FORM 3

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

AMENDED REPORT ☑

APPLICATION FOR PERMIT TO DRILL		1. WELL NAME and NUMBER: NBU 1022-14A1S
2. TYPE OF WORK: DRILL NEW WELL ◉ REENTER P&A WELL ○ DEEPEN WELL ○		3. FIELD OR WILDCAT: NATURAL BUTTES
4. TYPE OF WELL: Gas Well Coalbed Methane Well: NO		5. UNIT or COMMUNITIZATION AGREEMENT NAME: NATURAL BUTTES
6. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. OPERATOR PHONE: 720 929-6587
8. ADDRESS OF OPERATOR: P.O. Box 173779, Denver, CO, 80217		9. OPERATOR E-MAIL: mary.mondragon@anadarko.com
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE): ST UO 01197A	11. MINERAL OWNERSHIP: FEDERAL ○ INDIAN ○ STATE ◉ FEE ○	12. SURFACE OWNERSHIP: FEDERAL ○ INDIAN ○ STATE ◉ FEE ○
13. NAME OF SURFACE OWNER (if box 12 = 'fee')		14. SURFACE OWNER PHONE (if box 12 = 'fee')
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')		16. SURFACE OWNER E-MAIL (if box 12 = 'fee')
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')	18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS: YES ○ (Submit Commingling Application) NO ◉	19. SLANT: VERTICAL ○ DIRECTIONAL ◉ HORIZONTAL ○

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	1228 FNL 1417 FEL	NENE	14	10.0 S	22.0 E	S
Top of Uppermost Producing Zone	345 FNL 600 FEL	NENE	14	10.0 S	22.0 E	S
At Total Depth	345 FNL 600 FEL	NENE	14	10.0 S	22.0 E	S

21. COUNTY	22. DISTANCE TO NEAREST LEASE LINE (Feet)	23. NUMBER OF ACRES IN DRILLING UNIT
UINTAH	345	1674
	25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed): 20	26. PROPOSED DEPTH: MD: 8670 TVD: 8400
27. ELEVATION - GROUND LEVEL: 5235	28. BOND NUMBER: 22013542	29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE: Permit #43-8496

ATTACHMENTS

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

☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	☑ COMPLETE DRILLING PLAN
☐ AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	☐ FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
☑ DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	☑ TOPOGRAPHICAL MAP

NAME: Kevin McIntyre	TITLE: Regulatory Analyst I	PHONE: 720 929-6226
SIGNATURE	DATE: 03/17/2009	EMAIL: Kevin.McIntyre@anadarko.com

API NUMBER ASSIGNED
43047502280000

APPROVAL

Permit Manager

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

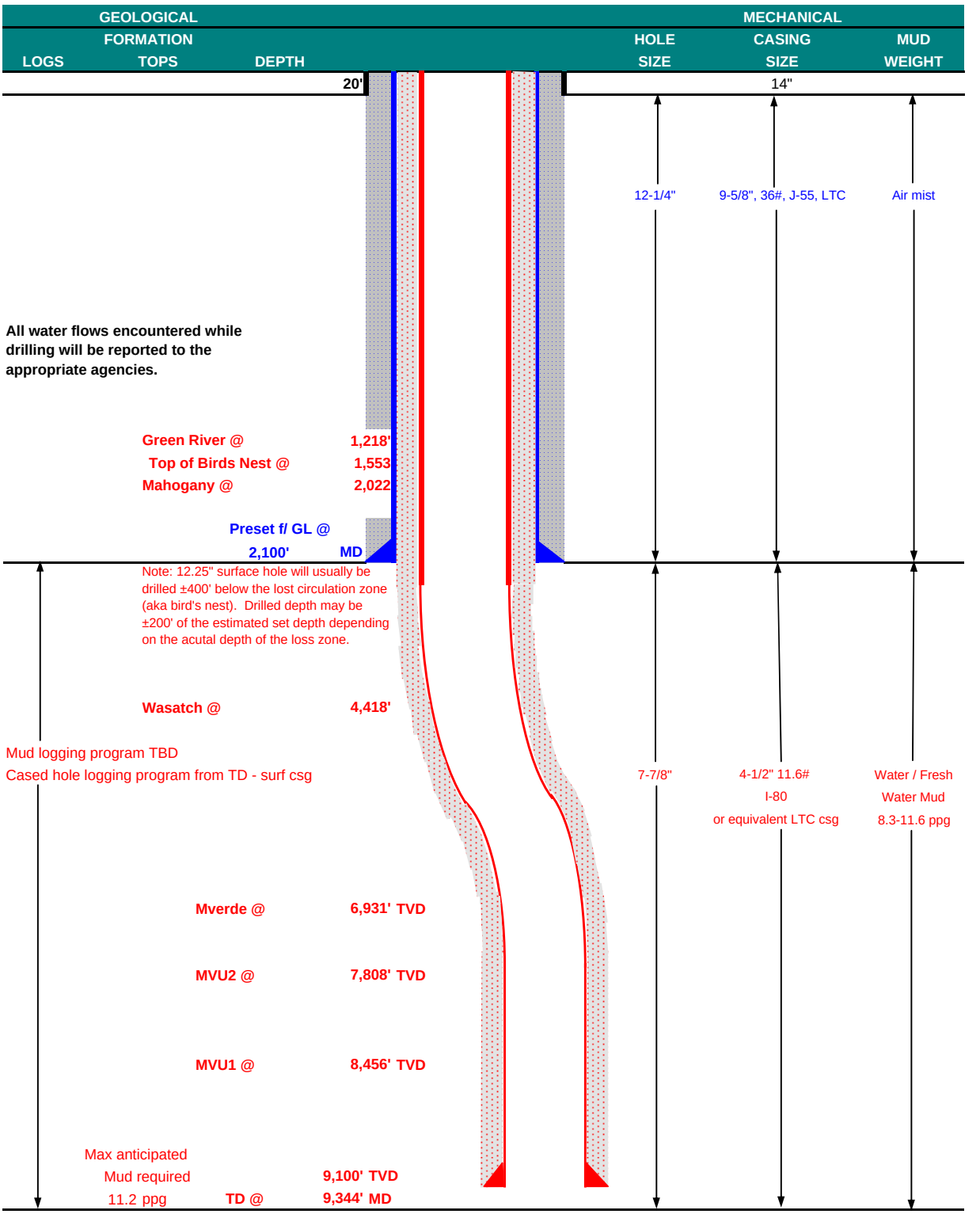
Proposed Hole, Casing, and Cement						
String	**Hole Size**	**Casing Size**	**Top (MD)**	**Bottom (MD)**		
Prod	7.875	4.5	0	8670		
Pipe	**Grade**	**Length**	**Weight**			
	Grade I-80 LT&C	8670	11.6			

'APIWellNo:43047502280000'

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP			DATE	February 9, 2009		
WELL NAME	**NBU 922-32P3CS**			TD	9,100'	TVD	9,344' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	ELEVATION	5,033' GL KB 5,048'
SURFACE LOCATION	SW/4 SE/4	900' FSL	1,915' FEL	Sec 32	T 9S	R 22E	
	Latitude:	39.987761	Longitude:	-109.460553		NAD 27	
BTM HOLE LOCATION	SE/4 SE/4	±304' FSL	±1,087' FEL	Sec 32	T 9S	R 22E	
	Latitude:	39-986128	Longitude:	-109.457592		NAD 27	
OBJECTIVE ZONE(S)	Wasatch/Mesaverde						
ADDITIONAL INFO	Regulatory Agencies: SITLA (Minerals), UDOGM (Surface), Tri-County Health Dept.						



'APIWellNo:43047502280000'

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 2,100	36.00	J-55	LTC	1.04	2.06	7.63
						7,780	6,350	201,000
PRODUCTION	4-1/2"	0 to 9,344	11.60	I-80	LTC	2.30	1.17	2.12

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

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)
(Burst Assumptions: TD = 11.2 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 3,195 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
(Burst Assumptions: TD = 11.2 ppg) 0.57 psi/ft = bottomhole gradient
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MABHP 5,336 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1			+ 0.25 pps flocele				
	TOP OUT CMT (1)	200	20 gals sodium silicate + Premium cmt	50		15.60	1.18
			+ 2% CaCl + 0.25 pps flocele				
	TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**				
Option 2	LEAD	1500	65/35 Poz + 6% Gel + 10 pps gilsonite	360	35%	12.60	1.81
			+.25 pps Flocele + 3% salt BWOW				
	TAIL	500	Premium cmt + 2% CaCl	180	35%	15.60	1.18
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	3,914'	Premium Lite II + 3% KCl + 0.25 pps	380	40%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	5,430'	50/50 Poz/G + 10% salt + 2% gel	1330	40%	14.30	1.31
			+.1% R-3				

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

FLOAT EQUIPMENT & CENTRALIZERS

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

ADDITIONAL INFORMATION

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

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

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

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

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

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

NBU 922-32P3CS
SW/4 SE/4 Sec. 32 T9S R22E
UINTAH COUNTY, UTAH
ML 22649

ONSHORE ORDER NO. 1

DRILLING PROGRAM

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

Formation	Depth	Resource
Uinta	0 – Surface	
Green River	1,218'	
Birds Nest	1,553'	Water
Mahogany	2,022'	Water
Wasatch	4,418'	Gas
Mesaverde	6,931'	Gas
MVU2	7,808'	Gas
MVL1	8,456'	Gas
TVD	9,100'	
TD	9,344'	

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 9,344' TD, approximately equals 5,336 psi (calculated at 0.57 psi/foot).

Maximum anticipated surface pressure equals approximately 3,195 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

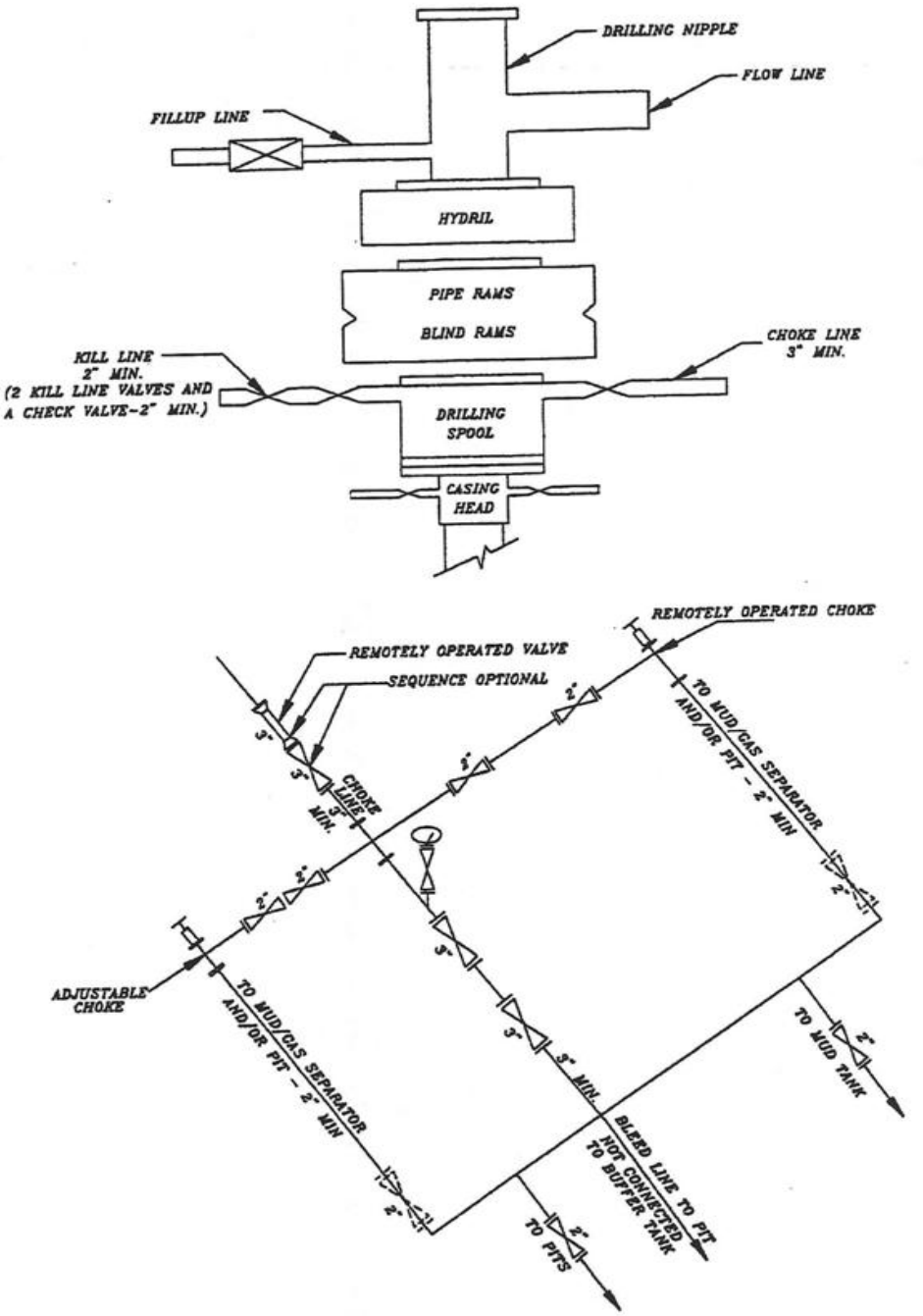
The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. Other Information:

Please refer to the attached Drilling Program.

'APIWellNo:43047502280000'

EXHIBIT A
NBU 922-32P3CS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

NBU 922-32P3CS
SW/4 SE/4 Sec. 32 T9S R22E
UINTAH COUNTY, UTAH
ML 22649

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 ±0.0 mi. (±0') of new access road is proposed. Please refer to the attached 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.

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

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.

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

Kathy Schneebeck Dulnoan
Regulatory Analyst
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6226

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

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

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

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

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

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

_____ January 29, 2009
Kathy Schneebeck Dulnoan Date

ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)
NBU 922-32O PAD
NBU 922-32P3CS

NBU 922-32P3CS

Plan: Design #1

Standard Planning Report

10 December, 2008

'APIWellNo:43047502280000'

Anadarko Petroleum Corporation

Weatherford

ANTI-COLLISION NOTE:
WELL STARTS CONVERGING AT 800'-1600' MD, CENTER TO CENTER DISTANCE IS 13.54'

Project:	UINTAH COUNTY, UTAH (nad 27)
Site:	NBU 922-32O PAD
Well:	NBU 922-32P3CS
Wellbore:	NBU 922-32P3CS
Design:	Design #1
Latitude:	39° 59' 15.940 N
Longitude:	109° 27' 37.991 W
GL:	5033.00
KB:	WELL @ 5053.00ft (Original Well Elev)

WELL DETAILS: NBU 922-32P3CS

Ground Level: 5033.00

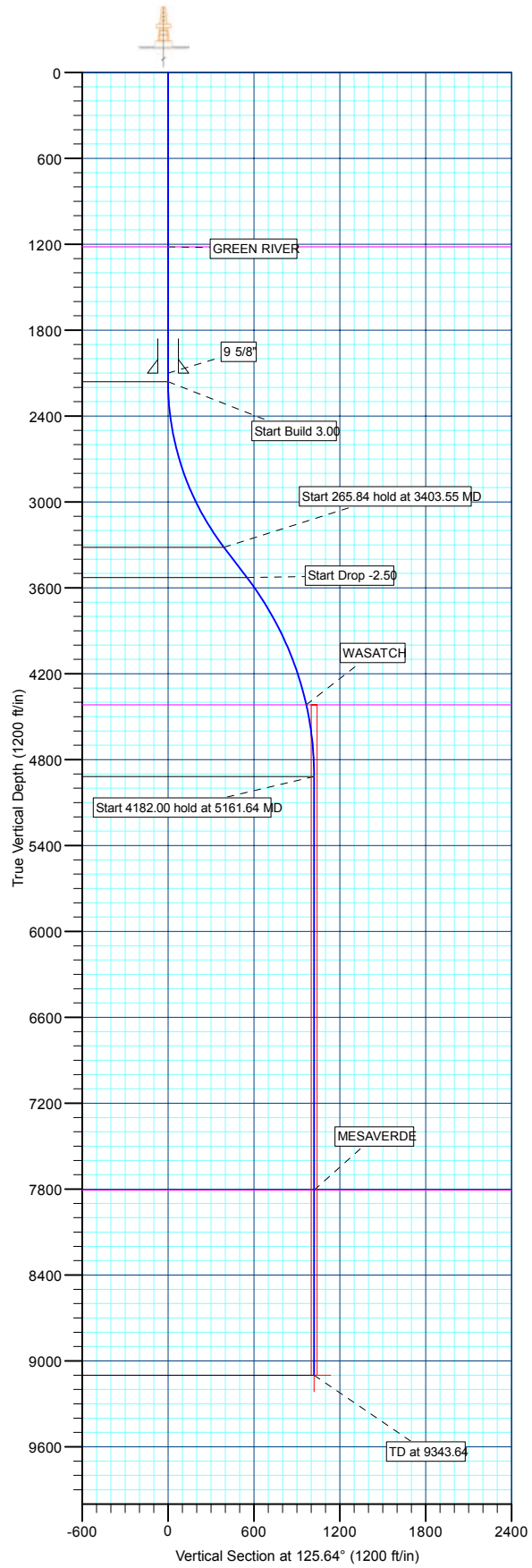
+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.00	0.00	14525311.03	2071637.69	39° 59' 15.940 N	109° 27' 37.991 W	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL_NBU 922-32P3CS	9100.00	-594.74	829.60	39° 59' 10.061 N	109° 27' 27.331 W	Circle (Radius: 20.00)

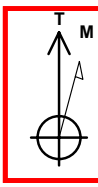
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2160.00	0.00	0.00	2160.00	0.00	0.00	0.00	0.00	0.00	
3	3403.55	37.31	125.64	3317.52	-227.67	317.57	3.00	125.64	390.75	
4	3669.39	37.31	125.64	3528.97	-321.54	448.51	0.00	0.00	551.87	
5	5161.64	0.00	0.00	4918.00	-594.74	829.60	2.50	180.00	1020.76	
6	9343.64	0.00	0.00	9100.00	-594.74	829.60	0.00	0.00	1020.76	PBHL_NBU 922-32P3CS



LEGEND

NBU404 ACTUAL GYRO, NBU404 ACTUAL GYRO, NBU404 ACTUAL GYRO V0
Design #1



Azimuths to True North
Magnetic North: 11.41°

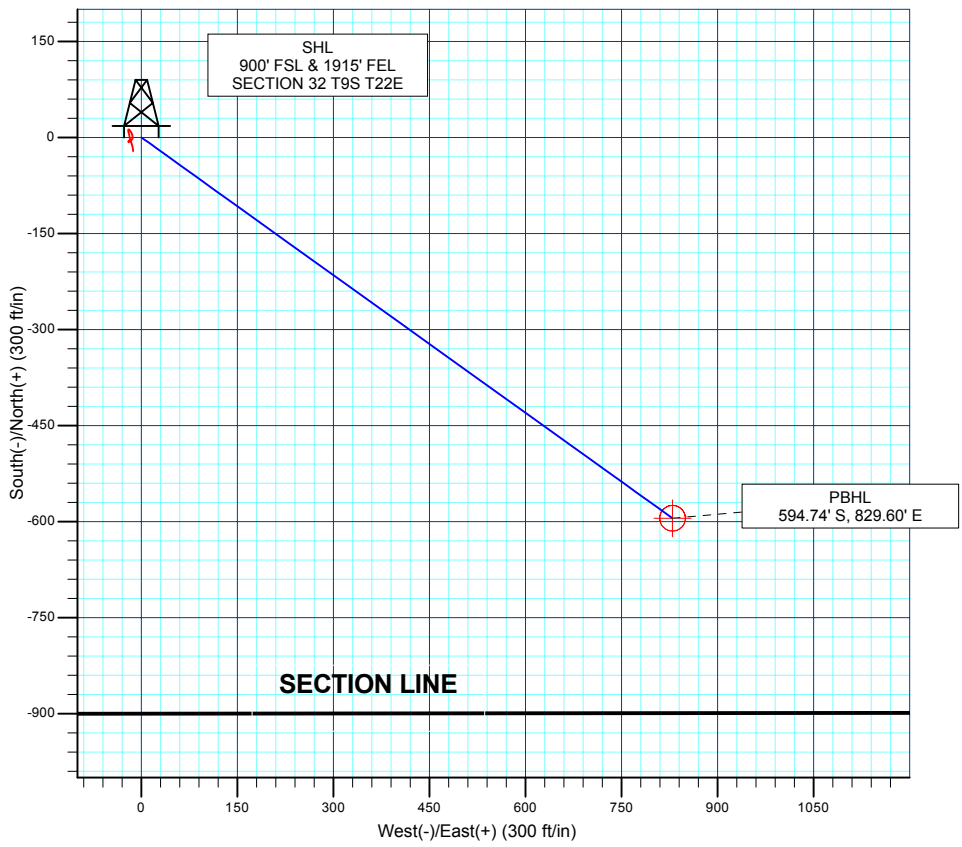
Magnetic Field
Strength: 52593.2snT
Dip Angle: 65.96°
Date: 12/4/2008
Model: BGGM2008

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1218.00	1218.00	GREEN RIVER
4418.00	4657.59	WASATCH
7808.00	8051.64	MESAVERDE

CASING DETAILS

TVD	MD	Name	Size
2100.00	2100.00	9 5/8"	9.62



Plan: Design #1 (NBU 922-32P3CS/NBU 922-32P3CS)

Created By: ROBERT SCOTT Date: 17:29, December 10 2008

'APIWellNo:43047502280000'

Database:	EDM 2003.21 Single User Db	**Local Co-ordinate Reference:**	Well NBU 922-32P3CS
Company:	ANADARKO PETROLEUM CORP.	**TVD Reference:**	WELL @ 5053.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	**MD Reference:**	WELL @ 5053.00ft (Original Well Elev)
Site:	NBU 922-32O PAD	**North Reference:**	True
Well:	NBU 922-32P3CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	NBU 922-32P3CS		
Design:	Design #1		

Project UINTAH COUNTY, UTAH (nad 27),

Map System:	Universal Transverse Mercator (US Survey Fee	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	Zone 12N (114 W to 108 W)		

Site NBU 922-32O PAD, SECTION 32 T9S R22E

Site Position:		**Northing:**	14,525,311.03 ft	**Latitude:**	39° 59' 15.940 N
From:	Lat/Long	**Easting:**	2,071,637.69 ft	**Longitude:**	109° 27' 37.991 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	in	**Grid Convergence:**	0.99 °

Well NBU 922-32P3CS

Well Position	**+N/-S**	0.00 ft	**Northing:**	14,525,311.03 ft	**Latitude:**	39° 59' 15.940 N
	+E/-W	0.00 ft	**Easting:**	2,071,637.69 ft	**Longitude:**	109° 27' 37.991 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,033.00 ft

Wellbore NBU 922-32P3CS

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2008	12/4/2008	11.41	65.96	52,593

Design Design #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	125.64

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	
2,160.00	0.00	0.00	2,160.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,403.55	37.31	125.64	3,317.52	-227.67	317.57	3.00	3.00	0.00	125.64	
3,669.39	37.31	125.64	3,528.97	-321.54	448.51	0.00	0.00	0.00	0.00	
5,161.64	0.00	0.00	4,918.00	-594.74	829.60	2.50	-2.50	0.00	180.00	
9,343.64	0.00	0.00	9,100.00	-594.74	829.60	0.00	0.00	0.00	0.00	PBHL_NBU 922-32

Database:	EDM 2003.21 Single User Db	**Local Co-ordinate Reference:**	Well NBU 922-32P3CS
Company:	ANADARKO PETROLEUM CORP.	**TVD Reference:**	WELL @ 5053.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	**MD Reference:**	WELL @ 5053.00ft (Original Well Elev)
Site:	NBU 922-32O PAD	**North Reference:**	True
Well:	NBU 922-32P3CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	NBU 922-32P3CS		
Design:	Design #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
2,160.00	0.00	0.00	2,160.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 3.00									
2,200.00	1.20	125.64	2,200.00	-0.24	0.34	0.42	3.00	3.00	0.00
2,300.00	4.20	125.64	2,299.87	-2.99	4.17	5.13	3.00	3.00	0.00
2,400.00	7.20	125.64	2,399.37	-8.77	12.24	15.06	3.00	3.00	0.00
2,500.00	10.20	125.64	2,498.21	-17.59	24.53	30.18	3.00	3.00	0.00
2,600.00	13.20	125.64	2,596.12	-29.40	41.01	50.46	3.00	3.00	0.00
2,700.00	16.20	125.64	2,692.83	-44.18	61.63	75.83	3.00	3.00	0.00
2,800.00	19.20	125.64	2,788.09	-61.90	86.34	106.23	3.00	3.00	0.00
2,900.00	22.20	125.64	2,881.62	-82.49	115.06	141.58	3.00	3.00	0.00
3,000.00	25.20	125.64	2,973.18	-105.91	147.73	181.77	3.00	3.00	0.00
3,100.00	28.20	125.64	3,062.51	-132.08	184.24	226.69	3.00	3.00	0.00
3,200.00	31.20	125.64	3,149.36	-160.95	224.50	276.23	3.00	3.00	0.00
3,300.00	34.20	125.64	3,233.50	-192.42	268.40	330.25	3.00	3.00	0.00
3,400.00	37.20	125.64	3,314.70	-226.42	315.82	388.60	3.00	3.00	0.00
3,403.55	37.31	125.64	3,317.52	-227.67	317.57	390.75	3.00	3.00	0.00
Start 265.84 hold at 3403.55 MD									
3,500.00	37.31	125.64	3,394.24	-261.73	365.08	449.20	0.00	0.00	0.00
3,600.00	37.31	125.64	3,473.78	-297.04	414.34	509.81	0.00	0.00	0.00
3,669.39	37.31	125.64	3,528.97	-321.54	448.51	551.87	0.00	0.00	0.00
Start Drop -2.50									
3,700.00	36.54	125.64	3,553.45	-332.26	463.46	570.26	2.50	-2.50	0.00
3,800.00	34.04	125.64	3,635.06	-365.92	510.41	628.03	2.50	-2.50	0.00
3,900.00	31.54	125.64	3,719.12	-397.47	554.42	682.18	2.50	-2.50	0.00
4,000.00	29.04	125.64	3,805.46	-426.86	595.41	732.61	2.50	-2.50	0.00
4,100.00	26.54	125.64	3,893.92	-454.02	633.30	779.24	2.50	-2.50	0.00
4,200.00	24.04	125.64	3,984.33	-478.91	668.02	821.95	2.50	-2.50	0.00
4,300.00	21.54	125.64	4,076.51	-501.48	699.50	860.69	2.50	-2.50	0.00
4,400.00	19.04	125.64	4,170.30	-521.68	727.68	895.36	2.50	-2.50	0.00
4,500.00	16.54	125.64	4,265.51	-539.48	752.51	925.92	2.50	-2.50	0.00
4,600.00	14.04	125.64	4,361.96	-554.85	773.95	952.29	2.50	-2.50	0.00
4,657.59	12.60	125.64	4,418.00	-562.58	784.73	965.56	2.50	-2.50	0.00
WASATCH									
4,700.00	11.54	125.64	4,459.47	-567.75	791.94	974.42	2.50	-2.50	0.00
4,800.00	9.04	125.64	4,557.86	-578.15	806.46	992.29	2.50	-2.50	0.00
4,900.00	6.54	125.64	4,656.92	-586.05	817.47	1,005.84	2.50	-2.50	0.00
5,000.00	4.04	125.64	4,756.49	-591.42	824.97	1,015.06	2.50	-2.50	0.00
5,100.00	1.54	125.64	4,856.36	-594.26	828.92	1,019.93	2.50	-2.50	0.00
5,161.64	0.00	0.00	4,918.00	-594.74	829.60	1,020.76	2.50	-2.50	0.00
Start 4182.00 hold at 5161.64 MD									
5,200.00	0.00	0.00	4,956.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
5,300.00	0.00	0.00	5,056.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
5,400.00	0.00	0.00	5,156.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
5,500.00	0.00	0.00	5,256.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
5,600.00	0.00	0.00	5,356.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
5,700.00	0.00	0.00	5,456.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
5,800.00	0.00	0.00	5,556.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
5,900.00	0.00	0.00	5,656.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
6,000.00	0.00	0.00	5,756.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
6,100.00	0.00	0.00	5,856.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
6,200.00	0.00	0.00	5,956.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
6,300.00	0.00	0.00	6,056.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
6,400.00	0.00	0.00	6,156.36	-594.74	829.60	1,020.76	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	**Local Co-ordinate Reference:**	Well NBU 922-32P3CS
Company:	ANADARKO PETROLEUM CORP.	**TVD Reference:**	WELL @ 5053.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	**MD Reference:**	WELL @ 5053.00ft (Original Well Elev)
Site:	NBU 922-32O PAD	**North Reference:**	True
Well:	NBU 922-32P3CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	NBU 922-32P3CS		
Design:	Design #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,500.00	0.00	0.00	6,256.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
6,600.00	0.00	0.00	6,356.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
6,700.00	0.00	0.00	6,456.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
6,800.00	0.00	0.00	6,556.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
6,900.00	0.00	0.00	6,656.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
7,000.00	0.00	0.00	6,756.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
7,100.00	0.00	0.00	6,856.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
7,200.00	0.00	0.00	6,956.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
7,300.00	0.00	0.00	7,056.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
7,400.00	0.00	0.00	7,156.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
7,500.00	0.00	0.00	7,256.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
7,600.00	0.00	0.00	7,356.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
7,700.00	0.00	0.00	7,456.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
7,800.00	0.00	0.00	7,556.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
7,900.00	0.00	0.00	7,656.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
8,000.00	0.00	0.00	7,756.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
8,051.64	0.00	0.00	7,808.00	-594.74	829.60	1,020.76	0.00	0.00	0.00
MESAVERDE									
8,100.00	0.00	0.00	7,856.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
8,200.00	0.00	0.00	7,956.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
8,300.00	0.00	0.00	8,056.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
8,400.00	0.00	0.00	8,156.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
8,500.00	0.00	0.00	8,256.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
8,600.00	0.00	0.00	8,356.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
8,700.00	0.00	0.00	8,456.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
8,800.00	0.00	0.00	8,556.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
8,900.00	0.00	0.00	8,656.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
9,000.00	0.00	0.00	8,756.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
9,100.00	0.00	0.00	8,856.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
9,200.00	0.00	0.00	8,956.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
9,300.00	0.00	0.00	9,056.36	-594.74	829.60	1,020.76	0.00	0.00	0.00
9,343.64	0.00	0.00	9,100.00	-594.74	829.60	1,020.76	0.00	0.00	0.00
TD at 9343.64 - PBHL_NBU 922-32P3CS									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,100.00	2,100.00	9 5/8"	9.62	12.25

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,218.00	1,218.00	GREEN RIVER		0.00	
4,657.59	4,418.00	WASATCH		0.00	
8,051.64	7,808.00	MESAVERDE		0.00	

'APIWellNo:43047502280000'

Database:	EDM 2003.21 Single User Db	**Local Co-ordinate Reference:**	Well NBU 922-32P3CS
Company:	ANADARKO PETROLEUM CORP.	**TVD Reference:**	WELL @ 5053.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	**MD Reference:**	WELL @ 5053.00ft (Original Well Elev)
Site:	NBU 922-32O PAD	**North Reference:**	True
Well:	NBU 922-32P3CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	NBU 922-32P3CS		
Design:	Design #1		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
2,160.00	2,160.00	0.00	0.00	Start Build 3.00
3,403.55	3,317.52	-227.67	317.57	Start 265.84 hold at 3403.55 MD
3,669.39	3,528.97	-321.54	448.51	Start Drop -2.50
5,161.64	4,918.00	-594.74	829.60	Start 4182.00 hold at 5161.64 MD
9,343.64	9,100.00	-594.74	829.60	TD at 9343.64

'APIWellNo:43047502280000'

ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)
NBU 922-32O PAD
NBU 922-32P3CS

NBU 922-32P3CS
Design #1

Anticollision Report

10 December, 2008

'APIWellNo:43047502280000'

Weatherford International Ltd.

