



Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80127

November 20, 2008

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

Re: Directional Drilling R649-3-11
NBU 1022-2A4S
T10S R22E
Section 2: NENE
NENE, 207' FNL, 836' FEL (surface)
NENE, 1175' FNL, 315' FEL (bottom hole)
Uintah County, Utah

Dear Mrs. Mason:

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

- Kerr-McGee's NBU 1022-2A4S is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore (State lease UT ST ML 22651, and Federal Lease USA Utu 010954-a).

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

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

James C. Colligan III
Landman

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DIV. OF OIL, GAS & MINING

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

FORM 3

AMENDED REPORT
(highlight changes)

APPLICATION FOR PERMIT TO DRILL				5. MINERAL LEASE NO: ST ML 22651	6. SURFACE: State
1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>				7. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A	
B. TYPE OF WELL: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>				8. UNIT or CA AGREEMENT NAME: UTU-63047A	
2. NAME OF OPERATOR: Kerr-McGee Oil & Gas Onshore, LP				9. WELL NAME and NUMBER: NBU 1022-2A4S	
3. ADDRESS OF OPERATOR: P.O. Box 173779 CITY Denver STATE CO ZIP 80217-3779			PHONE NUMBER: (720) 929-6226	10. FIELD AND POOL, OR WILDCAT: Natural Buttes Field	
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 207' FNL & 836' FEL LAT 39.984714 LON -109.400014 (NAD 27) AT PROPOSED PRODUCING ZONE: NENE 1175' FNL & 315' FEL, Sec. 2, T10S, R22E				11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENE 2 10S 22E	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 24.6 miles southwest of Ouray, Utah				12. COUNTY: Uintah	13. STATE: UTAH
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) 207'		16. NUMBER OF ACRES IN LEASE: 620.25		17. NUMBER OF ACRES ASSIGNED TO THIS WELL: Unit Well	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) 20'		19. PROPOSED DEPTH: 8,748		20. BOND DESCRIPTION: 22013542	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 4975' GR		22. APPROXIMATE DATE WORK WILL START:		23. ESTIMATED DURATION: 10 days	

24. **PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT			
12.25	9.625	J-55	36#	1900 4,700	Premium Cement	215	1.18	15.6
					Premium Cement	50	1.18	15.6
7.875	4.5	I-80	11.6#	8,748	Premium Lite II	350	3.38	11.0
					50/50 Poz G	1250	1.31	14.3

25. **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 checked="" type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER	<input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) Kevin McIntyre TITLE Regulatory Analyst

SIGNATURE *Kevin McIntyre* DATE 11/6/2008

(This space for State use only)

Approved by the Utah Division of Oil, Gas and Mining

APPROVAL: _____
Date: 02-02-09
By: *[Signature]*

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DIV. OF OIL, GAS & MINING

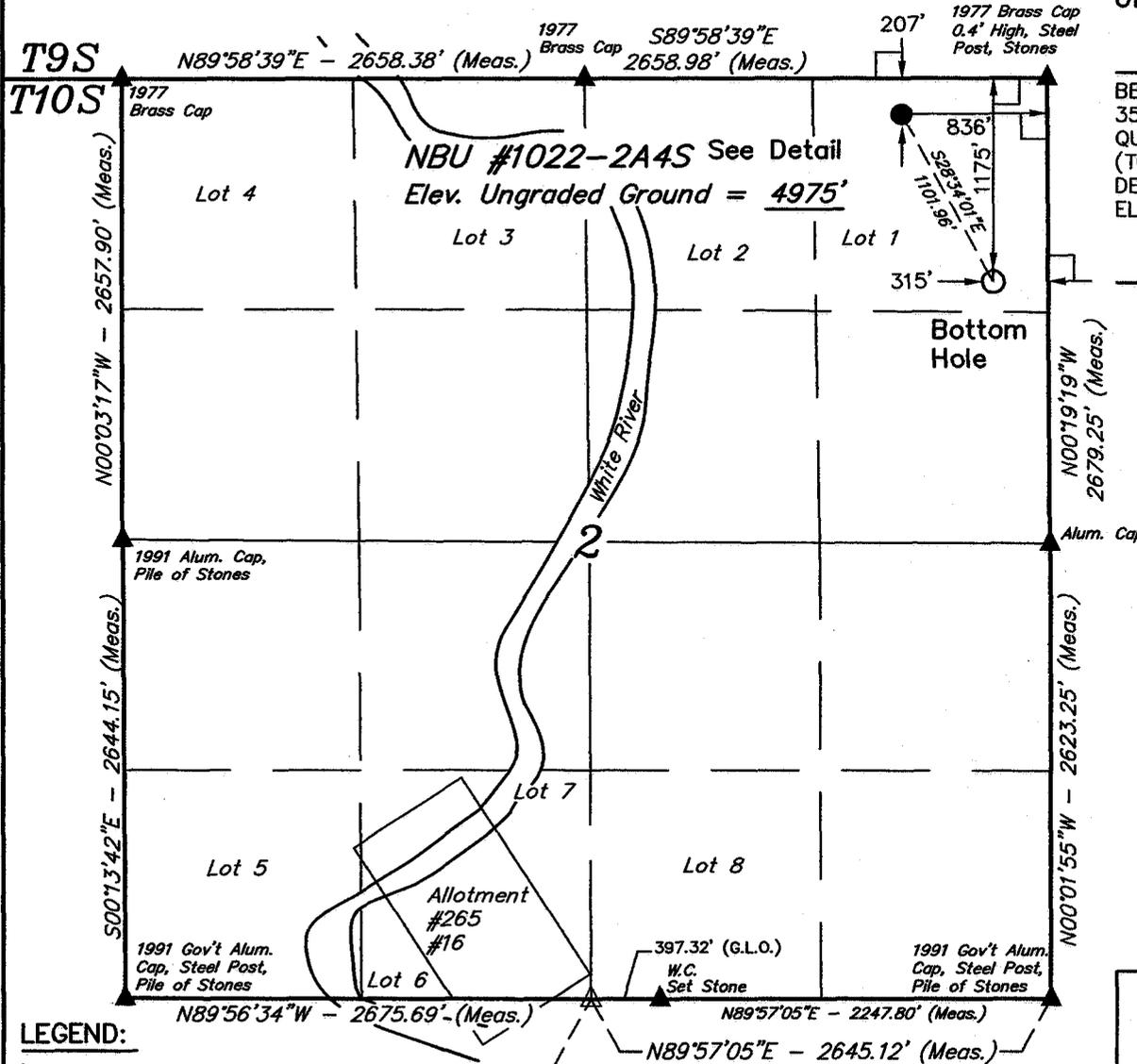
API NUMBER ASSIGNED: 43-047-48433

(11/2001) (See Instructions on Reverse Side)

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

Kerr-McGee Oil & Gas Onshore LP

Well location, NBU #1022-2A4S, located as shown in Lot 1 of Section 2, T10S, R22E, S.L.B.&M., Uintah County, Utah.

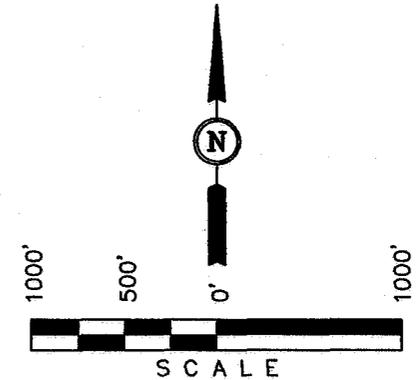


BASIS OF ELEVATION

BENCH MARK (20EAM) LOCATED IN THE SE 1/4 OF SECTION 35, T8S, R21E, S.L.B.&M. TAKEN FROM THE OURAY SE QUADRANGLE, UTAH, UTAH COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 4697 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 J. KAY
REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

LEGEND:

- └─┘ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.
- △ = SECTION CORNERS RE-ESTABLISHED.
(Not Set on Ground.)

True Position
S 1/4 Corner
Sec. 2

NAD 83 (TARGET BOTTOM HOLE)		NAD 83 (SURFACE LOCATION)	
LATITUDE = 39°58'55.28" (39.982022)	LONGITUDE = 109°23'55.75" (109.398819)	LATITUDE = 39°59'04.85" (39.984681)	LONGITUDE = 109°24'02.50" (109.400694)
NAD 27 (TARGET BOTTOM HOLE)		NAD 27 (SURFACE LOCATION)	
LATITUDE = 39°58'55.40" (39.982056)	LONGITUDE = 109°23'53.30" (109.398139)	LATITUDE = 39°59'04.97" (39.984714)	LONGITUDE = 109°24'00.05" (109.400014)

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

SCALE 1" = 1000'	DATE SURVEYED: 06-13-08	DATE DRAWN: 07-10-08
PARTY L.K. D.D. C.H.	REFERENCES G.L.O. PLAT	
WEATHER HOT	FILE Kerr-McGee Oil & Gas Onshore LP	

**NBU 1022-2A4S
Twin to CIGE #67D
NENE Sec. 2, T10S,R22E
UINTAH COUNTY, UTAH
ST ML 22651**

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. Estimated Tops of Important Geologic Markers:

<u>Formation</u>	<u>Depth</u>
Uinta	0- Surface
Green River	1087'
Birds Nest	1346'
Mahogany	1859'
Wasatch	4150'
Mesaverde	6451'
MVU2	7349'
MVL1	7932'
TVD	8500'
TD	8748'

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

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
	Green River	1087'
Water	Birds Nest	1346'
Water	Mahogany	1859'
Gas	Wasatch	4150'
Gas	Mesaverde	6451'
Gas	MVU2	7349'
Gas	MVL1	7932'
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 8748' TD, approximately equals 5424 psi (calculated at 0.62 psi/foot). *TVD 8500' @ 5270 psi.*

Maximum anticipated surface pressure equals approximately 3499 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.

NBU 1022-2A4S
Twin to CIGE #67D
NENE SEC. 2, T10S, R22E
UINTAH COUNTY, UTAH
ST ML 22651

ONSHORE ORDER NO. 1

MULTI-POINT SURFACE USE & OPERATIONS PLAN

Directional Drilling:

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

1. **Existing Roads:**

Refer to Topo Map A for directions to the location.

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

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

All existing roads will be maintained and kept in good repair during all drilling and completion operations associated with this well.

2. **Planned Access Roads:**

Approximately 0.1 mi. +/- of access road is proposed. Refer to Topo Map B.

The upgraded and new portions of the access road will be crowned and ditched with a running surface of 18 feet and a maximum disturbed width of 30 feet. Appropriate water control will be installed to control erosion.

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

The access road was centerline flagged during time of staking.

Surfacing material may be necessary, depending upon weather conditions.

Surface disturbance and vehicular traffic will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.

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

Please refer to Topo Map C.

4. Location of Existing & Proposed Facilities:

The following guidelines will apply if the well is productive.

All production facilities will be located on the disturbed portion of the well pad and at a minimum of 25 feet from the toe of the back slope or the top of the fill slope.

A dike will be constructed completely around those production facilities which contain fluids (i.e., production tanks, produced water tanks, and/or heater/treater). These dikes will be constructed of compacted subsoil, be impervious, hold 100% of the capacity of the largest tank, and be independent of the back cut.

All permanent (on-site six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earthtone color to match one of the standard environmental colors, as determined by the five state Rocky Mountain Inter-Agency Committee.

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

Any necessary pits will be properly fenced to protect livestock and prevent wildlife entry.

No new pipeline utilizing the existing CIGE #67D pipeline. No TOPO D attached.

5. Location and Type of Water Supply:

Water for drilling purposes will be obtained from Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32, T4S, R3E, Water User Claim #43-8496, Application #53617.

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

No water well is to be drilled on this lease.

6. Source of Construction Materials:

Surface and subsoil materials in the immediate area will be utilized.

Any gravel will be obtained from a commercial source.

7. Methods of Handling Waste Materials:

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids, including salts and chemicals, will be contained in the reserve pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be removed and disposed of at an approved waste disposal facility within 120 days after drilling is terminated.

The reserve pit will be constructed on the location and will not be located within natural drainage, where a flood hazard exists or surface runoff will destroy or damage the pit walls. The reserve pit will be constructed so that it will not leak, break, or allow discharge of liquids.

A plastic reinforced liner and felt will be used, it will be a minimum of 20 mil thick, with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with

dirt and/or rocks to hold it in place. No trash or scrap that could puncture the liner will be disposed of in the pit.

Any spills of oil, gas, salt water, or other noxious fluids will be immediately cleaned up and removed to an approved disposal site.

A chemical porta-toilet will be furnished with the drilling rig.

Garbage, trash, and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. No trash will be burned on location.

All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig.

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling of this well.

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites: RNI, Sec. 5, T9S, R22E, NBU #159, Sec. 35, T9S, R21E, Ace Oilfield, Sec. 2, T6S, R20E, MC&MC, Sec. 12, T6S, R19E, Pipeline Facility, Sec. 36, T9S, R20E, Goat Pasture Evaporation Pond, SW/4 Sec. 16, T10S, R22E, Bonanza Evaporation Pond, Sec. 2, T10S, R23E.

8. **Ancillary Facilities:**

None are anticipated.

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

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

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

The reserve pit will be lined, and when the reserve pit is closed, the pit liner will be buried below plow depth.

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

39 inch net wire will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.

The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.

Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

The reserve pit fencing will be on three sides during drilling operations, and on the fourth side when the rig moves off location. Pits will be fenced and maintained until cleanup.

Location size may change prior to the drilling of the well due to current rig availability. If the proposed location is not large enough to accommodate the drilling rig the location will be re-surveyed and a Form 9 shall be submitted.

10. Plans for Reclamation of the Surface:

Producing Location:

Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, materials, trash, and debris not required for production.

Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1.

A plastic, nylon reinforced liner will be used, it shall be torn and perforated before backfilling of the reserve pit.

Before any dirt work associated with location restoration takes place, the reserve pit shall be as dry as possible. All debris in it will be removed. Other waste and spoil materials will be disposed of immediately upon completion of operations.

The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours. The reserve pit will be reclaimed within 90 days from the date of well completion, weather permitting.

To prevent surface water (s) from standing (ponding) on the reclaimed reserve pit area, final reclamation of the reserve pit will consist of "mounding" the surface three feet above surrounding ground surface to allow the reclaimed pit area to drain effectively.

Upon completion of backfilling, leveling, and recontouring, the stockpiled topsoil will be spread evenly over the reclaimed area(s).

Dry Hole/Abandoned Location:

Abandoned well sites, roads, and other disturbed areas will be restored as near as practical to their original condition. Where applicable, these conditions include the re-establishment of irrigation systems, the re-establishment of appropriate soil conditions, and re-establishment of vegetation as specified.

All disturbed surfaces will be recontoured to the approximate natural contours, with reclamation of the well pad and access road to be performed as soon as practical after final abandonment. Reseeding operations will be performed after completion of other reclamation operations.

11. Surface/Mineral Ownership:

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

12. Other Information:

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, the approved Plan of Operations, and any applicable Notice of Lessees. The Operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

The Operator will control noxious weeds along Rights-Of-Way for roads, pipelines, well sites, or other applicable facilities.

A Class III archaeological survey will be submitted when report becomes available.

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

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

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

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

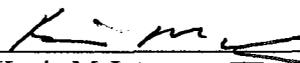
Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

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

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

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

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by the Operator, its contractors, and subcontractors in conformity with this plan and the terms and conditions under which it is approved.



Kevin McIntyre

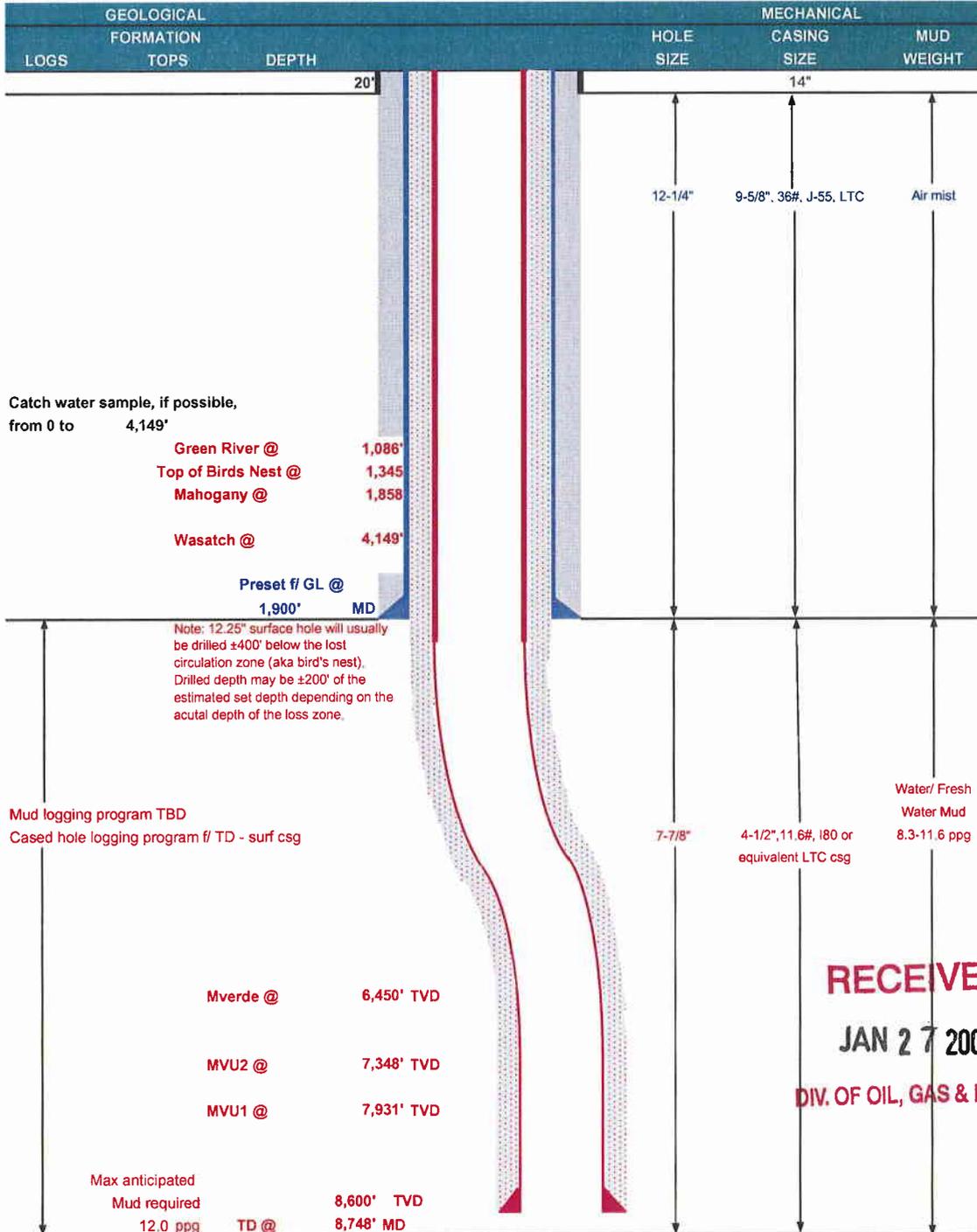
11/06/2008

Date



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	January 27, 2009			
WELL NAME	NBU 1022-2A4S		TD	8,500'	TVD	8,748' MD	
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	ELEVATION	4,975' GL KB 4,990'
SURFACE LOCATION	NENE 207' FNL 836' FEL, Sec. 2 T 10S R 22E (Lot 1)						
	Latitude:	39.984714	Longitude:	-109.400014	NAD 27		
BTM HOLE LOCATION	NENE 1,175' FNL 315' FEL, Sec. 2 T 10S R 22E (Lot 1)						
	Latitude:	39.982056	Longitude:	-109.398139	NAD 27		
OBJECTIVE ZONE(S)	Wasatch/Mesaverde						
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals & Surface), BLM, Tri-County Health Dept.						



RECEIVED
JAN 27 2009

DIV. OF OIL, GAS & MINING



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3520	2020	453000
SURFACE	9-5/8"	0 to 1900	36.00	J-55	LTC	1.00	2.27	8.43
PRODUCTION	4-1/2"	0 to 8748	11.60	I-80	LTC	2.20	1.16	2.27

- 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 = 12.0 ppg) 0.22 psi/ft = gradient for partially evac wellbore
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing * Buoy Fact. of water)
 MASP 3,465 psi

CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD	
SURFACE Option 1	LEAD 500	Premium cmt + 2% CaCl + .25 pps flocele	215	60%	15.60	1.18	
	TOP OUT CMT (1) 200	20 gals sodium silicate + Premium cmt + 2% CaCl + .25 pps flocele	50		15.60	1.18	
	TOP OUT CMT (2) as required	Premium cmt + 2% CaCl	as req.		15.60	1.18	
SURFACE Option 2	NOTE: If well will circulate water to surface, option 2 will be utilized						
	LEAD 1500	65/35 Poz + 6% Gel + 10 pps gilsonite + 25 pps Flocele + 3% salt BWOW	360	35%	12.60	1.81	
	TAIL 500	Premium cmt + 2% CaCl + .25 pps flocele	180	35%	15.60	1.18	
	TOP OUT CMT as required	Premium cmt + 2% CaCl	as req.		15.60	1.18	
PRODUCTION	LEAD 3,648'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	350	40%	11.00	3.38	
	TAIL 5,100'	50/50 Poz/G + 10% salt + 2% gel + .1% R-3	1250	40%	14.30	1.31	

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained
 *Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint to top of tail cement with bow spring centralizers.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.
 BOPE: 11" 5M with one annular and 2 rams. Test to 5,000 psi (annular to 2,500 psi) prior to drilling out. Record on chart recorder & tour sheet. Function test rams on each trip. Maintain safety valve & inside BOP on rig floor at all times. Kelly to be equipped with upper & lower kelly valves.
 Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.
 Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER: _____
 Brad Laney

DATE: _____

DRILLING SUPERINTENDENT: _____
 Randy Bayne

DATE: _____

Kerr McGee Oil And Gas Company, L.P.
NBU #1022-2A2T, #1022-2B2S, #1022-2A3S, #1022-2A4S
 LOCATED IN UINTAH COUNTY, UTAH
 SECTION 2, T10S, R22E, S.L.B.&M.

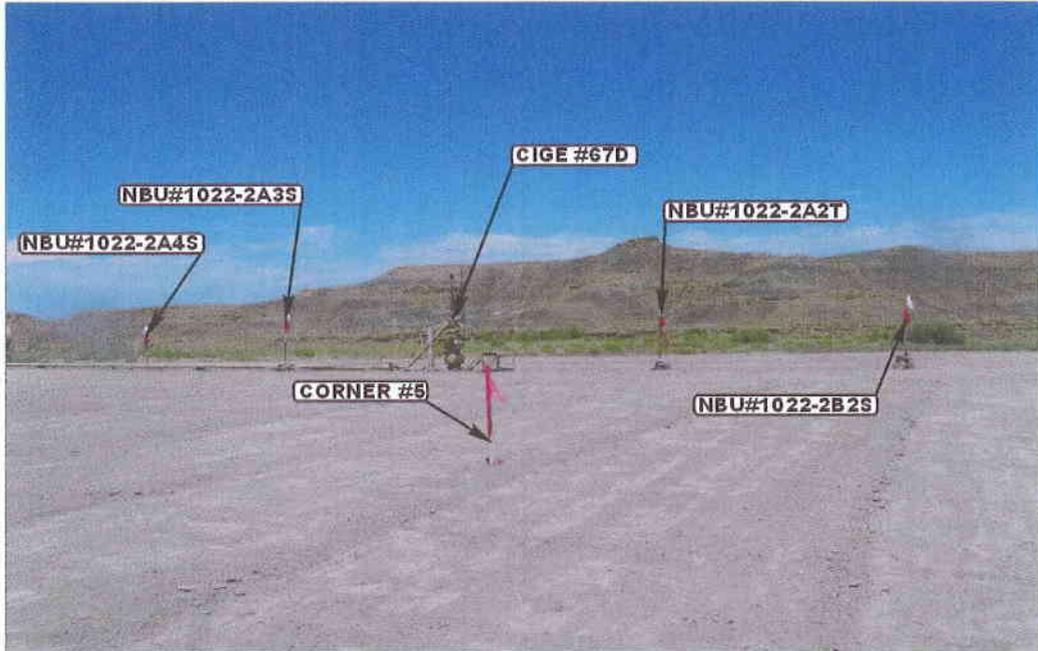


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKES

CAMERA ANGLE: NORTHERLY

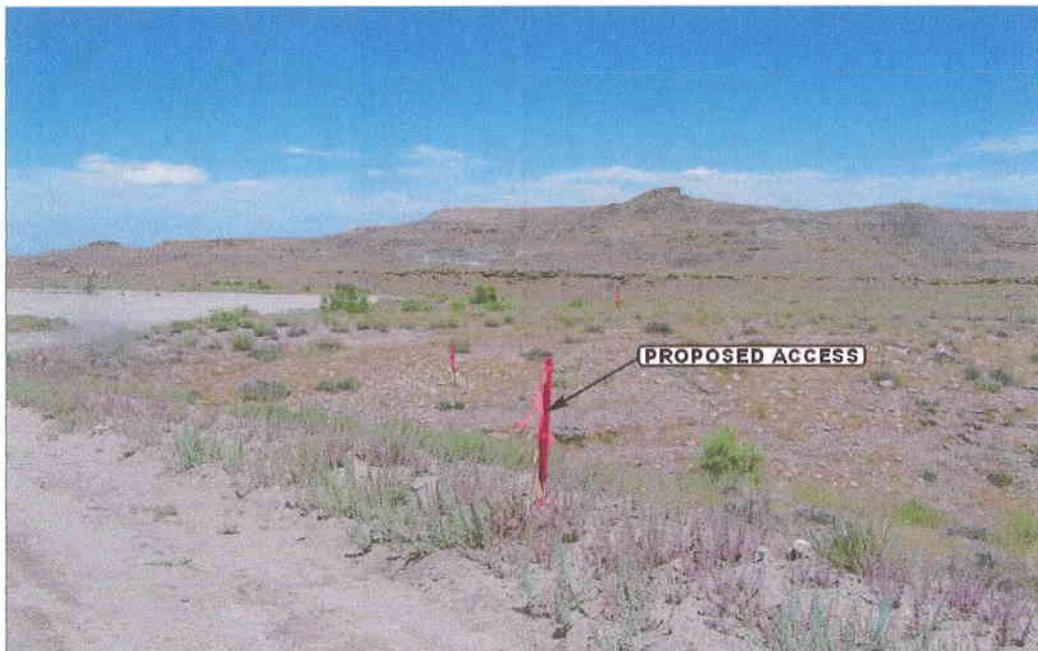


PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: NORTHWESTERLY



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

- Since 1964 -

LOCATION PHOTOS

07 **17** **08**
 MONTH DAY YEAR

PHOTO

TAKEN BY: L.K.

DRAWN BY: J.C.

REV: 09-17-08 J.J.

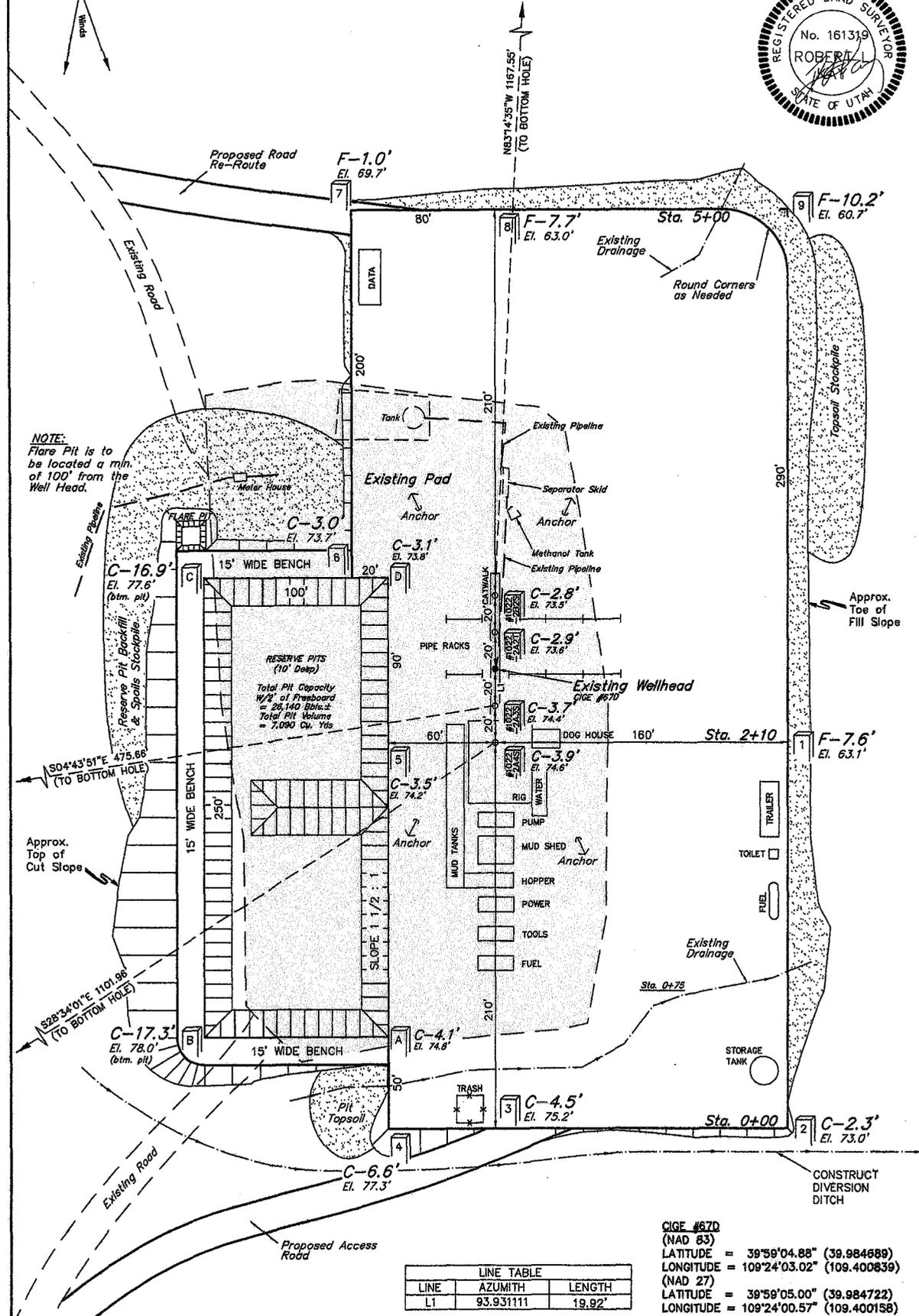
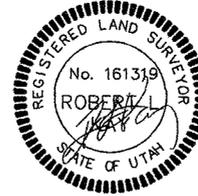
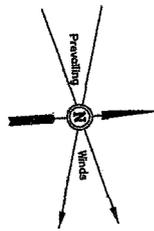
Kerr-McGee Oil & Gas Onshore LP

LOCATION LAYOUT FOR

NBU #1022-2A2T, #1022-2B2S, #1022-2A3S & #1022-2A4S
SECTION 2, T10S, R22E, S.L.B.&M.
NE 1/4 NE 1/4

FIGURE #1

SCALE: 1" = 50'
DATE: 08-25-08
Drawn By: C.C.
REVISED: 11-25-08 D.P.



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

504°43'51"E 475.66'
(TO BOTTOM HOLE)

S28°34'01"E 1101.96'
(TO BOTTOM HOLE)

LINE TABLE		
LINE	AZUMITH	LENGTH
L1	93.931111	19.92'

CIGE #67D
(NAD 83)
LATITUDE = 39°59'04.88" (39.984689)
LONGITUDE = 109°24'03.02" (109.400839)
(NAD 27)
LATITUDE = 39°59'05.00" (39.984722)
LONGITUDE = 109°24'00.57" (109.400158)

Elev. Ungraded Ground at #1022-2A4S Location Stake = 4974.6'
Elev. Graded Ground at #1022-2A4S Location Stake = 4970.7'

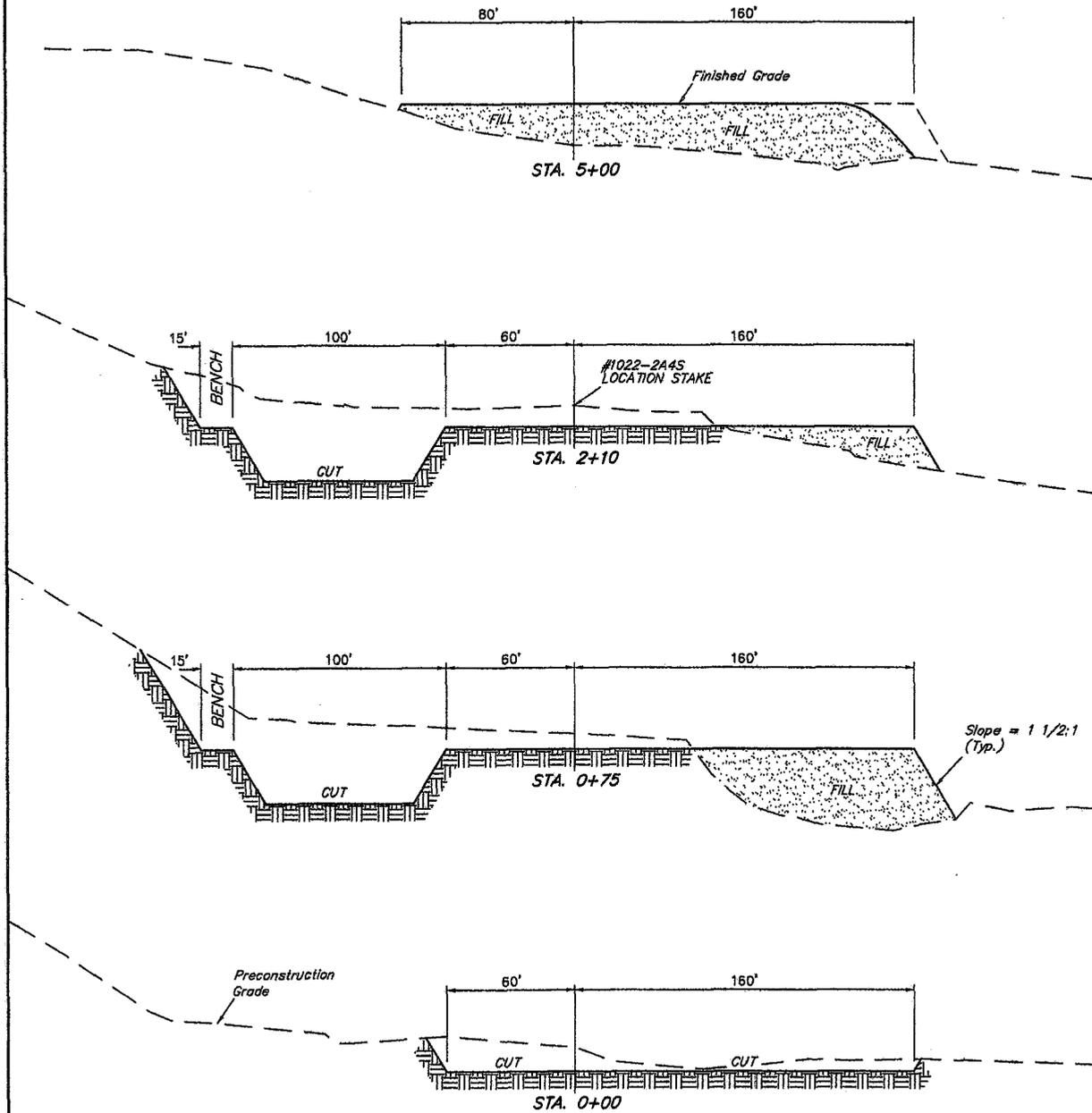
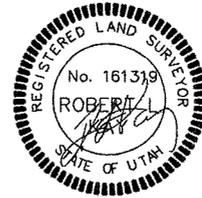
Kerr-McGee Oil & Gas Onshore LP

FIGURE #2

1" = 20'
X-Section
Scale
1" = 50'

TYPICAL CROSS SECTIONS FOR
NBU #1022-2A2T, #1022-2B2S, #1022-2A3S & #1022-2A4S
SECTION 2, T10S, R22E, S.L.B.&M.
NE 1/4 NE 1/4

DATE: 08-25-08
Drawn By: C.C.
REVISED: 11-25-08 D.P.



NOTE:

Topsail should not be Stripped Below Finished Grade on Substructure Area.

* NOTE:
FILL QUANTITY INCLUDES
5% FOR COMPACTION

APPROXIMATE YARDAGES

(6") Topsoil Stripping = 1,520 Cu. Yds.
(New Construction Only)
Remaining Location = 19,470 Cu. Yds.
TOTAL CUT = 20,990 CU.YDS.
FILL = 15,920 CU.YDS.

