

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

FORM 3

AMENDED REPORT   
(highlight changes)

<b>APPLICATION FOR PERMIT TO DRILL</b>			5. MINERAL LEASE NO: ML-22793	6. SURFACE: State
1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>			7. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
B. TYPE OF WELL: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>			8. UNIT or CA AGREEMENT NAME: UNIT #891008900A	
2. NAME OF OPERATOR: KERR MCGEE OIL & GAS ONSHORE L.P.			9. WELL NAME and NUMBER: NBU 1021-30L	
3. ADDRESS OF OPERATOR: 1368 S 1200 E CITY VERNAL STATE UT ZIP 84078		PHONE NUMBER: (435) 781-7024	10. FIELD AND POOL, OR WILDCAT: NATURAL BUTTES	
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 1602'FSL, 980'FWL LOT 3 AT PROPOSED PRODUCING ZONE:			11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWSW 30 10S 21E	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 20.6 MILES SOUTH OF OURAY, UTAH			12. COUNTY: UINTAH	13. STATE: UTAH
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) 980'	16. NUMBER OF ACRES IN LEASE: 643.84	17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40.00		
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) REFER TO TOPO C	19. PROPOSED DEPTH: 9,460	20. BOND DESCRIPTION: RLB0005237		
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 5306'GL	22. APPROXIMATE DATE WORK WILL START:	23. ESTIMATED DURATION:		

24. **PROPOSED CASING AND CEMENTING PROGRAM**

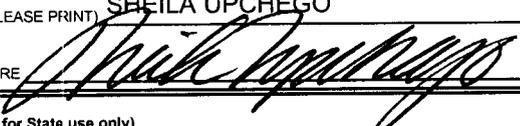
SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT		
12 1/4"	9 5/8	H-40	32.3#	1,900	265 SX CLASS G	1.18 YIELD	15.6 PPG
7 7/8"	4 1/2	I-80	11.6#	9,460	2000 SX 50/50 POZ	1.31 YIELD	14.3 PPG

25. **ATTACHMENTS**

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

<input checked="" type="checkbox"/> WELL PLAN OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input checked="" type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER	<input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

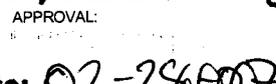
NAME (PLEASE PRINT) SHEILA UPCHEGO TITLE SENIOR LAND ADMIN SPECIALIST

SIGNATURE  DATE 1/23/2007

(This space for State use only)

API NUMBER ASSIGNED: 43-047-39023

Approved by the  
Utah Division of  
Oil, Gas and Mining

APPROVAL: 

**RECEIVED**  
**FEB 02 2007**  
DIV. OF OIL, GAS & MINING

Date: 02-28-07  
(See Instructions on Reverse Side)  
By: 

# T10S, R21E, S.L.B.&M.

## Kerr-McGee Oil & Gas Onshore LP

Well location, NBU #1021-30L, located as shown in Lot 3 of Section 30, T10S, R21E, S.L.B.&M., Uintah County, Utah.

### BASIS OF ELEVATION

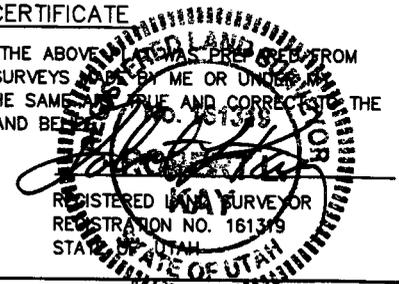
TWO WATER TRIANGULATION STATION LOCATED IN THE NW 1/4 OF SECTION 1, T10S, R21E, S.L.B.&M. TAKEN FROM THE BIG PACK MTN NE, QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING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



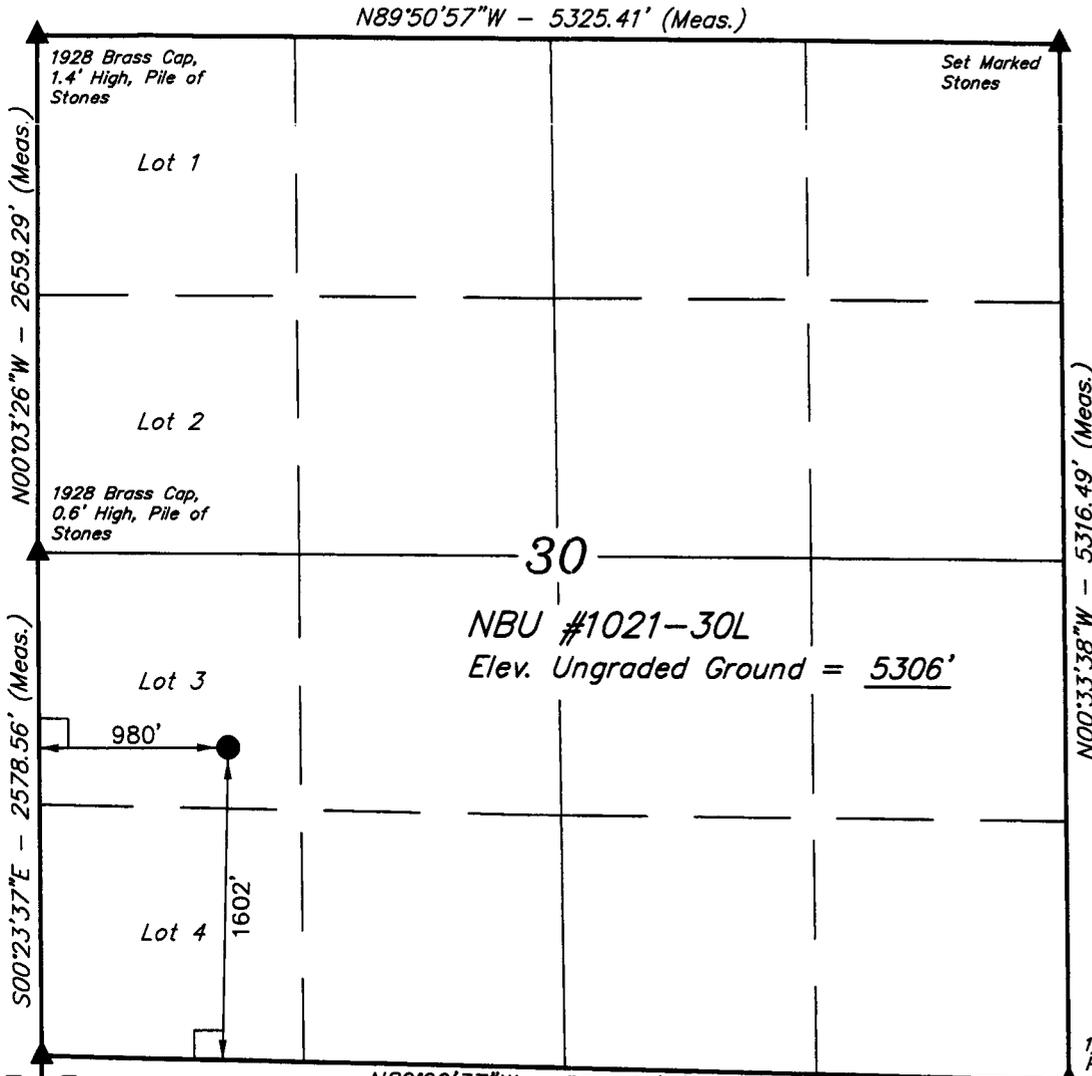
SCALE

### CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE DESCRIBED PROPERTY IS THE RESULT OF 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. 161379  
STATE OF UTAH



30  
NBU #1021-30L  
Elev. Ungraded Ground = 5306'

1/2" Rebar 0.6' High,  
Pile of Stones, Set  
Stone

R R Brass Cap Flush W/  
20 21 Pile of Stones  
E E

### BASIS OF BEARINGS

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

(NAD 83)  
LATITUDE = 39°54'57.00" (39.915833)  
LONGITUDE = 109°36'02.25" (109.600625)  
(NAD 27)  
LATITUDE = 39°54'57.12" (39.915867)  
LONGITUDE = 109°35'59.77" (109.599936)

### LEGEND:

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

## UNTAH ENGINEERING & LAND SURVEYING

85 SOUTH 200 EAST - VERNAL, UTAH 84078

(435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 11-02-06	DATE DRAWN: 11-15-06
PARTY D.K. T.H. C.H.	REFERENCES G.L.O. PLAT	
WEATHER COOL	FILE Kerr-McGee Oil & Gas Onshore LP	

**NBU 1021-30L  
NW/SW SEC. 30, T10S, R21E  
UINTAH COUNTY, UTAH  
ML-22793**

**ONSHORE ORDER NO. 1**

***DRILLING PROGRAM***

**1. Estimated Tops of Important Geologic Markers:**

<u>Formation</u>	<u>Depth</u>
Uinta	0- Surface
Green River	1109'
Top of Birds Nest Water	1340'
Mahogany	1873'
Wasatch	4309'
Mesaverde	7277'
MVU2	8277'
MVL1	8799'
TD	9460'

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

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
Water	Green River	1109'
	Top of Birds Nest Water	1340'
	Mahogany	1873'
Gas	Wasatch	4309'
Gas	Mesaverde	7277'
Gas	MVU2	8277'
Gas	MVL1	8799'
Water	N/A	
Other Minerals	N/A	

**3. Pressure Control Equipment (Schematic Attached)**

*Please refer to the attached Drilling Program.*

**4. Proposed Casing & Cementing Program:**

*Please refer to the attached Drilling Program.*

**5. Drilling Fluids Program:**

*Please refer to the attached Drilling Program.*

**6. Evaluation Program:**

*Please refer to the attached Drilling Program.*

7. **Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 9460' TD, approximately equals 5865 psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 3784 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. **Variations:**

*Please refer to the attached Drilling Program.*

10. **Other Information:**

*Please refer to the attached Drilling Program.*



# KERR-McGEE OIL & GAS ONSHORE LP

## DRILLING PROGRAM

COMPANY NAME KERR-McGEE OIL & GAS ONSHORE LP DATE January 23, 2007  
 WELL NAME NBU 1021-30L TD 9,460' MD/TVD  
 FIELD Natural Buttes COUNTY Uintah STATE Utah ELEVATION 5,306' GL KB 5,321'  
 SURFACE LOCATION NW/SW LOT 3 SEC. 30, T10S, R21E 1602'FSL, 980'FWL BHL Straight Hole  
 Latitude: 39.915833 Longitude: 109.600625  
 OBJECTIVE ZONE(S) Wasatch/Mesaverde  
 ADDITIONAL INFO Regulatory Agencies: UDOGM (SURF & MINERALS), BLM, Tri-County Health Dept.