Anticollision Report

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-32P3CS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	WELL @ 5053.00ft (Original Well Elev)
Reference Site:	NBU 922-32O PAD	**MD Reference:**	WELL @ 5053.00ft (Original Well Elev)
Site Error:	0.00ft	**North Reference:**	True
Reference Well:	NBU 922-32P3CS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 922-32P3CS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Reference Design #1

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

Survey Tool Program **Date** 12/10/2008

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	9,343.64	Design #1 (NBU 922-32P3CS)	MWD	MWD - Standard

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
NBU 922-32O PAD						
NBU404 ACTUAL GYRO - NBU404 ACTUAL GYRO - NI	1,507.50	1,487.61	13.54	7.56	2.266	CC, ES, SF

Offset Design NBU 922-32O PAD - NBU404 ACTUAL GYRO - NBU404 ACTUAL GYRO - NBU404 ACTUAL GYRO

Offset Site Error: 0.00 ft

Survey Program: 100-NS-GYRO-MS

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-104.04	-5.00	-20.00	28.72				
100.00	100.00	79.98	79.98	0.09	0.11	-104.41	-5.14	-20.00	20.65	20.46	0.20	105.302	
200.00	200.00	179.97	179.97	0.31	0.35	-105.55	-5.57	-20.01	20.77	20.11	0.66	31.487	
300.00	300.00	279.94	279.94	0.54	0.60	-106.56	-5.98	-20.10	20.97	19.83	1.14	18.368	
400.00	400.00	379.97	379.96	0.76	0.86	-107.43	-6.36	-20.27	21.24	19.62	1.62	13.084	
500.00	500.00	479.98	479.98	0.99	1.12	-108.56	-6.80	-20.25	21.36	19.25	2.11	10.128	
600.00	600.00	579.99	579.99	1.21	1.38	-109.70	-7.23	-20.18	21.44	18.84	2.59	8.264	
700.00	700.00	680.07	680.07	1.44	1.54	-110.34	-7.42	-20.02	21.35	18.37	2.98	7.158	
800.00	800.00	780.10	780.09	1.66	1.63	-110.06	-7.19	-19.68	20.95	17.65	3.30	6.352	
900.00	900.00	880.15	880.14	1.89	1.74	-109.71	-6.88	-19.21	20.41	16.78	3.63	5.627	
1,000.00	1,000.00	980.09	980.08	2.11	1.84	-108.62	-6.32	-18.77	19.80	15.85	3.95	5.008	
1,100.00	1,100.00	1,080.14	1,080.13	2.34	1.97	-107.57	-5.84	-18.45	19.35	15.05	4.30	4.496	
1,200.00	1,200.00	1,180.29	1,180.28	2.56	2.14	-106.29	-5.13	-17.56	18.30	13.60	4.70	3.894	
1,300.00	1,300.00	1,280.37	1,280.34	2.79	2.34	-104.77	-4.20	-15.94	16.49	11.37	5.13	3.218	
1,400.00	1,400.00	1,380.30	1,380.24	3.01	2.54	-100.91	-2.75	-14.29	14.55	9.00	5.55	2.623	
1,500.00	1,500.00	1,480.12	1,480.02	3.24	2.71	-90.23	-0.06	-13.55	13.55	7.60	5.95	2.278	
1,507.50	1,507.50	1,487.61	1,487.50	3.25	2.72	-89.19	0.19	-13.54	13.54	7.56	5.98	2.266	CC, ES, SF
1,600.00	1,600.00	1,579.85	1,579.68	3.46	2.87	-75.74	3.58	-14.10	14.55	8.22	6.33	2.299	
1,700.00	1,700.00	1,679.71	1,679.45	3.69	3.02	-64.66	7.45	-15.73	17.41	10.70	6.71	2.596	
1,800.00	1,800.00	1,779.78	1,779.46	3.91	3.18	-59.12	10.46	-17.50	20.40	13.31	7.09	2.878	
1,900.00	1,900.00	1,880.00	1,879.65	4.14	3.34	-57.60	12.08	-19.03	22.54	15.07	7.47	3.017	
2,000.00	2,000.00	1,980.22	1,979.86	4.36	3.48	-58.45	12.34	-20.09	23.58	15.74	7.84	3.008	
2,100.00	2,100.00	2,080.53	2,080.17	4.59	3.62	-61.53	11.23	-20.71	23.56	15.36	8.20	2.874	
2,160.00	2,160.00	2,140.61	2,140.23	4.72	3.71	-63.64	10.21	-20.60	22.99	14.57	8.42	2.730	
2,180.16	2,180.16	2,160.78	2,160.40	4.76	3.74	170.06	9.86	-20.54	22.89	14.40	8.50	2.694	
2,200.00	2,200.00	2,180.62	2,180.24	4.80	3.77	169.51	9.52	-20.47	22.99	14.43	8.57	2.684	

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

'APIWellNo:43047502280000'

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-32P3CS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	WELL @ 5053.00ft (Original Well Elev)
Reference Site:	NBU 922-32O PAD	**MD Reference:**	WELL @ 5053.00ft (Original Well Elev)
Site Error:	0.00ft	**North Reference:**	True
Reference Well:	NBU 922-32P3CS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 922-32P3CS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design NBU 922-32O PAD - NBU404 ACTUAL GYRO - NBU404 ACTUAL GYRO - NBU404 ACTUAL GYRO — **Offset Site Error:** 0.00 ft

Survey Program: 100-NS-GYRO-MS — **Offset Well Error:** 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
2,300.00	2,299.87	2,280.67	2,280.28	4.98	3.93	167.95	7.56	-19.97	26.34	17.45	8.89	2.962	
2,400.00	2,399.37	2,380.33	2,379.90	5.18	4.11	167.93	5.04	-19.34	34.47	25.26	9.21	3.741	
2,500.00	2,498.21	2,479.45	2,478.98	5.39	4.29	169.13	2.51	-18.77	47.75	38.22	9.52	5.015	
2,600.00	2,596.12	2,577.56	2,577.06	5.64	4.48	170.52	0.00	-18.28	66.19	56.38	9.81	6.745	
2,700.00	2,692.83	2,674.91	2,674.38	5.93	4.67	171.73	-2.51	-17.92	89.82	79.73	10.09	8.902	
2,800.00	2,788.09	2,770.70	2,770.14	6.29	4.87	172.89	-4.80	-17.21	118.26	107.91	10.35	11.427	
2,900.00	2,881.62	2,864.75	2,864.16	6.74	5.07	173.89	-6.73	-16.47	151.81	141.22	10.59	14.331	
3,000.00	2,973.18	2,957.54	2,956.93	7.28	5.28	174.64	-8.69	-15.73	190.21	179.39	10.82	17.578	
3,100.00	3,062.51	3,048.01	3,047.37	7.95	5.48	175.20	-10.80	-14.76	233.10	222.07	11.03	21.130	
3,200.00	3,149.36	3,135.30	3,134.63	8.74	5.68	175.58	-12.95	-14.05	280.78	269.56	11.22	25.016	
3,300.00	3,233.50	3,219.83	3,219.14	9.66	5.87	175.84	-15.10	-13.63	333.19	321.78	11.40	29.223	
3,403.55	3,317.52	3,304.34	3,303.62	10.76	6.06	176.06	-17.18	-13.31	392.21	380.64	11.57	33.895	
3,500.00	3,394.24	3,381.39	3,380.65	11.88	6.23	176.35	-18.94	-13.08	449.43	437.38	12.05	37.302	
3,600.00	3,473.78	3,461.34	3,460.58	13.09	6.42	176.59	-20.68	-12.89	508.87	496.31	12.56	40.513	
3,669.39	3,528.97	3,490.00	3,489.23	13.94	6.48	176.66	-21.30	-12.84	550.80	537.93	12.88	42.778	
3,700.00	3,553.45	3,490.00	3,489.23	14.29	6.48	176.70	-21.30	-12.84	570.54	557.46	13.08	43.629	
3,800.00	3,635.06	3,490.00	3,489.23	15.32	6.48	176.83	-21.30	-12.84	639.05	625.34	13.72	46.592	
3,900.00	3,719.12	3,490.00	3,489.23	16.31	6.48	176.98	-21.30	-12.84	712.28	697.96	14.33	49.717	
4,000.00	3,805.46	3,490.00	3,489.23	17.25	6.48	177.13	-21.30	-12.84	788.80	773.89	14.91	52.921	
4,100.00	3,893.92	3,490.00	3,489.23	18.13	6.48	177.29	-21.30	-12.84	867.60	852.16	15.45	56.165	
4,200.00	3,984.33	3,490.00	3,489.23	18.93	6.48	177.44	-21.30	-12.84	948.00	932.05	15.95	59.433	
4,300.00	4,076.51	3,490.00	3,489.23	19.67	6.48	177.60	-21.30	-12.84	1,029.47	1,013.06	16.41	62.725	
4,400.00	4,170.30	3,490.00	3,489.23	20.33	6.48	177.74	-21.30	-12.84	1,111.65	1,094.82	16.83	66.048	
4,500.00	4,265.51	3,490.00	3,489.23	20.91	6.48	177.88	-21.30	-12.84	1,194.25	1,177.05	17.20	69.415	
4,600.00	4,361.96	3,490.00	3,489.23	21.42	6.48	178.01	-21.30	-12.84	1,277.05	1,259.52	17.53	72.840	
4,700.00	4,459.47	3,490.00	3,489.23	21.85	6.48	178.14	-21.30	-12.84	1,359.87	1,342.05	17.81	76.341	
4,800.00	4,557.86	3,490.00	3,489.23	22.22	6.48	178.25	-21.30	-12.84	1,442.55	1,424.50	18.05	79.936	
4,900.00	4,656.92	3,490.00	3,489.23	22.51	6.48	178.36	-21.30	-12.84	1,524.98	1,506.75	18.23	83.642	
5,000.00	4,756.49	3,490.00	3,489.23	22.74	6.48	178.46	-21.30	-12.84	1,607.05	1,588.68	18.37	87.481	
5,100.00	4,856.36	3,490.00	3,489.23	22.90	6.48	178.55	-21.30	-12.84	1,688.68	1,670.21	18.46	91.471	
5,161.64	4,918.00	3,490.00	3,489.23	22.97	6.48	-55.76	-21.30	-12.84	1,738.73	1,720.24	18.49	94.043	
5,200.00	4,956.36	3,490.00	3,489.23	23.00	6.48	-55.76	-21.30	-12.84	1,769.95	1,751.39	18.55	95.395	
5,300.00	5,056.36	3,490.00	3,489.23	23.10	6.48	-55.76	-21.30	-12.84	1,852.60	1,833.87	18.74	98.877	
5,400.00	5,156.36	3,490.00	3,489.23	23.21	6.48	-55.76	-21.30	-12.84	1,936.90	1,917.98	18.92	102.371	
5,500.00	5,256.36	3,490.00	3,489.23	23.31	6.48	-55.76	-21.30	-12.84	2,022.62	2,003.51	19.11	105.865	
5,600.00	5,356.36	3,490.00	3,489.23	23.42	6.48	-55.76	-21.30	-12.84	2,109.60	2,090.31	19.29	109.350	
5,700.00	5,456.36	3,490.00	3,489.23	23.52	6.48	-55.76	-21.30	-12.84	2,197.69	2,178.21	19.48	112.818	
5,800.00	5,556.36	3,490.00	3,489.23	23.63	6.48	-55.76	-21.30	-12.84	2,286.76	2,267.09	19.67	116.263	
5,900.00	5,656.36	3,490.00	3,489.23	23.74	6.48	-55.76	-21.30	-12.84	2,376.70	2,356.84	19.86	119.679	
6,000.00	5,756.36	3,490.00	3,489.23	23.85	6.48	-55.76	-21.30	-12.84	2,467.41	2,447.36	20.05	123.063	
6,100.00	5,856.36	3,490.00	3,489.23	23.97	6.48	-55.76	-21.30	-12.84	2,558.82	2,538.58	20.24	126.411	
6,200.00	5,956.36	3,490.00	3,489.23	24.08	6.48	-55.76	-21.30	-12.84	2,650.84	2,630.41	20.44	129.720	
6,300.00	6,056.36	3,490.00	3,489.23	24.20	6.48	-55.76	-21.30	-12.84	2,743.43	2,722.80	20.63	132.988	
6,400.00	6,156.36	3,490.00	3,489.23	24.32	6.48	-55.76	-21.30	-12.84	2,836.52	2,815.69	20.82	136.213	
6,500.00	6,256.36	3,490.00	3,489.23	24.44	6.48	-55.76	-21.30	-12.84	2,930.06	2,909.04	21.02	139.395	
6,600.00	6,356.36	3,490.00	3,489.23	24.56	6.48	-55.76	-21.30	-12.84	3,024.02	3,002.80	21.22	142.532	
6,700.00	6,456.36	3,490.00	3,489.23	24.68	6.48	-55.76	-21.30	-12.84	3,118.35	3,096.93	21.41	145.623	
6,800.00	6,556.36	3,490.00	3,489.23	24.81	6.48	-55.76	-21.30	-12.84	3,213.02	3,191.41	21.61	148.669	
6,900.00	6,656.36	3,490.00	3,489.23	24.93	6.48	-55.76	-21.30	-12.84	3,308.01	3,286.20	21.81	151.668	
7,000.00	6,756.36	3,490.00	3,489.23	25.06	6.48	-55.76	-21.30	-12.84	3,403.29	3,381.28	22.01	154.621	
7,100.00	6,856.36	3,490.00	3,489.23	25.19	6.48	-55.76	-21.30	-12.84	3,498.83	3,476.62	22.21	157.529	
7,200.00	6,956.36	3,490.00	3,489.23	25.32	6.48	-55.76	-21.30	-12.84	3,594.61	3,572.20	22.41	160.390	

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

'APIWellNo:43047502280000'

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-32P3CS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	WELL @ 5053.00ft (Original Well Elev)
Reference Site:	NBU 922-32O PAD	**MD Reference:**	WELL @ 5053.00ft (Original Well Elev)
Site Error:	0.00ft	**North Reference:**	True
Reference Well:	NBU 922-32P3CS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 922-32P3CS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design NBU 922-32O PAD - NBU404 ACTUAL GYRO - NBU404 ACTUAL GYRO - NBU404 ACTUAL GYRO

Offset Site Error: 0.00 ft
Offset Well Error: 0.00 ft

Survey Program: 100-NS-GYRO-MS

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
7,300.00	7,056.36	3,490.00	3,489.23	25.45	6.48	-55.76	-21.30	-12.84	3,690.62	3,668.00	22.61	163.206	
7,400.00	7,156.36	3,490.00	3,489.23	25.58	6.48	-55.76	-21.30	-12.84	3,786.83	3,764.01	22.82	165.977	
7,500.00	7,256.36	3,490.00	3,489.23	25.71	6.48	-55.76	-21.30	-12.84	3,883.23	3,860.21	23.02	168.703	
7,600.00	7,356.36	3,490.00	3,489.23	25.85	6.48	-55.76	-21.30	-12.84	3,979.81	3,956.59	23.22	171.385	
7,700.00	7,456.36	3,490.00	3,489.23	25.99	6.48	-55.76	-21.30	-12.84	4,076.56	4,053.14	23.43	174.024	
7,800.00	7,556.36	3,490.00	3,489.23	26.12	6.48	-55.76	-21.30	-12.84	4,173.46	4,149.83	23.63	176.619	
7,900.00	7,656.36	3,490.00	3,489.23	26.26	6.48	-55.76	-21.30	-12.84	4,270.50	4,246.67	23.83	179.173	
8,000.00	7,756.36	3,490.00	3,489.23	26.40	6.48	-55.76	-21.30	-12.84	4,367.68	4,343.64	24.04	181.684	
8,100.00	7,856.36	3,490.00	3,489.23	26.54	6.48	-55.76	-21.30	-12.84	4,464.98	4,440.73	24.25	184.155	
8,200.00	7,956.36	3,490.00	3,489.23	26.68	6.48	-55.76	-21.30	-12.84	4,562.40	4,537.95	24.45	186.585	
8,300.00	8,056.36	3,490.00	3,489.23	26.83	6.48	-55.76	-21.30	-12.84	4,659.92	4,635.27	24.66	188.976	
8,400.00	8,156.36	3,490.00	3,489.23	26.97	6.48	-55.76	-21.30	-12.84	4,757.55	4,732.69	24.87	191.328	
8,500.00	8,256.36	3,490.00	3,489.23	27.12	6.48	-55.76	-21.30	-12.84	4,855.28	4,830.21	25.07	193.642	
8,600.00	8,356.36	3,490.00	3,489.23	27.26	6.48	-55.76	-21.30	-12.84	4,953.10	4,927.82	25.28	195.918	
8,700.00	8,456.36	3,490.00	3,489.23	27.41	6.48	-55.76	-21.30	-12.84	5,051.00	5,025.51	25.49	198.158	
8,800.00	8,556.36	3,490.00	3,489.23	27.56	6.48	-55.76	-21.30	-12.84	5,148.98	5,123.28	25.70	200.361	
8,900.00	8,656.36	3,490.00	3,489.23	27.71	6.48	-55.76	-21.30	-12.84	5,247.04	5,221.13	25.91	202.529	
9,000.00	8,756.36	3,490.00	3,489.23	27.86	6.48	-55.76	-21.30	-12.84	5,345.17	5,319.06	26.12	204.662	
9,100.00	8,856.36	3,490.00	3,489.23	28.01	6.48	-55.76	-21.30	-12.84	5,443.37	5,417.05	26.33	206.762	
9,200.00	8,956.36	3,490.00	3,489.23	28.16	6.48	-55.76	-21.30	-12.84	5,541.64	5,515.10	26.54	208.828	
9,300.00	9,056.36	3,490.00	3,489.23	28.32	6.48	-55.76	-21.30	-12.84	5,639.96	5,613.21	26.75	210.861	
9,343.64	9,100.00	3,490.00	3,489.23	28.39	6.48	-55.76	-21.30	-12.84	5,682.89	5,656.05	26.84	211.739	

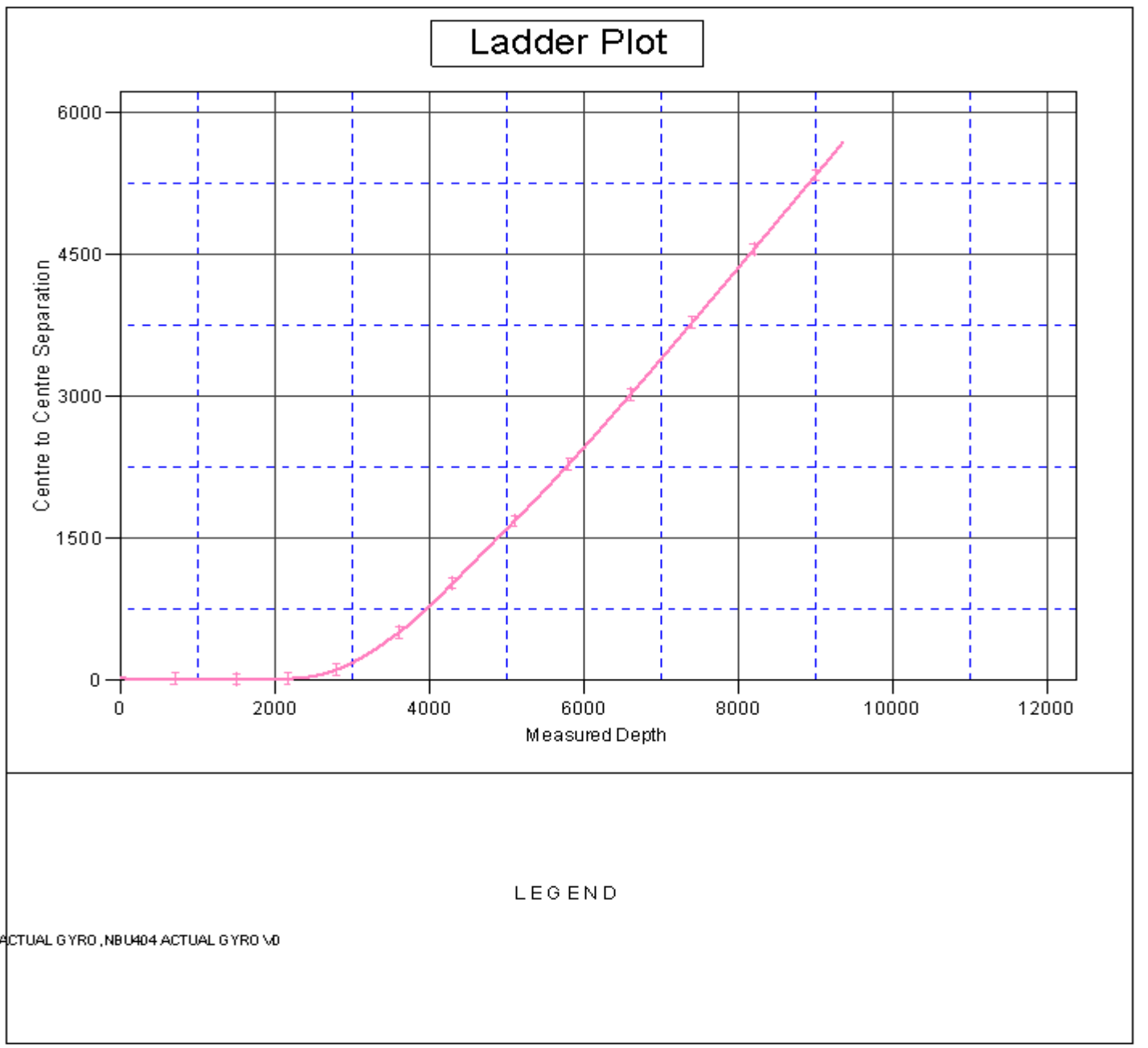
'APIWellNo:43047502280000'

Weatherford International Ltd.

Anticollision Report

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-32P3CS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	WELL @ 5053.00ft (Original Well Elev)
Reference Site:	NBU 922-32O PAD	**MD Reference:**	WELL @ 5053.00ft (Original Well Elev)
Site Error:	0.00ft	**North Reference:**	True
Reference Well:	NBU 922-32P3CS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 922-32P3CS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 5053.00ft (Original Well Ele\Coordinates are relative to: NBU 922-32P3CS
Offset Depths are relative to Offset Datum
Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N
Central Meridian is 111° 0' 0.000 W °
Grid Convergence at Surface is: 0.99°

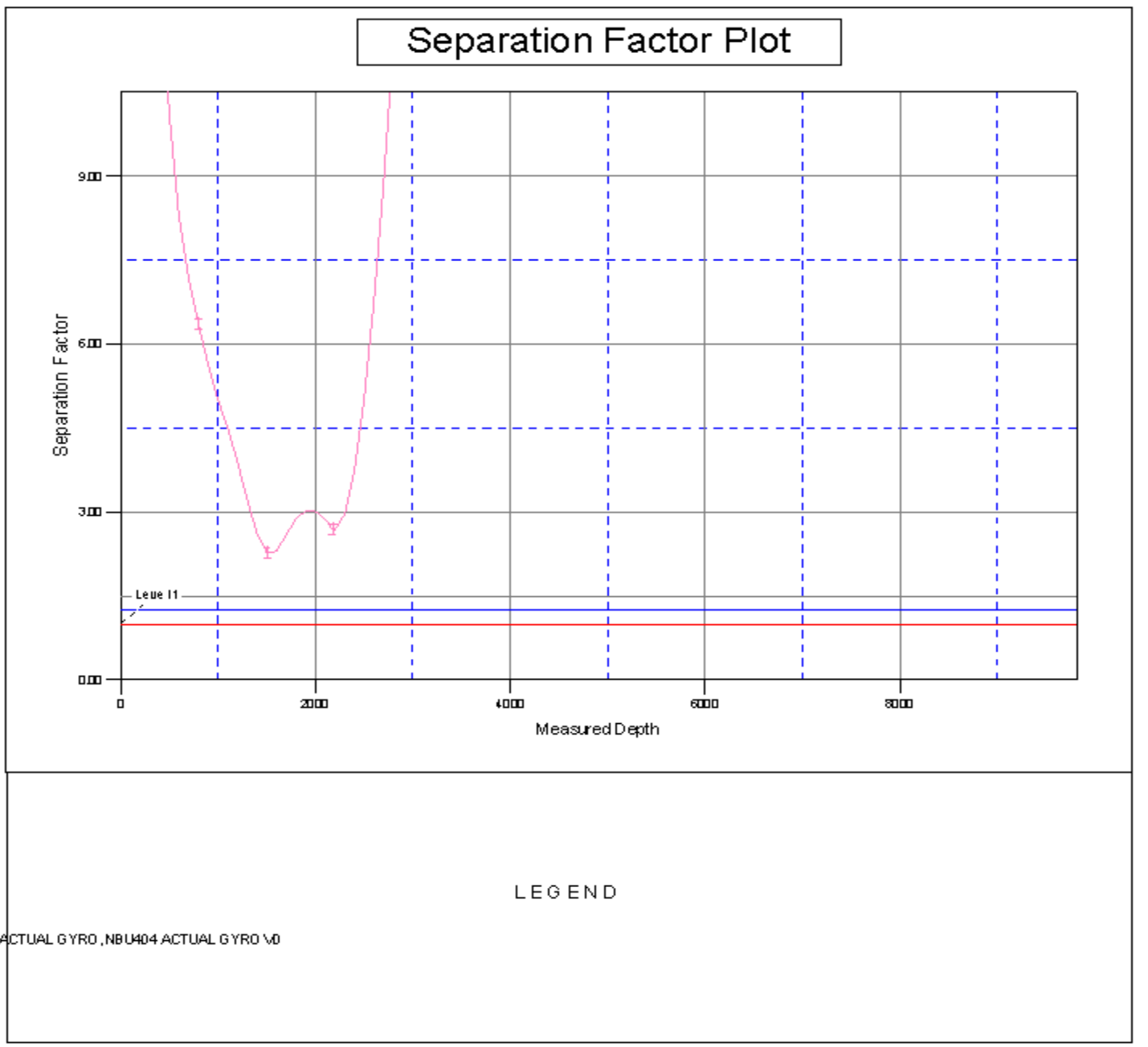


Weatherford International Ltd.

Anticollision Report

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-32P3CS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	WELL @ 5053.00ft (Original Well Elev)
Reference Site:	NBU 922-32O PAD	**MD Reference:**	WELL @ 5053.00ft (Original Well Elev)
Site Error:	0.00ft	**North Reference:**	True
Reference Well:	NBU 922-32P3CS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 922-32P3CS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 5053.00ft (Original Well Ele\Coordinates are relative to: NBU 922-32P3CS
Offset Depths are relative to Offset Datum
Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N
Central Meridian is 111° 0' 0.000 W °
Grid Convergence at Surface is: 0.99°



’APIWellNo:43047502280000’

Weatherford International, Ltd
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IPC #08-147

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: 2J25, 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.

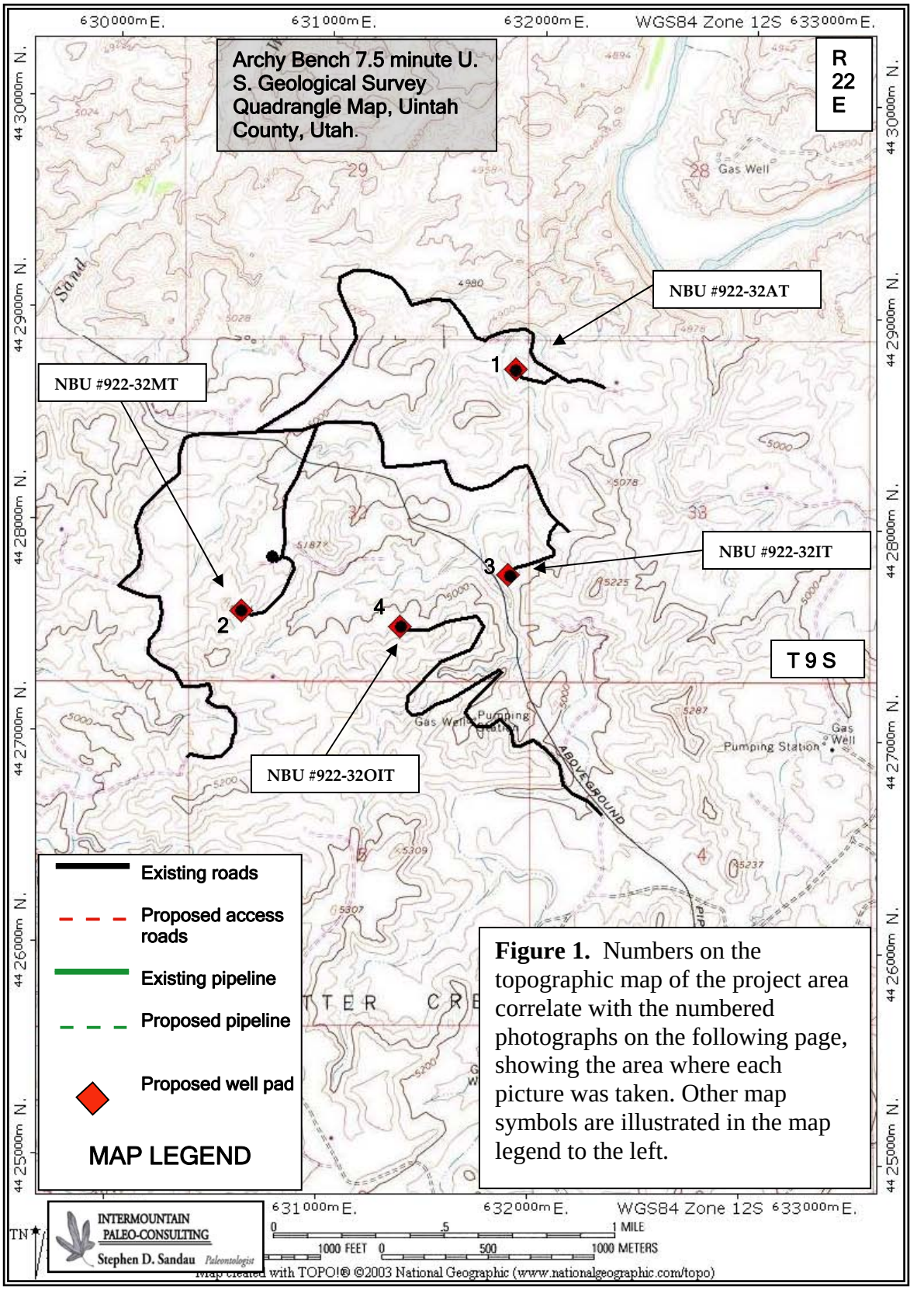
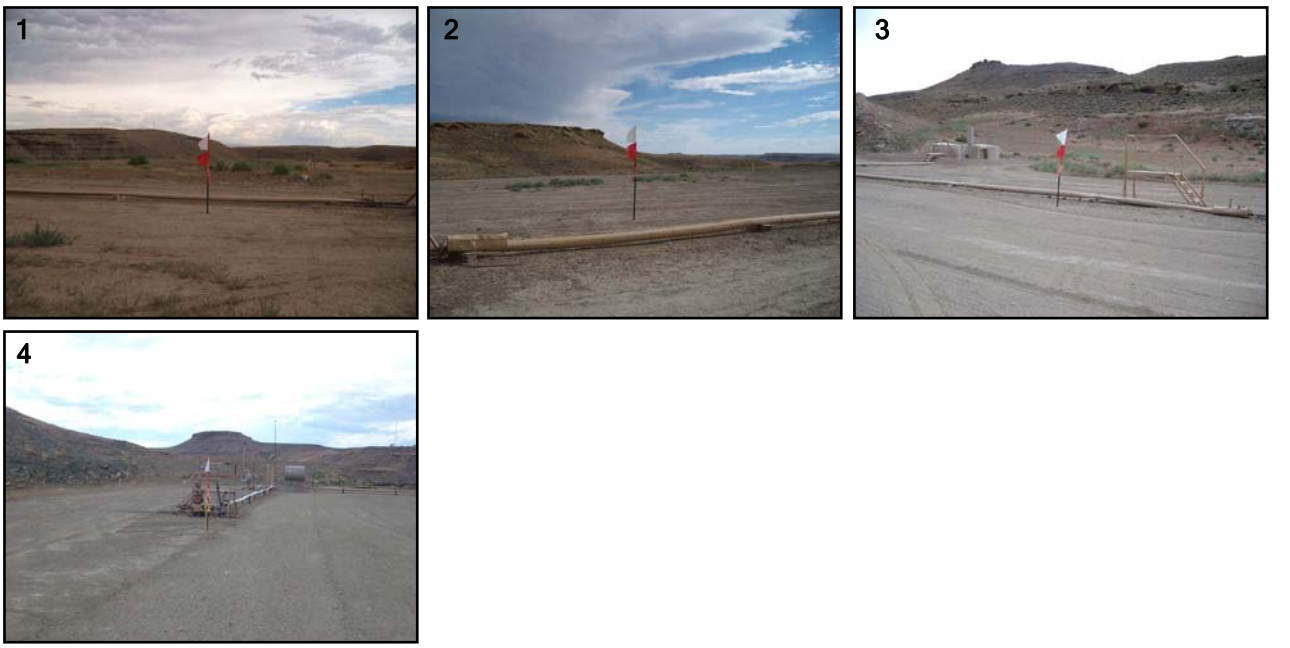


Figure 1. Numbers on the topographic map of the project area correlate with the numbered photographs on the following page, showing the area where each picture was taken. Other map symbols are illustrated in the map legend to the left.

