.34	-5.02	7.33	0.62	0.59	-7.42
8,147.00	1.58	253.14	8,145.91	6.59	-7.57	6.57	0.20	-0.20	-0.97
8,238.00	1.76	251.73	8,236.87	5.79	-10.10	5.76	0.20	0.20	-1.55
8,328.00	1.23	244.09	8,326.84	4.93	-12.28	4.90	0.63	-0.59	-8.49
8,419.00	1.23	235.30	8,417.82	3.95	-13.96	3.92	0.21	0.00	-9.66
8,509.00	1.06	202.87	8,507.80	2.63	-15.08	2.60	0.73	-0.19	-36.03
8,600.00	0.97	205.59	8,598.79	1.16	-15.74	1.13	0.11	-0.10	2.99
8,640.00	1.14	197.15	8,638.78	0.48	-16.00	0.44	0.57	0.43	-21.10
LAST SDI PRODUCTION MWD SURVEY									
8,697.00	1.14	197.15	8,695.77	-0.61	-16.33	-0.64	0.00	0.00	0.00
PROJECTION TO TD									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
NBU 1022-11K1T PBHL	0.00	0.00	8,545.20	0.02	0.00	600,495.60	2,586,297.84	39° 57' 47.500 N	109° 24' 29.080 W
- hit/miss target									
- Shape									
- actual wellpath misses target center by 15.47ft at 8546.33ft MD (8545.12 TVD, 2.01 N, -15.35 E)									
- Circle (radius 25.00)									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
147.00	147.00	0.12	0.44	First Weatherford Surface MWD Survey
1,890.00	1,889.92	-5.29	8.30	Last Weatherford Surface MWD Survey
1,986.00	1,985.90	-6.90	9.07	FIRST SDI PRODUCTION MWD SURVEY
8,640.00	8,638.78	0.48	-16.00	LAST SDI PRODUCTION MWD SURVEY
8,697.00	8,695.77	-0.61	-16.33	PROJECTION TO TD

Checked By: _____ Approved By: _____ Date: _____



Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT NAD27
NBU 1022-11K2 Pad
NBU 1022-11K1T

OH

Design: OH

Survey Report - Geographic

19 August, 2010

Anadarko 
Petroleum Corporation

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT NAD27
Site: NBU 1022-11K2 Pad
Well: NBU 1022-11K1T
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 1022-11K1T
TVD Reference: GL 5113.2 & RKB 14' @ 5127.20ft (ENSIGN 145)
MD Reference: GL 5113.2 & RKB 14' @ 5127.20ft (ENSIGN 145)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Project	Uintah County, UT NAD27		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Utah Central 4302		

Site	NBU 1022-11K2 Pad, Sec 11 T10S R22E				
Site Position:		Northing:	600,476.33 usft	Latitude:	39° 57' 47.310 N
From:	Lat/Long	Easting:	2,586,295.18 usft	Longitude:	109° 24' 29.120 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	1.34 °

Well	NBU 1022-11K1T, 2531' FSL 2209' FWL					
Well Position	+N/-S	0.00 ft	Northing:	600,495.59 usft	Latitude:	39° 57' 47.500 N
	+E/-W	0.00 ft	Easting:	2,586,297.84 usft	Longitude:	109° 24' 29.080 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,113.20 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	10/30/2008	(°)	(°)	(nT)
			11.37	65.92	52,584

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	0.13	

Survey Program	Date	08/18/2010			
From	To	Survey (Wellbore)	Tool Name	Description	
(ft)	(ft)				
10.00	1,890.00	Survey #1 - Weatherford Surface MWD (OH)	MWD	MWD - Standard	
1,986.00	8,697.00	Survey #2-SDI Production MWD (OH)	MWD SDI	MWD - Standard ver 1.0.1	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	600,495.59	2,586,297.84	39° 57' 47.500 N	109° 24' 29.080 W
10.00	0.00	1.34	10.00	0.00	0.00	600,495.59	2,586,297.84	39° 57' 47.500 N	109° 24' 29.080 W
147.00	0.38	74.84	147.00	0.12	0.44	600,495.72	2,586,298.28	39° 57' 47.501 N	109° 24' 29.074 W
First Weatherford Surface MWD Survey									
234.00	0.19	39.71	234.00	0.31	0.81	600,495.91	2,586,298.64	39° 57' 47.503 N	109° 24' 29.070 W
321.00	0.38	80.46	321.00	0.46	1.19	600,496.08	2,586,299.02	39° 57' 47.504 N	109° 24' 29.065 W
409.00	0.31	62.09	409.00	0.62	1.68	600,496.25	2,586,299.51	39° 57' 47.506 N	109° 24' 29.058 W
499.00	0.25	55.59	498.99	0.85	2.06	600,496.48	2,586,299.88	39° 57' 47.508 N	109° 24' 29.054 W
589.00	0.31	72.71	588.99	1.03	2.46	600,496.68	2,586,300.27	39° 57' 47.510 N	109° 24' 29.048 W