GEOLOGICAL FORMATION		MECHANICAL			
LOGS	TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
			12-1/4"	9-5/8", 32.3#, H-40, STC	Air mist
Catch water sample, if possible, from 0 to 4,309' Green River @ 1,109' Top of Birds Nest Water @ 1340' Mahogany @ 1,873' Preset ff GL @ 1,900' MD					
Note: 12.25" surface hole will usually be drilled ±400' below the bottom of lost circulation zone. Drilled depth may be ±200' of the estimated set depth depending on the actual depth of the loss zone.					
Mud logging program TBD Open hole logging program ff TD - surf csg			7-7/8"	4-1/2", 11.6#, I-80 or equivalent LTC casing	Water/Fresh Water Mud 8.3-11.5 ppg
	Wasatch @	4,309'			
	Mverde @	7,277'			
	MVU2 @	8,277'			
	MVL1 @	8,799'			
	TD @	9,460'			Max anticipated Mud required 11.5 ppg



# KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

## CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				2270	1370	254000
SURFACE	9-5/8"	0 to 1900	32.30	H-40	STC	0.63*****	1.54	4.73
PRODUCTION	4-1/2"	0 to 9460	11.60	I-80	LTC	7780	6350	201000
						2.18	1.12	2.10

- 1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point)
- 2) MASP (Prod Casing) = Pore Pressure at TD - (.22 psi/ft-partial evac gradient x TD)
- (Burst Assumptions: TD = 11.5 ppg) .22 psi/ft = gradient for partially evac wellbore
- (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)
- MASP 3576 psi

\*\*\*\*\* Burst SF is low but csg is much stronger than formation at 2000'. EMW @ 2000' for 2270# is 21.8 ppg or 1.13 psi/ft

## CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500	Premium cmt + 2% CaCl + .25 pps flocele	215	60%	15.60	1.18
<b>Option 1</b>	TOP OUT CMT (1)	200	20 gals sodium silicate + Premium cmt + 2% CaCl + .25 pps flocele	50		15.60	1.18
	TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
SURFACE		<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>					
<b>Option 2</b>	LEAD	1500	Prem cmt + 16% Gel + 10 pps gilsonite + .25 pps Flocele + 3% salt BWOC	170	35%	11.00	3.82
	TAIL	500	Premium cmt + 2% CaCl + .25 pps flocele	180	35%	15.60	1.18
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	3,800'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	420	60%	11.00	3.38
	TAIL	5,660'	50/50 Poz/G + 10% salt + 2% gel +.1% R-3	1580	60%	14.30	1.31

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

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

## FLOAT EQUIPMENT & CENTRALIZERS

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

## ADDITIONAL INFORMATION

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

BOPE: 11" 5M with one annular and 2 rams. Test to 5,000 psi (annular to 2,500 psi) prior to drilling out. Record on chart recorder & tour sheet. Function test rams on each trip. Maintain safety valve & inside BOP on rig floor at all times. Kelly to be equipped with upper & lower kelly valves.

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

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

DRILLING ENGINEER:

Brad Laney

DATE:

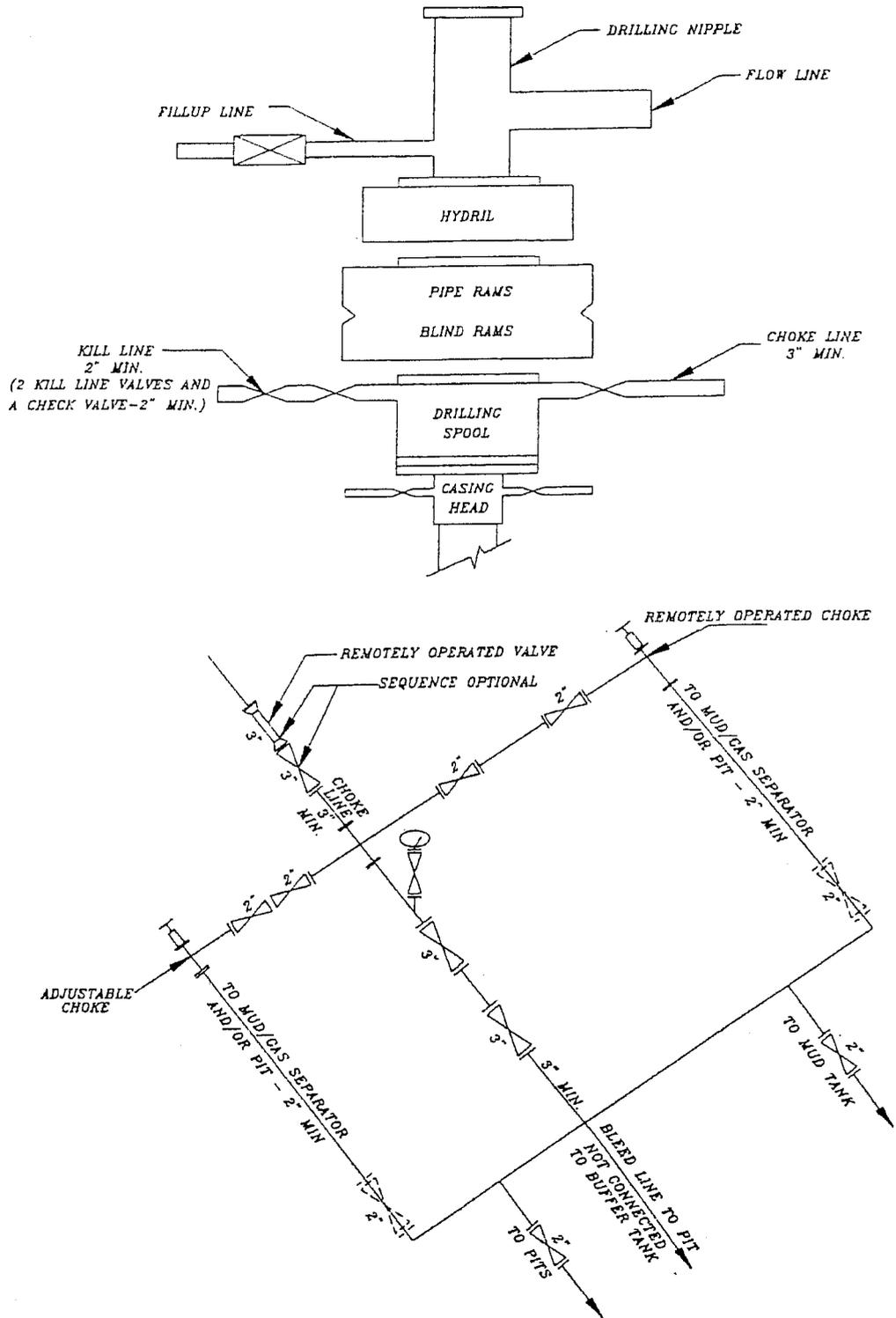
DRILLING SUPERINTENDENT:

Randy Bayne

DATE:

NBU1021-30L DHD.xls

# 5M BOP STACK and CHOKE MANIFOLD SYSTEM



NBU 1021-30L  
NW/SW SEC. 30, T10S, R21E  
Uintah County, UT  
ML-22793

**ONSHORE ORDER NO. 1**

***MULTI-POINT SURFACE USE & OPERATIONS PLAN***

**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 0.5 +/- miles of new access road is proposed. Refer to Topo Map B for the location of the proposed access road.

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 Carlsbad Canyon, standard color number 2.5Y 6/2.

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

Approximately 690' +/- of 4" pipeline is proposed from the location to a tie-in point. Refer to Topo Map D.

**5. Location and Type of Water Supply:**

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

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

No water well is to be drilled on this lease.

**6. Source of Construction Materials:**

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

Any gravel will be obtained from a commercial source.

**7. Methods of Handling Waste Materials:**

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

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

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

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

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

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

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

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

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

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

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites: RNI, Sec. 5, T9S, R22E, NBU #159, Sec. 35, T9S, R21E, Ace Oilfield, Sec. 2, T6S, R20E, MC&MC, Sec. 12, T6S, R19E.

**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 Ownership:**

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

**12. Other Information:**

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

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

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

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

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

Sheila Upchego  
Senior Land Admin Specialist  
Kerr-McGee Oil & Gas Onshore LP  
1368 South 1200 East.  
Vernal, UT 84078  
(435) 781-7024

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

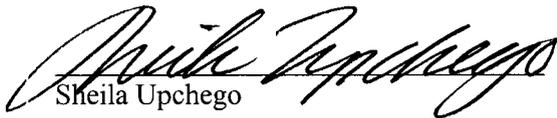
Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

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

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

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by State Surety Bond #RLB0005237.

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

  
Sheila Upchego

1/24/2007

\_\_\_\_\_  
Date

# Kerr-McGee Oil & Gas Onshore LP

NBU #1021-30L

SECTION 30, T10S, R21E, 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; TURN LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.0 MILES TO OURAY, UTAH; PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 9.1 MILES ON THE SEEP RIDGE ROAD TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN LEFT AND PROCEED IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 2.4 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN A EASTERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 4.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHWEST; TURN RIGHT AND PROCEED IN A SOUTHWESTERLY DIRECTION APPROXIMATELY 1.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHWEST; TURN RIGHT AND PROCEED IN A NORTHWESTERLY DIRECTION APPROXIMATELY 0.7 MILES TO THE BEGINNING OF THE PROPOSED ACCESS ROAD FOR THE #1021-30J TO THE NORHTWEST; FOLLOW ROAD FLAGS IN A NORTHWESTERLY DIRECTION APPROXIMATLELY 0.2 MILES TO THE BEGINNING OF THE ACCESS ROAD FOR THE #1021-30N TO THE SOUTHWEST; FOLLOW ROAD FLAGS IN A SOUTHWESTERLY, THEN NORTHWESTERLY DIRECTION APPROXIMATELY 0.5 MILES TO THE #1021-30N AND THE BEGINNING OF THE ACCESS ROAD TO THE WEST; FOLLOW ROAD FLAGS IN A WESTERLY, THEN SOUTHWESTERLY, THEN NORTHWESTERLY DIRECTION APPROXIMATELY 0.5 MILES TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 51.6 MILES.

# Kerr-McGee Oil & Gas Onshore LP

## NBU #1021-30L

LOCATED IN UINTAH COUNTY, UTAH  
SECTION 30, T10S, R21E, S.L.B.&M.

