

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

FORM 3

AMENDED REPORT 

<b>APPLICATION FOR PERMIT TO DRILL</b>						<b>1. WELL NAME and NUMBER</b> NBU 1022-27C	
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						<b>3. FIELD OR WILDCAT</b> NATURAL BUTTES	
<b>4. TYPE OF WELL</b> Gas Well Coalbed Methane Well: NO						<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> NATURAL BUTTES	
<b>6. NAME OF OPERATOR</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.						<b>7. OPERATOR PHONE</b> 720 929-6587	
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217						<b>9. OPERATOR E-MAIL</b> mary.mondragon@anadarko.com	
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UTU-0473			<b>11. MINERAL OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>			<b>12. SURFACE OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>	
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>						<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>	
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>						<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>	
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>			<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>			<b>19. SLANT</b> VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>	
<b>20. LOCATION OF WELL</b>	<b>FOOTAGES</b>	<b>QTR-QTR</b>	<b>SECTION</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>MERIDIAN</b>	
<b>LOCATION AT SURFACE</b>	922 FNL 2341 FWL	NENW	27	10.0 S	22.0 E	S	
<b>Top of Uppermost Producing Zone</b>	922 FNL 2341 FWL	NENW	27	10.0 S	22.0 E	S	
<b>At Total Depth</b>	922 FNL 2341 FWL	NENW	27	10.0 S	22.0 E	S	
<b>21. COUNTY</b> UINTAH			<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 922			<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 640	
			<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 60			<b>26. PROPOSED DEPTH</b> MD: 8350 TVD:	
<b>27. ELEVATION - GROUND LEVEL</b> 4968			<b>28. BOND NUMBER</b> WYB000291			<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> Permit #43-8496	
<b>ATTACHMENTS</b>							
<b>VERIFY THE FOLLOWING ARE ATTACHED IN ACCORCANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES</b>							
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER				<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN			
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)				<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER			
<input type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)				<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP			
<b>NAME</b> Kevin McIntyre			<b>TITLE</b> Regulatory Analyst I			<b>PHONE</b> 720 929-6226	
<b>SIGNATURE</b>			<b>DATE</b> 10/21/2008			<b>EMAIL</b> Kevin.McIntyre@anadarko.com	
<b>API NUMBER ASSIGNED</b> 43047501650000			<b>APPROVAL</b>  Permit Manager				

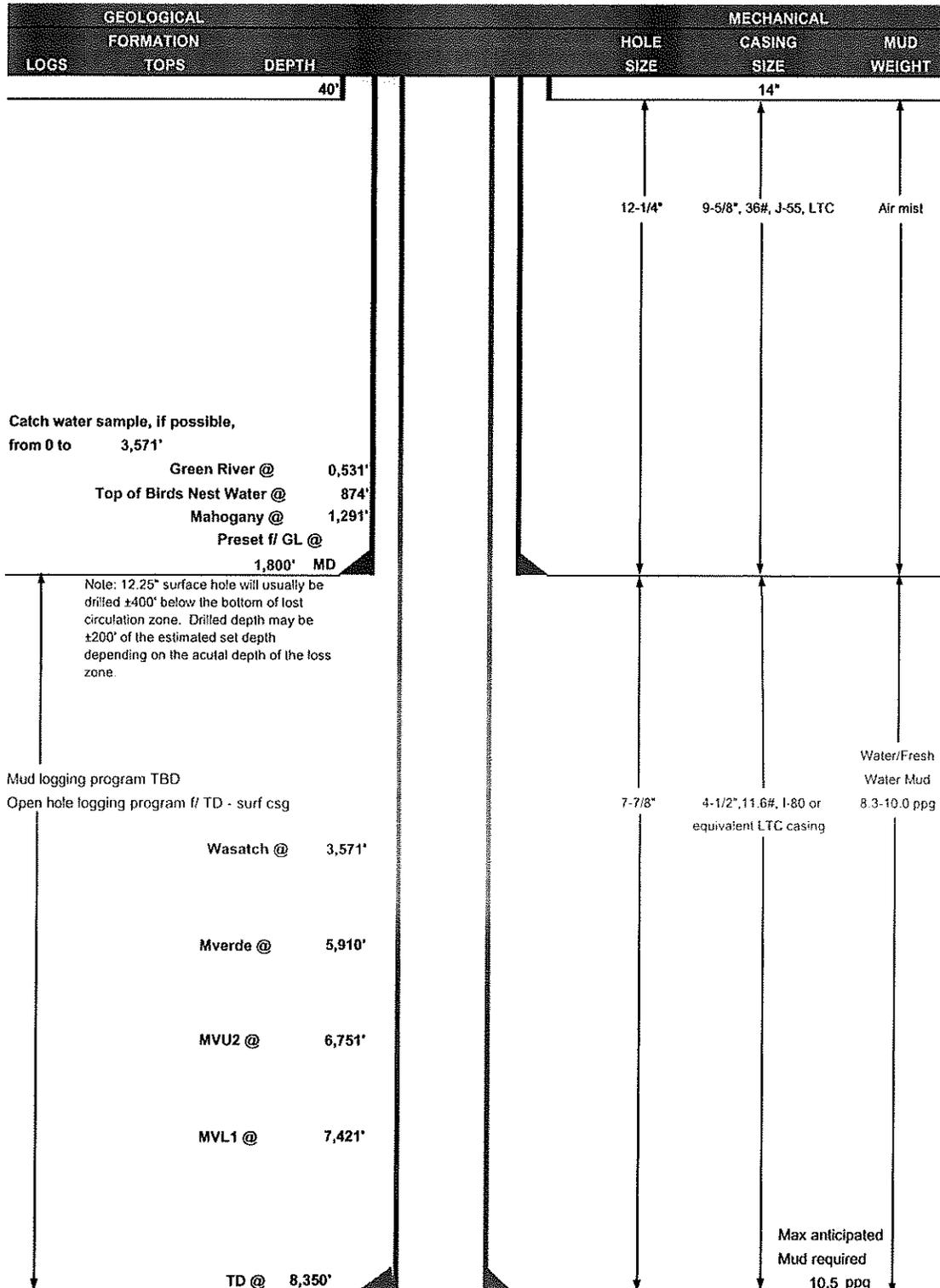
<b>Proposed Hole, Casing, and Cement</b>						
<b>String</b>	<b>Hole Size</b>	<b>Casing Size</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>		
Surf	12.25	9.625	0	1800		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade J-55 LT&C	1800	36.0			
	<b>Cement Interval</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>			
		0	1800			
		<b>Cement Description</b>	<b>Class</b>	<b>Sacks</b>	<b>Yield</b>	<b>Weight</b>
			Premium Foamed Cement	265	1.18	15.6

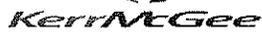
<b>Proposed Hole, Casing, and Cement</b>						
<b>String</b>	<b>Hole Size</b>	<b>Casing Size</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>		
Prod	7.875	4.5	0	8350		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade I-80 LT&C	8350	11.6			
	<b>Cement Interval</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>			
		0	8350			
		<b>Cement Description</b>	<b>Class</b>	<b>Sacks</b>	<b>Yield</b>	<b>Weight</b>
			Premium Lite High Strength	340	3.38	11.0
			Pozzuolanic Cement	1480	1.31	14.3



## KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	October 1, 2008
WELL NAME	NBU 1022-27C	TD	8,350' MD/TVD
FIELD	Natural Buttes	COUNTY	Uintah STATE Utah ELEVATION 4,968' GL KB 4,983'
SURFACE LOCATION	NENW 922' FNL & 2341' FWL, SEC. 27, T10S, R22E		BHL Straight Hole
	Latitude: 39.924583	Longitude: -109.426292	NAD 27
OBJECTIVE ZONE(S)	Wasatch/Mesaverde		
ADDITIONAL INFO	Regulatory Agencies: BLM (MINERALS & SURFACE), UDOGM, Tri-County Health Dept.		