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MD Reference: GL 5113.2 & RKB 14' @ 5127.20ft (ENSGN 145)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
679.00	0.44	85.34	678.99	1.13	3.03	600,496.79	2,586,300.85	39° 57' 47.511 N	109° 24' 29.041 W
769.00	0.38	54.59	768.99	1.33	3.62	600,497.00	2,586,301.43	39° 57' 47.513 N	109° 24' 29.034 W
859.00	0.25	60.71	858.99	1.60	4.03	600,497.28	2,586,301.84	39° 57' 47.515 N	109° 24' 29.028 W
949.00	0.25	116.59	948.99	1.61	4.38	600,497.30	2,586,302.18	39° 57' 47.516 N	109° 24' 29.024 W
1,039.00	0.19	259.34	1,038.99	1.50	4.41	600,497.18	2,586,302.22	39° 57' 47.514 N	109° 24' 29.023 W
1,129.00	0.06	240.09	1,128.99	1.44	4.22	600,497.13	2,586,302.03	39° 57' 47.514 N	109° 24' 29.026 W
1,219.00	0.31	257.09	1,218.99	1.37	3.94	600,497.04	2,586,301.75	39° 57' 47.513 N	109° 24' 29.029 W
1,309.00	0.06	103.46	1,308.99	1.30	3.75	600,496.97	2,586,301.56	39° 57' 47.513 N	109° 24' 29.032 W
1,399.00	0.38	127.59	1,398.98	1.11	4.04	600,496.79	2,586,301.85	39° 57' 47.511 N	109° 24' 29.028 W
1,489.00	0.63	160.34	1,488.98	0.46	4.44	600,496.15	2,586,302.27	39° 57' 47.504 N	109° 24' 29.023 W
1,579.00	0.88	129.96	1,578.97	-0.45	5.13	600,495.26	2,586,302.98	39° 57' 47.495 N	109° 24' 29.014 W
1,669.00	1.06	130.71	1,668.96	-1.44	6.30	600,494.30	2,586,304.17	39° 57' 47.485 N	109° 24' 28.999 W
1,759.00	1.13	148.71	1,758.94	-2.74	7.39	600,493.02	2,586,305.29	39° 57' 47.473 N	109° 24' 28.985 W
1,849.00	1.31	167.09	1,848.92	-4.50	8.08	600,491.28	2,586,306.02	39° 57' 47.455 N	109° 24' 28.976 W
1,890.00	1.00	160.71	1,889.92	-5.29	8.30	600,490.49	2,586,306.26	39° 57' 47.447 N	109° 24' 28.973 W
Last Weatherford Surface MWD Survey									
1,986.00	1.14	148.64	1,985.90	-6.90	9.07	600,488.90	2,586,307.07	39° 57' 47.431 N	109° 24' 28.963 W
FIRST SDI PRODUCTION MWD SURVEY									
2,076.00	1.58	214.29	2,075.88	-8.69	8.84	600,487.11	2,586,306.88	39° 57' 47.414 N	109° 24' 28.966 W
2,167.00	1.67	242.59	2,166.84	-10.34	6.96	600,485.42	2,586,305.04	39° 57' 47.397 N	109° 24' 28.991 W
2,258.00	1.85	276.78	2,257.80	-10.77	4.32	600,484.92	2,586,302.41	39° 57' 47.393 N	109° 24' 29.024 W
2,348.00	1.76	266.94	2,347.76	-10.68	1.50	600,484.95	2,586,299.59	39° 57' 47.394 N	109° 24' 29.061 W
2,439.00	1.85	290.32	2,438.71	-10.24	-1.27	600,485.32	2,586,296.81	39° 57' 47.398 N	109° 24' 29.096 W
2,529.00	2.02	309.30	2,528.66	-8.73	-3.86	600,486.77	2,586,294.18	39° 57' 47.413 N	109° 24' 29.130 W
2,620.00	2.29	334.53	2,619.60	-6.07	-5.89	600,489.38	2,586,292.10	39° 57' 47.440 N	109° 24' 29.156 W
2,711.00	1.49	325.30	2,710.55	-3.46	-7.34	600,491.96	2,586,290.58	39° 57' 47.465 N	109° 24' 29.174 W