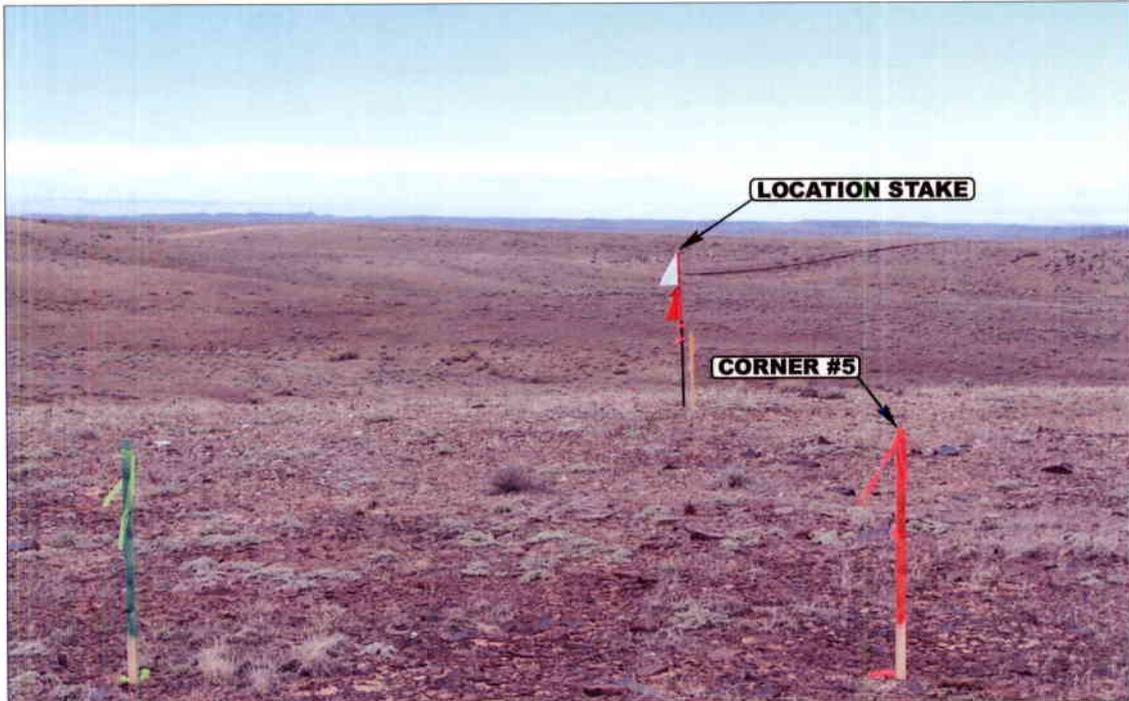


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY

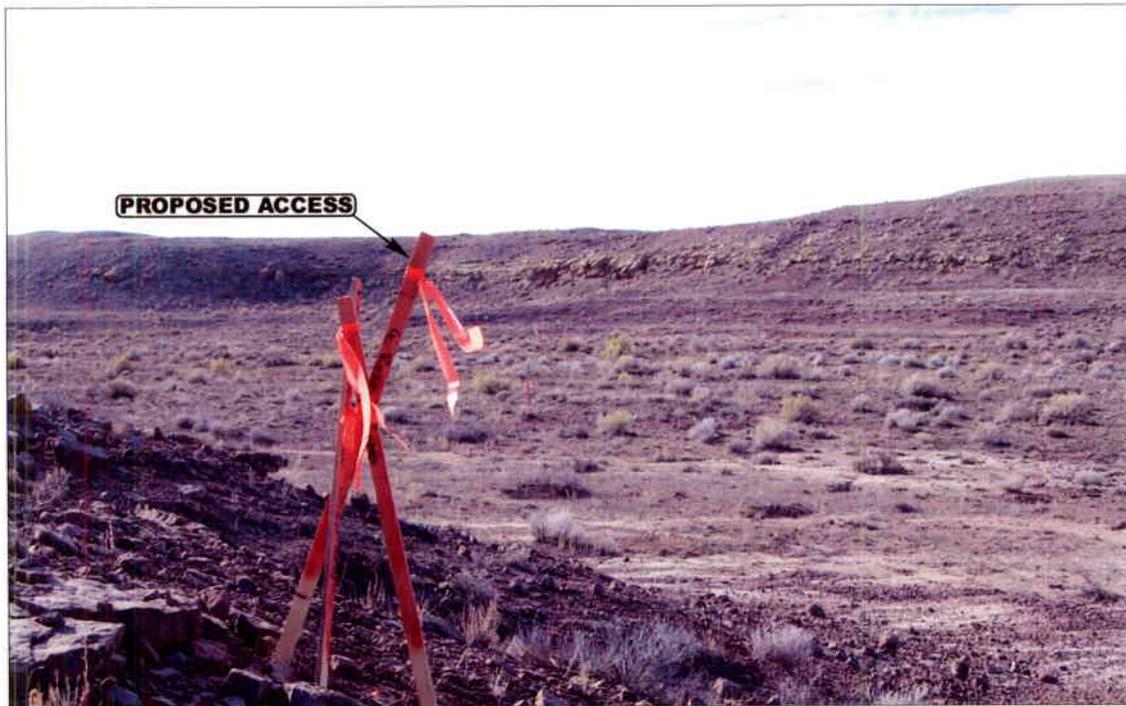


PHOTO: VIEW FROM BEGINNING OF THE PROPOSED ACCESS

CAMERA ANGLE: WESTERLY



- Since 1964 -

**UELS** Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
435-789-1017 uels@uelsinc.com

LOCATION PHOTOS

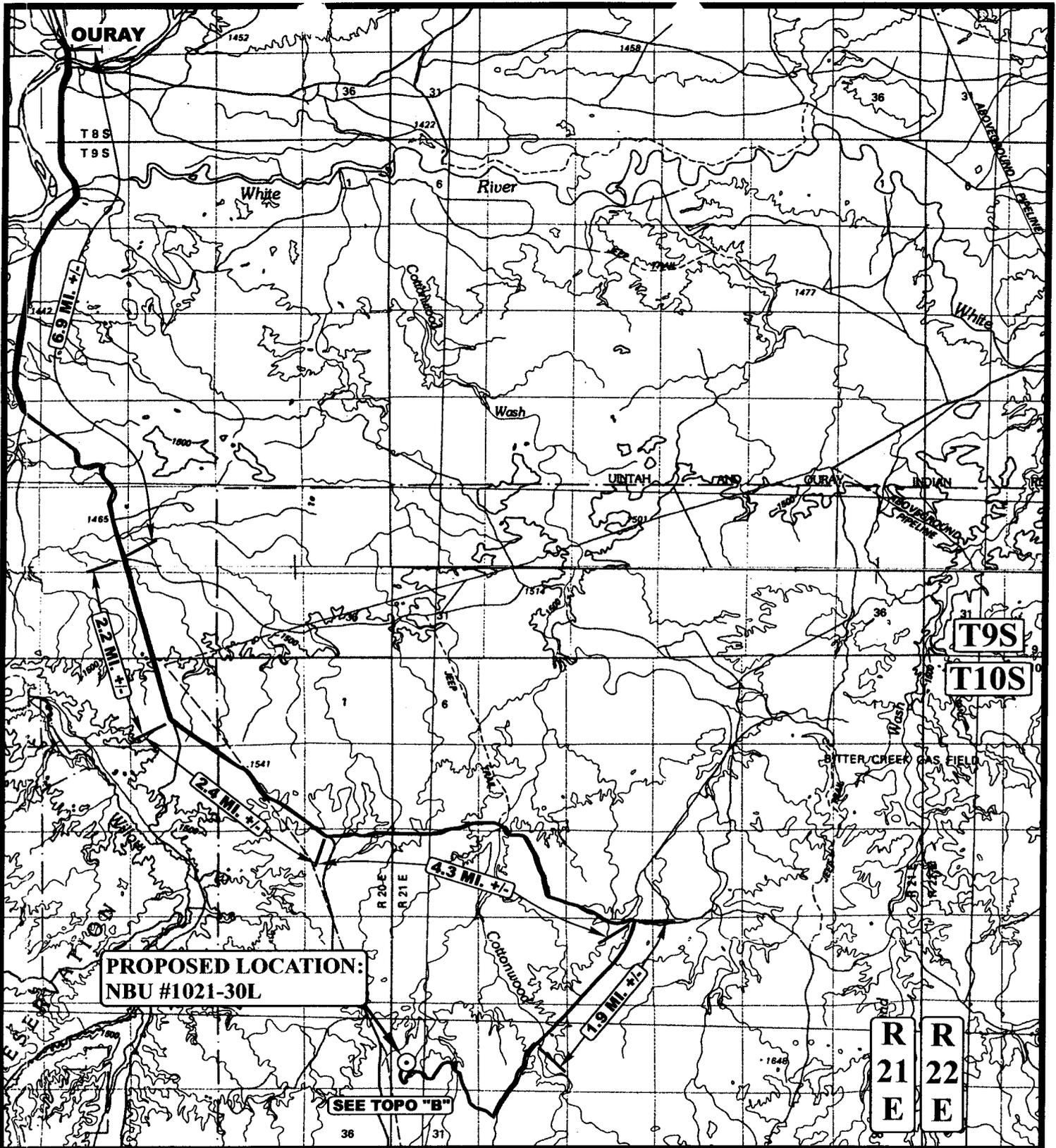
11 16 06  
MONTH DAY YEAR

PHOTO

TAKEN BY: D.K.

DRAWN BY: S.L.

REVISED: 00-00-00



**LEGEND:**

⊙ PROPOSED LOCATION



**Kerr-McGee Oil & Gas Onshore LP**

NBU #1021-30L  
SECTION 30, T10S, R21E, S.L.B.&M.  
1602' FSL 980' FWL



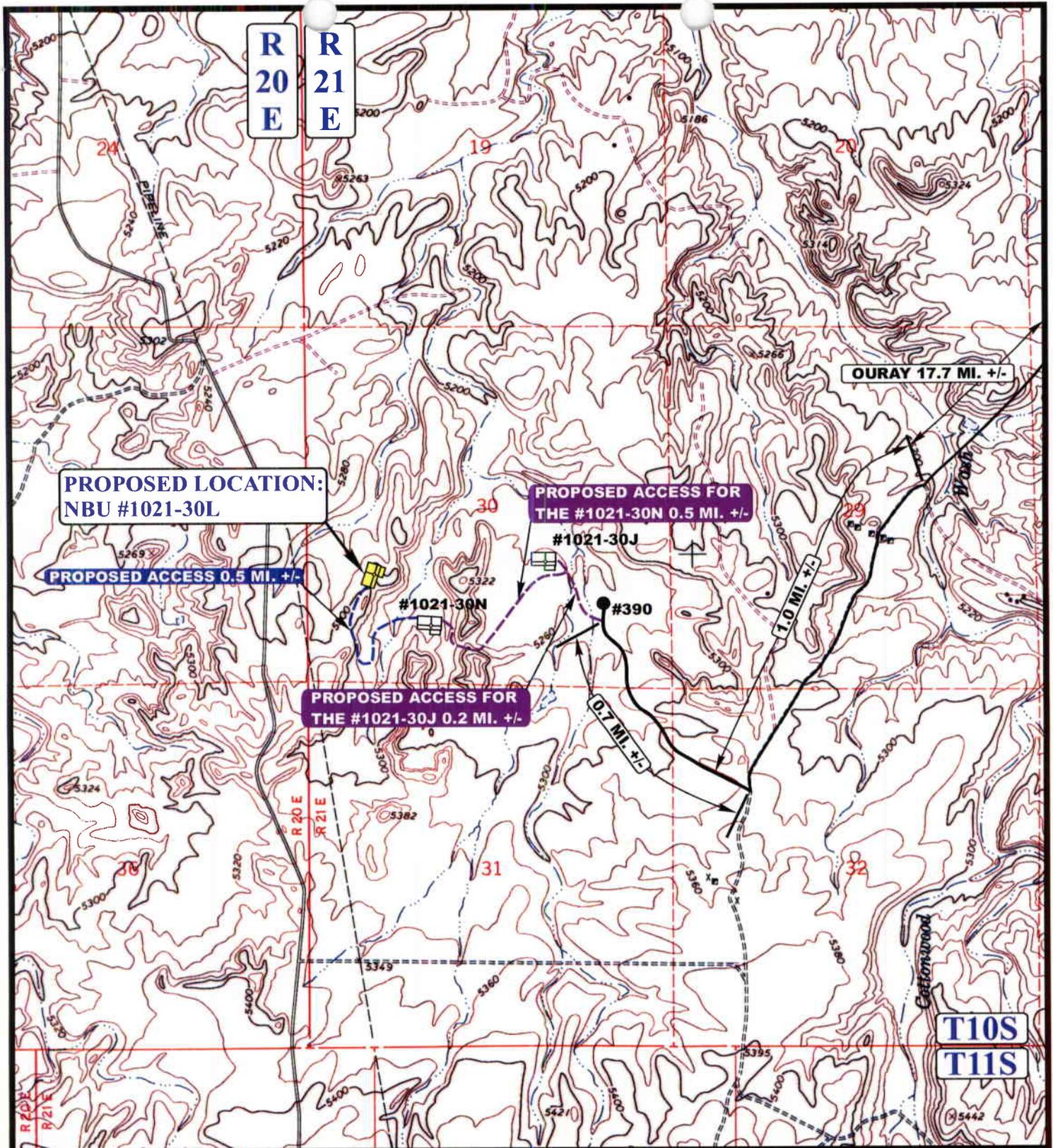
Utah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

