

**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 1022-03A2T
<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-01191-A	<b>11. MINERAL 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>12. SURFACE OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>		<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>		<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>
<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		<b>19. SLANT</b> VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
<b>LOCATION AT SURFACE</b>	478 FNL 706 FEL	NENE	3	10.0 S	22.0 E	S
<b>Top of Uppermost Producing Zone</b>	478 FNL 706 FEL	NENE	3	10.0 S	22.0 E	S
<b>At Total Depth</b>	478 FNL 706 FEL	NENE	3	10.0 S	22.0 E	S

<b>21. COUNTY</b> UINTAH	<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 706	<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 1363
	<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 20	<b>26. PROPOSED DEPTH</b> MD: 8600 TVD:
<b>27. ELEVATION - GROUND LEVEL</b> 4957	<b>28. BOND NUMBER</b> WYB-000291	<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> zpermit #43-849

**ATTACHMENTS**

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

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

<b>NAME</b> Raleen White	<b>TITLE</b> Sr. Regulatory Analyst	<b>PHONE</b> 720 929-6666
<b>SIGNATURE</b>	<b>DATE</b> 12/22/2008	<b>EMAIL</b> raleen.white@anadarko.com
<b>API NUMBER ASSIGNED</b> 43047501710000	<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	2000		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade J-55 LT&C	2000	36.0			
	<b>Cement Interval</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>			
		0	2000			
		<b>Cement Description</b>	<b>Class</b>	<b>Sacks</b>	<b>Yield</b>	<b>Weight</b>
			Premium Foamed Cement	315	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	8600		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade I-80 LT&C	8600	11.6			
	<b>Cement Interval</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>			
		0	8600			
		<b>Cement Description</b>	<b>Class</b>	<b>Sacks</b>	<b>Yield</b>	<b>Weight</b>
			Premium Lite High Strength	400	3.38	11.8
			Pozzuolanic Cement	1380	1.31	14.3

**Kerr-McGee Oil & Gas Onshore LP**  
**NBU #1022-O3A2T**  
**SECTION 3, T10S, R22E, S.L.B.&M.**

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 14.0 MILES TO THE JUNCTION OF STATE HIGHWAY 88; EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.0 MILES TO OURAY, UTAH; PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 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 8.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN LEFT AND PROCEED IN AN NORTHEASTERLY DIRECTION APPROXIMATELY 3.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTH; TURN LEFT AND PROCEED IN A NORTHERLY DIRECTION APPROXIMATELY 1.0 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORHTEAST; TURN RIGHT AND PROCEED IN A NORTHEASTERLY, THEN SOUTHERLY, THEN NORTHEASTERLY DIRECTION APPROXIMATELY 1.2 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTH; TURN LEFT AND PROCEED IN A NORTHERLY DIRECTION APPROXIMATELY 100' TO THE EXISTING WELL #86J AND THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 57.2 MILES.

**Kerr McGee Oil & Gas Onshore LP**  
**NBU #1022-O3A2T**  
 LOCATED IN UINTAH COUNTY, UTAH  
 SECTION 3, T10S, R22E, S.L.B.&M.