2,801.00	1.32	313.17	2,800.53	-1.79	-8.76	600,493.59	2,586,289.12	39° 57' 47.482 N	109° 24' 29.193 W
2,892.00	1.85	328.20	2,891.49	0.18	-10.30	600,495.52	2,586,287.54	39° 57' 47.501 N	109° 24' 29.212 W
2,982.00	2.11	346.57	2,981.44	3.02	-11.45	600,498.34	2,586,286.32	39° 57' 47.530 N	109° 24' 29.227 W
3,073.00	1.49	330.04	3,072.39	5.68	-12.43	600,500.97	2,586,285.28	39° 57' 47.556 N	109° 24' 29.240 W
3,164.00	1.14	313.43	3,163.37	7.32	-13.68	600,502.59	2,586,283.99	39° 57' 47.572 N	109° 24' 29.256 W
3,254.00	0.97	303.85	3,253.35	8.36	-14.96	600,503.60	2,586,282.69	39° 57' 47.582 N	109° 24' 29.272 W
3,345.00	0.44	263.07	3,344.35	8.75	-15.95	600,503.96	2,586,281.69	39° 57' 47.586 N	109° 24' 29.285 W
3,435.00	0.35	207.26	3,434.35	8.47	-16.42	600,503.67	2,586,281.23	39° 57' 47.583 N	109° 24' 29.291 W
3,526.00	0.62	190.47	3,525.34	7.73	-16.64	600,502.93	2,586,281.03	39° 57' 47.576 N	109° 24' 29.294 W
3,617.00	0.88	198.74	3,616.33	6.59	-16.95	600,501.78	2,586,280.74	39° 57' 47.565 N	109° 24' 29.298 W
3,707.00	0.44	70.94	3,706.33	6.05	-16.85	600,501.24	2,586,280.86	39° 57' 47.559 N	109° 24' 29.296 W
3,798.00	0.26	85.71	3,797.33	6.18	-16.31	600,501.38	2,586,281.39	39° 57' 47.561 N	109° 24' 29.289 W
3,888.00	0.35	134.58	3,887.33	6.00	-15.91	600,501.21	2,586,281.79	39° 57' 47.559 N	109° 24' 29.284 W
3,979.00	0.88	144.42	3,978.32	5.24	-15.31	600,500.46	2,586,282.42	39° 57' 47.551 N	109° 24' 29.277 W
4,070.00	0.26	117.61	4,069.32	4.57	-14.72	600,499.81	2,586,283.02	39° 57' 47.545 N	109° 24' 29.269 W
4,160.00	0.35	114.98	4,159.32	4.36	-14.29	600,499.61	2,586,283.46	39° 57' 47.543 N	109° 24' 29.263 W
4,251.00	0.18	102.76	4,250.32	4.21	-13.89	600,499.47	2,586,283.85	39° 57' 47.541 N	109° 24' 29.258 W
4,341.00	0.18	106.80	4,340.31	4.14	-13.62	600,499.41	2,586,284.13	39° 57' 47.541 N	109° 24' 29.255 W
4,432.00	0.35	164.28	4,431.31	3.83	-13.41	600,499.10	2,586,284.35	39° 57' 47.538 N	109° 24' 29.252 W
4,523.00	0.53	169.47	4,522.31	3.15	-13.26	600,498.42	2,586,284.51	39° 57' 47.531 N	109° 24' 29.250 W
4,613.00	0.79	184.67	4,612.31	2.12	-13.23	600,497.40	2,586,284.56	39° 57' 47.521 N	109° 24' 29.250 W
4,704.00	0.44	305.43	4,703.30	1.70	-13.57	600,496.97	2,586,284.24	39° 57' 47.516 N	109° 24' 29.254 W
4,794.00	0.62	286.10	4,793.30	2.03	-14.32	600,497.29	2,586,283.48	39° 57' 47.520 N	109° 24' 29.264 W
4,885.00	0.44	279.42	4,884.29	2.23	-15.13	600,497.46	2,586,282.66	39° 57' 47.522 N	109° 24' 29.274 W
4,976.00	0.44	254.72	4,975.29	2.19	-15.82	600,497.41	2,586,281.98	39° 57' 47.521 N	109° 24' 29.283 W
5,066.00	0.62	237.23	5,065.29	1.84	-16.56	600,497.04	2,586,281.24	39° 57' 47.518 N	109° 24' 29.293 W
5,157.00	0.53	206.38	5,156.28	1.19	-17.16	600,496.38	2,586,280.66	39° 57' 47.511 N	109° 24' 29.300 W