**KERR-McGEE OIL & GAS ONSHORE LP  
DRILLING PROGRAM**

**CASING PROGRAM**

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3520	2020	453000
SURFACE	9-5/8"	0 to 1800	36.00	J-55	LTC	1.29	2.40	8.90
PRODUCTION	4-1/2"	0 to 8350	11.60	I-80	LTC	2.86	1.39	2.38

- 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 = 10.5 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 3340 psi

**CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500	Premium cmt + 2% CaCl + .25 pps flocele	215	60%	15.60	1.18
Option 1	TOP OUT CMT (1)	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
<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>							
SURFACE	LEAD	1500	Prem cmt + 16% Gel + 10 pps gilsonite + .25 pps Flocele + 3% salt BWOC	170	35%	11.00	3.82
Option 2	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	3,070'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	340	60%	11.00	3.38
	TAIL	5,280'	50/50 Poz/G + 10% salt + 2% gel +.1% R-3	1480	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.  
 BOP: 11" 5M with one annular and 2 rams. Test to 5,000 psi (annular to 2,500 psi) prior to drilling out. Record on chart recorder & tour sheet. Function test rams on each trip. Maintain safety valve & inside BOP on rig floor at all times. Kelly to be equipped with upper & lower kelly valves.  
 Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.  
 Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER: \_\_\_\_\_ DATE: \_\_\_\_\_  
 Brad Laney  
 DRILLING SUPERINTENDENT: \_\_\_\_\_ DATE: \_\_\_\_\_  
 Randy Bayne NBU 1022-27C.xls

**NBU 1022-27C  
Twin to NBU 58N2  
NENW Sec. 27, T10S,R22E  
UINTAH COUNTY, UTAH  
UTU-473**

**ONSHORE ORDER NO. 1**

***DRILLING PROGRAM***

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

<u>Formation</u>	<u>Depth</u>
Uinta	0- Surface
Green River	531'
Bird's Nest	874'
Mahogany	1291'
Wasatch	3571'
Mesaverde	5910'
MVU2	6751'
MVL1	7421'
TD	8350'

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

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
	Green River	531'
	Bird's Nest	874'
	Mahogany	1291'
Gas	Wasatch	3571'
Gas	Mesaverde	5910'
Gas	MVU2	6751'
Gas	MVL1	7421'
Water	N/A	
Other Minerals	N/A	

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

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

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

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

**5. Drilling Fluids Program:**

*Please see the Natural Buttes Unit SOP.*

6. **Evaluation Program:**

*Please see the Natural Buttes Unit SOP.*

7. **Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 8,350' TD, approximately equals 5177 psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 3340 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. **Anticipated Starting Dates:**

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

9. **Variances:**

*Please see Natural Buttes Unit SOP Onshore Order #2 – Air Drilling Variance  
Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2*

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

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

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

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

*Background*

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

*The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.*

*Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.*

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

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

#### *Variance for BOPE Requirements*

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

#### *Variance for Mud Material Requirements*

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

#### *Variance for Special Drilling Operation (surface equipment placement) Requirements*

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

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

*Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.*

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

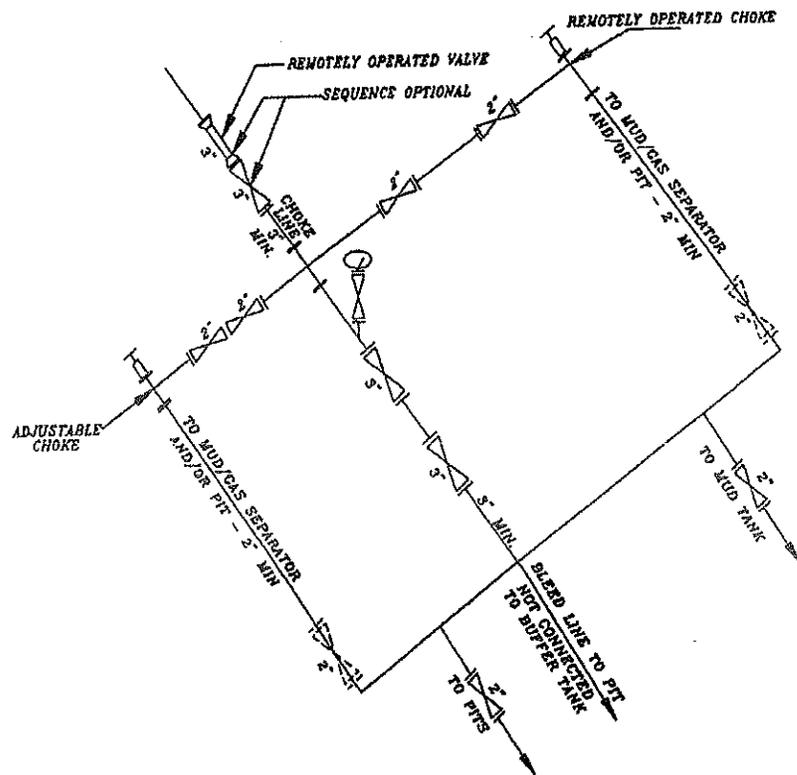
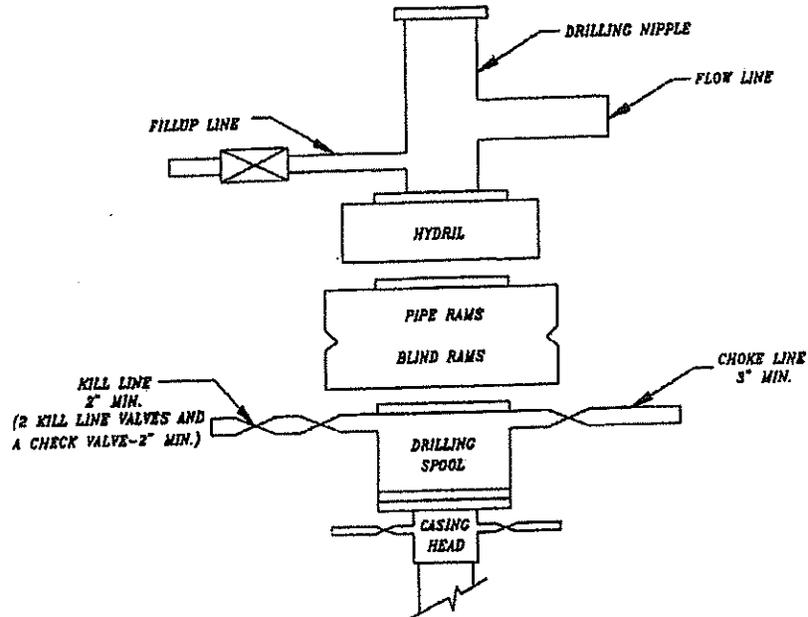
*Conclusion*

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

**10. Other Information:**

*Please see Natural Buttes Unit SOP.*

EXHIBIT A



**SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK**

**NBU 1022-27C  
Twin to NBU 58N2  
NENW Sec. 27 ,T10S,R22E  
UINTAH COUNTY, UTAH  
UTU-473**

**ONSHORE ORDER NO. 1**

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

**1. Existing Roads:**

Refer to the attached location directions.