TOPOGRAPHIC  
MAP

11 16 06  
MONTH DAY YEAR

SCALE: 1:100,000 DRAWN BY: S.L. REVISED: 00-00-00





**LEGEND:**

- PROPOSED ACCESS ROAD
- PROPOSED ACCESS ROAD
- SERVICING OTHER WELLS
- EXISTING ROAD



**Kerr-McGee Oil & Gas Onshore LP**

**NBU #1021-30L**  
**SECTION 30, T10S, R21E, S.L.B.&M.**  
**1602' FSL 980' FWL**

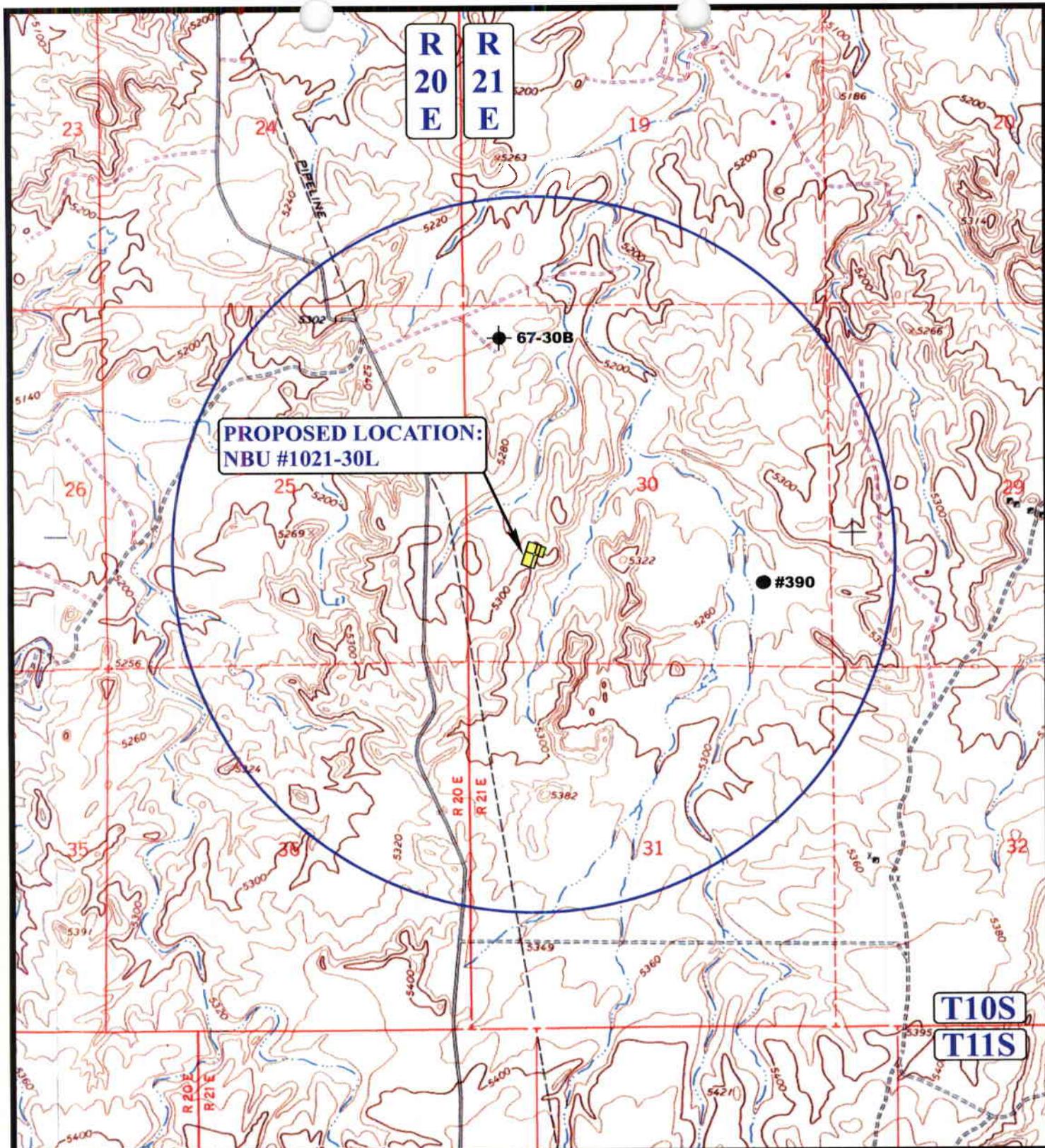


**Utah Engineering & Land Surveying**  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC**  
**MAP**  
 SCALE: 1" = 2000' DRAWN BY: S.L.

**11 16 06**  
 MONTH DAY YEAR  
 REVISED: 00-00-00





**LEGEND:**

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

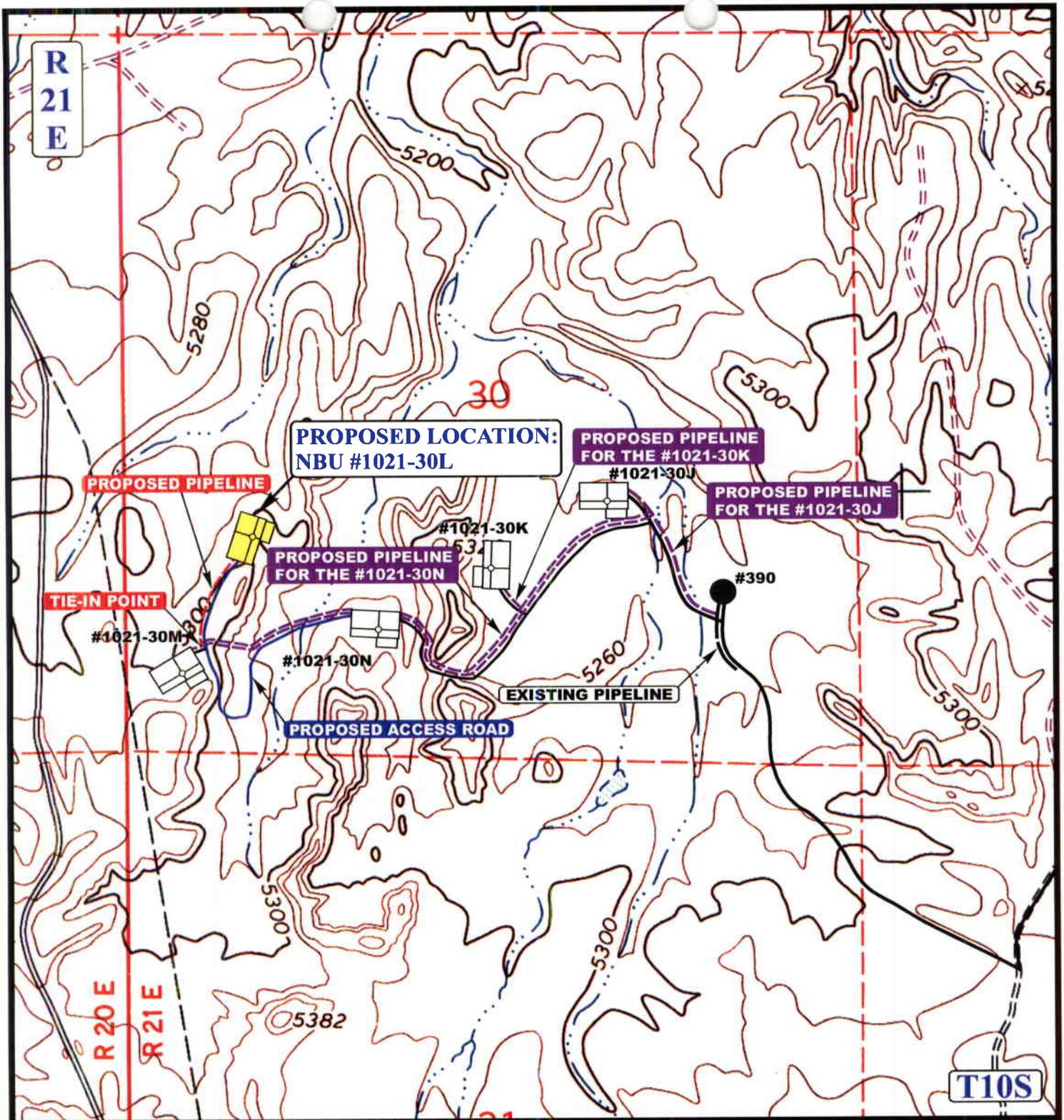
**Kerr-McGee Oil & Gas Onshore LP**

**NBU #1021-30L**  
**SECTION 30, T10S, R21E, S.L.B.&M.**  
**1602' FSL 980' FWL**

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



**TOPOGRAPHIC MAP** **11 16 06**  
 MONTH DAY YEAR  
 SCALE: 1" = 2000' DRAWN BY: S.L. REVISED: 00-00-00 **C TOPO**



**APPROXIMATE TOTAL PIPELINE DISTANCE = 690' +/-**

**LEGEND:**

- PROPOSED ACCESS ROAD
- EXISTING PIPELINE
- - - - - PROPOSED PIPELINE
- - - - - PROPOSED PIPELINE
- - - - - SERVICING OTHER WELLS

**Kerr-McGee Oil & Gas Onshore LP**

**NBU #1021-30L**  
**SECTION 30, T10S, R21E, S.L.B.&M.**  
**1602' FSL 980' FWL**

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



**TOPOGRAPHIC MAP**  
**11 16 06**  
 MONTH DAY YEAR  
 SCALE: 1" = 1000' DRAWN BY: S.L. REVISED: 00-00-00

**D**  
**TOPO**

# Kerr-McGee Oil & Gas Onshore LP

NBU #1021-30L  
PIPELINE ALIGNMENT

LOCATED IN UINTAH COUNTY, UTAH  
SECTION 30, T10S, R21E, S.L.B.&M.