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MD Reference: GL 5113.2 & RKB 14' @ 5127.20ft (ENSIGN 145)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-Roberts-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,247.00	0.79	168.76	5,246.28	0.21	-17.22	600,495.40	2,586,280.62	39° 57' 47.502 N	109° 24' 29.301 W
5,338.00	0.88	168.33	5,337.27	-1.09	-16.96	600,494.10	2,586,280.91	39° 57' 47.489 N	109° 24' 29.298 W
5,429.00	0.53	129.21	5,428.26	-2.04	-16.49	600,493.16	2,586,281.40	39° 57' 47.480 N	109° 24' 29.292 W
5,519.00	0.70	145.65	5,518.26	-2.75	-15.86	600,492.46	2,586,282.05	39° 57' 47.472 N	109° 24' 29.284 W
5,610.00	0.79	143.45	5,609.25	-3.72	-15.17	600,491.52	2,586,282.76	39° 57' 47.463 N	109° 24' 29.275 W
5,700.00	1.32	138.97	5,699.23	-5.00	-14.12	600,490.26	2,586,283.84	39° 57' 47.450 N	109° 24' 29.261 W
5,791.00	0.97	100.47	5,790.22	-5.93	-12.68	600,489.36	2,586,285.31	39° 57' 47.441 N	109° 24' 29.243 W
5,882.00	0.79	41.32	5,881.21	-5.60	-11.51	600,489.72	2,586,286.47	39° 57' 47.444 N	109° 24' 29.228 W
5,972.00	0.53	55.91	5,971.20	-4.90	-10.75	600,490.44	2,586,287.21	39° 57' 47.451 N	109° 24' 29.218 W
6,063.00	0.53	72.70	6,062.20	-4.54	-10.00	600,490.82	2,586,287.95	39° 57' 47.455 N	109° 24' 29.208 W
6,153.00	0.44	92.48	6,152.19	-4.43	-9.26	600,490.94	2,586,288.69	39° 57' 47.456 N	109° 24' 29.199 W
6,244.00	0.53	111.72	6,243.19	-4.60	-8.52	600,490.79	2,586,289.43	39° 57' 47.454 N	109° 24' 29.189 W
6,335.00	0.79	116.29	6,334.19	-5.03	-7.56	600,490.38	2,586,290.40	39° 57' 47.450 N	109° 24' 29.177 W
6,425.00	1.14	30.34	6,424.18	-4.53	-6.56	600,490.90	2,586,291.39	39° 57' 47.455 N	109° 24' 29.164 W
6,516.00	1.06	55.21	6,515.16	-3.27	-5.41	600,492.19	2,586,292.51	39° 57' 47.467 N	109° 24' 29.149 W
6,606.00	0.88	60.92	6,605.15	-2.46	-4.12	600,493.03	2,586,293.78	39° 57' 47.475 N	109° 24' 29.133 W
6,697.00	0.97	64.53	6,696.13	-1.79	-2.81	600,493.73	2,586,295.07	39° 57' 47.482 N	109° 24' 29.116 W
6,788.00	0.97	78.24	6,787.12	-1.30	-1.36	600,494.25	2,586,296.51	39° 57' 47.487 N	109° 24' 29.098 W
6,878.00	0.97	97.05	6,877.11	-1.24	0.14	600,494.35	2,586,298.01	39° 57' 47.487 N	109° 24' 29.078 W
6,969.00	0.18	178.43	6,968.10	-1.48	0.91	600,494.13	2,586,298.78	39° 57' 47.485 N	109° 24' 29.068 W
7,059.00	0.62	73.49	7,058.10	-1.48	1.38	600,494.14	2,586,299.25	39° 57' 47.485 N	109° 24' 29.062 W
7,150.00	0.62	102.93	7,149.10	-1.45	2.33	600,494.19	2,586,300.20	39° 57' 47.485 N	109° 24' 29.050 W
7,241.00	0.97	37.02	7,240.09	-0.95	3.27	600,494.72	2,586,301.13	39° 57' 47.490 N	109° 24' 29.038 W
7,331.00	1.06	352.28	7,330.08	0.49	3.62	600,496.16	2,586,301.45	39° 57' 47.504 N	109° 24' 29.034 W
7,422.00	0.97	335.23	7,421.06	2.02	3.18	600,497.68	2,586,300.98	39° 57' 47.520 N	109° 24' 29.039 W
7,512.00	1.06	343.84	7,511.05	3.51	2.63	600,499.16	2,586,300.39	39° 57' 47.534 N	109° 24' 29.046 W
7,603.00	0.97	352.10	7,602.04	5.08	2.29	600,500.72	2,586,300.01	39° 57' 47.550 N	109° 24' 29.051 W
7,694.00	1.06	329.16	7,693.02	6.57	1.76	600,502.19	2,586,299.44	39° 57' 47.565 N	109° 24' 29.057 W
7,785.00	0.97	289.70	7,784.01	7.55	0.60	600,503.15	2,586,298.26	39° 57' 47.574 N	109° 24' 29.072 W
7,875.00	1.06	277.75	7,873.99	7.92	-0.94	600,503.48	2,586,296.71	39° 57' 47.578 N	109° 24' 29.092 W
7,966.00	1.23	260.70	7,964.98	7.88	-2.74	600,503.40	2,586,294.92	39° 57' 47.577 N	109° 24' 29.115 W
8,056.00	1.76	254.02	8,054.95	7.34	-5.02	600,502.81	2,586,292.65	39° 57' 47.572 N	109° 24' 29.145 W
8,147.00	1.58	253.14	8,145.91	6.59	-7.57	600,502.00	2,586,290.12	39° 57' 47.565 N	109° 24' 29.177 W
8,238.00	1.76	251.73	8,236.87	5.79	-10.10	600,501.14	2,586,287.61	39° 57' 47.557 N	109° 24' 29.210 W
8,328.00	1.23	244.09	8,326.84	4.93	-12.28	600,500.23	2,586,285.45	39° 57' 47.548 N	109° 24' 29.238 W
8,419.00	1.23	235.30	8,417.82	3.95	-13.96	600,499.21	2,586,283.79	39° 57' 47.539 N	109° 24' 29.259 W
8,509.00	1.06	202.87	8,507.80	2.63	-15.08	600,497.87	2,586,282.71	39° 57' 47.526 N	109° 24' 29.274 W
8,600.00	0.97	205.59	8,598.79	1.16	-15.74	600,496.38	2,586,282.08	39° 57' 47.511 N	109° 24' 29.282 W
8,640.00	1.14	197.15	8,638.78	0.48	-16.00	600,495.69	2,586,281.83	39° 57' 47.504 N	109° 24' 29.285 W
LAST SDI PRODUCTION MWD SURVEY									
8,697.00	1.14	197.15	8,695.77	-0.61	-16.33	600,494.60	2,586,281.53	39° 57' 47.494 N	109° 24' 29.290 W
PROJECTION TO TD									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
NBU 1022-11K1T PBHL	0.00	0.00	8,545.20	0.02	0.00	600,495.60	2,586,297.84	39° 57' 47.500 N	109° 24' 29.080 W
- actual wellpath misses target center by 15.47ft at 8546.33ft MD (8545.12 TVD, 2.01 N, -15.35 E)									
- Circle (radius 25.00)									