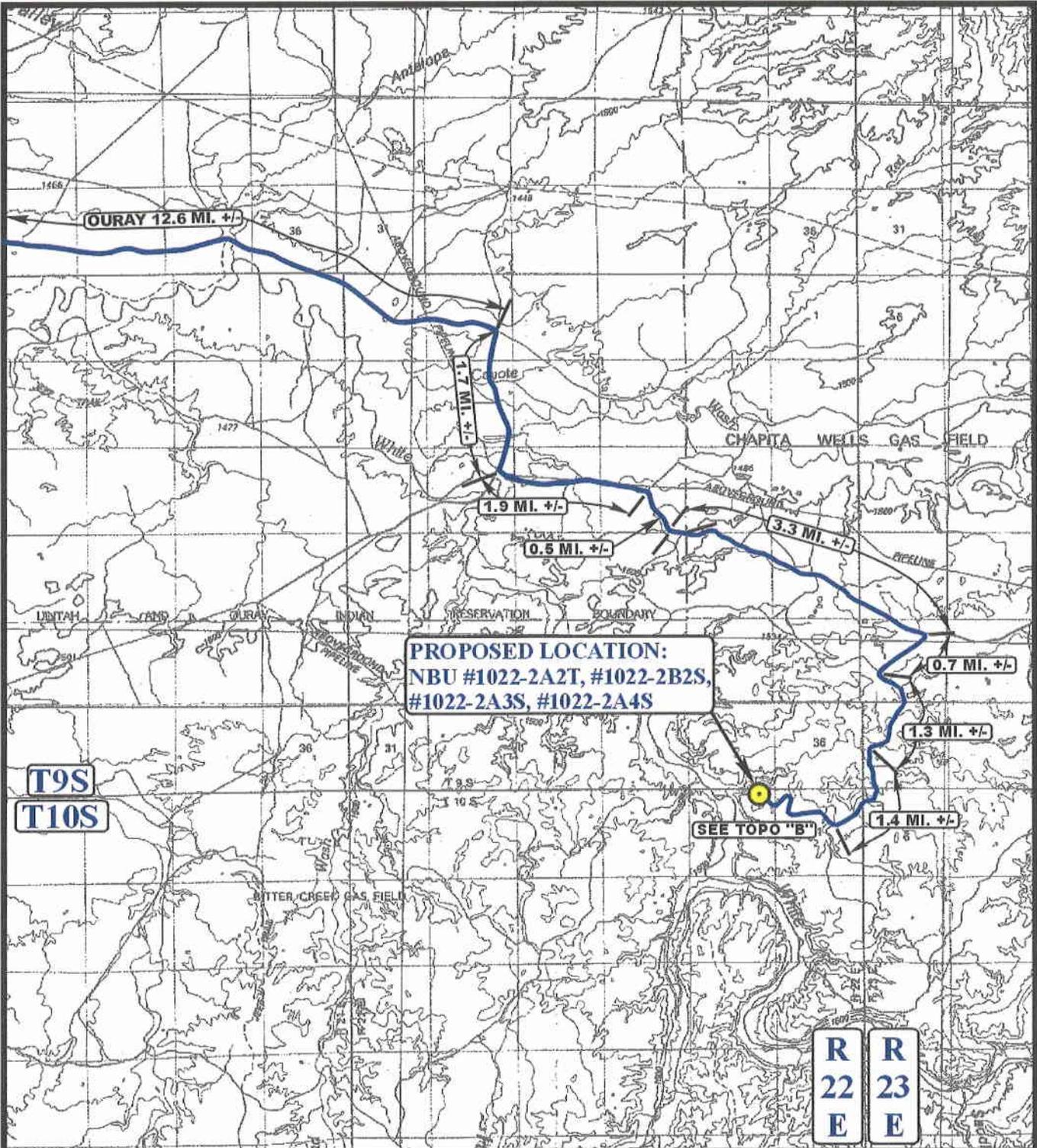
EXCESS MATERIAL = 5,070 Cu. Yds.
Topsoil & Pit Backfill = 5,070 Cu. Yds.
(1/2 Pit Vol.)
EXCESS UNBALANCE = 0 Cu. Yds.
(After Interim Rehabilitation)

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East • Vernal, Utah 84078 • (435) 788-1077

Kerr McGee Oil & Gas Onshore LP.
NBU #1022-2A2T, #1022-2B2S,
#1022-2A3S, #1022-2A4S
SECTION 2, 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 DIRECTION APPROXIMATELY 0.3 MILES ON THE SEEP RIDGE ROAD TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN A EASTERLY DIRECTION APPROXIMATELY 12.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN RIGHT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 1.7 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 1.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN RIGHT AND PROCEED IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 0.5 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 3.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHWEST; TURN RIGHT AND PROCEED IN A SOUTHWESTERLY DIRECTION APPROXIMATELY 0.7 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN LEFT AND PROCEED IN A SOUTHEASTERLY, THEN SOUTHWESTERLY DIRECTION APPROXIMATELY 1.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN LEFT AND PROCEED IN A SOUTHERLY, THEN SOUTHWESTERLY DIRECTION APPROXIMATELY 1.4 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE WEST; TURN RIGHT AND PROCEED IN A WESTERLY, THEN NORTHWESTERLY DIRECTION APPROXIMATELY 1.2 MILES TO THE BEGINNING OF THE PROPOSED ACCESS TO THE NORTH; FOLLOW ROAD FLAGS IN A NORTHERLY DIRECTION APPROXIMATELY 0.1 MILE TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 55.7 MILES.



LEGEND:

 PROPOSED LOCATION



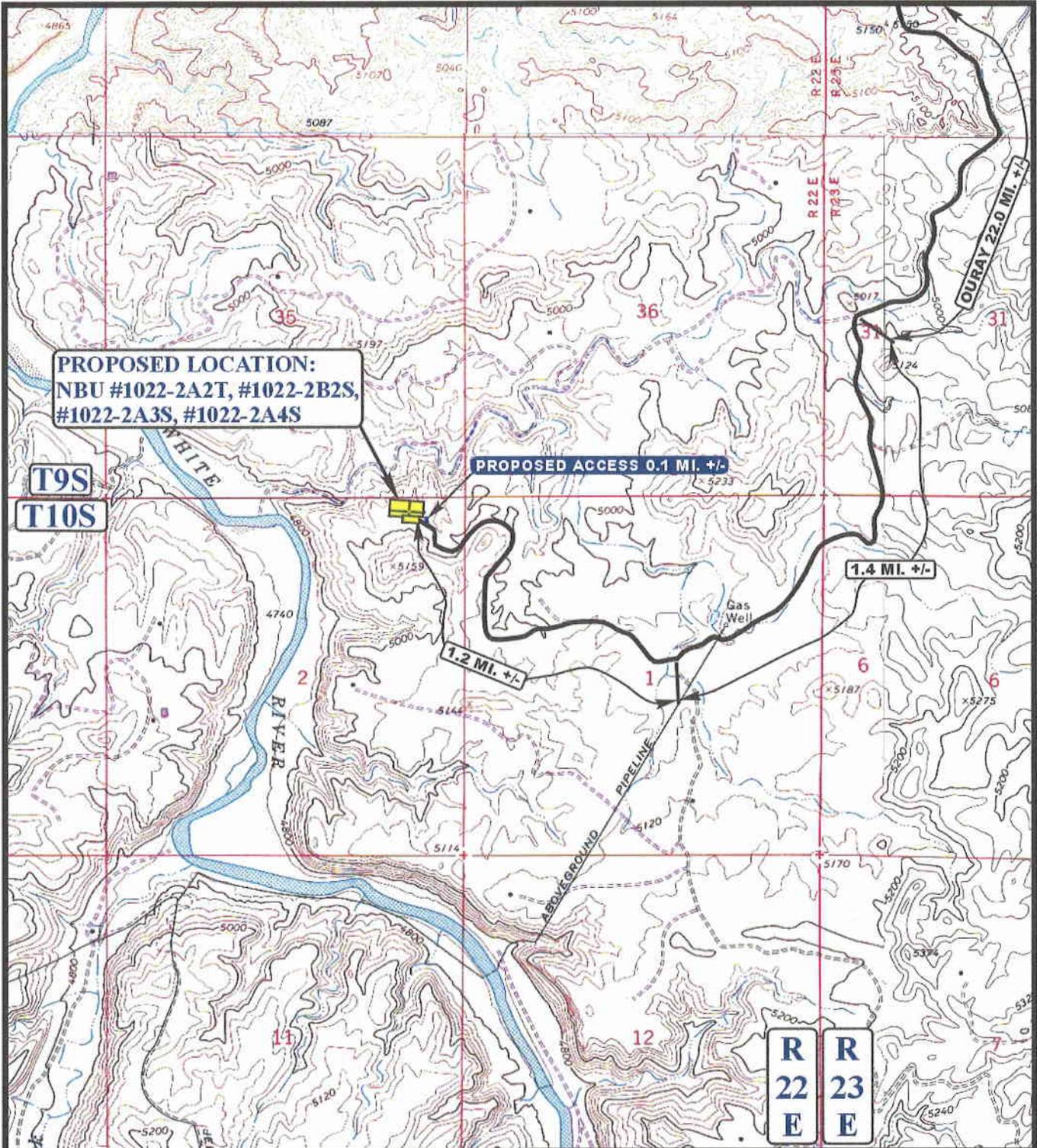
Kerr McGee Oil And Gas Company, L.P.

NBU #1022-2A2T, #1022-2B2S,
 #1022-2A3S, #1022-2A4S
 SECTION 2, T10S, R22E, S.L.B.&M.
 NE 1/4 NE 1/4

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

TOPOGRAPHIC MAP 07 17 08
 MONTH DAY YEAR
 SCALE: 1:100,000 DRAWN BY: J.C. REV: 09-17-08 J.J.





LEGEND:

- EXISTING ROAD
- PROPOSED ACCESS ROAD



Kerr McGee Oil And Gas Company, L.P.

NBU #1022-2A2T, #1022-2B2S,
 #1022-2A3S, #1022-2A4S
 SECTION 2, T10S, R22E, S.L.B.&M.
 NE 1/4 NE 1/4



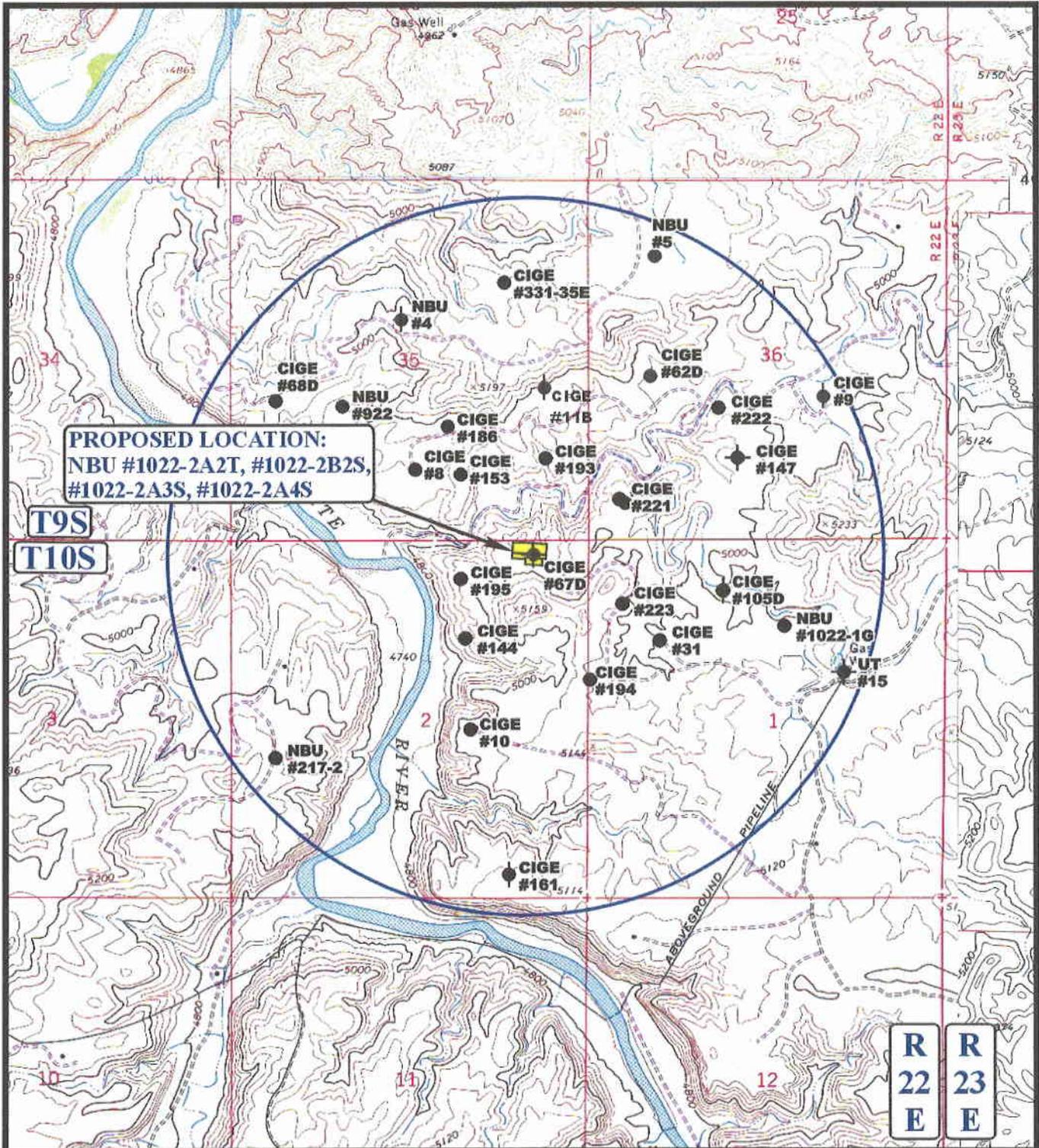
Utah Engineering & Land Surveying
 85 South 200 East Vernal, Utah 84078
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**TOPOGRAPHIC
 MAP**

07 17 08
 MONTH DAY YEAR



SCALE: 1" = 2000' DRAWN BY: J.C. REV: 09-17-08 J.J.



PROPOSED LOCATION:
NBU #1022-2A2T, #1022-2B2S,
#1022-2A3S, #1022-2A4S

T9S
T10S

R
22
E

R
23
E

LEGEND:

- ◊ DISPOSAL WELLS
- PRODUCING WELLS
- ◐ SHUT IN WELLS
- ◊ WATER WELLS
- ◐ ABANDONED WELLS
- ◐ TEMPORARILY ABANDONED

Kerr McGee Oil And Gas Company, L.P.

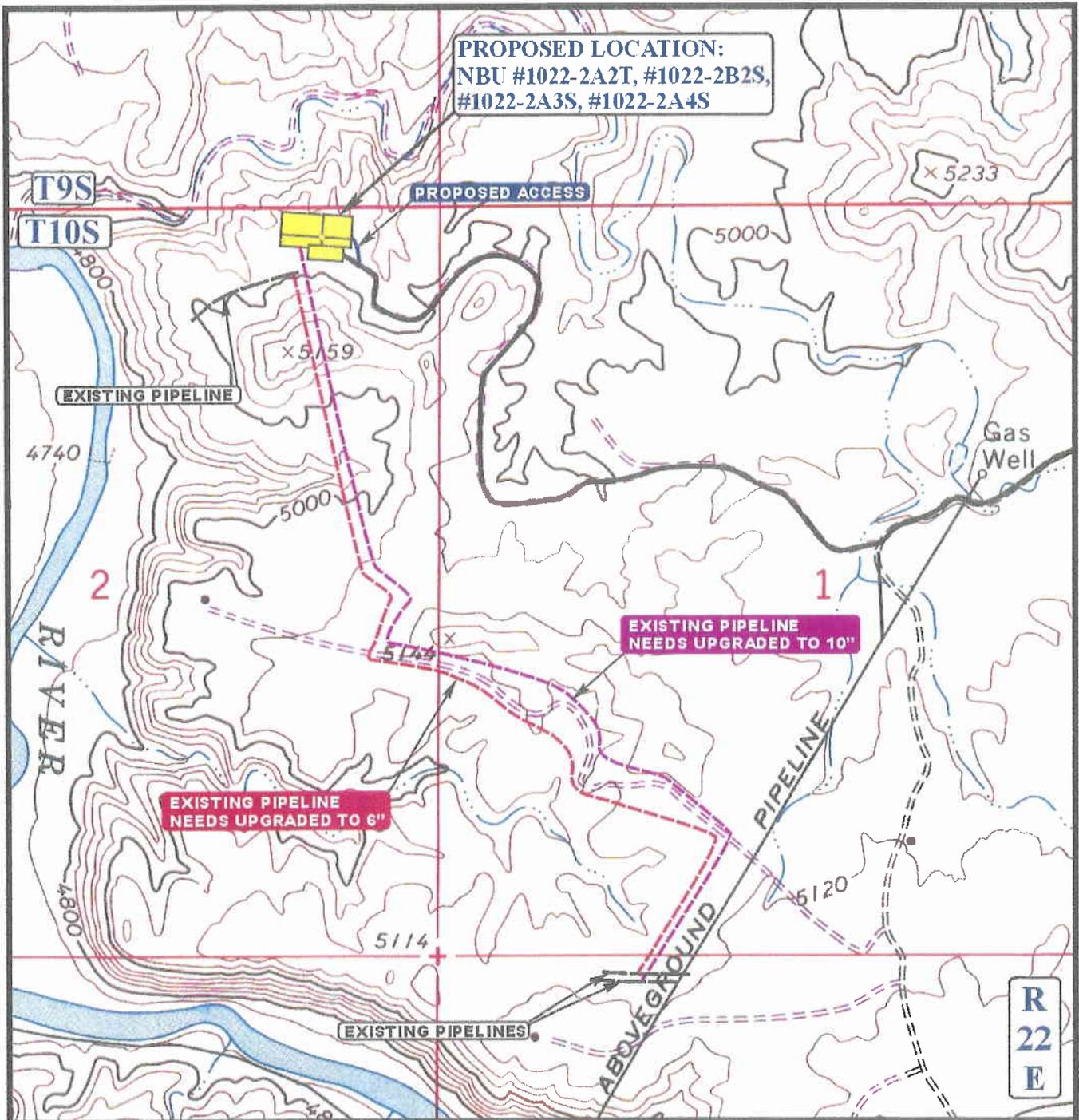
NBU #1022-2A2T, #1022-2B2S,
#1022-2A3S, #1022-2A4S
SECTION 2, T10S, R22E, S.L.B.&M.
NE 1/4 NE 1/4

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



TOPOGRAPHIC **07 17 08**
MAP MONTH DAY YEAR
 SCALE: 1" = 2000' DRAWN BY: J.C. REV: 09-17-08 J.J.





APPROXIMATE TOTAL PIPELINE DISTANCE = 14,400' +/-

APPROXIMATE TOTAL PIPELINE DISTANCE = 13,400' +/-

LEGEND:

- PROPOSED ACCESS ROAD
- EXISTING PIPELINE
- EXISTING PIPELINE UPGRADE TO 6"
- EXISTING PIPELINE UPGRADE TO 10"

Kerr McGee Oil And Gas Company, L.P.

NBU #1022-2A2T, #1022-2B2S,
 #1022-2A3S, #1022-2A4S
 SECTION 2, T10S, R22E, S.L.B.&M.
 NE 1/4 NE 1/4



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 85 South 200 East Vernal, Utah 84078
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TOPOGRAPHIC 11 25 08
MAP MONTH DAY YEAR

SCALE: 1" = 1000' DRAWN BY: D.P. REVISED: 00-00-00





Scientific Drilling
Rocky Mountain Operations

Project: Uintah County, UT NAD27
Site: NBU 1022-2A Pad
Well: NBU 1022-2A4S
Wellbore: OH
Design: Plan #1

McGee Oil and Gas Onshore LP

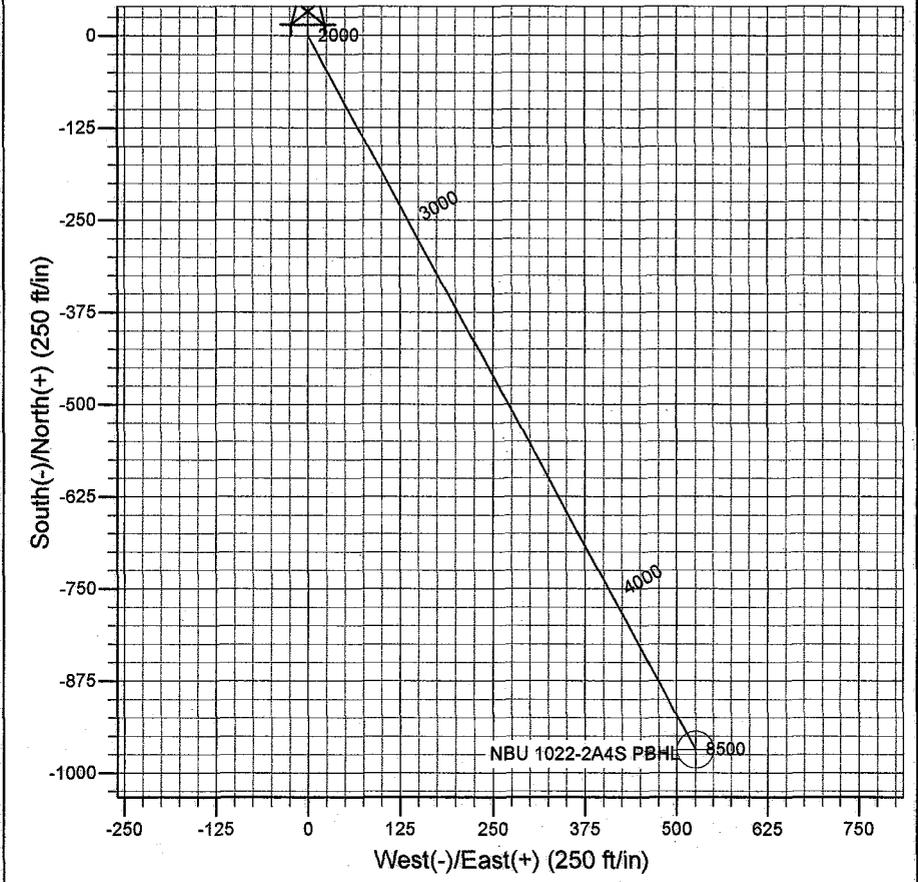
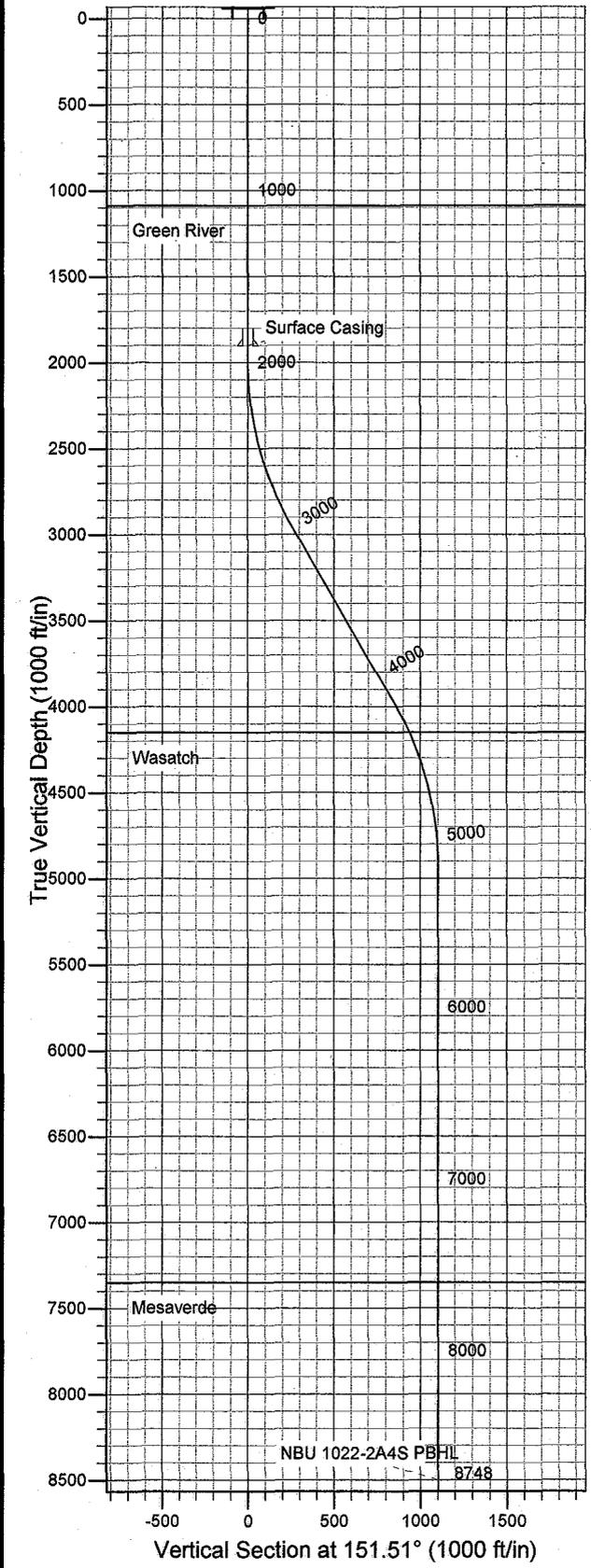
Azimuths to True North
 Magnetic North: 11.35°

 Magnetic Field
 Strength: 52620.6snT
 Dip Angle: 65.95°
 Date: 10/30/2008
 Model: IGRF2005-10

WELL DETAILS: NBU 1022-2A4S

GL 4974' & RKB 18' @ 4992.00ft 4974.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	608385.92	2588378.64	39° 59' 4.970 N	109° 24' 0.050 W



Plan: Plan #1 (NBU 1022-2A4S/OH)
Created By: Julie Cruse Date: 2008-10-31
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 2 T10S R22E System Datum: Mean Sea Level Local North: True

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	
3000.00	30.00	151.51	2954.93	-224.90	122.03	3.00	151.51	255.87	
4179.78	30.00	151.51	3976.65	-743.37	403.37	0.00	0.00	845.76	
5179.78	0.00	0.00	4931.58	-968.27	525.41	3.00	180.00	101.64	
8748.20	0.00	0.00	8500.00	-968.27	525.41	0.00	0.00	101.64	NBU 1022-2A4S PBHL



Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT NAD27
NBU 1022-2A Pad
NBU 1022-2A4S
OH

Plan: Plan #1

Standard Planning Report

31 October, 2008



Scientific Drilling

Planning Report

Database: EDM 2003.16 Multi User DB
Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT NAD27
Site: NBU 1022-2A Pad
Well: NBU 1022-2A4S
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well NBU 1022-2A4S
TVD Reference: GL 4974' & RKB 18' @ 4992.00ft
MD Reference: GL 4974' & RKB 18' @ 4992.00ft
North Reference: True
Survey Calculation Method: Minimum Curvature

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 1022-2A Pad, SEc 2 T10S R22E		
Site Position:		Northing:	608,388.56 ft
From:	Lat/Long	Easting:	2,588,318.63 ft
Position Uncertainty:	0.00 ft	Slot Radius:	in
		Latitude:	39° 59' 5.010 N
		Longitude:	109° 24' 0.820 W
		Grid Convergence:	1.35 °

Well	NBU 1022-2A4S, 207' FNL 836' FEL		
Well Position	+N/-S	0.00 ft	Northing: 608,385.92 ft
	+E/-W	0.00 ft	Easting: 2,588,378.64 ft
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
		Latitude:	39° 59' 4.970 N
		Longitude:	109° 24' 0.050 W
		Ground Level:	4,974.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	10/30/2008	11.35	65.95	52,821

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	151.51

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,000.00	30.00	151.51	2,954.93	-224.90	122.03	3.00	3.00	0.00	151.51	
4,179.78	30.00	151.51	3,976.65	-743.37	403.37	0.00	0.00	0.00	0.00	
5,179.78	0.00	0.00	4,931.58	-968.27	525.41	3.00	-3.00	0.00	180.00	
8,748.20	0.00	0.00	8,500.00	-968.27	525.41	0.00	0.00	0.00	0.00	NBU 1022-2A4S PBH



Scientific Drilling

Planning Report

Database: EDM 2003.16 Multi User DB
Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT NAD27
Site: NBU 1022-2A Pad
Well: NBU 1022-2A4S
Wellbore: OH
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TVD Reference: GL 4974' & RKB 18' @ 4992.00ft
MD Reference: GL 4974' & RKB 18' @ 4992.00ft
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,087.00	0.00	0.00	1,087.00	0.00	0.00	0.00	0.00	0.00	0.00	
Green River										
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
Surface Casing										
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,100.00	3.00	151.51	2,099.95	-2.30	1.25	2.62	3.00	3.00	0.00	
2,200.00	6.00	151.51	2,199.63	-9.20	4.99	10.46	3.00	3.00	0.00	
2,300.00	9.00	151.51	2,298.77	-20.67	11.21	23.51	3.00	3.00	0.00	
2,400.00	12.00	151.51	2,397.08	-36.68	19.90	41.74	3.00	3.00	0.00	
2,500.00	15.00	151.51	2,494.31	-57.20	31.04	65.08	3.00	3.00	0.00	
2,600.00	18.00	151.51	2,590.18	-82.16	44.58	93.48	3.00	3.00	0.00	
2,700.00	21.00	151.51	2,684.43	-111.50	60.50	126.85	3.00	3.00	0.00	
2,800.00	24.00	151.51	2,776.81	-145.13	78.75	165.12	3.00	3.00	0.00	
2,900.00	27.00	151.51	2,867.06	-182.96	99.28	208.16	3.00	3.00	0.00	
3,000.00	30.00	151.51	2,954.93	-224.90	122.03	255.87	3.00	3.00	0.00	
3,100.00	30.00	151.51	3,041.53	-268.84	145.88	305.87	0.00	0.00	0.00	
3,200.00	30.00	151.51	3,128.13	-312.79	169.73	355.87	0.00	0.00	0.00	
3,300.00	30.00	151.51	3,214.74	-356.74	193.57	405.87	0.00	0.00	0.00	
3,400.00	30.00	151.51	3,301.34	-400.68	217.42	455.87	0.00	0.00	0.00	
3,500.00	30.00	151.51	3,387.94	-444.63	241.27	505.87	0.00	0.00	0.00	
3,600.00	30.00	151.51	3,474.54	-488.58	265.11	555.87	0.00	0.00	0.00	
3,700.00	30.00	151.51	3,561.15	-532.53	288.96	605.87	0.00	0.00	0.00	
3,800.00	30.00	151.51	3,647.75	-576.47	312.81	655.87	0.00	0.00	0.00	
3,900.00	30.00	151.51	3,734.35	-620.42	336.65	705.87	0.00	0.00	0.00	
4,000.00	30.00	151.51	3,820.96	-664.37	360.50	755.87	0.00	0.00	0.00	
4,100.00	30.00	151.51	3,907.56	-708.31	384.35	805.87	0.00	0.00	0.00	
4,179.78	30.00	151.51	3,976.65	-743.37	403.37	845.76	0.00	0.00	0.00	
4,200.00	29.39	151.51	3,994.21	-752.18	408.15	855.78	3.00	-3.00	0.00	
4,300.00	26.39	151.51	4,082.59	-793.29	430.46	902.56	3.00	-3.00	0.00	
4,374.56	24.16	151.51	4,150.00	-821.27	445.64	934.39	3.00	-3.00	0.00	
Wasatch										
4,400.00	23.39	151.51	4,173.28	-830.29	450.53	944.65	3.00	-3.00	0.00	
4,500.00	20.39	151.51	4,266.06	-863.06	468.31	981.93	3.00	-3.00	0.00	
4,600.00	17.39	151.51	4,360.66	-891.51	483.76	1,014.31	3.00	-3.00	0.00	



Scientific Drilling

Planning Report

Database: EDM 2003.16 Multi User DB
Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT NAD27
Site: NBU 1022-2A Pad
Well: NBU 1022-2A4S
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well NBU 1022-2A4S
TVD Reference: GL 4974' & RKB 18' @ 4992.00ft
MD Reference: GL 4974' & RKB 18' @ 4992.00ft
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,700.00	14.39	151.51	4,456.83	-915.58	496.82	1,041.69	3.00	-3.00	0.00
4,800.00	11.39	151.51	4,554.30	-935.19	507.46	1,064.00	3.00	-3.00	0.00
4,900.00	8.39	151.51	4,652.80	-950.29	515.65	1,081.18	3.00	-3.00	0.00
5,000.00	5.39	151.51	4,752.06	-960.84	521.37	1,093.18	3.00	-3.00	0.00
5,100.00	2.39	151.51	4,851.82	-966.81	524.61	1,099.97	3.00	-3.00	0.00
5,179.78	0.00	0.00	4,931.58	-968.27	525.41	1,101.64	3.00	-3.00	0.00
5,200.00	0.00	0.00	4,951.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
5,300.00	0.00	0.00	5,051.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
5,400.00	0.00	0.00	5,151.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
5,500.00	0.00	0.00	5,251.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
5,600.00	0.00	0.00	5,351.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
5,700.00	0.00	0.00	5,451.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
5,800.00	0.00	0.00	5,551.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
5,900.00	0.00	0.00	5,651.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
6,000.00	0.00	0.00	5,751.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
6,100.00	0.00	0.00	5,851.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
6,200.00	0.00	0.00	5,951.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
6,300.00	0.00	0.00	6,051.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
6,400.00	0.00	0.00	6,151.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
6,500.00	0.00	0.00	6,251.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
6,600.00	0.00	0.00	6,351.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
6,700.00	0.00	0.00	6,451.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
6,800.00	0.00	0.00	6,551.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
6,900.00	0.00	0.00	6,651.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
7,000.00	0.00	0.00	6,751.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
7,100.00	0.00	0.00	6,851.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
7,200.00	0.00	0.00	6,951.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
7,300.00	0.00	0.00	7,051.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
7,400.00	0.00	0.00	7,151.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
7,500.00	0.00	0.00	7,251.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
7,597.20	0.00	0.00	7,349.00	-968.27	525.41	1,101.64	0.00	0.00	0.00
Mesaverde									
7,600.00	0.00	0.00	7,351.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
7,700.00	0.00	0.00	7,451.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
7,800.00	0.00	0.00	7,551.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
7,900.00	0.00	0.00	7,651.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
8,000.00	0.00	0.00	7,751.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
8,100.00	0.00	0.00	7,851.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
8,200.00	0.00	0.00	7,951.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
8,300.00	0.00	0.00	8,051.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
8,400.00	0.00	0.00	8,151.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
8,500.00	0.00	0.00	8,251.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
8,600.00	0.00	0.00	8,351.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
8,700.00	0.00	0.00	8,451.80	-968.27	525.41	1,101.64	0.00	0.00	0.00
8,748.20	0.00	0.00	8,500.00	-968.27	525.41	1,101.64	0.00	0.00	0.00



Scientific Drilling

Planning Report

Database: EDM 2003.16 Multi User DB
Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT NAD27
Site: NBU 1022-2A Pad
Well: NBU 1022-2A4S
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well NBU 1022-2A4S
TVD Reference: GL 4974' & RKB 18' @ 4992.00ft
MD Reference: GL 4974' & RKB 18' @ 4992.00ft
North Reference: True
Survey Calculation Method: Minimum Curvature

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
NBU 1022-2A4S PBHL - hit/miss target - Shape - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,500.00	-968.27	525.41	607,430.25	2,588,926.63	39° 58' 55.400 N	109° 23' 53.300 W

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)		
1,900.00	1,900.00	Surface Casing	9.625	13.500		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,087.00	1,087.00	Green River		0.00		
4,374.56	4,150.00	Wasatch		0.00		
7,597.20	7,349.00	Mesaverde		0.00		

Paleontological Reconnaissance Survey Report

**Survey of Kerr McGee's Proposed Twin Wells "NBU #922-32AT,
#922-32IT, #922-32MT, #922-32OIT, #922-35IT, #922-36NT"
(Sec. 32, 35 & 36, T 9 S, R 22 E) & "NBU #1022-2A2T &
#1022-2JIT" (Sec. 2, T 10 S, R 22 E)**

Archy Bench
Topographic Quadrangle
Uintah County, Utah

July 25, 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 twin wells "NBU #922-32AT, #922-32IT, #922-32MT, #922-32OIT, #922-35IT, #922-36NT" (Sec. 32, 35 & 36, T 9 S, R 22 E) & "NBU #1022-2A2T & #1022-2JIT" (Sec. 2, T 10 S, R 22 E) was conducted by Stephen D. Sandau Jason Klimek and Arica Scheetz on July 22 and 23, 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 twin wells "NBU #922-32AT, #922-32IT, #922-32MT, #922-32OIT, #922-35IT, #922-36NT" (Sec. 32, 35 & 36, T 9 S, R 22 E) & "NBU #1022-2A2T & #1022-2JIT" (Sec. 2, T 10 S, R 22 E) are on lands managed by the BLM and the State of Utah Trust Lands Administration (SITLA), in and slightly northeast of Sand Wash, south of Coyote Wash and on the East Bench, just 16 miles south and east of Ouray, Utah, and 12-16 miles west of Bonanza, Utah. 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 pipelines and access roads.

NBU #922-32AT

The proposed twin is located on the existing well "NBU #190" in the NE/NE quarter-quarter section of Sec. 32, T 9 S, R 22 E (Figure 1). The proposed twin is located on a colluvium-covered hill derived from underlying sandstones which outcrop along the perimeter. No fossils were found.

NBU #922-32IT

The proposed twin is located on the existing well "NBU #282" in the NE/SE quarter-quarter section of Sec. 32, T 9 S, R 22 E (Figure 1). The proposed twin is located on a colluvium-covered hill of inter-bedded brown/tan sandstones. No fossils were found.

NBU #922-32MT

The proposed twin is located on the existing well "NBU #281" in the SW/SW quarter-quarter section of Sec. 32, T 9 S, R 22 E (Figure 1). The proposed twin is located among hills of inter-bedded tan sandstones and variegated green siltstone.

No fossils were found.

NBU #922-32OIT

The proposed twin is located on the existing well "NBU #404" in the SW/SE quarter-quarter section of Sec. 32, T 9 S, R 22 E (Figure 1). The proposed twin is located among hills of inter-bedded gray sandstones and variegated mudstones. No fossils were found.

NBU #922-35IT

The proposed twin is located on the existing well "CIGE #118" in the NE/SE quarter-quarter section of Sec. 35, T 9 S, R 22 E (Figure 2). The proposed twin is located on colluvium-covered hills derived from underlying tan sandstones which outcrop along the perimeter. No fossils were found.

NBU #922-36NT

The proposed twin is located on a previously existing well "CIGE #147" in the SE/SW quarter-quarter section of Sec. 36, T 9 S, R 22 E (Figure 2). The proposed twin is located on colluvium-covered hills derived from underlying tan sandstones. No fossils were found.

NBU #1022-2JIT (multi-well also included: 2J2S, 2J3S & 2O2S)

The proposed twin is located on the existing well "CIGE #10" in the NW/SE quarter-quarter section of Sec. 2, T 10 S, R 22 E (Figure 2). The proposed twin is located on colluvium-covered hills derived from underlying tan sandstones. No fossils were found.

NBU #1022-2A2T (multi-well also included: 2B2S, 2A3S & 2A4S)

The proposed twin is located on the existing well "CIGE #67A" in the NE/NE quarter-quarter section of Sec. 2, T 10 S, R 22 E (Figure 2). The proposed twin is located on colluvium-covered hills derived from underlying tan sandstones. No fossils were found.