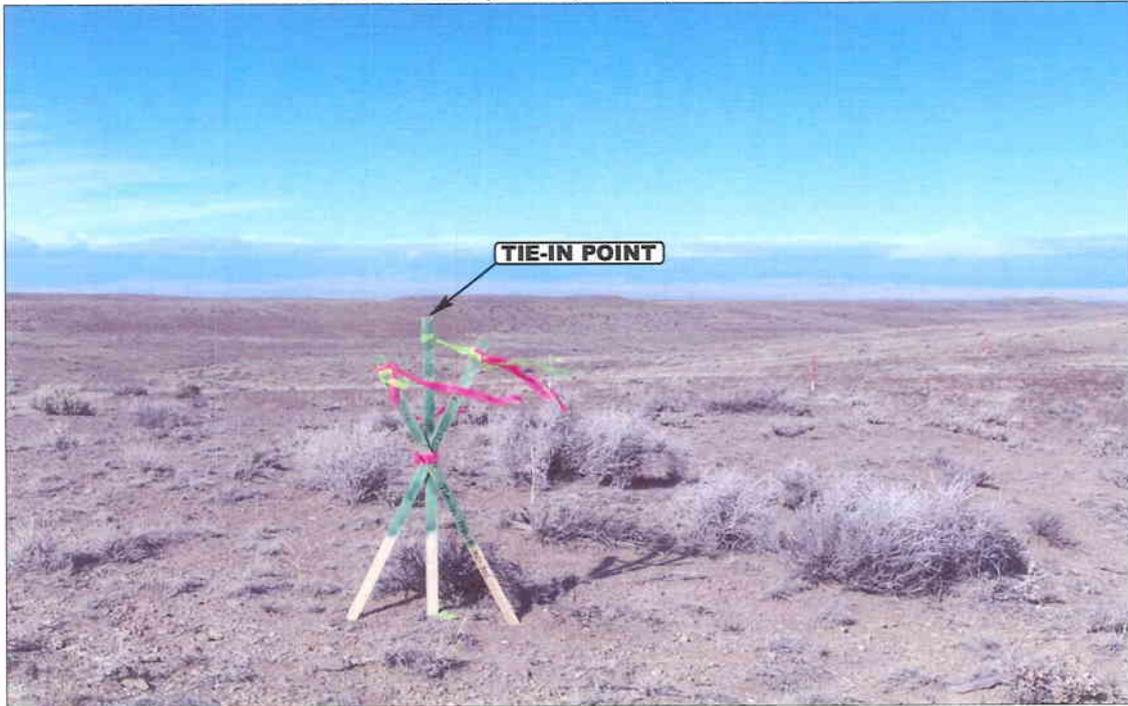


PHOTO: VIEW FROM TIE-IN POINT

CAMERA ANGLE: NORTHEASTERLY

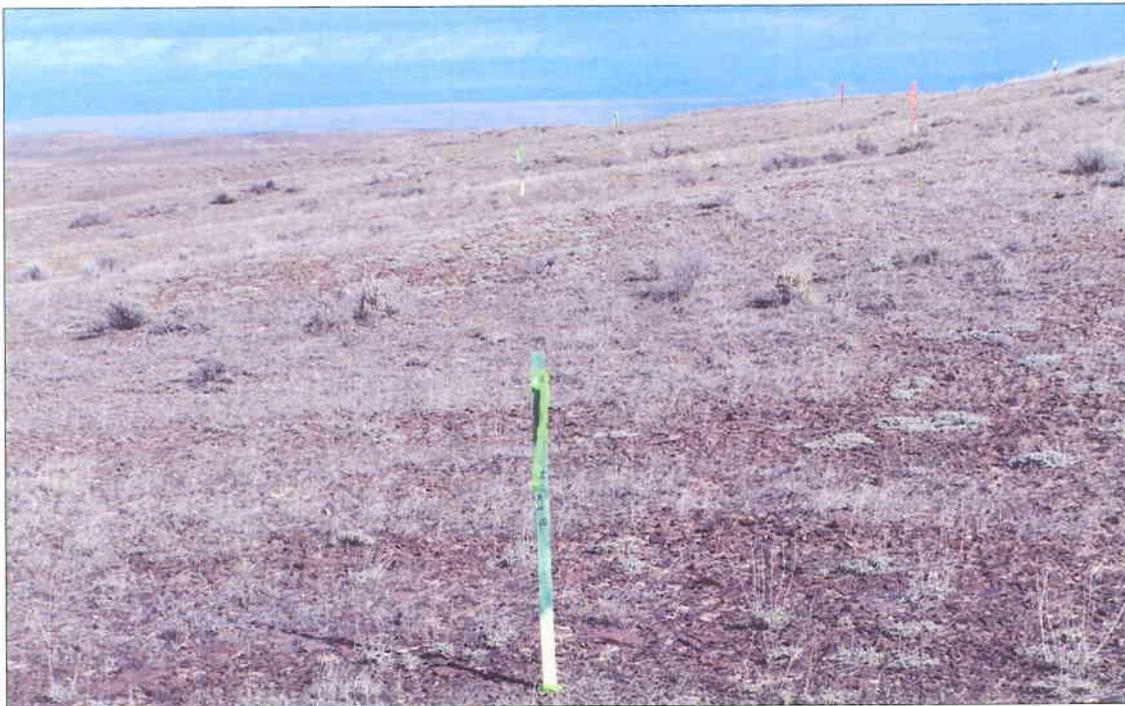


PHOTO: VIEW OF PIPELINE ALIGNMENT

CAMERA ANGLE: NORTHEASTERLY



U  
E  
L  
S  
- Since 1964 -  
Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
435-789-1017 uels@uelsinc.com

LOCATION PHOTOS

11 16 06  
MONTH DAY YEAR

PHOTO

TAKEN BY: D.K.

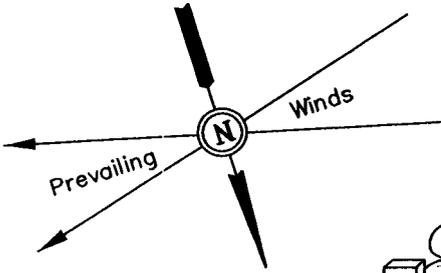
DRAWN BY: S.L.

REVISED: 00-00-00

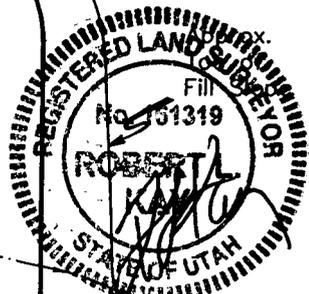
**Herr-McGee Oil & Gas Onshore LP**

**LOCATION LAYOUT FOR**

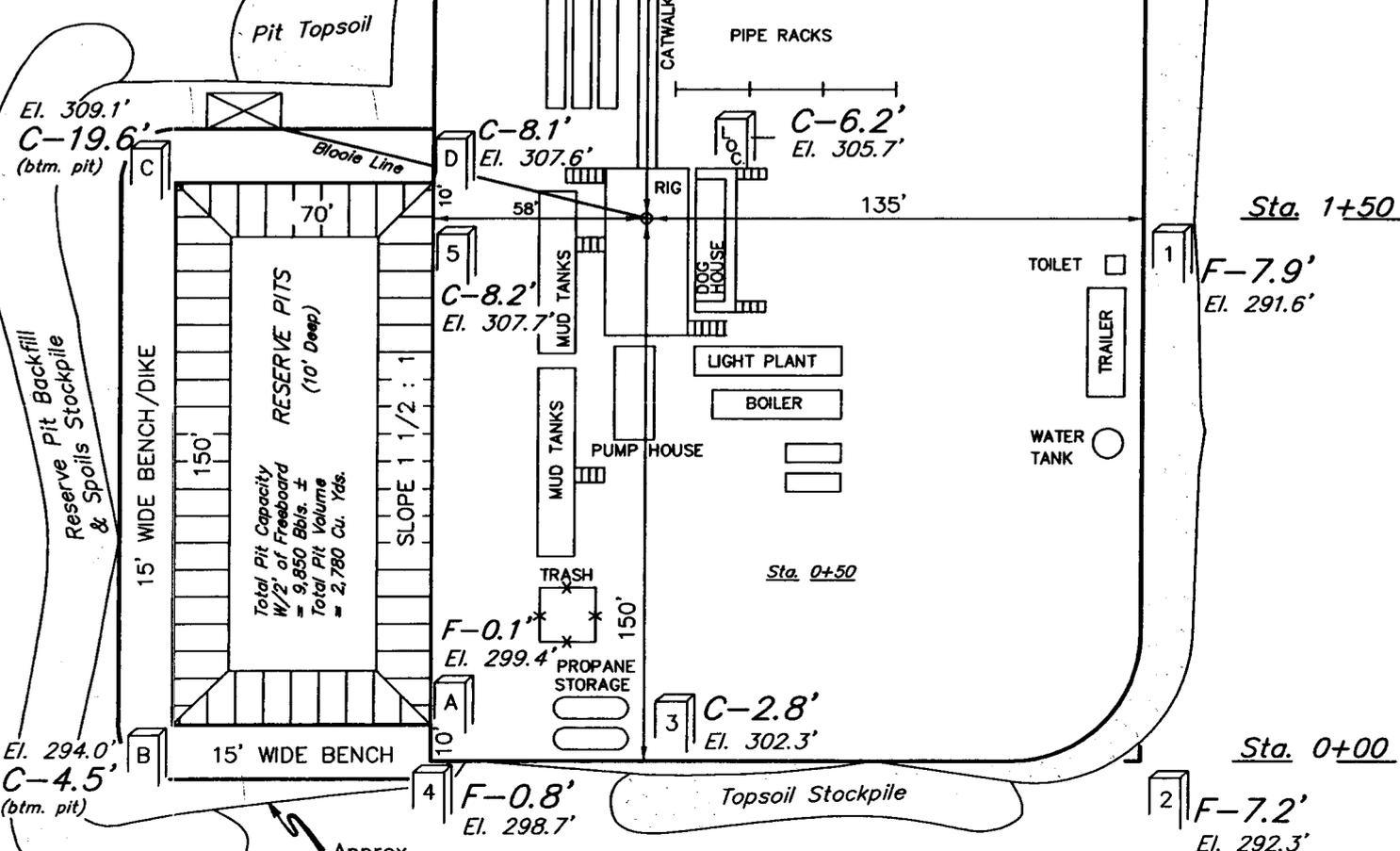
**NBU #1021-30L**  
**SECTION 30, T10S, R21E, S.L.B.&M.**  
**1602' FSL 980' FWL**



SCALE: 1" = 50'  
 DATE: 11-15-06  
 Drawn By: C.H.