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Design: OH

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TVD Reference: GL 5113.2 & RKB 14' @ 5127.20ft (ENSIGN 145)
MD Reference: GL 5113.2 & RKB 14' @ 5127.20ft (ENSIGN 145)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
147.00	147.00	0.12	0.44	First Weatherford Surface MWD Survey
1,890.00	1,889.92	-5.29	8.30	Last Weatherford Surface MWD Survey
1,986.00	1,985.90	-6.90	9.07	FIRST SDI PRODUCTION MWD SURVEY
8,640.00	8,638.78	0.48	-16.00	LAST SDI PRODUCTION MWD SURVEY
8,697.00	8,695.77	-0.61	-16.33	PROJECTION TO TD

Checked By: _____ Approved By: _____ Date: _____

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ST UO 01197A
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 1022-11K1T
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047502150000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2531 FSL 2209 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 11 Township: 10.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES COUNTY: UINTAH STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 12/10/2010 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER	<input checked="" type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input type="text" value="Wellhead"/>

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

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

Approved by the Utah Division of Oil, Gas and Mining

Date: 12/14/2010

By: *Derek Duff*

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A		DATE 12/9/2010

WORKORDER #: 88104325

Name: NBU 1022-11K1T
Location: NE NE SW Sec 11 T10S R22E
Uintah County, UT

12/9/10

ELEVATIONS: 5115' GL 5128' KB

TOTAL DEPTH: 8697' **PBTD:** 8641'

SURFACE CASING: 8 5/8", 28# IJ-55 ST&C @ 1925'

PRODUCTION CASING: 4 1/2", 11.6#, I-80 LT&C @ 8689'
Marker Joint 6265'-6286'
T.O.C.@ Surface

PERFORATIONS: Mesaverde 6775' - 8550'
Wasatch 5568' - 5630'

	BURST (psi)	COLLAPSE (psi)	DRIFT DIA. (in.)	CAPACITIES	
				(bbl/ft)	(gal/ft)
2 3/8" 4.7# J-55 tbg	7,700	8,100	1.901"	0.00387	0.1624
4 1/2" 11.6# I-80 (See above)	7780	6350	3.875"	0.0155	0.6528
2 3/8" by 4 1/2" Annulus				0.0101	0.4227

GEOLOGICAL TOPS:

936' Green River
1271' Bird's Nest
1765' Mahogany
4094' Wasatch
6357' Mesaverde
8697' Bottom of Mesaverde (TD)

Completion Information:

- 9/1/10 - Perf and frac gross MV/Was interval f/ 5568' - 8550' in 7 stages using 329,580# sand & 8697 bbls slickwater
- Well IP'd on 9/13/10 - 2703 MCFD, 0 BOPD, 288 BWPD, CP 2325#, FTP 1800#, CK 20/64", LP 78#, 24 HRS

NBU 1022-11K1T- WELLHEAD REPLACEMENT PROCEDURE

Prior to initiating back-off or casing cutting activities the UDOGM will be notified. Specifically, Mr. Dave Hackford (435-722-7589) will be called, and if not available, Dan Jarvis (801-538-5338) and or Dustin Doucet (801-538-5281) will be notified. No work will be accomplished prior to notifying the appropriate UDOGM representative.