Figure 1. *continued. . .*



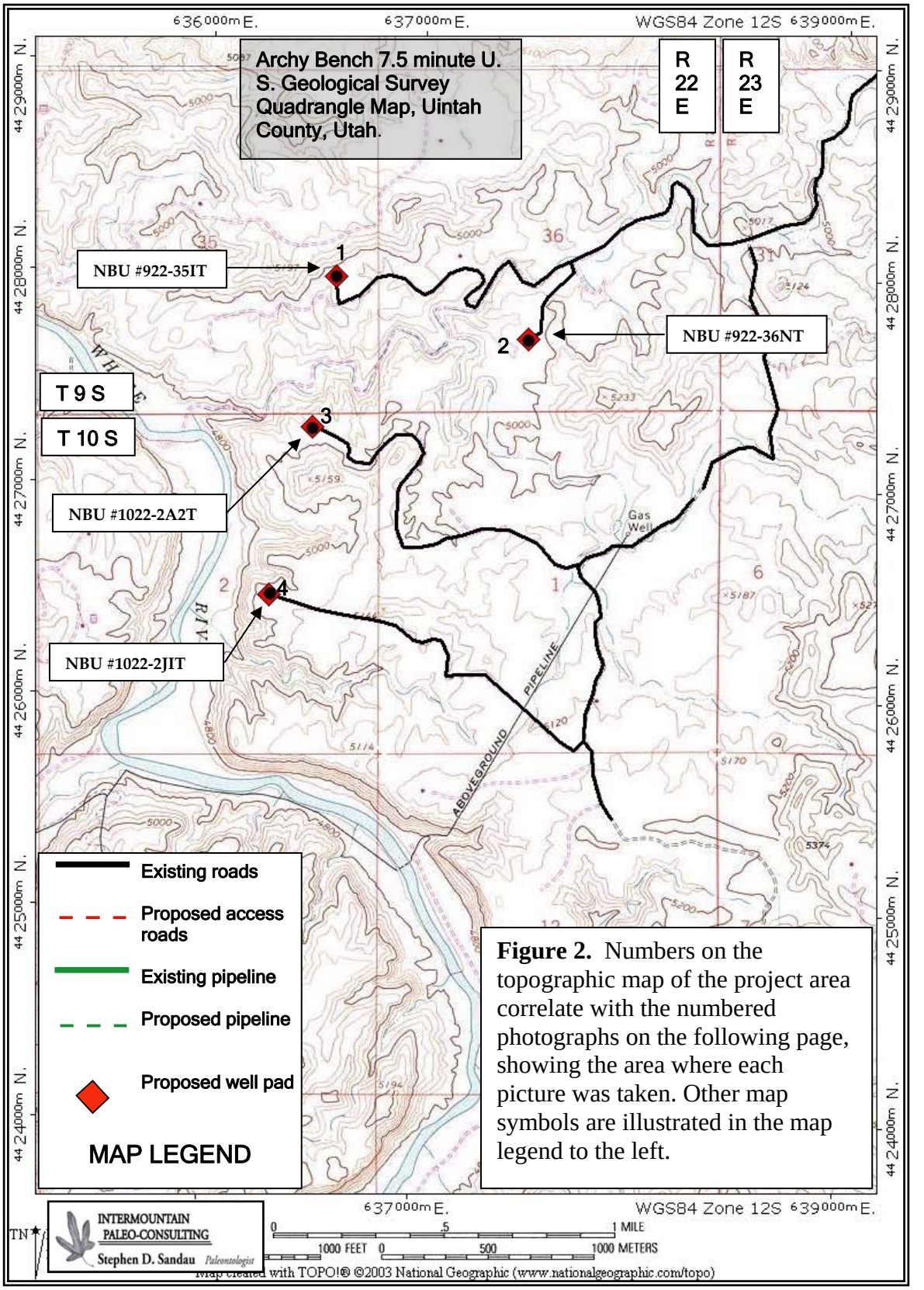
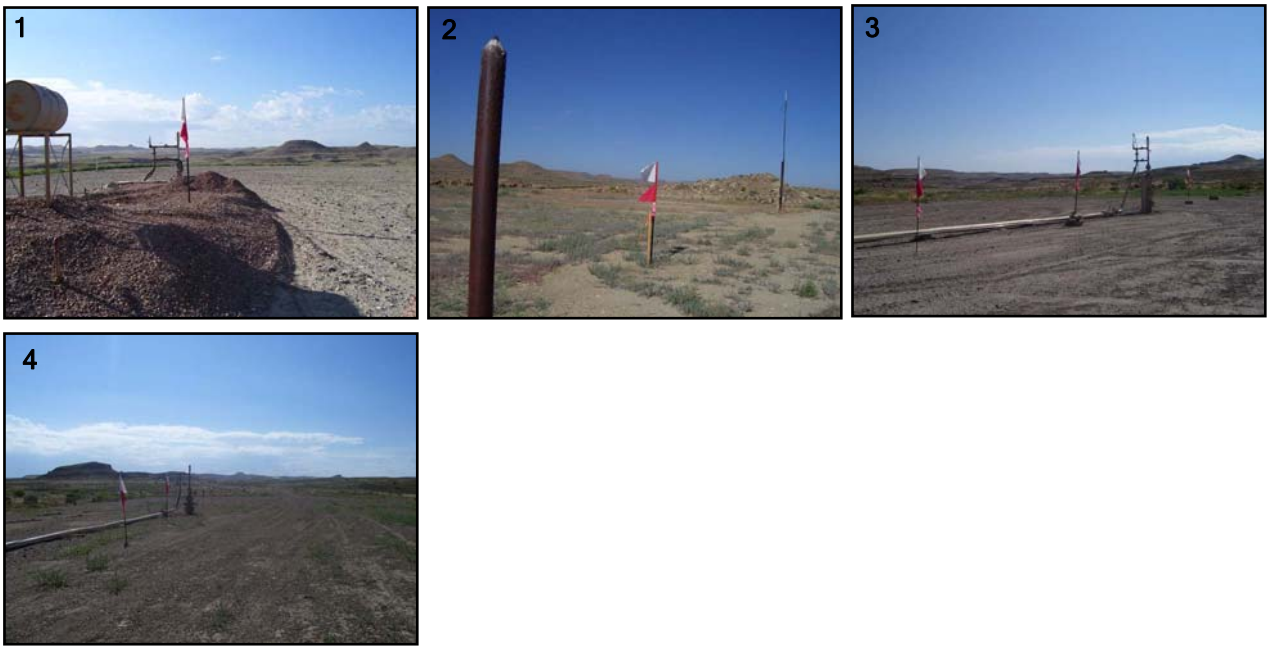


Figure 2. Numbers on the topographic map of the project area correlate with the numbered photographs on the following page, showing the area where each picture was taken. Other map symbols are illustrated in the map legend to the left.

Figure 2. *continued. . .*



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'APIWellNo:43047502280000'

Kerr–McGee Oil & Gas Onshore LP

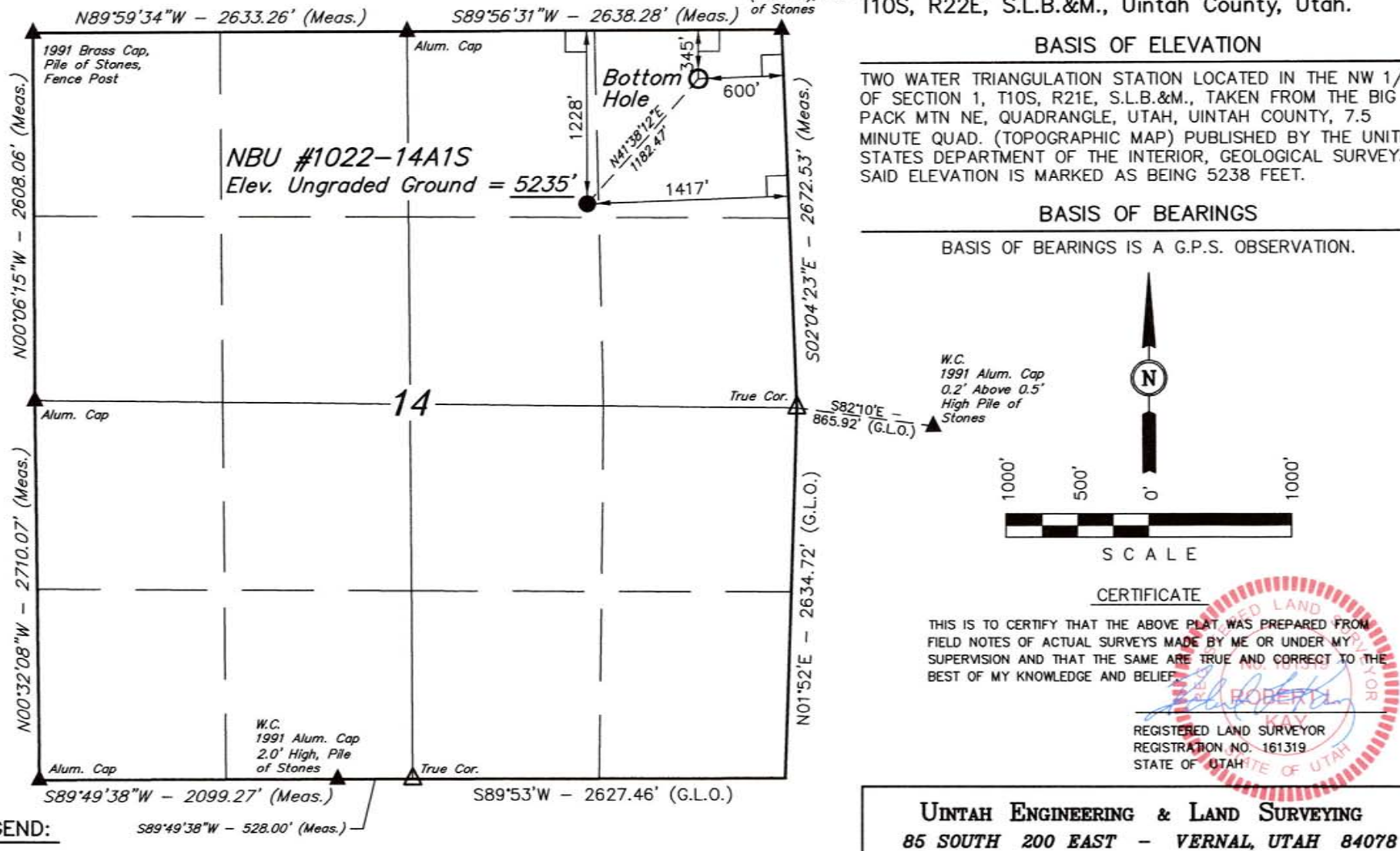
Well location, NBU #1022–14A1S, located as shown in the NW 1/4 NE 1/4 of Section 14, T10S, R22E, S.L.B.&M., Uintah County, Utah.

BASIS OF ELEVATION

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

BASIS OF BEARINGS

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



CERTIFICATE

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

REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

REGISTERED LAND SURVEYOR NO. 161319 ROBERT L. KAY STATE OF UTAH

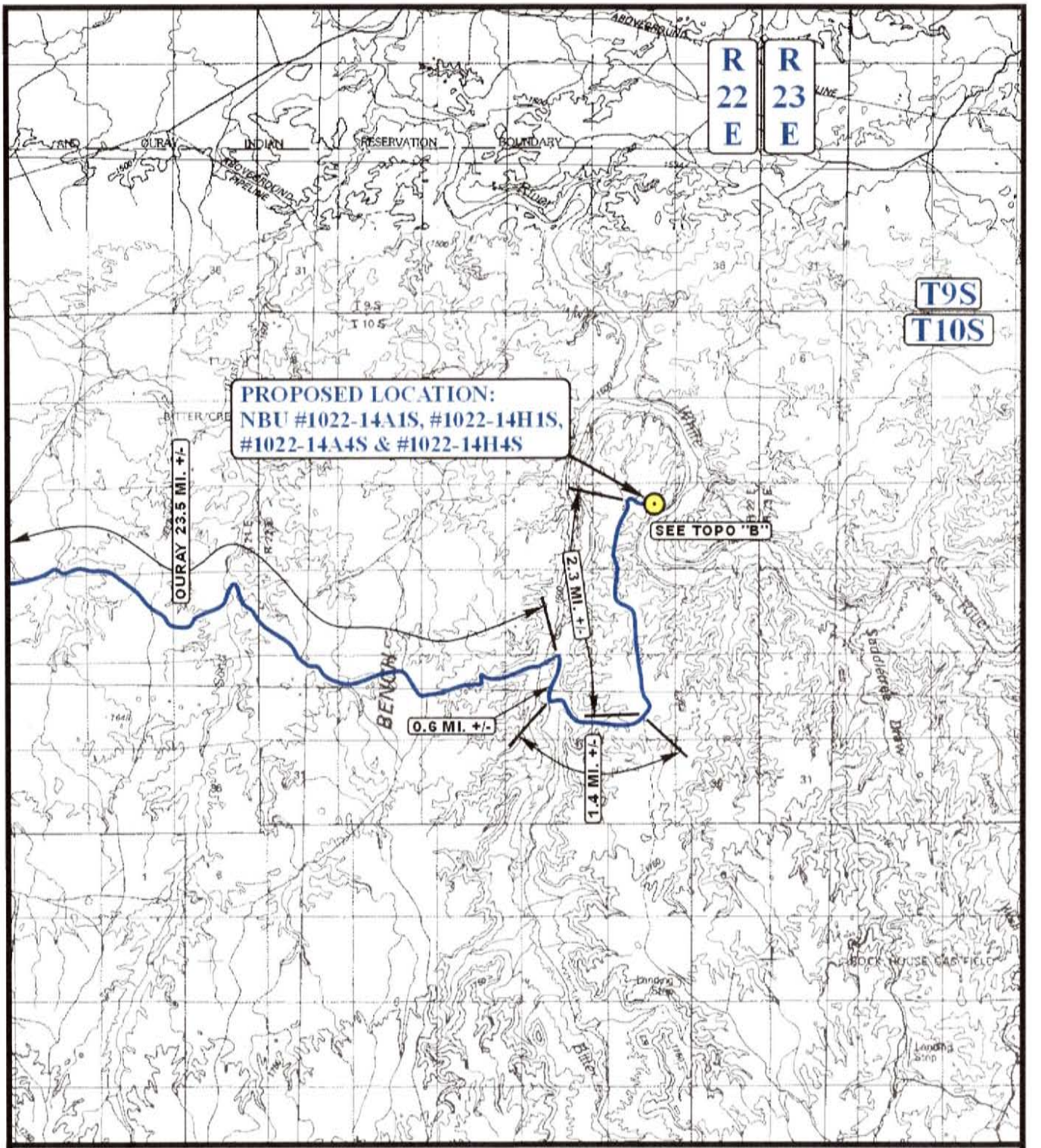
LEGEND:

- ⌐ = 90° SYMBOL
- ● = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.
- △ = SECTION CORNERS RE–ESTABLISHED. (Not Set on Ground)

NAD 83 (TARGET BOTTOM HOLE)	NAD 83 (SURFACE LOCATION)
LATITUDE = 39°57'18.97" (39.955269)	LATITUDE = 39°57'10.24" (39.952844)
LONGITUDE = 109°23'59.74" (109.399928)	LONGITUDE = 109°24'09.83" (109.402731)
NAD 27 (TARGET BOTTOM HOLE)	**NAD 27 (SURFACE LOCATION)**
LATITUDE = 39°57'19.09" (39.955303)	LATITUDE = 39°57'10.36" (39.952878)
LONGITUDE = 109°23'57.29" (109.399247)	LONGITUDE = 109°24'07.38" (109.402050)

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

SCALE: 1" = 1000'	DATE SURVEYED: 08–13–08	DATE DRAWN: 08–15–08
PARTY: D.K. C.K. C.C.	REFERENCES: G.L.O. PLAT	
WEATHER: HOT	FILE: Kerr–McGee Oil & Gas Onshore LP	



LEGEND:

PROPOSED LOCATION

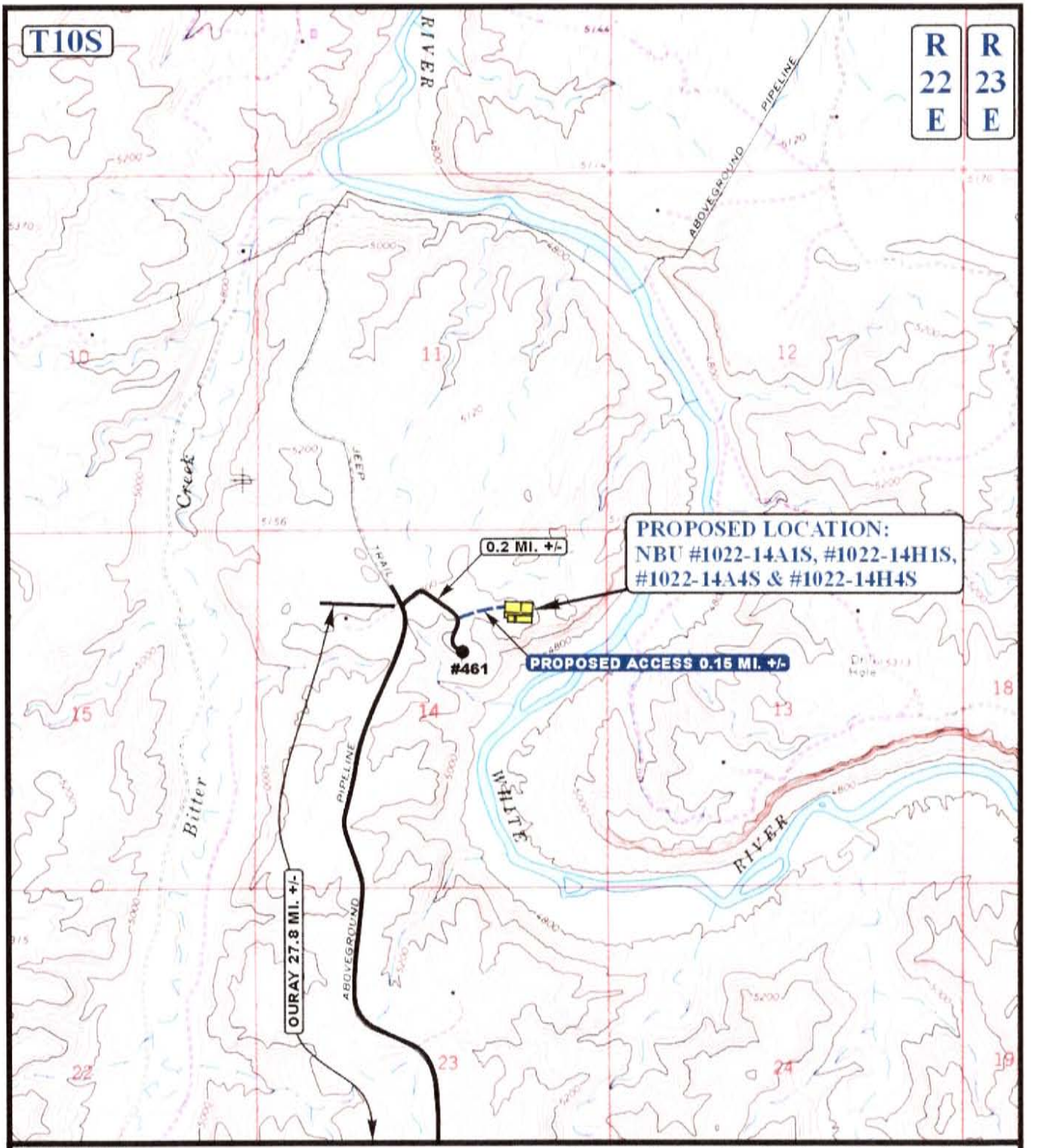
N

Kerr-McGee Oil & Gas Onshore LP

NBU #1022-14A1S, #1022-14H1S, #1022-14A4S & #1022-14H4S
SECTION 14, T10S, R22E, S.L.B.&M.
NW 1/4 NE 1/4

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

TOPOGRAPHIC MAP	02 MONTH	23 DAY	07 YEAR	A TOPO
SCALE: 1:100,000	DRAWN BY: C.P.	REV: 08-21-08 J.J.		



LEGEND:

EXISTING ROAD

PROPOSED ACCESS ROAD

N

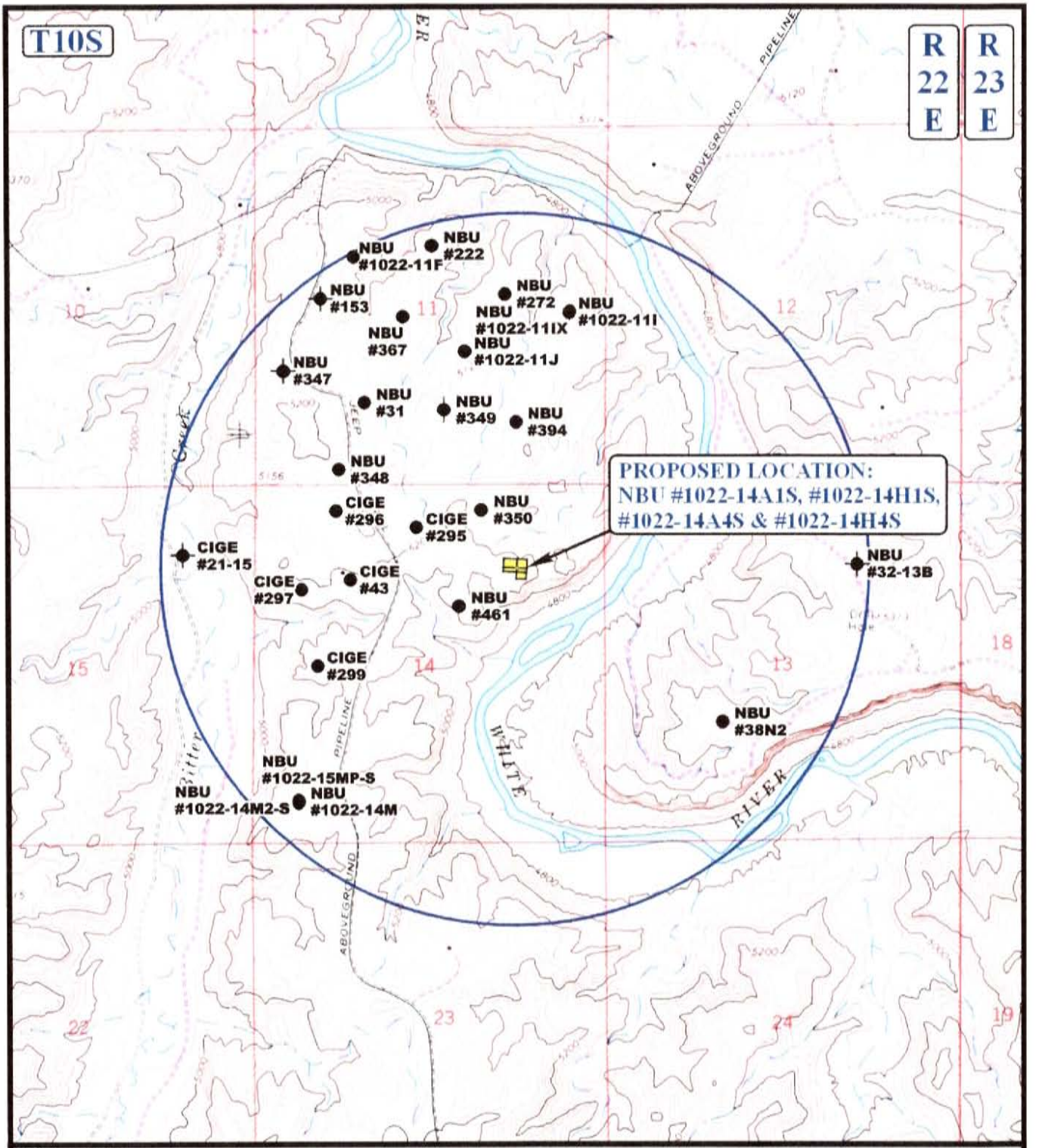
Kerr-McGee Oil & Gas Onshore LP

NBU #1022-14A1S, #1022-14H1S, #1022-14A4S & #1022-14H4S
SECTION 14, T10S, R22E, S.L.B.&M.
NW 1/4 NE 1/4

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

TOPOGRAPHIC MAP	02 MONTH	23 DAY	07 YEAR	B TOPO
SCALE: 1" = 2000'	DRAWN BY: C.P.	REV: 08-21-08 J.J.		

'APIWellNo:43047502280000'



LEGEND:

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

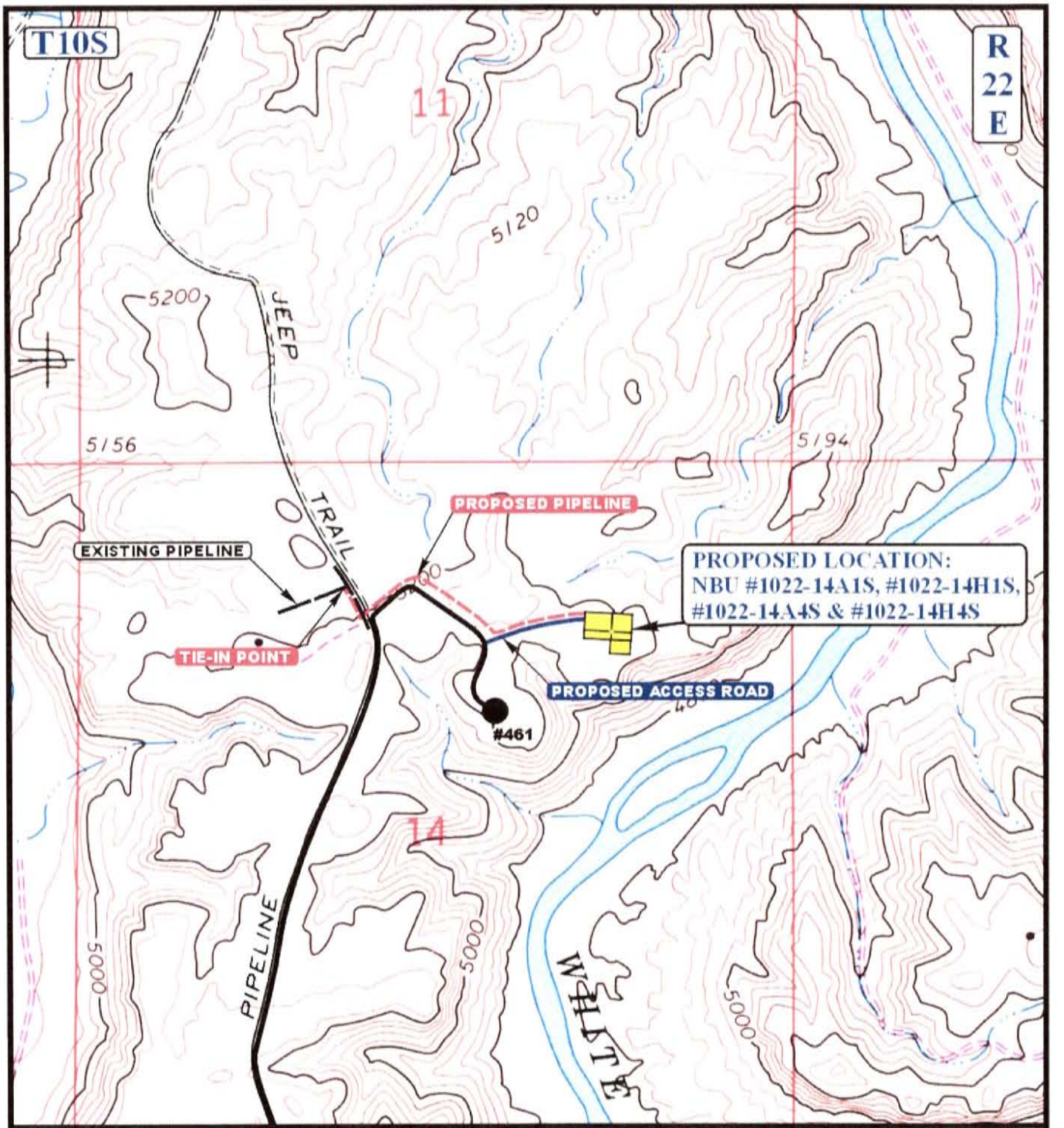
N

Kerr-McGee Oil & Gas Onshore LP

NBU #1022-14A1S, #1022-14H1S, #1022-14A4S & #1022-14H4S
SECTION 14, T10S, R22E, S.L.B.&M.
NW 1/4 NE 1/4

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

TOPOGRAPHIC MAP	02 MONTH	23 DAY	07 YEAR	C TOPO
SCALE: 1" = 2000'	DRAWN BY: C.P.	REV: 08-21-08 J.J.		



APPROXIMATE TOTAL 6" PIPELINE DISTANCE = 2,002' +/-

LEGEND:

PROPOSED ACCESS ROAD
EXISTING PIPELINE
PROPOSED PIPELINE

N

Kerr-McGee Oil & Gas Onshore LP

NBU #1022-14A1S, #1022-14H1S, #1022-14A4S & #1022-14H4S
SECTION 14, T10S, R22E, S.L.B.&M.
NW 1/4 NE 1/4

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

TOPOGRAPHIC MAP	02 MONTH	23 DAY	07 YEAR	D TOPO
SCALE: 1" = 1000'	DRAWN BY: C.P.	REV: 08-21-08 J.J.		

Kerr-McGee Oil & Gas Onshore LP

NBU #1022-14A1S, #1022-14H1S, #1022-14A4S & #1022-14H4S

LOCATED IN UINTAH COUNTY, UTAH
SECTION 14, T10S, R22E, S.L.B.&M.