SURVEY RESULTS

PROJECT	GEOLOGY	PALEONTOLOGY
"NBU #922-32AT" (Sec. 32, T 9 S, R 22 E)	The proposed twin is located on a colluvium-covered hill derived from underlying sandstones which outcrop along the perimeter.	No fossils were found. Class 3a
"NBU #922-32IT" (Sec. 32, T 9 S, R 22 E)	The proposed twin is located on a colluvium-covered hill of inter-bedded brown/tan sandstones.	No fossils were found. Class 3a
"NBU #922-32MT" (Sec. 32, T 9 S, R 22 E)	The proposed twin is located among hills of inter-bedded tan sandstones and variegated green siltstone.	No fossils were found. Class 3a
"NBU #922-32OIT" (Sec. 32, T 9 S, R 22 E)	The proposed twin is located among hills of inter-bedded gray sandstones and variegated mudstones.	No fossils were found. Class 3a
"NBU #922-35IT" (Sec. 35, T 9 S, R 22 E)	The proposed twin is located on colluvium-covered hills derived from underlying tan sandstones which outcrop along the perimeter.	No fossils were found. Class 3a
"NBU #922-36NT" (Sec. 36, T 9 S, R 22 E)	The proposed twin is located on colluvium-covered hills derived from underlying tan sandstones.	No fossils were found. Class 3a
"NBU #1022-2A2T" (Sec. 2, T 10 S, R 22 E)	The proposed twin is located on colluvium-covered hills derived from underlying tan sandstones.	No fossils were found. Class 3a
"NBU #1022-2JIT" (Sec. 2, T 10 S, R 22 E)	The proposed twin is located on colluvium-covered hills derived from underlying tan sandstones.	No fossils were found. Class 3a

RECOMMENDATIONS

A reconnaissance survey was conducted for Kerr McGee's proposed twin wells "NBU #922-32AT, #922-32IT, #922-32MT, #922-32OIT, #922-35IT, #922-36NT" (Sec. 32, 35 & 36, T 9 S, R 22 E) & "NBU #1022-2A2T & #1022-2JIT" (Sec. 2, T 10 S, R 22 E). The twin wells 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.

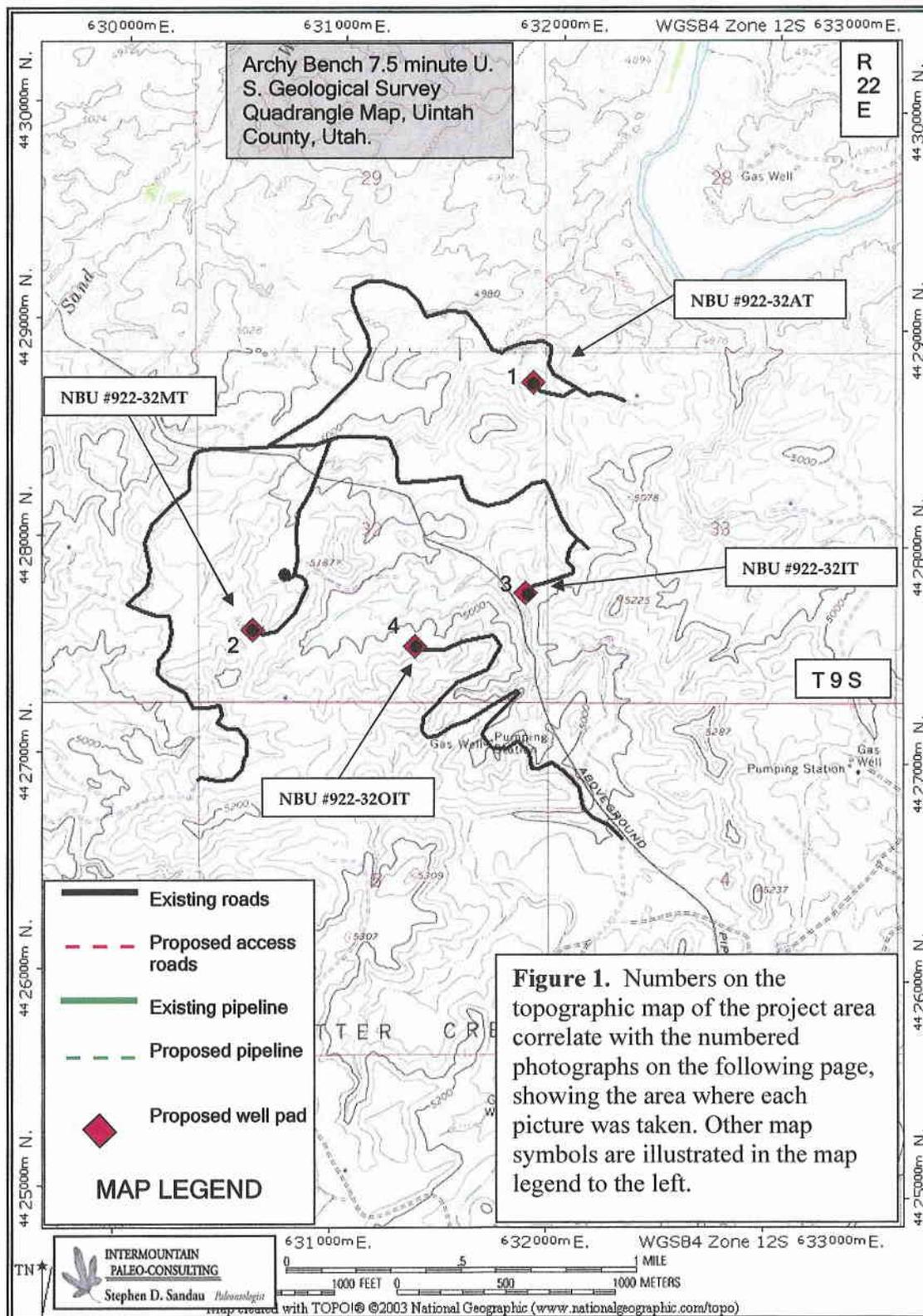


Figure 1. *continued . .*



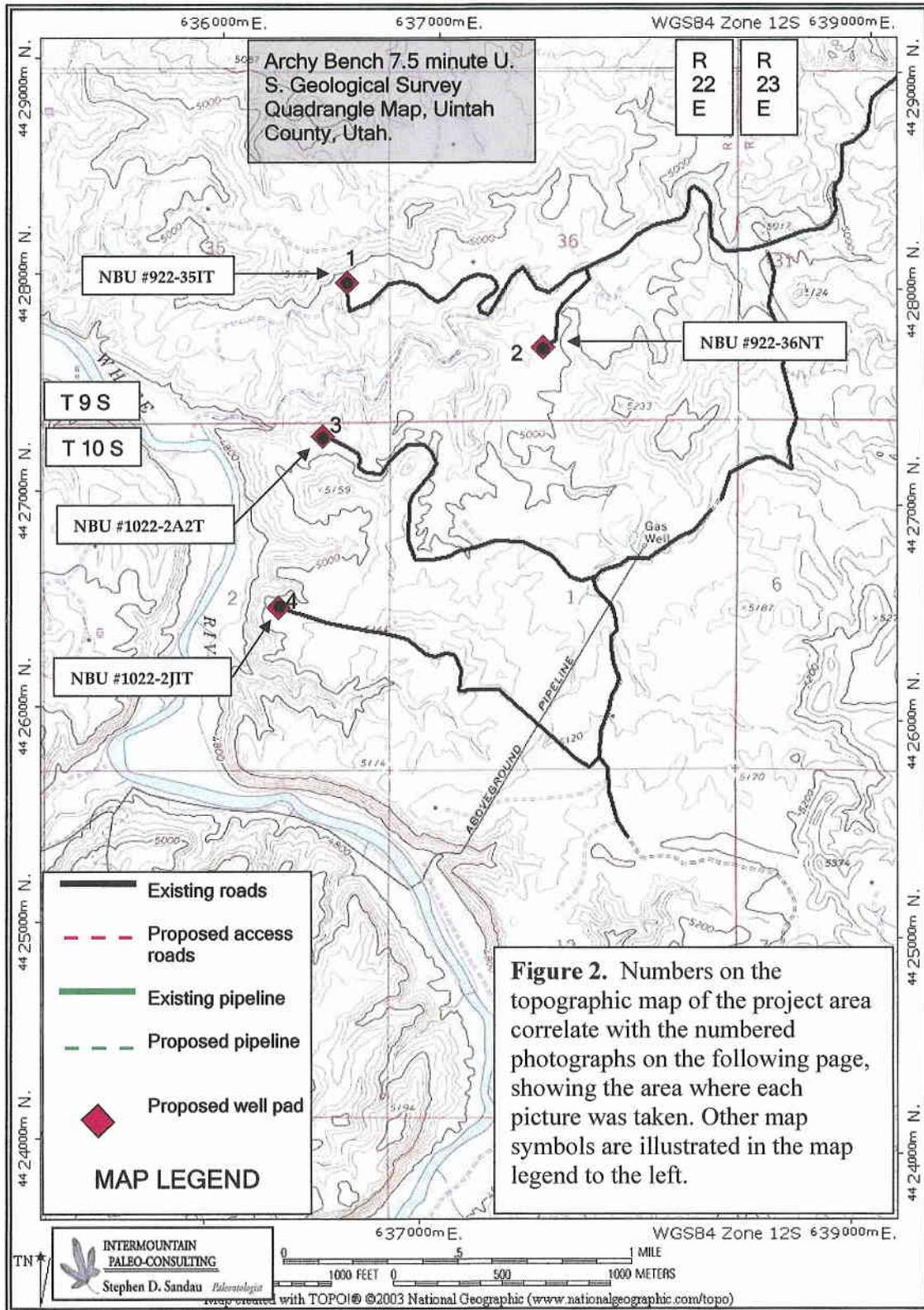
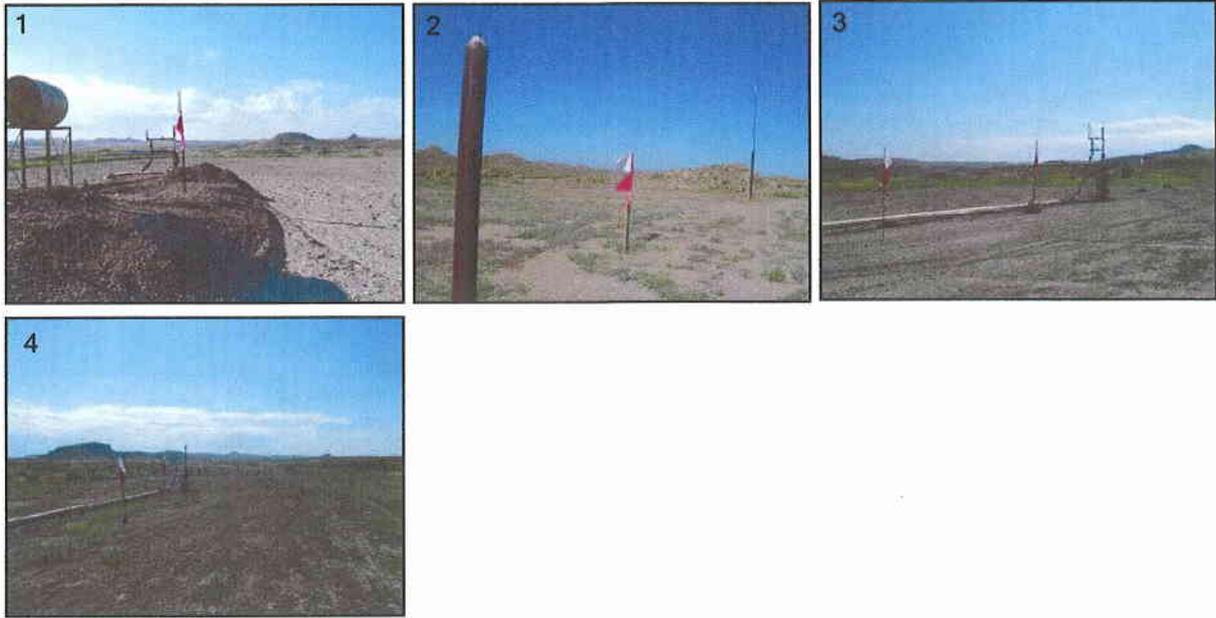


Figure 2. *continued...*



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**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.

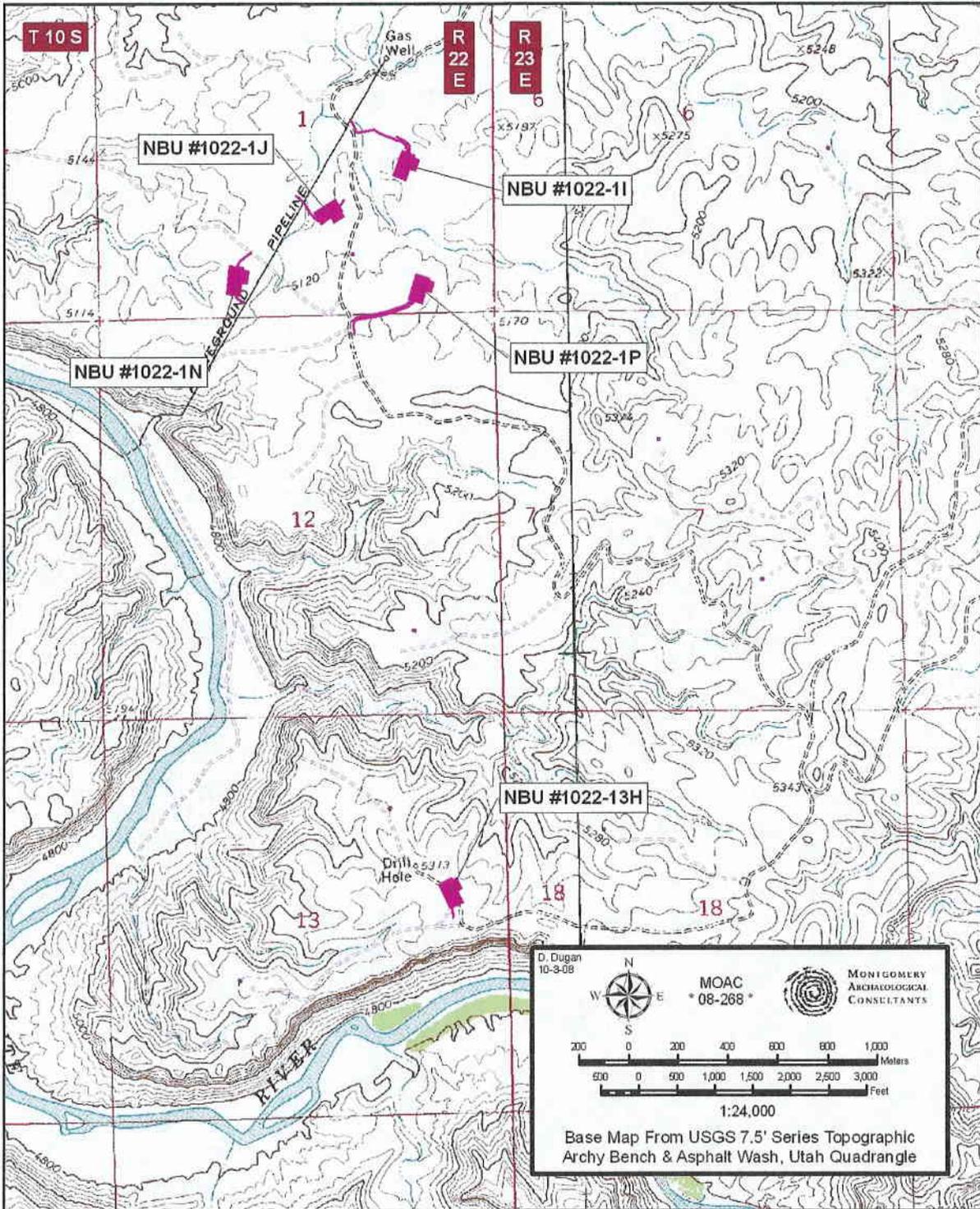
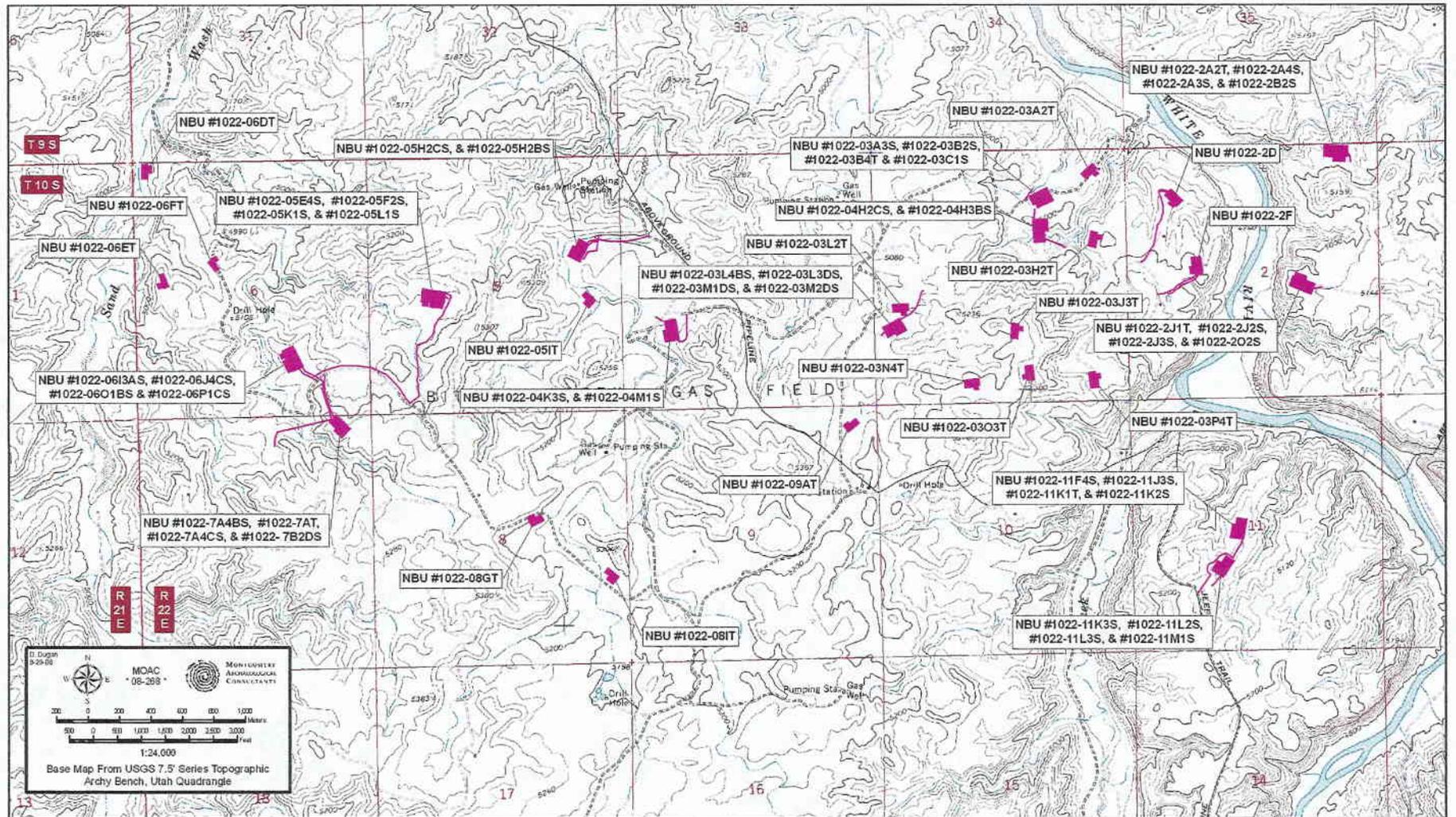


Figure 1. Location of Kerr-McGee Onshore's Well Pads in T10S, R22E.



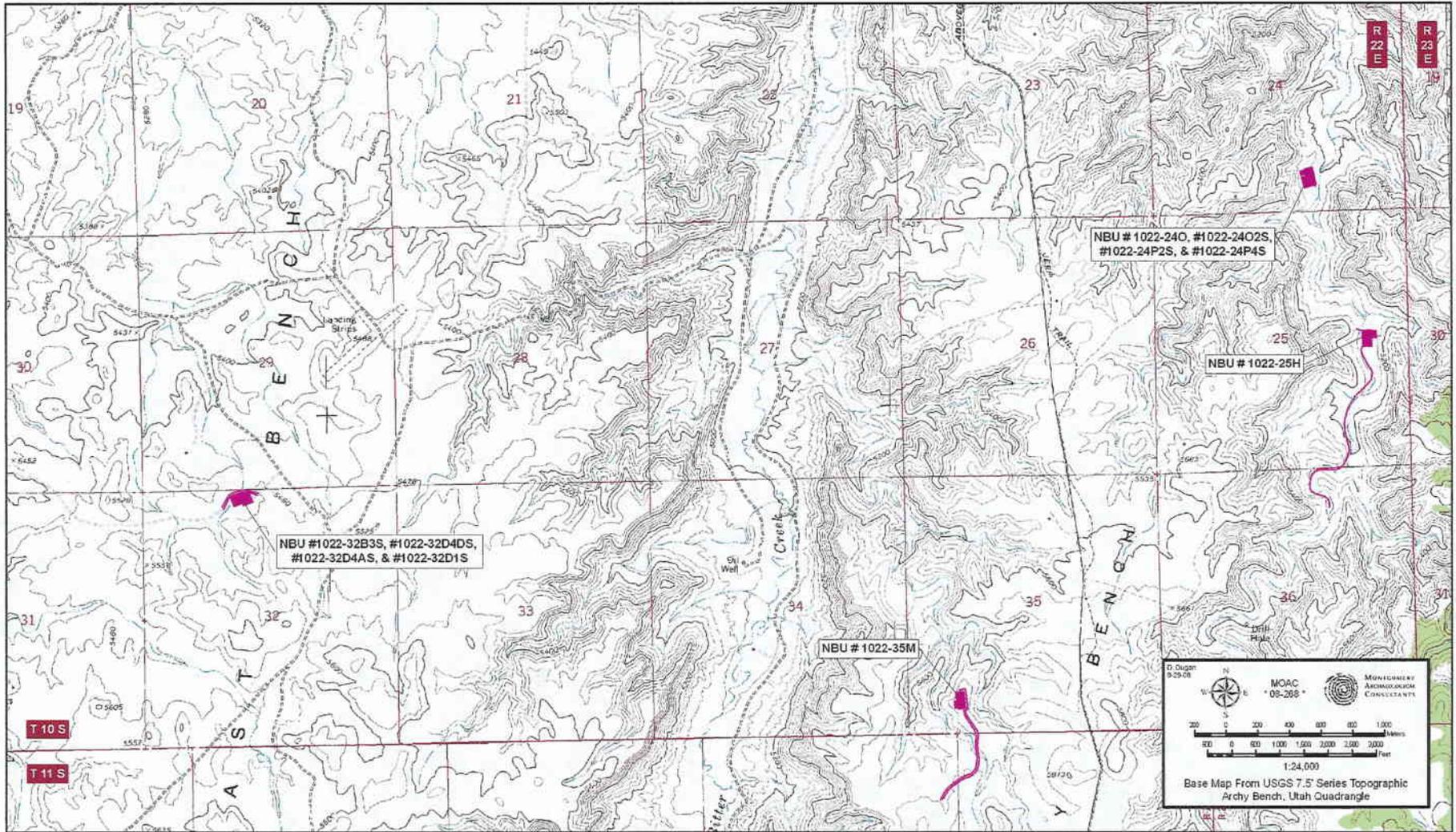


Table 1. Kerr-McGee Onshore's 73 NBU Well Locations.

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, 1022-2O2S	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.

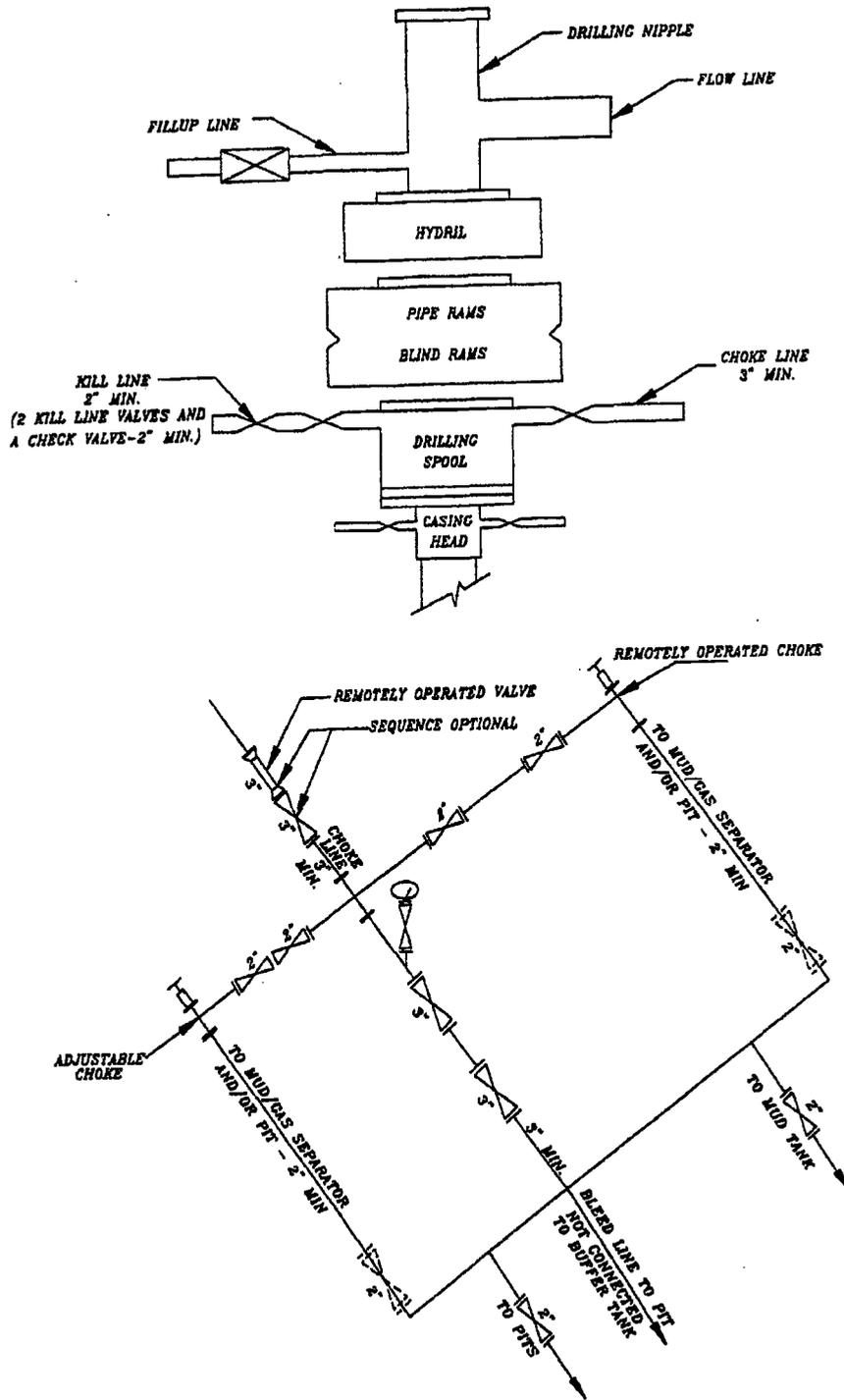
CLASS I RESULTS AND RECOMMENDATIONS

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.

EXHIBIT A



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

**WORKSHEET
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 12/01/2008

API NO. ASSIGNED: 43-047-40433

WELL NAME: NBU 1022-2A4S

OPERATOR: KERR-MCGEE OIL & GAS (N2995)

PHONE NUMBER: 720-929-6226

CONTACT: KEVIN MCINTYRE

PROPOSED LOCATION:

NENE 02 100S 220E
 SURFACE: 0207 FNL 0836 FEL
 BOTTOM: 1175 FNL 0315 FEL
 COUNTY: UINTAH
 LATITUDE: 39.98466 LONGITUDE: -109.4000
 UTM SURF EASTINGS: 636610 NORTHINGS: 4427070
 FIELD NAME: NATURAL BUTTES (630)

INSPECT LOCATN BY: / /		
Tech Review	Initials	Date
Engineering	DKEO	2/2/09
Geology		
Surface		

LEASE TYPE: 3 - State
 LEASE NUMBER: ST ML 22651
 SURFACE OWNER: 3 - State

PROPOSED FORMATION: WSMVD
 COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

- Plat
- Bond: Fed[] Ind[] Sta[] Fee[]
(No. 22013542)
- Potash (Y/N)
- Oil Shale 190-5 (B) or 190-3 or 190-13
- Water Permit
(No. 43-8496)
- RDCC Review (Y/N)
(Date: _____)
- Fee Surf Agreement (Y/N)
- Intent to Commingle (Y/N)

LOCATION AND SITING:

- R649-2-3.
- Unit: NATURAL BUTTES
- R649-3-2. General
Siting: 460 From Qtr/Qtr & 920' Between Wells
- R649-3-3. Exception
- Drilling Unit
Board Cause No: 17314
Eff Date: 12-2-1999
Siting: 460' by 1100' by 1100' by 1100' Trust
- R649-3-11. Directional Drill

COMMENTS:

Needs Permit (11-18-08)

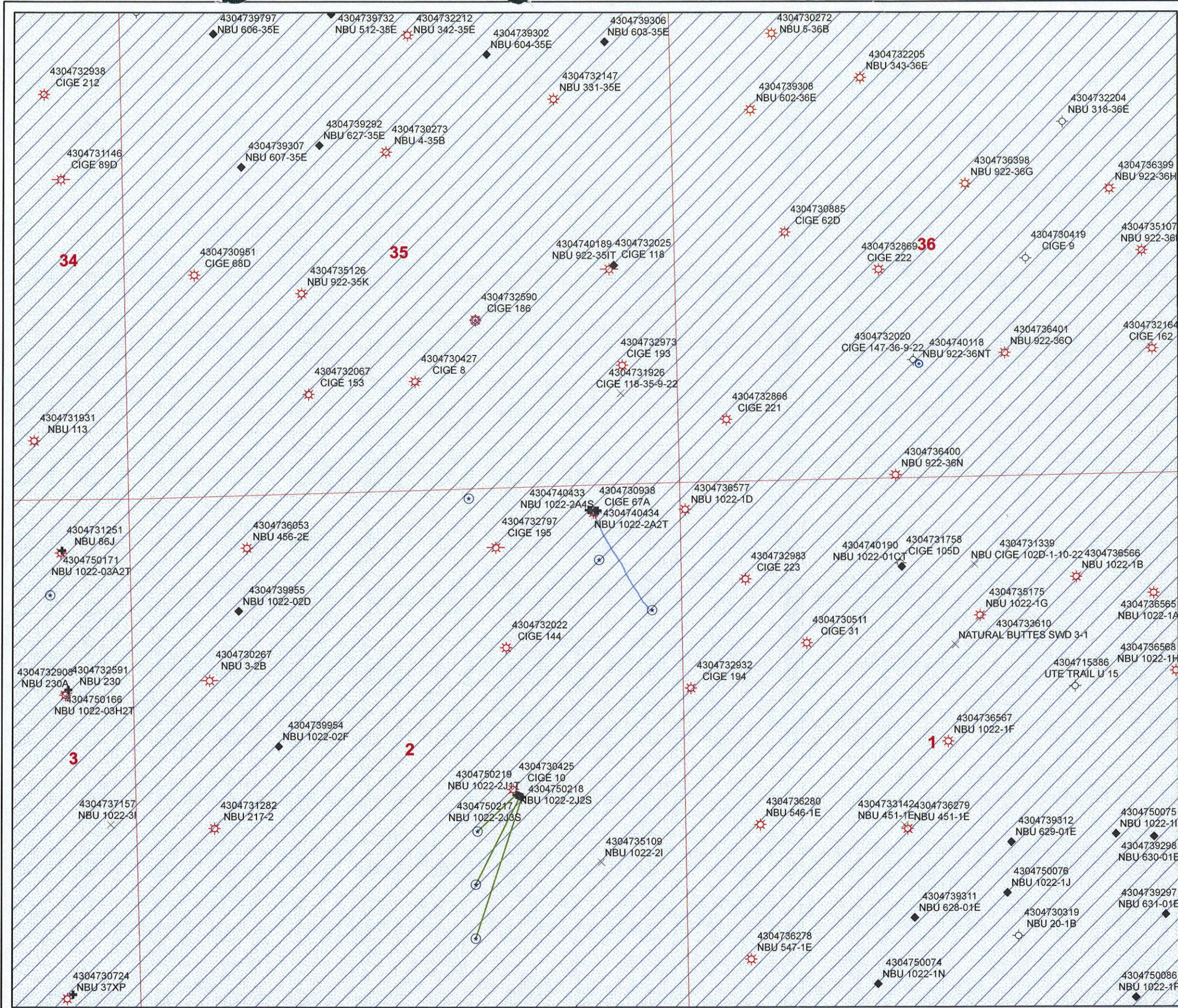
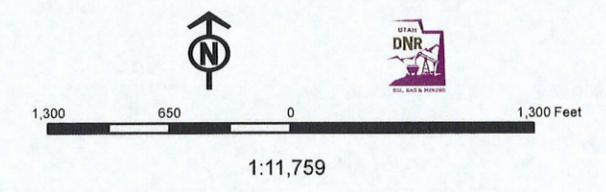
STIPULATIONS:

- 1- STATEMENT OF BASIS
- 2- OIL SHALE
- 3- Surf. Sta p

API Number: 4304740433
Well Name: NBU 1022-2A4S
Township 10.0 S Range 22.0 E Section 02
Meridian: SLBM
 Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
 Map Produced by Diana Mason

- | | |
|---------------|---------------------------|
| Units | Wells Query Events |
| STATUS | <call other values> |
| ACTIVE | GIS_STAT_TYPE |
| EXPLORATORY | <Null> |
| GAS STORAGE | APD |
| NF PP OIL | DRL |
| NF SECONDARY | GI |
| PI OIL | GS |
| PP GAS | LA |
| PP GEOTHERMAL | NEW |
| PP OIL | OPS |
| SECONDARY | PA |
| TERMINATED | PGW |
| Fields | POW |
| STATUS | RET |
| ACTIVE | SGW |
| COMBINED | SOW |
| Sections | TA |
| | TW |
| | WD |
| | WI |
| | WS |



Application for Permit to Drill

Statement of Basis

1/22/2009

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Ownr	CBM
1223	43-047-40433-00-00		GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L P		Surface Owner-APD		
Well Name	NBU 1022-2A4S	Unit	NATURAL BUTTES		
Field	NATURAL BUTTES		Type of Work		
Location	NENE 2 10S 22E S 207 FNL 836 FEL		GPS Coord (UTM) 636610E 4427070N		

Geologic Statement of Basis

Kerr McGee proposes to set 1,900' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 3,500'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 2. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Production casing cement should be brought to above the base of the moderately saline groundwater in order to isolate it from fresher waters uphole.

Brad Hill
APD Evaluator

1/13/2009
Date / Time

Surface Statement of Basis

The general area is in the southeast end of the Natural Buttes Unit, which contains the White River and short 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 1/4 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 43 air miles to the northwest. Access from Ouray, Utah is approximately 24.7 road miles following Utah State, Uintah County and oilfield development roads to the location.

The proposed pad encompasses a pad of the CIGE 67D gas well that will be significantly enlarged on three sides. The site begins at the edge of a steep north slope that leads away from a high knoll or ridge to the south. The slope continues to the north beyond the location toward a deep draw which runs to the west joining a major wash which meets the White River. The White River is about 1 mile south of the location. A drainage on the east side of the pad shows light flows which have either continued down the shallow bottom or onto the edge of the existing pad. This drainage needs to be diverted along the east side of the new pad or accept occasional light flows onto the pad. No other drainage concerns exist. The existing pad shows no stability problems and the site has no apparent concerns for constructing an enlarged pad, drilling and operating the planned wells and is the best location in the immediate area. A new Figure #1 (cut-sheet) was prepared following the pre-site visit. It lowered the surface of the existing pad approximately 2.7 feet to obtain fill material for the enlarged pad.

Both the surface and minerals are owned by SITLA. Jim Davis of SITLA reviewed the site and had no concerns regarding the proposal.

Pat Rambolt of the Utah Division of Wildlife Resources also attended the pre-site. Mr. Rambolt stated no wildlife values would be significantly affected by drilling and operating the wells at this location. He provided Jim Davis of SITLA and Ramie Hoopes of Kerr McGee a written wildlife evaluation and a copy of a recommended seed mix to be used for re-vegetating the disturbed area.

Floyd Bartlett
Onsite Evaluator

11/18/2008
Date / Time

Application for Permit to Drill

Statement of Basis

1/22/2009

Utah Division of Oil, Gas and Mining

Page 2

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A double synthetic liner each with a minimum thickness of 20 mils and an appropriate thickness of felt sub-liner to cushion the liners shall be properly installed and maintained in the reserve pit.
Surface	Drainages adjacent to the proposed pad shall be diverted around the location.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.
Well Name NBU 1022-2A4S
API Number 43-047-40433-0 **APD No** 1223 **Field/Unit** NATURAL BUTTES
Location: 1/4,1/4 NENE **Sec** 2 **Tw** 10S **Rng** 22E 207 FNL 836 FEL
GPS Coord (UTM) 636608 4427070 **Surface Owner**

Participants

Floyd Bartlett (DOGM), Jim Davis (SITLA), Ramie Hoopes, Griz Oleen and Tony Kzneck (Kerr McGee), Pat Rainbolt (UDWR) and David Kay (Uintah Engineering and Land Surveying).

Regional/Local Setting & Topography

The general area is in the southeast end of the Natural Buttes Unit, which contains the White River and short 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 43 air miles to the northwest. Access from Ouray, Utah is approximately 24.7 road miles following Utah State, Uintah County and oilfield development roads to the location.

The proposed pad encompasses a pad of the CIGE 67D gas well that will be significantly enlarged on three sides. The site begins at the edge of a steep north slope that leads away from a high knoll or ridge to the south. The slope continues to the north beyond the location toward a deep draw which runs to the west joining a major wash which meets the White River. The White River is about 1 mile south of the location. A drainage on the east side of the pad shows light flows which have either continued down the shallow bottom or onto the edge of the existing pad. This drainage needs to be diverted along the east side of the new pad or accept occasional light flows onto the pad. No other drainage concerns exist. The existing pad shows no stability problems and the site has no apparent concerns for constructing an enlarged pad, drilling and operating the planned wells and is the best location in the immediate area. A new Figure #1 (cut-sheet) was prepared following the pre-site visit. It lowered the surface of the existing pad approximately 2.7 feet to obtain fill material for the enlarged pad.