PREP-WORK PRIOR TO MIRU:

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

WORKOVER PROCEDURE:

1. MIRU workover rig.
2. Kill well with 10# brine / KCL (dictated by well pressure).
3. Remove tree, install double BOP with blind and 2 3/8" pipe rams, with accumulator closing unit and manual back-ups. Function test BOP system.
4. Pooh w/ tubing.
5. Rig up wireline service. RIH and set CBP @ ~5518'. Dump bail 4 sx cement on top of plug. POOH and RD wireline service.
6. Remove BOP and ND WH.
7. Depending on conditions at wellsite, continue with either CUT/PATCH Procedure or BACK-OFF Procedure.

CUT/PATCH PROCEDURE:

1. PU internal casing cutters and RIH. Cut casing at +/- 30' from surface.
2. Pooh, LD cutters and casing.
3. PU & RIH w/ 4 ½" 10k external casing patch on 4 ½" I-80 or P-110 casing.
4. Latch fish, PU to 100,000# tension. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.
5. Install C-22 slips. Land casing w/ 80,000# tension.
6. Cut-off and dress 4 ½" casing stub.
7. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~5518'. Clean out to PBD (8641').
8. POOH, land tbg and pump off POBS.
9. NUWH, RDMO. Turn well over to production ops.

BACK-OFF PROCEDURE:

1. PU internal casing cutters and RIH. Cut casing at +/- 6' from surface.
2. POOH, LD cutters and casing.
3. PU 4 ½" overshot. RIH, latch fish. Pick string weight to neutral.
4. MIRU wireline services. RIH and shoot string shot at casing collar @ 46'.
5. MIRU casing crew.
6. Back-off casing, Pooh.
7. PU new casing joint w/ entry guide and RIH. Tag casing top. Thread into casing and torque up to +/- 6000#.
8. PU 100,000# tension string weight. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.
9. Install C-22 slips. Land casing w/ 80,000# tension.
10. Cut-off and dress 4 ½" casing stub.

11. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~5518'. Clean out to PBTB (8641').
12. POOH, land tbg and pump off POBS.
13. NUWH, RDMO. Turn well over to production ops.



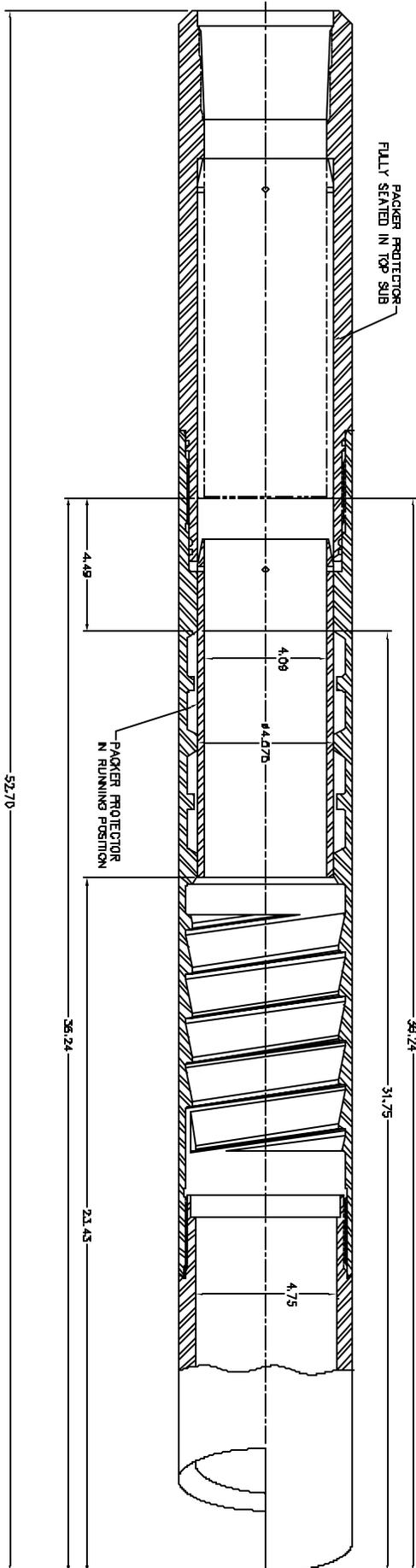
Logan High Pressure Casing Patches Assembly Procedure

All parts should be thoroughly greased before being assembled.