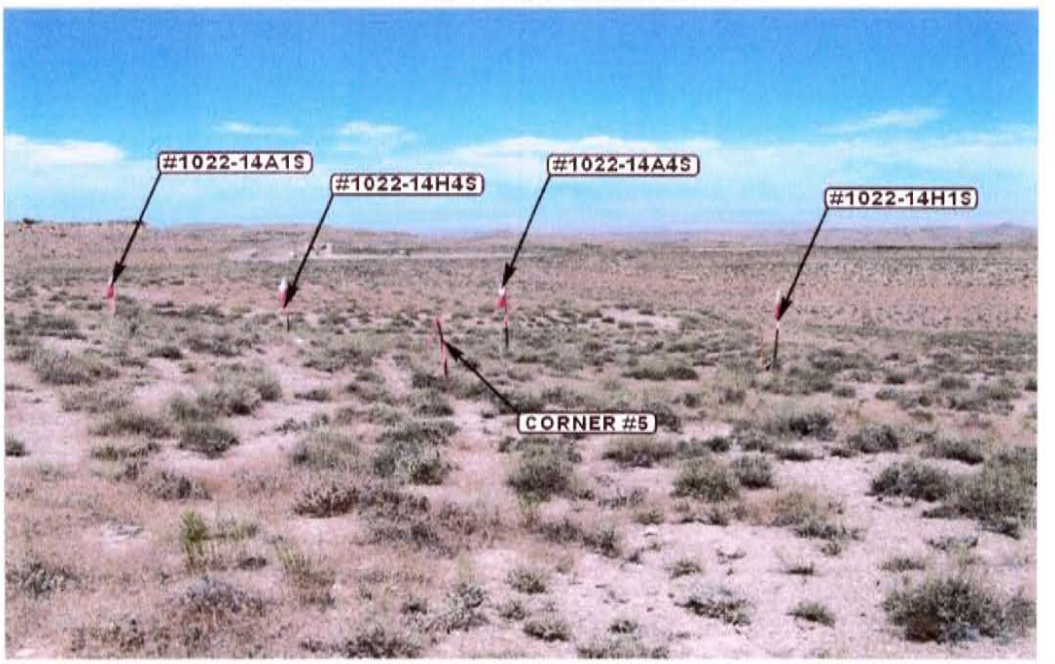
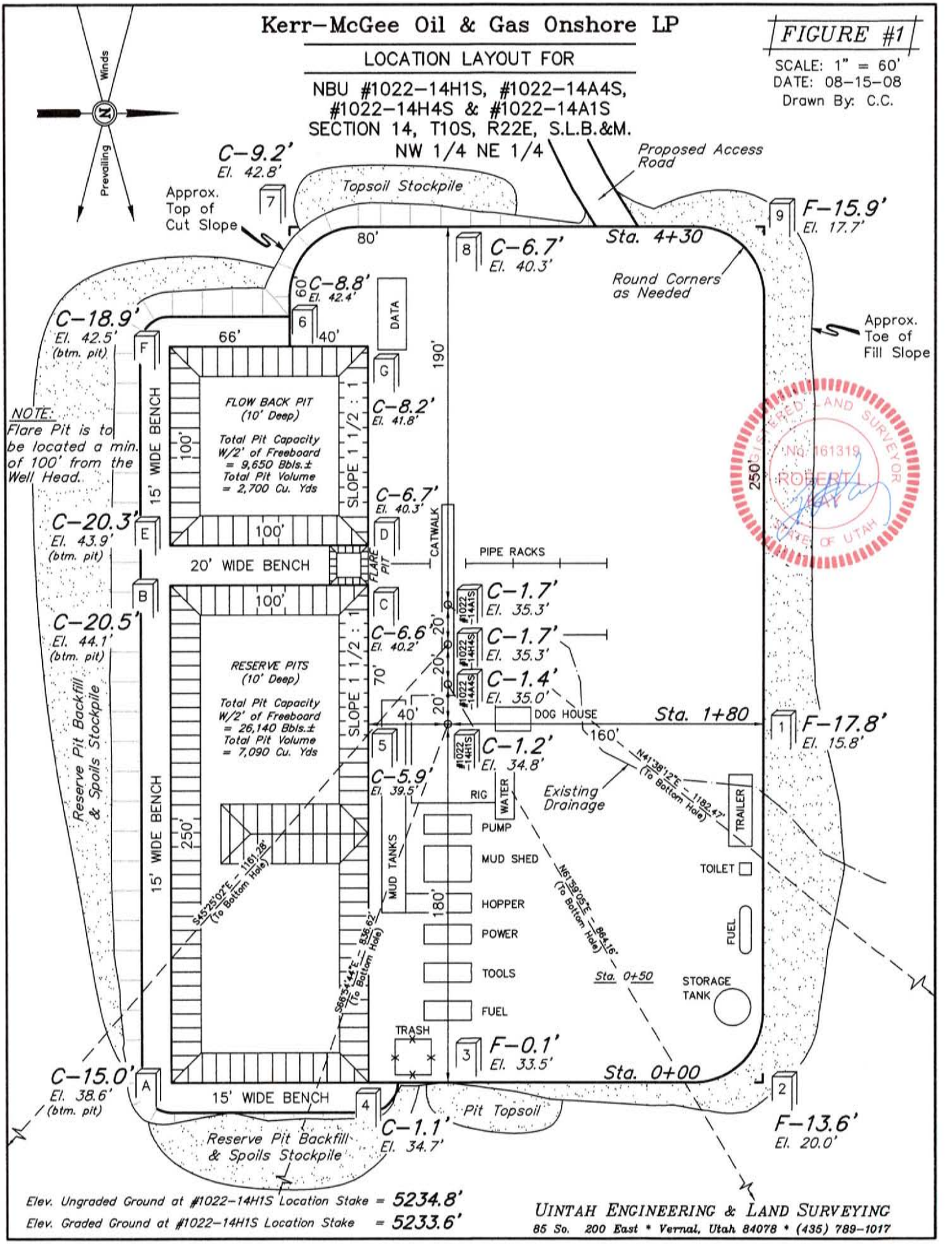


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKES — CAMERA ANGLE: NORTHERLY

PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS — CAMERA ANGLE: EASTERLY

- Since 1964 -
Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

LOCATION PHOTOS	02 MONTH	23 DAY	07 YEAR	PHOTO
TAKEN BY: D.K.	DRAWN BY: C.P.	REV: 08-21-08 J.J.		



'API Well No: 43047502280000'

Kerr-McGee Oil & Gas Onshore LP

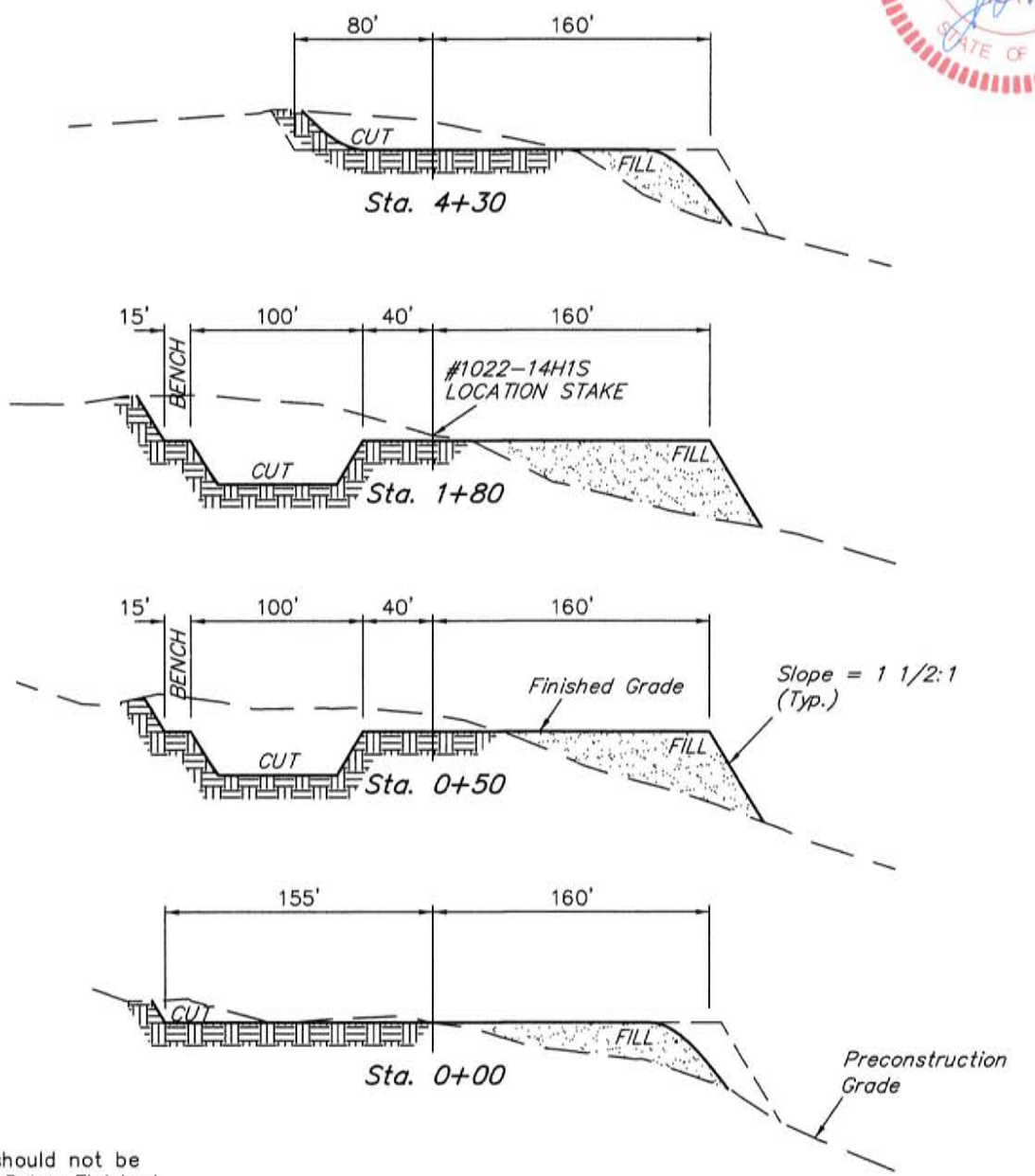
FIGURE #2

TYPICAL CROSS SECTIONS FOR

NBU #1022-14H1S, #1022-14A4S,
#1022-14H4S & #1022-14A1S
SECTION 14, T10S, R22E, S.L.B.&M.
NW 1/4 NE 1/4

1" = 40' X-Section Scale
1" = 100'
DATE: 08-15-08
Drawn By: C.C.

REGISTERED LAND SURVEYOR
No. 161319
ROBERT L. KAY
STATE OF UTAH



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

* NOTE:
FILL QUANTITY INCLUDES 5% FOR COMPACTION

APPROXIMATE YARDAGES

(6") Topsoil Stripping	=	3,060 Cu. Yds.
Remaining Location	=	28,940 Cu. Yds.
TOTAL CUT	=	32,000 CU.YDS.
FILL	=	21,540 CU.YDS.

EXCESS MATERIAL	=	10,460 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	=	7,960 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	=	2,500 Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017

Kerr-McGee Oil & Gas Onshore LP

NBU #1022-14A1S, #1022-14H1S, #1022-14A4S & #1022-14H4S

SECTION 14, T10S, R22E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 14.0 MILES TO THE JUNCTION OF STATE HIGHWAY 88; EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.0 MILES TO OURAY, UTAH; PROCEED IN A SOUTHERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 11.2 MILES ON THE SEEP RIDGE ROAD TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 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 0.6 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN LEFT AND PROCEED IN A NORTHEASTERLY, THEN EASTERLY DIRECTION APPROXIMATELY 1.4 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN LEFT AND PROCEED IN A NORTHEASTERLY, THEN NORTHERLY DIRECTION APPROXIMATELY 2.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN RIGHT AND PROCEED IN A NORTHEASTERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 0.2 MILES TO THE BEGINNING OF THE PROPOSED ACCESS TO THE EAST; FOLLOW ROAD FLAGS IN AN EASTERLY DIRECTION APPROXIMATELY 0.15 MILES TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 59.15 MILES.

Scientific Drilling
Rocky Mountain Operations

Project: Uintah County, UT
Site: NBU 1022-14B Pad
Well: NBU 1022-14A1S
Wellbore: OH
Design: Plan #1

Kerr McGee Oil and Gas Onshore LP

T M

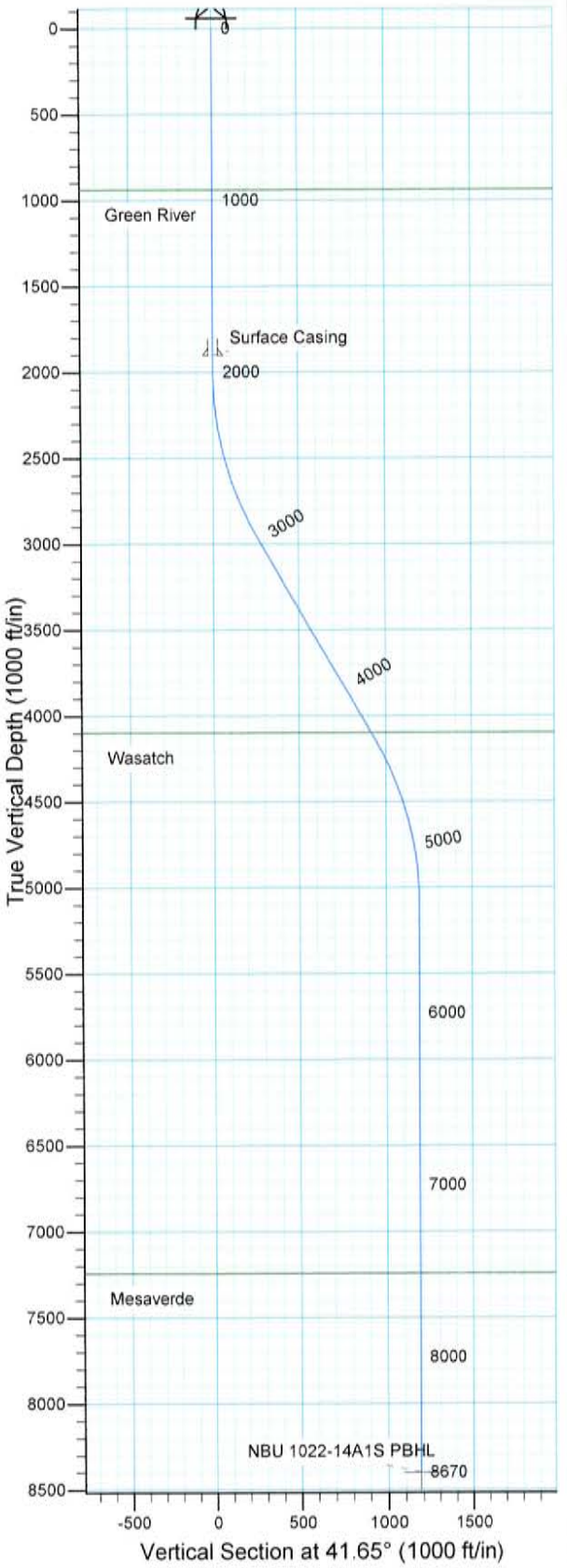
Azimuths to True North
Magnetic North: 11.35°

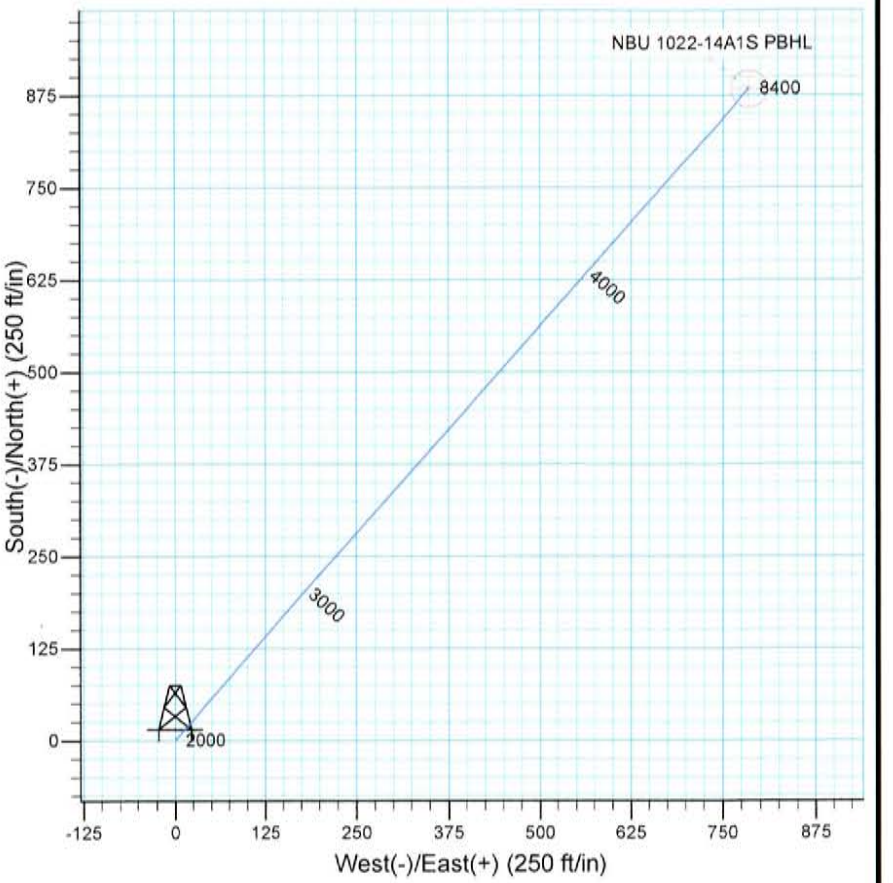
Magnetic Field
Strength: 52603.3snT
Dip Angle: 65.92°
Date: 10/21/2008
Model: IGRF2005-10

WELL DETAILS: NBU 1022-14A1S

GL 5234' & RKB 18' @ 5252.00ft 5234.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	596779.65	2588080.23	39° 57' 10.360 N	109° 24' 7.380 W





Plan: Plan #1 (NBU 1022-14A1S/OH)

Created By: Julie Cruse Date: 2008-10-21

PROJECT DETAILS: Uintah County, UT

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Utah Central 4302
Location: Sec 14 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	41.65	2954.93	191.18	170.06	3.00	41.65	255.87	
4340.86	30.00	41.65	4116.14	692.12	615.63	0.00	0.00	926.30	
5340.86	0.00	0.00	5071.07	883.30	785.69	3.00	180.00	1182.17	
8669.78	0.00	0.00	8400.00	883.30	785.69	0.00	0.00	1182.17	NBU 1022-14A1S PBHL

'API Well No: 43047502280000'

Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT
NBU 1022-14B Pad
NBU 1022-14A1S
OH

Plan: Plan #1

Standard Planning Report

21 October, 2008

Database:	EDM 2003.16 Multi User DB	**Local Co-ordinate Reference:**	Well NBU 1022-14A1S
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Project:	Uintah County, UT	**MD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Site:	NBU 1022-14B Pad	**North Reference:**	True
Well:	NBU 1022-14A1S	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Uintah County, UT		
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 1022-14B Pad, Sec 14 T10S R22E				
Site Position:		**Northing:**	596,779.66 ft	**Latitude:**	39° 57' 10.360 N
From:	Lat/Long	**Easting:**	2,588,080.23 ft	**Longitude:**	109° 24' 7.380 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	in	**Grid Convergence:**	1.34 °

Well	NBU 1022-14A1S, 1228' FNL 1417' FEL					
Well Position	**+N/-S**	0.00 ft	**Northing:**	596,779.65 ft	**Latitude:**	39° 57' 10.360 N
	+E/-W	0.00 ft	**Easting:**	2,588,080.23 ft	**Longitude:**	109° 24' 7.380 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,234.00 ft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2005-10	10/21/2008	11.35	65.92	52,603

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	41.65	

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	41.65	2,954.93	191.18	170.06	3.00	3.00	0.00	41.65	
4,340.86	30.00	41.65	4,116.14	692.12	615.63	0.00	0.00	0.00	0.00	
5,340.86	0.00	0.00	5,071.07	883.30	785.69	3.00	-3.00	0.00	180.00	
8,669.78	0.00	0.00	8,400.00	883.30	785.69	0.00	0.00	0.00	0.00	NBU 1022-14A1S PB

Database:	EDM 2003.16 Multi User DB	**Local Co-ordinate Reference:**	Well NBU 1022-14A1S
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Project:	Uintah County, UT	**MD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Site:	NBU 1022-14B Pad	**North Reference:**	True
Well:	NBU 1022-14A1S	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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
937.00	0.00	0.00	937.00	0.00	0.00	0.00	0.00	0.00	0.00
Green River									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
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	41.65	2,099.95	1.96	1.74	2.62	3.00	3.00	0.00
2,200.00	6.00	41.65	2,199.63	7.82	6.95	10.46	3.00	3.00	0.00
2,300.00	9.00	41.65	2,298.77	17.57	15.63	23.51	3.00	3.00	0.00
2,400.00	12.00	41.65	2,397.08	31.18	27.74	41.74	3.00	3.00	0.00
2,500.00	15.00	41.65	2,494.31	48.62	43.25	65.08	3.00	3.00	0.00
2,600.00	18.00	41.65	2,590.18	69.84	62.13	93.48	3.00	3.00	0.00
2,700.00	21.00	41.65	2,684.43	94.78	84.31	126.85	3.00	3.00	0.00
2,800.00	24.00	41.65	2,776.81	123.37	109.74	165.12	3.00	3.00	0.00
2,900.00	27.00	41.65	2,867.06	155.54	138.35	208.16	3.00	3.00	0.00
3,000.00	30.00	41.65	2,954.93	191.18	170.06	255.87	3.00	3.00	0.00
3,100.00	30.00	41.65	3,041.53	228.54	203.29	305.87	0.00	0.00	0.00
3,200.00	30.00	41.65	3,128.13	265.90	236.52	355.87	0.00	0.00	0.00
3,300.00	30.00	41.65	3,214.74	303.26	269.75	405.87	0.00	0.00	0.00
3,400.00	30.00	41.65	3,301.34	340.62	302.98	455.87	0.00	0.00	0.00
3,500.00	30.00	41.65	3,387.94	377.98	336.21	505.87	0.00	0.00	0.00
3,600.00	30.00	41.65	3,474.54	415.34	369.44	555.87	0.00	0.00	0.00
3,700.00	30.00	41.65	3,561.15	452.70	402.67	605.87	0.00	0.00	0.00
3,800.00	30.00	41.65	3,647.75	490.06	435.90	655.87	0.00	0.00	0.00
3,900.00	30.00	41.65	3,734.35	527.42	469.13	705.87	0.00	0.00	0.00
4,000.00	30.00	41.65	3,820.96	564.78	502.36	755.87	0.00	0.00	0.00
4,100.00	30.00	41.65	3,907.56	602.14	535.60	805.87	0.00	0.00	0.00
4,200.00	30.00	41.65	3,994.16	639.50	568.83	855.87	0.00	0.00	0.00
4,300.00	30.00	41.65	4,080.76	676.85	602.06	905.87	0.00	0.00	0.00
4,318.75	30.00	41.65	4,097.00	683.86	608.29	915.25	0.00	0.00	0.00
Wasatch									
4,340.86	30.00	41.65	4,116.14	692.12	615.63	926.30	0.00	0.00	0.00
4,400.00	28.23	41.65	4,167.81	713.62	634.76	955.07	3.00	-3.00	0.00
4,500.00	25.23	41.65	4,257.12	747.22	664.64	1,000.04	3.00	-3.00	0.00
4,600.00	22.23	41.65	4,348.66	777.28	691.38	1,040.27	3.00	-3.00	0.00

Database:	EDM 2003.16 Multi User DB	**Local Co-ordinate Reference:**	Well NBU 1022-14A1S
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Project:	Uintah County, UT	**MD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Site:	NBU 1022-14B Pad	**North Reference:**	True
Well:	NBU 1022-14A1S	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,700.00	19.23	41.65	4,442.18	803.72	714.90	1,075.66	3.00	-3.00	0.00
4,800.00	16.23	41.65	4,537.42	826.46	735.13	1,106.10	3.00	-3.00	0.00
4,900.00	13.23	41.65	4,634.12	845.45	752.02	1,131.52	3.00	-3.00	0.00
5,000.00	10.23	41.65	4,732.03	860.64	765.53	1,151.84	3.00	-3.00	0.00
5,100.00	7.23	41.65	4,830.86	871.97	775.61	1,167.01	3.00	-3.00	0.00
5,200.00	4.23	41.65	4,930.35	879.42	782.24	1,176.98	3.00	-3.00	0.00
5,300.00	1.23	41.65	5,030.22	882.98	785.40	1,181.74	3.00	-3.00	0.00
5,340.86	0.00	0.00	5,071.07	883.30	785.69	1,182.17	3.00	-3.00	0.00
5,400.00	0.00	0.00	5,130.22	883.30	785.69	1,182.17	0.00	0.00	0.00
5,500.00	0.00	0.00	5,230.22	883.30	785.69	1,182.17	0.00	0.00	0.00
5,600.00	0.00	0.00	5,330.22	883.30	785.69	1,182.17	0.00	0.00	0.00
5,700.00	0.00	0.00	5,430.22	883.30	785.69	1,182.17	0.00	0.00	0.00
5,800.00	0.00	0.00	5,530.22	883.30	785.69	1,182.17	0.00	0.00	0.00
5,900.00	0.00	0.00	5,630.22	883.30	785.69	1,182.17	0.00	0.00	0.00
6,000.00	0.00	0.00	5,730.22	883.30	785.69	1,182.17	0.00	0.00	0.00
6,100.00	0.00	0.00	5,830.22	883.30	785.69	1,182.17	0.00	0.00	0.00
6,200.00	0.00	0.00	5,930.22	883.30	785.69	1,182.17	0.00	0.00	0.00
6,300.00	0.00	0.00	6,030.22	883.30	785.69	1,182.17	0.00	0.00	0.00
6,400.00	0.00	0.00	6,130.22	883.30	785.69	1,182.17	0.00	0.00	0.00
6,500.00	0.00	0.00	6,230.22	883.30	785.69	1,182.17	0.00	0.00	0.00
6,600.00	0.00	0.00	6,330.22	883.30	785.69	1,182.17	0.00	0.00	0.00
6,700.00	0.00	0.00	6,430.22	883.30	785.69	1,182.17	0.00	0.00	0.00
6,800.00	0.00	0.00	6,530.22	883.30	785.69	1,182.17	0.00	0.00	0.00
6,900.00	0.00	0.00	6,630.22	883.30	785.69	1,182.17	0.00	0.00	0.00
7,000.00	0.00	0.00	6,730.22	883.30	785.69	1,182.17	0.00	0.00	0.00
7,100.00	0.00	0.00	6,830.22	883.30	785.69	1,182.17	0.00	0.00	0.00
7,200.00	0.00	0.00	6,930.22	883.30	785.69	1,182.17	0.00	0.00	0.00
7,300.00	0.00	0.00	7,030.22	883.30	785.69	1,182.17	0.00	0.00	0.00
7,400.00	0.00	0.00	7,130.22	883.30	785.69	1,182.17	0.00	0.00	0.00
7,500.00	0.00	0.00	7,230.22	883.30	785.69	1,182.17	0.00	0.00	0.00
7,510.78	0.00	0.00	7,241.00	883.30	785.69	1,182.17	0.00	0.00	0.00
Mesaverde									
7,600.00	0.00	0.00	7,330.22	883.30	785.69	1,182.17	0.00	0.00	0.00
7,700.00	0.00	0.00	7,430.22	883.30	785.69	1,182.17	0.00	0.00	0.00
7,800.00	0.00	0.00	7,530.22	883.30	785.69	1,182.17	0.00	0.00	0.00
7,900.00	0.00	0.00	7,630.22	883.30	785.69	1,182.17	0.00	0.00	0.00
8,000.00	0.00	0.00	7,730.22	883.30	785.69	1,182.17	0.00	0.00	0.00
8,100.00	0.00	0.00	7,830.22	883.30	785.69	1,182.17	0.00	0.00	0.00
8,200.00	0.00	0.00	7,930.22	883.30	785.69	1,182.17	0.00	0.00	0.00
8,300.00	0.00	0.00	8,030.22	883.30	785.69	1,182.17	0.00	0.00	0.00
8,400.00	0.00	0.00	8,130.22	883.30	785.69	1,182.17	0.00	0.00	0.00
8,500.00	0.00	0.00	8,230.22	883.30	785.69	1,182.17	0.00	0.00	0.00
8,600.00	0.00	0.00	8,330.22	883.30	785.69	1,182.17	0.00	0.00	0.00
8,669.78	0.00	0.00	8,400.00	883.30	785.69	1,182.17	0.00	0.00	0.00

Database:	EDM 2003.16 Multi User DB	**Local Co-ordinate Reference:**	Well NBU 1022-14A1S
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Project:	Uintah County, UT	**MD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Site:	NBU 1022-14B Pad	**North Reference:**	True
Well:	NBU 1022-14A1S	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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 1022-14A1S PBHL - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,400.00	883.30	785.69	597,681.14	2,588,844.99	39° 57' 19.090 N	109° 23' 57.290 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 (°)
937.00	937.00	Green River		0.00	
4,318.75	4,097.00	Wasatch		0.00	
7,510.78	7,241.00	Mesaverde		0.00	

IPC #08-135

Paleontological Reconnaissance Survey Report

Survey of Kerr McGee's Proposed Twin Wells "NBU #1022-14F2T, 14C4S, 14D3S & 14F4S" & "NBU #1022-14A1S, 14A4S, 14H1S & 14H4S" (Sec. 14, T 10 S, R 22 E) & "Bonanza #1023-5IS" (Sec. 5, T 10 S, R 23 E)

Archy Bench & Asphalt Wash
Topographic Quadrangle
Uintah County, Utah

August 20, 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 #1022-14F2T, 14C4S, 14D3S & 14F4S" & "NBU #1022-14A1S, 14A4S, 14H1S & 14H4S" (Sec. 14, T 10 S, R 22 E) & "Bonanza #1023-5IS" (Sec. 5, T 10 S, R 23 E) was conducted by Simon Masters and Amanda Dopheide on July 12, 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 #1022-14F2T, 14C4S, 14D3S & 14F4S" & "NBU #1022-14A1S, 14A4S, 14H1S & 14H4S" (Sec. 14, T 10 S, R 22 E) & "Bonanza #1023-5IS" (Sec. 5, T 10 S, R 23 E) are on lands managed by the BLM and the State of Utah Trust Lands Administration (SITLA), east of East Bench, 17-20 miles southeast of Ouray, Utah, 15-20 miles south and southwest of Red Wash, Utah and 11-14 miles southwest of Bonanza, Utah. The project area can be found on the Archy Bench and Asphalt Wash 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 B) of the Uinta Formation. The following list provides a description of the proposed twin wells.

NBU #1022-14F2T, 14C4S, 14D3S & 14F4S
The proposed well for "NBU #1022-14F2T" is a twin to "CIGE # 43" located in the NW/NW quarter-quarter section of Sec. 14, T 10 S, R 22 E (Figure 1). It is staked on relatively flat ground that has been previously disturbed. The undisturbed ground is covered in colluvium and cobble-sized pieces of purple sandstone. An outcrop of purple sandstone was observed approximately 3 ft. south of the existing well pad. No fossils were found.

NBU #1022-14A1S, 14A4S, 14H1S & 14H4S
The proposed access road travels100 ft. east from the existing well "NBU #461" to the proposed well pad "NBU #1022-14A" located in the SW/NE quarter-quarter section of Sec. 14, T 10 S, R 22 E (Figure 1). The proposed access road and well pad are staked on relatively flat ground covered by previously disturbed soil, colluvium, and cobble-sized pieces of purple sandstone. No fossils were found.

Bonanza #1023-5IS
The proposed well "Bonanza #1023-5IS" is a twin to well "Southman Canyon #4-5", and is located on the existing "Southman Canyon 4-5" well pad in the NE/SE quarter-quarter section of Sec. 5, T 10 S, R 23 E (Figure 2). The proposed well is situated primarily on level ground that has been previously disturbed. Undisturbed ground is covered with colluvium and cobble-sized pieces of purple sandstone. No fossils were found.

SURVEY RESULTS

PROJECT	GEOLOGY	PALEONTOLOGY
"NBU #1022-14F2T, 14C4S, 14D3S & 14F4S" (Sec. 14, T 10 S, R 22 E)	The proposed well is staked on relatively flat ground that has been previously disturbed. Undisturbed ground is covered in colluvium and cobble-sized pieces of purple sandstone. An outcrop of purple sandstone was observed approximately 3 ft. south of the existing well pad.	No fossils were found. **Class 3a**
"NBU #1022-14A1S, 14A4S, 14H1S & 14H4S" (Sec. 14, T 10 S, R 22 E)	The proposed access road and well pad are staked on relatively flat ground covered by previously disturbed soil, colluvium, and cobble-sized pieces of purple sandstone.	No fossils were found. **Class 3a**
"Bonanza #1023-5IS" (Sec. 5, T 10 S, R 23 E)	The proposed well is situated primarily on level ground that has been previously disturbed. Undisturbed ground is covered with colluvium and cobble-sized pieces of purple sandstone.	No fossils were found. **Class 3a**

RECOMMENDATIONS

A reconnaissance survey was conducted for Kerr McGee's proposed twin wells "NBU #1022-14F2T, 14C4S, 14D3S & 14F4S" & "NBU #1022-14A1S, 14A4S, 14H1S & 14H4S" (Sec. 14, T 10 S, R 22 E) & "Bonanza #1023-5IS" (Sec. 5, T 10 S, R 23 E). The proposed well pads and the access road 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.