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



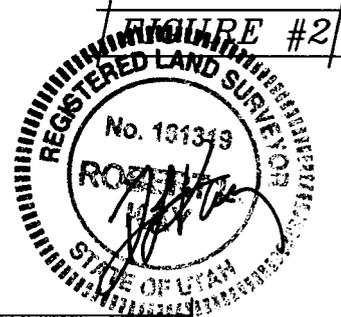
**NOTES:**  
 Elev. Ungraded Ground At Loc. Stake = 5305.7'  
 FINISHED GRADE ELEV. AT LOC. STAKE = 5299.5'

**FIGURE #1**

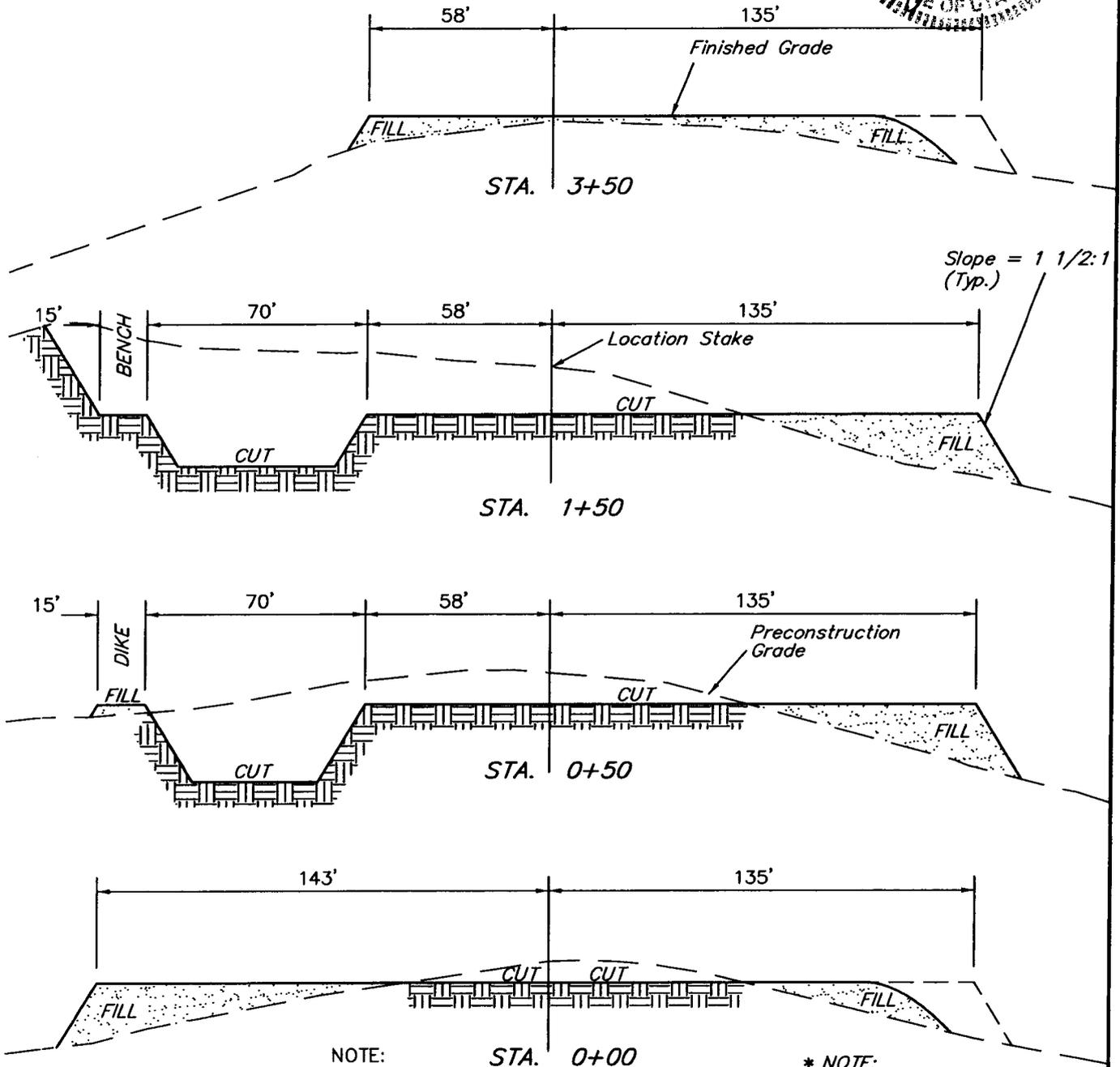
**Herr-McGee Oil & Gas Onshore LP**

**TYPICAL CROSS SECTIONS FOR**

**NBU #1021-30L  
SECTION 30, T10S, R21E, S.L.B.&M.  
1602' FSL 980' FWL**



1" = 20'  
X-Section Scale  
1" = 50'  
DATE: 11-15-06  
Drawn By: C.H.



NOTE: STA. 0+00  
Topsoil should not be Stripped Below Finished Grade on Substructure Area.

\* NOTE:  
FILL QUANTITY INCLUDES 5% FOR COMPACTION

**APPROXIMATE YARDAGES**

CUT	
(6") Topsoil Stripping	= 1,800 Cu. Yds.
Remaining Location	= 9,300 Cu. Yds.
<b>TOTAL CUT</b>	<b>= 11,100 CU.YDS.</b>
<b>FILL</b>	<b>= 7,910 CU.YDS.</b>

EXCESS MATERIAL	= 3,190 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	= 3,190 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	= 0 Cu. Yds.

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

**WORKSHEET  
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 02/02/2007

API NO. ASSIGNED: 43-047-39023
--------------------------------

WELL NAME: NBU 1021-30L  
 OPERATOR: KERR-MCGEE OIL & GAS ( N2995 )  
 CONTACT: SHEILA UPCHEGO

PHONE NUMBER: 435-781-7024

PROPOSED LOCATION:

INSPECT LOCATN BY: / /		
Tech Review	Initials	Date
Engineering	Dued	2/20/07
Geology		
Surface		

NWSW 30 100S 210E  
 SURFACE: 1602 FSL 0980 FWL  
 BOTTOM: 1602 FSL 0980 FWL  
 COUNTY: UINTAH  
 LATITUDE: 39.91590 LONGITUDE: -109.5999  
 UTM SURF EASTINGS: 619661 NORTHINGS: 4419151  
 FIELD NAME: NATURAL BUTTES ( 630 )

LEASE TYPE: 3 - State  
 LEASE NUMBER: ML-22793  
 SURFACE OWNER: 3 - State

PROPOSED FORMATION: WSMVD  
 COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

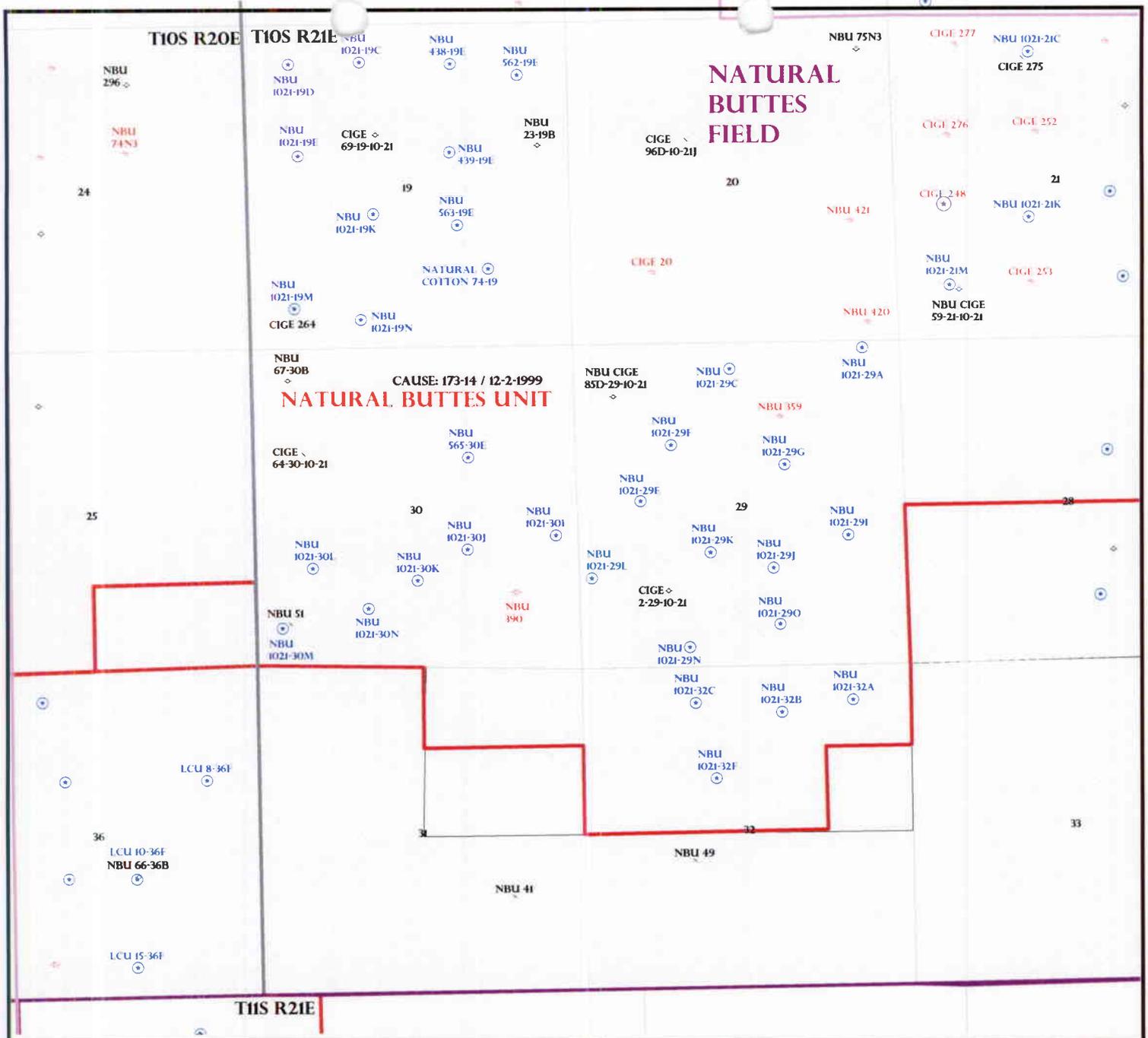
- Plat
- Bond: Fed[] Ind[] Sta[] Fee[]  
(No. 22013542 )
- N Potash (Y/N)
- Oil Shale 190-5 (B) or 190-3 or 190-13
- Water Permit  
(No. 43-8496 )
- N RDCC Review (Y/N)  
(Date: \_\_\_\_\_ )
- NA Fee Surf Agreement (Y/N)
- NA Intent to Commingle (Y/N)

LOCATION AND SITING:

- \_\_\_\_\_ R649-2-3.
- Unit: NATURAL BUTTES
- \_\_\_\_\_ R649-3-2. General  
Siting: 460 From Qtr/Qtr & 920' Between Wells
- \_\_\_\_\_ R649-3-3. Exception
- Drilling Unit  
Board Cause No: 173-14  
Eff Date: 12-2-1999  
Siting: 460 fr u bary & u m m m trails
- \_\_\_\_\_ R649-3-11. Directional Drill