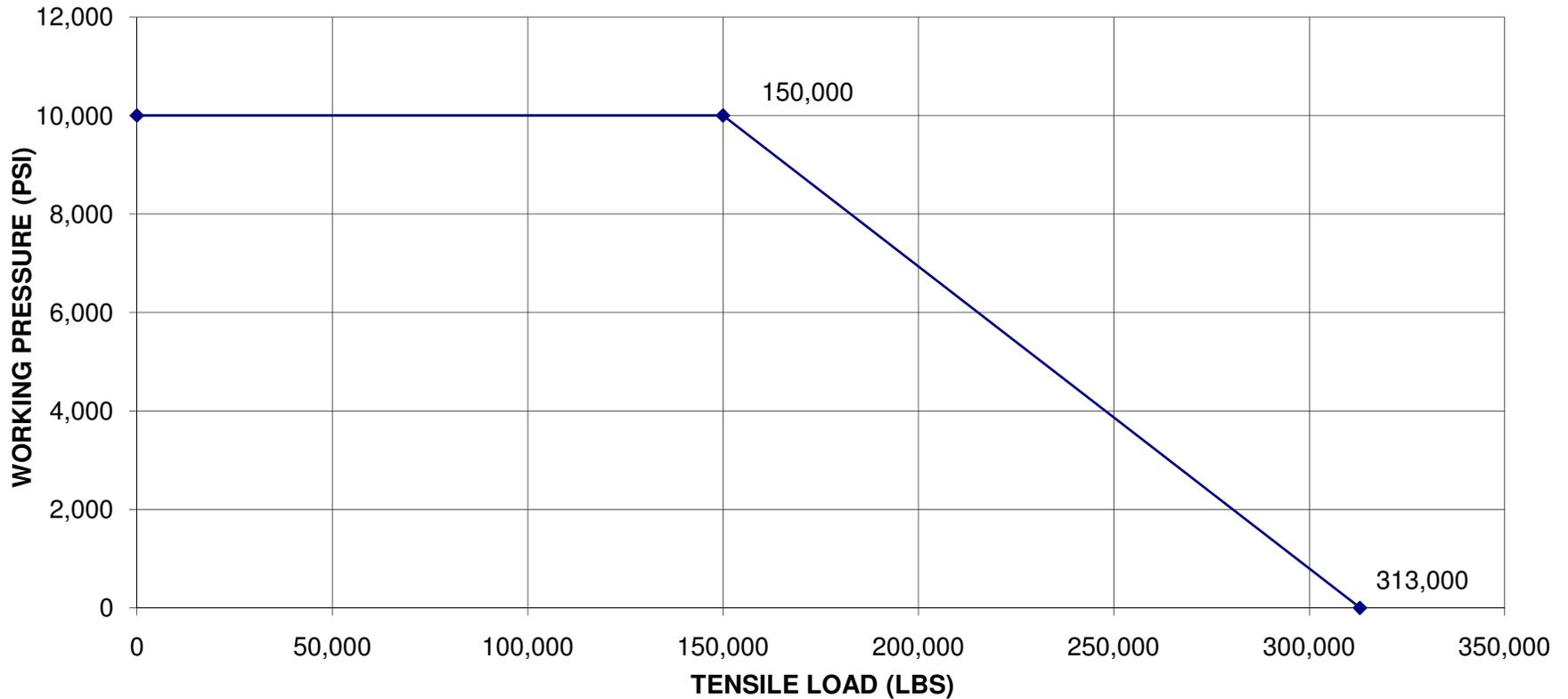
1. Install all four Logan Type "L" Packers in the spaces provided in the Casing Patch Bowl. Refer to diagram provided for proper installation.
2. Install Packer Protector from the Basket Grapple end of the Bowl. The beveled end of the Packer Protector goes in first. Carefully push the Packer Protector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

Follow recommended Make-Up Torque as provided in chart.

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



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



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

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

DATA BY SLS 11/16/2009

RECEIVED December 09, 2010

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: ST UO 01197A
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 1022-11K1T	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047502150000	
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: 2531 FSL 2209 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 11 Township: 10.0S Range: 22.0E Meridian: S	COUNTY: UINTAH	
		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 6/7/2011 <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER	
	<input checked="" type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input type="text" value="Wellhead Repair"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
THE OPERATOR HAS CONCLUDED WELLHEAD/CASING REPAIRS ON THE SUBJECT WELL LOCATION. PLEASE SEE THE ATTACHED CHRONOLOGICAL HISTORY FOR DETAILS OF THE OPERATIONS.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY		
NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 6/7/2011	