Both the surface and minerals are owned by SITLA. Jim Davis of SITLA reviewed the site and had no concerns regarding the proposal.

Surface Use Plan

Current Surface Use

Wildlife Habitat
Existing Well Pad

New Road

Miles	Well Pad	Src Const Material	Surface Formation
0	Width 335 Length 420	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetland N

Flora / Fauna

Poorly vegetated with greasewood, cheatgrass, black sagebrush, broom snakeweed, shadscale, rabbitbrush, pepper weed, halogeton and annuals.

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

Shallow rocky sandy loam.

Soil Type and Characteristics

Shallow rocky sandy loam.

Erosion Issues N

Sedimentation Issues Y

A drainage needs to be diverted along the east side of the new pad or accept occasional light flows onto the pad.

Site Stability Issues N

Drainage Diversion Required Y

Berm Required? N

Erosion Sedimentation Control Required? Y

A drainage on the east side of the pad shows light flows which have either continued down the shallow bottom or onto the edge of the existing pad.

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

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)	<300	20
Native Soil Type	Mod permeability	10
Fluid Type	Fresh Water	5
Drill Cuttings	Normal Rock	0
Annual Precipitation (inches)	<10	0
Affected Populations	<10	0
Presence Nearby Utility Conduits	Not Present	0

Final Score 35 1 **Sensitivity Level**

Characteristics / Requirements

The reserve pit is planned in an area of cut in the southeast corner of the location. Dimensions are 100' x 250' x 10' deep with 2' of freeboard. 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 double 20-mil.liner and an appropriate thickness of felt sub-liner to cushion the rock.

Closed Loop Mud Required? N **Liner Required?** Y **Liner Thickness** 40 **Pit Underlayment Required?** Y

Other Observations / Comments

Floyd Bartlett
Evaluator

11/18/2008
Date / Time

Casing Schematic

Surface

127
157

Uenta

9-5/8"
MW 8.4
Frac 19.3

TOC @
0.

TOC @
403.

to surf w/8% w/o, tail 1427
* St. p ✓

1087' Green River

1346' Bird's Nest

1532' tail

1859' Mahogany

Surface
1900. MD
1900. TVD

✓ Stip surf cont.

~~3500' TBMSW~~
~~3530' tail~~

4150 Wasatch ✓

6451 Mesaverde

7349' MV U2

7932' MV L1

4-1/2"
MW 12.

Production
8748. MD
8500. TVD

Well name:

43047404330000 NBU 1022-2A4S

Operator: Kerr McGee Oil & Gas Onshore L.P.

String type: Surface

Project ID:

43-047-40433-0000

Location: Uintah County, Utah

Design parameters:

Collapse

Mud weight: 8.400 ppg
Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 102 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,300 ft

Cement top: 403 ft

Burst

Max anticipated surface pressure: 1,672 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 1,900 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: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 1,664 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 8,500 ft
Next mud weight: 12.000 ppg
Next setting BHP: 5,299 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 1,900 ft
Injection pressure: 1,900 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)	Internal Capacity (ft³)
1	1900	9.625	36.00	J-55	LT&C	1900	1900	8.796	824.7
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	829	2020	2.437	1900	3520	1.85	60	453	7.56 J

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

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

Date: January 26, 2009
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 1900 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

Well name:	43047404330000 NBU 1022-2A4S		
Operator:	Kerr McGee Oil & Gas Onshore L.P.		
String type:	Production	Project ID:	43-047-40433-0000
Location:	Uintah County, Utah		

Design parameters:

Collapse

Mud weight: 12.000 ppg
 Internal fluid density: 2.300 ppg

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: 1,500 ft

Cement top: Surface

Burst

Max anticipated surface pressure: 3,429 psi
 Internal gradient: 0.220 psi/ft
 Calculated BHP 5,299 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: 1.50 (B)

Directional well information:

Kick-off point 2100 ft
 Departure at shoe: 1102 ft
 Maximum dogleg: 3 °/100ft
 Inclination at shoe: 0 °

Tension is based on buoyed weight.
 Neutral point: 7,223 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)	Internal Capacity (ft³)
1	8748	4.5	11.60	I-80	LT&C	8500	8748	3.875	763.4
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	4283	6360	1.485	5299	7780	1.47	81	212	2.62 J

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

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

Date: January 28, 2009
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 8500 ft, a mud weight of 12 ppg. An internal gradient of .119 psi/ft was used for collapse from TD to TD. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

BOPE REVIEW

Kerr-McGee NBU 1022-2A4S

API 43-047-40433-0000

INPUT

Well Name	Kerr-McGee NBU 1022-2A4S API 43-047-40433-0000		
	String 1	String 2	
Casing Size (")	9 5/8	4 1/2	
Setting Depth (TVD)	1900	8500	
Previous Shoe Setting Depth (TVD)	40	1900	
Max Mud Weight (ppg)	8.4	12	✓
BOPE Proposed (psi)	500	5000	
Casing Internal Yield (psi)	3520	7780	
Operators Max Anticipated Pressure (psi)	5270	11.9 ppg	✓

Calculations	String 1	9 5/8 "	
Max BHP [psi]	.052*Setting Depth*MW =	830	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) [psi]	Max BHP-(0.12*Setting Depth) =	602	NO <i>air</i> Air Drill to surface shoe with diverter
MASP (Gas/Mud) [psi]	Max BHP-(0.22*Setting Depth) =	412	YES
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth) =	421	NO <i>Reasonable depth margin</i>
Required Casing/BOPE Test Pressure		1900 psi	
*Max Pressure Allowed @ Previous Casing Shoe =		40 psi	*Assumes 1psi/ft frac gradient

Calculations	String 2	4 1/2 "	
Max BHP [psi]	.052*Setting Depth*MW =	5304	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) [psi]	Max BHP-(0.12*Setting Depth) =	4284	YES ✓
MASP (Gas/Mud) [psi]	Max BHP-(0.22*Setting Depth) =	3434	YES
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth) =	3852	NO <i>Reasonable</i>
Required Casing/BOPE Test Pressure		5000 psi	
*Max Pressure Allowed @ Previous Casing Shoe =		1900 psi	*Assumes 1psi/ft frac gradient

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)

December 5, 2008

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2008 Plan of Development Natural Buttes Unit Uintah County, Utah.

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

API #	WELL NAME	LOCATION
(Proposed PZ Wasatch/MesaVerde)		
43-047-40444	NBU 921-10G4S	Sec 10 T09S R21E 1937 FNL 1931 FWL
	BHL	Sec 10 T09S R21E 2158 FNL 1441 FEL
43-047-40445	NBU 921-10F2S	Sec 10 T09S R21E 1877 FNL 1927 FWL
	BHL	Sec 10 T09S R21E 1373 FNL 1959 FEL
43-047-40446	NBU 921-10E3S	Sec 10 T09S R21E 1917 FNL 1929 FWL
	BHL	Sec 10 T09S R21E 2080 FNL 0406 FWL
43-047-40447	NBU 921-10F3T	Sec 10 T09S R21E 1897 FNL 1928 FWL
43-047-40448	NBU 922-29D1T	Sec 29 T09S R22E 0571 FNL 1009 FWL
43-047-40423	NBU 921-10CT	Sec 10 T09S R21E 0811 FNL 1792 FWL
43-047-40428	NBU 921-13CT	Sec 13 T09S R21E 0655 FNL 1920 FWL
43-047-40435	NBU 1022-3B4T	Sec 03 T10S R22E 1022 FNL 1751 FEL
43-047-40434	NBU 1022-2A2T	Sec 02 T10S R22E 0203 FNL 0896 FEL
43-047-40424	NBU 921-10G2S	Sec 10 T09S R21E 0835 FNL 1824 FWL
	BHL	Sec 10 T09S R21E 1340 FNL 2462 FEL
43-047-40425	NBU 921-10D2S	Sec 10 T09S R21E 0799 FNL 1776 FWL

BHL Sec 10 T09S R21E 0543 FNL 0648 FWL

Page 2

43-047-40426 NBU 921-10B4S Sec 10 T09S R21E 0823 FNL 1808 FWL
BHL Sec 10 T09S R21E 0705 FNL 1929 FEL

43-047-40427 NBU 921-13G2S Sec 13 T09S R21E 0655 FNL 1940 FWL
BHL Sec 13 T09S R21E 1372 FNL 2523 FEL

43-047-40429 NBU 921-13B2S Sec 13 T09S R21E 0655 FNL 1960 FWL
BHL Sec 13 T09S R21E 0488 FNL 2541 FEL

43-047-40430 NBU 921-13D4S Sec 13 T09S R21E 0655 FNL 1900 FWL
BHL Sec 13 T09S R21E 0682 FNL 0912 FWL

43-047-40431 NBU 1022-2B2S Sec 02 T10S R22E 0202 FNL 0916 FEL
BHL Sec 02 T10S R22E 0065 FNL 2075 FEL

43-047-40432 NBU 1022-2A3S Sec 02 T10S R22E 0206 FNL 0857 FEL
BHL Sec 02 T10S R22E 0680 FNL 0820 FEL

43-047-40433 NBU 1022-2A4S Sec 02 T10S R22E 0207 FNL 0836 FEL
BHL Sec 02 T10S R22E 1175 FNL 0315 FEL

43-047-40436 NBU 1022-3A3S Sec 03 T10S R22E 1013 FNL 1734 FEL
BHL Sec 03 T10S R22E 0904 FNL 0822 FEL

43-047-40437 NBU 1022-3C1S Sec 03 T10S R22E 1040 FNL 1787 FEL
BHL Sec 03 T10S R22E 0380 FNL 2354 FWL

43-047-40438 NBU 1022-3B2S Sec 03 T10S R22E 1031 FNL 1769 FEL
BHL Sec 03 T10S R22E 0048 FNL 2516 FEL

43-047-40439 NBU 1022-24O2S Sec 24 T10S R22E 0684 FSL 2016 FEL
BHL Sec 24 T10S R22E 0830 FSL 0690 FEL

43-047-40440 NBU 1022-24P4S Sec 24 T10S R22E 0625 FSL 2002 FEL
BHL Sec 24 T10S R22E 0400 FSL 0635 FEL

43-047-40441 NBU 1022-25G2S Sec 25 T10S R22E 1768 FNL 1502 FEL
BHL Sec 25 T10S R22E 1900 FNL 2025 FEL

43-047-40442 NBU 1022-25G4S Sec 25 T10S R22E 1758 FNL 1443 FEL
BHL Sec 25 T10S R22E 2615 FNL 1955 FEL

43-047-40443 NBU 1022-25G3S Sec 25 T10S R22E 1765 FNL 1482 FEL
BHL Sec 25 T10S R22E 2250 FNL 2065 FEL

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

/s/ Michael L. Coulthard

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

MCoulthard:mc:12-5-08

From: Jim Davis
To: Bonner, Ed; Mason, Diana
Date: 12/30/2008 1:00 PM
Subject: SITLA well approvals (4 KMG, 2 Newfield)

CC: Garrison, LaVonne

The following wells have been approved by SITLA including arch and paleo clearance.

4304740431	NBU 1022-2B2S	Kerr-McGee Oil & Gas	Natural Buttes
4304740432	NBU 1022-2A3S	Kerr-McGee Oil & Gas	Natural Buttes
4304740433	NBU 1022-2A4S	Kerr-McGee Oil & Gas	Natural Buttes
4304740434	NBU 1022-2A2T	Kerr-McGee Oil & Gas	Natural Buttes
4304740420	STATE 1-36-6-20	Newfield Production Co.	Undesignated
4301334146	W DRAW ST N-32-8-16	Newfield Production Co.	Monument Butte

-Jim

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



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

February 2, 2009

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

Re: NBU 1022-2A4S Well, 207' FNL, 836' FEL, NE NE, Sec. 2, T. 10 South, R. 22 East,
Bottom Location 1175' FNL, 315' FEL, NE NE, Sec. 2, T. 10 South, R. 22 East,
Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

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. The API identification number assigned to this well is 43-047-40433.

Sincerely,

Gil Hunt
Associate Director

pab
Enclosures

cc: Uintah County Assessor
SITLA
Bureau of Land Management, Vernal Office



Operator: Kerr-McGee Oil & Gas Onshore, LP
Well Name & Number NBU 1022-2A4S
API Number: 43-047-40433
Lease: ST ML 22651

Location: NE NE **Sec. 2** **T. 10 South** **R. 22 East**
Bottom Location: NE NE **Sec. 2** **T. 10 South** **R. 22 East**

Conditions of Approval

1. 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.

2. 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

3. 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.

4. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.
5. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)
6. In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.
7. In accordance with Order in Cause No. 190-5(b) dated October 28, 1982, the Operator shall comply with requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operator shall ensure that the surface and/or production casing is properly cemented over the entire oil shale interval as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the Division.
8. Surface casing shall be cemented to the surface.

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: Kerr-McGee Oil & Gas Onshore, LP

Well Name: NBU 1022-2A4S

API No: 43-047-40433 Lease Type: State

Section 02 Township 10S Range 22E County Uintah

Drilling Contractor Pete Martin Drilling Rig # Bucket

SPUDDED:

Date 04/10/09

Time 08:00 AM

How Dry

Drilling will Commence: _____

Reported by Lew Weldon

Telephone # 435-781-7060

Date 04/14/2009 Signed RM

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

FORM 6

ENTITY ACTION FORM

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

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304740432	NBU 1022-2A3S		NENE	2	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
<u>B</u>	99999	<u>2900</u>	4/10/2009		<u>4/16/09</u>		
Comments: MIRU PETE MARTIN BUCKET RIG <u>WSMVD</u> SPUD WELL LOCATION ON 04/10/2009 AT 1400 HRS <u>BHL = NENE</u>							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304740433	NBU 1022-2A4S		NENE	2	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
<u>B</u>	99999	<u>2900</u>	4/10/2009		<u>4/16/09</u>		
Comments: MIRU PETE MARTIN BUCKET RIG <u>WSMVD</u> SPUD WELL LOCATION ON 04/10/2009 AT 0800 HRS. <u>BHL = NENE</u>							

Well 3

047-40431

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304740431	NBU 1022-2B2S		NENE	2	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
<u>B</u>	99999	<u>2900</u>	4/10/2009		<u>4/16/09</u>		
Comments: MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 04/10/2009 AT 1200 HRS <u>BHL = NENE</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)

SHEILA UPCHEGO

Name (Please Print)

Signature

REGULATORY ANALYST

Title

4/14/2009

Date

RECEIVED

APR 14 2009

DIV. OF OIL, GAS & MINING

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

FORM 9

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

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

7. UNIT or CA AGREEMENT NAME:
UNIT #891008900A

1. TYPE OF WELL OIL WELL GAS WELL OTHER _____

8. WELL NAME and NUMBER:
NBU 1022-2A4S

2. NAME OF OPERATOR:
KERR MCGEE OIL & GAS ONSHORE LP

9. API NUMBER:
4304740433

3. ADDRESS OF OPERATOR:
1368 SOUTH 1200 EAST CITY VERNAL STATE UT ZIP 84078

PHONE NUMBER:
(435) 781-7024

10. FIELD AND POOL, OR WILDCAT:
NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: **207'FNL, 836'FEL**

COUNTY: **UINTAH**

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: **NENE 2 10S 22E**

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 (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>SET SURFACE CSG</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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

MIRU PROPETRO AIR RIG ON 04/11/2009. DRILLED 12 1/4" SURFACE HOLE TO 2340'. RAN 9 5/8" 36# J-55 SURFACE CSG. CMT W/350 SX PREM CLASS G @15.8 PPG 1.15 YIELD. NO RETURNS THROUGH OUT JOB 200 PSI LIFT LAND PLUG W/1000 PSI FLOATS DID NOT HOLD. TOP OUT W/100 SX PREM CLASS G @15.8 PPG 1.15 YIELD DOWN BACKSIDE. 2ND TOP OUT W/100 SX PREM CLASS G @15.8 PPG 1.15 YIELD. 3RD TOP OUT W/125 SX PREM CLASS G @15.8 PPG 1.15 YIELD. 4TH TOP OUT W/225 SX PREM CLASS G @15.8 PPG 1.15 YIELDL DOWN BACKSIDE GOOD CMT TO SURFACE HOLE STAYED FULL.

WORT

NAME (PLEASE PRINT) **SHEILA UPCHEGO**

TITLE **REGULATORY ANALYST**

SIGNATURE _____

DATE **4/20/2009**

(This space for State use only)

RECEIVED

APR 21 2009

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

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.
Use APPLICATION FOR PERMIT -- for such proposals

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

NOTICE OF INTENT (Submit in Duplicate)
Abandonment
Casing Repair
Change of Plans
Conversion to Injection
Fracture Treat
Multiple Completion
Other
New Construction
Pull or Alter Casing (checked)
Recompletion
Shoot or Acidize
Vent or Flare
Water Shut-Off

SUBSEQUENT REPORT (Submit Original Form Only)
Abandonment *
Casing Repair
Change of Plans
Conversion to Injection
Fracture Treat
Other
New Construction
Pull or Alter Casing
Shoot or Acidize
Vent or Flare
Water Shut-Off

Approximate Date Work Will Start

Date of Work Completion

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form.
* Must be accompanied by a cement verification report.

13. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

An APD for this location was submitted to UDOGM and was given the API number 43-047-48433. The APD was approved by UDOGM on February 2, 2009. Kerr-McGee Oil & Gas Onshore, LP (Kerr-McGee) requests to change the surface casing for this well due to revised drilling practices.

The surface casing is changing
From: 1,900'
To: 2,050'

COPY SENT TO OPERATOR

Date: 5.19.2009
Initials: KS

Please see the attached drilling diagram for additional details. All other information remains the same.

Please contact the undersigned if you have any questions and/or comments. Thank you.

14. I hereby certify that the foregoing is true and correct.
Name & Signature Danielle Piernot Title Regulatory Analyst Date 04/13/09

(State Use Only)

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING

RECEIVED APR 15 2009

DATE: 5/18/09 See Instructions on Reverse Side
BY: [Signature]



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'						
SURFACE	9-5/8"	0 to 2,150	36.00	J-55	LTC	3520	2020	453000
						7,780	6,350	201,000
PRODUCTION	4-1/2"	0 to 8,748	11.60	I-80	LTC	2.32	1.20	2.27

- 1) Max Anticipated Surf. Press. (MASP) (Surface Casing) = (Pore Pressure at next csg point - (0.22 psi/ft - partial evac gradient x TVD of next csg point))
- 2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft - partial evac gradient x TD)
 (Burst Assumptions: TD = 11.6 ppg) 0.22 psi/ft = gradient for partially evac wellbore
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing * Buoy. Fact. of water)
MASP 3,198 psi
- 3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
 (Burst Assumptions: TD = 11.6 ppg) 0.59 psi/ft = bottomhole gradient
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing * Buoy. Fact. of water)
MABHP 5,178 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE Option 1	LEAD	500	Premium cmt + 2% CaCl + 0.25 pps flocele	215	60%	15.60	1.18
	TOP OUT CMT (1)	200	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	50		15.60	1.18
	TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
SURFACE Option 2	NOTE: If well will circulate water to surface, option 2 will be utilized						
	LEAD	1500	65/35 Poz + 6% Gel + 10 pps gilsonite + 25 pps Flocele + 3% salt BWOW	360	35%	12.60	1.81
	TAIL	500	Premium cmt + 2% CaCl + 0.25 pps flocele	180	35%	15.60	1.18
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	3,648'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	350	40%	11.00	3.38
	TAIL	5,100'	50/50 Poz/G + 10% salt + 2% gel + 1% R-3	1250	40%	14.30	1.31

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained
 *Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

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

ADDITIONAL INFORMATION

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

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

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

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

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

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ST ML 22651
---	--

SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
--	--

1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 1022-2A4S
------------------------------------	--

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047404330000
---	---

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

4. LOCATION OF WELL FOOTAGES AT SURFACE: 0207 FNL 0836 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 02 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: 6/23/2009	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: _____

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

FINISHED DRILLING FROM 2340' TO 8630' ON 06/21/2009. RAN 4 1/2" 11.6# I-80 PRODUCTION CSG. LEAD CMT W/651 SX PREM LITE II @12.8 PP 1.85 YIELD. TAILED CMT W/1221 SX 50/50 POZ @14.3# 1.31 YIELD. DISPLACE W/132 BBLS WATER BUMPED PLUG FLOATS HELD RETURNED 101 BBLS CMT TO SURFACE. FLUSH PMP LINE FLUSH STACK IN IT AND ALLOWED CMT TO FLOW TO GASBUSTER ON DISPLACEMENT. NIPPLE DOWN BOP FOR CSG SLIPS SHORT CLEARANCE BELOW RIG FLOOR TO RAISE BOP ENOUGH TO SET SLIPS HAT TO JACK RIG UP 5 INCHES TO GAIN CLEARANCE TO SET SLIPS & CUT OFF CSG CLEAN PITS. RELEASED ENSIGN RIG 145 ON 06/23/2009 AT 1300 HRS.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 June 24, 2009

NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUMBER 435 781-7024	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 6/24/2009	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ST ML 22651
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 1022-2A4S
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047404330000
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: 0207 FNL 0836 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 02 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: 10/6/2009	<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: _____

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

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 10/06/2009 AT 12:00 P.M. PLEASE REFER TO THE ATTACHED CHRONOLOGICAL WELL HISTORY.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 October 07, 2009

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A		DATE 10/7/2009

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-2A4S [RED] Spud Conductor: 4/10/2009 Spud Date: 4/11/2009
 Project: UTAH-UINTAH Site: NBU 1022-2A PAD Rig Name No: PROPETRO/, ENSIGN 145/145
 Event: DRILLING Start Date: 4/11/2009 End Date: 6/23/2009
 Active Datum: RKB @4,988.00ft (above Mean Sea Level) UWI: 0/10/S/22/E/2/0/NENE/6/PM/N/207.00/E/0/836.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
4/11/2009	11:00 - 0:00	13.00	DRLSUR	02		P		MOVE IN AND RIG UP AIR RIG SPUD WELL @ 1100 HR 4/11/09 D/F 40'-960' W/ AIR MIST @ REPORT TIME
4/12/2009	0:00 - 12:00	12.00	DRLSUR	02		P		RIG DRILLED TO 1170' HIT SOME WATER PREP FOR TRIP
	12:00 - 14:00	2.00	DRLSUR	06		P		TRIP OUT OF HOLE LAY DOWN HAMMER RIH W/ TRICONE
	14:00 - 0:00	10.00	DRLSUR	02		P		RIG DRILLING AHEAD HIT TRONA WATER @ 1390' D/F 1390'-1440' @ REPORT TIME
4/13/2009	0:00 - 12:00	12.00	DRLSUR	02		P		RIG DRILLING AHEAD CIRCULATING WITH SKID PUMP NO RETURNS 1620'
	12:00 - 0:00	12.00	DRLSUR	02		P		RIG DRILLING AHEAD CIRCULATING WITH SKID PUMP NO RETURNS 1890' RUN SURVEY 1.25 DEG.
4/14/2009	0:00 - 12:00	12.00	DRLSUR	02		P		RIG DRILLING AHEAD DRILLING W/FLUID NO RETURNS 1980'
	12:00 - 0:00	12.00	DRLSUR	02		P		RIG DRILLING AHEAD DRILLING W/FLUID NO RETURNS 2250'
4/15/2009	0:00 - 6:00	6.00	DRLSUR	02		P		RIG T/D @ 2340' CONDITION HOLE 1 HR RUN SURVEY 1.25 DEG.
	6:00 - 10:00	4.00	DRLSUR	06		P		TRIP DP OUT OF HOLE
	10:00 - 14:00	4.00	DRLSUR	12		P		RUN 2305' OF 9 5/8 36# J-55 CSG AND RIG DOWN AIR RIG
	14:00 - 15:00	1.00	DRLSUR	12		P		CEMENT SURFACE WITH 350 SKS @ 15.8# 1.15 5.0 GAL/SK NO RETURNS THRU OUT JOB 200 PSI LIFT LAND PLUG W/ 1000 PSI FLOATS DID NOT HOLD SHUT IN WELL
	15:00 - 15:30	0.50	DRLSUR	12		P		1ST TOP JOB 100 SKS DOWN BS WOC
	15:30 - 17:30	2.00	DRLSUR	12		P		2ND TOP JOB 100 SKS DOWN BS WOC
	17:30 - 19:30	2.00	DRLSUR	12		P		3RD TOP JOB 125 SKS DOWN BS WOC
	19:30 - 21:30	2.00	DRLSUR	12		P		4TH TOP JOB 225 SKS DOWN BS NO CEMENT TO SURFACE + - 60' DOWN WILL READY MIX TO SURFACE
	21:30 - 21:30	0.00	DRLSUR					NO VISIBLE LEAKS PIT 20% FULL
6/13/2009	15:30 - 0:00	8.50	DRLPRO	01	E	P		RD, TEAR DOWN, PREP FOR RIG MOVE
6/14/2009	0:00 - 7:00	7.00	DRLPRO	01	B	P		WAIT ON DAYLIGHT, TRUCKS ON LOCATION AT 06:30, HOLD SAFETY MEETING
	7:00 - 0:00	17.00	DRLPRO					LOAD OUT & MOVE RIG TO LOCATION, ALL RIG EQUIPMENT ON LOCATION AT 18:00, RIG UP AT 75% COMPLETE
6/15/2009	0:00 - 23:00	23.00	DRLPRO	01	B	P		NU BOP, WAIT DAYLIGHT, RIG UP DERRICK, PIPE SKATE, FLOOR, HOOK UP KOOMY LINES, FLOW LINES
	23:00 - 0:00	1.00	DRLPRO	15	A	P		TEST BOPE
6/16/2009	0:00 - 5:00	5.00	DRLPRO	15	A	P		TEST BOPE
	5:00 - 11:00	6.00	DRLPRO	01	B	P		WORKING ON TOP DRIVE, RIG UP FLARE LINES, FINISH RIGGING UP FLOW LINES, HYDRAULIC LINES
	11:00 - 14:00	3.00	DRLPRO	08	B	P		WORK ON TOP DRIVE
	14:00 - 23:00	9.00	DRLPRO	06	A	P		PU DP & TIH W/ 71 JTS DP, STAND BACK IN DERRICK, PU & TIH W/ 71 JTS DP AND STAND BACK IN DERRICK, 142 JTS TOTAL
	23:00 - 0:00	1.00	DRLPRO	08	B	P		WORK ON TOP DRIVE, INSTALL TOP DRIVE CARD SENSOR, TOP DRIVE STILL MALFUNCTIONING

RECEIVED October 07, 2009

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-2A4S [RED] Spud Conductor: 4/10/2009 Spud Date: 4/11/2009
 Project: UTAH-UINTAH Site: NBU 1022-2A PAD Rig Name No: PROPETRO/, ENSIGN 145/145
 Event: DRILLING Start Date: 4/11/2009 End Date: 6/23/2009
 Active Datum: RKB @4,988.00ft (above Mean Sea Level) UWI: 0/10/S/22/E/2/0/NENE/6/PM/N/207.00/E/0/836.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	PAJ	MD From (ft)	Operation
6/17/2009	0:00 - 7:00	7.00	DRLPRO	06	A	P		PU BHA, DP, TIH, TAG CMT AT 2200, INSTALL ROTATING HEAD
	7:00 - 7:30	0.50	DRLPRO	02	D	P		DRILL CMT SHOE TRACK TO 2319
	7:30 - 15:00	7.50	DRLPRO	02	D	P		DRILL ROTARY & SLIDE 2319 TO 2676, 357' WOB-14, ROTARY RPM-32, MOTOR RPM-64, PUMP #1-60 SPM, 230 GPM, PUMP #2-60 SPM, 230 GPM, TORQUE ON/OFF BOTTOM-21/99/6, SPP ON/OFF BOTTOM- 1368/1320, ROP-73 TO 200 FPH
	15:00 - 15:30	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	15:30 - 0:00	8.50	DRLPRO	02	D	P		DRILL ROTARY & SLIDE 2676 TO 3522 ,846', WOB-14, ROTARY RPM-34, MOTOR RPM-73, PUMP #1-68 SPM, 261 GPM, PUMP #2-68 SPM, 261 GPM, TORQUE ON/OFF BOTTOM-9/6, SPP ON/OFF BOTTOM- 1560/1477, ROP-73 TO200 FPH
6/18/2009	0:00 - 12:00	12.00	DRLPRO	02	D	P		DRILL ROTARY & SLIDE 3522 TO 4338,816' WOB-14, ROTARY RPM-34, MOTOR RPM-73, PUMP #1-68 SPM, 261 GPM, PUMP #2-68 SPM, 261 GPM, TORQUE ON/OFF BOTTOM-9/6, SPP ON/OFF BOTTOM- 1560/1477, ROP-60 TO230 FPH
	12:00 - 12:30	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	12:30 - 0:00	11.50	DRLPRO	02	D	P		DRILL ROTARY & SLIDE 4338 TO 5395,1057, WOB-14, ROTARY RPM-34, MOTOR RPM-73, PUMP #1-68 SPM, 261 GPM, PUMP #2-68 SPM, 261 GPM, TORQUE ON/OFF BOTTOM-11/8, SPP ON/OFF BOTTOM- 1616/1587, ROP-60 TO230 FPH
6/19/2009	0:00 - 12:00	12.00	DRLPRO	02	D	P		DRILL ROTARY & SLIDE- 5395 TO 6172,777', WOB-14, ROTARY RPM-34, MOTOR RPM-73, PUMP #1-68 SPM, 261 GPM, PUMP #2-68 SPM, 261 GPM, TORQUE ON/OFF BOTTOM-11/8, SPP ON/OFF BOTTOM- 1616/1587, ROP-60 TO230 FPH
	12:00 - 12:30	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	12:30 - 12:30	0.00	DRLPRO	02	D	P		DRILL ROTARY & SLIDE- 6172 TO 7014,842' WOB-14, ROTARY RPM-34, MOTOR RPM-73, PUMP #1-65 SPM, 249 GPM, PUMP #2-65 SPM, 249 GPM, TORQUE ON/OFF BOTTOM-12/7, SPP ON/OFF BOTTOM- 2648/2604, ROP-60 TO 120 FPH
6/20/2009	0:00 - 12:30	12.50	DRLPRO	02	D	P		DRILL ROTARY & SLIDE- 7014 TO 7674,660' WOB-14, ROTARY RPM-34, MOTOR RPM-73, PUMP #1-65 SPM, 249 GPM, PUMP #2-65 SPM, 249 GPM, TORQUE ON/OFF BOTTOM-15/9, SPP ON/OFF BOTTOM- 22879/2810, ROP-60 TO 120 FPH
	12:30 - 13:00	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	13:00 - 17:00	4.00	DRLPRO	02	D	P		DRILL ROTARY & SLIDE- 7674 TO 7928, 254', WOB-17, ROTARY RPM-34, MOTOR RPM-73, PUMP #1-65 SPM, 249 GPM, PUMP #2-65 SPM, 249 GPM, TORQUE ON/OFF BOTTOM-116/8, SPP ON/OFF BOTTOM- 3186/3077, ROP-60 TO 120 FPH
	17:00 - 19:00	2.00	DRLPRO	08	B	Z		REPAIR VFD,
	19:00 - 0:00	5.00	DRLPRO	02	D	P		DRILL ROTARY & SLIDE- 7928 TO 8193',265' WOB-16, ROTARY RPM-34, MOTOR RPM-73, PUMP #1-62 SPM, 249 GPM, PUMP #2-62 SPM, 249 GPM, TORQUE ON/OFF BOTTOM-15/8, SPP ON/OFF BOTTOM- 3190/3090, ROP-60 TO 120 FPH
6/21/2009	0:00 - 10:00	10.00	DRLPRO	02	D	P		DRILL ROTARY - 8193 TO 8630,' WOB-17, ROTARY RPM-34, MOTOR RPM-73, PUMP #1-62 SPM, 246 GPM, PUMP #2-62 SPM, 246 GPM, TORQUE ON/OFF BOTTOM-15/9, SPP ON/OFF BOTTOM- 3084/2990, ROP-625TO 90FPH, GEOLOGIST CALLED TD EARLY

RECEIVED October 07, 2009

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2A4S [RED]	Spud Conductor: 4/10/2009	Spud Date: 4/11/2009
Project: UTAH-UINTAH	Site: NBU 1022-2A PAD	Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLING	Start Date: 4/11/2009	End Date: 6/23/2009
Active Datum: RKB @4,988.00ft (above Mean Sea Level)	UWI: 0/10/S/22/E/2/0/NENE/6/PM/N/207.00/E/0/836.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	10:00 - 12:30	2.50	DRLPRO	05	F	P		PUMP SWEEPS, CIRC HOLE
	12:30 - 16:30	4.00	DRLPRO	06	E	P		ROTATE OUT 16 STDS, POOH TO 3850
	16:30 - 19:00	2.50	DRLPRO	06	E	P		TIH TO 8622, TOP DRIVE FAILED, CANT ROTATE
	19:00 - 21:00	2.00	DRLPRO	08	B	Z		WORK ON TOP DRIVE ELECTRONICS,
	21:00 - 22:00	1.00	DRLPRO	05	F	P		PUMP SWEEP, CIRC HOLE
	22:00 - 22:30	0.50	DRLPRO	08	B	Z		CIRCULATE & WORK ON TOP DRIVE
	22:30 - 23:00	0.50	DRLPRO	06	A	P		ROTATE OUT 3 STDS
	23:00 - 0:00	1.00	DRLPRO	08	B	Z		REPAIR HYD HOSE ON ELEVATORS
6/22/2009	0:00 - 6:30	6.50	DRLPRO	06	A	P		POOH & STAND BACK DP, LD DIR TOOLS
	6:30 - 7:30	1.00	DRLPRO	21	D	Z		LOGGERS LOST, WAIT ON LOGGERS
	7:30 - 15:00	7.50	DRLPRO	11	D	P		RU LOGGERS, RUN TRIPLE COMBO, BRIDGED OUT AT 4650, LOG OUT, RD LOGGERS
	15:00 - 16:30	1.50	DRLPRO	12	A	P		RU CASERS
	16:30 - 0:00	7.50	DRLPRO	12	C	P		RUN 208 JTS 4 1/2 , 11.6#, I-80, CSG, LAST 2 JTS HANGING UP
6/23/2009	0:00 - 1:00	1.00	DRLPRO	12	C	P		4 1/2 CSG STICKY ON LAST JT, MADE UP LANDING JT AND WASHED TO 8604, COULD NOT WASH DOWN, PULLING 155K TO MOVE UP, POOH TO TO 8602, COLD NOT WASH DOWN, WORK CSG OUT OF HOLE AT 155K UNTIL CSG COLLAR IS 3 FT ABOVE FLOOR, LD LANDING JT KELLY UP AND CIRC HOLE FOR 1 HOUR, GAINED FOUR FT MOVEMENT UP 2 FT MOVEMENT DOWN
	1:00 - 2:00	1.00	DRLPRO	05	A	P		
	2:00 - 5:00	3.00	DRLPRO	12	E	P		RU CEMENTERS, PUMP 40 BBLS WATER FLUSH, 215 BBLS, 651 SX, 12.8#, 1.85 YIELD, LEAD, 285 BBLS, 1221 SX, 14.3#, 1.31 YIELD TAIL, DISPLACED W/ 132 BBLS WATER, BUMPED PLUG, FLOATS HELD, RETURNED 10 BBLS CMT TO SURFACE
	5:00 - 6:30	1.50	DRLPRO	12	E	P		FLUSH PUMP LINES, RD CEMENTERS
	6:30 - 9:00	2.50	DRLPRO	01	E	P		FLUSH STACK AND CLEAN FLOWLINES, FLUSH GAS BUSTER. 10" VALVE @ SHAKERS HAD A PIECE OF FLOAT RUBBER STUCK IN IT AND ALLOWED CMT TO FLOW TO GASBUSTER ON DISPLACEMENT
	9:00 - 13:00	4.00	DRLPRO	01	E	P		ND BOP FOR CSG SLIPS, SHORT CLEARANCE BELOW RIG FLOOR TO RAISE BOP ENOUGH TO SET SLIPS, HAD TO JACK RIG UP 5 INCHES TO GAIN CLEARANCE TO SET SLIPS & CUT OFF CSG, CLEANED PITS, RELEASE RIG AT 13:00

RECEIVED October 07, 2009

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-2A4S [RED]		Spud Conductor: 4/10/2009	Spud Date: 4/11/2009
Project: UTAH-UINTAH		Site: NBU 1022-2A PAD	Rig Name No: GWS 1/1, SWABBCO 1/1
Event: COMPLETION		Start Date: 9/24/2009	End Date: 10/3/2009
Active Datum: RKB @4,988.00ft (above Mean Sea Level)		UWI: 0/10/S/22/E/2/0/NENE/6/PM/N/207.00/E/0/836.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
9/24/2009	-							
9/25/2009	7:00 - 7:15	0.25	COMP	48		P		HSM, REVIEW R/U WIRE LINE
	7:15 - 15:00	7.75	COMP	37	B			MIRU SCHLUMBERGER WIRE LINE, P/U PERF GUN RIH, PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE. 8485'-8489' 3 SPF, 120* PH, 12 HOLES. 8440'-8444' 4 SPF, 90* PH, 16 HOLES. 8390'-8394' 4 SPF, 90* PH, 16 HOLES. [44 HOLES] SWI READY TO FRAC MON.
9/28/2009	7:00 - 7:15	0.25	COMP	48		P		DIDN'T PUMP ANY STG'S ON THIS WELL, THIS DAY.
9/29/2009	7:00 - 7:15	0.25	COMP	48		P		HSM, FRACING & WORKING W/ WIRE LINE
	7:15 - 17:00	9.75	COMP	36		P		FRAC STG #1 IN MESAVERDE 8390'-8489' [44 HOLES] STG #1] WHP= 1792#, BRK DN PERFS @ 3234#, INJ PSI= 5600#, INJ RT= 40, ISIP= 2847#, FG=.77, PUMP'D 1074 BBLS SLK WTR W/ 34,694 # 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP= 2793#, FG=.76, AR= 53, AP= 5317 #, MR= 53.9, MP= 6475#, NPI=#, 35 /44 CALC PERFS OPEN W/ 103 GAL CHEMICAL SLUG IN THE LAST PART ON 2# STG. STG #2] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @ 8576' PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE. 90 & 120 PHASING. PERF F/ 8268'-72', 3 SPF, 12 HOLES. 8172'-76', 4 SPF, 16 HOLES. 8158'-62', 4 SPF, 16 HOLES. POOH. OPEN WELL 2024# BEG PUMPING, BRK @ 5781# @ 3.2 BPM. SD ISIP 3708# FG .87. BEG FRAC, EST INJT RT @ 42 BPM @ 4500# = 100% PERF'S OPEN. PUMP 61,398# 30/50 WHITE & TAIL IN W/ 5,000# 20/40 TLC. PUMP 133 GAL PILL OF SCALE INHIB IN LAST PART OF 2# STG. SD ISIP 2960# FG .79. ((EXT PAD BY 150 BBLS DUE T/ HIGH PSI & COULD NOT GET ENOUGH RT.))) SWI. SDFN.