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

**2. Planned Access Roads:**

Approximately 260' +/- of new access road is proposed. Refer to Topo Map B.

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

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

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

Please refer to Topo Map C.

**4. Location of Existing & Proposed Facilities:**

No new pipeline, as we will be utilizing the existing NBU #58N2 pipeline. No TOPO D attached.

*Please see the Natural Buttes Unit SOP.*

**Variances to Best Management Practices (BMPs) Requested:**

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

**Interim Surface Reclamation Plan:**

This exception is requested due to the current twin and multi-well program. If determined that this well will not be a candidate for either twinning &/or multi-well the operator shall spread the topsoil pile on the location up to the rig anchor points. The location will be reshaped to the

original contour to the extent possible. The operator will reseed the area using the BLM recommended seed mixture and reclamation methods.

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

*Please see the Natural Buttes SOP.*

6. **Source of Construction Materials:**

*Please see the Natural Buttes SOP.*

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

*Please see the Natural Buttes SOP.*

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

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites: RNI, Sec. 5, T9S, R22E, NBU #159, Sec. 35, T9S R21E, Ace Oilfield, Sec. 2, T6S, R20E, MC&MC, Sec. 12, T6S, R19E, Pipeline Facility Sec. 36, T9S, R20E, Goat Pasture Evaporation Pond SW/4 Sec. 16, T10S, R22E, Bonanza Evaporation Pond Sec. 2, T10S, R23E (*Request is in lieu of filing Form 3160-5, after initial production*).

8. **Ancillary Facilities:**

*Please see the Natural Buttes SOP.*

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

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

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

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

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

*Please see the Natural Buttes SOP.*

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

Crested Wheatgrass      12 lbs.

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

**11. Surface/Mineral Ownership:**

The well pad, access road, pipeline and mineral ownership are listed below:

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

**12. Stipulations/Notices/Mitigation:**

There are no stipulations or notices for this location.

**13. Other Information:**

A Class III archaeological survey and a paleontological survey have been performed and will be submitted.

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

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

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

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

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

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

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

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by BLM Nationwide Bond #WYB000291.

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

  
Kevin McIntyre

10/1/2008

Date

**Kerr-McGee Oil & Gas Onshore LP**  
**NBU #1022-27C**  
**SECTION 27, 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 10.7 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 1.6 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; PROCEED IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 0.1 MILES TO THE BEGINNING OF THE PROPOSED ACCESS TO THE NORTHEAST; FOLLOW ROAD FLAGS IN A NORTHEASTERLY DIRECTION APPROXIMATELY 260' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 54.6 MILES.

# Kerr-McGee Oil & Gas Onshore LP

NBU #1022-27C

LOCATED IN UINTAH COUNTY, UTAH  
SECTION 27, T10S, R22E, S.L.B.&M.