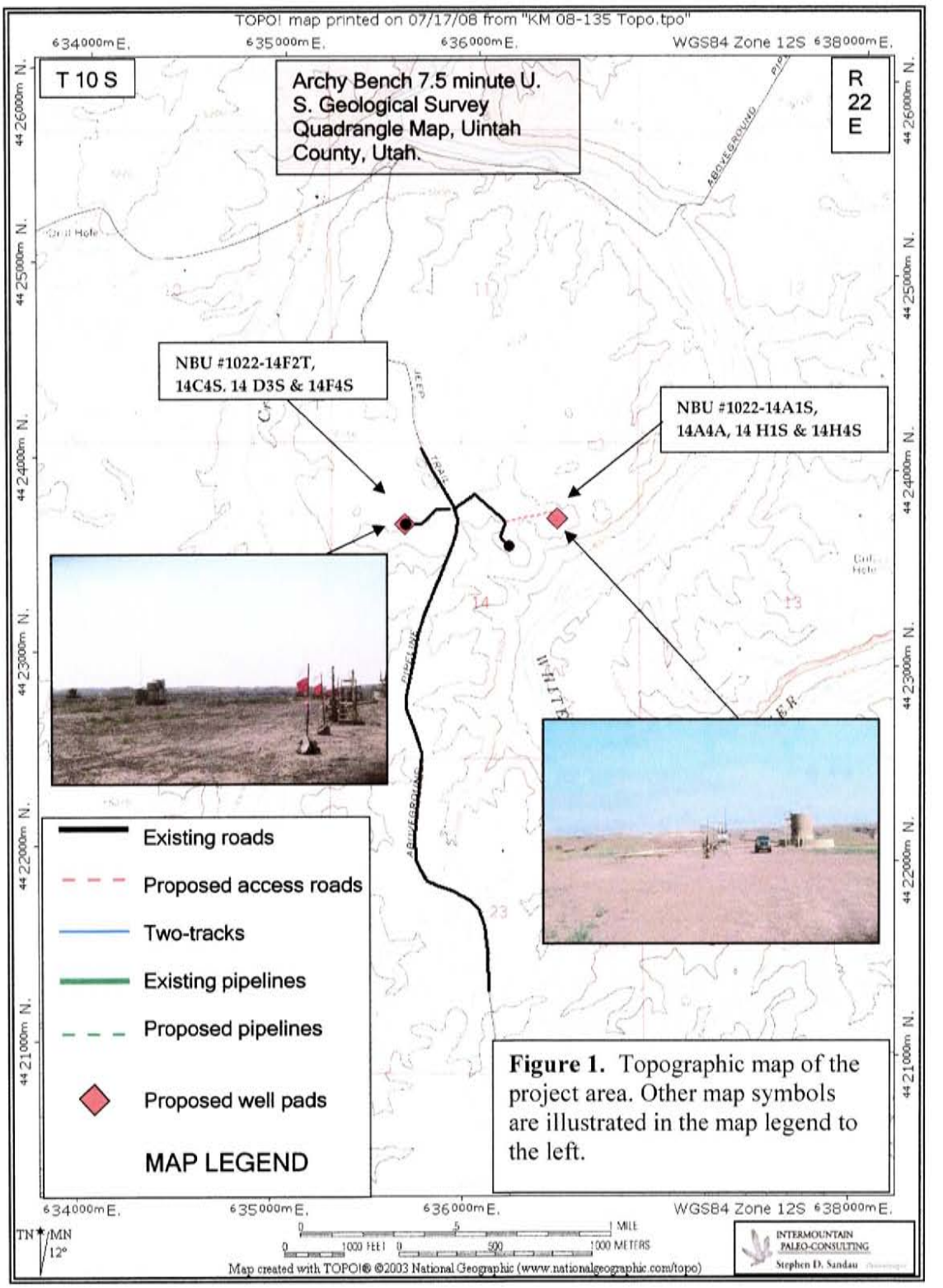


Figure 1. Topographic map of the project area. Other map symbols are illustrated in the map legend to the left.

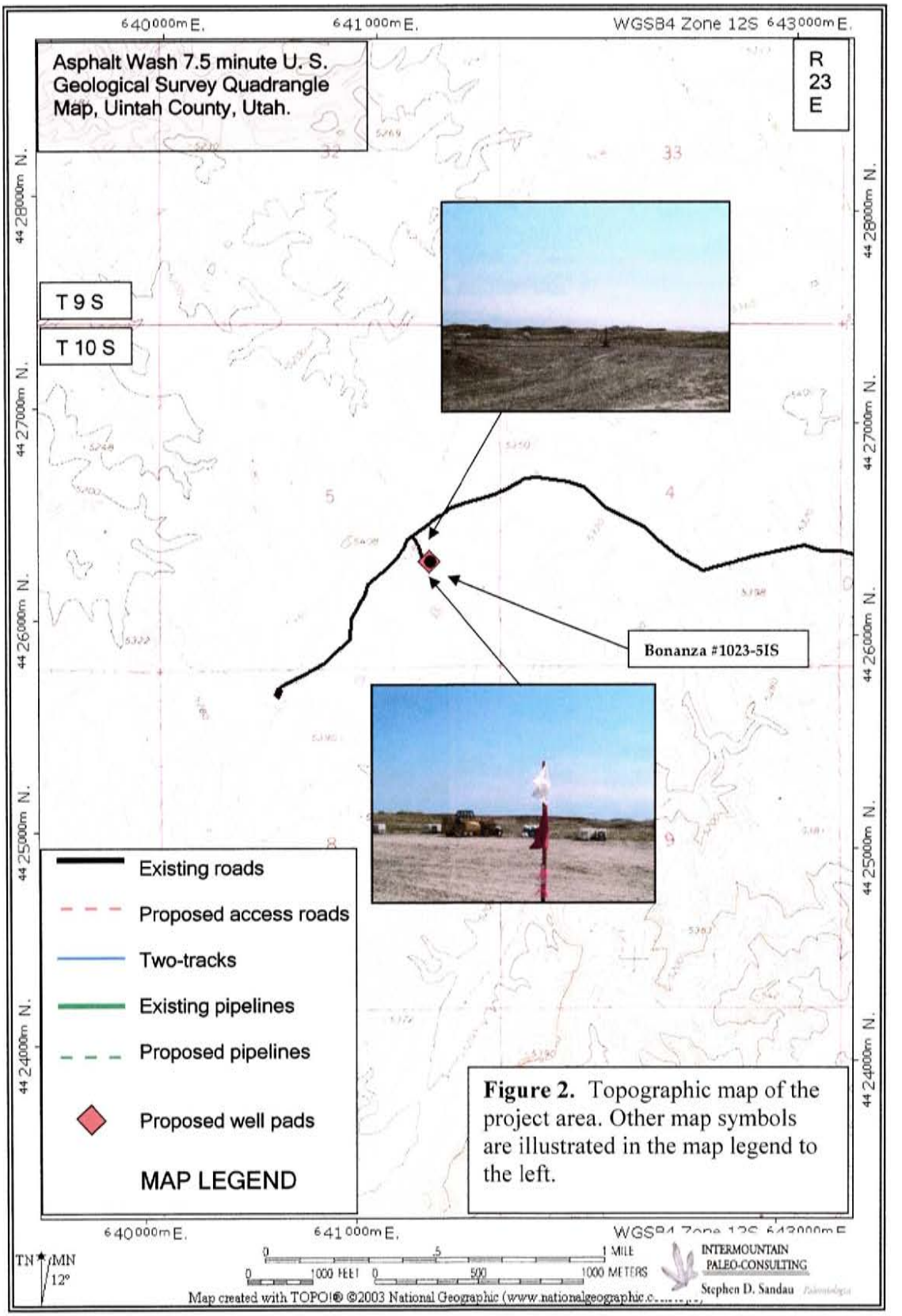


Figure 2. Topographic map of the project area. Other map symbols are illustrated in the map legend to the left.

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CLASS I REVIEW OF KERR-MCGEE OIL AND GAS
ONSHORE LP'S PROPOSED NBU WELL LOCATIONS, TEMPORARY
WORK AREA, PIPELINE ROW, AND PIPELINE ROW EXTENSION,
TOWNSHIP 10S, RANGE 22E
UINTAH COUNTY, UTAH

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS ONSHORE LP'S PROPOSED NBU WELL LOCATIONS, TEMPORARY WORK AREA, PIPELINE ROW, AND PIPELINE ROW EXTENSION, TOWNSHIP 10S, RANGE 22E UINTAH COUNTY, UTAH

By:

Jacki A. Montgomery

Prepared For:

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

Prepared Under Contract With:

Kerr-McGee Oil and Gas Onshore LP
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MOAC Report No. 08-236

September 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 Montgomery Archaeological Consultants Inc. (MOAC) in September 2008 of Kerr-McGee Onshore's proposed NBU well locations in Township 10S, Range 22E. The project area is situated east and west of the White River, south of the town of Vernal, Uintah County, Utah. The well pads are designated NBU 1022-01CT, 1022-03CT, 1022-03FT, 1022-03GT, 1022-04AT, 1022-04GT, 1022-04HT, 1022-05BT, 1022-05IT, 1022-05JT, 1022-7A4BS, 1022-7AT, 1022-7A4CS, 1022-7B2DS, 1022-10A2T, 1022-10FT, 1022-10HT, 1022-14A1S, 1022-14A4S, 1022-14H1S, and 1022-14H4S. In addition, the proposed White River to 83X lateral pipeline and work station are included in this review. This document was implemented at the request of Ms. Raleen White, Kerr-McGee Onshore LP, Denver, Colorado. Land status is public land administered by the Bureau of Land Management (BLM) Vernal Field Office and State of Utah School & Institutional Trust Lands Administration (SITLA).

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 proposed NBU well locations and pipeline/workstation occur was previously inventoried by MOAC in 2007 for the Class III inventory of Township 10 South, Range 22 East (Montgomery 2008). 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 archaeological sites occur in the current project area.

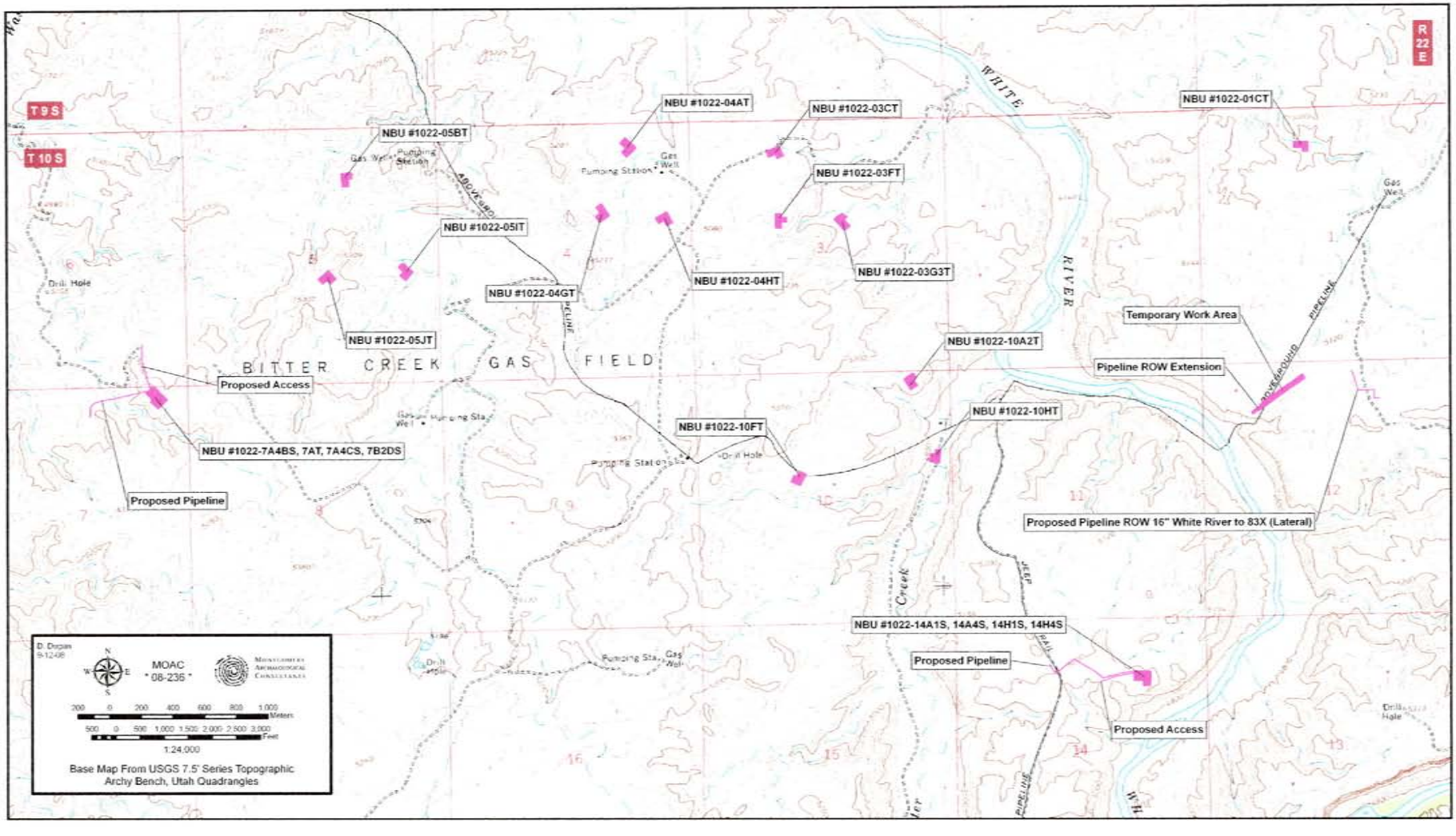
DESCRIPTION OF THE PROJECT AREA

The project area is situated in the Bitter Creek Gas Field along the east and west sides of the White River in the Uinta Basin. The legal description is Township 10S, Range 22E Sections 1, 3, 4, 5, 6, 7, 10, 12 and 14 (Table 1; Figure 1).

Table 1. Kerr-McGee Onshore's 21 NBU Well Locations.

Well Designation	Legal Description	Access/Pipeline Corridor	Cultural Resources
1022-01CT	T10S R22E Sec. 1 NE/NW	None	None
1022-03CT	T10S R22E Sec. 3 NE/NW	None	None
1022-03FT	T10S R22E Sec. 3 SE/NW	None	None
1022-03GT	T10S R22E Sec. 4 SW/NE	None	None
1022-04AT	T10S R22E Sec. 4 NE/NE	None	None
1022-04GT	T10S R22E Sec. 4 SW/NE	None	None
1022-04HT	T10S R22E Sec. 4 SE/NE	None	None
1022-05BT	T10S R22E Sec. 5 NW/NE	None	None
1022-05IT	T10S R22E Sec. 5 NE/SE	None	None
1022-05JT	T10S R22E Sec. 5 NW/SE	None	None
1022-7A4BS, 1022-7AT 1022-7A4CS 1022-7B2DS	T10S R22E Sec. 7 NE/NE	Access 1050 ft Pipeline 1350 ft	None
1022-10A2T	T10S R22E Sec. 10 NE/NE	None	None
1022-10FT	T10S R22E Sec. 10 SE/NW	None	None
1022-10HT	T10S R22E Sec. 10 SE/NE	None	None
1022-14A1S, 1022-14A4S 1022-14H1S, 1022-14H4S	T10S R22E Sec. 14 NW/NE	Access 700 ft Pipeline 1700 ft	None
White Rv. To 83X Lateral PL	T10S R22E Sec. 12	900 ft	None
PL ROW Extension & Work Area	T10S R22E Sec. 12	1300 ft	None

’APIWellNo:43047502280000’



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 adjacent to the White River and Bitter Creek. Elevation ranges from 4800 to 5300 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

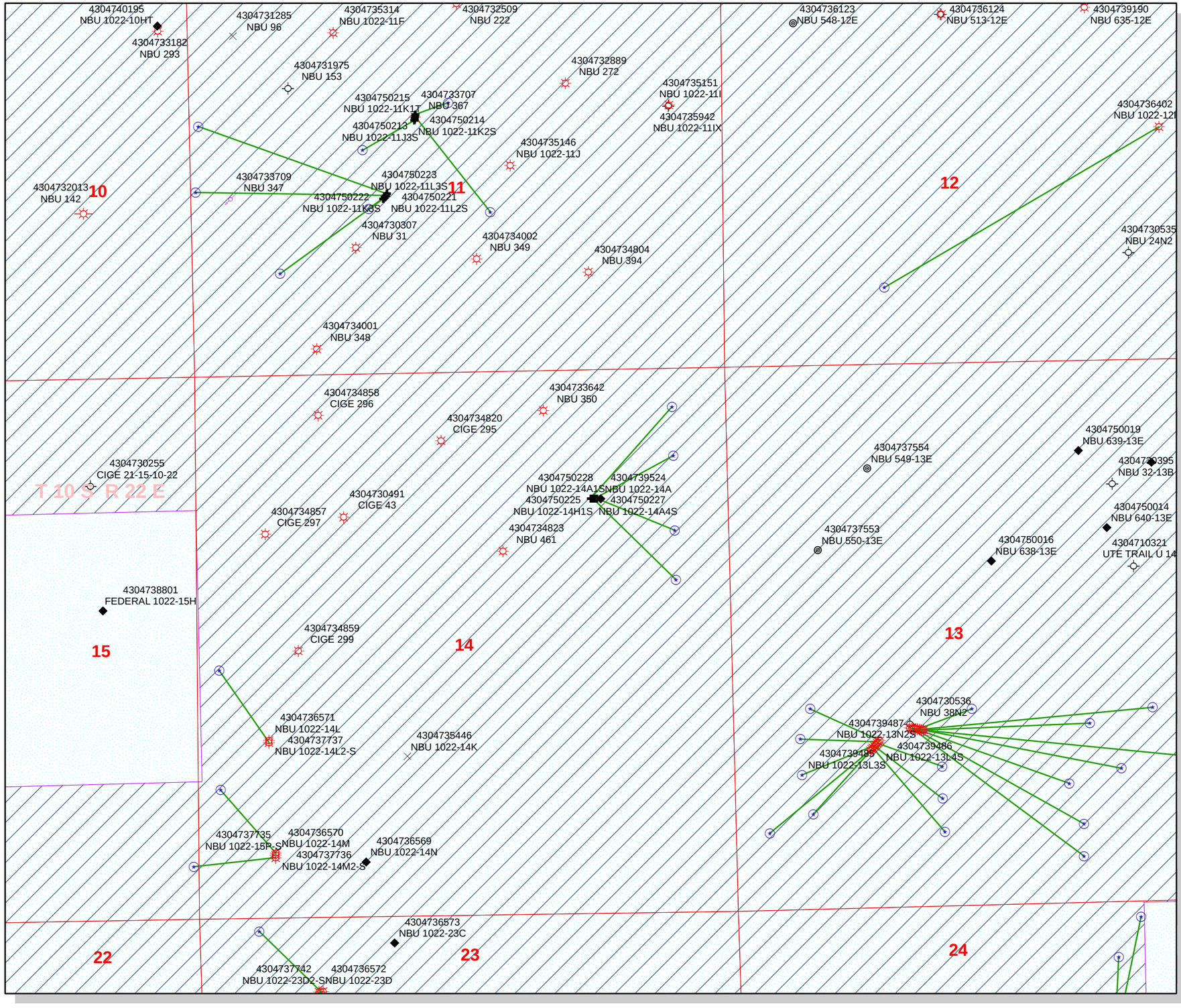
The Class I literature review of Kerr-McGee Onshore's proposed NBU well locations in Township 10S, Range 22E resulted in the location of no cultural resources. Based on the findings, a determination of "no adverse impact" is recommended for the undertaking pursuant to Section 106, CFR 800.

REFERENCES CITED

Montgomery, J. A.
2008 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-1438.

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.



API Number: 4304750228

Well Name: NBU 1022-14A1S

Township 10.0 S Range 22.0 E Section 14

Meridian: SLBM

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

Map Prepared:
Map Produced by Diana Mason

Units

STATUS
- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Fields

STATUS
- ACTIVE
- COMBINED
- Sections
- Township

Wells Query Events
- <all other values>

GIS_STAT_TYPE
- <Null>
- APD
- DRL
- GI
- GS
- LA
- NEW
- OPS
- PA
- PGW
- POW
- RET
- SGW
- SOW
- TA
- TW
- WD
- WI
- WS

1,300 650 0 1,300 Feet

1:12,000

'APIWellNo:43047502280000'

'APIWellNo:43047502280000'

Kerr-McGee Oil & Gas Onshore LP
1999 Broadway, Suite 3700
Denver, CO 80205

November 13, 2008

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

1176

Re: Directional Drilling R649-3-11
NBU 1022-14A1S
T10S R22E
Section 14: NENE
1228' FNL, 1417' FEL (surface)
345' FNL, 600' 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 1022-14A1S is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore

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

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Jason K. Rayburn
Landman

RECEIVED
NOV 18 2008
DIV. OF OIL, GAS & MINING

API Well No: 43047502280000

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:
3160
(UT-922)

November 21, 2008

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

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

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

API #	WELL NAME	LOCATION

(Proposed PZ WASATCH-MESA VERDE)

43-047-50224 NBU 1022-14H4S Sec 14 T10S R22E 1229 FNL 1397 FEL
BHL Sec 14 T10S R22E 2045 FNL 0600 FEL

43-047-50225 NBU 1022-14H1S Sec 14 T10S R22E 1231 FNL 1357 FEL
BHL Sec 14 T10S R22E 1560 FNL 0600 FEL

43-047-50227 NBU 1022-14A4S Sec 14 T10S R22E 1230 FNL 1377 FEL
BHL Sec 14 T10S R22E 0825 FNL 0600 FEL

43-047-50228 NBU 1022-14A1S Sec 14 T10S R22E 1228 FNL 1417 FEL
BHL Sec 14 T10S R22E 0345 FNL 0600 FEL

43-047-50226 NBU 922-31CT Sec 31 T09S R22E 0389 FNL 1592 FWL

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

/s/ Michael L. Coulthard

API Well No: 43047502280000

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

MCoulthard:mc:11-21-08

BOPE REVIEW KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 1022-14A1S 43047502280000

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 1022-14A1S 4304750228			
String	Surf	Prod		
Casing Size(")	9.625	4.500		
Setting Depth (TVD)	1900	8670		
Previous Shoe Setting Depth (TVD)	0	1900		
Max Mud Weight (ppg)	8.3	12.0		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3520	7780		
Operators Max Anticipated Pressure (psi)	5498	12.2		

Calculations	Surf String	9.625	"
Max BPH (psi)	.052*Setting Depth*MW=	820	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	592	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	402	YES
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	402	NO Reasonable depth in area, no expected pressure
Required Casing/BOPE Test Pressure=		1900	psi
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient

Calculations	Prod String	4.500	"
Max BPH (psi)	.052*Setting Depth*MW=	5410	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4370	YES
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3503	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	3921	NO Reasonable, note max pressure allowed
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		1900	psi *Assumes 1psi/ft frac gradient

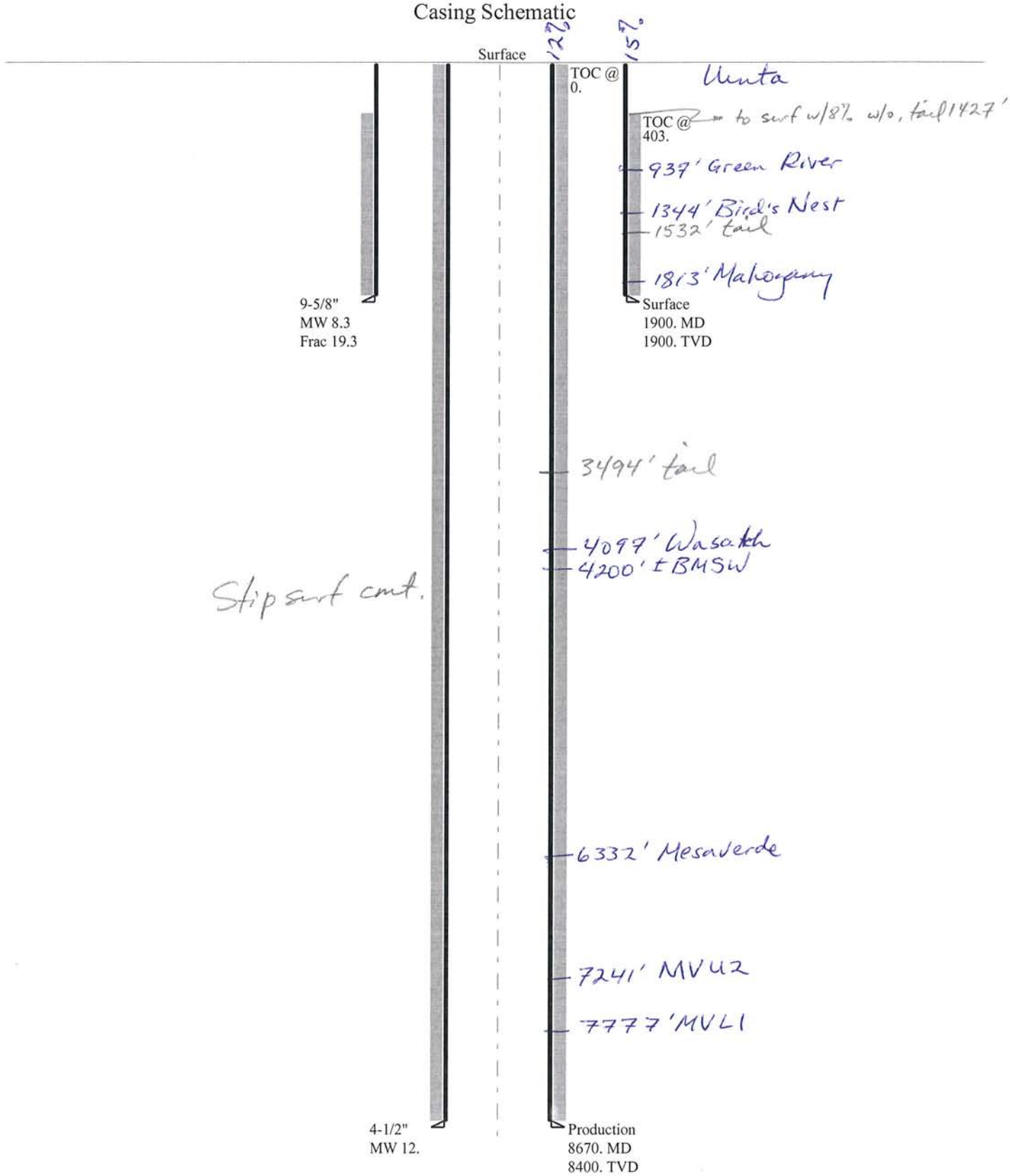
Calculations	String		"
Max BPH (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous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

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

'APIWellNo:43047502280000'

43047502280000 K-M NBU 1022-14A1S

Casing Schematic



'APIWellNo:43047502280000'

Well name:	**43047502280000 K-M NBU 1022-14A1S**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Surface
Project ID:	43-047-50228-0000
Location:	UINTAH COUNTY

Design parameters:

Collapse
Mud weight: 8.300 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 1,672 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 1,900 psi
Annular backup: 4.33 ppg

Minimum design factors:

Collapse:
Design factor 1.000

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.70 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 1,667 ft

Environment:
H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 101 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 403 ft

Non-directional string.

Re subsequent strings:
Next setting depth: 8,400 ft
Next mud weight: 12.000 ppg
Next setting BHP: 5,237 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)	Est. Cost ($)
1	1900	9.625	36.00	J-55	LT&C	1900	1900	8.796	15537

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	819	2020	2.466	1672	3520	2.11	68.4	453	6.62 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940
Date: January 22,2009
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 1900 ft, a mud weight of 8.3 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.

'APIWellNo:43047502280000'

Well name:	**43047502280000 K-M NBU 1022-14A1S**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Production
Project ID:	43-047-50228-0000
Location:	UINTAH COUNTY

Design parameters:

Collapse
Mud weight: 12.000 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 3,388 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 5,237 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.000

Burst:
Design factor 1.00

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

Tension is based on air weight.
Neutral point: 7,163 ft

Environment:
H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 192 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: Surface

Directional well information:
Kick-off point 2100 ft
Departure at shoe: 1182 ft
Maximum dogleg: 3 °/100ft
Inclination at shoe: 0 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
1	8670	4.5	11.60	I-80	LT&C	8400	8670	3.875	114444

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	5237	6360	1.215	5237	7780	1.49	97.4	212	2.18 J

Prepared by: Helen Sadik-Macdonald, Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940
Date: January 22,2009
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 8400 ft, a mud weight of 12 ppg The casing is considered to be evacuated for collapse purposes.
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

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

ON-SITE PREDRILL EVALUATION
Utah Division of Oil, Gas and Mining

Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.				
Well Name	NBU 1022-14A1S				
API Number	43047502280000	**APD No**	1176	**Field/Unit**	NATURAL BUTTES
Location: 1/4,1/4	NENE **Sec** 14 **Tw** 10.0S **Rng** 22.0E 1228 FNL 1417 FEL				
GPS Coord (UTM)	636512 4423543	**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 near the end of Archy Bench located between the White River to the east and Bitter Creek to the west. A few rounded to flat-topped ridges or benches occur. The area contains numerous side draws with side-slopes that become excessively steep often forming vertical cliffs as they break off into these major drainages. Access is by existing roads except for 0.15 miles of new road which will be required.. Ouray Utah is approximately 29 road miles to the northwest.

Four wells will be directionally drilled from this pad. The pad is oriented in an east-west direction with the south portion beginning on a flat-topped ridge which extends away from a higher knoll capped with sandstone bedrock. This ridge also extends to the northeast toward the White River rim with the river being approximately 1/5 mile from the location. The ridge with the location also slopes off moderately steep to the north toward a deep side-draw. The heads of the draws and swales within the site on the north will be filled during construction. No drainages intersect the location and no diversions are needed. No seeps, springs or streams exist in the immediate area. The selected site appears to be a good location for constructing a pad and drilling and operating the proposed wells and because of rough topography, the only location available in the area.

A reserve pit 100'x 250'x 10' deep is planned in an area of cut in the south east corner of the location. 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. A second pit for completion flows is shown on the Layout Sheet. If it is to be constructed it will be applied for separately.

The surface and minerals are both owned by SITLA. Jim Davis of SITLA attended the pre-site and had no concerns regarding the proposed location.

Surface Use Plan

Current Surface Use
Grazing
Recreational
Wildlfe Habitat

New Road Miles	Well Pad	Src Const Material	Surface Formation
0.15	**Width** 315 **Length** 370	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

A fair vegetation stand including cheatgrass, black sagebrush, broom snakeweed, shadscale, Indian Ricegrass, Gardner saltbrush, globe mallow and annuals exist.

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

Soil Type and Characteristics

Shallow gravely, rocky sandy loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diverson Required? N

Berm Required? N

Erosion Sedimentation Control Required? N

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

Reserve Pit

Site-Specific Factors		Site Ranking	
Distance to Groundwater (feet)	>200	0	
Distance to Surface Water (feet)	>1000	0	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)		20	
Native Soil Type	Mod permeability	10	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
Annual Precipitation (inches)		0	
Affected Populations			
Presence Nearby Utility Conduits	Not Present	0	
	Final Score	35	1 Sensitivity Level

Characteristics / Requirements

A reserve pit 100'x 250'x 10' deep is planned in an area of cut in the south east corner of the location. 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. A second pit for completion flows is shown on the Layout Sheet. If it is to be constructed it will be applied for separately.

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

Other Observations / Comments

Floyd Bartlett	11/18/2008
Evaluator	**Date / Time**

Application for Permit to Drill
Statement of Basis

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
1176	43047502280000	FILED	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		**Surface Owner-APD**		
Well Name	NBU 1022-14A1S		**Unit**	NATURAL BUTTES	
Field	NATURAL BUTTES		**Type of Work**	DRILL	
Location	NENE 14 10S 22E S 1228 FNL 1417 FEL		GPS Coord (UTM)	636496E	4423532N

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 4,200'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 14. 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	12/2/2008
APD Evaluator	**Date / Time**

Surface Statement of Basis

The general area is near the end of Archy Bench located between the White River to the east and Bitter Creek to the west. A few rounded to flat-topped ridges or benches occur. The area contains numerous side draws with side-slopes that become excessively steep often forming vertical cliffs as they break off into these major drainages. Access is by existing roads except for 0.15 miles of new road which will be required.. Ouray Utah is approximately 29 road miles to the northwest.

Four wells will be directionally drilled from this pad. The pad is oriented in an east-west direction with the south portion beginning on a flat-topped ridge which extends away from a higher knoll capped with sandstone bedrock. This ridge also extends to the northeast toward the White River rim with the river being approximately 1/5 mile from the location. The ridge with the location also slopes off moderately steep to the north toward a deep side-draw. The heads of the draws and swales within the site on the north will be filled during construction. No drainages intersect the location and no diversions are needed. No seeps, springs or streams exist in the immediate area. The selected site appears to be a good location for constructing a pad and drilling and operating the proposed wells and because of rough topography, the only location available in the area.

A reserve pit 100'x 250'x 10' deep is planned in an area of cut in the south east corner of the location. 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. A second pit for completion flows is shown on the Layout Sheet. If it is to be constructed it will be applied for separately.

The surface and minerals are both owned by SITLA. Jim Davis of SITLA attended the pre-site and had no concerns regarding the proposed location.