COMMENTS: Needs Permit (02-13-07)

STIPULATIONS: 1- STATEMENT OF BASIS  
2- OIL SHALE  
3- Surface csg unit step



OPERATOR: KERR MCGEE O&G (N2995)

SEC: 19,29,30,32 T.10S R. 21E

FIELD: NATURAL BUTTES (630)

COUNTY: UINTAH

CAUSE: 173-14 / 12-2-1999

- Field Status**
- ABANDONED
  - ACTIVE
  - COMBINED
  - INACTIVE
  - PROPOSED
  - STORAGE
  - TERMINATED

- Unit Status**
- EXPLORATORY
  - GAS STORAGE
  - NF PP OIL
  - NF SECONDARY
  - PENDING
  - PI OIL
  - PP GAS
  - PP GEOTHERML
  - PP OIL
  - SECONDARY
  - TERMINATED

- Wells Status**
- \* GAS INJECTION
  - \* GAS STORAGE
  - x LOCATION ABANDONED
  - o NEW LOCATION
  - x PLUGGED & ABANDONED
  - \* PRODUCING GAS
  - \* PRODUCING OIL
  - \* SHUT-IN GAS
  - \* SHUT-IN OIL
  - x TEMP. ABANDONED
  - o TEST WELL
  - \* WATER INJECTION
  - \* WATER SUPPLY
  - \* WATER DISPOSAL
  - \* DRILLING



PREPARED BY: DIANA MASON  
DATE: 7-FEBRUARY-2007

# Application for Permit to Drill

## Statement of Basis

2/15/2007

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Ownr	CBM
249	43-047-39023-00-00		GW	S	No
<b>Operator</b>	KERR-MCGEE OIL & GAS ONSHORE, LP		<b>Surface Owner-APD</b>		
<b>Well Name</b>	NBU 1021-30L		<b>Unit</b>		
<b>Field</b>	UNDESIGNATED		<b>Type of Work</b>		
<b>Location</b>	NWSW 30 10S 21E S 0 FL 0 FL GPS Coord (UTM) 619661E 4419151N				

### 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 4,300'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 30. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Production casing cement should be brought up above the base of the moderately saline ground water to isolate it from fresher waters uphole.

Brad Hill  
APD Evaluator

2/15/2007  
Date / Time

### Surface Statement of Basis

The general area is within the Cottonwood Wash Drainage. The area is characterized by rolling hills and benches, which are frequently intersected by somewhat gentle draws, which flow into Cottonwood Wash. The draws are occasionally rimmed with steep side hills, which have exposed sand stone bedrock cliffs along the rims. Cottonwood Wash is an ephemeral drainage, which drains northerly approximately 11 miles to the White River. No seeps, springs or streams exist in the area.

This location is approximately 21 miles southeast of Ouray, Ut. and is accessed by the Seep Ridge Road to the Uintah County Love Unit Road then by existing or planned oil field development roads to within 0.5 miles of the site, which will require new construction.

The proposed location is on a knob at the end of a ridge with the reserve pit extending to the east side of the ridge. A gentle slope extends to the west toward a valley with undulating swales. The slope drains north toward a more significant drainage.

Both the surface and minerals are owned by SITLA. Jim Davis represented SITLA at the pre-site investigation. Mr. Davis had no concerns pertaining to this location. The selected location appears to be the best site for drilling and operating a well in the immediate area.

Floyd Bartlett  
Onsite Evaluator

2/13/2007  
Date / Time

### Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 20 mils with a felt subliner shall be properly installed and maintained in the reserve pit.

# ON-SITE PREDRILL EVALUATION

## Utah Division of Oil, Gas and Mining

**Operator** KERR-MCGEE OIL & GAS ONSHORE, LP  
**Well Name** NBU 1021-30L  
**API Number** 43-047-39023-0 **APD No** 249 **Field/Unit** UNDESIGNATED  
**Location:** 1/4,1/4 NWSW **Sec** 30 **Tw** 10S **Rng** 21E 0 FL 0 FL  
**GPS Coord (UTM)** 619663 4419150 **Surface Owner**

### Participants

Floyd Bartlett and David Hackford (DOGM), Jim Davis (SITLA), Carroll Estes, Tony Kznick, and Clay Einerson (Kerr McGee), David Kay (Uintah Engineering and Land Surveying), and Ben Williams (UDWR)

### Regional/Local Setting & Topography

The general area is within the Cottonwood Wash Drainage. The area is characterized by rolling hills and benches, which are frequently intersected by somewhat gentle draws, which flow into Cottonwood Wash. The draws are occasionally rimmed with steep side hills, which have exposed sand stone bedrock cliffs along the rims. Cottonwood Wash is an ephemeral drainage, which drains northerly approximately 11 miles to the White River. No seeps, springs or streams exist in the area.

This location is approximately 21 miles southeast of Ouray, Ut. and is accessed by the Seep Ridge Road to the Uintah County Love Unit Road then by existing or planned oil field development roads to within 0.5 miles of the site, which will require new construction.

The proposed location is on a knob at the end of a ridge with the reserve pit extending to the east side of the ridge. A gentle slope extends to the west toward a valley with undulating swales. The slope drains north toward a more significant drainage.

### Surface Use Plan

#### **Current Surface Use**

Grazing  
Recreational  
Wildlfe Habitat

#### **New Road**

Miles	Well Pad	Src Const Material	Surface Formation
0.5	Width 278 Length 350	Onsite	UNTA

**Ancillary Facilities** N

### Waste Management Plan Adequate? N

### Environmental Parameters

**Affected Floodplains and/or Wetland** N

#### **Flora / Fauna**

Snow covered the vegetation on the area. Identifiable vegetation consisted of shadscale, horse brush, cheat grass and greasewood. Vegetation is not abundant on location.

Antelope, cattle, rabbits, coyotes, and small mammals, birds and raptors.

**Soil Type and Characteristics**

Shallow rocky loam.

**Erosion Issues** N

**Sedimentation Issues** N

**Site Stability Issues** N

**Drainage Diversion Required** N

**Berm Required?** N

**Erosion Sedimentation Control Required?** N

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

**Reserve Pit**

**Site-Specific Factors**

**Site Ranking**

<b>Distance to Groundwater (feet)</b>	>200	0
<b>Distance to Surface Water (feet)</b>	>1000	0
<b>Dist. Nearest Municipal Well (ft)</b>	>5280	0
<b>Distance to Other Wells (feet)</b>	300 to 1320	10
<b>Native Soil Type</b>	Mod permeability	10
<b>Fluid Type</b>	Fresh Water	5
<b>Drill Cuttings</b>	Normal Rock	0
<b>Annual Precipitation (inches)</b>	<10	0
<b>Affected Populations</b>	<10	0
<b>Presence Nearby Utility Conduits</b>	Not Present	0

**Final Score** 25    1    **Sensitivity Level**

**Characteristics / Requirements**

The proposed reserve pit is 70' x 150' x 10' deep located in a cut on the north east corner of the location. A 20 mil liner with a felt sub-liner is planned by Kerr McGee.

**Closed Loop Mud Required?** N    **Liner Required?** Y    **Liner Thickness** 20    **Pit Underlayment Required?** Y

**Other Observations / Comments**

Ben Williams representing the UDWR stated the area is classified as yearlong critical habitat for antelope. He stated that the lack of water not forage is the limiting factor affecting the herd in the area. He recommended no restrictions for antelope. No other wildlife is expected to be significantly affected. He gave Jim Davis of SITLA and Carroll Estes of Kerr McGee a copy of his wildlife evaluation and a UDWR recommended seed mix to be used when revegetating the location.

The area was covered with snow. ATV's were used to access the site.

Floyd Bartlett  
**Evaluator**

2/13/2007  
**Date / Time**

Casing Schematic

Surface

12%  
18%

Uinta

BHP  $0.052(9460)11.5 = 5657 \text{ psi}$   
anticipate 5865 psi

Good  $.12(9460) = 1135$   
 $5657 - 1135 = 4522 \text{ psi, MASP}$   
MW 8.4  
Frac 19.3

BOPE 5 MW ✓

Burst 3520  
70% 2464

Max P @ surf. shrc  
 $.22(7560) = 1663$   
 $5657 - 1663 = 3994 \text{ psi}$

test to 2464 psi ✓

Strip Surf. cnt ✓

✓ Adequate 2/20/07

4-1/2"  
MW 11.5

Production  
9460. MD

TOC @ 0.  
901' Top w/0% w/o  
1109' Green River  
1340' Birds Nest  
TOC @ 1407.  
Option 1 - Top out  
1873' Mahogany ✓.K.  
Surface  
1900. MD

4300' ± BMSW  
4309' Wasatch

7277' Mesaverde

8277' MVU2

8799' MVL1

Well name:	<b>2007-02 Kerr McGee NBU 1021-30L</b>		
Operator:	<b>Kerr McGee Oil &amp; Gas Onshore L.P.</b>		
String type:	Surface	Project ID:	43-047-39023
Location:	Uintah County, Utah		

**Design parameters:**

**Collapse**

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

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
 Surface temperature: 75 °F  
 Bottom hole temperature: 102 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 1,500 ft

Cement top: 1,407 ft

**Burst**

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

No backup mud specified.

**Tension:**

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

Tension is based on buoyed weight.  
 Neutral point: 1,666 ft

**Non-directional string.**

**Re subsequent strings:**

Next setting depth: 9,460 ft  
 Next mud weight: 11.500 ppg  
 Next setting BHP: 5,651 psi  
 Fracture mud wt: 19.250 ppg  
 Fracture depth: 1,900 ft  
 Injection pressure: 1,900 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	1900	9.625	32.30	H-40	ST&C	1900	1900	8.876	839.5

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	829	1370	1.652	1900	2270	1.19	54	254	4.72 J

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

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

Date: February 20, 2007  
 Salt Lake City, Utah

**Remarks:**

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

Burst strength is not adjusted for tension.

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

Well name:	<b>2007-02 Kerr McGee NBU 1021-30L</b>	
Operator:	<b>Kerr McGee Oil &amp; Gas Onshore L.P.</b>	
String type:	Production	Project ID: 43-047-39023
Location:	Uintah County, Utah	

**Design parameters:**

**Collapse**

Mud weight: 11.500 ppg  
Design is based on evacuated pipe.