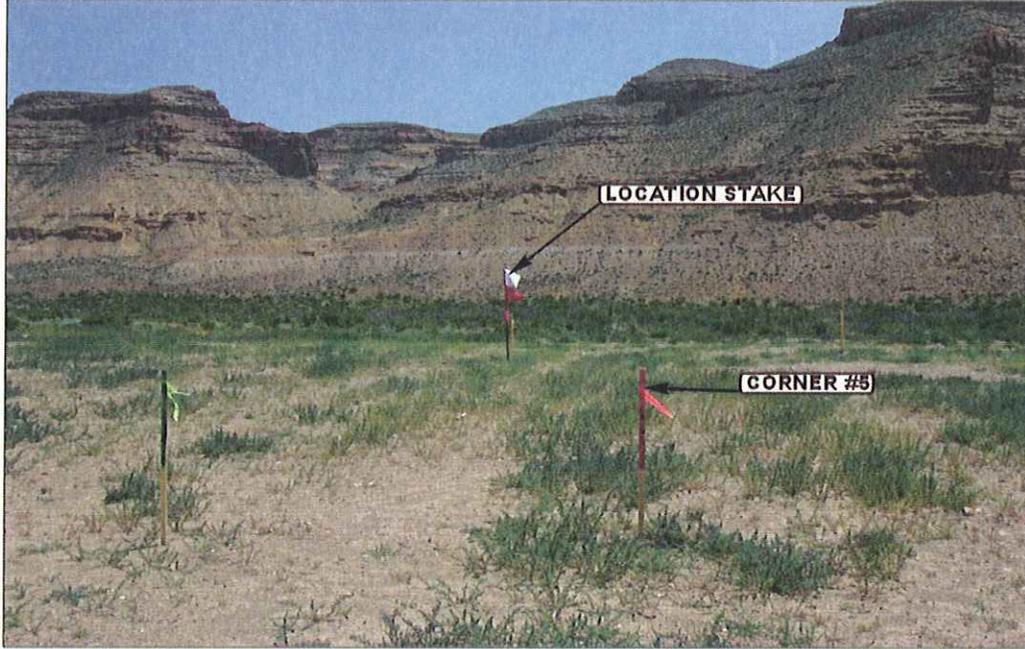


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY

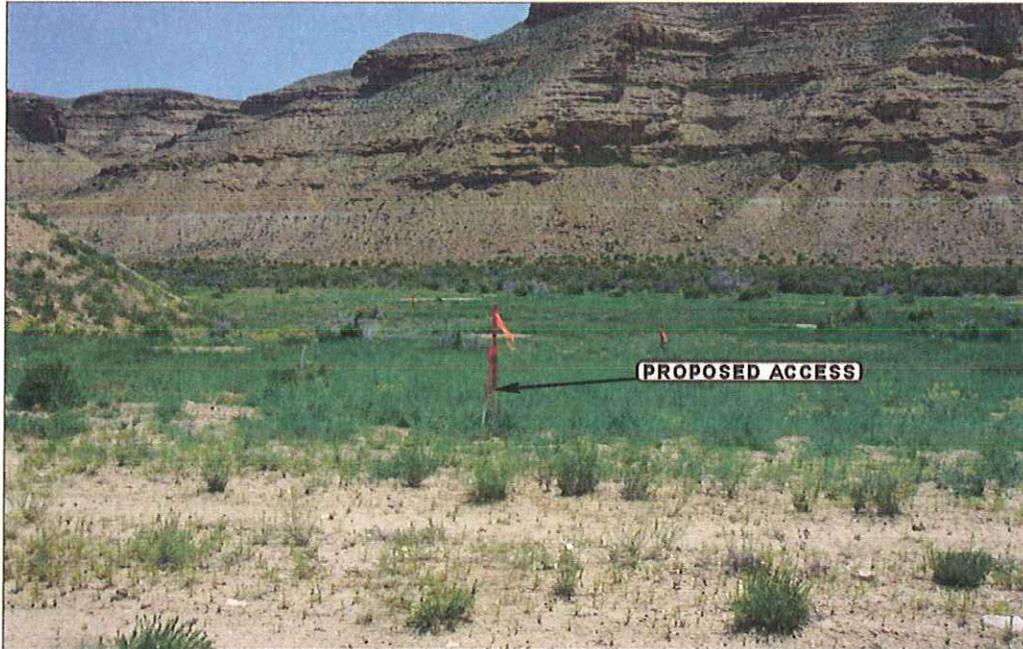


PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: NORTHEASTERLY



- Since 1964 -

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

<b>LOCATION PHOTOS</b>			<b>06</b>	<b>27</b>	<b>05</b>	<b>PHOTO</b>
MONTH	DAY	YEAR				
TAKEN BY: D.K.	DRAWN BY: C.P.	REVISED: 09-26-08 SP				

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

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

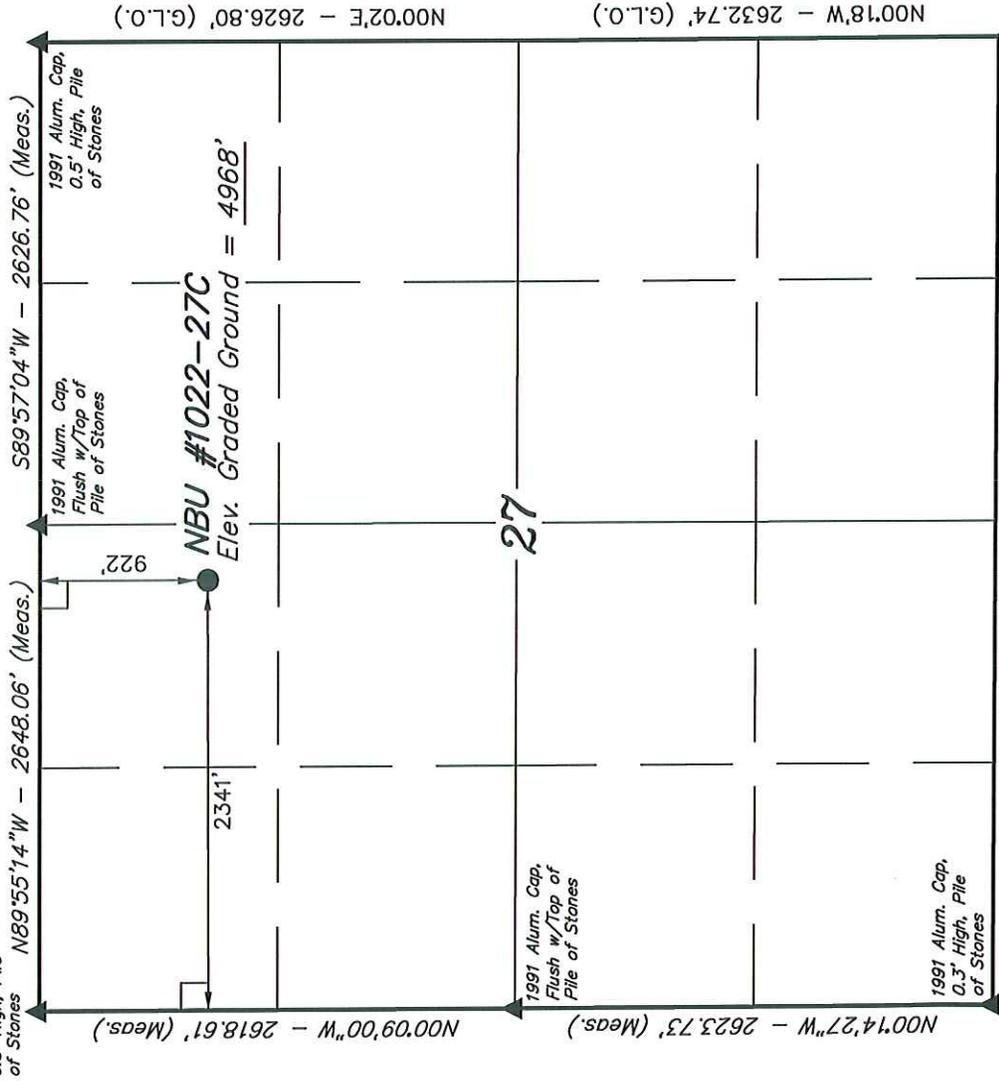
Well location, NBU #1022-27C, located as shown in the NE 1/4 NW 1/4 of Section 27, T10S, R22E, S.L.B.&M. Uintah County, Utah.

**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 SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5238 FEET.

**BASIS OF BEARINGS**

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



**CERTIFICATE**

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

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

REVISED 09-26-08 S.P.

**UINTAH ENGINEERING & LAND SURVEYING**

85 SOUTH 200 EAST - VERNAL, UTAH 84078  
(435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 06-20-05	DATE DRAWN: 06-28-05
PARTY D.K. L.K. P.M.	REFERENCES G.L.O. PLAT	
WEATHER HOT	FILE Kerr-McGee Oil & Gas Onshore LP	

(NAD 83)  
LATITUDE = 39°55'28.38" (39.924550)  
LONGITUDE = 109°25'37.10" (109.426972)  
(NAD 27)  
LATITUDE = 39°55'28.50" (39.924583)  
LONGITUDE = 109°25'34.65" (109.426292)

**LEGEND:**

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

Kerr-McGee Oil & Gas Onshore LP

FIGURE #1

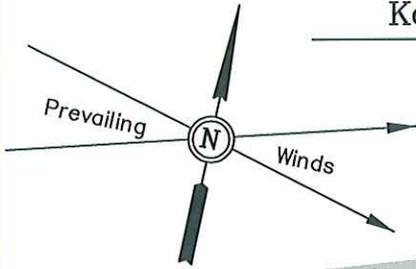
LOCATION LAYOUT FOR

NBU #1022-27C  
SECTION 27, T10S, R22E, S.L.B.&M.

F-0.2' 922' FNL 2341' FWL  
El. 68.2'

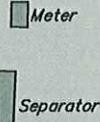
Approx. Toe of Fill Slope

F-2.4' El. 66.0'



SCALE: 1" = 50'  
DATE: 06-28-05  
Drawn By: P.M.  
REVISED 09-26-08  
By: S.P.

EXISTING LOCATION FOR NBU #58N2

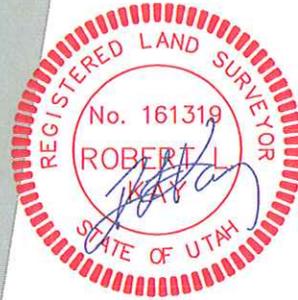


NOTE:  
Flare Pit is to be located a min. of 100' from the Well Head.