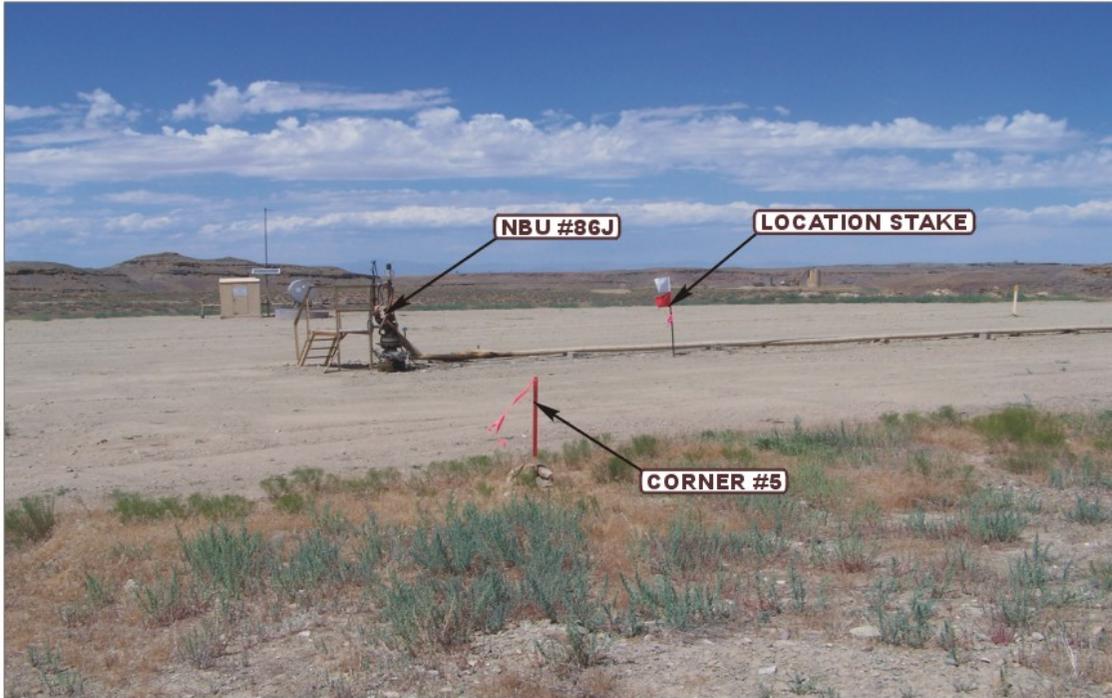


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY



PHOTO: VIEW OF EXISTING ACCESS

CAMERA ANGLE: NORTHEASTERLY



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

<b>LOCATION PHOTOS</b>			<b>08</b>	<b>19</b>	<b>08</b>	<b>PHOTO</b>
			MONTH	DAY	YEAR	
TAKEN BY: D.K.	DRAWN BY: J.J.	REVISED: 00-00-00				

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

## Kerr-McGee Oil & Gas Onshore LP

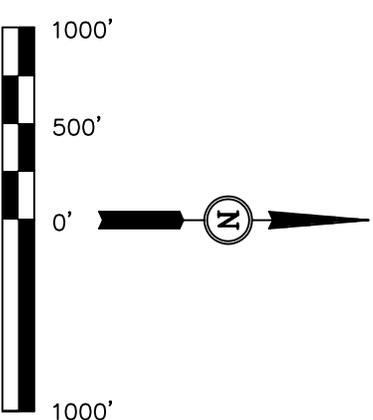
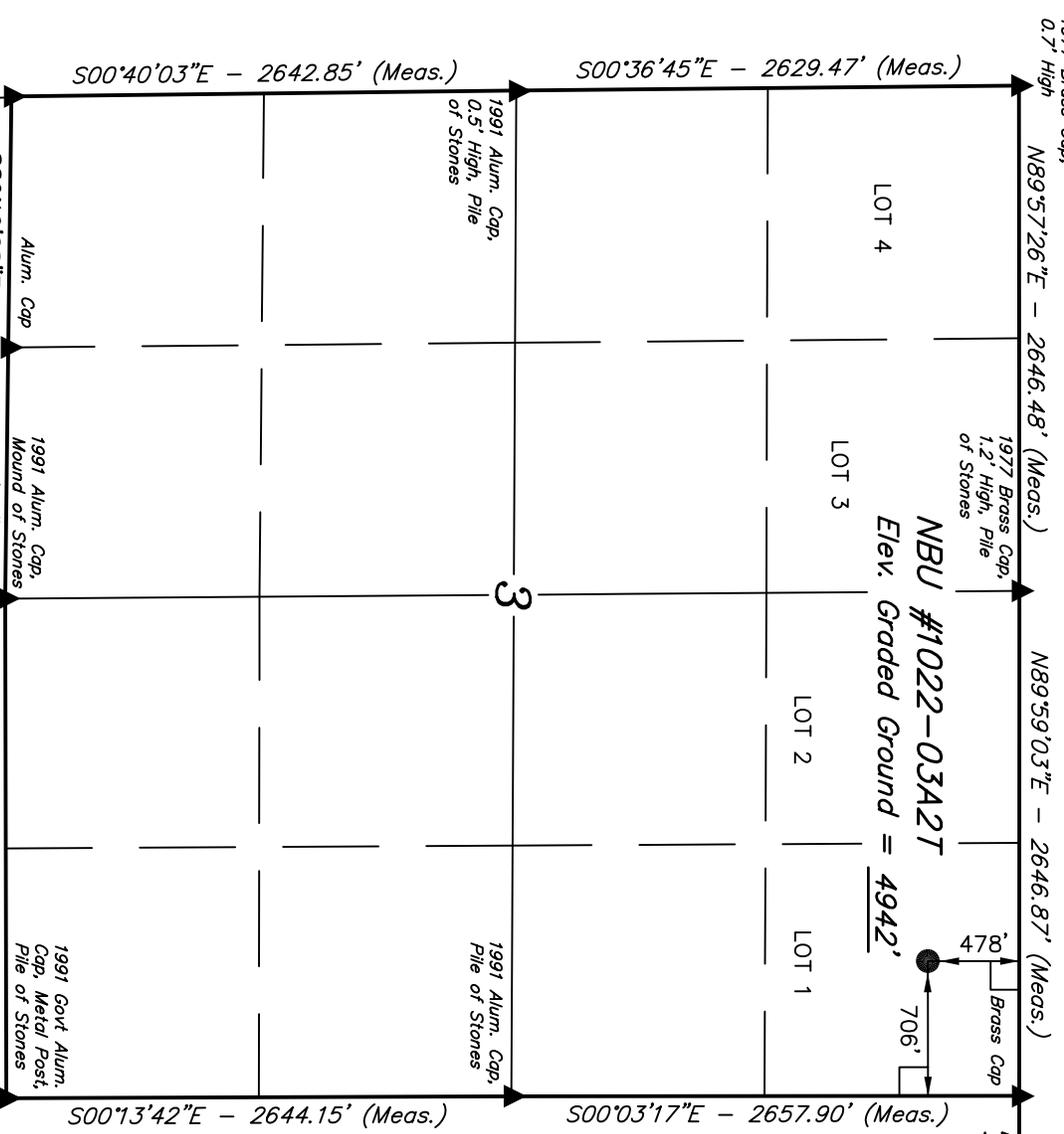
Well location, NBU #1022-03A2T, located as Shown in the LOT 1 of Section 3, T10S, R22E, S.L.B.&M., Uintah County, Utah.