**Burst**

Max anticipated surface pressure: 3,570 psi  
Internal gradient: 0.220 psi/ft  
Calculated BHP: 5,651 psi

No backup mud specified.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**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: 1.50 (B)

Tension is based on buoyed weight.  
Neutral point: 7,834 ft

**Environment:**

H2S considered? No  
Surface temperature: 75 °F  
Bottom hole temperature: 207 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 1,500 ft

Cement top: Surface

**Non-directional string.**

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	9460	4.5	11.60	I-80	LT&C	9460	9460	3.875	825.5
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	5651	6360	1.125	5651	7780	1.38	91	212	2.33 J

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

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

Date: February 20, 2007  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 9460 ft, a mud weight of 11.5 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.*

# 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)

February 7, 2007

Memorandum

**To:** Assistant District Manager Minerals, Vernal District

**From:** Michael Coulthard, Petroleum Engineer

**Subject:** 2007 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 2007 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
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(Proposed PZ Wasatch/MesaVerde)

43-047-39004	NBU 1021-19C	Sec. 19 T. 10S R. 21E 0620 FNL 1904 FWL
43-047-39005	NBU 1021-19D	Sec. 19 T. 10S R. 21E 0637 FNL 0755 FWL
43-047-39006	NBU 1021-19E	Sec. 19 T. 10S R. 21E 2146 FNL 0879 FWL
43-047-39007	NBU 1021-19K	Sec. 19 T. 10S R. 21E 2181 FSL 2092 FWL
43-047-39008	NBU 1021-19N	Sec. 19 T. 10S R. 21E 0462 FSL 1845 FWL
43-047-39009	NBU 1021-29L	Sec. 29 T. 10S R. 21E 1398 FSL 0190 FWL
43-047-39010	NBU 1021-29O	Sec. 29 T. 10S R. 21E 0615 FSL 2115 FEL
43-047-39011	NBU 1021-29N	Sec. 29 T. 10S R. 21E 0250 FSL 1764 FWL
43-047-39012	NBU 1021-29J	Sec. 29 T. 10S R. 21E 1532 FSL 2192 FEL
43-047-39013	NBU 1021-29K	Sec. 29 T. 10S R. 21E 1804 FSL 2143 FWL
43-047-39014	NBU 1021-29I	Sec. 29 T. 10S R. 21E 2060 FSL 0962 FEL
43-047-39015	NBU 1021-29G	Sec. 29 T. 10S R. 21E 2090 FNL 1960 FEL
43-047-39016	NBU 1021-29F	Sec. 29 T. 10S R. 21E 1718 FNL 1529 FWL
43-047-39017	NBU 1021-29E	Sec. 29 T. 10S R. 21E 2635 FNL 1010 FWL
43-047-39018	NBU 1021-29C	Sec. 29 T. 10S R. 21E 0476 FNL 2501 FWL
43-047-39019	NBU 1021-29A	Sec. 29 T. 10S R. 21E 0170 FNL 0627 FEL
43-047-39020	NBU 1021-30I	Sec. 30 T. 10S R. 21E 2131 FSL 0387 FEL
43-047-39021	NBU 1021-30J	Sec. 30 T. 10S R. 21E 1901 FSL 1827 FEL
43-047-39022	NBU 1021-30K	Sec. 30 T. 10S R. 21E 1398 FSL 2686 FWL
43-047-39023	NBU 1021-30L	Sec. 30 T. 10S R. 21E 1602 FSL 0980 FWL
43-047-39024	NBU 1021-30M	Sec. 30 T. 10S R. 21E 0612 FSL 0462 FWL

Page 2

43-047-39025 NBU 1021-30N Sec. 30 T. 10S R. 21E 0942 FSL 1876 FWL  
43-047-39026 NBU 1021-32A Sec. 32 T. 10S R. 21E 0646 FNL 0955 FEL  
43-047-39027 NBU 1021-32B Sec. 32 T. 10S R. 21E 0837 FNL 2117 FEL  
43-047-39028 NBU 1021-32C Sec. 32 T. 10S R. 21E 0664 FNL 1840 FWL  
43-047-39029 NBU 1021-32F Sec. 32 T. 10S R. 21E 1909 FNL 2165 FWL  
43-047-39001 NBU 1021-01G Sec. 01 T. 10S R. 21E 2660 FSL 1765 FEL  
43-047-39002 NBU 1021-01O Sec. 01 T. 10S R. 21E 0245 FSL 2619 FEL  
43-047-39003 NBU 1021-01P Sec. 01 T. 10S R. 21E 0888 FSL 1309 FEL  
43-047-39030 NBU 1022-18A Sec. 18 T. 10S R. 22E 1007 FNL 0512 FEL  
43-047-39031 NBU 1022-24I Sec. 24 T. 10S R. 22E 2045 FSL 1166 FEL  
43-047-39032 NBU 1022-25B Sec. 25 T. 10S R. 22E 0403 FNL 1971 FEL  
43-047-39033 NBU 1022-25H Sec. 25 T. 10S R. 22E 2604 FNL 0825 FEL

Our records indicate the NBU 1022-25H is closer than 460 feet from the Natural Buttes Unit boundary (approximately 36 feet).

We have no objections to permitting the wells so long as the unit operator receives an exception to the locating and siting requirements of the State of Utah (R649-3-2).

/s/ Michael L. Coulthard

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

MCoulthard:mc:2-7-07

**From:** Ed Bonner  
**To:** Mason, Diana  
**Date:** 2/14/2007 9:50 AM  
**Subject:** The following wells have been given cultural resource clearance by the Trust Lands Cultural Resource

**CC:** Davis, Jim; Garrison, LaVonne; Hill, Brad; Hunt, Gil; sheila.upchego...  
The following wells have been given cultural resource clearance by the Trust Lands Cultural Resources Group:

Kerr McGee Oil & Gas Onshore LP  
NBU 1022-7H-4 (API 43 047 38570)  
NBU 1021-2E (API 43 047 38838)  
NBU 1021-2F (API 43 047 38839)  
NBU 1021-2M (API 43 047 38841)  
NBU 1021-2K (API 43 047 38842)  
NBU 1021-2L (API 43 047 38843)  
NBU 1021-2J (API 43 047 38844)  
NBU 1021-36D (API 43 047 38845)  
NBU 1021-36E (API 43 047 38846)  
NBU 1021-36F (API 43 047 38847)  
NBU 1021-36N (API 43 047 38848)  
NBU 1021-36K (API 43 047 38849)  
NBU 1021-36C (API 43 047 38850)  
NBU 1021-1G (API 43 047 39001)  
NBU 1021-1O (API 43 047 39002)  
NBU 1021-1P (API 43 047 39003)  
NBU 1021-30I (API 43 047 39020)  
NBU 1021-30J (API 43 047 39021)  
NBU 1021-30K (API 43 047 39022)  
NBU 1021-30L (API 43 047 39023)  
NBU 1021-30M (API 43 047 39024)  
NBU 1021-30N (API 43 047 39025)

If you have any questions regarding this matter please give me a call.



**State of Utah**

**Department of  
Natural Resources**

MICHAEL R. STYLER  
*Executive Director*

**Division of  
Oil, Gas & Mining**

JOHN R. BAZA  
*Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

February 28, 2007

Kerr-McGee Oil & Gas Onshore LP  
1368 S 1200 E  
Vernal, UT 84078

Re: Natural Buttes Unit 1021-30L Well, 1602' FSL, 980' FWL, NW SW, Sec. 30,  
T. 10 South, R. 21 East, Uintah County, Utah

Gentlemen:

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

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-39023.

Sincerely,

Gil Hunt  
Associate Director

pab  
Enclosures

cc: Uintah County Assessor (via e-mail)  
SITLA  
Bureau of Land Management, Vernal District Office

**Operator:** Kerr-McGee Oil & Gas Onshore LP  
**Well Name & Number** Natural Buttes Unit 1021-30L  
**API Number:** 43-047-39023  
**Lease:** ML-22793

**Location:** NW SW                      **Sec.** 30                      **T.** 10 South                      **R.** 21 East

### Conditions of Approval

#### 1. General

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

#### 2. Notification Requirements

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

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

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

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

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

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

#### 3. Reporting Requirements

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

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

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

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: <b>ML-22793</b>
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:
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		7. UNIT or CA AGREEMENT NAME: <b>UNIT #891008900A</b>
2. NAME OF OPERATOR: <b>KERR MCGEE OIL &amp; GAS ONSHORE LP</b>		8. WELL NAME and NUMBER: <b>NBU 1021-30L</b>
3. ADDRESS OF OPERATOR: <b>1368 SOUTH 1200 EAST</b> CITY <b>VERNAL</b> STATE <b>UT</b> ZIP <b>84078</b>		9. API NUMBER: <b>4304739023</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>1602'FSL, 980'FWL (LOT 3)</b>		10. FIELD AND POOL, OR WILDCAT: <b>NATURAL BUTTES</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>NWSW 30 10S 21E</b>		COUNTY: <b>UINTAH</b>
		STATE: <b>UTAH</b>

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <b>APD EXTENSION</b>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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

THE OPERATOR REQUESTS AUTHORIZATION FOR A ONE YEAR EXTENSION FOR THE SUBJECT WELL LOCATION. SO THAT THE DRILLING OPERATIONS MAY BE COMPLETED. THE ORIGINAL APD WAS APPROVED BY THE DIVISION OF OIL, GAS AND MINING ON FEBRUARY 28, 2007.

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: 02-25-08  
By: [Signature]

COPY SENT TO OPERATOR  
Date: 2-26-2008  
Initials: KS

NAME (PLEASE PRINT) <b>SHEILA UPCHEGO</b>	TITLE <b>SENIOR LAND ADMIN SPECIALIST</b>
SIGNATURE <u>[Signature]</u>	DATE <b>2/6/2008</b>

(This space for State use only)

**RECEIVED**  
**FEB 25 2008**



**Application for Permit to Drill  
Request for Permit Extension  
Validation**

(this form should accompany the Sundry Notice requesting permit extension)

**API:** 4304739023  
**Well Name:** NBU 1021-30L  
**Location:** NW/SW SEC. 30, T10S, R21E  
**Company Permit Issued to:** KERR McGEE OIL AND GAS ONSHORE LP  
**Date Original Permit Issued:** 2/28/2007

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.

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

  
Signature

2/6/2008  
Date

Title: SENOIR LAND ADMIN SPECIALIST

Representing: KERR-McGEE OIL & GAS ONSHORE LP

**RECEIVED  
FEB 25 2008  
DIV. OF OIL, GAS & MINING**



**Application for Permit to Drill  
Request for Permit Extension  
Validation**

(this form should accompany the Sundry Notice requesting permit extension)

**API:** 4304739023  
**Well Name:** NBU 1021-30L  
**Location:** 1602' FSL, 980' FWL NWSW SEC30 T10S R21E  
**Company Permit Issued to:** KERR McGEE OIL & GAS ONSHORE LP  
**Date Original Permit Issued:** 2/28/2007

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.

If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes  No

Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes  No

Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes  No

Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes  No

Has the approved source of water for drilling changed? Yes  No

Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes  No

Is bonding still in place, which covers this proposed well? Yes  No

*Lucky Schmuck*  
Signature

2/12/2009  
Date

**Title:** STAFF REGULATORY ANALYST

**Representing:** KERR McGEE OIL & GAS ONSHORE LP

**RECEIVED**  
**FEB 24 2009**  
DIV. OF OIL, GAS & MINING



GARY R. HERBERT  
*Governor*

GREGORY S. BELL  
*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*

March 8, 2010

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

Re: APD Rescinded – Natural Buttes U 1021-30L, Sec. 30, T. 10S, R. 21E,  
Uintah County, Utah, API No. 43-047-39023

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on February 28, 2007. On February 25, 2008 and March 2, 2009 the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective March 8, 2010.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason  
Environmental Scientist

cc: Well File  
SITLA, Ed Bonner