Reserve Pit Backfill & Spoils Stockpile

Approx. Top of Cut Slope

C-0.1' El. 68.5'



Existing Road

FLARE PIT

Bloole Line

El. 69.4'  
C-11.0' (btm. pit)

RESERVE PITS (10' Deep)

Total Pit Capacity W/2' of Freeboard = 15,490 Bbls. ±  
Total Pit Volume = 4,280 Cu. Yds.

El. 69.1'  
C-10.7' (btm. pit)

15' WIDE BENCH

15' WIDE BENCH/DIKE

Reserve Pit Backfill & Spoils Stockpile

Existing Topsoil  
Topsoil Stockpile

F-1.3' El. 67.1'

C-1.4' El. 69.8'

PROANE STORAGE

F-5.0' El. 63.4'

Sta. 0+00

F-7.5' El. 60.9'

Topsoil Stockpile

F-5.5' El. 62.9'

TOILET

TRAILER

WATER TANK

LIGHT PLANT

BOILER

COMPRESSOR

BOOSTER

PUMP HOUSE

TRASH

MUD TANKS

GRADE El. 68.4'

135'

Sta. 1+50

Sta. 0+50

Round Corners as Needed

Proposed Access Road

NOTES:

FINISHED GRADE ELEV. AT #1022-27C LOC. STAKE = 4968.4'

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Kerr-McGee Oil & Gas Onshore LP

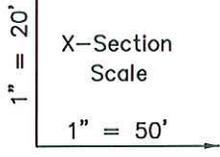
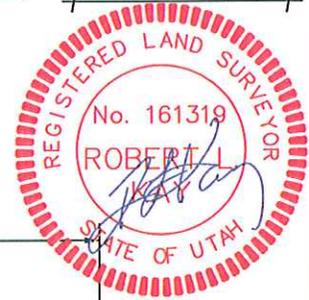
FIGURE #2

TYPICAL CROSS SECTIONS FOR

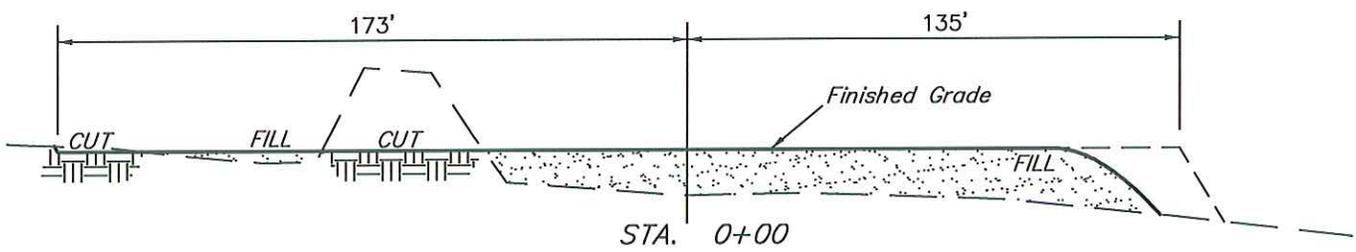
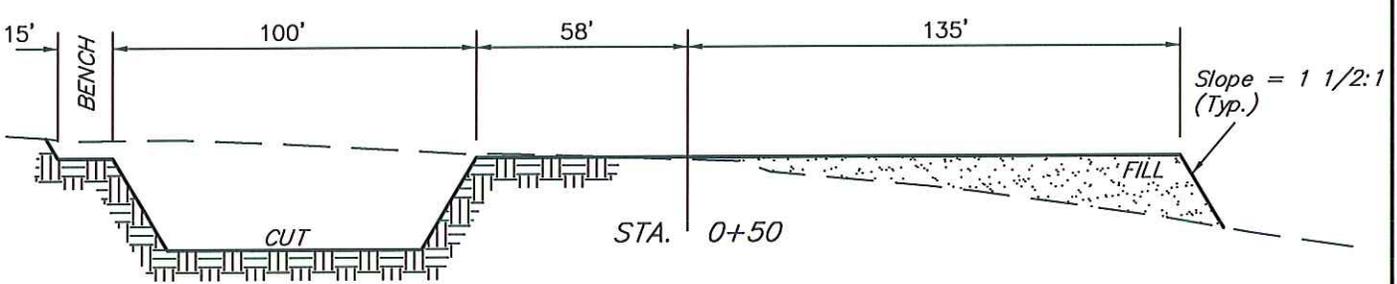
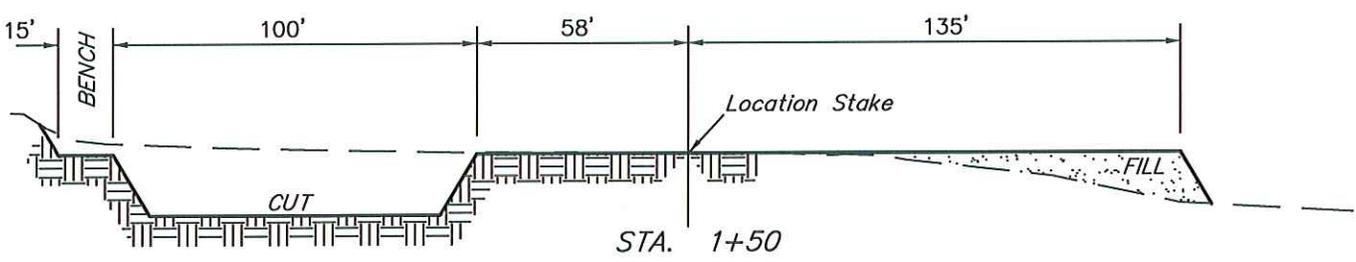
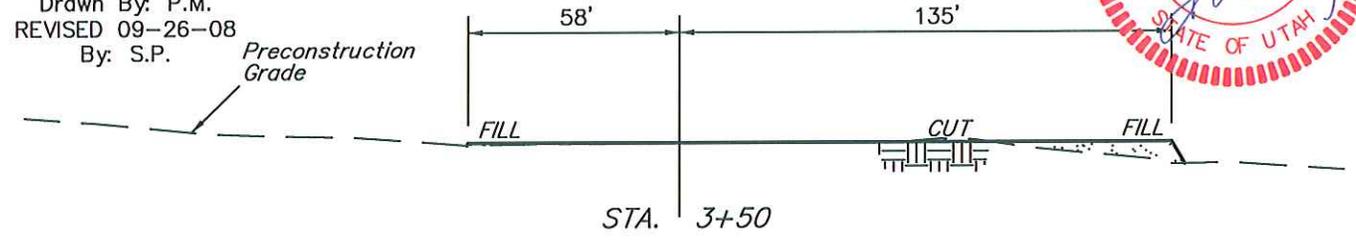
NBU #1022-27C

SECTION 27, T10S, R22E, S.L.B.&M.

922' FNL 2341' FWL



DATE: 06-28-05  
 Drawn By: P.M.  
 REVISED 09-26-08  
 By: S.P.