Pat Rainbolt representing the Utah Division of Wildlife Resources stated that a historic prairie falcon nest is located along the White River Rim approximately ½ mile to the north of the proposed pad. He recommended to Jim Davis of SITLA that the pad not be constructed or the wells drilled during the nesting and fledging period which is April 1-July 15th. Mr. Davis told Ramie Hoopes that if Kerr-McGee could not schedule around this period SITLA was to be contacted. No other wildlife values are expected to be significantly affected. Mr. Rainbolt provided Jim Davis and Ramie Hoopes a written wildlife evaluation and a copy of a recommended

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

Floyd Bartlett	11/18/2008
Onsite Evaluator	**Date / Time**

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	The reserve pit shall be fenced upon completion of drilling operations.

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/17/2008 **API NO. ASSIGNED:** 43047502280000

WELL NAME: NBU 1022-14A1S

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6226

CONTACT: Kevin McIntyre

PROPOSED LOCATION: NENE 14 100S 220E **Permit Tech Review:** ☑

SURFACE: 1228 FNL 1417 FEL **Engineering Review:** ☑

BOTTOM: 0345 FNL 0600 FEL **Geology Review:** ☑

COUNTY: UINTAH

LATITUDE: 39.95281 **LONGITUDE:** -109.40211

UTM SURF EASTINGS: 636496.00 **NORTHINGS:** 4423532.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: ST UO 01197A **PROPOSED FORMATION:** WSMVD

SURFACE OWNER: 3 - State **COALBED METHANE:** NO

RECEIVED AND/OR REVIEWED:

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

LOCATION AND SITING:

- ☐ **R649-2-3.**

  Unit: NATURAL BUTTES
- ☐ **R649-3-2. General**
- ☐ **R649-3-3. Exception**
- ☑ **Drilling Unit**

  Board Cause No: Cause 173-14

  Effective Date: 12/2/1999

  Siting: 460' fr u bdry & uncomm. tract
- ☑ **R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations:

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

From: Jim Davis
To: Bonner, Ed; Mason, Diana
Date: 3/16/2009 11:00 AM
Subject: Kerr McGee approvals (7)

CC: Garrison, LaVonne

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

NBU 1022-14A1S 43-047-50228
NBU 1022-14A4S 43-047-50227
NBU 1022-14H1S 43-047-50225
NBU 1022-14H4S 43-047-50224
NBU 1022-11F4S 43-047-50212
NBU 1022-11K2S 43-047-50214
NBU 1022-11J3S 43-047-50213

-Jim Davis

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

Permit To Drill

****

Well Name: NBU 1022-14A1S
API Well Number: 43047502280000
Lease Number: ST UO 01197A
Surface Owner: STATE
Approval Date: 3/19/2009

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

Authority:
Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14 .

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

Commingle:
In accordance with Cause No. 173-14, commingling of the Wasatch and Mesaverde formations is allowed.

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

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

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

Surface casing shall be cemented to the surface.

API Well No: 43047502280000

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

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

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

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

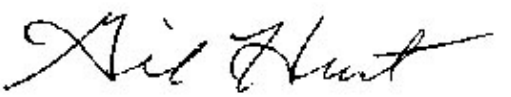
- Plugging and abandonment or significant plug back of this well - contact Dustin Doucet
- Any changes to the approved drilling plan - contact Dustin Doucet

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

- Dan Jarvis at: (801) 538-5338 office
  (801) 942-0871 home
- Carol Daniels at: (801) 538-5284 office
- Dustin Doucet at: (801) 538-5281 office
  (801) 733-0983 home

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

Approved By:



Gil Hunt
Associate Director, Oil & Gas

API Well No: 43047502280000

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 UO 01197A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-14A1S

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

9. API NUMBER: 43047502280000

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: 1228 FNL 1417 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 14 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		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
✓ SPUD REPORT Date of Spud: 8/18/2009	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL LOCATION ON 08/18/2009 AT 1200 HRS.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
August 20, 2009

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Sheila Wopsock	435 781-7024	Regulatory Analyst
SIGNATURE N/A		**DATE** 8/19/2009

RECEIVED August 19, 2009

API Well No: 43047502280000

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

FORM 9

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-14A1S

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

9. API NUMBER: 43047502280000

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: 1228 FNL 1417 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 14 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		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 9/1/2009	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

MIRU PROPETRO AIR RIG ON 08/30/2009. DRILLED 12-1/4" SURFACE HOLE TO 1980'. RAN 9-5/8" 36# J-55 SURFACE CASING. CMT W/250 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YIELD. TOP OUT W/450 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YIELD. WORT.

Accepted by the Utah Division of Oil, Gas and Mining

FOR RECORD ONLY

September 03, 2009

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 9/3/2009

RECEIVED September 03, 2009

API Well No: 43047502280000

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

FORM 9

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-14A1S

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

9. API NUMBER: 43047502280000

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: 1228 FNL 1417 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 14 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		
✓ NOTICE OF INTENT Approximate date work will start: 9/14/2009	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: Frac Factory Pit Refurb

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

Kerr-McGee Oil & Gas Onshore, LP is requesting to refurb the existing pit on this pad for completion operations. The refurb pit will be relined per the requirements in the COA of the APD. Upon completion of the wells on this pad KMG is also requesting to utilize this pit as a staging pit to be utilized for other completion operations in the area. There will be 2 - 400 bbl upright skim tanks placed on location. The trucks will unload water into these tanks before the water is placed into the refurbed pit. The purpose of the skim tanks is to collect any hydro-carbons that may have been associated with the other completion operations before releasing into the pit. We plan to keep this pit open for 1 year. During this time the attached well location completion fluids will be recycled in this pit and utilized for other frac jobs in the area.

Approved by the Utah Division of Oil, Gas and Mining

Date: September 22, 2009

By: Dustin Doucet

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Raleen White	720 929-6666	Sr. Regulatory Analyst
SIGNATURE N/A		**DATE** 9/14/2009

RECEIVED September 14, 2009

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Sundry Conditions of Approval Well Number 43047502280000

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

Approved by the
Utah Division of
Oil, Gas and Mining

Date: September 22, 2009

By:

API Well No: 43047502280000

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

FORM 9

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

SUNDRY NOTICES AND REPORTS ON WELLS

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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 1022-14A1S

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

9. API NUMBER: 43047502280000

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: 1228 FNL 1417 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 14 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		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 11/12/2009	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

FINISHED DRILLING FROM 1980' TO 8750' ON 11/11/2009. RAN 4-1/2" 11.6# I-80 PRODUCTION CSG. PUMP 40 BBLS AHEAD. LEAD CMT W/460 SX ECONOCEM @ 12.0 PPG, 2.25 YIELD. TAILED CMT W/1350 SX CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.25 YIELD. DROP PLUG & DISPLACED W/134.7 BBLS WATER. BUMP PLUG W/500 OVER FINAL CIRC PSI OF 2450. PLUG HELD & GOT BACK 15 BBLS CMT TO SURFACE. HAD FULL RETURNS DURING JOB. SET CASING HANGER 85K STRING WT & L/D LANDING JT. NIPPLE DOWN & CLEAN MUD TANKS. RELEASE ENSIGN RIG 139 ON 11/12/2009 AT 08:00 HRS.

Accepted by the Utah Division of Oil, Gas and Mining

FOR RECORD ONLY

November 16, 2009

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 11/12/2009

RECEIVED November 12, 2009

API Well No: 43047502280000

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL: Gas Well

8. WELL NAME and NUMBER: NBU 1022-14A1S

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

9. API NUMBER: 43047502280000

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: 1228 FNL 1417 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 14 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		
✓ NOTICE OF INTENT Approximate date work will start: 7/19/2010	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: UPDATE WATER SOUI

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

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

Accepted by the Utah Division of Oil, Gas and Mining

Date: July 22, 2010

By: Dustin Doucet

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE		**DATE**
N/A		7/19/2010

API Well No: 43047502280000

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

FORM 9

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

SUNDRY NOTICES AND REPORTS ON WELLS

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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 1022-14A1S

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

9. API NUMBER: 43047502280000

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: 1228 FNL 1417 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 14 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		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 8/8/2010	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	✓ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ 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 AUGUST 8, 2010 AT 11:50 A.M. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
August 10, 2010

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 8/10/2010

API Well No: 43047502280000

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

FORM 9

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-14A1S

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

9. API NUMBER: 43047502280000

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: 1228 FNL 1417 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 14 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		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
✓ SUBSEQUENT REPORT Date of Work Completion: 9/7/2010	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: SURFACE LOCATION

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

PLEASE BE ADVISED THAT THE SURFACE LOCATION FOR THIS WELL IS IN THE NW/4NE/4. THE OPERATOR REQUESTS THAT ALL FUTURE FILINGS REFLECT THIS LOCATION. THANK YOU.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
September 07, 2010

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 9/7/2010

RECEIVED September 07, 2010

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

AMENDED REPORT ☐ (highlight changes) FORM 8

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. LEASE DESIGNATION AND SERIAL NUMBER: ST UO 01197A
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT or CA AGREEMENT NAME: UTU63047A
8. WELL NAME and NUMBER: NBU 1022-14A1S
9. API NUMBER: 4304750228
10 FIELD AND POOL, OR WILDCAT: NATURAL BUTTES

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: NWNE 1228 FNL & 1417 FEL
AT TOP PRODUCING INTERVAL REPORTED BELOW: NENE 340 FNL & 633 FEL SEC.14-10S-22E
AT TOTAL DEPTH: NENE 345 FNL & 620 FEL SEC.14-10S-22E

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNE 14 10S 22E S
12. COUNTY: UINTAH
13. STATE: UTAH

14. DATE SPUDDED: 8/18/2009
15. DATE T.D. REACHED: 11/11/2009
16. DATE COMPLETED: 8/8/2010 ABANDONED ☐ READY TO PRODUCE ☑
17. ELEVATIONS (DF, RKB, RT, GL): 5,235' GL

18. TOTAL DEPTH: MD 8,750 TVD 8,512
19. PLUG BACK T.D.: MD 8,690 TVD 8,452
20. IF MULTIPLE COMPLETIONS, HOW MANY? *
21. DEPTH BRIDGE PLUG SET: MD TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
BHV SDL-DSN-ACTR - CBL/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#		1,955		700			
7 7/8"	4 1/2 I-80	11.6#		8,733		1810			

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	7,958							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A) MESAVERDE	6,858	8,405		
(B)				
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
6,858 8,405	0.36	120	Open ☑ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐

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

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
6,858-8,405	PMP 7,698 BBLS SLICK H20 & 289,976 LBS 30/50 SD.

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

(5/2000) **(CONTINUED ON BACK)**

RECEIVED
SEP 16 2010
DIV. OF OIL, GAS & MINING

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
8/8/2010	8/14/2010	24		0	2,464	300	FLOWING

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:
20/64	1,294	1,765					0	2,464	300	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	913				
MAHOGANY	1,771				
WASATCH	4,249				
MESAVERDE	6,603	8,750	TD		

35. ADDITIONAL REMARKS (Include plugging procedure)

ATTACHED IS THE DRILLING/COMPLETION CHRONOLOGICAL WELL HISTORY AND FINAL SURVEY.

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

NAME (PLEASE PRINT) ANDY LYTLE TITLE REGULATORY ANALYST

SIGNATURE DATE 9/7/2010

This report must be submitted within 30 days of

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

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

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

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

Phone: 801-538-5340

Fax: 801-359-3940

(5/2000)

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-14A1S BLUE	Spud Conductor: 8/18/2009	Spud Date: 8/30/2009
Project: UTAH-UINTAH	Site: NBU 1022-14B PAD	Rig Name No: ENSIGN 139/139, PROPETRO/
Event: DRILLING	Start Date: 7/21/2009	End Date: 11/12/2009
Active Datum: RKB @5,249.00ft (above Mean Sea Leve	UWI: NW/NE/0/10/S/22/E/14/0/0/26/PM/N/1,228.00/E/0/1,417.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
8/30/2009	15:30 - 16:30	1.00	DRLSUR	01	B	P		R/U PROPETRO 12, AIR BOWL,BLOOY LINE,COMPRESS,BOOSTER
	16:30 - 17:30	1.00	DRLSUR	06	A	P		P/U HAMMER TOOLS
	17:30 - 19:00	1.50	DRLSUR	02	A	P		SPUD W/ HAMMER DRL F/ 44' TO 180'
	19:00 - 19:30	0.50	DRLSUR	06	A	P		L/D TOOLS
	19:30 - 21:30	2.00	DRLSUR	06	A	P		P/U BIT,BHA DIR TOOLS ORIENT SAME
	21:30 - 0:00	2.50	DRLSUR	02	D	P		DRL F/ 180' TO 500' ROTATE-SLIDE
8/31/2009	0:00 - 17:00	17.00	DRLSUR	02	D	P		DRL F/ 500' TO 1980' TD' WATER AT 1430'
	17:00 - 18:00	1.00	DRLSUR	05	C	P		CIRC TO L/D TOOLS
	18:00 - 21:30	3.50	DRLSUR	06	A	P		L/D TOOLS- BIT
	21:30 - 0:00	2.50	DRLSUR	12	C	P		R/U RUN 44 JOINTS 36# J55, 95/8 CSNG, SHOE @ 1945 BAFFLE @ 1896.90 RELEASE RIG 00:00 8/31/09
11/4/2009	12:00 - 13:30	1.50	MIRU	01	C	P		SKID ON W/SUB & DERRICK
	13:30 - 0:00	10.50	MIRU	01	A	P		MOVE UP BACKYARD 20',RELEASE TRUCKS 18:30 11/4/09 ,4 TRUCKS 1 FORKLIFT,,RURT,FLARE LINES,PITS PUMPS FLOOR
11/5/2009	0:00 - 2:00	2.00	MIRU	01	B	P		RURT,BACKYARD,FLOOR F/TEST
	2:00 - 3:30	1.50	MIRU	14	A	P		NUBOP,FUNCTION TEST,PRE SPUD INSPECTION
	3:30 - 8:00	4.50	PRPSPD	15	A	P		TEST RAMS, CHOKE,KILL LINE,CHOKE MANIFOLD TO 5K,ANNULAR 2.5K,CSG 1.5K/30 MIN,250 LOWS F/ALL,
	8:00 - 12:00	4.00	PRPSPD	06	A	P		INSTALL WEARRING,P/U BIT#1 SEC 563,& 1.5 BENT MTR .23RPG,ORIENTATE DIR TOOLS,LEVEL DERRICK,INSTALL ROT RUBBER,TIH TO 1875'
	12:00 - 14:00	2.00	DRLPRO	02	F	P		DRILL CEMENT & FE F/1875' TO 1990
	14:00 - 16:00	2.00	DRLPRO	02	D	P		DIR DRILL F/1990 TO 2218',AVG 114 SURVEY EVERY 90',WOB 15,RPM 135,STKS 105,GPM435,PSI 980, DIFF175
	16:00 - 16:30	0.50	DRLPRO	07	A	P		RIG SERVICE
	16:30 - 0:00	7.50	DRLPRO	02	D	P		DIR DRILL F/2218 TO 2940,AVG 96 WOB15,RPM135,116 STKS,480 GPM,1200 PSI 300 DIFF
11/6/2009	0:00 - 11:00	11.00	DRLPRO	02	D	P		DIR DRILL F/2940' TO3870,AVG85,WOB12-16,RPM135,1200 PSI,DIFF300,STKS 116,
	11:00 - 12:30	1.50	DRLPRO	05	B	P		3870' ,,LT MUD UP F/GAS=30'FLARE,2450 UNITS,,WT UP 9.4/35
	12:30 - 18:00	5.50	DRLPRO	02	D	P		DIR DRILL F/3870 TO 4210,AVG 62,SURVEY 90',WOB 15,RPM 135,PSI 1550 DIFF 300 STWT 150-125-115
	18:00 - 18:30	0.50	DRLPRO	07	A	P		DAILY SERVICE
	18:30 - 0:00	5.50	DRLPRO	02	D	P		DIR DRILL F/4210 TO 4840,SURVEY 90' AVG 115,WOB15-18,RPM140,PSI 1800DIFF 250,MUD WT 9.4/36,STWT 165-140-125
11/7/2009	0:00 - 12:00	12.00	DRLPRO	02	D	P		DIR DRILL F/4840' TO 5749,AVG 76,SURVEY 90'WOB 18,PSI 2100,STKS 106,DIFF200,STWT190-150-145
	12:00 - 12:30	0.50	DRLPRO	07	A	P		RIG SERVICE
	12:30 - 0:00	11.50	DRLPRO	02	D	P		DIR DRILL F/5749' TO 6400,AVG 57,WOB 18-20,116 STKS,RPM 135,PSI2200,DIFF 2-300,STWT 195-155-145

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-14A1S BLUE	Spud Conductor: 8/18/2009	Spud Date: 8/30/2009
Project: UTAH-UINTAH	Site: NBU 1022-14B PAD	Rig Name No: ENSIGN 139/139, PROPETRO/
Event: DRILLING	Start Date: 7/21/2009	End Date: 11/12/2009
Active Datum: RKB @5,249.00ft (above Mean Sea Leve	UWI: NW/NE/0/10/S/22/E/14/0/0/26/PM/N/1,228.00/E/0/1,417.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
11/8/2009	0:00 - 17:30	17.50	DRLPRO	02	D	P		DIR DRILL F/6400 TO 7288',AVG 51,WOB 18,RPM 140,PSI 2300,STK 116,DIFF 300, STWT 205-165-145,MUD WT 10.6/45,NO GAS,TORQ 12-14K
	17:30 - 18:00	0.50	DRLPRO	07	A	P		RIG SERVICE
	18:00 - 0:00	6.00	DRLPRO	02	D	P		DIR DRILL F/7288' TO 7560',AVG 45,WOB 18-20,RPM 135,PSI 2350,STKS 110,DIFF 300,STWT 210-170-150,STRAIGHT PULL 240K,NO GAS READING,TORQ 13-15,,SLOW FT/HR AVG DUE TO SLIDING F/DIRECTION IN CASE WE ROTATE OUT ,BIT STILL GOOD
11/9/2009	0:00 - 2:30	2.50	DRLPRO	02	D	P		DIR DRILL F/7560 TO 7620,AVG 25',WOB 20-40 SLIDING,DHRPM 100-140,PSI 2400,STKS 110,DIFF 2-300,STWT 210-170-150,TORQ 12-15K
	2:30 - 4:00	1.50	DRLPRO	22	L	Z		PLUGGED FLOW LINE,CEMENT & PLUG RUBBERS,AT GAS BUSTER VALVE
	4:00 - 18:00	14.00	DRLPRO	02	D	P		DIR DRILL F/7620' TO 8194 ,AVG 41 ,WOB 15-20,RPM 140,STKS 110,PSI 2400,DIFF 250,TORG12-13K,ST WT 210-170-150
	18:00 - 0:00	6.00	DRLPRO	06	A	S		PUMP OUT 6 STNDS TO 7750,PUMPPILL,STRT PULL 110 OVER,POOH L/D BIT #1 & MUD MTR
11/10/2009	1:00 - 9:30	8.50	DRLPRO	06	A	P		TIH BREAK CIRC @SHOE & 5K,TIH
	9:30 - 10:30	1.00	DRLPRO	02	D	P		DRILL F/8194 TO 8225,AVG 31'/HR
	10:30 - 11:00	0.50	DRLPRO	07	A	P		DAILY SERVICE,TOP DRIVE,BLOCKS
	11:00 - 0:00	13.00	DRLPRO	02	D	P		DRILL F/8225 TO 8723,AVG 38 WOB 20,RPM 140,GPM 440,STKS 104,PSI 2600,DIFF200,STWT UP 260,180,150,LOST 80 BBLS MUD IN SEGO
11/11/2009	0:00 - 1:00	1.00	DRLPRO	02	D	P		DRILL F/8723' TO TD 8750,FINAL MUD WT 12.0/46,WOB 20,PSI 2600,DIFF 200,STWT 260-175-150,CHECK FLOW,NONE
	1:00 - 1:30	0.50	DRLPRO	05	C	P		CIRC F/SHORTTRIP
	1:30 - 3:00	1.50	DRLPRO	06	E	P		PUMP OUT 10 STNDS F/SHORTTRIP BACK TO 7680', NO PROBLEMS
	3:00 - 4:30	1.50	DRLPRO	05	C	P		CIRC BTMS TWICE,TRIP GAS 2400,NO FLARE,BK GAS 36 UNITS
	4:30 - 12:30	8.00	DRLPRO	06	B	P		DROP SURVEYPOOH F/LOGS,PUMP OUT TO 8030,STR PULL 110K
	12:30 - 13:30	1.00	DRLPRO	06	A	P		L/D MOTOR- MONEL - BIT & PULL WEAR BUSHING
	13:30 - 18:00	4.50	DRLPRO	11	D	P		HELD S/M & R/U HALLIBURTON & RUN TRIPLE COMBO LOGS - LOGGERS DEPTH @ 8,749
	18:00 - 23:30	5.50	DRLPRO	12	C	P		R/U KIMZEY CASING & RUN 4 1/2 PROD STRING RUN 208 JTS PLUS MAKER SHOE SET @ 8719.68 F/C @ 8676.63
	23:30 - 0:00	0.50	DRLPRO	12	A	P		R/U HALLIBURTON CEMENT HEAD
11/12/2009	0:00 - 1:00	1.00	DRLPRO	05	A	P		CIRC BTM UP
	1:00 - 4:00	3.00	DRLPRO	12	E	P		HELD S/M & R/U HALLIBURTON & TEST LINES TO 5,000 PSI & CEMENT W/ 40 BBLS WATER AHEAD & F/ LEAD 460 SKS YIELD 2.25 @ 12.0 PPG F/ TAIL 1350 SKS 1.25 YIELD @ 14.3 PPG & DROP PLUG & DISPLACED W/ 134.7 BBLS WATER BUMP PLUG W/ 500 OVER FINAL CIRC PSI OF 2450 PLUG HELD & GOT BACK 15 BBLS CEMENT TO SURFACE HAD FULL RETURNS DURING JOB.
	4:00 - 8:00	4.00	DRLPRO	14	A	P		SET CASING HANGER 85K STRING WT & L/D LANDING JT & NIPPLE DOWN & CLEAN OUT MUD TANKS & TRANS MUD TO STORAGE TANKS & RELEASED RIG @ 08:00 HRS ON 11/12/2009

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-14A1S BLUE	Spud Conductor: 8/18/2009	Spud Date: 8/30/2009
Project: UTAH-UINTAH	Site: NBU 1022-14B PAD	Rig Name No: MILES-GRAY 1/1
Event: COMPLETION	Start Date: 6/25/2010	End Date: 8/5/2010
Active Datum: RKB @5,249.00ft (above Mean Sea Leve	UWI: NW/NE/0/10/S/22/E/14/0/0/26/PM/N/1,228.00/E/0/1,417.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
7/23/2010	9:00 - 11:00	2.00	COMP	37	B	P		R/U CASEDHOLE WIRELINE, RIH W/ PERF GUNS, PERF TH MESAVERDE @ 8403' - 8405', 4-SPF, 8233' - 8236', 4-SPF, 8188' - 8190', 3-SPF, USING 3 3/8" SCALLOP GUNS, 23gm, 0.36" HOLE, 90* PHS, 26 HOLES,

7/26/2010	8:30 - 11:00	2.50	COMP	36	E	P		(STG #1) WHP = 1410 #,
								SPOT 250 GALS 15% HCL ON PERF, STEP DOWN TEST = 50 B/M @ 5349 #, DROP 2 PUMPS, RATE @ 35 B/M @ 4195 #, DROP 1 PUMPS, RATE @ 20.(B/M @ 3132 #, DROP 1 PUMP, RATE @ 7 B/M @ 2600 #, SHUT DOWN,
								ISIP = 2372 #, F..G.= 0.72 , INJ-RT = 49 B/M, INJ-P 5000 #, CALC 96% PERF OPEN, PUMP 1306 BBLS SLK WTR AND 44385 # OTTAWA SAND, ISIP = 2583 #, F.G.= 0.74 , NPI = 211 #, MP = 5261 #, MR = 50.8 B/M, AP = 3900 #, AR = 50.3 B/M, 39385 # 30/5(SD, 5000 # SLC SD,
								COMMENTS = RA TRACER PUMP IN STG, GOOD JOB
								
								(STG #2)RIH W/ HALLIBURTON 8K CBP AND PERF GUN, SET THE CBP @ 8149 ', PERF THE MESAVERDE @ 8117' - 8119', 3-SPF, 8097' - 8100', 4-SPF, 8018' - 8020', 3-SPF, USING 3 3/8" SCALLOP GUNS, 23gm, 0.36" HOLE, 90* PHS, 24 HOLES,

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-14A1S BLUE	Spud Conductor: 8/18/2009	Spud Date: 8/30/2009
Project: UTAH-UINTAH	Site: NBU 1022-14B PAD	Rig Name No: MILES-GRAY 1/1
Event: COMPLETION	Start Date: 6/25/2010	End Date: 8/5/2010
Active Datum: RKB @5,249.00ft (above Mean Sea Leve	UWI: NW/NE/0/10/S/22/E/14/0/0/26/PM/N/1,228.00/E/0/1,417.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
7/27/2010	8:00 - 15:00	7.00	COMP	36	E	P		(STG #2) WHP = 2080 #, STEP DOWN TEST = 50 B/M @ 5750 #, DROP 2 PUMPS, RATE @ 38 B/M @ 4677 #, DROP 2 PUMPS, RATE @ 22.7 B/M @ 3672 #, DROP 1 PUMP, RATE @ 10.2 B/M @ 3014 #, SHUT DOWN, ISIP = 2648 #, F..G.= 0.76 , INJ-RT = 50.5 B/M, INJ-P 5147 #, CALC ALL PERF OPEN, PUMP 2045 BBLS SLK WTR AND 68297 # OTTAWA SAND, ISIP = 2589 #, F.G.= 0.75 , NPI = -59 #, MP = 6450 #, MR = 54 B/M, AP = 5500 #, AR = 47 B/M, 63297 # 30/50 SD, 5000 # SLC SD, COMMENTS = LOST PUMP ON SWEEP, CUT WHITE SD SHORT BY 7,000#, STARTED SCREEN OFF, TAIL IN W/ 5000# SLC. (STG #3) RIH W/ HALLIBURTON 8K CBP AND PERF GUN, SET THE CBP @ 7954 ', PERF THE MESAVERDE @ 7851' - 7854', 7810' - 7813', 4-spf, USING 3 3/8" SCALLOP GUNS, 23gm, 0.36" HOLE, 90* PHS, 24 HOLES, WHP = 1874 #, STEP DOWN TEST = 49.6 B/M @ 4810 #, DROP 2 PUMPS, RATE @ 37 B/M @ 4078 #, DROP 2 PUMPS, RATE @ 18.8 B/M @ 3196 #, DROP 1 PUMP, RATE @ 8.2 B/M @ 2820 #, SHUT DOWN, ISIP = 2566 #, F..G.= 0.76 , INJ-RT = 50 B/M, INJ-P = 46834 #, CALC ALL PERF OPEN, PUMP 1197 BBLS SLK WTR AND 46013 # OTTAWA SAND, ISIP = 2389 #, F.G.= 0.74 , NPI = -177 #, MP = 5567 #, MR = 50.1 B/M, AP = 4200 #, AR = 49.5 B/M, 41013 # 30/50 SD, 5000 # SLC SD, COMMENTS = GOOD JOB (STG #4) RIH W/ HALLIBURTON 8K CBP AND PERF GUN, SET THE CBP @ 7673 ', PERF THE MESAVERDE @ 7571' - 7573', 3-spf, 7506' - 7507', 4-spf, 7478' - 7479', 4-spf, 7416' - 7417', 3-spf, 7334' - 7335', 3-spf, 7287' - 7288', 4-spf, USING 3 3/8" SCALLOP GUNS, 23gm, 0.36" HOLE, 90* PHS, 24 HOLES,

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-14A1S BLUE	Spud Conductor: 8/18/2009	Spud Date: 8/30/2009	
Project: UTAH-UINTAH	Site: NBU 1022-14B PAD		Rig Name No: MILES-GRAY 1/1
Event: COMPLETION	Start Date: 6/25/2010		End Date: 8/5/2010
Active Datum: RKB @5,249.00ft (above Mean Sea Leve	UWI: NW/NE/0/10/S/22/E/14/0/0/26/PM/N/1,228.00/E/0/1,417.00/0/0		

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

7/30/2010	7:00 - 15:00	8.00	COMP	36	E	P		(STG #4) WHP = 1792 #,
								STEP DOWN TEST = 50 B/M @ 4670 #, DROP 2 PUMPS, RATE @ 36 B/M @ 3472 #, DROP 2 PUMPS, RATE @ 17.9 B/M @ 2732 #, DROP 1 PUMP, RATE @ 10 B/M @ 2490 #, SHUT DOWN, ISIP = 2207 #, F..G.= 0.73 , INJ-RT = 51 B/M, INJ-P = 4454 #, CALC ALL PERF OPEN, PUMP 1537 BBLS SLK WTR AND 61809 # OTTAWA SAND, ISIP = 2424 #, F.G.= 0-.76 , NPI = 217 #, MP = 6361 #, MR = 51.4 B/M, AP = 3700 #, AR = 51 B/M,56809 # 30/50 SD, 5000 # SLC SD,
								COMMENTS = RA TRACER IN STG, SLOW BETWEEN STG,
								
								(STG #5) RIH W/ HALLIBURTON 8K CBP AND PERF GUN, SET THE CBP @ 7107 ', PERF THE MESAVERDE @ 7005' - 7007', 3-SPF, 6915' - 6916', 4-SPF, 6858' - 6861', 4-SPF, USING 3 3/8" SCALLOP GUNS, 23gm, 0.36" HOLE, 90* PHS, 22 HOLES, WHP = 135 #,
								STEP DOWN TEST = 50.8 B/M @ 4454 #, DROP 2 PUMPS, RATE @ 36.6 B/M @ 3326 #, DROP 2 PUMPS, RATE @ 18 B/M @ 2374 #, DROP 1 PUMP, RATE @ 10 B/M @ 2115 #, SHUT DOWN,
								ISIP = 1854 #, F..G.= 0.70 , INJ-RT = 50.9 B/M, INJ-P = 3561 #, CALC ALL PERF OPEN, PUMP 1613 BBLS SLK WTR AND 67472 # OTTAWA SAND, ISIP = 2213 #, F.G.= 0.75 , NPI = 359 #, MP = 5337 #, MR = 51.8 B/M, AP = 3400 #, AR = 51 B/M, 62472 # 30/50 SD, 5000 # SLC SD,
								COMMENTS = GOOD JOB
								
								(KILL PLUG) RIH W/ HALLIBURTON 8K CBP, SET CBP @ 6808', R/D WIRELINE AND FRAC OFF WELL,
								
								TOTAL FLUID = 7698 BBLS SLK WTR,
								TOTAL SAND = 289976 # OTTAWA SAND

8/4/2010	7:00 - 7:30	0.50	COMP	48		P		HSM, ND WH NU BOPS. WATCHING PINCH POINTS.
	7:30 - 15:00	7.50	COMP	31	I	P		ND WH, NU BOPS, RU FLOOR & TBG EQUIP. TALLY & PU 37/8 BIT, POBS, 1.875 X/N & 214 JTS 23/8 L/80 OFF FLOAT, EOT @ 6780`RU DRLG EQUIP PREP TO D/O IN AM. SWI SDFN
8/5/2010	7:00 - 7:30	0.50	COMP	48		P		HSM, DRILLING PLUGS.