RECEIVED October 07, 2009

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2A4S [RED] Spud Conductor: 4/10/2009 Spud Date: 4/11/2009
 Project: UTAH-UINTAH Site: NBU 1022-2A PAD Rig Name No: GWS 1/1, SWABBCO 1/1
 Event: COMPLETION Start Date: 9/24/2009 End Date: 10/3/2009
 Active Datum: RKB @4,988.00ft (above Mean Sea Level) UWI: 0/10/S/22/E/2/0/NENE/6/PM/N/207.00/E/0/836.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
9/30/2009	7:00 - 18:00	11.00	COMP	36	B	P		<p>STG 3)PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 8070' P/U PERF F/ 8034'-40', 3 SPF, 18 HOLES. 7962'-66', 3 SPF, 12 HOLES. 7896'-00', 3 SPF, 12 HOLES. POOH. 10:41 OPEN WELL 243#. BEG PUMPING, BRK @ 4874# @ 3.4 BPM. SD ISIP 3242# FG .84. BEG FRACING, EST INJT RT @ 49 BPM @ 4600# = 100% PERF'S OPEN. PUMP 124,463# 30/50 WHITE & TAIL IN W/ 5,000# TLC. PUMP 199 GAL PILL OF SCALE INHIB IN THE LAST OF THE 2# STG. SD ISIP 2836# FG .79. 11:53 SWI.</p> <p>STG 4)PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 7776' P/U PERF F/ 7742'-46', 4 SPF, 16 HOLES. 7662'-66', 4 SPF, 16 HOLES. 7610'-12', 3 SPF, 6 HOLES. 7584'-86', 3 SPF, 6 HOLES. POOH. 14:43 OPEN WELL 2070#. BEG PUMPING, BRK @ 4988# @ 4.6 BPM. SD ISIP 3605# FG .90. BEG FRAC, EST INJT RT @ 44 BPM @ 5800# = 70% PERF'S OPEN. PUMP 57,569# 30/50 WHITE & TAIL IN W/ 5,000# 20/40 TLC. PUMP 125 GAL PILL OF SCALE INHIB IN THE LAST OF THE 2# STG. SD ISIP 2469# FG .76. 15:25 SWI, X-OVER T/ GREEN.</p> <p>STG 5)PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 7490' P/U PERF F/ 7456'-60', 3 SPF, 12 HOLES. 7410'-12', 4 SPF, 8 HOLES. 7360'-62', 4 SPF, 8 HOLES. 7310'-12', 4 SPF, 8 HOLES. 7250'-52', 4 SPF, 8 HOLES. POOH. 17:54 OPEN WELL 1215#. BEG PUMPING, BRK @ 3251# @ 4.7 BPM. SD ISIP 1753# FG .67. BEG FRAC, EST INJT RT @ 50 BPM @ 4000# = 100% PERF'S OPEN. PUMP 34,034# 30/50 WHITE & TAIL IN W/ 5,000# 20/40 TLC. PUMP 95 GAL PILL OF SCALE INHIB IN THE LAST OF THE 2# STG. SD ISIP 2111# FG .72. 18:21 SWI, SDFN.</p>

RECEIVED October 07, 2009

**US ROOKIES REGION
Operation Summary Report**

Well: NBU 1022-2A4S [RED] Spud Conductor: 4/10/2009 Spud Date: 4/11/2009
 Project: UTAH-UINTAH Site: NBU 1022-2A PAD Rig Name No: GWS 1/1, SWABBCO 1/1
 Event: COMPLETION Start Date: 9/24/2009 End Date: 10/3/2009
 Active Datum: RKB @4,988.00ft (above Mean Sea Level) UWI: 0/10/S/22/E/2/0/NENE/6/PM/N/207.00/E/0/836.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
10/1/2009	7:00 - 18:00	11.00	COMP	36	B	P		STG 6) PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN. 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7192' P/U PERF F/ 7160'-62', 4 SPF, 8 HOLES. 7076'-78', 4 SPF, 8 HOLES. 7044'-46', 4 SPF, 8 HOLES. 6992'-94', 4 SPF, 8 HOLES. 6906'-08', 4 SPF, 8 HOLES. 6861'-62', 4 SPF, 4 HOLES. POOH. 9:39 OPEN WELL 316#. BEG PUMPING, BRK @ 3008# @ 4.7 BPM. SD ISIP 1533# FG .65. BEG FRACING, EST INJT RT @ 55 BPM @ 4400# = 100% PERF'S OPEN. PUMP 126,822# 30/50 WHITE & TAIL IN W/ 5,000# 20/40 TLC. PUMP 200 GAL PILL OF SCALE INHIB IN LAST PART OF 2# STG. SD ISIP 2333# FG .76. 10:46 SWI. DONE FRACING THIS WELL.
10/2/2009	7:00 -		COMP	30		P		PU 4 1/2 8K HAL CBP. RIH SET CBP @ 6811'. POOH. SWI. HSM MIRU SPOT ALL EQUIPMENT NDFRAC VALVE NUBOP SPOT TBG FLOAT TIH 3 7/8 ROCK BIT, POBS WITH XN NIPPLE & HSM BREAK CIRC DRILL PLUGS AS FOLLOW: #1 @ 6811' JNT 216 IN 20 MIN 450# KICK CSG @ 50# #2 @ 7192' JNT 228 IN 15 MIN 450# KICK CSG @ 250# #3 @ 7490' JNT 237 IN 15 MIN 600# KICK CSG @ 200# #4 @ 7776' JNT 246 IN 15 MIN 800# KICK CSG @ 250# #5 @ 8070' JNT 256 IN 20 MIN 1000# KICK CSG @ 300# #6 @ 8302' JNT 263 IN 20 MIN 250# KICK CSG @ 350# CLEAN OUT TO PBT @ 8570' WITH JNT 271 LAY DOWN 15 JNTS LTBG @ 8116' WITH 256 JNTS DROP BALL NDBOP NUWH PUMP OFF BIT @ R/O PUMP & TANKS RDMO ROAD RIG TO BLUE FEATHER ROAD
10/3/2009	7:00 -		COMP	30		P		
10/4/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2700#, TP 2000#, 20/64" CK, 44 BWPH, MEDIUM SAND, - GAS TTL BBLs RECOVERED: 2912 BBLs LEFT TO RECOVER: 9996
10/5/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 3000#, TP 2050#, 20/64" CK, 37 BWPH, MEDIUM SAND, - GAS TTL BBLs RECOVERED: 3849 BBLs LEFT TO RECOVER: 9059
10/6/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 3000#, TP1950#, 20/64" CK, 32 BWPH, MEDIUM SAND, - GAS TTL BBLs RECOVERED: 5166 BBLs LEFT TO RECOVER: 5501
	12:00 -		PROD	50				WELL TURNED TO SALE @ 1200 HR ON 10/6/09 - FTP 2000#, CP 2700#, 2400 MCFD, 32 BWPD, 20/64 CK
10/7/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2600#, TP 1900#, 20/64" CK, 28 BWPH, LIGHT SAND, - GAS TTL BBLs RECOVERED: 5367 BBLs LEFT TO RECOVER: 5795

RECEIVED October 07, 2009

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

AMENDED REPORT FORM 8
(highlight changes)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. LEASE DESIGNATION AND SERIAL NUMBER:
ST ML 22651

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT or CA AGREEMENT NAME
UNIT # 891008900A

8. WELL NAME and NUMBER:
NBU 1022-2A4S

9. API NUMBER:
4304740433

10. FIELD AND POOL, OR WILDCAT
NATURAL BUTTES

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

12. COUNTY
UINTAH

13. STATE
UTAH

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

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

2. NAME OF OPERATOR:
KERR MCGEE OIL & GAS ONSHORE LP

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: **NENE 207 FNL & 841' FEL 2-10S-22E**
AT TOP PRODUCING INTERVAL REPORTED BELOW: **NENE 1165 FNL & 325 FEL SEC.2-10S-22E**
AT TOTAL DEPTH: **NENE 1180 FNL & 315 FEL SEC.2-10S-22E**

14. DATE SPUDDED: **4/10/2009** 15. DATE T.D. REACHED: **6/21/2009** 16. DATE COMPLETED: **10/6/2009** ABANDONED READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL):
4950' GL

18. TOTAL DEPTH: MD **8,630** TVD **8,426** 19. PLUG BACK T.D.: MD **8,570** TVD _____

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)
CHI-CCL-RAW-HDIL-ZDL-CN-GR

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			
12 1/4"	9 5/8 J-55	36#		2,319		900			
7 7/8"	4 1/2 I-80	11.6#		8,611		1782			

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	8,116							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A) MESAVERDE	6,861	8,489			6,861 8,489	0.36	262	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(B)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

27. PERFORATION RECORD

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
6,861-8,489	PMP 9,901 BBLS SLICK H2O & 469,152 LBS 30/50 SD.

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

29. ENCLOSED ATTACHMENTS:

ELECTRICAL/MECHANICAL LOGS GEOLOGIC REPORT DST REPORT DIRECTIONAL SURVEY

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

30. WELL STATUS:
PROD

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 10/6/2009		TEST DATE: 10/14/2009		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL - BBL: 6	GAS - MCF: 2,449	WATER - BBL: 12	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 335	CSG. PRESS. 1,832	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL: 6	GAS - MCF: 2,449	WATER - BBL: 12	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.)

SOLD

33. SUMMARY OF POROUS ZONES (Include Aquifers):

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

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
GREEN RIVER	1,104				
MAHOGANY	1,863				
WASATCH	4,375	6,580			
MESAVERDE	6,642	8,534			

35. ADDITIONAL REMARKS (Include plugging procedure)

ATTACHED TO THIS COMPLETION REPORT IS THE CHRONOLOGICAL WELL HISTORY AND EOWR.

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

NAME (PLEASE PRINT) ANDY LYTLE

TITLE REGULATORY ANALYST

SIGNATURE 

DATE 11/5/2009

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

UTAH ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2A4S [RED]		Spud Conductor: 4/10/2009	Spud Date: 4/11/2009
Project: UTAH-UINTAH		Site: NBU 1022-2A PAD	Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLING		Start Date: 4/11/2009	End Date: 6/23/2009
Active Datum: RKB @4,988.00ft (above Mean Sea Level)		UWI: NE/NE/O/10/S/22/E/2/O/0/6/PM/N/207.00/E/O/841.00/O/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
4/11/2009	11:00 - 0:00	13.00	DRLSUR	02		P		MOVE IN AND RIG UP AIR RIG SPUD WELL @ 1100 HR 4/11/09 D/F 40'-960' W/ AIR MIST @ REPORT TIME
4/12/2009	0:00 - 12:00	12.00	DRLSUR	02		P		RIG DRILLED TO 1170' HIT SOME WATER PREP FOR TRIP
	12:00 - 14:00	2.00	DRLSUR	06		P		TRIP OUT OF HOLE LAY DOWN HAMMER RIH W/ TRICONE
	14:00 - 0:00	10.00	DRLSUR	02		P		RIG DRILLING AHEAD HIT TRONA WATER @ 1390' D/F 1390'-1440' @ REPORT TIME
4/13/2009	0:00 - 12:00	12.00	DRLSUR	02		P		RIG DRILLING AHEAD CIRCULATING WITH SKID PUMP NO RETURNS 1620'
	12:00 - 0:00	12.00	DRLSUR	02		P		RIG DRILLING AHEAD CIRCULATING WITH SKID PUMP NO RETURNS 1890' RUN SURVEY 1.25 DEG.
4/14/2009	0:00 - 12:00	12.00	DRLSUR	02		P		RIG DRILLING AHEAD DRILLING W/FLUID NO RETURNS 1980'
	12:00 - 0:00	12.00	DRLSUR	02		P		RIG DRILLING AHEAD DRILLING W/FLUID NO RETURNS 2250'
4/15/2009	0:00 - 6:00	6.00	DRLSUR	02		P		RIG T/D @ 2340' CONDITION HOLE 1 HR RUN SURVEY 1.25 DEG.
	6:00 - 10:00	4.00	DRLSUR	06		P		TRIP DP OUT OF HOLE
	10:00 - 14:00	4.00	DRLSUR	12		P		RUN 2305' OF 9 5/8 36# J-55 CSG AND RIG DOWN AIR RIG
	14:00 - 15:00	1.00	DRLSUR	12		P		CEMENT SURFACE WITH 350 SKS @ 15.8# 1.15 5.0 GAL/SK NO RETURNS THRU OUT JOB 200 PSI LIFT LAND PLUG W/ 1000 PSI FLOATS DID NOT HOLD SHUT IN WELL
	15:00 - 15:30	0.50	DRLSUR	12		P		1ST TOP JOB 100 SKS DOWN BS WOC
	15:30 - 17:30	2.00	DRLSUR	12		P		2ND TOP JOB 100 SKS DOWN BS WOC
	17:30 - 19:30	2.00	DRLSUR	12		P		3RD TOP JOB 125 SKS DOWN BS WOC
	19:30 - 21:30	2.00	DRLSUR	12		P		4TH TOP JOB 225 SKS DOWN BS NO CEMENT TO SURFACE + - 60' DOWN WILL READY MIX TO SURFACE
	21:30 - 21:30	0.00	DRLSUR					NO VISIBLE LEAKS PIT 20% FULL
6/13/2009	15:30 - 0:00	8.50	DRLPRO	01	E	P		RD, TEAR DOWN, PREP FOR RIG MOVE
6/14/2009	0:00 - 7:00	7.00	DRLPRO	01	B	P		WAIT ON DAYLIGHT, TRUCKS ON LOCATION AT 06:30, HOLD SAFETY MEETING
	7:00 - 0:00	17.00	DRLPRO					LOAD OUT & MOVE RIG TO LOCATION, ALL RIG EQUIPMENT ON LOCATION AT 18:00, RIG UP AT 75% COMPLETE
6/15/2009	0:00 - 23:00	23.00	DRLPRO	01	B	P		NU BOP, WAIT DAYLIGHT, RIG UP DERRICK, PIPE SKATE, FLOOR, HOOK UP KOOMY LINES, FLOW LINES
	23:00 - 0:00	1.00	DRLPRO	15	A	P		TEST BOPE
6/16/2009	0:00 - 5:00	5.00	DRLPRO	15	A	P		TEST BOPE
	5:00 - 11:00	6.00	DRLPRO	01	B	P		WORKING ON TOP DRIVE, RIG UP FLARE LINES, FINISH RIGGING UP FLOW LINES, HYDRAULIC LINES
	11:00 - 14:00	3.00	DRLPRO	08	B	P		WORK ON TOP DRIVE
	14:00 - 23:00	9.00	DRLPRO	06	A	P		PU DP & TIH W/ 71 JTS DP, STAND BACK IN DERRICK, PU & TIH W/ 71 JTS DP AND STAND BACK IN DERRICK, 142 JTS TOTAL
	23:00 - 0:00	1.00	DRLPRO	08	B	P		WORK ON TOP DRIVE, INSTALL TOP DRIVE CARD SENSOR, TOP DRIVE STILL MALFUNCTIONING

Operation Summary Report

Well: NBU 1022-2A4S [RED] Spud Conductor: 4/10/2009 Spud Date: 4/11/2009
 Project: UTAH-UINTAH Site: NBU 1022-2A PAD Rig Name No: PROPETRO/, ENSIGN 145/145
 Event: DRILLING Start Date: 4/11/2009 End Date: 6/23/2009
 Active Datum: RKB @4,988.00ft (above Mean Sea Level) UWI: NE/NE/0/10/S/22/E/2/0/0/6/PM/N/207.00/E/0/841.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	PIU	MD From (ft)	Operation
6/17/2009	0:00 - 7:00	7.00	DRLPRO	06	A	P		PU BHA, DP, TIH, TAG CMT AT 2200, INSTALL ROTATING HEAD
	7:00 - 7:30	0.50	DRLPRO	02	F	P		DRILL CMT SHOE TRACK TO 2319
	7:30 - 15:00	7.50	DRLPRO	02	D	P		DRILL ROTARY & SLIDE 2319 TO 2676, 357' WOB-14, ROTARY RPM-32, MOTOR RPM-64, PUMP #1-60 SPM, 230 GPM, PUMP #2-60 SPM, 230 GPM, TORQUE ON/OFF BOTTOM-21/99/6, SPP ON/OFF BOTTOM- 1368/1320, ROP-73 TO 200 FPH
	15:00 - 15:30	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	15:30 - 0:00	8.50	DRLPRO	02	D	P		DRILL ROTARY & SLIDE 2676 TO 3522 ,846', WOB-14, ROTARY RPM-34, MOTOR RPM-73, PUMP #1-68 SPM, 261 GPM, PUMP #2-68 SPM, 261 GPM, TORQUE ON/OFF BOTTOM-9/6, SPP ON/OFF BOTTOM- 1560/1477, ROP-73 TO200 FPH
	6/18/2009	0:00 - 12:00	12.00	DRLPRO	02	D	P	
6/18/2009	12:00 - 12:30	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	12:30 - 0:00	11.50	DRLPRO	02	D	P		DRILL ROTARY & SLIDE 4338 TO 5395,1057', WOB-14, ROTARY RPM-34, MOTOR RPM-73, PUMP #1-68 SPM, 261 GPM, PUMP #2-68 SPM, 261 GPM, TORQUE ON/OFF BOTTOM-11/8, SPP ON/OFF BOTTOM- 1616/1587, ROP-60 TO230 FPH
	6/19/2009	0:00 - 12:00	12.00	DRLPRO	02	D	P	
6/19/2009	12:00 - 12:30	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	12:30 - 12:30	0.00	DRLPRO	02	D	P		DRILL ROTARY & SLIDE- 6172 TO 7014,842' WOB-14, ROTARY RPM-34, MOTOR RPM-73, PUMP #1-65 SPM, 249 GPM, PUMP #2-65 SPM, 249 GPM, TORQUE ON/OFF BOTTOM-12/7, SPP ON/OFF BOTTOM- 2648/2604, ROP-60 TO 120 FPH
	6/20/2009	0:00 - 12:30	12.50	DRLPRO	02	D	P	
6/20/2009	12:30 - 13:00	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	13:00 - 17:00	4.00	DRLPRO	02	D	P		DRILL ROTARY & SLIDE- 7674 TO 7928, 254', WOB-17, ROTARY RPM-34, MOTOR RPM-73, PUMP #1-65 SPM, 249 GPM, PUMP #2-65 SPM, 249 GPM, TORQUE ON/OFF BOTTOM-116/8, SPP ON/OFF BOTTOM- 3186/3077, ROP-60 TO 120 FPH
	17:00 - 19:00	2.00	DRLPRO	08	B	Z		REPAIR VFD,
6/20/2009	19:00 - 0:00	5.00	DRLPRO	02	D	P		DRILL ROTARY & SLIDE- 7928 TO 8193',265' WOB-16, ROTARY RPM-34, MOTOR RPM-73, PUMP #1-62 SPM, 249 GPM, PUMP #2-62 SPM, 249 GPM, TORQUE ON/OFF BOTTOM-15/8, SPP ON/OFF BOTTOM- 3190/3090, ROP-60 TO 120 FPH
	6/21/2009	0:00 - 10:00	10.00	DRLPRO	02	D	P	

LBS PRODUCTION DIVISION
Operative Summary Report

Well: NBU 1022-2A4S [RED] Spud Conductor: 4/10/2009 Spud Date: 4/11/2009
 Project: UTAH-UINTAH Site: NBU 1022-2A PAD Rig Name No: PROPETRO/, ENSIGN 145/145
 Event: DRILLING Start Date: 4/11/2009 End Date: 6/23/2009
 Active Datum: RKB @4,988.00ft (above Mean Sea Level) UWI: NE/NE/0/10/S/22/E/2/0/0/6/PM/N/207.00/E/0/841.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	RTJ	MD From (ft)	Operation
6/22/2009	10:00 - 12:30	2.50	DRLPRO	05	F	P		PUMP SWEEPS, CIRC HOLE
	12:30 - 16:30	4.00	DRLPRO	06	E	P		ROTATE OUT 16 STDS, POOH TO 3850
	16:30 - 19:00	2.50	DRLPRO	06	E	P		TIH TO 8622, TOP DRIVE FAILED, CAN'T ROTATE
	19:00 - 21:00	2.00	DRLPRO	08	B	Z		WORK ON TOP DRIVE ELECTRONICS,
	21:00 - 22:00	1.00	DRLPRO	05	F	P		PUMP SWEEP, CIRC HOLE
	22:00 - 22:30	0.50	DRLPRO	08	B	Z		CIRCULATE & WORK ON TOP DRIVE
	22:30 - 23:00	0.50	DRLPRO	06	A	P		ROTATE OUT 3 STDS
	23:00 - 0:00	1.00	DRLPRO	08	B	Z		REPAIR HYD HOSE ON ELEVATORS
	0:00 - 6:30	6.50	DRLPRO	06	A	P		POOH & STAND BACK DP, LD DIR TOOLS
	6:30 - 7:30	1.00	DRLPRO	21	D	Z		LOGGERS LOST, WAIT ON LOGGERS
6/23/2009	7:30 - 15:00	7.50	DRLPRO	11	D	P		RU LOGGERS, RUN TRIPLE COMBO, BRIDGED OUT AT 4650, LOG OUT, RD LOGGERS
	15:00 - 16:30	1.50	DRLPRO	12	A	P		RU CASERS
	16:30 - 0:00	7.50	DRLPRO	12	C	P		RUN 208 JTS 4 1/2 , 11.6#, I-80, CSG, LAST 2 JTS HANGING UP
	0:00 - 1:00	1.00	DRLPRO	12	C	P		4 1/2 CSG STICKY ON LAST JT, MADE UP LANDING JT AND WASHED TO 8604, COULD NOT WASH DOWN, PULLING 155K TO MOVE UP, POOH TO TO 8602, COLD NOT WASH DOWN, WORK CSG OUT OF HOLE AT 155K UNTIL CSG COLLAR IS 3 FT ABOVE FLOOR, LD LANDING JT KELLY UP AND CIRC HOLE FOR 1 HOUR, GAINED FOUR FT MOVEMENT UP 2 FT MOVEMENT DOWN
	1:00 - 2:00	1.00	DRLPRO	05	A	P		
	2:00 - 5:00	3.00	DRLPRO	12	E	P		RU CEMENTERS, PUMP 40 BBLs WATER FLUSH, 215 BBLs, 651 SX, 12.8#, 1.85 YIELD, LEAD, 285 BBLs, 1221 SX, 14.3#, 1.31 YIELD TAIL, DISPLACED W/ 132 BBLs WATER, BUMPED PLUG, FLOATS HELD, RETURNED 10 BBLs CMT TO SURFACE
	5:00 - 6:30	1.50	DRLPRO	12	E	P		FLUSH PUMP LINES, RD CEMENTERS
	6:30 - 9:00	2.50	DRLPRO	01	E	P		FLUSH STACK AND CLEAN FLOWLINES, FLUSH GAS BUSTER. 10" VALVE @ SHAKERS HAD A PIECE OF FLOAT RUBBER STUCK IN IT AND ALLOWED CMT TO FLOW TO GASBUSTER ON DISPLACEMENT
	9:00 - 13:00	4.00	DRLPRO	01	E	P		ND BOP FOR CSG SLIPS, SHORT CLEARANCE BELOW RIG FLOOR TO RAISE BOP ENOUGH TO SET SLIPS, HAD TO JACK RIG UP 5 INCHES TO GAIN CLEARANCE TO SET SLIPS & CUT OFF CSG, CLEANED PITS, RELEASE RIG AT 13:00

U.S. ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2A4S [RED] Spud Conductor: 4/10/2009 Spud Date: 4/11/2009
 Project: UTAH-UINTAH Site: NBU 1022-2A PAD Rig Name No: GWS 1/1, SWABBCO 1/1
 Event: COMPLETION Start Date: 9/24/2009 End Date: 10/3/2009
 Active Datum: RKB @4,988.00ft (above Mean Sea Level) UWI: NE/NE/0/10/S/22/E/2/0/0/6/PM/N/207.00/E/0/841.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	R/U	MD From (ft)	Operation
9/24/2009	-							
9/25/2009	7:00 - 7:15	0.25	COMP	48		P		HSM, REVIEW R/U WIRE LINE
	7:15 - 15:00	7.75	COMP	37	B			MIRU SCHLUMBERGER WIRE LINE, P/U PERF GUN RIH, PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE. 8485'-8489'3 SPF, 120* PH, 12 HOLES. 8440'-8444' 4 SPF, 90* PH, 16 HOLES. 8390'-8394' 4 SPF, 90* PH, 16 HOLES. [44 HOLES] SWI READY TO FRAC MON.
9/28/2009	7:00 - 7:15	0.25	COMP	48		P		DIDN'T PUMP ANY STG'S ON THIS WELL, THIS DAY.
9/29/2009	7:00 - 7:15	0.25	COMP	48		P		HSM, FRACING & WORKING W/ WIRE LINE
	7:15 - 17:00	9.75	COMP	36		P		FRAC STG #1 IN MESAVERDE 8390'-8489' [44 HOLES] STG #1] WHP= 1792#, BRK DN PERFS @ 3234#, INJ PSI= 5600#, INJ RT= 40, ISIP= 2847#, FG=.77, PUMP'D 1074 BBLS SLK WTR W/ 34,694 # 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP= 2793#, FG=.76, AR= 53, AP= 5317 #, MR= 53.9, MP= 6475#, NPI=#, 35 /44 CALC PERFS OPEN W/ 103 GAL CHEMICAL SLUG IN THE LAST PART ON 2# STG. STG #2] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @ 8576' PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE. 90 & 120 PHASING. PERF F/ 8268'-72', 3 SPF, 12 HOLES. 8172'-76', 4 SPF, 16 HOLES. 8158'-62', 4 SPF, 16 HOLES. POOH. OPEN WELL 2024# BEG PUMPING, BRK @ 5781# @ 3.2 BPM. SD ISIP 3708# FG .87. BEG FRAC, EST INJT RT @ 42 BPM @ 4500# = 100% PERF'S OPEN. PUMP 61,398# 30/50 WHITE & TAIL IN W/ 5,000# 20/40 TLC. PUMP 133 GAL PILL OF SCALE INHIB IN LAST PART OF 2# STG. SD ISIP 2960# FG ..79. ((EXT PAD BY 150 BBLS DUE T/ HIGH PSI & COULD NOT GET ENOUGH RT.))) SWI. SDFN.

OPERATION SUMMARY REPORT

Well: NBU 1022-2A4S [RED] Spud Conductor: 4/10/2009 Spud Date: 4/11/2009
 Project: UTAH-UINTAH Site: NBU 1022-2A PAD Rig Name No: GWS 1/1, SWABBCO 1/1
 Event: COMPLETION Start Date: 9/24/2009 End Date: 10/3/2009
 Active Datum: RKB @4,988.00ft (above Mean Sea Level) UWI: NE/NE/0/10/S/22/E/2/0/0/6/PM/N/207.00/E/0/841.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
9/30/2009	7:00 - 18:00	11.00	COMP	36	B	P		<p>STG 3)PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 8070' P/U PERF F/ 8034'-40', 3 SPF, 18 HOLES. 7962'-66', 3 SPF, 12 HOLES. 7896'-00', 3 SPF, 12 HOLES. POOH. 10:41 OPEN WELL 243#. BEG PUMPING, BRK @ 4874# @ 3.4 BPM. SD ISIP 3242# FG .84. BEG FRACING, EST INJT RT @ 49 BPM @ 4600# = 100% PERF'S OPEN. PUMP 124,463# 30/50 WHITE & TAIL IN W/ 5,000# TLC. PUMP 199 GAL PILL OF SCALE INHIB IN THE LAST OF THE 2# STG. SD ISIP 2836# FG .79. 11:53 SWI.</p> <p>STG 4)PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 7776' P/U PERF F/ 7742'-46', 4 SPF, 16 HOLES. 7662'-66', 4 SPF, 16 HOLES. 7610'-12', 3 SPF, 6 HOLES. 7584'-86', 3 SPF, 6 HOLES. POOH. 14:43 OPEN WELL 2070#. BEG PUMPING, BRK @ 4988# @ 4.6 BPM. SD ISIP 3605# FG .90. BEG FRAC, EST INJT RT @ 44 BPM @ 5800# = 70% PERF'S OPEN. PUMP 57,569# 30/50 WHITE & TAIL IN W/ 5,000# 20/40 TLC. PUMP 125 GAL PILL OF SCALE INHIB IN THE LAST OF THE 2# STG. SD ISIP 2469# FG .76. 15:25 SWI, X-OVER T/ GREEN.</p> <p>STG 5)PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 7490' P/U PERF F/ 7456'-60', 3 SPF, 12 HOLES. 7410'-12', 4 SPF, 8 HOLES. 7360'-62', 4 SPF, 8 HOLES. 7310'-12', 4 SPF, 8 HOLES. 7250'-52', 4 SPF, 8 HOLES. POOH. 17:54 OPEN WELL 1215#. BEG PUMPING, BRK @ 3251# @ 4.7 BPM. SD ISIP 1753# FG .67. BEG FRAC, EST INJT RT @ 50 BPM @ 4000# = 100% PERF'S OPEN. PUMP 34,034# 30/50 WHITE & TAIL IN W/ 5,000# 20/40 TLC. PUMP 95 GAL PILL OF SCALE INHIB IN THE LAST OF THE 2# STG. SD ISIP 2111# FG .72. 18:21 SWI, SDFN.</p>

**US ROCK OIL FIELD
Operation Summary Report**

Well: NBU 1022-2A4S [RED]		Spud Conductor: 4/10/2009	Spud Date: 4/11/2009
Project: UTAH-UINTAH		Site: NBU 1022-2A PAD	Rig Name No: GWS 1/1, SWABBCO 1/1
Event: COMPLETION		Start Date: 9/24/2009	End Date: 10/3/2009
Active Datum: RKB @4,988.00ft (above Mean Sea Level)		UWI: NE/NE/0/10/S/22/E/2/0/0/6/PM/N/207.00/E/0/841.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	PU	MD From (ft)	Operation
10/1/2009	7:00 - 18:00	11.00	COMP	36	B	P		<p>STG 6) PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN. 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7192' P/U PERF F/ 7160'-62', 4 SPF, 8 HOLES. 7076'-78', 4 SPF, 8 HOLES. 7044'-46', 4 SPF, 8 HOLES. 6992'-94', 4 SPF, 8 HOLES. 6906'-08', 4 SPF, 8 HOLES. 6861'-62', 4 SPF, 4 HOLES. POOH.</p> <p>9:39 OPEN WELL 316#.</p> <p>BEG PUMPING, BRK @ 3008# @ 4.7 BPM. SD ISIP 1533# FG .65.</p> <p>BEG FRACING, EST INJT RT @ 55 BPM @ 4400# = 100% PERF'S OPEN.</p> <p>PUMP 126,822# 30/50 WHITE & TAIL IN W/ 5,000# 20/40 TLC. PUMP 200 GAL PILL OF SCALE INHIB IN LAST PART OF 2# STG. SD ISIP 2333# FG .76.</p> <p>10:46 SWI. DONE FRACING THIS WELL.</p> <p>PU 4 1/2 8K HAL CBP. RIH SET CBP @ 6811'. POOH. SWI.</p>
10/2/2009	7:00 -		COMP	30		P		<p>HSM MIRU SPOT ALL EQUIPMENT NDFRAC VALVE NUBOP SPOT TBG FLOAT TIH 3 7/8 ROCK BIT, POBS WITH XN NIPPLE & HSM BREAK CIRC DRILL PLUGS AS FOLLOW:</p>
10/3/2009	7:00 -		COMP	30		P		<p>#1 @ 6811' JNT 216 IN 20 MIN 450# KICK CSG @ 50#</p> <p>#2 @ 7192' JNT 228 IN 15 MIN 450# KICK CSG @ 250#</p> <p>#3 @ 7490' JNT 237 IN 15 MIN 600# KICK CSG @ 200#</p> <p>#4 @ 7776' JNT 246 IN 15 MIN 800# KICK CSG @ 250#</p> <p>#5 @ 8070' JNT 256 IN 20 MIN 1000# KICK CSG @ 300#</p> <p>#6 @ 8302' JNT 263 IN 20 MIN 250# KICK CSG @ 350#</p> <p>CLEAN OUT TO PBTD @ 8570' WITH JNT 271 LAY DOWN 15 JNTS LTBG @ 8116' WITH 256 JNTS DROP BALL NDBOP NUWH PUMP OFF BIT @ R/O PUMP & TANKS RDMO ROAD RIG TO BLUE FEATHER ROAD</p>
10/4/2009	7:00 -			33		A		<p>7 AM FLBK REPORT: CP 2700#, TP 2000#, 20/64" CK, 44 BWPH, MEDIUM SAND, - GAS</p> <p>TTL BBLS RECOVERED: 2912</p> <p>BBLS LEFT TO RECOVER: 9996</p>
10/5/2009	7:00 -			33		A		<p>7 AM FLBK REPORT: CP 3000#, TP 2050#, 20/64" CK, 37 BWPH, MEDIUM SAND, - GAS</p> <p>TTL BBLS RECOVERED: 3849</p> <p>BBLS LEFT TO RECOVER: 9059</p>
10/6/2009	7:00 -			33		A		<p>7 AM FLBK REPORT: CP 3000#, TP1950#, 20/64" CK, 32 BWPH, MEDIUM SAND, - GAS</p> <p>TTL BBLS RECOVERED: 5166</p> <p>BBLS LEFT TO RECOVER: 5501</p>
	12:00 -		PROD	50				<p>WELL TURNED TO SALE @ 1200 HR ON 10/6/09 - FTP 2000#, CP 2700#, 2400 MCFD, 32 BWPH, 20/64 CK</p>
10/7/2009	7:00 -			33		A		<p>7 AM FLBK REPORT: CP 2600#, TP 1900#, 20/64" CK, 28 BWPH, LIGHT SAND, - GAS</p> <p>TTL BBLS RECOVERED:5367</p> <p>BBLS LEFT TO RECOVER: 5795</p>

UNRECORDED SECTION
Operation Summary Report

Well: NBU 1022-2A4S [RED]		Spud Conductor: 4/10/2009	Spud Date: 4/11/2009
Project: UTAH-UINTAH		Site: NBU 1022-2A PAD	Rig Name No: GWS 1/1, SWABBCO 1/1
Event: COMPLETION		Start Date: 9/24/2009	End Date: 10/3/2009
Active Datum: RKB @4,988.00ft (above Mean Sea Level)		UWI: NE/NE/0/10/S/22/E/2/0/0/6/PM/N/207.00/E/0/841.00/0/0	

Date	Time Start-End	Duration (H)	Phase	Code	Sub Code	PU	MD From (H)	Operation
10/8/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2600#, TP 1700#, 20/64" CK, 24 BWPH, TRACE SAND, - GAS TTL BBLs RECOVERED: 5995 BBLs LEFT TO RECOVER: 5167
10/9/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2300#, TP 1650#, 20/64" CK, 22 BWPH, TRACE SAND, - GAS TTL BBLs RECOVERED: 6543 BBLs LEFT TO RECOVER: 4619



END OF WELL REPORT

Prepared For:

Kerr McGee Oil & Gas Onshore LP

NBU 1022-2A4S

NBU 1022-2A Pad

Ensign 145

Uintah County, UT

Prepared By:

Julie Cruse, Rockies Region Engineer

Scientific Drilling

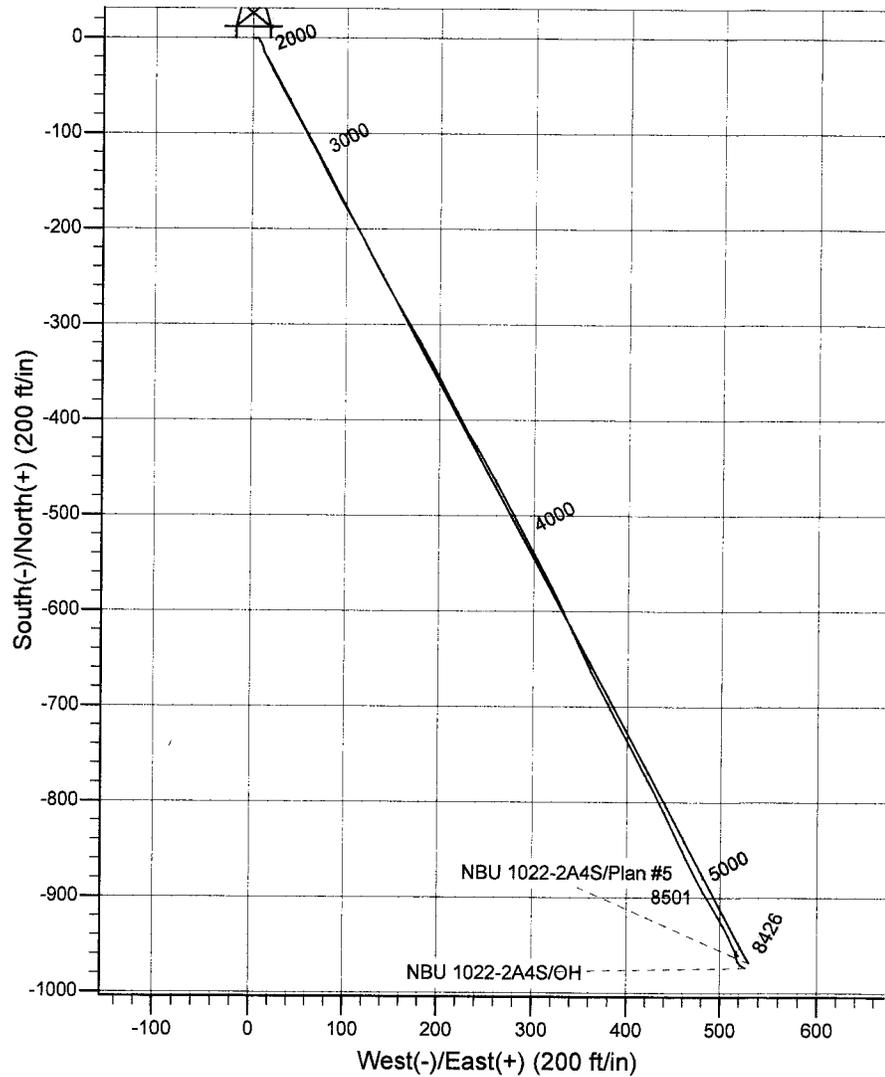
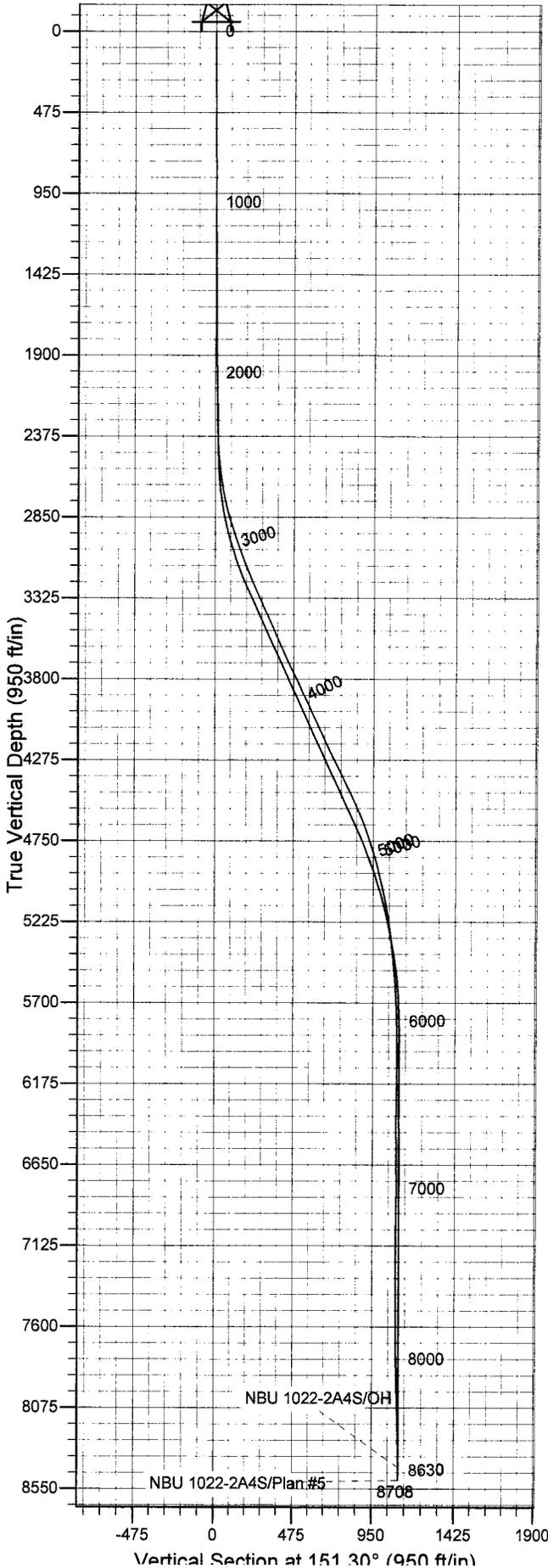
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WELL DETAILS: NBU 1022-2A4S

Ground Level: GL 4974' & RKB 18' @ 4992.00ft (Ensign 145)
 Northing: 608386.41 Easting: 2588368.83 Latitude: 39° 59' 4.988 N Longitude: 109° 24' 0.109 W

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well NBU 1022-2A4S, True North
 Vertical (TVD) Reference: GL 4974' & RKB 18' @ 4992.00ft (Ensign 14)
 Section (VS) Reference: Slot - (0.00N, 0.00E)
 Measured Depth Reference: GL 4974' & RKB 18' @ 4992.00ft (Ensign 14)
 Calculation Method: Minimum Curvature
 Local North: True
 Location: Sec 2 T10S R22E

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

Design: OH (NBU 1022-2A4S/OH)

Created By: Julie Cruse Date: 2009-06-24



Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

**Uintah County, UT NAD27
NBU 1022-02A Pad
NBU 1022-2A4S
OH**

Design: OH

Standard Survey Report

24 June, 2009



Scientific Drilling

Survey Report

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT NAD27
Site: NBU 1022-02A Pad
Well: NBU 1022-2A4S
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 1022-2A4S
TVD Reference: GL 4974' & RKB 18' @ 4992.00ft (Ensign 145)
MD Reference: GL 4974' & RKB 18' @ 4992.00ft (Ensign 145)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Multi User Db

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 1022-02A Pad, Sec 2 T10S R22E				
Site Position:		Northing:	608,386.69 ft	Latitude:	39° 59' 4.999 N
From:	Lat/Long	Easting:	2,588,333.01 ft	Longitude:	109° 24' 0.569 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	1.35 °

Well	NBU 1022-2A4S, 207' FNL 841' FEL					
Well Position	+N/-S	0.00 ft	Northing:	608,386.41 ft	Latitude:	39° 59' 4.988 N
	+E/-W	0.00 ft	Easting:	2,588,368.83 ft	Longitude:	109° 24' 0.109 W
Position Uncertainty	0.00 ft		Wellhead Elevation:	ft	Ground Level:	4,974.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	2008-10-30	11.35	65.95	52,621

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 (°)
		18.00	0.00	0.00	151.30

Survey Program	Date	2009-06-24			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
118.00	2,208.00	Survey #1 - Surface Gyro (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	
2,389.00	8,630.00	Survey #2 - 7 7/8" Hole (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
118.00	0.25	100.27	118.00	-0.05	0.25	0.16	0.21	0.21	0.00
218.00	0.50	110.27	218.00	-0.24	0.88	0.63	0.26	0.25	10.00
318.00	0.50	95.27	317.99	-0.43	1.72	1.20	0.13	0.00	-15.00
418.00	0.50	84.27	417.99	-0.43	2.59	1.62	0.10	0.00	-11.00
518.00	0.50	112.27	517.99	-0.55	3.43	2.12	0.24	0.00	28.00
618.00	0.50	85.27	617.98	-0.68	4.27	2.64	0.23	0.00	-27.00
718.00	0.50	95.27	717.98	-0.68	5.14	3.06	0.09	0.00	10.00
818.00	0.50	150.27	817.98	-1.10	5.79	3.74	0.46	0.00	55.00
918.00	0.25	155.27	917.97	-1.68	6.09	4.40	0.25	-0.25	5.00
1,018.00	0.25	140.27	1,017.97	-2.05	6.32	4.83	0.07	0.00	-15.00
1,118.00	0.25	190.27	1,117.97	-2.43	6.43	5.21	0.21	0.00	50.00

Scientific Drilling

Survey Report

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT NAD27
Site: NBU 1022-02A Pad
Well: NBU 1022-2A4S
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 1022-2A4S
TVD Reference: GL 4974' & RKB 18' @ 4992.00ft (Ensign 145)
MD Reference: GL 4974' & RKB 18' @ 4992.00ft (Ensign 145)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Multi User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,218.00	0.25	170.27	1,217.97	-2.86	6.42	5.59	0.09	0.00	-20.00
1,318.00	0.25	160.27	1,317.97	-3.28	6.53	6.01	0.04	0.00	-10.00
1,418.00	0.25	147.27	1,417.97	-3.67	6.73	6.44	0.06	0.00	-13.00
1,518.00	0.25	126.27	1,517.97	-3.98	7.02	6.86	0.09	0.00	-21.00
1,618.00	0.25	103.27	1,617.97	-4.16	7.41	7.20	0.10	0.00	-23.00
1,718.00	0.50	140.27	1,717.96	-4.54	7.90	7.78	0.34	0.25	37.00
1,818.00	0.75	150.27	1,817.96	-5.45	8.50	8.86	0.27	0.25	10.00
1,918.00	0.75	156.27	1,917.95	-6.62	9.09	10.16	0.08	0.00	6.00
2,018.00	0.75	161.27	2,017.94	-7.83	9.56	11.46	0.07	0.00	5.00
2,118.00	1.00	160.22	2,117.93	-9.28	10.07	12.97	0.25	0.25	-1.05
2,208.00	1.00	164.12	2,207.92	-10.77	10.55	14.51	0.08	0.00	4.33
2,389.00	1.06	175.27	2,388.89	-13.96	11.12	17.58	0.12	0.03	6.16
First MWD Survey									
2,482.00	3.87	148.99	2,481.79	-17.51	12.81	21.50	3.18	3.02	-28.26
2,575.00	7.30	155.67	2,574.34	-25.58	16.86	30.53	3.75	3.69	7.18
2,668.00	9.94	150.93	2,666.28	-37.98	23.20	44.45	2.94	2.84	-5.10
2,761.00	13.01	151.98	2,757.41	-54.24	32.02	62.95	3.31	3.30	1.13
2,854.00	15.83	151.10	2,847.47	-74.59	43.07	86.11	3.04	3.03	-0.95
2,947.00	18.64	150.58	2,936.29	-98.65	56.50	113.66	3.03	3.02	-0.56
3,041.00	20.14	153.30	3,024.96	-126.19	71.15	144.85	1.86	1.60	2.89
3,134.00	22.42	150.75	3,111.61	-155.98	87.01	178.59	2.65	2.45	-2.74
3,227.00	22.60	149.35	3,197.53	-186.82	104.79	214.19	0.61	0.19	-1.51
3,321.00	24.62	152.51	3,283.66	-219.73	123.04	251.82	2.54	2.15	3.36
3,414.00	25.50	151.19	3,367.90	-254.46	141.63	291.21	1.12	0.95	-1.42
3,507.00	23.92	148.20	3,452.39	-288.03	161.21	330.06	2.17	-1.70	-3.22
3,600.00	23.48	150.49	3,537.55	-320.18	180.27	367.41	1.10	-0.47	2.46
3,693.00	25.32	151.98	3,622.24	-353.86	198.74	405.82	2.09	1.98	1.60
3,786.00	27.08	152.60	3,705.68	-390.21	217.83	446.88	1.92	1.89	0.67
3,879.00	24.45	148.56	3,789.43	-425.44	237.61	487.27	3.40	-2.83	-4.34
3,973.00	26.20	151.90	3,874.40	-460.34	257.54	527.46	2.40	1.86	3.55
4,066.00	26.20	151.72	3,957.84	-496.53	276.93	568.52	0.09	0.00	-0.19
4,159.00	24.71	151.98	4,041.81	-531.77	295.79	608.49	1.61	-1.60	0.28
4,252.00	24.89	151.98	4,126.24	-566.21	314.12	647.49	0.19	0.19	0.00
4,345.00	26.29	155.32	4,210.12	-602.20	331.91	687.61	2.16	1.51	3.59
4,438.00	27.26	155.15	4,293.14	-640.25	349.46	729.41	1.05	1.04	-0.18
4,532.00	26.56	152.16	4,376.97	-678.37	368.33	771.90	1.62	-0.74	-3.18
4,626.00	25.06	151.46	4,461.59	-714.44	387.65	812.82	1.63	-1.60	-0.74
4,719.00	23.57	151.98	4,546.34	-748.16	405.80	851.11	1.62	-1.60	0.56
4,813.00	21.81	151.98	4,633.06	-780.17	422.83	887.37	1.87	-1.87	0.00
4,907.00	19.08	153.56	4,721.13	-809.34	437.88	920.19	2.96	-2.90	1.68
5,000.00	16.97	153.83	4,809.56	-835.14	450.64	948.94	2.27	-2.27	0.29
5,094.00	15.12	153.48	4,899.90	-858.42	462.16	974.90	1.97	-1.97	-0.37
5,187.00	12.93	151.90	4,990.12	-878.45	472.48	997.42	2.39	-2.35	-1.70
5,280.00	10.99	149.35	5,081.10	-895.26	481.90	1,016.69	2.16	-2.09	-2.74
5,374.00	9.50	148.29	5,173.59	-909.57	490.55	1,033.39	1.60	-1.59	-1.13
5,467.00	7.83	148.38	5,265.53	-921.49	497.90	1,047.38	1.80	-1.80	0.10
5,561.00	6.60	152.51	5,358.78	-931.74	503.75	1,059.18	1.42	-1.31	4.39
5,654.00	5.54	152.33	5,451.26	-940.46	508.30	1,069.01	1.14	-1.14	-0.19
5,747.00	4.57	154.36	5,543.90	-947.77	511.99	1,077.20	1.06	-1.04	2.18
5,841.00	3.52	155.32	5,637.66	-953.77	514.82	1,083.82	1.12	-1.12	1.02
5,934.00	1.58	153.39	5,730.57	-957.51	516.58	1,087.95	2.09	-2.09	-2.08
6,028.00	0.79	128.69	5,824.55	-959.07	517.67	1,089.84	0.98	-0.84	-26.28
6,121.00	1.06	155.67	5,917.54	-960.26	518.52	1,091.29	0.54	0.29	29.01
6,214.00	0.79	340.24	6,010.53	-960.44	518.66	1,091.52	1.99	-0.29	-188.63

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT NAD27
Site: NBU 1022-02A Pad
Well: NBU 1022-2A4S
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 1022-2A4S
TVD Reference: GL 4974' & RKB 18' @ 4992.00ft (Ensign 145)
MD Reference: GL 4974' & RKB 18' @ 4992.00ft (Ensign 145)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Multi User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,308.00	0.70	324.51	6,104.52	-959.36	518.11	1,090.31	0.24	-0.10	-16.73
6,401.00	0.44	337.87	6,197.52	-958.57	517.65	1,089.39	0.31	-0.28	14.37
6,494.00	0.26	288.83	6,290.52	-958.17	517.31	1,088.88	0.36	-0.19	-52.73
6,587.00	0.18	247.34	6,383.52	-958.16	516.98	1,088.71	0.19	-0.09	-44.61
6,680.00	0.26	232.67	6,476.52	-958.34	516.67	1,088.72	0.10	0.09	-15.77
6,774.00	0.18	236.89	6,570.51	-958.55	516.38	1,088.77	0.09	-0.09	4.49
6,867.00	0.35	193.12	6,663.51	-958.91	516.19	1,088.99	0.27	0.18	-47.06
6,959.00	0.70	159.28	6,755.51	-959.71	516.33	1,089.75	0.49	0.38	-36.78
7,055.00	0.35	318.01	6,851.51	-960.04	516.34	1,090.05	1.08	-0.36	165.34
7,149.00	0.44	61.63	6,945.51	-959.65	516.47	1,089.77	0.66	0.10	110.23
7,243.00	0.97	3.80	7,039.50	-958.69	516.84	1,089.10	0.88	0.56	-61.52
7,336.00	0.97	15.84	7,132.49	-957.15	517.10	1,087.88	0.22	0.00	12.95
7,431.00	0.44	26.12	7,227.48	-956.04	517.48	1,087.09	0.57	-0.56	10.82
7,526.00	0.00	220.80	7,322.48	-955.72	517.64	1,086.88	0.46	-0.46	0.00
7,619.00	0.44	217.11	7,415.48	-956.00	517.43	1,087.03	0.47	0.47	0.00
7,713.00	0.70	211.57	7,509.47	-956.78	516.91	1,087.46	0.28	0.28	-5.89
7,807.00	0.88	182.04	7,603.46	-957.99	516.58	1,088.37	0.47	0.19	-31.41
7,900.00	0.62	189.60	7,696.46	-959.20	516.47	1,089.38	0.30	-0.28	8.13
7,994.00	0.88	176.42	7,790.45	-960.42	516.43	1,090.43	0.33	0.28	-14.02
8,087.00	1.14	160.16	7,883.43	-962.00	516.79	1,091.99	0.41	0.28	-17.48
8,181.00	1.41	163.44	7,977.41	-963.99	517.44	1,094.05	0.30	0.29	3.49
8,275.00	1.49	163.06	8,071.38	-966.27	518.13	1,096.37	0.09	0.09	-0.40
8,368.00	1.76	143.46	8,164.34	-968.57	519.33	1,098.97	0.66	0.29	-21.08
8,467.00	2.11	123.86	8,263.29	-970.81	521.75	1,102.09	0.75	0.35	-19.80
8,575.00	1.93	116.74	8,371.22	-972.74	525.02	1,105.36	0.29	-0.17	-6.59
8,630.00	1.93	116.74	8,426.19	-973.57	526.68	1,106.88	0.00	0.00	0.00

Projection to TD

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT NAD27
Site: NBU 1022-02A Pad
Well: NBU 1022-2A4S
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 1022-2A4S
TVD Reference: GL 4974' & RKB 18' @ 4992.00ft (Ensign 145)
MD Reference: GL 4974' & RKB 18' @ 4992.00ft (Ensign 145)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Multi User Db

Targets
Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N-S (ft)	+E-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
NBU 1022-2A4S PBHL - actual wellpath misses target center by 74.07ft at 8630.00ft MD (8426.19 TVD, -973.57 N, 526.68 E) - Circle (radius 25.00)	0.00	0.00	8,500.00	-968.57	530.31	607,430.56	2,588,921.73	39° 58' 55.415 N	109° 23' 53.296 W
NBU 1022-2A4S MV - actual wellpath misses target center by 18.95ft at 7552.54ft MD (7349.02 TVD, -955.74 N, 517.63 E) - Point	0.00	0.00	7,349.00	-970.09	530.00	607,429.03	2,588,921.45	39° 58' 55.400 N	109° 23' 53.300 W
NBU 1022-2A4S 5625' - actual wellpath misses target center by 27.62ft at 5826.36ft MD (5623.05 TVD, -952.94 N, 514.43 E) - Point	0.00	0.00	5,625.00	-927.53	503.76	607,470.96	2,588,894.22	39° 58' 55.821 N	109° 23' 53.637 W

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N-S (ft)	+E-W (ft)	
2,389.00	2,388.89	-13.96	11.12	First MWD Survey
8,630.00	8,426.19	-973.57	526.68	Projection to TD

Checked By: _____ Approved By: _____ Date: _____



JOB NO.:	42DEF0906267	Report Time:	2400	1 of 8
COMPANY:	Kerr McGee Oil and Gas Onshore LP	API JOB #		
LOCATION:	NBU 1022-2A Pad	WORK ORDER#	136437	
RIG NAME:	Ensign 145	FIELD:	Natural Buttes Unit	
STATE:	Utah	Township:	Sec 2 T10S R22E	
COUNTY:	Uintah	SECTRANGE:		Rocky Mountain
WELL NAME:	NBU 1022-2A4S			

From Monday, June 15, 2009 at 0000 to Monday, June 15, 2009 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	0.00	Rotary Hours	0.00	WOB	0	Pick UP	0	Slack Off	0	SPM	
End Depth	0.00	Circulating Hours	0.00	RAB	0	SPP	0	FlowRate	0-0	0	
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type		PV	0	SOLID	0		
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	0	GAS	0	YP	0	BHT°	0
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	0	SAND	0	PH	0	Flow T°	0
Below Rotary Hrs.	0.00	Percent Slide:	NA	Chlorides	0	WL	0			Oil %	0

PERSONNEL				cASING			BHA	
Lead Directional :	Bob Brewer (2085)			Size	Lb/ft	Set Depth	N/A	
Second Directional :	Don Crum (3118)			9 5/8	36	2319		
MWD Operator1	Luke Kristy (3505)			Signature:				
MWD Operator2	Andy Gibson (3085)							
Directional Company:	SDI							
Geologist:								
Company Man:	Doug Barone							
Incl. In:	0	Azm. In:	0	Incl. Out:	0	Azm. Out:	0	

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
15-Jun-09	00:00	08:00	8.00	0	0	Standby	Waiting on rig move.
15-Jun-09	08:00	12:00	4.00	0	0	Standby	Mob to rig.
15-Jun-09	12:00	24:00	12.00	0	0	Standby	Rig-up and wait on rig.



JOB NO.:	42DEF0906267	Report Time:	2400	2 of 8
COMPANY:	Kerr McGee Oil and Gas Onshore LP	API JOB #		
LOCATION:	NBU 1022-2A Pad	WORK ORDER#	136437	
RIG NAME:	Ensign 145	FIELD:	Natural Buttes Unit	
STATE:	Utah	Township:	Sec 2 T10S R22E	
COUNTY:	Uintah	SECTRANGE:		Rocky Mountain
WELL NAME:	NBU 1022-2A4S			

From Tuesday, June 16, 2009 at 0000 to Tuesday, June 16, 2009 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	0.00	Rotary Hours	0.00	WOB	0	Pick UP	0	Slack Off	0	SPM	
End Depth	0.00	Circulating Hours	0.00	RAB	0	SPP	0	FlowRate	0-0		0
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type		PV	0	SOLID		0	
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	0	GAS	0	YP	0	BHT°	0
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	0	SAND	0	PH	0	Flow T°	0
Below Rotary Hrs.	0.00	Percent Slide:	NA	Chlorides	0	WL	0			Oil %	0

PERSONNEL				cASING			BHA	
Lead Directional :	Bob Brewer (2085)			Size	Lb/ft	Set Depth	N/A	
Second Directional :	Don Crum (3118)			9 5/8	36	2319		
MWD Operator1	Luke Kristy (3505)			Signature:				
MWD Operator2	Andy Gibson (3085)							
Directional Company:	SDI							
Geologist:								
Company Man:	Doug Barone							
Incl. In:	0	Azm. In:	0	Incl. Out:	0	Azm. Out:	0	

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
16-Jun-09	00:00	04:00	4.00	0	0	Test BOPS	Waiting on rig.
16-Jun-09	04:00	14:00	10.00	0	0	Standby	Topdrive - Rig Repair.
16-Jun-09	14:00	24:00	10.00	0	0	Standby	P/U drill pipe.



JOB NO.:	42DEF0906267	Report Time:	2400	3 of 8
COMPANY:	Kerr McGee Oil and Gas Onshore LP	API JOB #		
LOCATION:	NBU 1022-2A Pad	WORK ORDER#	136437	
RIG NAME:	Ensign 145	FIELD:	Natural Buttes Unit	
STATE:	Utah	Township:	Sec 2 T10S R22E	
COUNTY:	Uintah	SECT/RANGE:		Rocky Mountain
WELL NAME:	NBU 1022-2A4S			

From Wednesday, June 17, 2009 at 0000 to Wednesday, June 17, 2009 at 2400

DRILLING SUMMARY				Drilling Parameters									
Start Depth	2200.00	Rotary Hours	8.83	WOB	15	Pick UP	95	Slack Off	90	SPM			
End Depth	3520.00	Circulating Hours	0.00	RAB	90	SPP	1250	FlowRate	0-470		130		
Total Drilled:	1320.00	Avg. Total ROP:	81.23	Mud Data									
Total Rotary Drilled:	790.00	Avg. Rotary ROP:	89.43	Type	H20	PV	0	SOLID	0				
Total Drilled Sliding:	530.00	Avg. Slide ROP:	71.46	Weight	9	GAS	0	YP	0	BHT°	0		
Slide Hours:	7.42	Percent Rotary:	59.85	Viscosity	30	SAND	0	PH	0	Flow T°	0		
Below Rotary Hrs.	22.00	Percent Slide:	40.15	Chlorides	0	WL	0			Oil %	0		
PERSONNEL				cASING			BHA						
Lead Directional :	Bob Brewer (2085)			Size	Lb/ft	Set Depth	BHA # 1: Security FMHX555ZM w/5x13s, 6.5" 3.3 stg. 1.5 fbh, 6.5" NMPC, 6.5" HOS, 6.5" NMDC, 6.5" HOS, 6.5" GAP SUB, 6.5" NMPC, 25 Jts. 4 1/2" HWDP Spiral,						
Second Directional :	Don Crum (3118)			9 5/8	36	2319							
MWD Operator1	Luke Kristy (3505)			Signature:									
MWD Operator2	Andy Gibson (3085)												
Directional Company:	SDI												
Geologist:													
Company Man:	Doug Barone												
Incl. In:	0	Azm. In:	0	Incl. Out:	25.5	Azm. Out:	151.19						

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
17-Jun-09	00:00	02:00	2.00	0	0	Standby	P/U drill pipe.
17-Jun-09	02:00	03:30	1.50	0	0	Change BHA	P/U BHA # 1.
17-Jun-09	03:30	07:00	3.50	0	2200	TIH	TIH
17-Jun-09	07:00	07:30	0.50	2200	2219	Drilling Cement	Drilling out cement & shoe track.
17-Jun-09	07:30	08:05	0.58	2219	2296	Drilling	Drilling
17-Jun-09	08:05	08:20	0.25	2296	2296	Survey & Conn.	Survey & Conn.
17-Jun-09	08:20	08:35	0.25	2296	2309	Sliding	Sliding
17-Jun-09	08:35	08:45	0.17	2309	2330	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	08:45	08:55	0.17	2330	2444	Sliding	Sliding - (WOB:10;GPM :470;TFO:110)
17-Jun-09	08:55	09:20	0.42	2444	2475	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	09:20	09:35	0.25	2475	2490	Sliding	Sliding - (WOB:10;GPM :470;TFO:120)
17-Jun-09	09:35	09:45	0.17	2490	2506	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	09:45	10:00	0.25	2506	2519	Sliding	Sliding - (WOB:10;GPM :470;TFO:145)
17-Jun-09	10:00	10:10	0.17	2519	2536	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	10:10	10:20	0.17	2536	2546	Sliding	Sliding - (WOB:10;GPM :470;TFO:20)
17-Jun-09	10:20	10:30	0.17	2546	2569	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	10:30	10:40	0.17	2569	2579	Sliding	Sliding - (WOB:10;GPM :470;TFO:20)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
17-Jun-09	10:40	10:55	0.25	2579	2600	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	10:55	11:05	0.17	2600	2610	Sliding	Sliding - (WOB:10;GPM :470;TFO:20)
17-Jun-09	11:05	11:20	0.25	2610	2625	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	11:20	11:30	0.17	2625	2641	Sliding	Sliding - (WOB:10;GPM :470;TFO:-15)
17-Jun-09	11:30	11:40	0.17	2641	2661	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	11:40	12:00	0.33	2661	2675	Sliding	Sliding - (WOB:10;GPM :470;TFO:-10)
17-Jun-09	12:00	12:10	0.17	2675	2692	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	12:10	12:25	0.25	2692	2704	Sliding	Sliding - (WOB:10;GPM :470;TFO:-40)
17-Jun-09	12:25	12:35	0.17	2704	2724	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	12:35	12:50	0.25	2724	2737	Sliding	Sliding - (WOB:10;GPM :470;TFO:-40)
17-Jun-09	12:50	13:10	0.33	2737	2754	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	13:10	13:20	0.17	2754	2765	Sliding	Sliding - (WOB:10;GPM :470;TFO:1)
17-Jun-09	13:20	13:30	0.17	2765	2785	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	13:30	13:45	0.25	2785	2796	Sliding	Sliding - (WOB:10;GPM :470;TFO:1)
17-Jun-09	13:45	14:00	0.25	2796	2816	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	14:00	14:15	0.25	2816	2828	Sliding	Sliding - (WOB:10;GPM :470;TFO:-15)
17-Jun-09	14:15	14:30	0.25	2828	2846	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	14:30	14:40	0.17	2846	2857	Sliding	Sliding - (WOB:10;GPM :470;TFO:10)
17-Jun-09	14:40	14:45	0.08	2857	2878	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	14:45	15:15	0.50	2878	2878	Rig Service-Inhole	Rig Service-Inhole
17-Jun-09	15:15	15:30	0.25	2878	2890	Sliding	Sliding - (WOB:10;GPM :470;TFO:10)
17-Jun-09	15:30	15:45	0.25	2890	2909	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	15:45	15:55	0.17	2909	2920	Sliding	Sliding - (WOB:10;GPM :470;TFO:10)
17-Jun-09	15:55	16:10	0.25	2920	2941	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	16:10	16:25	0.25	2941	2954	Sliding	Sliding - (WOB:10;GPM :470;TFO:10)
17-Jun-09	16:25	16:40	0.25	2954	2972	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	16:40	16:55	0.25	2972	2984	Sliding	Sliding - (WOB:10;GPM :470;TFO:10)
17-Jun-09	16:55	17:10	0.25	2984	3002	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	17:10	17:25	0.25	3002	3013	Sliding	Sliding - (WOB:10;GPM :470;TFO:10)
17-Jun-09	17:25	17:40	0.25	3013	3034	Drilling	Drilling - (WOB:10;GPM :470;RPM:45)
17-Jun-09	17:40	17:50	0.17	3034	3046	Sliding	Sliding - (WOB:10;GPM :470;TFO:360)
17-Jun-09	17:50	18:05	0.25	3046	3065	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
17-Jun-09	18:05	18:15	0.17	3065	3077	Sliding	Sliding - (WOB:10;GPM :470;TFO:360)
17-Jun-09	18:15	18:30	0.25	3077	3096	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
17-Jun-09	18:30	18:45	0.25	3096	3108	Sliding	Sliding - (WOB:10;GPM :470;TFO:360)
17-Jun-09	18:45	18:55	0.17	3108	3127	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
17-Jun-09	18:55	19:10	0.25	3127	3142	Sliding	Sliding - (WOB:10;GPM :470;TFO:360)
17-Jun-09	19:10	19:25	0.25	3142	3158	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
17-Jun-09	19:25	19:40	0.25	3158	3173	Sliding	Sliding - (WOB:10;GPM :470;TFO:360)
17-Jun-09	19:40	20:05	0.42	3173	3220	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
17-Jun-09	20:05	20:20	0.25	3220	3235	Sliding	Sliding - (WOB:10;GPM :470;TFO:15)
17-Jun-09	20:20	20:30	0.17	3235	3251	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
17-Jun-09	20:30	20:45	0.25	3251	3271	Sliding	Sliding - (WOB:10;GPM :470;TFO:30)
17-Jun-09	20:45	20:55	0.17	3271	3282	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
17-Jun-09	20:55	21:10	0.25	3282	3302	Sliding	Sliding - (WOB:10;GPM :470;TFO:30)
17-Jun-09	21:10	21:20	0.17	3302	3314	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
17-Jun-09	21:20	21:35	0.25	3314	3329	Sliding	Sliding - (WOB:10;GPM :470;TFO:360)
17-Jun-09	21:35	21:50	0.25	3329	3345	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
17-Jun-09	21:50	22:05	0.25	3345	3360	Sliding	Sliding - (WOB:10;GPM :470;TFO:360)
17-Jun-09	22:05	22:20	0.25	3360	3376	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
17-Jun-09	22:20	22:30	0.17	3376	3386	Sliding	Sliding - (WOB:10;GPM :470;TFO:360)
17-Jun-09	22:30	23:00	0.50	3386	3438	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
17-Jun-09	23:00	23:15	0.25	3438	3448	Sliding	Sliding - (WOB:10;GPM :470;TFO:360)
17-Jun-09	23:15	23:30	0.25	3448	3469	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
17-Jun-09	23:30	23:45	0.25	3469	3484	Sliding	Sliding - (WOB:10;GPM :470;TFO:360)
17-Jun-09	23:45	24:00	0.25	3484	3520	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)



JOB NO.:	42DEF0906267	Report Time:	2400	4 of 8
COMPANY:	Kerr McGee Oil and Gas Onshore LP	API JOB #		
LOCATION:	NBU 1022-2A Pad	WORK ORDER#	136437	
RIG NAME:	Ensign 145	FIELD:	Natural Buttes Unit	
STATE:	Utah	Township:	Sec 2 T10S R22E	
COUNTY:	Uintah	SECTRANGE:		Rocky Mountain
WELL NAME:	NBU 1022-2A4S			

From Thursday, June 18, 2009 at 0000 to Thursday, June 18, 2009 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	3520.00	Rotary Hours	14.58	WOB	15	Pick UP	110	Slack Off	100	SPM	
End Depth	5389.00	Circulating Hours	0.00	RAB	105	SPP	1500	FlowRate	470 - 470	130	
Total Drilled:	1869.00	Avg. Total ROP:	79.53	Mud Data							
Total Rotary Drilled:	1457.00	Avg. Rotary ROP:	99.91	Type	H2O	PV	0	SOLID	0		
Total Drilled Sliding:	412.00	Avg. Slide ROP:	46.21	Weight	8.4	GAS	0	YP	0	BHT°	0
Slide Hours:	8.92	Percent Rotary:	77.96	Viscosity	26	SAND	0	PH	9	Flow T°	0
Below Rotary Hrs.	24.00	Percent Slide:	22.04	Chlorides	400	WL	0		Oil %	0	

PERSONNEL				cASING			BHA
Lead Directional :	Bob Brewer (2085)			Size	Lb/ft	Set Depth	BHA # 1: Security FMHX5552M w/5x13s, 6.5" 3.3 stg. 1.5 fbh, 6.5" NMPC, 6.5" HOS, 6.5" NMDC, 6.5" HOS, 6.5" GAP SUB, 6.5" NMPC, 25 Jts. 4 1/2" HWDP Spiral,
Second Directional :	Don Crum (3118)			9 5/8	36	2319	
MWD Operator1	Luke Kristy (3505)			Signature:			
MWD Operator2	Andy Gibson (3085)						
Directional Company:	SDI						
Geologist:							
Company Man:	Doug Barone						
Incl. In:	25.5	Azm. In:	151.19	Incl. Out:	10.99	Azm. Out:	149.35

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
18-Jun-09	00:00	00:10	0.17	3520	3531	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	00:10	00:25	0.25	3531	3546	Sliding	Sliding - (WOB:10;GPM :470;TFO:30)
18-Jun-09	00:25	00:40	0.25	3546	3562	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	00:40	00:55	0.25	3562	3582	Sliding	Sliding - (WOB:10;GPM :470;TFO:45)
18-Jun-09	00:55	01:05	0.17	3582	3593	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	01:05	01:20	0.25	3593	3608	Sliding	Sliding - (WOB:10;GPM :470;TFO:45)
18-Jun-09	01:20	01:35	0.25	3608	3624	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	01:35	01:50	0.25	3624	3644	Sliding	Sliding - (WOB:10;GPM :470;TFO:45)
18-Jun-09	01:50	02:05	0.25	3644	3655	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	02:05	02:20	0.25	3655	3675	Sliding	Sliding - (WOB:10;GPM :470;TFO:30)
18-Jun-09	02:20	02:35	0.25	3675	3686	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	02:35	02:50	0.25	3686	3706	Sliding	Sliding - (WOB:10;GPM :470;TFO:30)
18-Jun-09	02:50	03:00	0.17	3706	3717	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	03:00	03:15	0.25	3717	3732	Sliding	Sliding - (WOB:10;GPM :470;TFO:15)
18-Jun-09	03:15	03:25	0.17	3732	3748	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	03:25	03:40	0.25	3748	3763	Sliding	Sliding - (WOB:10;GPM :470;TFO:15)
18-Jun-09	03:40	03:55	0.25	3763	3779	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
18-Jun-09	03:55	04:05	0.17	3779	3789	Sliding	Sliding - (WOB:10;GPM :470;TFO:15)
18-Jun-09	04:05	04:20	0.25	3789	3810	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	04:20	04:30	0.17	3810	3820	Sliding	Sliding - (WOB:10;GPM :470;TFO:15)
18-Jun-09	04:30	05:15	0.75	3820	3904	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	05:15	05:30	0.25	3904	3919	Sliding	Sliding - (WOB:10;GPM :470;TFO:30)
18-Jun-09	05:30	05:40	0.17	3919	3934	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	05:40	05:55	0.25	3934	3949	Sliding	Sliding - (WOB:10;GPM :470;TFO:30)
18-Jun-09	05:55	06:10	0.25	3949	3966	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	06:10	06:25	0.25	3966	3975	Sliding	Sliding - (WOB:10;GPM :470;TFO:30)
18-Jun-09	06:25	06:40	0.25	3975	3996	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	06:40	06:50	0.17	3996	4004	Sliding	Sliding - (WOB:10;GPM :470;TFO:30)
18-Jun-09	06:50	07:15	0.42	4004	4028	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	07:15	07:20	0.08	4028	4033	Sliding	Sliding - (WOB:10;GPM :470;TFO:10)
18-Jun-09	07:20	07:40	0.33	4033	4058	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	07:40	07:50	0.17	4058	4063	Sliding	Sliding - (WOB:10;GPM :470;TFO:1)
18-Jun-09	07:50	08:10	0.33	4063	4089	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	08:10	08:15	0.08	4089	4094	Sliding	Sliding - (WOB:10;GPM :470;TFO:1)
18-Jun-09	08:15	08:50	0.58	4094	4154	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	08:50	09:10	0.33	4154	4160	Sliding	Sliding - (WOB:10;GPM :470;TFO:10)
18-Jun-09	09:10	09:45	0.58	4160	4214	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	09:45	10:05	0.33	4214	4224	Sliding	Sliding - (WOB:10;GPM :470;TFO:10)
18-Jun-09	10:05	10:20	0.25	4224	4244	Drilling	Drilling - (WOB:15;GPM :470;RPM:40)
18-Jun-09	10:20	10:40	0.33	4244	4254	Sliding	Sliding - (WOB:10;GPM :470;TFO:1)
18-Jun-09	10:40	10:50	0.17	4254	4276	Drilling	Drilling - (WOB:10;GPM :470;RPM:35)
18-Jun-09	10:50	11:10	0.33	4276	4287	Sliding	Sliding - (WOB:10;GPM :470;TFO:1)
18-Jun-09	11:10	11:30	0.33	4287	4307	Drilling	Drilling - (WOB:10;GPM :470;RPM:35)
18-Jun-09	11:30	11:40	0.17	4307	4327	Sliding	Sliding - (WOB:10;GPM :470;TFO:1)
18-Jun-09	11:40	11:45	0.08	4327	4337	Drilling	Drilling - (WOB:10;GPM :470;RPM:35)
18-Jun-09	11:45	12:15	0.50	4347	4347	Rig Service-Inhole	Rig Service-Inhole
18-Jun-09	12:15	12:35	0.33	4337	4357	Sliding	Sliding - (WOB:10;GPM :470;TFO:1)
18-Jun-09	12:35	12:45	0.17	4357	4369	Drilling	Drilling - (WOB:10;GPM :470;RPM:35)
18-Jun-09	12:45	13:05	0.33	4369	4379	Sliding	Sliding - (WOB:10;GPM :470;TFO:1)
18-Jun-09	13:05	13:30	0.42	4379	4418	Drilling	Drilling - (WOB:10;GPM :470;RPM:35)
18-Jun-09	13:30	13:50	0.33	4418	4428	Sliding	Sliding - (WOB:10;GPM :470;TFO:-60)
18-Jun-09	13:50	14:35	0.75	4428	4498	Drilling	Drilling - (WOB:10;GPM :470;RPM:35)
18-Jun-09	14:35	15:05	0.50	4498	4514	Sliding	Sliding - (WOB:10;GPM :470;TFO:-80)
18-Jun-09	15:05	17:10	2.08	4514	4774	Drilling	Drilling - (WOB:10;GPM :470;RPM:35)
18-Jun-09	17:10	17:30	0.33	4774	4784	Sliding	Sliding - (WOB:15;GPM :470;TFO:-80)
18-Jun-09	17:30	18:10	0.67	4784	4868	Drilling	Drilling - (WOB:15;GPM :470;RPM:35)
18-Jun-09	18:10	18:30	0.33	4868	4881	Sliding	Sliding - (WOB:15;GPM :470;TFO:180)
18-Jun-09	18:30	19:05	0.58	4881	4962	Drilling	Drilling - (WOB:15;GPM :470;RPM:50)
18-Jun-09	19:05	19:25	0.33	4962	4974	Sliding	Sliding - (WOB:15;GPM :470;TFO:180)
18-Jun-09	19:25	20:10	0.75	4974	5055	Drilling	Drilling - (WOB:15;GPM :470;RPM:50)
18-Jun-09	20:10	20:30	0.33	5055	5067	Sliding	Sliding - (WOB:15;GPM :470;TFO:-150)
18-Jun-09	20:30	21:10	0.67	5067	5149	Drilling	Drilling - (WOB:15;GPM :470;RPM:50)
18-Jun-09	21:10	21:40	0.50	5149	5161	Sliding	Sliding - (WOB:15;GPM :470;TFO:-150)
18-Jun-09	21:40	22:20	0.67	5161	5242	Drilling	Drilling - (WOB:15;GPM :470;RPM:50)
18-Jun-09	22:20	22:35	0.25	5242	5252	Sliding	Sliding - (WOB:15;GPM :470;TFO:-150)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
18-Jun-09	22:35	23:25	0.83	5252	5335	Drilling	Drilling - (WOB:15;GPM :470;RPM:50)
18-Jun-09	23:25	23:40	0.25	5335	5343	Sliding	Sliding - (WOB:15;GPM :470;TFO:180)
18-Jun-09	23:40	24:00	0.33	5343	5389	Drilling	Drilling - (WOB:15;GPM :470;RPM:50)