US ROCKIES REGION
Operation Summary Report

US ROCKIES REGION								
Operation Summary Report								
Well: NBU 1022-11K1T BLUE			Spud Conductor: 3/30/2010			Spud Date: 4/7/2010		
Project: UTAH-UINTAH			Site: NBU 1022-11K PAD			Rig Name No: MILES-GRAY 1/1, SWABBCO 6/6		
Event: WELL WORK EXPENSE			Start Date: 2/16/2011			End Date: 4/21/2011		
Active Datum: RKB @5,128.00ft (above Mean Sea Leve			UWI: NE/SW/0/10/S/22/E/11/0/0/6/PM/S/2,531.00/W/0/2,209.00/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
2/16/2011	13:00 - 14:00	1.00	WO/REP	30	A	P		MIRU SERVICE UNIT,
	14:00 - 17:00	3.00	WO/REP	31	I	P		TOOH W/ 2 3/8" TBG, FOUND 1 JT PERF WASH AT COLLER, P/O 169 JTS 2 3/8" TBG, SWI, DRAIN UP PUMP & LINES SDFN
	14:00 - 14:00	0.00	WO/REP	30	F	P		PUMP 40 BBLS WTR DN TBG, N/D WH. N/U BOPS, R/U TBG EQUIP,
2/17/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA-SAFETY MEETING, WORK AROUND WIRELINE,
	7:15 - 7:45	0.50	WO/REP	30	E	P		300# ON WELL, BLOWED DN TO TK, PUMP 50 BBLS WTR DN CSG.
	7:45 - 10:00	2.25	WO/REP	34	I	P		R/U CUTTER WIRELINE, RIH W/ GAUGE RING TO 5550', RIH W/ BAKER 10K CBP SET @ 5500', RIH DUMP BAIL 4 SACKS CEMENT ON TOP OF CBP, R/D WIRELINE
	10:00 - 11:30	1.50	WO/REP	31	I	P		P/U 2 3/8" XN-NIPPLE-NOTCH END, TIH W/ 2 3/8" TBG 164 JTS LAND TBG W EOT @ 5166', PRESSURE UP ON 4 1/2" CSG TO 500#, BLEED OFF SLOW, NO FLUID OUT SURFACE CSG,
	11:30 - 13:00	1.50	WO/REP	30	F	P		N/D BOPS, N/U WH, HOOK MONITORING GAUGE UP TO 4 1/2" CSG AND SURFACE CSG FOR MONITORING PRESSURE,
	13:00 - 15:00	2.00	WO/REP	30	C	P		R/D SERVICE UNIT, MOVE IN AM ON FROST
4/20/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA= RD & RU
	7:15 - 18:30	11.25	WO/REP	30		P		RD RIG ON 11F4S MOVE RU ON 11K1T ND WELLHEAD NU BOPS RU FLOOR & TUBING EQUIP POOH W/ TUBING 164 JTS (5 JNTS GAULDED) LD BHA RD FLOOR & TUB EQUIP ND BOPS ND WELL HEAD PU PWR SWVL & INT CUTTER RIH 8' CUT CSG BELOW 4' PUP LD CUTTER RD SWVL PULL & LD HNGR & PUP PU OVERSHOT RUN OVER FISH TOP PULL ON CSG STRING RU W/L & CSG TONGS BACK OFF @ 1ST COLLAR 10' PUP RD W/L LD PUP & OVERSHOT PU 2 10' PUPS RIH THREAD ONTO CASING STRING TORQUE UP TO 7000FT/# NU TESTER TEST TO 3500# PULL 90000# ON CASING SET SLIPS NU WELLHEAD NU BOPS RU FLOOR & TUBING EQUIP PU 3-7/8" BIT & BIT SUB RIH W/ 160 JNTS EOT @ 5060' SIW SDFN
4/21/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA= FOAMING
	7:15 - 19:00	11.75	WO/REP	30		P		0 PSI ON WELL CONTINUE TO RIH TAG @ 5472' PU PWR SWVL EST CIRC W/ FOAMER C/O & DRILL THRU CEM & CBP WELL PRESS INCREASED 600# CIRC CLEAN CONTINUE TO RIH TAG @ 8630' RD PWR SWVL POOH LD 23 JNTS CONTINUE TO POOH TO BHA LD BIT PU NOTCHED 1.87XN NPL RIH SHUT DOWN 2 HOURS SEVERE STORM, LAND TUBING ON HNGR W/ 253 JNTS EOT @ 7943.88' RD FLOOR & TUBING EQUIP ND BOPS NU WELLHEAD SIW PREP TO RD RIG SDFW

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
4304750215	NBU 1022-11K1T		NESW	11	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	3/30/2010			<u>4/1/10</u>	
Comments: MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 3/30/2010 AT 16:00 HRS.							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750213	NBU 1022-11J3S		NESW	11	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	3/31/2010			<u>4/1/10</u>	
Comments: MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 3/31/2010 AT 9:00 HRS. <u>BAL = NWSE</u>							

Well 3 4304750212

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750214	NBU 1022-11F4S		NESW	11	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	3/31/2010			<u>4/1/10</u>	
Comments: MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 3/31/2010 AT 11:00 HRS. <u>BAL = SENW</u>							

ACTION CODES:

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

ANDY LYTLE

Name (Please Print)

Signature

REGULATORY ANALYST

Title

4/1/2010

Date

RECEIVED

APR 01 2010

DIV. OF OIL, GAS & MINING