US ROCKIES REGION

Operation Summary Report

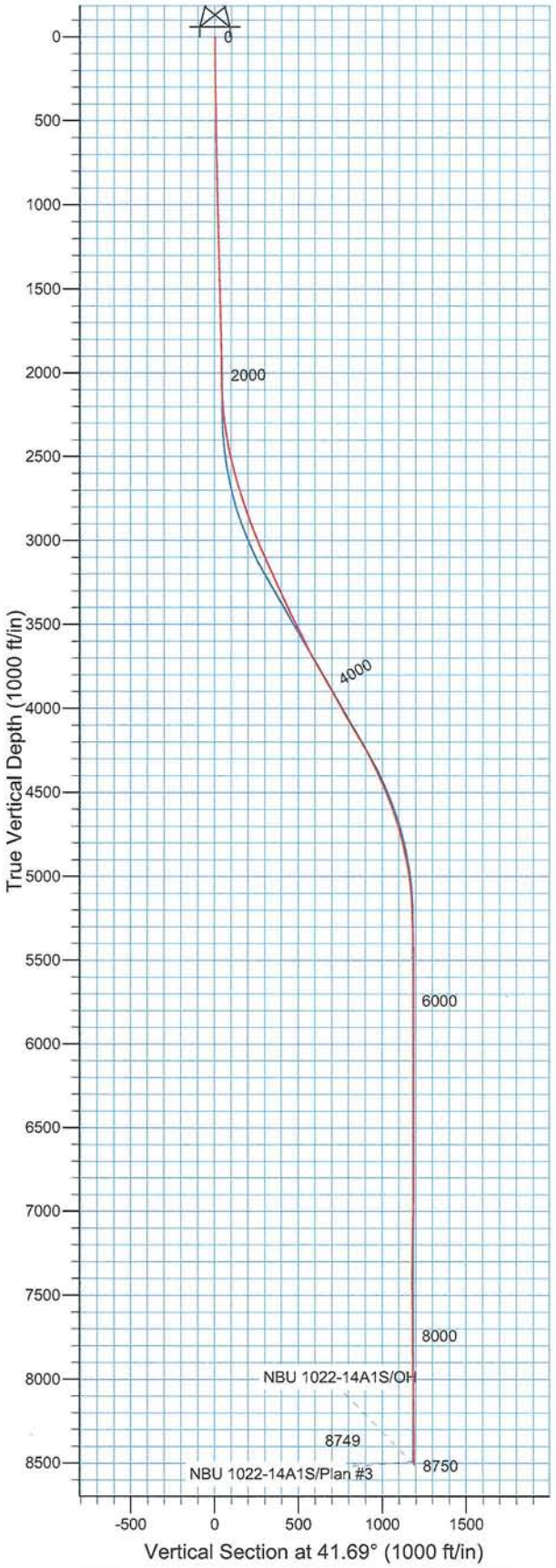
Well: NBU 1022-14A1S BLUE	Spud Conductor: 8/18/2009	Spud Date: 8/30/2009
Project: UTAH-UINTAH	Site: NBU 1022-14B PAD	Rig Name No: MILES-GRAY 1/1
Event: COMPLETION	Start Date: 6/25/2010	End Date: 8/5/2010
Active Datum: RKB @5,249.00ft (above Mean Sea Leve	UWI: NW/NE/0/10/S/22/E/14/0/0/26/PM/N/1,228.00/E/0/1,417.00/0/0	

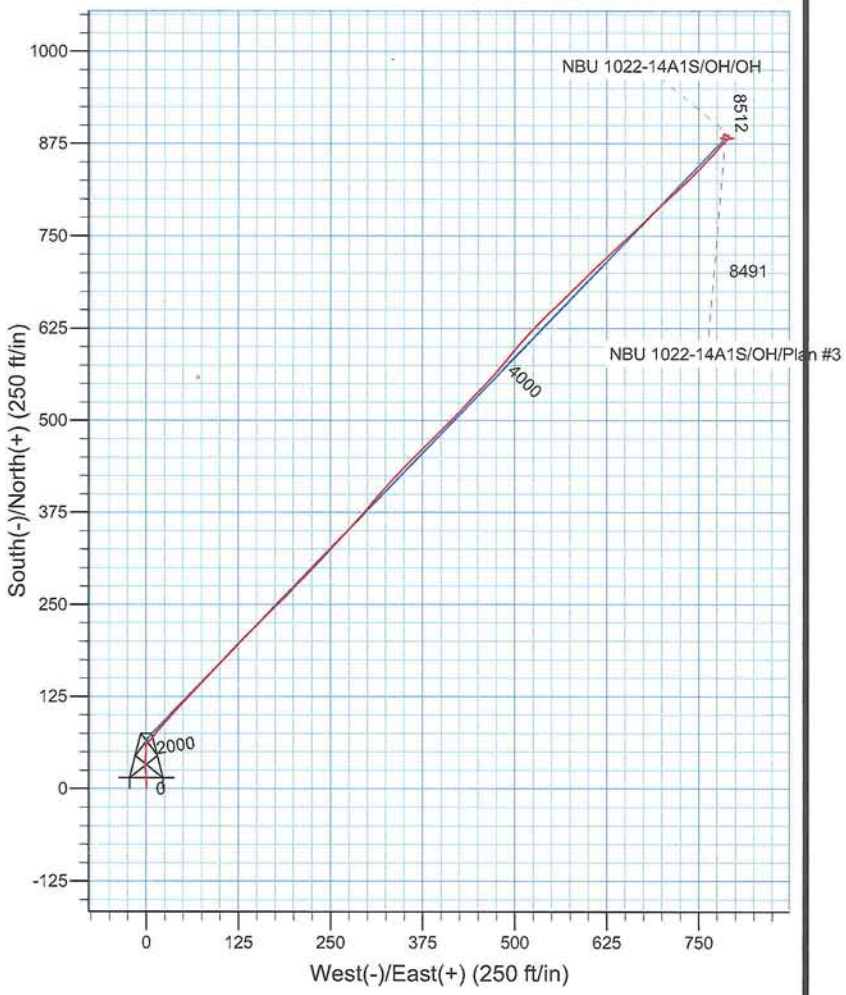
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:30 - 12:00	4.50	COMP	44	C	P		BROK CIRC CONVENTIONAL, TEST BOPS TO 3,000# OK RIH. C/O 40' SAND TAG 1ST PLUG @ 6826' DRL PLG IN 4 MIN 300# PSI INCREASE RIH. (MV) C/O 90' SAND TAG 2ND PLUG @ 7100' DRL PLG IN 7 MIN 500# PSI INCREASE RIH. (MV) C/O 90' SAND TAG 3RD PLUG @ 7673' DRL PLG IN 3 MIN 200# PSI INCREASE RIH. (MV) C/O 75' SAND TAG 4TH PLUG @ 7954' DRL PLG IN 8 MIN 400# PSI INCREASE RIH. (MV) C/O 11' SAND TAG 5TH PLUG @ 8130' DRL PLG IN 8 MIN 400# PSI INCREASE RIH. (MV C/O TO PBTD @ 8689', CIRC CLEAN, RD SWIVEL, L/D 18 JTS. LAND TBG ON 251 JTS, ND BOPS NU WH PMP OFF BIT LET WELL SET FOR 30 MIN FOR BIT TO FALL, TURN WELL OVER TO FB CREW. RIG DWN. KB = 13' CAMERON 71/16 5K HANGER = .83' 251 JTS 23/8 L-80 = 7942.73' POBS & 1.875 X/N = 2.20' EOT @ 7958.76' 284 JTS HAULED OUT 251 LANDED 33 TO RETURN TWTR = 7918 BBLS TWR = 500 BBLS TWLTR = 7418 BBLS
8/6/2010	7:00 -			33	A			7 AM FLBK REPORT: CP 2825#, TP 1850#, 20/64" CK, 40 BWPH, HEAVY SAND, LIGHT GAS TTL BBLS RECOVERED: 1325 BBLS LEFT TO RECOVER: 6593
8/7/2010	7:00 -			33	A			7 AM FLBK REPORT: CP 2700#, TP 1750#, 20/64" CK, 35 BWPH, MED SAND, MED GAS TTL BBLS RECOVERED: 2210 BBLS LEFT TO RECOVER: 5708
8/8/2010	7:00 -			33	A			7 AM FLBK REPORT: CP 2400#, TP 1600#, 20/64" CK, 30 BWPH, MED SAND, MED GAS TTL BBLS RECOVERED: 2930 BBLS LEFT TO RECOVER: 4988
	11:50 -		PROD	50				WELL TURNED TO SALES @ 11:50 HR ON 8/8/10 - 2200 MCFD, 672 BWPD, CP 2315#, FTP 1250#, CK 20/64"
8/9/2010	7:00 -			33	A			7 AM FLBK REPORT: CP 2175#, TP 1400#, 20/64" CK, 25 BWPH, TRACE SAND, - GAS TTL BBLS RECOVERED: 3563 BBLS LEFT TO RECOVER: 4355
8/10/2010	7:00 -			33	A			7 AM FLBK REPORT: CP 2025#, TP 1325#, 20/64" CK, 15 BWPH, TRACE SAND, - GAS TTL BBLS RECOVERED: 3960 BBLS LEFT TO RECOVER: 3958
8/14/2010	7:00 -							WELL IP'D ON 8/14/10 - 2464 MCFD, 0 BOPD, 300 BWPD, CP 1765#, FTP 1294#, CK 20/64", LP 86#, 24 HRS

Scientific Drilling
Rocky Mountain Operations

Project: Uintah County, UT NAD27
Site: NBU 1022-14B Pad
Well: NBU 1022-14A1S
Wellbore: OH
Design: OH

Kerr McGee Oil and Gas Onshore LP





WELL DETAILS: NBU 1022-14A1S

Ground Level: GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)

		Northing	Easting	Latitude	Longitude
0.00	0.00	596779.25	2588074.96	39° 57' 10.368 N	109° 24' 7.381 W

REFERENCE INFORMATION

Co-ordinate (N/E) Reference:	Well NBU 1022-14A1S, True North
Vertical (TVD) Reference:	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Section (VS) Reference:	Slot - (0.00N, 0.00E)
Measured Depth Reference:	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Calculation Method:	Minimum Curvature
Local North:	True North
Location:	Sec 14 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 1022-14A1S/OH)

Created By: Julie Cruse Date: 2009-11-16

Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT NAD27
NBU 1022-14B Pad
NBU 1022-14A1S
OH

Design: OH

Standard Survey Report

16 November, 2009

Anadarko
Petroleum Corporation

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 1022-14A1S
Project:	Uintah County, UT NAD27	**TVD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Site:	NBU 1022-14B Pad	**MD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Well:	NBU 1022-14A1S	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**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 1022-14B Pad, Sec 14 T10S R22E				
Site Position:		**Northing:**	596,779.27 ft	**Latitude:**	39° 57' 10.368 N
From:	Lat/Long	**Easting:**	2,588,074.96 ft	**Longitude:**	109° 24' 7.381 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	in	**Grid Convergence:**	1.34 °

Well	NBU 1022-14A1S, 1228' FNL 1417' FEL					
Well Position	**+N/-S**	0.00 ft	**Northing:**	596,779.25 ft	**Latitude:**	39° 57' 10.368 N
	+E/-W	0.00 ft	**Easting:**	2,588,074.96 ft	**Longitude:**	109° 24' 7.381 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,234.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	2009-08-30	11.24	65.90	52,521
	IGRF2005-10	2009-11-04	11.22	65.90	52,504

Design	OH				
Audit Notes:					
Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	41.69

Survey Program **Date** 2009-11-16

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
169.00	1,939.00	Survey #1 - Surface (OH)	MWD SDI	MWD - Standard ver 1.0.1
1,981.00	8,750.00	Survey #2 - Production (OH)	MWD SDI	MWD - Standard ver 1.0.1

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
169.00	0.27	341.66	169.00	0.38	-0.13	0.20	0.16	0.16	0.00
First SDI Surface MWD Survey									
259.00	0.81	354.97	259.00	1.21	-0.25	0.74	0.61	0.60	14.79
349.00	1.84	4.31	348.97	3.29	-0.19	2.33	1.17	1.14	10.38
429.00	1.90	3.42	428.93	5.89	-0.02	4.39	0.08	0.07	-1.11
519.00	1.62	353.59	518.88	8.65	-0.07	6.41	0.46	-0.31	-10.92
609.00	1.49	359.84	608.85	11.08	-0.22	8.13	0.24	-0.14	6.94
699.00	1.86	348.91	698.81	13.68	-0.50	9.88	0.54	0.41	-12.14
789.00	2.03	0.47	788.76	16.71	-0.77	11.97	0.47	0.19	12.84
879.00	2.03	359.23	878.71	19.90	-0.78	14.34	0.05	0.00	-1.38

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 1022-14A1S
Project:	Uintah County, UT NAD27	**TVD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Site:	NBU 1022-14B Pad	**MD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Well:	NBU 1022-14A1S	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**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)
969.00	1.70	355.95	968.66	22.82	-0.89	16.45	0.39	-0.37	-3.64
1,059.00	1.62	356.65	1,058.62	25.43	-1.06	18.28	0.09	-0.09	0.78
1,149.00	2.34	355.42	1,148.57	28.53	-1.28	20.45	0.80	0.80	-1.37
1,239.00	2.34	348.86	1,238.49	32.16	-1.79	22.83	0.30	0.00	-7.29
1,329.00	2.07	7.93	1,328.43	35.57	-1.92	25.29	0.86	-0.30	21.19
1,419.00	1.82	12.10	1,418.37	38.58	-1.39	27.88	0.32	-0.28	4.63
1,509.00	1.41	356.07	1,508.34	41.08	-1.17	29.90	0.67	-0.46	-17.81
1,599.00	1.55	8.73	1,598.31	43.39	-1.06	31.70	0.39	0.16	14.07
1,689.00	1.94	14.37	1,688.27	46.07	-0.50	34.07	0.47	0.43	6.27
1,779.00	2.29	352.51	1,778.21	49.33	-0.35	36.60	0.97	0.39	-24.29
1,869.00	1.93	358.02	1,868.15	52.63	-0.64	38.87	0.46	-0.40	6.12
1,939.00	1.79	351.23	1,938.11	54.88	-0.85	40.42	0.37	-0.20	-9.70
Last SDI Surface MWD Survey									
1,981.00	1.24	341.39	1,980.09	55.96	-1.09	41.06	1.44	-1.31	-23.43
First Survey in 7 7/8" Hole									
2,071.00	1.45	9.38	2,070.07	58.01	-1.22	42.51	0.76	0.23	31.10
2,162.00	4.05	41.65	2,160.96	61.55	1.11	46.70	3.22	2.86	35.46
2,252.00	5.43	45.66	2,250.65	66.90	6.26	54.12	1.58	1.53	4.46
2,343.00	8.79	37.07	2,340.94	75.46	13.54	65.35	3.86	3.69	-9.44
2,433.00	10.54	39.84	2,429.66	87.27	22.96	80.43	2.01	1.94	3.08
2,524.00	12.29	43.35	2,518.86	100.70	34.94	98.44	2.07	1.92	3.86
2,614.00	15.44	43.42	2,606.23	116.37	49.75	119.99	3.50	3.50	0.08
2,705.00	17.39	41.92	2,693.51	135.29	67.16	145.70	2.19	2.14	-1.65
2,795.00	18.78	43.29	2,779.06	155.85	86.08	173.63	1.62	1.54	1.52
2,886.00	20.12	43.49	2,864.87	177.86	106.90	203.92	1.47	1.47	0.22
2,976.00	21.24	44.56	2,949.07	200.71	128.99	235.67	1.31	1.24	1.19
3,067.00	23.27	44.53	3,033.29	225.27	153.17	270.09	2.23	2.23	-0.03
3,158.00	24.07	46.10	3,116.63	250.95	179.15	306.55	1.12	0.88	1.73
3,248.00	23.99	42.04	3,198.84	277.27	204.62	343.15	1.84	-0.09	-4.51
3,339.00	24.93	45.15	3,281.67	304.54	230.61	380.79	1.75	1.03	3.42
3,429.00	24.88	42.20	3,363.31	331.94	256.78	418.66	1.38	-0.06	-3.28
3,520.00	25.93	42.52	3,445.50	360.79	283.08	457.70	1.16	1.15	0.35
3,610.00	26.11	39.29	3,526.39	390.62	308.92	497.16	1.59	0.20	-3.59
3,701.00	26.85	43.53	3,607.85	421.02	335.76	537.71	2.23	0.81	4.66
3,791.00	28.30	44.16	3,687.62	451.06	364.62	579.34	1.64	1.61	0.70
3,882.00	29.55	45.79	3,767.27	482.19	395.74	623.28	1.62	1.37	1.79
3,973.00	30.55	42.91	3,846.04	514.77	427.57	668.79	1.93	1.10	-3.16
4,063.00	29.44	44.02	3,923.99	547.43	458.52	713.76	1.38	-1.23	1.23
4,154.00	29.04	38.73	4,003.40	580.75	487.88	758.17	2.87	-0.44	-5.81
4,244.00	29.84	41.71	4,081.79	614.51	516.45	802.37	1.85	0.89	3.31
4,335.00	31.34	47.02	4,160.13	647.55	548.83	848.59	3.39	1.65	5.84
4,425.00	29.17	45.26	4,237.87	678.95	581.54	893.79	2.60	-2.41	-1.96
4,516.00	28.36	45.71	4,317.64	709.65	612.76	937.48	0.92	-0.89	0.49
4,606.00	25.21	48.64	4,397.98	737.25	642.46	977.85	3.79	-3.50	3.26
4,697.00	22.54	44.67	4,481.19	762.47	669.27	1,014.51	3.42	-2.93	-4.36
4,787.00	20.44	46.66	4,564.93	785.53	692.83	1,047.40	2.47	-2.33	2.21
4,878.00	18.25	47.24	4,650.79	806.11	714.85	1,077.41	2.42	-2.41	0.64
4,968.00	15.75	46.83	4,736.85	824.04	734.11	1,103.61	2.78	-2.78	-0.46
5,059.00	12.95	41.73	4,825.00	840.10	749.91	1,126.11	3.37	-3.08	-5.60
5,149.00	10.37	46.46	4,913.14	853.21	762.50	1,144.27	3.05	-2.87	5.26
5,240.00	8.39	40.11	5,002.92	863.93	772.71	1,159.07	2.45	-2.18	-6.98
5,330.00	5.52	40.99	5,092.25	872.22	779.78	1,169.97	3.19	-3.19	0.98
5,421.00	3.47	46.28	5,182.97	877.43	784.64	1,177.09	2.30	-2.25	5.81
5,511.00	1.68	53.19	5,272.87	880.10	787.67	1,181.10	2.01	-1.99	7.68

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 1022-14A1S
Project:	Uintah County, UT NAD27	**TVD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Site:	NBU 1022-14B Pad	**MD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Well:	NBU 1022-14A1S	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**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)
5,602.00	1.96	36.31	5,363.83	882.15	789.66	1,183.95	0.66	0.31	-18.55
5,693.00	0.63	337.36	5,454.80	883.87	790.39	1,185.72	1.89	-1.46	-64.78
5,783.00	0.52	340.85	5,544.80	884.71	790.06	1,186.13	0.13	-0.12	3.88
5,874.00	0.35	1.46	5,635.80	885.38	789.94	1,186.55	0.25	-0.19	22.65
5,964.00	0.81	282.76	5,725.79	885.79	789.32	1,186.45	0.91	0.51	-87.44
6,055.00	0.52	297.65	5,816.79	886.13	788.33	1,186.04	0.37	-0.32	16.36
6,145.00	0.44	285.64	5,906.78	886.41	787.63	1,185.79	0.14	-0.09	-13.34
6,236.00	0.32	245.69	5,997.78	886.40	787.07	1,185.40	0.31	-0.13	-43.90
6,327.00	0.21	245.59	6,088.78	886.23	786.68	1,185.02	0.12	-0.12	-0.11
6,417.00	0.81	283.60	6,178.78	886.31	785.91	1,184.57	0.73	0.67	42.23
6,508.00	0.60	266.79	6,269.77	886.43	784.81	1,183.93	0.32	-0.23	-18.47
6,598.00	0.68	310.90	6,359.76	886.76	783.94	1,183.59	0.54	0.09	49.01
6,689.00	0.50	12.10	6,450.76	887.50	783.61	1,183.92	0.68	-0.20	67.25
6,779.00	0.44	33.59	6,540.76	888.17	783.89	1,184.61	0.21	-0.07	23.88
6,870.00	0.14	2.65	6,631.76	888.57	784.09	1,185.04	0.36	-0.33	-34.00
6,960.00	0.33	103.90	6,721.76	888.62	784.34	1,185.25	0.43	0.21	112.50
7,051.00	0.32	189.76	6,812.75	888.31	784.55	1,185.15	0.49	-0.01	94.35
7,141.00	0.78	164.71	6,902.75	887.47	784.67	1,184.61	0.56	0.51	-27.83
7,232.00	1.04	232.55	6,993.74	886.37	784.18	1,183.46	1.14	0.29	74.55
7,323.00	1.27	208.97	7,084.72	884.98	783.04	1,181.66	0.57	0.25	-25.91
7,413.00	1.44	217.44	7,174.70	883.21	781.87	1,179.56	0.29	0.19	9.41
7,504.00	1.16	264.32	7,265.68	882.21	780.25	1,177.74	1.17	-0.31	51.52
7,594.00	0.48	18.30	7,355.67	882.48	779.47	1,177.42	1.58	-0.76	126.64
7,685.00	0.26	54.63	7,446.67	882.96	779.75	1,177.97	0.34	-0.24	39.92
7,775.00	0.60	100.10	7,536.67	883.00	780.38	1,178.42	0.51	0.38	50.52
7,866.00	0.67	104.45	7,627.66	882.78	781.37	1,178.91	0.09	0.08	4.78
7,956.00	1.01	106.57	7,717.65	882.42	782.64	1,179.49	0.38	0.38	2.36
8,047.00	1.00	98.06	7,808.64	882.08	784.19	1,180.27	0.16	-0.01	-9.35
8,138.00	1.05	87.47	7,899.62	882.01	785.81	1,181.29	0.21	0.05	-11.64
Last SDI Survey									
8,750.00	1.05	87.47	8,511.52	882.50	797.02	1,189.11	0.00	0.00	0.00
Projection to TD									

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 1022-14A1S
Project:	Uintah County, UT NAD27	**TVD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Site:	NBU 1022-14B Pad	**MD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Well:	NBU 1022-14A1S	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**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 1022-14A1S PBHL	0.00	0.00	8,491.00	882.81	786.31	597,680.26	2,588,840.35	39° 57' 19.093 N	109° 23' 57.283 W
- actual wellpath misses target center by 10.33ft at 8729.29ft MD (8490.81 TVD, 882.49 N, 796.64 E)									
- Circle (radius 25.00)									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
169.00	169.00	0.38	-0.13	First SDI Surface MWD Survey
1,939.00	1,938.11	54.88	-0.85	Last SDI Surface MWD Survey
1,981.00	1,980.09	55.96	-1.09	First Survey in 7 7/8" Hole
8,138.00	7,899.62	882.01	785.81	Last SDI Survey
8,750.00	8,511.52	882.50	797.02	Projection to TD

Checked By: _____ Approved By: _____ Date: _____

Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT NAD27
NBU 1022-14B Pad
NBU 1022-14A1S
OH

Design: OH

Survey Report - Geographic

16 November, 2009

Anadarko
Petroleum Corporation

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 1022-14A1S
Project:	Uintah County, UT NAD27	**TVD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Site:	NBU 1022-14B Pad	**MD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Well:	NBU 1022-14A1S	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**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 1022-14B Pad, Sec 14 T10S R22E				
Site Position:		**Northing:**	596,779.27 ft	**Latitude:**	39° 57' 10.368 N
From:	Lat/Long	**Easting:**	2,588,074.96 ft	**Longitude:**	109° 24' 7.381 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	in	**Grid Convergence:**	1.34 °

Well	NBU 1022-14A1S, 1228' FNL 1417' FEL					
Well Position	**+N/-S**	0.00 ft	**Northing:**	596,779.25 ft	**Latitude:**	39° 57' 10.368 N
	+E/-W	0.00 ft	**Easting:**	2,588,074.96 ft	**Longitude:**	109° 24' 7.381 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,234.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	2009-08-30	11.24	65.90	52,521
	IGRF2005-10	2009-11-04	11.22	65.90	52,504

Design OH

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	41.69

Survey Program **Date** 2009-11-16

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
169.00	1,939.00	Survey #1 - Surface (OH)	MWD SDI	MWD - Standard ver 1.0.1
1,981.00	8,750.00	Survey #2 - Production (OH)	MWD SDI	MWD - Standard ver 1.0.1

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 1022-14A1S
Project:	Uintah County, UT NAD27	**TVD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Site:	NBU 1022-14B Pad	**MD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Well:	NBU 1022-14A1S	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 2003.16 Multi User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	596,779.25	2,588,074.96	39° 57' 10.368 N	109° 24' 7.381 W
169.00	0.27	341.66	169.00	0.38	-0.13	596,779.63	2,588,074.82	39° 57' 10.372 N	109° 24' 7.383 W
First SDI Surface MWD Survey									
259.00	0.81	354.97	259.00	1.21	-0.25	596,780.46	2,588,074.68	39° 57' 10.380 N	109° 24' 7.384 W
349.00	1.84	4.31	348.97	3.29	-0.19	596,782.54	2,588,074.69	39° 57' 10.400 N	109° 24' 7.384 W
429.00	1.90	3.42	428.93	5.89	-0.02	596,785.14	2,588,074.80	39° 57' 10.426 N	109° 24' 7.381 W
519.00	1.62	353.59	518.88	8.65	-0.07	596,787.89	2,588,074.68	39° 57' 10.453 N	109° 24' 7.382 W
609.00	1.49	359.84	608.85	11.08	-0.22	596,790.33	2,588,074.48	39° 57' 10.477 N	109° 24' 7.384 W
699.00	1.86	348.91	698.81	13.68	-0.50	596,792.92	2,588,074.14	39° 57' 10.503 N	109° 24' 7.387 W
789.00	2.03	0.47	788.76	16.71	-0.77	596,795.94	2,588,073.80	39° 57' 10.533 N	109° 24' 7.391 W
879.00	2.03	359.23	878.71	19.90	-0.78	596,799.13	2,588,073.71	39° 57' 10.564 N	109° 24' 7.391 W
969.00	1.70	355.95	968.66	22.82	-0.89	596,802.05	2,588,073.53	39° 57' 10.593 N	109° 24' 7.392 W
1,059.00	1.62	356.65	1,058.62	25.43	-1.06	596,804.65	2,588,073.30	39° 57' 10.619 N	109° 24' 7.395 W
1,149.00	2.34	355.42	1,148.57	28.53	-1.28	596,807.74	2,588,073.01	39° 57' 10.650 N	109° 24' 7.397 W
1,239.00	2.34	348.86	1,238.49	32.16	-1.79	596,811.36	2,588,072.42	39° 57' 10.686 N	109° 24' 7.404 W
1,329.00	2.07	7.93	1,328.43	35.57	-1.92	596,814.77	2,588,072.21	39° 57' 10.719 N	109° 24' 7.406 W
1,419.00	1.82	12.10	1,418.37	38.58	-1.39	596,817.79	2,588,072.66	39° 57' 10.749 N	109° 24' 7.399 W
1,509.00	1.41	356.07	1,508.34	41.08	-1.17	596,820.30	2,588,072.83	39° 57' 10.774 N	109° 24' 7.396 W
1,599.00	1.55	8.73	1,598.31	43.39	-1.06	596,822.61	2,588,072.88	39° 57' 10.797 N	109° 24' 7.395 W
1,689.00	1.94	14.37	1,688.27	46.07	-0.50	596,825.30	2,588,073.38	39° 57' 10.823 N	109° 24' 7.387 W
1,779.00	2.29	352.51	1,778.21	49.33	-0.35	596,828.56	2,588,073.45	39° 57' 10.855 N	109° 24' 7.386 W
1,869.00	1.93	358.02	1,868.15	52.63	-0.64	596,831.85	2,588,073.08	39° 57' 10.888 N	109° 24' 7.389 W
1,939.00	1.79	351.23	1,938.11	54.88	-0.85	596,834.10	2,588,072.82	39° 57' 10.910 N	109° 24' 7.392 W
Last SDI Surface MWD Survey									
1,981.00	1.24	341.39	1,980.09	55.96	-1.09	596,835.18	2,588,072.55	39° 57' 10.921 N	109° 24' 7.395 W
First Survey in 7 7/8" Hole									
2,071.00	1.45	9.38	2,070.07	58.01	-1.22	596,837.22	2,588,072.38	39° 57' 10.941 N	109° 24' 7.397 W
2,162.00	4.05	41.65	2,160.96	61.55	1.11	596,840.81	2,588,074.62	39° 57' 10.976 N	109° 24' 7.367 W
2,252.00	5.43	45.66	2,250.65	66.90	6.26	596,846.28	2,588,079.65	39° 57' 11.029 N	109° 24' 7.301 W
2,343.00	8.79	37.07	2,340.94	75.46	13.54	596,855.01	2,588,086.72	39° 57' 11.114 N	109° 24' 7.207 W
2,433.00	10.54	39.84	2,429.66	87.27	22.96	596,867.03	2,588,095.86	39° 57' 11.230 N	109° 24' 7.086 W
2,524.00	12.29	43.35	2,518.86	100.70	34.94	596,880.75	2,588,107.53	39° 57' 11.363 N	109° 24' 6.932 W
2,614.00	15.44	43.42	2,606.23	116.37	49.75	596,896.76	2,588,121.97	39° 57' 11.518 N	109° 24' 6.742 W
2,705.00	17.39	41.92	2,693.51	135.29	67.16	596,916.08	2,588,138.93	39° 57' 11.705 N	109° 24' 6.518 W
2,795.00	18.78	43.29	2,779.06	155.85	86.08	596,937.07	2,588,157.36	39° 57' 11.908 N	109° 24' 6.276 W
2,886.00	20.12	43.49	2,864.87	177.86	106.90	596,959.57	2,588,177.66	39° 57' 12.126 N	109° 24' 6.008 W
2,976.00	21.24	44.56	2,949.07	200.71	128.99	596,982.93	2,588,199.21	39° 57' 12.352 N	109° 24' 5.724 W
3,067.00	23.27	44.53	3,033.29	225.27	153.17	597,008.06	2,588,222.80	39° 57' 12.594 N	109° 24' 5.414 W
3,158.00	24.07	46.10	3,116.63	250.95	179.15	597,034.34	2,588,248.17	39° 57' 12.848 N	109° 24' 5.080 W
3,248.00	23.99	42.04	3,198.84	277.27	204.62	597,061.25	2,588,273.02	39° 57' 13.108 N	109° 24' 4.753 W
3,339.00	24.93	45.15	3,281.67	304.54	230.61	597,089.12	2,588,298.36	39° 57' 13.378 N	109° 24' 4.420 W
3,429.00	24.88	42.20	3,363.31	331.94	256.78	597,117.12	2,588,323.88	39° 57' 13.649 N	109° 24' 4.083 W
3,520.00	25.93	42.52	3,445.50	360.79	283.08	597,146.58	2,588,349.50	39° 57' 13.934 N	109° 24' 3.746 W
3,610.00	26.11	39.29	3,526.39	390.62	308.92	597,177.01	2,588,374.64	39° 57' 14.228 N	109° 24' 3.414 W
3,701.00	26.85	43.53	3,607.85	421.02	335.76	597,208.03	2,588,400.75	39° 57' 14.529 N	109° 24' 3.069 W
3,791.00	28.30	44.16	3,687.62	451.06	364.62	597,238.74	2,588,428.90	39° 57' 14.826 N	109° 24' 2.699 W
3,882.00	29.55	45.79	3,767.27	482.19	395.74	597,270.59	2,588,459.28	39° 57' 15.133 N	109° 24' 2.299 W
3,973.00	30.55	42.91	3,846.04	514.77	427.57	597,303.91	2,588,490.34	39° 57' 15.456 N	109° 24' 1.890 W
4,063.00	29.44	44.02	3,923.99	547.43	458.52	597,337.29	2,588,520.51	39° 57' 15.778 N	109° 24' 1.493 W
4,154.00	29.04	38.73	4,003.40	580.75	487.88	597,371.29	2,588,549.08	39° 57' 16.108 N	109° 24' 1.116 W
4,244.00	29.84	41.71	4,081.79	614.51	516.45	597,405.70	2,588,576.85	39° 57' 16.441 N	109° 24' 0.749 W
4,335.00	31.34	47.02	4,160.13	647.55	548.83	597,439.50	2,588,608.45	39° 57' 16.768 N	109° 24' 0.333 W
4,425.00	29.17	45.26	4,237.87	678.95	581.54	597,471.65	2,588,640.41	39° 57' 17.078 N	109° 23' 59.913 W
4,516.00	28.36	45.71	4,317.64	709.65	612.76	597,503.08	2,588,670.91	39° 57' 17.382 N	109° 23' 59.512 W
4,606.00	25.21	48.64	4,397.98	737.25	642.46	597,531.37	2,588,699.95	39° 57' 17.654 N	109° 23' 59.130 W