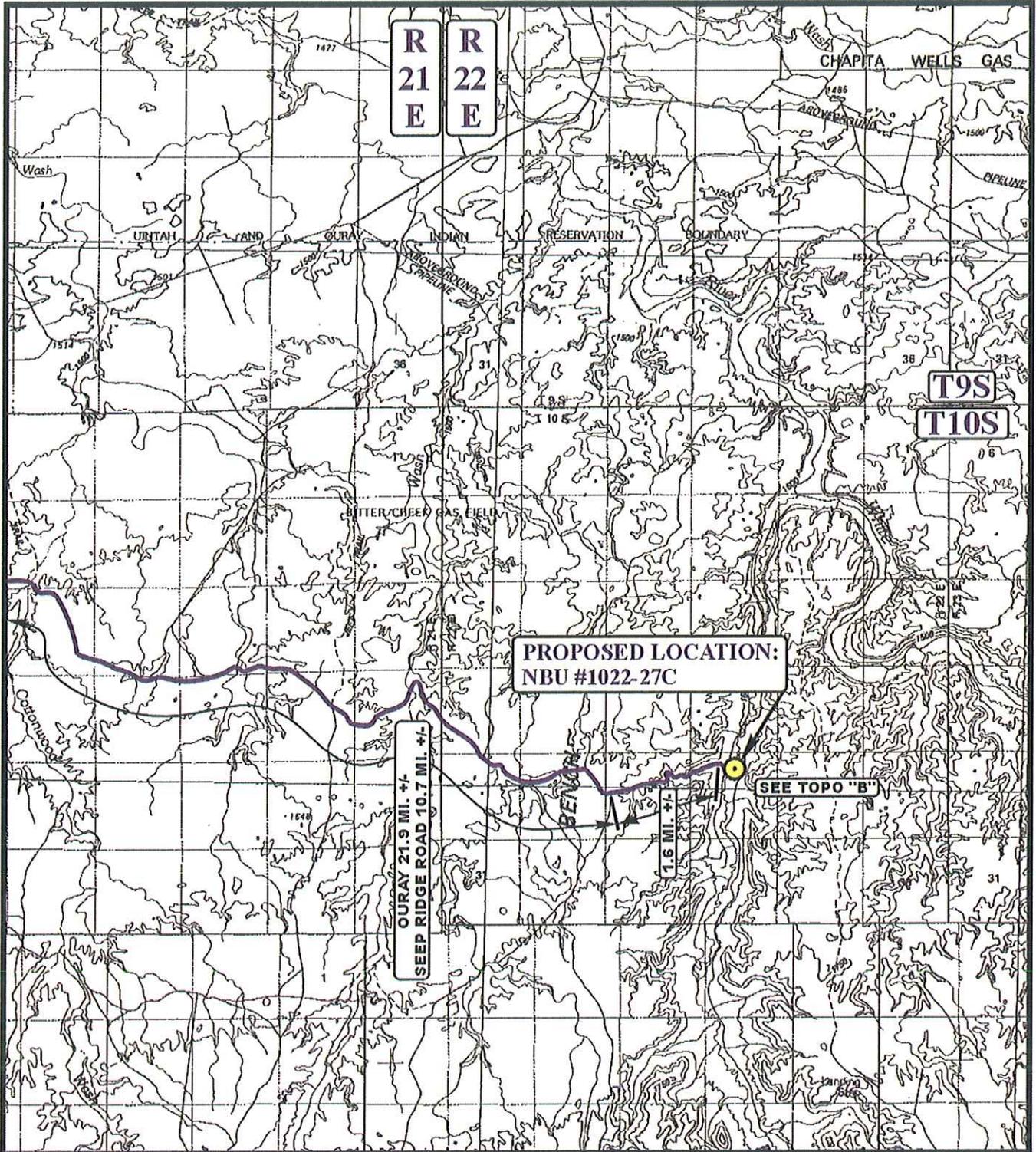
\* NOTE:  
 FILL QUANTITY INCLUDES  
 5% FOR COMPACTION

APPROXIMATE YARDAGES

CUT	
(6") Topsoil Stripping	= 840 Cu. Yds.
(New Construction Only)	
Remaining Location	= 5,330 Cu. Yds.
<b>TOTAL CUT</b>	<b>= 6,170 CU.YDS.</b>
<b>FILL</b>	<b>= 4,490 CU.YDS.</b>

EXCESS MATERIAL	= 1,680 Cu. Yds.
Topsoil & Pit Backfill	= 2,980 Cu. Yds.
(1/2 Pit Vol.)	
DEFICIT UNBALANCE	= <1,300> Cu. Yds.
(After Rehabilitation)	

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



**LEGEND:**

 PROPOSED LOCATION



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

NBU #1022-27C

SECTION 27, T10S, R22E, S.L.B.&M.

922' FNL 2341' FWL



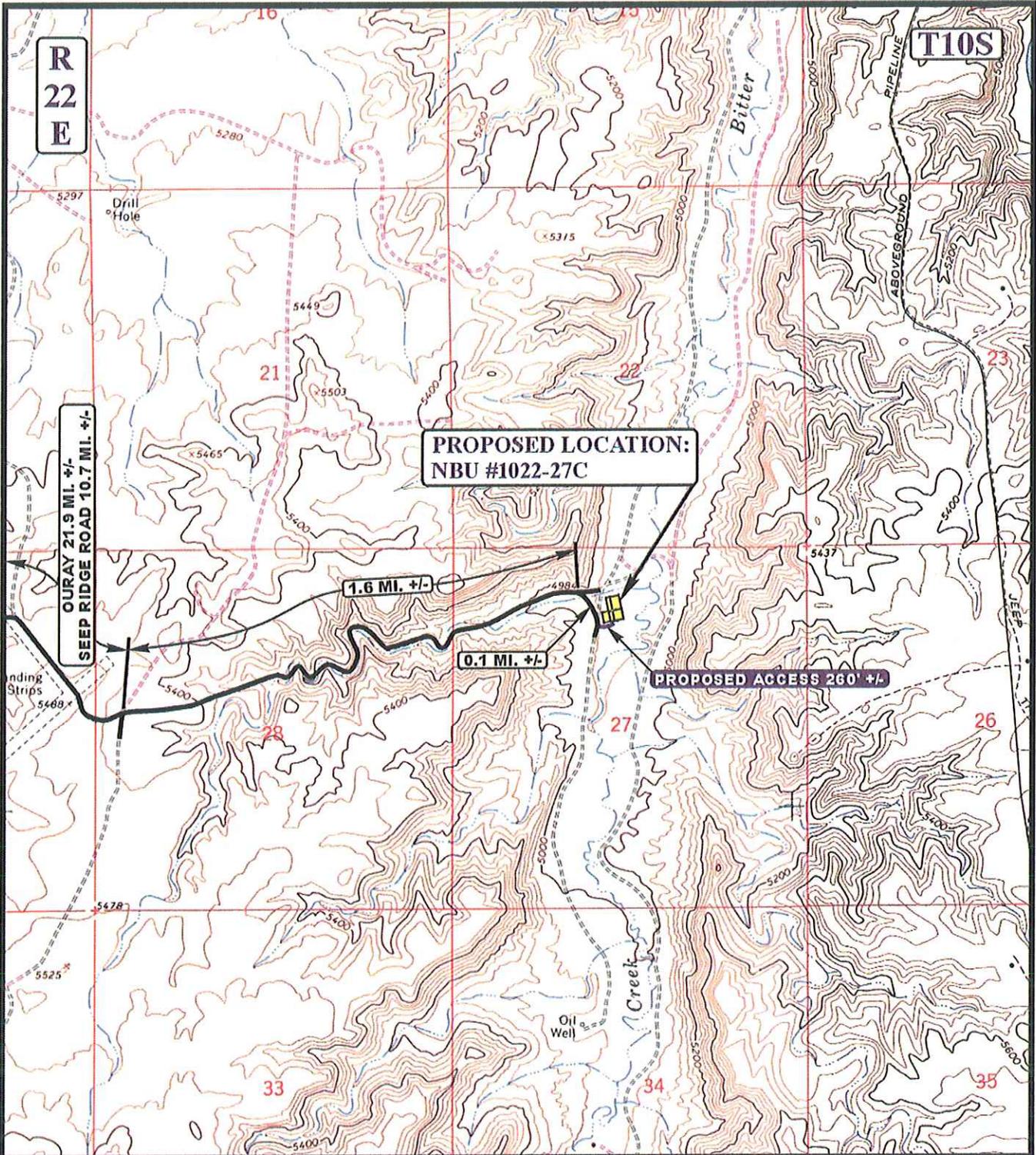
Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC  
MAP**