JOB NO.:	42DEF0906267	Report Time:	2400	5 of 8
COMPANY:	Kerr McGee Oil and Gas Onshore LP	API JOB #		
LOCATION:	NBU 1022-2A Pad	WORK ORDER#	136437	
RIG NAME:	Ensign 145	FIELD:	Natural Buttes Unit	
STATE:	Utah	Township:	Sec 2 T10S R22E	
COUNTY:	Uintah	SECTRANGE:		Rocky Mountain
WELL NAME:	NBU 1022-2A4S			

From Friday, June 19, 2009 at 0000 to Friday, June 19, 2009 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	5389.00	Rotary Hours	18.83	WOB	18	Pick UP	110	Slack Off	100	SPM	
End Depth	7014.00	Circulating Hours	0.00	RAB	105	SPP	1900	FlowRate	470 - 470	130	
Total Drilled:	1625.00	Avg. Total ROP:	69.15	Mud Data							
Total Rotary Drilled:	1529.00	Avg. Rotary ROP:	81.19	Type	LSND	PV	13	SOLID	9		
Total Drilled Sliding:	96.00	Avg. Slide ROP:	20.57	Weight	10.1	GAS	0	YP	9	BHT°	133
Slide Hours:	4.67	Percent Rotary:	94.09	Viscosity	36	SAND	0	PH	10.5	Flow T°	0
Below Rotary Hrs.	24.00	Percent Slide:	5.91	Chlorides	700	WL	10.8		Oil %	0	

PERSONNEL				cASING			BHA
Lead Directional :	Bob Brewer (2085)			Size	Lb/ft	Set Depth	BHA # 1: Security FMHX555ZM w/5x13s, 6.5" 3.3 stg. 1.5 fbh, 6.5" NMPC, 6.5" HOS, 6.5" NMDC, 6.5" HOS, 6.5" GAP SUB, 6.5" NMPC, 25 Jts. 4 1/2" HWDP Spiral,
Second Directional :	Don Crum (3118)			9 5/8	36	2319	
MWD Operator1	Luke Kristy (3505)			Signature:			
MWD Operator2	Andy Gibson (3085)						
Directional Company:	SDI						
Geologist:							
Company Man:	Doug Barone						
Incl. In:	10.99	Azm. In:	149.35	Incl. Out:	0.7	Azm. Out:	159.28

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
19-Jun-09	00:00	00:25	0.42	5389	5429	Drilling	Drilling - (WOB:15;GPM :470;RPM:50)
19-Jun-09	00:25	00:45	0.33	5429	5437	Sliding	Sliding - (WOB:15;GPM :470;TFO:180)
19-Jun-09	00:45	01:30	0.75	5437	5522	Drilling	Drilling - (WOB:15;GPM :470;RPM:50)
19-Jun-09	01:30	01:50	0.33	5522	5530	Sliding	Sliding - (WOB:15;GPM :470;TFO:180)
19-Jun-09	01:50	02:45	0.92	5530	5616	Drilling	Drilling - (WOB:15;GPM :470;RPM:50)
19-Jun-09	02:45	03:05	0.33	5616	5622	Sliding	Sliding - (WOB:15;GPM :470;TFO:180)
19-Jun-09	03:05	03:55	0.83	5622	5709	Drilling	Drilling - (WOB:15;GPM :470;RPM:50)
19-Jun-09	03:55	04:25	0.50	5709	5717	Sliding	Sliding - (WOB:15;GPM :470;TFO:180)
19-Jun-09	04:25	05:20	0.92	5717	5802	Drilling	Drilling - (WOB:15;GPM :470;RPM:50)
19-Jun-09	05:20	06:00	0.67	5802	5814	Sliding	Sliding - (WOB:15;GPM :470;TFO:180)
19-Jun-09	06:00	06:20	0.33	5814	5843	Drilling	Drilling - (WOB:15;GPM :470;RPM:50)
19-Jun-09	06:20	07:00	0.67	5843	5858	Sliding	Sliding - (WOB:15;GPM :470;TFO:180)
19-Jun-09	07:00	07:55	0.92	5858	5930	Drilling	Drilling - (WOB:15;GPM :470;RPM:50)
19-Jun-09	07:55	09:00	1.08	5930	5950	Sliding	Sliding - (WOB:15;GPM :470;TFO:180)
19-Jun-09	09:00	12:30	3.50	5950	6176	Drilling	Drilling - (WOB:15;GPM :470;RPM:50)
19-Jun-09	12:30	13:00	0.50	6176	6176	Rig Service-Inhole	Rig Service-Inhole
19-Jun-09	13:00	13:45	0.75	6176	6195	Sliding	Sliding - (WOB:15;GPM :470;TFO:180)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
19-Jun-09	13:45	24:00	10.25	6195	7014	Drilling	Drilling - (WOB:18;GPM :470;RPM:35)

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JOB NO.:	42DEF0906267	Report Time:	2400	6 of 8
COMPANY:	Kerr McGee Oil and Gas Onshore LP	API JOB #		
LOCATION:	NBU 1022-2A Pad	WORK ORDER#	136437	
RIG NAME:	Ensign 145	FIELD:	Natural Buttes Unit	
STATE:	Utah	Township:	Sec 2 T10S R22E	
COUNTY:	Uintah	SECTRANGE:		Rocky Mountain
WELL NAME:	NBU 1022-2A4S			

From Saturday, June 20, 2009 at 0000 to Saturday, June 20, 2009 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	7014.00	Rotary Hours	18.50	WOB	18	Pick UP	170	Slack Off	125	SPM	
End Depth	8193.00	Circulating Hours	1.75	RAB	136	SPP	2650	FlowRate	470 - 470	130	
Total Drilled:	1179.00	Avg. Total ROP:	54.84	Mud Data							
Total Rotary Drilled:	1124.00	Avg. Rotary ROP:	60.76	Type	LSND	PV	20	SOLID	18.5		
Total Drilled Sliding:	55.00	Avg. Slide ROP:	18.33	Weight	10.1	GAS	0	YP	20	BHT°	161
Slide Hours:	3.00	Percent Rotary:	95.34	Viscosity	42	SAND	0.25	PH	9.5	Flow T°	0
Below Rotary Hrs.	24.00	Percent Slide:	4.66	Chlorides	700	WL	8.8			Oil %	0

PERSONNEL				cCASING			BHA
Lead Directional :	Bob Brewer (2085)			Size	Lb/ft	Set Depth	BHA # 1:Security FMHX555ZM w/5x13s, 6.5" 3.3 stg. 1.5 fbh, 6.5" NMPC, 6.5" HOS, 6.5" NMDC, 6.5" HOS, 6.5" GAP SUB, 6.5" NMPC, 25 Jts. 4 1/2" HWDP Spiral,
Second Directional :	Don Crum (3118)			9 5/8	36	2319	
MWD Operator1	Robert Arvizu (3023)			Signature:			
MWD Operator2	Andy Gibson (3085)						
Directional Company:	SDI						
Geologist:							
Company Man:	Doug Barone						
Incl. In:	0.7	Azm. In:	159.28	Incl. Out:	1.14	Azm. Out:	160.16

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
20-Jun-09	00:00	01:00	1.00	7014	7034	Sliding	Sliding - (WOB:15;GPM :470;TFO:350)
20-Jun-09	01:00	03:30	2.50	7034	7204	Drilling	Drilling - (WOB:18;GPM :470;RPM:35)
20-Jun-09	03:30	04:30	1.00	7204	7224	Sliding	Sliding - (WOB:15;GPM :470;TFO:350)
20-Jun-09	04:30	12:30	8.00	7224	7674	Drilling	Drilling - (WOB:18;GPM :470;RPM:35)
20-Jun-09	12:30	12:45	0.25	7674	7674	Rig Service-Inhole	Rig Service-Inhole
20-Jun-09	12:45	14:40	1.92	7674	7862	Drilling	Drilling - (WOB:18;GPM :470;RPM:35)
20-Jun-09	14:40	15:40	1.00	7862	7877	Sliding	Sliding - (WOB:15;GPM :470;TFO:350)
20-Jun-09	15:40	16:45	1.08	7877	7928	Drilling	Drilling - (WOB:18;GPM :470;RPM:35)
20-Jun-09	16:45	18:30	1.75	7928	7928	Circulating	Circulating
20-Jun-09	18:30	19:00	0.50	7928	7928	Rig repair	Rig Repair
20-Jun-09	19:00	24:00	5.00	7928	8193	Drilling	Drilling - (WOB:18;GPM :470;RPM:35)



JOB NO.:	42DEF0906267	Report Time:	2400	7 of 8
COMPANY:	Kerr McGee Oil and Gas Onshore LP	API JOB #		
LOCATION:	NBU 1022-2A Pad	WORK ORDER#	136437	
RIG NAME:	Ensign 145	FIELD:	Natural Buttes Unit	
STATE:	Utah	Township:	Sec 2 T10S R22E	
COUNTY:	Uintah	SECTRANGE:	Rocky Mountain	
WELL NAME:	NBU 1022-2A4S			

From Sunday, June 21, 2009 at 0000 to Sunday, June 21, 2009 at 2400

DRILLING SUMMARY				Drilling Parameters									
Start Depth	8193.00	Rotary Hours	9.75	WOB	20	Pick UP	205	Slack Off	155	SPM			
End Depth	8630.00	Circulating Hours	4.00	RAB	175	SPP	2900	FlowRate	458 - 470		120		
Total Drilled:	437.00	Avg. Total ROP:	44.82	Mud Data									
Total Rotary Drilled:	437.00	Avg. Rotary ROP:	44.82	Type	LSND	PV	20	SOLID	18.5				
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	10.1	GAS	0	YP	20	BHT°	161		
Slide Hours:	0.00	Percent Rotary:	100.00	Viscosity	42	SAND	0.25	PH	9.5	Flow T°	0		
Below Rotary Hrs.	24.00	Percent Slide:	.00	Chlorides	700	WL	8.8			Oil %	0		
PERSONNEL				cASING				BHA					
Lead Directional :	Bob Brewer (2085)			Size	Lb/ft	Set Depth		BHA # 1:Security FMHX555ZM w/5x13s, 6.5" 3.3 stg. 1.5 fbh, 6.5" NMPC, 6.5" HOS, 6.5" NMDC, 6.5" HOS, 6.5" GAP SUB, 6.5" NMPC, 25 Jts. 4 1/2" HWDP Spiral,					
Second Directional :	Don Crum (3118)			9 5/8	36	2319							
MWD Operator1	Robert Arvizu (3023)			Signature:									
MWD Operator2	Luke Kristy (3505)												
Directional Company:	SDI												
Geologist:													
Company Man:	Doug Barone												
Incl. In:	1.14	Azm. In:	160.16	Incl. Out:	1.3	Azm. Out:	116						

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
21-Jun-09	00:00	00:55	0.92	8193	8236	Drilling	Drilling - (WOB:22;GPM :458;RPM:25)
21-Jun-09	00:55	02:50	1.92	8236	8330	Drilling	Drilling - (WOB:22;GPM :458;RPM:25)
21-Jun-09	02:50	04:45	1.92	8330	8423	Drilling	Drilling - (WOB:22;GPM :458;RPM:25)
21-Jun-09	04:45	09:45	5.00	8423	8630	Drilling	Drilling - (WOB:22;GPM :470;RPM:25)
21-Jun-09	09:45	10:00	0.25	8630	8630	Survey & Conn.	Survey & Conn.
21-Jun-09	10:00	12:15	2.25	8630	8630	Circulating	Circulating
21-Jun-09	12:15	19:00	6.75	8630	8630	Short Trip	Short Trip
21-Jun-09	19:00	21:00	2.00	8630	8630	Rig repair	Rig repair
21-Jun-09	21:00	22:45	1.75	8630	8630	Circulating	Circulating
21-Jun-09	22:45	24:00	1.25	8630	8630	Rig repair	Rig repair



JOB NO.:	42DEF0906267	Report Time:	2400	8 of 8
COMPANY:	Kerr McGee Oil and Gas Onshore LP	API JOB #		
LOCATION:	NBU 1022-2A Pad	WORK ORDER#	136437	
RIG NAME:	Ensign 145	FIELD:	Natural Buttes Unit	
STATE:	Utah	Township:	Sec 2 T10S R22E	
COUNTY:	Uintah	SECT\ RANGE:		Rocky Mountain
WELL NAME:	NBU 1022-2A4S			

From Monday, June 22, 2009 at 0000 to Monday, June 22, 2009 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	0.00	Rotary Hours	0.00	WOB	20	Pick UP	205	Slack Off	155	SPM	
End Depth	0.00	Circulating Hours	0.00	RAB	175	SPP	2900	FlowRate	470 - 470	120	
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type	LSND	PV	20	SOLID	18.5		
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	10.1	GAS	0	YP	20	BHT°	161
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	42	SAND	0.25	PH	9.5	Flow T°	0
Below Rotary Hrs.	24.00	Percent Slide:	NA	Chlorides	700	WL	8.8			Oil %	0
PERSONNEL				cASING			BHA				
Lead Directional :	Bob Brewer (2085)			Size	Lb/ft	Set Depth	BHA # 1: Security FMHX555ZM w/5x13s, 6.5" 3.3 stg. 1.5 fbh, 6.5" NMPC, 6.5" HOS, 6.5" NMDC, 6.5" HOS, 6.5" GAP SUB, 6.5" NMPC, 25 Jts. 4 1/2" HWDP Spiral,				
Second Directional :	Don Crum (3118)			9 5/8	36	2319					
MWD Operator1	Robert Arvizu (3023)			Signature:							
MWD Operator2	Luke Kristy (3505)										
Directional Company:	SDI										
Geologist:											
Company Man:	Doug Barone										
Incl. In:	1.3	Azm. In:	116	Incl. Out:	0	Azm. Out:	0				

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
22-Jun-09	00:00	06:00	6.00	8630	8630	POOH	POOH
22-Jun-09	06:00	06:30	0.50	8630	8630	Change BHA	Lay down tools
22-Jun-09	06:30	24:00	17.50	8630	8630	Other	Log well, run pipe, cement

BHA # 1



JOB NO.: 42DEF0906267	Work Order: 136437	FIELD: Natural Buttes Unit
COMPANY: Kerr McGee Oil and Gas Onshore LP		Township: Sec 2 T10S R22E
LOCATION: NBU 1022-2A Pad		SECT. RANGE: Rocky Mountain
RIG NAME: Ensign 145		Lead DD: Bob Brewer (2085)
STATE: Utah		Co. Man: Doug Barone
COUNTY: Uintah		BHA TYPE: Steerable Assembly
WELL NAME: NBU 1022-2A4S		BHA WT: 237783 Wt @ Jars: N/A

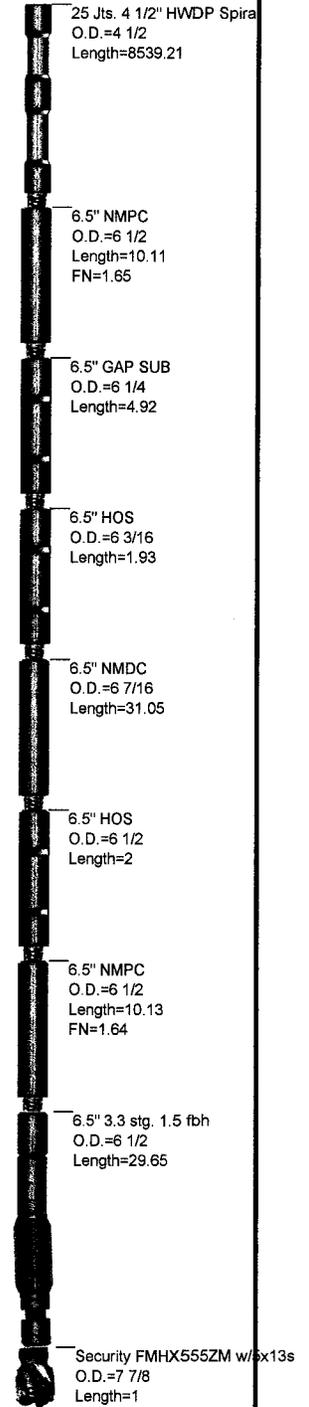
Time and Depths	MOTOR DATA	Drilling Parameters
Date In: 17-Jun-09 @ 02:00	6 1/2 FBH - 1.50 7:8 3.3 Stage	SO/PU: 90 - 155 / 90-205
Date Out: 22-Jun-09 @ 06:30	MFG.: SDI	Rot Strg Wt: 90-175
Hrs In Hole: 124.50	PAD OD: 6 3/4	WOB: 10 - 22
Start Depth: 2200.00	NB Stab: 0	TORQ: 0 - 0
End Depth: 8630.00	Bit to Bend: 5.96	SPP: 1250 - 2900
Total Drilled: 6430.00	Bent Hsg/Sub°: 1.5 /	Motor RPM: 66
Avg. Total ROP: 68.04	Lobe/Stage: 7:8 / 3.3	Rotary RPM: 25 - 50
Circ Hrs: Tot/Only 100.25 / 5.75	Rev/GAL: 0.14	Flow Rate: 458 - 470
Percent Slide: 17.00	Rotor Jet: 0	Avg Diff:
Percent Hrs: 25.40	Prop BUR:	Stall Pres.:
Slide Hours: 24.00	Act BUR:	Off Bot Pres.:
Total Sliding: 1093.00		
Avg. Slide ROP: 45.54		
Percent Rotary: 83.00		
Percent Hrs: 74.60		
Rotary Hours: 70.50		
Total Rotary: 5337.00		
Avg. Rotary ROP: 75.70		
Reason POOH: TD		

Mud Data		Bit Record	
Type LSND		Security / Security FMHX555ZM w/5x13s	
WT: 10.1	GAS: 0	Run #: 1	
Vis: 42	PV: 20	Type Bit: PDC	
WL: 8.8	PH: 9.5	IADC#: TFA: 0.648	
SOL: 18.5	SAND: 0.25	JETS: 5-13	
Oil %: 0	T °: 161	Bit Drop: 489 PSI @ 470 GPM	
Chlor: 700	YP: 20	Cond.: Fair	

MWD Spacing	Gamma: 0	Restiv: 0	Sensor: 55	Last Casing n n .
	GYRO: 0	DNSC: 0	Sonic: 0	Shoe @: Hanger @:

INC IN: .0 **INC OUT:** 1.9 **AZM IN:** .00 **AZM OUT:** 116.74

BHA Detail							
Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn	MFG.
Security FMHX555ZM w/5x13s	11229111		7 7/8	1.00	1.00	4 1/2 REGP	
6.5" 3.3 stg. 1.5 fbh	6492		6 1/2	29.65	30.65	4 1/2 XHB	
6.5" NMPC	125-070	3 1/4	6 1/2	10.13	40.78	4 1/2 XHB	
6.5" HOS	8-507	3 1/4	6 1/2	2.00	42.78	4 1/2 XHB	
6.5" NMDC	122-030	3 1/4	6 7/16	31.05	73.83	4 1/2 XHB	
6.5" HOS	8-414	3 1/4	6 3/16	1.93	75.76	4 1/2 XHB	
6.5" GAP SUB	69-556	2 7/8	6 1/4	4.92	80.68	4 1/2 XHB	
6.5" NMPC	125-075	3 1/4	6 1/2	10.11	90.79	4 1/2 XHB	
25 Jts. 4 1/2" HWDP Spiral	Rig	2 7/8	4 1/2	8,539.21	8630.00	4 1/2 XHB	





JOB NO.: 42DEF0906267
COMPANY: Kerr McGee Oil and Gas Onshore LP
LOCATION: NBU 1022-2A Pad
RIG NAME: Ensign 145
STATE: Utah
COUNTY: Country
WELL NAME: NBU 1022-2A4S

FIELD: Natural Buttes Unit
Township: Sec 2 T10S R22E
Range: Rocky Mountain

MOTOR INFORMATION
 Desc: 6 1/2 FBH - 1.50 7:8 3.3 Stage
 Bent Hsg/Sub: 1.5 / 0 Bit to Bend: 5.96
 PAD OD: 6 3/4 NB Stab:

Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
1	17-Jun	Drilling	07:30	08:05	0.58	2219	2296	77	10	132.0	45	0	470	1250		1.03	169.54	0.12	
1	17-Jun	Sliding	08:20	08:35	0.25	2296	2309	13	10	52.0	0	0	470	1250	110	1.03	170.34	0.12	
1	17-Jun	Drilling	08:35	08:45	0.17	2309	2330	21	10	126.0	45	0	470	1250		1.04	171.64	0.12	
1	17-Jun	Sliding	08:45	08:55	0.17	2330	2444	114	10	684.0	45	0	470	1250	120	2.72	159.73	3.18	
1	17-Jun	Drilling	08:55	09:20	0.42	2444	2475	31	10	74.4	45	0	470	1250		3.66	150.97	3.18	
1	17-Jun	Sliding	09:20	09:35	0.25	2475	2490	15	10	60.0	45	0	470	1250	145	4.17	149.56	3.75	
1	17-Jun	Drilling	09:35	09:45	0.17	2490	2506	16	10	96.0	45	0	470	1250		4.76	150.71	3.75	
1	17-Jun	Sliding	09:45	10:00	0.25	2506	2519	13	10	52.0	45	0	470	1250	20	5.23	151.65	3.75	
1	17-Jun	Drilling	10:00	10:10	0.17	2519	2536	17	10	102.0	45	0	470	1250		5.86	152.87	3.75	
1	17-Jun	Sliding	10:10	10:20	0.17	2536	2546	10	10	60.0	45	0	470	1250	20	6.23	153.59	3.75	
1	17-Jun	Drilling	10:20	10:30	0.17	2546	2569	23	10	138.0	45	0	470	1250		7.08	155.24	3.75	
1	17-Jun	Sliding	10:30	10:40	0.17	2569	2579	10	10	60.0	45	0	470	1250	20	7.41	155.47	2.94	
1	17-Jun	Drilling	10:40	10:55	0.25	2579	2600	21	10	84.0	45	0	470	1250		8.01	154.40	2.94	
1	17-Jun	Sliding	10:55	11:05	0.17	2600	2610	10	10	60.0	45	0	470	1250	-15	8.29	153.89	2.94	
1	17-Jun	Drilling	11:05	11:20	0.25	2610	2625	15	10	60.0	45	0	470	1250		8.72	153.12	2.94	
1	17-Jun	Sliding	11:20	11:30	0.17	2625	2641	16	10	96.0	45	0	470	1250	-10	9.17	152.31	2.94	
1	17-Jun	Drilling	11:30	11:40	0.17	2641	2661	20	10	120.0	45	0	470	1250		9.74	151.29	2.94	
1	17-Jun	Sliding	11:40	12:00	0.33	2661	2675	14	10	42.0	45	0	470	1250	-40	10.17	151.01	3.31	
1	17-Jun	Drilling	12:00	12:10	0.17	2675	2692	17	10	102.0	45	0	470	1250		10.73	151.20	3.31	
1	17-Jun	Sliding	12:10	12:25	0.25	2692	2704	12	10	48.0	45	0	470	1250	1	11.13	151.34	3.31	
1	17-Jun	Drilling	12:25	12:35	0.17	2704	2724	20	10	120.0	45	0	470	1250		11.79	151.56	3.31	
1	17-Jun	Sliding	12:35	12:50	0.25	2724	2737	13	10	52.0	45	0	470	1250	1	12.22	151.71	3.31	
1	17-Jun	Drilling	12:50	13:10	0.33	2737	2754	17	10	51.0	45	0	470	1250		12.78	151.90	3.31	
1	17-Jun	Sliding	13:10	13:20	0.17	2754	2765	11	10	66.0	45	0	470	1250	1	13.13	151.94	3.04	
1	17-Jun	Drilling	13:20	13:30	0.17	2765	2785	20	10	120.0	45	0	470	1250		13.74	151.75	3.04	
1	17-Jun	Sliding	13:30	13:45	0.25	2785	2796	11	10	44.0	45	0	470	1250	1	14.07	151.65	3.04	
1	17-Jun	Drilling	13:45	14:00	0.25	2796	2816	20	10	80.0	45	0	470	1250		14.68	151.46	3.04	

Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
1	17-Jun	Sliding	14:00	14:15	0.25	2816	2828	12	10	48.0		0	470	1250	-15	15.04	151.35	3.04	
1	17-Jun	Drilling	14:15	14:30	0.25	2828	2846	18	10	72.0	45	0	470	1250		15.59	151.18	3.04	
1	17-Jun	Sliding	14:30	14:40	0.17	2846	2857	11	10	66.0		0	470	1250	10	15.92	151.08	3.03	
1	17-Jun	Drilling	14:40	14:45	0.08	2857	2878	21	10	252.0	45	0	470	1250		16.56	150.97	3.03	
1	17-Jun	Sliding	15:15	15:30	0.25	2878	2890	12	10	48.0		0	470	1250	10	16.92	150.90	3.03	
1	17-Jun	Drilling	15:30	15:45	0.25	2890	2909	19	10	76.0	45	0	470	1250		17.49	150.79	3.03	
1	17-Jun	Sliding	15:45	15:55	0.17	2909	2920	11	10	66.0	45	0	470	1250	10	17.82	150.73	3.03	
1	17-Jun	Drilling	15:55	16:10	0.25	2920	2941	21	10	84.0	45	0	470	1250		18.46	150.61	3.03	
1	17-Jun	Sliding	16:10	16:25	0.25	2941	2954	13	10	52.0	45	0	470	1250	10	18.75	150.78	1.86	
1	17-Jun	Drilling	16:25	16:40	0.25	2954	2972	18	10	72.0	45	0	470	1250		19.04	151.30	1.86	
1	17-Jun	Sliding	16:40	16:55	0.25	2972	2984	12	10	48.0		0	470	1250	10	19.23	151.65	1.86	
1	17-Jun	Drilling	16:55	17:10	0.25	2984	3002	18	10	72.0	45	0	470	1250		19.52	152.17	1.86	
1	17-Jun	Sliding	17:10	17:25	0.25	3002	3013	11	10	44.0		0	470	1250	10	19.69	152.49	1.86	
1	17-Jun	Drilling	17:25	17:40	0.25	3013	3034	21	10	84.0	45	0	470	1250		20.03	153.10	1.86	
1	17-Jun	Sliding	17:40	17:50	0.17	3034	3046	12	10	72.0		0	470	1250	360	20.26	153.16	2.65	
1	17-Jun	Drilling	17:50	18:05	0.25	3046	3065	19	15	76.0	40	0	470	1250		20.73	152.64	2.65	
1	17-Jun	Sliding	18:05	18:15	0.17	3065	3077	12	10	72.0		0	470	1250	360	21.02	152.31	2.65	
1	17-Jun	Drilling	18:15	18:30	0.25	3077	3096	19	15	76.0	40	0	470	1250		21.49	151.79	2.65	
1	17-Jun	Sliding	18:30	18:45	0.25	3096	3108	12	10	48.0		0	470	1250	360	21.78	151.46	2.65	
1	17-Jun	Drilling	18:45	18:55	0.17	3108	3127	19	15	114.0	40	0	470	1250		22.25	150.94	2.65	
1	17-Jun	Sliding	18:55	19:10	0.25	3127	3142	15	10	60.0		0	470	1250	360	22.44	150.63	0.61	
1	17-Jun	Drilling	19:10	19:25	0.25	3142	3158	16	15	64.0	40	0	470	1250		22.47	150.39	0.61	
1	17-Jun	Sliding	19:25	19:40	0.25	3158	3173	15	10	60.0		0	470	1250	360	22.50	150.16	0.61	
1	17-Jun	Drilling	19:40	20:05	0.42	3173	3220	47	15	112.8	40	0	470	1250		22.59	149.46	0.61	
1	17-Jun	Sliding	20:05	20:20	0.25	3220	3235	15	10	60.0		0	470	1250	15	22.77	149.62	2.54	
1	17-Jun	Drilling	20:20	20:30	0.17	3235	3251	16	15	96.0	40	0	470	1250		23.12	150.16	2.54	
1	17-Jun	Sliding	20:30	20:45	0.25	3251	3271	20	10	80.0		0	470	1250	30	23.55	150.83	2.54	
1	17-Jun	Drilling	20:45	20:55	0.17	3271	3282	11	15	66.0	40	0	470	1250		23.78	151.20	2.54	
1	17-Jun	Sliding	20:55	21:10	0.25	3282	3302	20	10	80.0		0	470	1250	15	24.21	151.87	2.54	
1	17-Jun	Drilling	21:10	21:20	0.17	3302	3314	12	15	72.0	40	0	470	1250		24.47	152.27	2.54	
1	17-Jun	Sliding	21:20	21:35	0.25	3314	3329	15	10	60.0		0	470	1250	360	24.70	152.40	1.12	
1	17-Jun	Drilling	21:35	21:50	0.25	3329	3345	16	15	64.0	40	0	470	1250		24.85	152.17	1.12	
1	17-Jun	Sliding	21:50	22:05	0.25	3345	3360	15	10	60.0		0	470	1250	360	24.99	151.96	1.12	
1	17-Jun	Drilling	22:05	22:20	0.25	3360	3376	16	15	64.0	40	0	470	1250		25.14	151.73	1.12	
1	17-Jun	Sliding	22:20	22:30	0.17	3376	3386	10	10	60.0		0	470	1250	360	25.24	151.59	1.12	

Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
1	17-Jun	Drilling	22:30	23:00	0.50	3386	3438	52	15	104.0	40	0	470	1250	360	25.09	150.42	2.17	
1	17-Jun	Sliding	23:00	23:15	0.25	3438	3448	10	10	40.0	40	0	470	1250	360	24.92	150.10	2.17	
1	17-Jun	Drilling	23:15	23:30	0.25	3448	3469	21	15	84.0	40	0	470	1250	360	24.57	149.42	2.17	
1	17-Jun	Sliding	23:30	23:45	0.25	3469	3484	15	10	60.0	40	0	470	1250	360	24.31	148.94	2.17	
1	17-Jun	Drilling	23:45	24:00	0.25	3484	3520	36	15	144.0	40	0	470	1250	360	23.86	148.52	1.10	
1	18-Jun	Drilling	00:00	00:10	0.17	3520	3531	11	15	66.0	40	0	470	1250	360	23.81	148.79	1.10	
1	18-Jun	Sliding	00:10	00:25	0.25	3531	3546	15	10	60.0	40	0	470	1250	360	23.74	149.16	1.10	
1	18-Jun	Drilling	00:25	00:40	0.25	3546	3562	16	15	64.0	40	0	470	1250	360	23.66	149.55	1.10	
1	18-Jun	Sliding	00:40	00:55	0.25	3562	3582	20	10	80.0	40	0	470	1250	360	23.57	150.05	1.10	
1	18-Jun	Drilling	00:55	01:05	0.17	3582	3593	11	15	66.0	40	0	470	1250	360	23.51	150.32	1.10	
1	18-Jun	Sliding	01:05	01:20	0.25	3593	3608	15	10	60.0	40	0	470	1250	360	23.64	150.62	2.09	
1	18-Jun	Drilling	01:20	01:35	0.25	3608	3624	16	15	64.0	40	0	470	1250	360	23.95	150.87	2.09	
1	18-Jun	Sliding	01:35	01:50	0.25	3624	3644	20	10	80.0	40	0	470	1250	360	24.35	151.19	2.09	
1	18-Jun	Drilling	01:50	02:05	0.25	3644	3655	11	15	44.0	40	0	470	1250	360	24.57	151.37	2.09	
1	18-Jun	Sliding	02:05	02:20	0.25	3655	3675	20	10	80.0	40	0	470	1250	360	24.96	151.69	2.09	
1	18-Jun	Drilling	02:20	02:35	0.25	3675	3686	11	15	44.0	40	0	470	1250	360	25.18	151.87	2.09	
1	18-Jun	Sliding	02:35	02:50	0.25	3686	3706	20	10	80.0	40	0	470	1250	360	25.57	152.07	1.92	
1	18-Jun	Drilling	02:50	03:00	0.17	3706	3717	11	15	66.0	40	0	470	1250	360	25.77	152.14	1.92	
1	18-Jun	Sliding	03:00	03:15	0.25	3717	3732	15	10	60.0	40	0	470	1250	360	26.06	152.24	1.92	
1	18-Jun	Drilling	03:15	03:25	0.17	3732	3748	16	15	96.0	40	0	470	1250	360	26.36	152.35	1.92	
1	18-Jun	Sliding	03:25	03:40	0.25	3748	3763	15	10	60.0	40	0	470	1250	360	26.64	152.45	1.92	
1	18-Jun	Drilling	03:40	03:55	0.25	3763	3779	16	15	64.0	40	0	470	1250	360	26.95	152.55	1.92	
1	18-Jun	Sliding	03:55	04:05	0.17	3779	3789	10	10	60.0	40	0	470	1250	360	27.00	152.47	3.40	
1	18-Jun	Drilling	04:05	04:20	0.25	3789	3810	21	15	84.0	40	0	470	1250	360	26.40	151.56	3.40	
1	18-Jun	Sliding	04:20	04:30	0.17	3810	3820	10	10	60.0	40	0	470	1250	360	26.12	151.12	3.40	
1	18-Jun	Drilling	04:30	05:15	0.75	3820	3904	84	15	112.0	40	0	470	1250	360	24.92	149.45	2.40	
1	18-Jun	Sliding	05:15	05:30	0.25	3904	3919	15	10	60.0	40	0	470	1250	360	25.19	149.98	2.40	
1	18-Jun	Drilling	05:30	05:40	0.17	3919	3934	15	15	90.0	40	0	470	1500	360	25.47	150.51	2.40	
1	18-Jun	Sliding	05:40	05:55	0.25	3934	3949	15	10	60.0	40	0	470	1500	360	25.75	151.05	2.40	
1	18-Jun	Drilling	05:55	06:10	0.25	3949	3966	17	15	68.0	40	0	470	1500	360	26.07	151.65	2.40	
1	18-Jun	Sliding	06:10	06:25	0.25	3966	3975	9	10	36.0	40	0	470	1500	360	26.20	151.90	0.09	
1	18-Jun	Drilling	06:25	06:40	0.25	3975	3996	21	15	84.0	40	0	470	1500	360	26.20	151.86	0.09	
1	18-Jun	Sliding	06:40	06:50	0.17	3996	4004	8	10	48.0	40	0	470	1500	360	26.20	151.84	0.09	
1	18-Jun	Drilling	06:50	07:15	0.42	4004	4028	24	15	57.6	40	0	470	1500	360	26.20	151.79	0.09	
1	18-Jun	Sliding	07:15	07:20	0.08	4028	4033	5	10	60.0	40	0	470	1500	360	26.20	151.78	0.09	

Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
1	18-Jun	Drilling	07:20	07:40	0.33	4033	4058	25	15	75.0	40	0	470	1500		26.20	151.74	0.09	
1	18-Jun	Sliding	07:40	07:50	0.17	4058	4063	5	10	30.0		0	470	1500	1	26.20	151.73	0.09	
1	18-Jun	Drilling	07:50	08:10	0.33	4063	4089	26	15	78.0	40	0	470	1500		25.83	151.78	1.61	
1	18-Jun	Sliding	08:10	08:15	0.08	4089	4094	5	10	60.0		0	470	1500	10	25.75	151.80	1.61	
1	18-Jun	Drilling	08:15	08:50	0.58	4094	4154	60	15	102.9	40	0	470	1500		24.79	151.97	1.61	
1	18-Jun	Sliding	08:50	09:10	0.33	4154	4160	6	10	18.0		0	470	1500	10	24.71	151.98	0.19	
1	18-Jun	Drilling	09:10	09:45	0.58	4160	4214	54	15	92.6	40	0	470	1500		24.82	151.98	0.19	
1	18-Jun	Sliding	09:45	10:05	0.33	4214	4224	10	10	30.0		0	470	1500	1	24.84	151.98	0.19	
1	18-Jun	Drilling	10:05	10:20	0.25	4224	4244	20	10	80.0	35	0	470	1500		24.87	151.98	0.19	
1	18-Jun	Sliding	10:20	10:40	0.33	4244	4254	10	10	30.0		0	470	1500	1	24.92	152.05	2.16	
1	18-Jun	Drilling	10:40	10:50	0.17	4254	4276	22	10	132.0	35	0	470	1500		25.25	152.84	2.16	
1	18-Jun	Sliding	10:50	11:10	0.33	4276	4287	11	10	33.0		0	470	1500	1	25.42	153.24	2.16	
1	18-Jun	Drilling	11:10	11:30	0.33	4287	4307	20	10	60.0	35	0	470	1500		25.72	153.96	2.16	
1	18-Jun	Sliding	11:30	11:40	0.17	4307	4327	20	10	120.0		0	470	1500	1	26.02	154.67	2.16	
1	18-Jun	Drilling	11:40	11:45	0.08	4327	4337	10	10	120.0	35	0	470	1500		26.17	155.03	2.16	
1	18-Jun	Sliding	12:15	12:35	0.33	4337	4357	20	10	60.0		0	470	1500	1	26.42	155.30	1.05	
1	18-Jun	Drilling	12:35	12:45	0.17	4357	4369	12	10	72.0	35	0	470	1500		26.54	155.28	1.05	
1	18-Jun	Sliding	12:45	13:05	0.33	4369	4379	10	10	30.0		0	470	1500	1	26.64	155.26	1.05	
1	18-Jun	Drilling	13:05	13:30	0.42	4379	4418	39	10	93.6	35	0	470	1500		27.05	155.19	1.05	
1	18-Jun	Sliding	13:30	13:50	0.33	4418	4428	10	10	30.0		0	470	1500	-60	27.16	155.17	1.05	
1	18-Jun	Drilling	13:50	14:35	0.75	4428	4498	70	10	93.3	35	0	470	1500		26.81	153.24	1.62	
1	18-Jun	Sliding	14:35	15:05	0.50	4498	4514	16	15	32.0		0	470	1500	-80	26.69	152.73	1.62	
1	18-Jun	Drilling	15:05	17:10	2.08	4514	4774	260	10	124.8	35	0	470	1500		22.54	151.98	1.87	
1	18-Jun	Sliding	17:10	17:30	0.33	4774	4784	10	15	30.0		0	470	1500	-80	22.35	151.98	1.87	
1	18-Jun	Drilling	17:30	18:10	0.67	4784	4868	84	15	126.0	50	0	470	1500		20.21	152.90	2.96	
1	18-Jun	Sliding	18:10	18:30	0.33	4868	4881	13	15	39.0		0	470	1500	180	19.84	153.12	2.96	
1	18-Jun	Drilling	18:30	19:05	0.58	4881	4962	81	15	138.9	50	0	470	1500		17.83	153.72	2.27	
1	18-Jun	Sliding	19:05	19:25	0.33	4962	4974	12	15	36.0		0	470	1500	180	17.56	153.75	2.27	
1	18-Jun	Drilling	19:25	20:10	0.75	4974	5055	81	15	108.0	50	0	470	1500		15.89	153.63	1.97	
1	18-Jun	Sliding	20:10	20:30	0.33	5055	5067	12	15	36.0		0	470	1500	-150	15.65	153.58	1.97	
1	18-Jun	Drilling	20:30	21:10	0.67	5067	5149	82	15	123.0	50	0	470	1500		13.82	152.55	2.39	
1	18-Jun	Sliding	21:10	21:40	0.50	5149	5161	12	15	24.0		0	470	1500	-150	13.54	152.34	2.39	
1	18-Jun	Drilling	21:40	22:20	0.67	5161	5242	81	15	121.5	50	0	470	1500		11.78	150.39	2.16	
1	18-Jun	Sliding	22:20	22:35	0.25	5242	5252	10	15	40.0		0	470	1500	-150	11.57	150.12	2.16	
1	18-Jun	Drilling	22:35	23:25	0.83	5252	5335	83	15	99.6	50	0	470	1500		10.12	148.73	1.60	

Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
1	18-Jun	Sliding	23:25	23:40	0.25	5335	5343	8	15	32.0		0	470	1500	180	9.99	148.64	1.60	
1	18-Jun	Drilling	23:40	24:00	0.33	5343	5389	46	15	138.0	50	0	470	1500		9.23	148.30	1.80	
1	19-Jun	Drilling	00:00	00:25	0.42	5389	5429	40	15	96.0	50	0	470	1900		8.51	148.34	1.80	
1	19-Jun	Sliding	00:25	00:45	0.33	5429	5437	8	15	24.0		0	470	1900	180	8.37	148.35	1.80	
1	19-Jun	Drilling	00:45	01:30	0.75	5437	5522	85	15	113.3	50	0	470	1900		7.11	150.80	1.42	
1	19-Jun	Sliding	01:30	01:50	0.33	5522	5530	8	15	24.0		0	470	1900	180	7.01	151.15	1.42	
1	19-Jun	Drilling	01:50	02:45	0.92	5530	5616	86	15	93.8	50	0	470	1900		5.97	152.40	1.14	
1	19-Jun	Sliding	02:45	03:05	0.33	5616	5622	6	15	18.0		0	470	1900	180	5.90	152.39	1.14	
1	19-Jun	Drilling	03:05	03:55	0.83	5622	5709	87	15	104.4	50	0	470	1900		4.97	153.53	1.06	
1	19-Jun	Sliding	03:55	04:25	0.50	5709	5717	8	15	16.0		0	470	1900	180	4.88	153.71	1.06	
1	19-Jun	Drilling	04:25	05:20	0.92	5717	5802	85	15	92.7	50	0	470	1900		3.96	154.92	1.12	
1	19-Jun	Sliding	05:20	06:00	0.67	5802	5814	12	15	18.0		0	470	1900	180	3.82	155.04	1.12	
1	19-Jun	Drilling	06:00	06:20	0.33	5814	5843	29	15	87.0	50	0	470	1900		3.48	155.28	2.09	
1	19-Jun	Sliding	06:20	07:00	0.67	5843	5858	15	15	22.5		0	470	1900	180	3.17	154.97	2.09	
1	19-Jun	Drilling	07:00	07:55	0.92	5858	5930	72	15	78.5	50	0	470	1900		1.66	153.47	2.09	
1	19-Jun	Sliding	07:55	09:00	1.08	5930	5950	20	15	18.5		0	470	1900	180	1.45	149.19	0.98	
1	19-Jun	Drilling	09:00	12:30	3.50	5950	6176	226	15	64.6	50	0	470	1900		0.90	51.92	1.99	
1	19-Jun	Sliding	13:00	13:45	0.75	6176	6195	19	15	25.3		0	470	1900	350	0.85	16.08	1.99	
1	19-Jun	Drilling	13:45	24:00	10.25	6195	7014	819	18	79.9	35	0	470	1900		0.50	43.97	1.08	
1	20-Jun	Sliding	00:00	01:00	1.00	7014	7034	20	15	20.0		0	470	1900	350	0.43	2.04	1.08	
1	20-Jun	Drilling	01:00	03:30	2.50	7034	7204	170	18	68.0	35	0	470	1900		0.75	27.79	0.88	
1	20-Jun	Sliding	03:30	04:30	1.00	7204	7224	20	15	20.0		0	470	1900	350	0.86	15.49	0.88	
1	20-Jun	Drilling	04:30	12:30	8.00	7224	7674	450	18	56.3	35	0	470	1900		0.59	213.87	0.28	
1	20-Jun	Drilling	12:45	14:40	1.92	7674	7862	188	18	98.1	35	0	470	2400		0.73	186.51	0.30	
1	20-Jun	Sliding	14:40	15:40	1.00	7862	7877	15	15	15.0		0	470	2650	350	0.68	187.73	0.30	
1	20-Jun	Drilling	15:40	16:45	1.08	7877	7928	51	18	47.1	35	0	470	2650		0.70	292.91	0.33	
1	20-Jun	Drilling	19:00	24:00	5.00	7928	8193	265	18	53.0	35	0	470	2650		1.42	163.39	0.09	
1	21-Jun	Drilling	00:00	00:55	0.92	8193	8236	43	22	46.9	25	0	458	2800		1.46	163.22	0.09	
1	21-Jun	Drilling	00:55	02:50	1.92	8236	8330	94	22	49.0	25	0	470	2800		1.65	151.47	0.66	
1	21-Jun	Drilling	02:50	04:45	1.92	8330	8423	93	22	48.5	25	0	458	2800		1.95	132.57	0.75	
1	21-Jun	Drilling	04:45	09:45	5.00	8423	8630	207	20	41.4	35	0	470	2900		1.93	116.74	0.00	

Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
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DEPTH% - TIME %

Total Drilled: 6430 Avg. Total ROP: 68.04

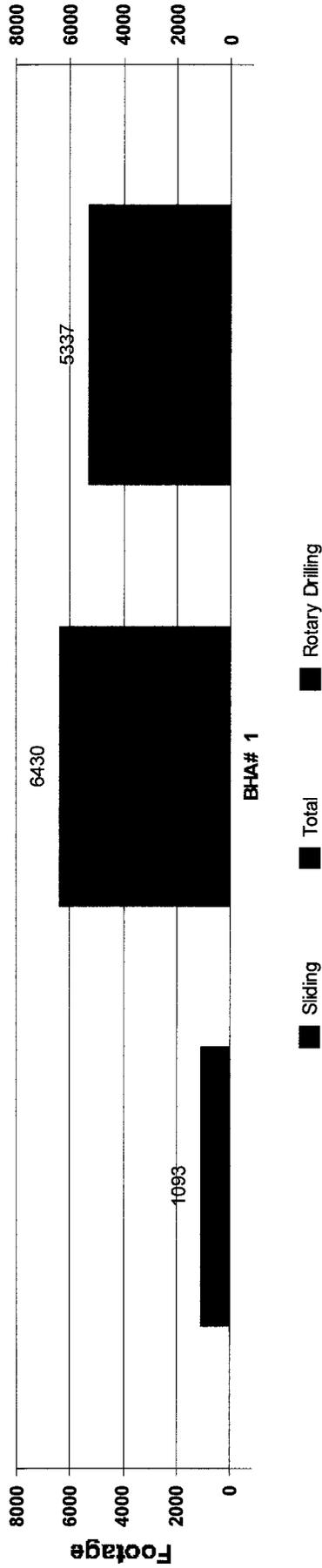
Total Rotary Drilled: 5337 Avg. Rotary ROP: 75.70 Percent Rotary: 83.00 - 74.60

Total Drilled Sliding: 1093 Avg. Slide ROP: 45.54 Percent Slide: 17.00 - 25.40

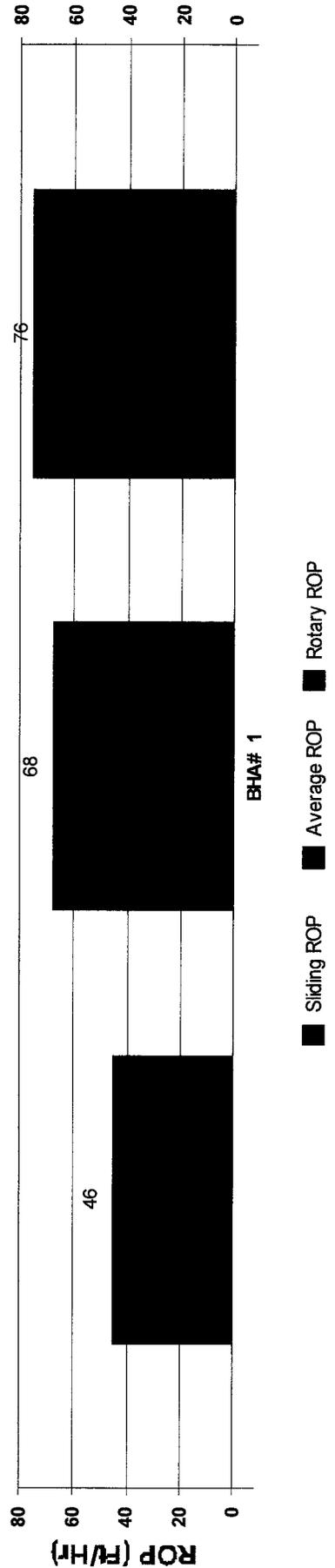


JOB NO.:	42DEF0906267	FIELD:	Natural Buttes Unit
COMPANY:	Kerr McGee Oil and Gas Onshore LP	Township:	Sec 2 T10S R22E
LOCATION:	NBU 1022-2A Pad	SECTIRANGE:	Rocky Mountain
RIG NAME:	Ensign 145	COMMENT	
STATE:	Utah		
COUNTY:	Uintah		
WELL NAME:	NBU 1022-2A4S		

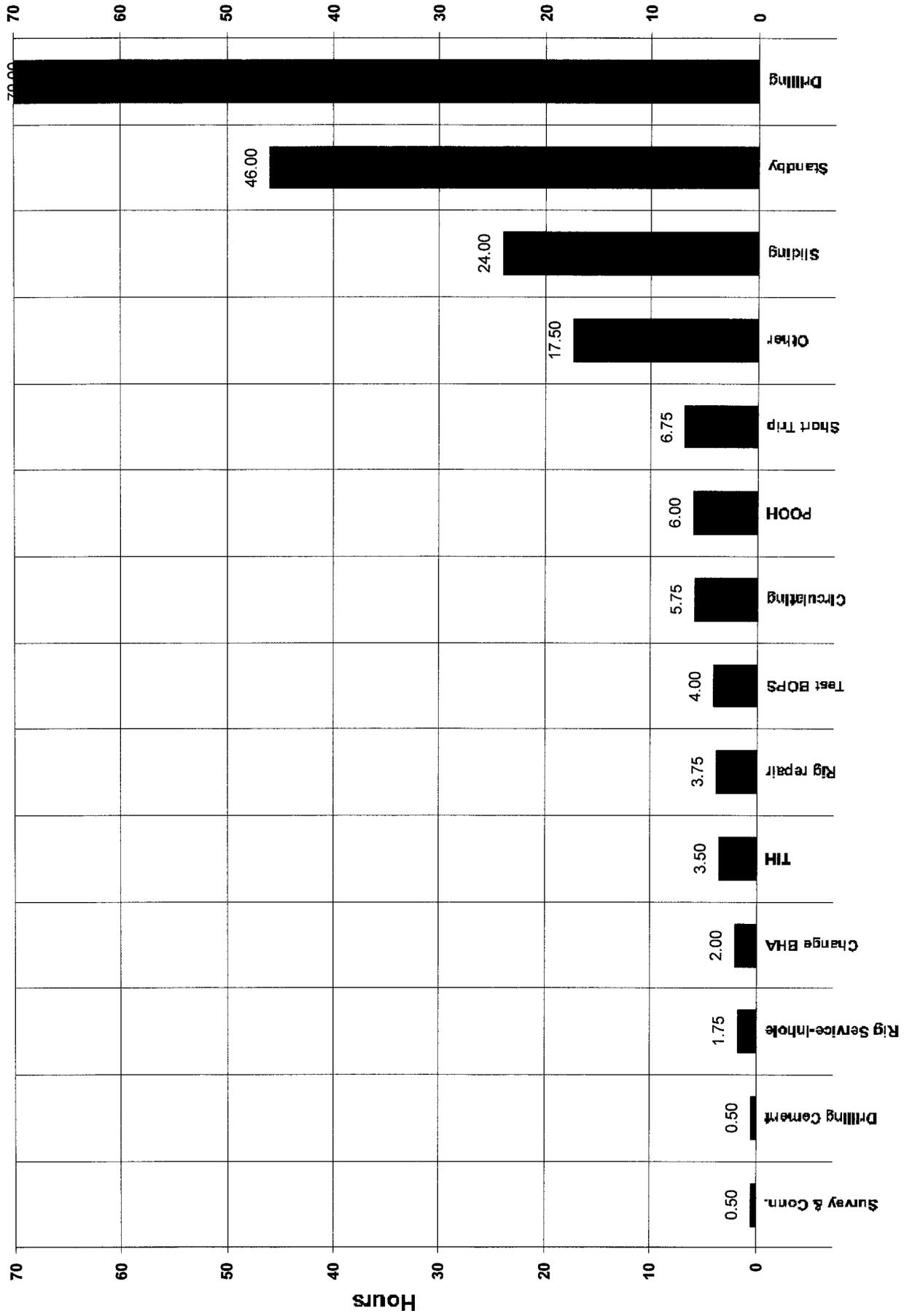
Footage Drilled with BHA



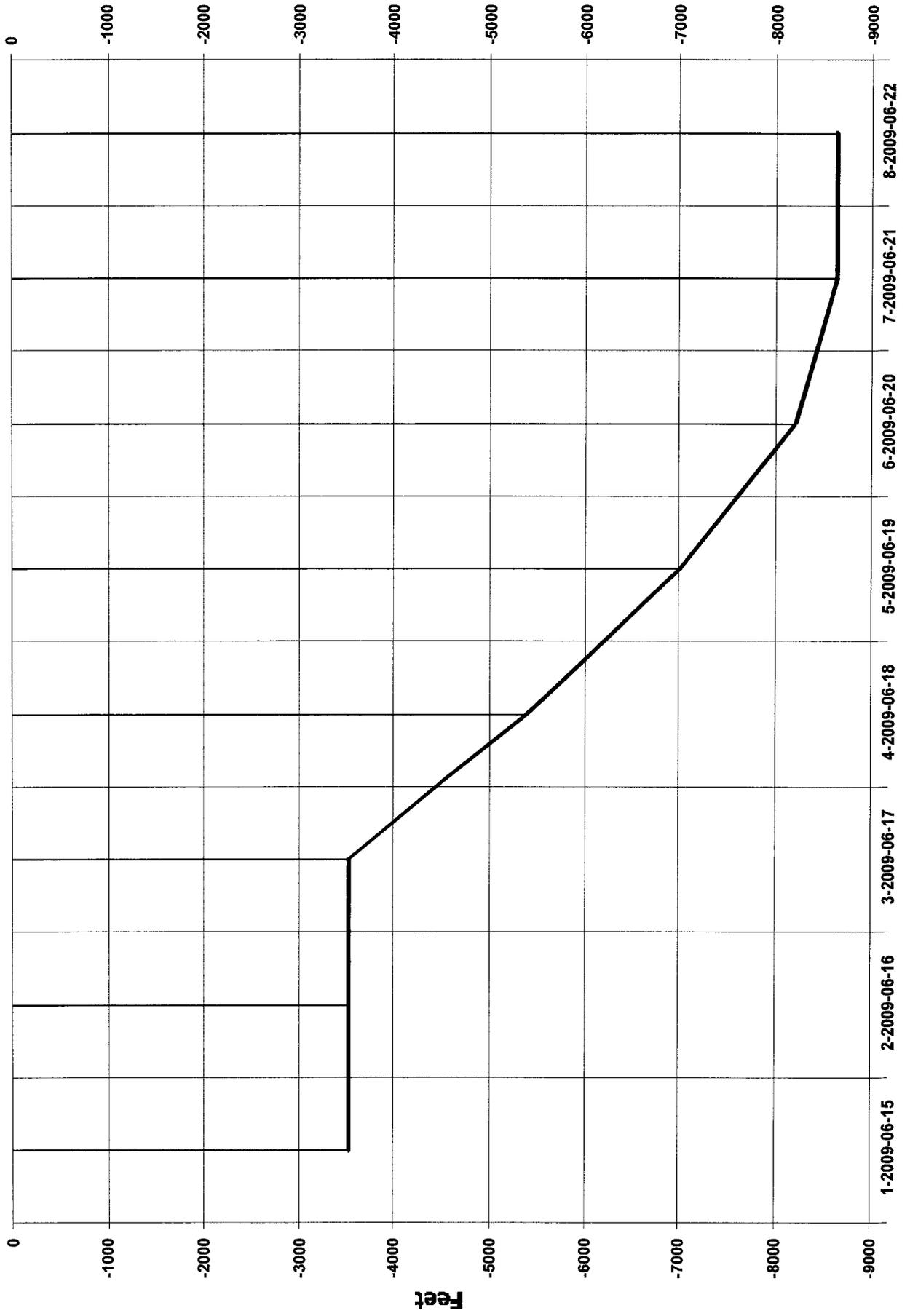
ROP vs BHA



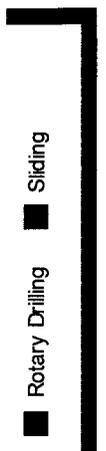
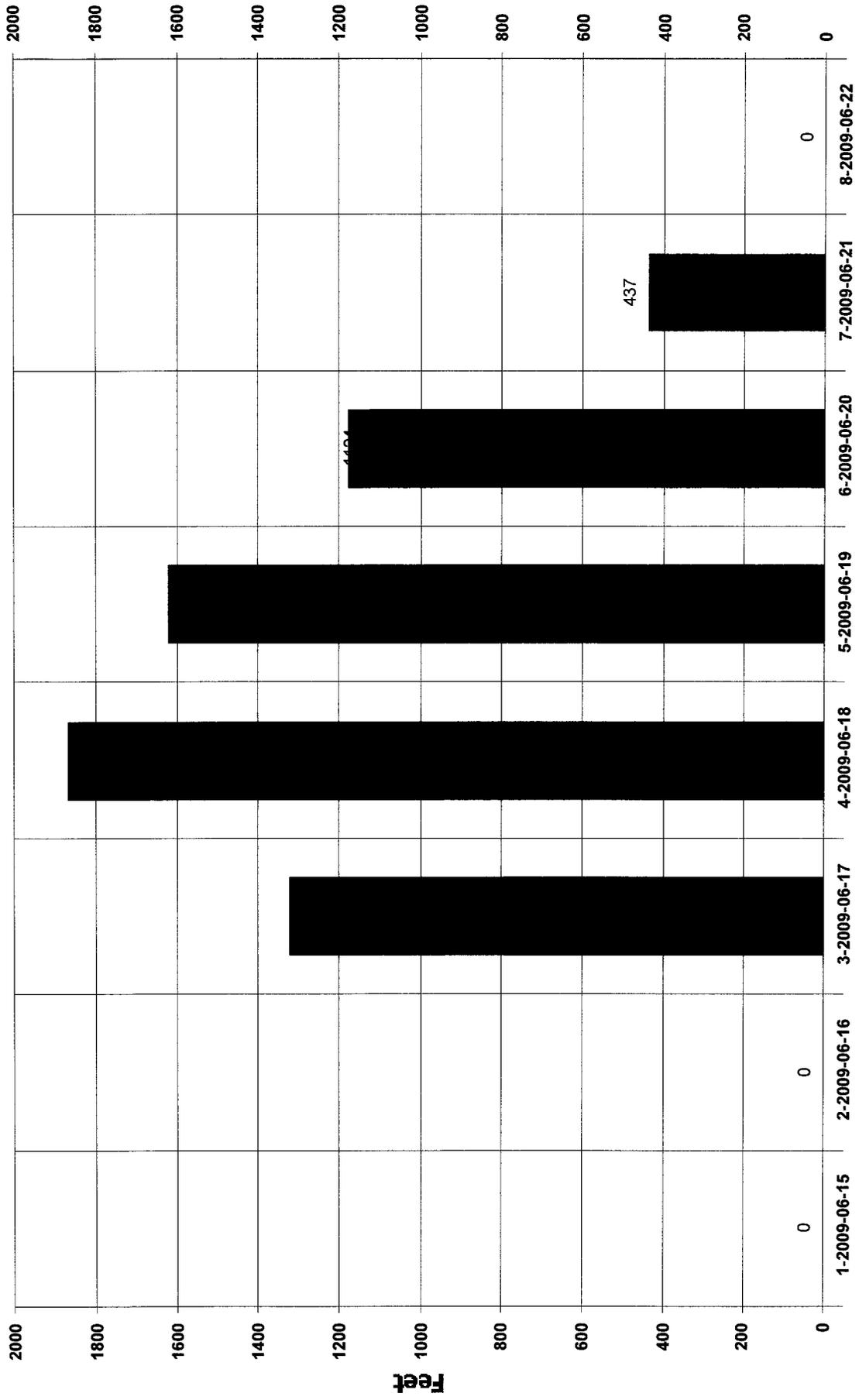
Activity Histogram



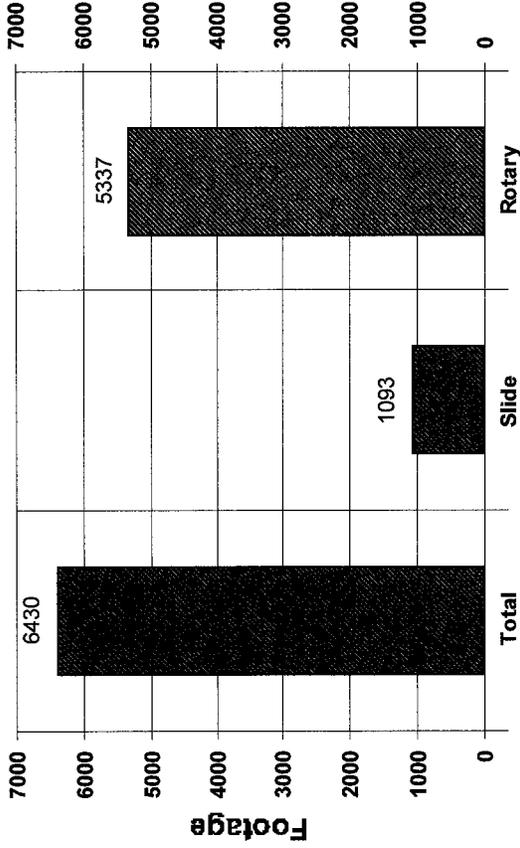
Measured Depth vs Days



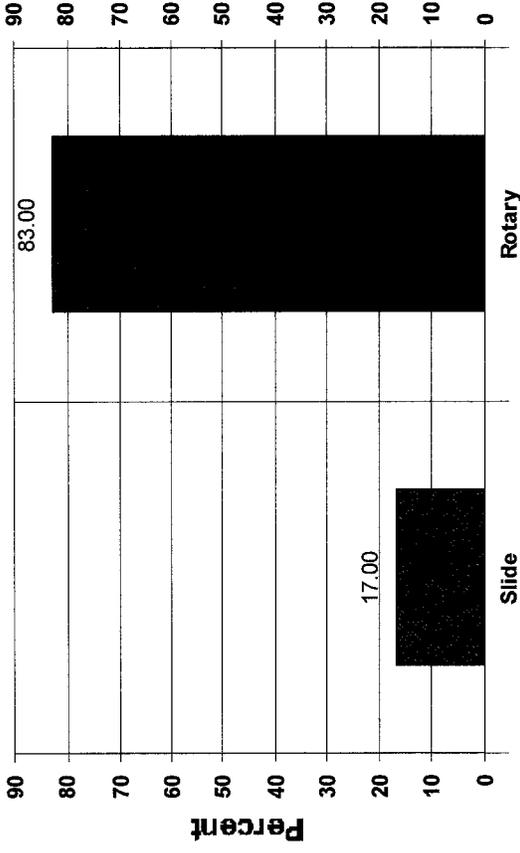
Daily Footage



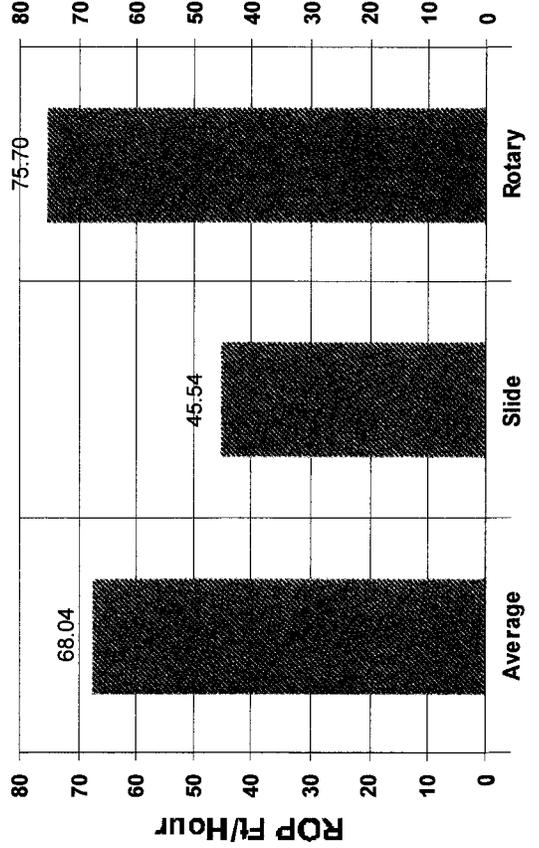
Footage Drilled Totals



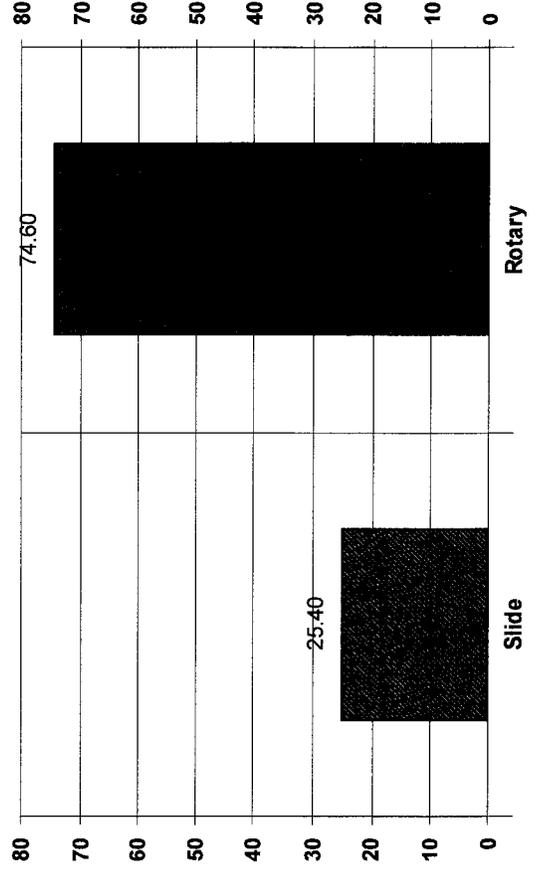
Footage Percent



Rate of Penetration Totals



Time Percent





Scientific Drilling
Rocky Mountain Operations

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(307) 472-6621

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: ST ML 22651
1. TYPE OF WELL Gas Well	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	8. WELL NAME and NUMBER: NBU 1022-2A4S
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0207 FNL 0836 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 02 Township: 10.0S Range: 22.0E Meridian: S	9. API NUMBER: 43047404330000
PHONE NUMBER: 720 929-6100	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 checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 6/15/2015	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text" value="WORKOVER"/>

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

A WORKOVER/WELLBORE CLEANOUT HAS BEEN COMPLETED ON THE NBU 1022-2A4S, SEE THE ATTACHED OPERATIONS SUMMARY REPORT.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 July 06, 2015

NAME (PLEASE PRINT) Doreen Green	PHONE NUMBER 435 781-9758	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 7/2/2015	

US ROCKIES REGION
Operation Summary Report

US ROCKIES REGION								
Operation Summary Report								
Well: NBU 1022-2A4S (ORIGINAL WELL-RED)			Spud Conductor: 4/10/2009			Spud date: 4/11/2009		
Project: UTAH-UINTAH			Site: NBU 1022-02A PAD			Rig name no.: MILES 2/2		
Event: WELL WORK EXPENSE			Start date: 6/5/2015			End date: 6/9/2015		
Active datum: RKB @4,988.00usft (above Mean Sea Level)			UWI: NE/NE/0/10/S/22/E/2/0/0/6/PM/N/207.00/E/0/841.00/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
6/5/2015	10:00 - 12:30	2.50	MAINT	30	A	P		MIRU F/ BON 1023-4D.
	12:30 - 13:30	1.00	MAINT	30	E	P		CONTROL TBG W/ 20 BBLs T-MAC, PRESSURED UP TO 500, BLEADING SLOW, CONTROL CSG W/ 20,(NOTE CHEMICAL SIDE CSG VALVE WAS SHUT) ND WH, UNLAND TBG NOT STUCK. RELAND
	13:30 - 14:00	0.50	MAINT	30	F	P		NU BOPS RU FLOOR & TBG EQUIP.
	14:00 - 17:00	3.00	MAINT	31	I	P		UNLAND TBG L/D HANGER, PU 9 JTS 23/8 TAG @ 8377', BTM PERF @ 8489', L/D 9 JTS, RU SCAN OUT W/ 163 JTS 23/8 J-55 SWI SDFN.
6/8/2015	7:00 - 7:15	0.25	MAINT	48		P		HSM, SLIPS, TRIPS & FALLS, RUSHING, PLUGGED TBG
	7:15 - 10:00	2.75	MAINT	45	A	P		SICP 1000 PSI, OPEN WELL, SCAN TBG CAME WET, RU SWAB EQUIP & RIH TO SWAB TBG DOWN TBG STARTED FLOWING, POOH L/D SWAB EQUIP, LET FLOW TO FBT, KILL CSG & FINISH SCANNING, FOUND HOLE IN JT # 192, JTS 203, 204, 205, 255, 256 WERE PLUGGED ASSUME PLUNGERS ARE IN THESE JTS, SCANNED 256 JTS J-55 TBG, 42 JTS YELLOW, 79 JTS BLUE, 135 JTS RED, LITE INTERNAL PITTING JTS 29 - 124, HEAVY INTERNAL PITTING JTS 130 - 256, OUTSIDE OF TBG LOOKED GOOD, RDMO SCAN TECH
	10:00 - 13:00	3.00	MAINT	31	I	P		PU 3 7/8" MILL, B/S, RIH W/ TBG TAGGED @ 8335', RU P/S
	13:00 - 19:00	6.00	MAINT	44	D	P		RU N2 & A/F UNIT, INSTAL S/F & BRK CIRC ((2 HRS)), C/O SAND & LITE SCALE FROM 8335' TO 8574', LET WELL CLEAN UP ((HEAVY SAND IN RETURNS 2 HRS)), TOP KILL TBG, RD P/S, L/D 14 JTS TBG & REMOVE S/F, EOT @ 8130', SWI, SDFN
6/9/2015	7:00 - 7:15	0.25	MAINT	48		P		HSM, SLIPS, TRIPS & FALLS, TRIPPING
	7:15 - 14:00	6.75	MAINT	31	I	P		SICP 800 PSI, OPEN & CONTROL WELL W/ TMAC, POOH L/D MILL, DUMP 10 GAL EC-1317A NALCO CHEMICAL DOWN CSG, PU 1.875" N/C S/N, RIH TO 4400', BROACH TBG W/ 1.906', RIH & LAND TBG W/ 256 JTS J-55 TBG @ 8136.14', BROACH TBG W/ 1.906', RD FLOOR & TBG EQUIP, ND BOP, NU WH, RDMO TO BON 1023-7P
								KB= 13' 7 1/16" CAM HANGER= .83' 256 JTS 2 3/8" J-55 TBG= 8121.26 1.875" N/C S/N= 1.05 EOT= 8136.14'
								TURN WELL OVER TO PRODUCTION, TBG & CSG NEED TO BE PURGED C/O W/ A/F & N2
6/15/2015	7:00 - 11:00	4.00	PROD	42		P		SWABBING FL 3900

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
		5. LEASE DESIGNATION AND SERIAL NUMBER: ST ML 22651
SUNDRY NOTICES AND REPORTS ON WELLS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well		8. WELL NAME and NUMBER: NBU 1022-2A4S
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		9. API NUMBER: 43047404330000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6456	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0207 FNL 0836 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 02 Township: 10.0S Range: 22.0E Meridian: S		COUNTY: UINTAH
		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 10/11/2016 <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input checked="" type="checkbox"/> OTHER	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. A WORKOVER CLEANOUT HAS BEEN COMPLETED ON THE NBU 1022-2A4S WELL. PLEASE SEE THE ATTACHED OPERATIONS SUMMARY REPORT FOR DETAILS.		
		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY October 21, 2016
NAME (PLEASE PRINT) Candice Barber	PHONE NUMBER 435 781-9749	TITLE HSE Representative
SIGNATURE N/A		DATE 10/14/2016

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-2A4S (ORIGINAL WELL-RED)		Spud Conductor: 4/10/2009		Spud date: 4/11/2009	
Project: UTAH-UINTAH			Site: NBU 1022-02A PAD		
Event: WELL WORK EXPENSE			Start date: 10/10/2016		End date: 10/11/2016
Active datum: RKB @4,988.00usft (above Mean Sea Level)			UWI: NE/NE/0/10/S/22/E/2/0/0/6/PM/N/207.00/E/0/841.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
10/3/2016	7:00 - 12:00	5.00	MAINT	35		P		WELL NAME: NBU 1022-2A4S Job Code: 80012176 WINS #: ZID: CTS953 FOREMAN: V-1 Ryan kunkel MECHANICAL: Craig Massey SLICKLINE COMPANY Delsco Northwest Inc. SLICKLINE OPERATOR Harvey Home/Shane Lane/P1035 TEL.NUMBER: 435-823-4268 DATE: 10/3/2016 JOB DESCRIPTION SUCCESSFUL Traveled to location, cut line and tied rope socket. Tripped plunger and rigged up on well. Ran in hole with scratcher and found well to be tight from 7700-7900ft, worked scratcher through tight spot several times and stacked out @ 8137ft. POOH and ran in hole with 1.906 broach and again worked through tight spot several times and stacked out @ 8137ft. POOH and ran in hole with JDC and stacked out on spring @ 8137ft, jarred on spring for 15 minutes. POOH and ran in hole with scratcher to clean seat nip[ple and was stacked ing out every 20ft or so, finally stacked out @ 8422ft. POOH and rigged down and returned well to sales without any PLE.
10/10/2016	13:00 - 15:00	2.00	MAINT	30	A	P		SPOT RIG AND EQUIP. KILL WELL. NDWH, NUBOP.
	15:00 - 17:00	2.00	MAINT	31	S	P		SCAN OUT W/ 100 JTS J-55.
10/11/2016	6:45 - 7:00	0.25	MAINT	48	B	P		HSM/JSA
	7:00 - 9:30	2.50	MAINT	31	S	P		FINISH SCAN OOH W/ 156 JTS J-55. 32 RED BAND L/D.
	9:30 - 15:00	5.50	MAINT	31	I	P		RIH W/ 256 JTS J-55. LAND @ 8133.85. BROACH TO SN
	15:00 - 17:30	2.50	MAINT	30	H	P		RIG DOWN. NDBOP, NUWH. MOVE IN MORNING.