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 1022-14A1S
Project:	Uintah County, UT NAD27	**TVD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Site:	NBU 1022-14B Pad	**MD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Well:	NBU 1022-14A1S	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 2003.16 Multi User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
4,697.00	22.54	44.67	4,481.19	762.47	669.27	597,557.21	2,588,726.16	39° 57' 17.904 N	109° 23' 58.786 W
4,787.00	20.44	46.66	4,564.93	785.53	692.83	597,580.81	2,588,749.18	39° 57' 18.131 N	109° 23' 58.484 W
4,878.00	18.25	47.24	4,650.79	806.11	714.85	597,601.90	2,588,770.71	39° 57' 18.335 N	109° 23' 58.201 W
4,968.00	15.75	46.83	4,736.85	824.04	734.11	597,620.28	2,588,789.54	39° 57' 18.512 N	109° 23' 57.953 W
5,059.00	12.95	41.73	4,825.00	840.10	749.91	597,636.71	2,588,804.96	39° 57' 18.671 N	109° 23' 57.751 W
5,149.00	10.37	46.46	4,913.14	853.21	762.50	597,650.11	2,588,817.23	39° 57' 18.800 N	109° 23' 57.589 W
5,240.00	8.39	40.11	5,002.92	863.93	772.71	597,661.06	2,588,827.19	39° 57' 18.906 N	109° 23' 57.458 W
5,330.00	5.52	40.99	5,092.25	872.22	779.78	597,669.52	2,588,834.07	39° 57' 18.988 N	109° 23' 57.367 W
5,421.00	3.47	46.28	5,182.97	877.43	784.64	597,674.84	2,588,838.81	39° 57' 19.040 N	109° 23' 57.304 W
5,511.00	1.68	53.19	5,272.87	880.10	787.67	597,677.58	2,588,841.77	39° 57' 19.066 N	109° 23' 57.266 W
5,602.00	1.96	36.31	5,363.83	882.15	789.66	597,679.68	2,588,843.71	39° 57' 19.086 N	109° 23' 57.240 W
5,693.00	0.63	337.36	5,454.80	883.87	790.39	597,681.41	2,588,844.40	39° 57' 19.103 N	109° 23' 57.231 W
5,783.00	0.52	340.85	5,544.80	884.71	790.06	597,682.25	2,588,844.05	39° 57' 19.112 N	109° 23' 57.235 W
5,874.00	0.35	1.46	5,635.80	885.38	789.94	597,682.91	2,588,843.91	39° 57' 19.118 N	109° 23' 57.236 W
5,964.00	0.81	282.76	5,725.79	885.79	789.32	597,683.31	2,588,843.29	39° 57' 19.122 N	109° 23' 57.244 W
6,055.00	0.52	297.65	5,816.79	886.13	788.33	597,683.62	2,588,842.29	39° 57' 19.126 N	109° 23' 57.257 W
6,145.00	0.44	285.64	5,906.78	886.41	787.63	597,683.89	2,588,841.59	39° 57' 19.129 N	109° 23' 57.266 W
6,236.00	0.32	245.69	5,997.78	886.40	787.07	597,683.87	2,588,841.02	39° 57' 19.128 N	109° 23' 57.273 W
6,327.00	0.21	245.59	6,088.78	886.23	786.68	597,683.68	2,588,840.64	39° 57' 19.127 N	109° 23' 57.278 W
6,417.00	0.81	283.60	6,178.78	886.31	785.91	597,683.75	2,588,839.87	39° 57' 19.128 N	109° 23' 57.288 W
6,508.00	0.60	266.79	6,269.77	886.43	784.81	597,683.85	2,588,838.76	39° 57' 19.129 N	109° 23' 57.302 W
6,598.00	0.68	310.90	6,359.76	886.76	783.94	597,684.15	2,588,837.88	39° 57' 19.132 N	109° 23' 57.313 W
6,689.00	0.50	12.10	6,450.76	887.50	783.61	597,684.88	2,588,837.54	39° 57' 19.139 N	109° 23' 57.318 W
6,779.00	0.44	33.59	6,540.76	888.17	783.89	597,685.56	2,588,837.80	39° 57' 19.146 N	109° 23' 57.314 W
6,870.00	0.14	2.65	6,631.76	888.57	784.09	597,685.97	2,588,837.99	39° 57' 19.150 N	109° 23' 57.312 W
6,960.00	0.33	103.90	6,721.76	888.62	784.34	597,686.02	2,588,838.24	39° 57' 19.150 N	109° 23' 57.308 W
7,051.00	0.32	189.76	6,812.75	888.31	784.55	597,685.71	2,588,838.46	39° 57' 19.147 N	109° 23' 57.306 W
7,141.00	0.78	164.71	6,902.75	887.47	784.67	597,684.88	2,588,838.60	39° 57' 19.139 N	109° 23' 57.304 W
7,232.00	1.04	232.55	6,993.74	886.37	784.18	597,683.77	2,588,838.13	39° 57' 19.128 N	109° 23' 57.310 W
7,323.00	1.27	208.97	7,084.72	884.98	783.04	597,682.36	2,588,837.02	39° 57' 19.114 N	109° 23' 57.325 W
7,413.00	1.44	217.44	7,174.70	883.21	781.87	597,680.56	2,588,835.89	39° 57' 19.097 N	109° 23' 57.340 W
7,504.00	1.16	264.32	7,265.68	882.21	780.25	597,679.52	2,588,834.31	39° 57' 19.087 N	109° 23' 57.361 W
7,594.00	0.48	18.30	7,355.67	882.48	779.47	597,679.77	2,588,833.51	39° 57' 19.090 N	109° 23' 57.371 W
7,685.00	0.26	54.63	7,446.67	882.96	779.75	597,680.26	2,588,833.79	39° 57' 19.094 N	109° 23' 57.367 W
7,775.00	0.60	100.10	7,536.67	883.00	780.38	597,680.31	2,588,834.42	39° 57' 19.095 N	109° 23' 57.359 W
7,866.00	0.67	104.45	7,627.66	882.78	781.37	597,680.12	2,588,835.41	39° 57' 19.093 N	109° 23' 57.347 W
7,956.00	1.01	106.57	7,717.65	882.42	782.64	597,679.79	2,588,836.68	39° 57' 19.089 N	109° 23' 57.330 W
8,047.00	1.00	98.06	7,808.64	882.08	784.19	597,679.49	2,588,838.25	39° 57' 19.086 N	109° 23' 57.310 W
8,138.00	1.05	87.47	7,899.62	882.01	785.81	597,679.45	2,588,839.87	39° 57' 19.085 N	109° 23' 57.289 W
Last SDI Survey									
8,750.00	1.05	87.47	8,511.52	882.50	797.02	597,680.21	2,588,851.06	39° 57' 19.090 N	109° 23' 57.146 W
Projection to TD									

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 1022-14A1S
Project:	Uintah County, UT NAD27	**TVD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Site:	NBU 1022-14B Pad	**MD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Well:	NBU 1022-14A1S	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**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 1022-14A1S PBHL	0.00	0.00	8,491.00	882.81	786.31	597,680.26	2,588,840.35	39° 57' 19.093 N	109° 23' 57.283 W
- actual wellpath misses target center by 10.33ft at 8729.29ft MD (8490.81 TVD, 882.49 N, 796.64 E)									
- Circle (radius 25.00)									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
169.00	169.00	0.38	-0.13	First SDI Surface MWD Survey
1,939.00	1,938.11	54.88	-0.85	Last SDI Surface MWD Survey
1,981.00	1,980.09	55.96	-1.09	First Survey in 7 7/8" Hole
8,138.00	7,899.62	882.01	785.81	Last SDI Survey
8,750.00	8,511.52	882.50	797.02	Projection to TD

Checked By: _____ Approved By: _____ Date: _____

API Well No: 43047502280000

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

FORM 9

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

SUNDRY NOTICES AND REPORTS ON WELLS

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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 1022-14A1S

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

9. API NUMBER: 43047502280000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 **PHONE NUMBER:** 720 929-6515 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1228 FNL 1417 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 14 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		
✓ NOTICE OF INTENT Approximate date work will start: 3/8/2011	☐ ACIDIZE	☐ ALTER CASING	✓ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

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

Approved by the Utah Division of Oil, Gas and Mining

Date: 03/09/2011

By: Dark K Quist

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Gina Becker	720 929-6086	Regulatory Analyst II
SIGNATURE N/A		**DATE** 3/8/2011

WORKORDER #: 88120966 3/2/11

Name: NBU 1022-14A1S – 1022-14B PAD
Surface Location: NWNE SEC.14, T10S, R22E
Uintah County, UT

API: 4304750228 LEASE#: ST UO 01197 A

ELEVATIONS: 5234' GL 5247' KB

TOTAL DEPTH: 8750' PBTD: 8690'

SURFACE CASING: 9 5/8", 36# J-55 @ 1955'

PRODUCTION CASING: 4 1/2", 11.6#, I-80 @ 8733'
TOC @ ~125' per CBL

PERFORATIONS: Mesaverde 6858' – 8405'

Tubular/Borehole	Drift inches	Collapse psi	Burst psi	Capacities		
				Gal./ft.	Cuft/ft.	Bbl./ft.
2.375" 4.7# J-55 tbg.	1.901	8100	7700	0.1624	0.02173	0.00387
4.5" 11.6# I-80	3.875	6350	7780	0.6528	0.0872	0.01554
9.625" 36# J-55	8.921	2020	3520	3.247	0.434	0.0773
Annular Capacities						
2.375" tbg. X 4 ½" 11.6# csg				0.4227	0.0565	0.01006

GEOLOGICAL MARKERS, TOPS:

913' Green River
1771' Mahogany
4249' Wasatch
6603' Mesaverde

NBU 1022-14A1S – WELLHEAD REPLACEMENT PROCEDURE

PREP-WORK PRIOR TO MIRU:

1. Dig out down to the 2" surface casing valve or to the valve on the riser off the surface casing.

2. Install a tee with 2 valves, with a pressure gauge and sensor on one valve.

3. Open casing valve and record pressures.

4. Install nipple and steel hose on the other valve, the relief valve,. Do not use hammer unions. No impact equipment or tools to be used for any of this installation. Extend hose and hard piping to a downwind location at least 100' from the wellhead. Consider installing a manifold so that vent area could be in two locations approx. 90 degrees apart from the wellhead.

5. Open the relief valve and blow well down to the atmosphere.

6. Make a determination of amount of gas flow, either by installation of a choke nipple, bucket test or other.

7. Shut well in. Observe for rate of build-up by utilizing sensor data. Do not build-up for more than 24 hours. Vent gas through the vent line and leave open to the atmosphere.

WORKOVER PROCEDURE:

1. MIRU workover rig.

2. Kill well with 10# brine / KCL (dictated by well pressure).

3. Remove tree, install double BOP with blind and 2 3/8" pipe rams, with accumulator closing unit and manual back-ups. Function test BOP system.

4. POOH w/ tubing laying down extra tubing.

5. Rig up wireline service. RIH and set CBP @ ~6808'. Dump bail 4 sx cement on top of plug. POOH and RD wireline service. TIH w/ tubing and seating nipple. Land tubing ±60' above cement. RDMO.

6. Monitor well pressures. If surface casing is dead. MIRU. ND WH and NU BOP. POOH w/ tubing.

7. Depending on conditions at wellsite, continue with either CUT/PATCH Procedure or BACK-OFF Procedure.

CUT/PATCH PROCEDURE:

1. PU internal casing cutters and RIH. Cut casing at +/- 30' from surface.

2. POOH, LD cutters and casing.

3. PU 7 3/8" overshot with 4 ½" right hand standard wicker grapple, 1 - 4 ¾" drill collar with 3 ½" IF threads, pup joint, manual bumper sub, and crossovers. If casing cut is deeper than ±30' utilize >7000 ft-lb torque pipe as needed. Pull a minimum of 10,000# to keep grapple engaged if cement top is high (<~900'). If cement top is low (>~900'), more weight will be required to put casing in neutral. Torque casing string to ±7000 ft-lbs, count number of turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place ±7000 ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out, release overshot, POOH, and lay down.

4. TIH w/ skirted mill and dress off the fish top for approximately ½ hour. TOOH.

5. PU & RIH w/ 4 ½" 10k external casing patch on 4 ½" P-110 casing. Ensure that sliding sleeve assembly shifts ±3' and casing tags no-go portion of patch. NOTE: Shear pins will shear at 3500 to 4500 lbs.

6. Latch fish, PU to 100,000# tension. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.

7. Install slips. Land casing w/ 80,000# tension.

8. Cut-off and dress 4 ½" casing stub.

9. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~6758'. Clean out to PBTD (8690').

10. POOH, land tbg and pump off POBS.

11. NUWH, RDMO. Turn well over to production ops.

BACK-OFF PROCEDURE:

1. PU internal casing cutters and RIH. Cut casing at +/- 6' from surface.

2. POOH, LD cutters and casing.

3. PU 4 ½" overshot. RIH, latch fish. Pick string weight to neutral.

4. MIRU casing crew and wireline services. RIH and shoot string shot at casing collar @ ± 46'.

5. Back-off casing, POOH.

6. PU new casing joint with buttress threads and entry guide and RIH. Tag casing top. Thread into casing and torque up to ±7000 ft-lbs, count number of additional turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place ±7000 ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out go to step 7.

7. PU 100,000# tension string weight. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.

8. Install slips. Land casing w/ 80,000# tension.

9. Cut-off and dress 4 ½" casing stub.

10. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~6758'. Clean out to PBTD (8690').

11. POOH, land tbg and pump off POBS.

12. NUWH, RDMO. Turn well over to production ops.

Logan High Pressure Casing Patches
Assembly Procedure

All parts should be thoroughly greased before being assembled.

1. Install all four Logan Type “L” Packers in the spaces provided in the Casing Patch Bowl. Refer to diagram provided for proper installation.

2. Install Packer Protector from the Basket Grapple end of the Bowl. The beveled end of the Packer Protector goes in first. Carefully push the Packer Protector through the four Type “L” Packers.

3. Align Shear Pin Holes in Packer Protector so that the holes have just passed into the counter bore at the Top Sub end, refer to diagram. The Packer Protector is provided with four Shear Pin Holes. Use only two holes, 180 degrees apart and install the pins.

4. Screw the Basket Grapple in from the lower end of the Bowl, using left-hand rotation. The Tang Slot in the Basket Grapple must land in line with the slot in the Bowl.

5. Insert the Basket Grapple Control into the end of the Bowl. Align Tang on the Basket Grapple Control with the Tang Slot of the Bowl and Basket Grapple. This secures the Bowl and the Basket Grapple together.

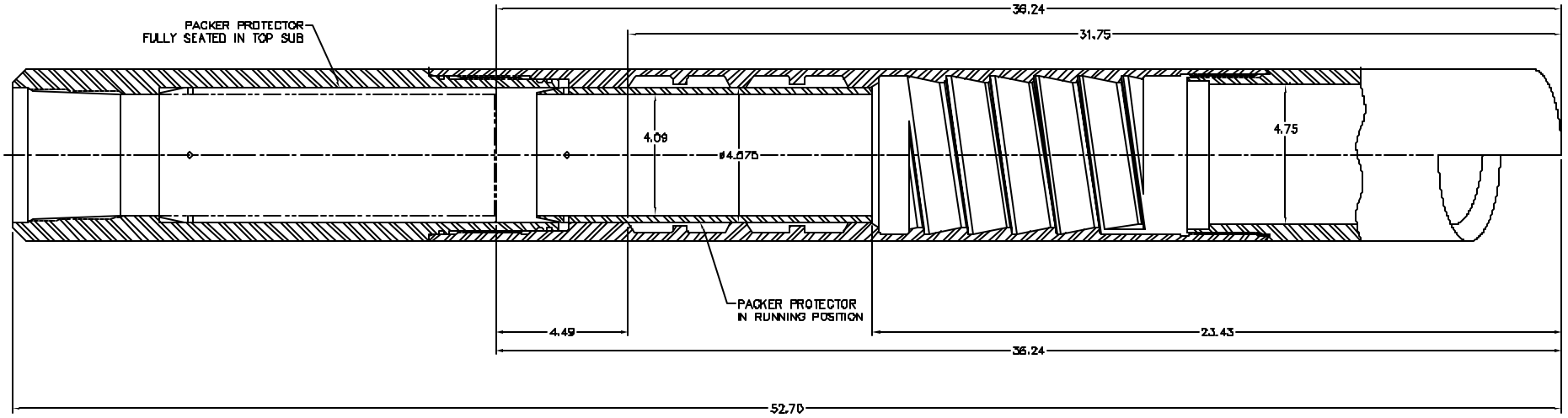
6. Install the Cutlipped Guide into the lower end of the Bowl.

7. Install O-Rings on the two five-foot long Extensions. Screw the first Extension into the top end of the Bowl. Screw the second Extension into the top end of the first Extension.

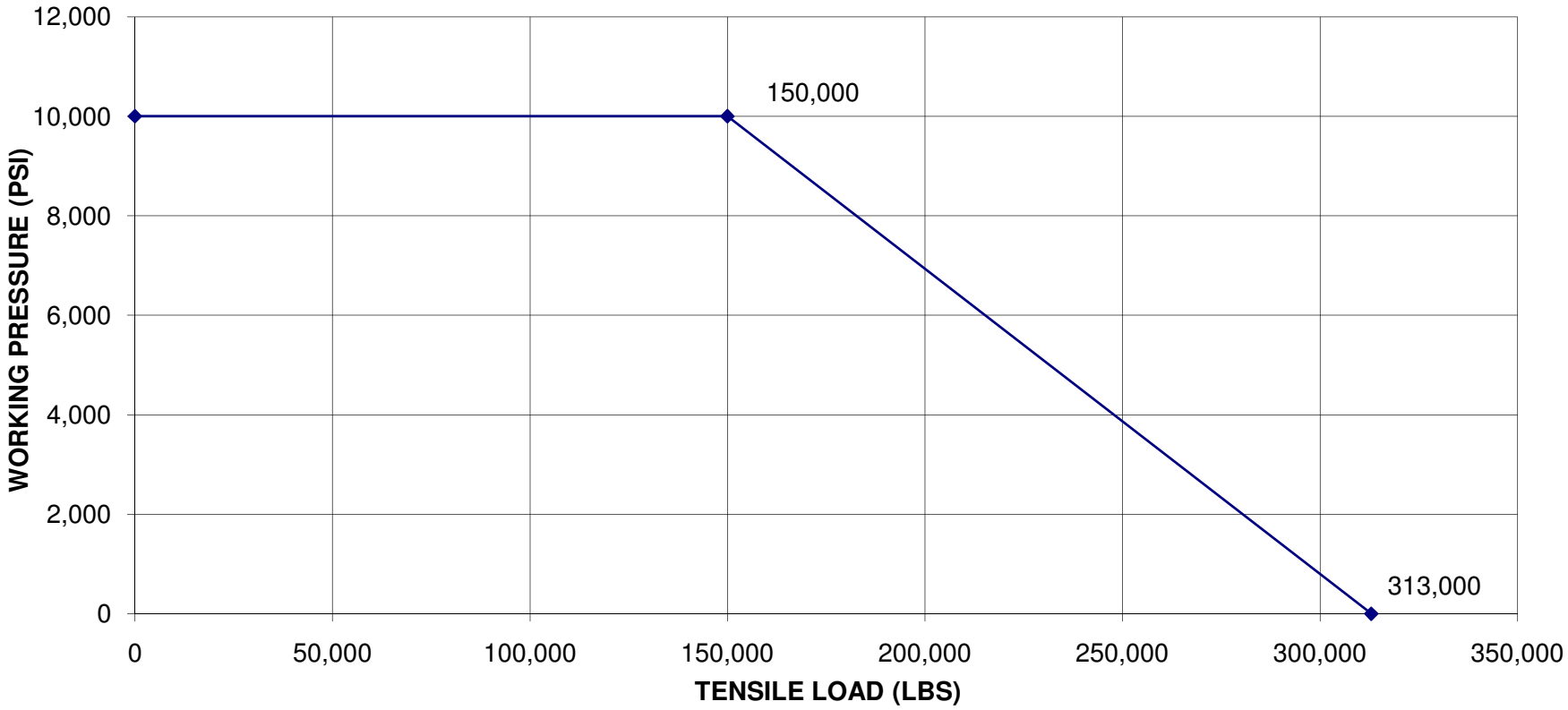
8. Install O-Ring on Top Sub. Screw Top Sub into top end of second Extension.

Follow recommended Make-Up Torque as provided in chart.

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



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



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

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

DATA BY SLS 11/16/2009

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 UO 01197A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-14A1S

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

9. API NUMBER: 43047502280000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 **PHONE NUMBER:** 720 929-6515 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1228 FNL 1417 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 14 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		
✓ NOTICE OF INTENT Approximate date work will start: 3/24/2011	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SPUD REPORT Date of Spud:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ DRILLING REPORT Report Date:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: GAS LIFT

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

The operator requests authorization to implement artificial gas lift in the subject well. Please see attached gas lift measurement formula, downhole configuration proposal, and topo map of the project area.

Approved by the Utah Division of Oil, Gas and Mining

Date: 04/04/2011

By: Dark K Quist

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 3/18/2011

RECEIVED Mar. 18, 2011

Section 14-10S-22E Gas Lift Proposal

Change of Measurement

The purpose of this change of measurement is to account for additional gas circulated in the wellbore during "gas lift" operations.

"Lift Gas" volumes and BTU content will be measured through a calibrated orifice meter. Reported "Formation Production" will be the BTU difference between the "Sales Meter" and "Lift Gas Meter." The calculation is shown below:

	Sales Meter:	BTU Content	x	Volume
-	Lift Gas Meter:	BTU Content	x	Volume
	Formation Production	BTU Content	x	Volume

Gas meters will be tested twice annually for BTU content.

Downhole Change of Configuration

The purpose of the new configuration is to operate this well with the "gas lift" mode of artificial lift. The installation will include a packer set above the perforation interval and gas lift valves & mandrels spaced throughout the tubing string. "Lift Gas" will be circulated from the casing-tubing annulus, pass through gas lift valves, and be produced with formation production. "Gas lift" is a proven artificial lift method in the Rockies region for high liquid rate wells such as this.

Purpose of Pipeline

The gas lift pipeline will tap into the Archy Bench Compressor's high-pressure discharge pipeline and extend back to the casing valve of each wellhead below. The purpose of this pipeline is to supply the well with "Lift Gas" from the Archy Bench Compressor Station, therefore enabling the "gas lift" mode of artificial lift.

Wells:

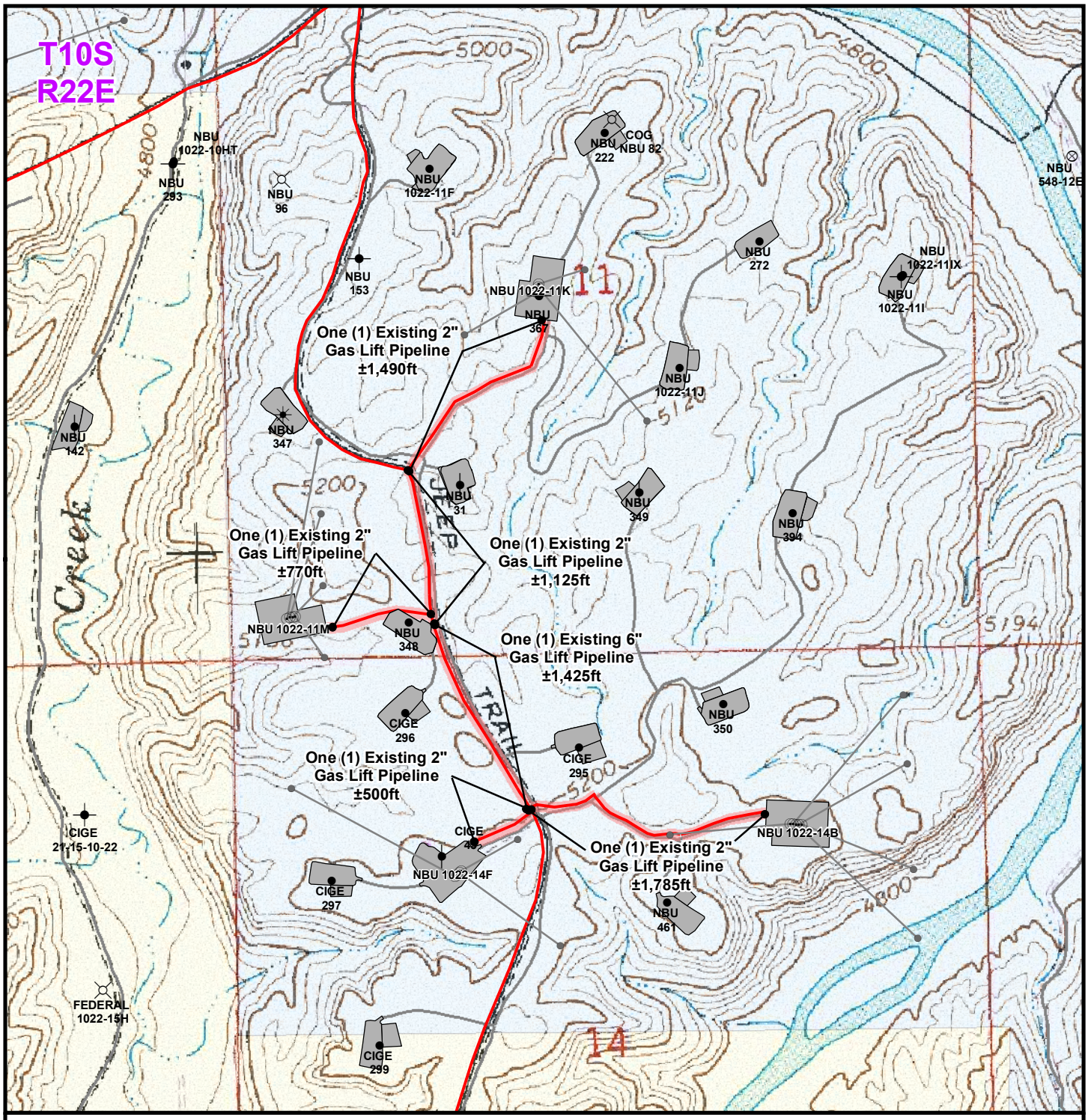
NBU 1022-14B pad:

- NBU 1022-14A1S
- NBU 1022-14A4S
- NBU 1022-14B3S
- NBU 1022-14H1S
- NBU 1022-14H4S

NBU 1022-14F pad:

- NBU 1022-14C4S
- NBU 1022-14D3S
- NBU 1022-14F2S
- NBU 1022-14F4S

RECEIVED Mar. 18, 2011



Legend

- Well - Proposed
- Well - Existing
- Well Pad - Existing
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Gas Lift Pipeline - Sundry
- Road - Proposed
- Road - Existing
- Overhead Powerline - As-Built
- Bureau of Land Management
- Indian Reservation
- State
- Private
- Active
- Approved permit (APD); not yet spudded
- Dry hole marker, buried
- Location Abandoned
- New Permit (Not yet approved or drilled)
- Plugged and Abandoned
- Producing
- Returned APD (Unapproved)
- Shut-In
- Spudded (Drilling commenced: Not yet completed)
- Temporarily-Abandoned

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

GAS LIFT PIPELINE SUNDRY
SECTION 11, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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

N

Scale: 1" = 1,000ft	NAD83 USP Central	Exhibit B
Drawn: CPS	Date: 14 Dec 2010	
Revised:	Date:	

RECEIVED Mar. 18, 2011

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

FORM 9

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

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Gas Well

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

9. API NUMBER:
43047502280000

3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
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9. FIELD and POOL or WILDCAT:
NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
1228 FNL 1417 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: NWNE Section: 14 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		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	✓ CASING REPAIR
✓ SUBSEQUENT REPORT Date of Work Completion: 6/7/2011	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: Wellhead Repair

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

THE OPERATOR HAS CONCLUDED WELLHEAD/CASING REPAIRS ON THE SUBJECT WELL LOCATION. PLEASE SEE THE ATTACHED CHRONOLOGICAL HISTORY FOR DETAILS OF THE OPERATIONS.

Accepted by the Utah Division of Oil, Gas and Mining

FOR RECORD ONLY

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Gina Becker	720 929-6086	Regulatory Analyst II
SIGNATURE		**DATE**
N/A		6/7/2011

RECEIVED Jun. 07, 2011

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-14A1S BLUE	Spud Conductor: 8/18/2009	Spud Date: 8/30/2009
Project: UTAH-UINTAH	Site: NBU 1022-14B PAD	Rig Name No: SWABBCO 6/6
Event: WELL WORK EXPENSE	Start Date: 5/23/2011	End Date: 5/25/2011
Active Datum: RKB @5,249.00ft (above Mean Sea Leve	UWI: NW/NE/0/10/S/22/E/14/0/0/26/PM/N/1,228.00/E/0/1,417.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
5/23/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA= WELL CONTROL
	7:15 - 17:00	9.75	WO/REP	30		P		MOVE RIG TO 14A1S RU RIG 150 FWP CONTROL WELL W/ 20 BBLS TMAC ND WELLHEAD NU BOPS RU FLOOR & TUBING EQUIP UNLAND TUBING LD HANGER POOH W/ TUBING TUBING PLUGGED WET STRING POOH 251 JNTS POBS PLUGGED W/ SCALE ON BTM RU W/L RIH W/ GAUGE RNG TO 6850' PU RIH W/ 10K CBP RIH SET @ 6800' DUMP BAIL 4 SKS CEM ON CBP RD W/L SIW SDFN
5/24/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA= TESTING
	7:15 - 15:00	7.75	WO/REP	30		P		0 PSI ON WELL ND BOPS ND WELLHEAD PU INT CUTTER CUT CSG 8' POOH W/ CUTTER, HNGR & PIECE PU OVERSHOT RIH PULL ON CSG APPLY LH TORQUE RU W/L RIH TO 1ST COLLAR SET OFF STRING SHOT BACK OFF CSG POOH RD W/L PU SKIRTED PUP & JNT MU RIH THREAD OVER CSG TORQUE TO 7000# RU TESTERS & TEST TO 3500# 30 MIN LOST 45# RD TESTER PULL 90000# SET SLIPS NU W/H & BOPS RU FLOOR & TUBING EQUIP PU MILL RIH TAG CEM RU PWR SWVL PREP TO D/O IN AM SDFN
5/25/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA= FOAMING
	7:15 - 12:50	5.58	WO/REP	30		P		0 PSI ON WELL EST CIRC W/ FOAMER C/O & DRILL THRU CEM & CBP @ 6800' CIRC CLEAN CONTINUE TO RIH TAG @ 7816' EST CIRC DRILL THRU 25' FELL FREE CONTINUE TO RIH TAG @ 8099' EST CIRC C/O & DRILL THRU 70' FELL FREE CONTINUE TO RIH TAG @ 8530' EST CIRC C/O & DRILL 20' TO 8540' TAG SOLID SUSPECT BIT SUB CIRC CLEAN LD 19 JNTS RD PWR SWVL
	12:50 - 14:20	1.50	WO/REP	30		P		POOH STOP @ 30 STANDS IN HOLE TO PMP 20 BBLS TMAC LD MILL
	14:20 - 15:00	0.67	WO/REP	30		P		LD 11 JNTS THAT WOULDNT BROACH PMP 20 BBLS TMAC
	15:00 - 16:20	1.33	WO/REP	30		P		PU NOTCHED 1.87XN RIH W/ 251 JNTS LAND TUB ON HNGR
	16:20 - 18:00	1.67	WO/REP	30		P		RD FLOOR & TUB EQUIP ND BOPS NU WELLHEAD PREP TO RD IN AM

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: **KERR-McGEE OIL & GAS ONSHORE, L.P.**

Well Name: **NBU 1022-14A1S**

Api No: **43-047-50228** Lease Type: **STATE**

Section **14** Township **10S** Range **22E** County **UINTAH**

Drilling Contractor **PETE MARTIN DRLG** RIG # **BUCKET**

SPUDDED:

Date **08/18/2009**

Time **12:00 NOON**

How **DRY**

Drilling will Commence:

Reported by **KENNY MORRIS**

Telephone # **(435) 828-1691**

Date **08/18/2009** **Signed** **CHD**

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
4304739524	NBU 1022-14B3S		NWNE	14	10S	22E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	2900	8/18/2009			8/25/09	

Comments: MIRU PETE MARTIN BUCKET RIG. WSMVD
SPUD WELL LOCATION ON 08/18/2009 AT 1400 HRS. BHL= SWNE

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750228	NBU 1022-14A1S		NENE	14	10S	22E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	2900	8/18/2009			8/25/09	

Comments: MIRU PETE MARTIN BUCKET RIG. WSMVD
SPUD WELL LOCATION ON 08/18/2009 AT 1200 HRS. BHL= NENE

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750224	NBU 1022-14H4S		NWNE	14	10S	22E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	2900	8/18/2009			8/25/09	

Comments: MIRU PETE MARTIN BUCKET RIG. WSMVD
SPUD WELL LOCATION ON 08/18/2009 AT 1000 HRS BHL= SENE

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

SHEILA WOPSOCK
Name (Please Print)
Signature
REGULATORY ANALYST
Title
8/19/2009
Date

RECEIVED
AUG 19 2009
DIV. OF OIL, GAS & MINING

(5/2000)