**06 27 05**  
MONTH DAY YEAR

SCALE: 1:100,000 | DRAWN BY: C.P. | REVISED: 09-26-08 SP





**LEGEND:**

- EXISTING ROAD
- - - - - PROPOSED ACCESS ROAD

N



**Kerr-McGee Oil & Gas Onshore LP**  
 NBU #1022-27C  
 SECTION 27, T 10S, R22E, S.L.B.&M.  
 922' FNL 2341' FWL



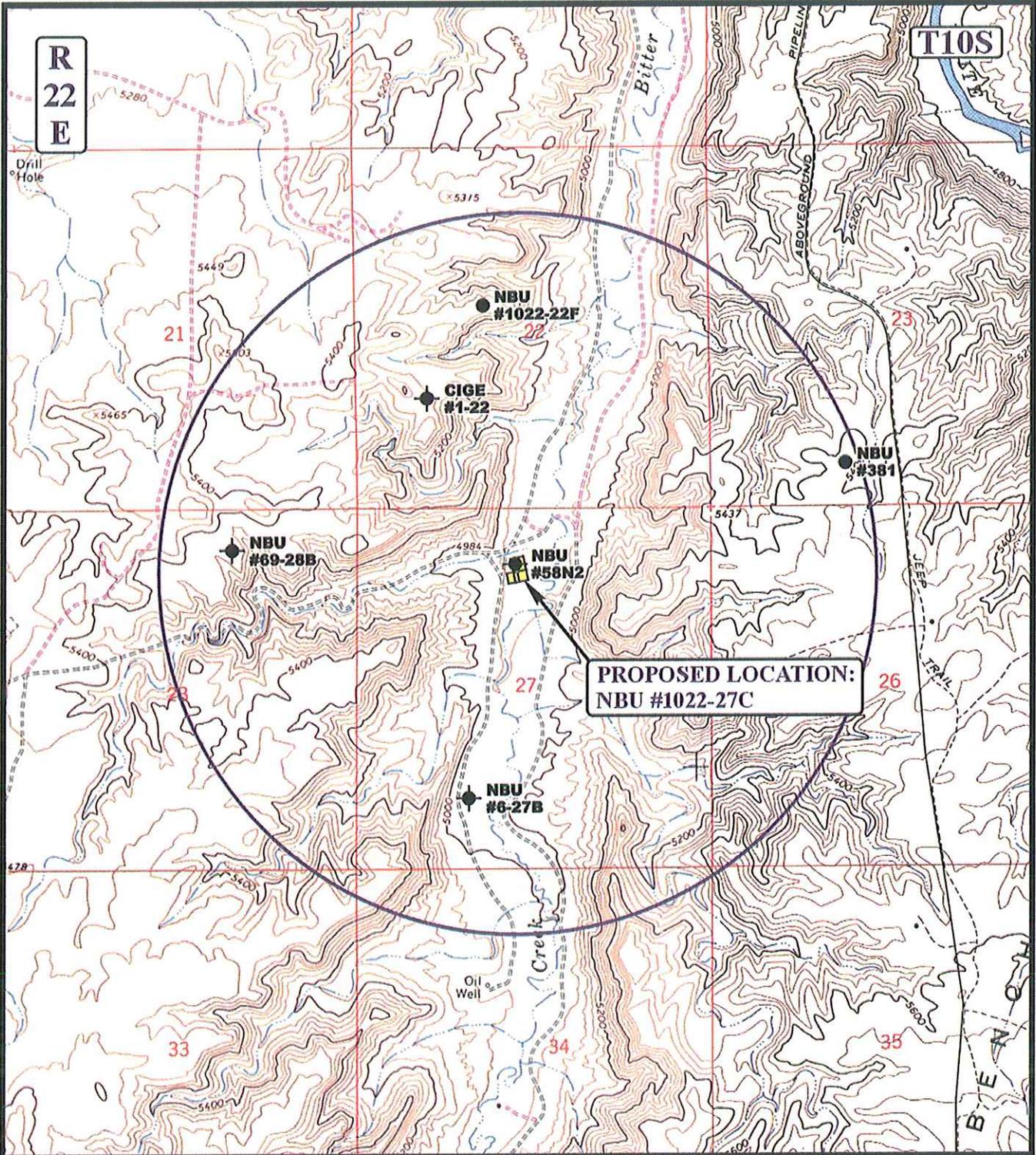
**Utah Engineering & Land Surveying**  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC MAP**

**06 27 05**  
 MONTH DAY YEAR



SCALE: 1" = 2000' DRAWN BY: C.P. REVISED: 09-26-08 S.P.



**LEGEND:**

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



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

**NBU #1022-27C**

**SECTION 27, T10S, R22E, S.L.B.&M.**

**922' FNL 2341' FWL**



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

**TOPOGRAPHIC MAP**

**06 27 05**  
 MONTH DAY YEAR



SCALE: 1" = 2000' DRAWN BY: C.P. REVISED: 09-26-08 S.P.

# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

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

IN REPLY REFER TO:  
3160  
(UT-922)

October 1, 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)		
43-047-50157	NBU 920-13F	Sec 13 T09S R20E 1321 FNL 1950 FWL
43-047-40380	NBU 920-13D	Sec 13 T09S R20E 0186 FNL 0807 FWL
43-047-50163	NBU 920-12E	Sec 12 T09S R20E 2080 FNL 0747 FWL
43-047-50151	NBU 920-13G	Sec 13 T09S R20E 1907 FNL 1782 FEL
43-047-50160	NBU 920-12D	Sec 12 T09S R20E 0491 FNL 0857 FWL
43-047-50164	NBU 920-13A	Sec 13 T09S R20E 0625 FNL 0586 FEL
43-047-50165	NBU 1022-27C	Sec 27 T10S R22E 0922 FNL 2341 FWL

(Proposed PZ MESA VERDE)

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

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

/s/ Michael L. Coulthard

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

MCoulthard:mc:10-1-08

API Number: 4304750165

Well Name: NBU 1022-27C

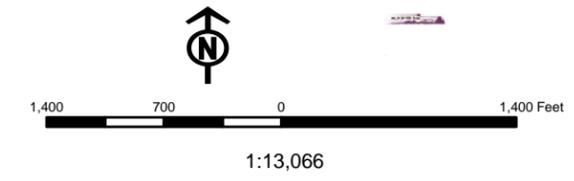
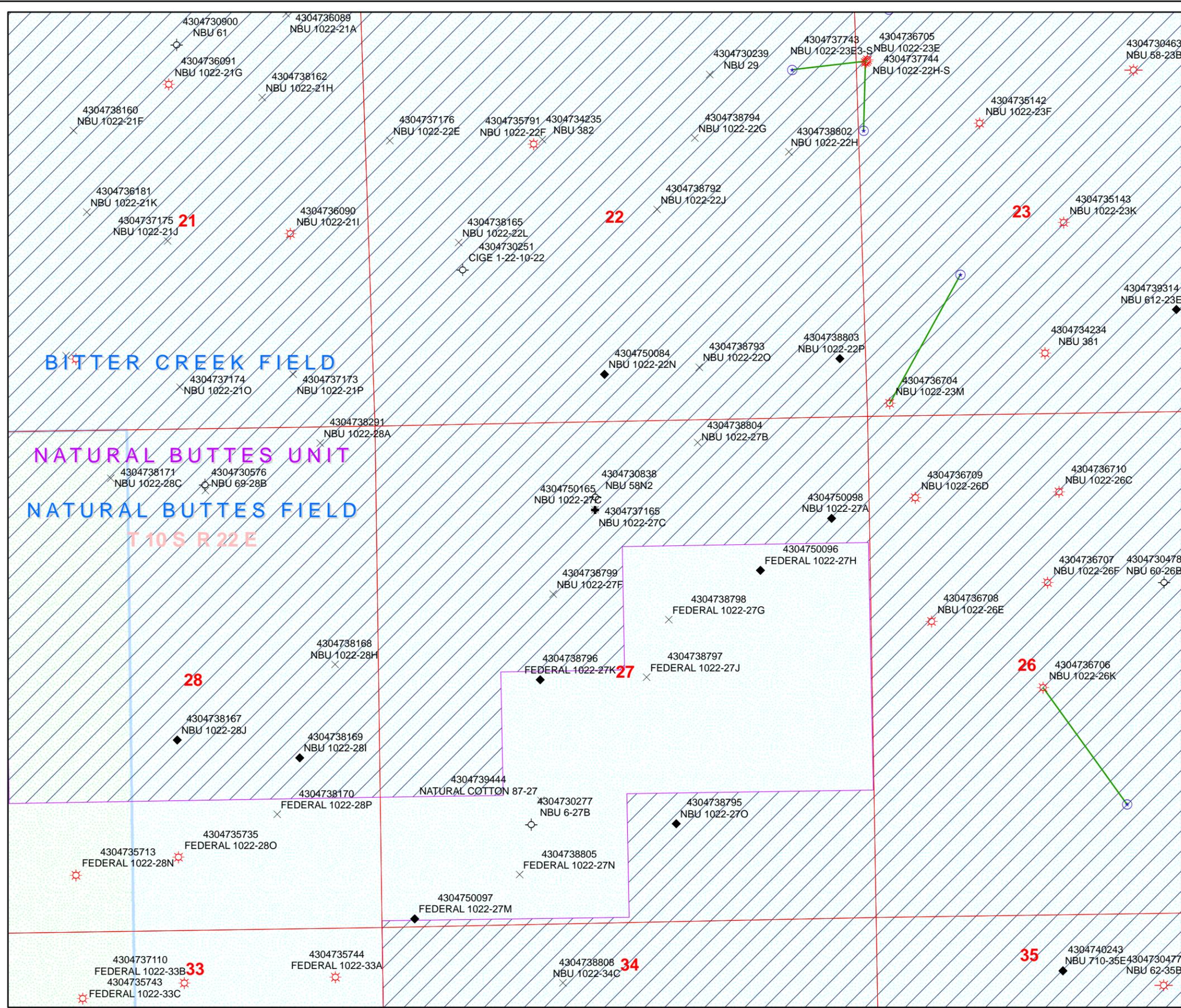
Township 10.0 S Range 22.0 E Section 27

Meridian: SLBM

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

Map Prepared:  
Map Produced by Diana Mason

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



**WORKSHEET  
APPLICATION FOR PERMIT TO DRILL**

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---

**APD RECEIVED:** 10/1/2008

**API NO. ASSIGNED:** 43047501650000

**WELL NAME:** NBU 1022-27C

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

**PHONE NUMBER:** 720 929-6226

**CONTACT:** Kevin McIntyre

**PROPOSED LOCATION:** NENW 27 100S 220E

**Permit Tech Review:**

**SURFACE:** 0922 FNL 2341 FWL

**Engineering Review:**

**BOTTOM:** 0922 FNL 2341 FWL

**Geology Review:**

**COUNTY:** UINTAH

**LATITUDE:** 39.92461

**LONGITUDE:** -109.42623

**UTM SURF EASTINGS:** 634491.00

**NORTHINGS:** 4420365.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 1 - Federal

**LEASE NUMBER:** UTU-0473

**PROPOSED FORMATION:** WSMVD

**SURFACE OWNER:** 1 - Federal

**COALBED METHANE:** NO

---

**RECEIVED AND/OR REVIEWED:**

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

**LOCATION AND SITING:**

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

**Comments:** Presite Completed

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



JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

### Permit To Drill

\*\*\*\*\*

**Well Name:** NBU 1022-27C  
**API Well Number:** 43047501650000  
**Lease Number:** UTU-0473  
**Surface Owner:** FEDERAL  
**Approval Date:** 10/21/2008

**Issued to:**

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

**Authority:**

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

**Duration:**

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

**General:**

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

**Conditions of Approval:**

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

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

**Notification Requirements:**

Notify the Division with 24 hours of spudding the well.

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

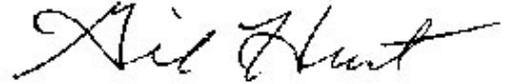
Notify the Division prior to commencing operations to plug and abandon the well.

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

**Reporting Requirements:**

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

**Approved By:**

A handwritten signature in black ink, appearing to read "Gil Hunt". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Gil Hunt  
Associate Director, Oil & Gas



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

November 17, 2009

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

Re: APD Rescinded – NBU 1022-27C, Sec. 27, T. 10S, R. 22E,  
Uintah County, Utah, API No. 43-047-50165

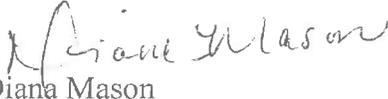
Dear Ms. Piernot:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on October 21, 2008. On November 17, 2009, you requested that the division rescind the state approved APD. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective November 17, 2009.

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  
Bureau of Land Management, Vernal