### BASIS OF ELEVATION

BENCH MARK (20EAM) LOCATED IN THE SE 1/4 OF SECTION 35, T8S, R21E, S.L.B.&M. TAKEN FROM THE OURAY SE QUADRANGLE, UTAH, 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 4697 FEET.

### BASIS OF BEARINGS

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



### CERTIFICATE

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

**KAY ROBERTS**  
 REGISTERED LAND SURVEYOR  
 REGISTRATION NO. 161319  
 STATE OF UTAH

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

SCALE	1" = 1000'	DATE SURVEYED:	08-06-08	DATE DRAWN:	08-20-08
PARTY	L.K. D.D. S.L.	REFERENCES	G.L.O. PLAT		
WEATHER	WARM	FILE	Kerr-McGee Oil & Gas Onshore LP		

**LEGEND:**  
 ┌ = 90° SYMBOL  
 ● = PROPOSED WELL HEAD.  
 ▲ = SECTION CORNERS LOCATED.

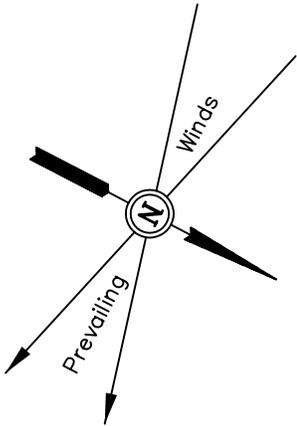
(NAD 83)  
 LATITUDE = 39°59'02.22" (39.983950)  
 LONGITUDE = 109°25'09.14" (109.419206)  
 (NAD 27)  
 LATITUDE = 39°59'02.34" (39.983983)  
 LONGITUDE = 109°25'06.68" (109.418522)

Kerr-McGee Oil & Gas Onshore LP

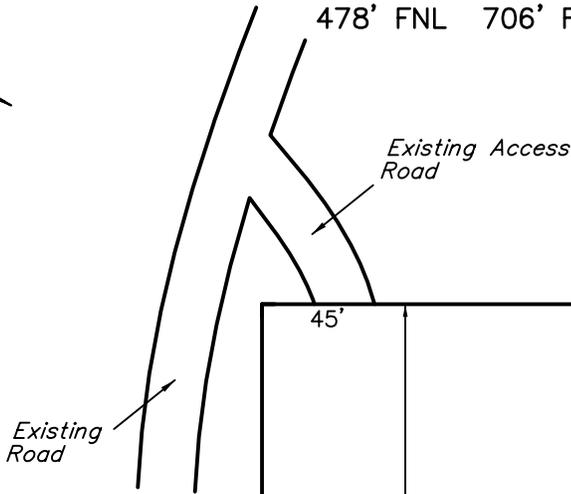
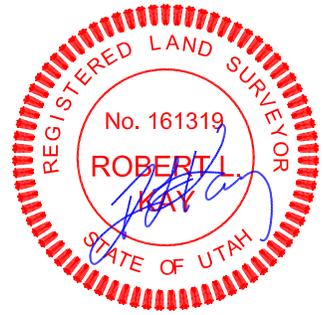
FIGURE #1

LOCATION LAYOUT FOR

NBU #1022-03A2T  
SECTION 3, T10S, R22E, S.L.B.&M.  
478' FNL 706' FEL

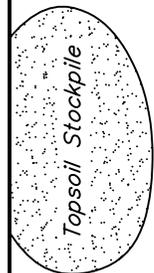
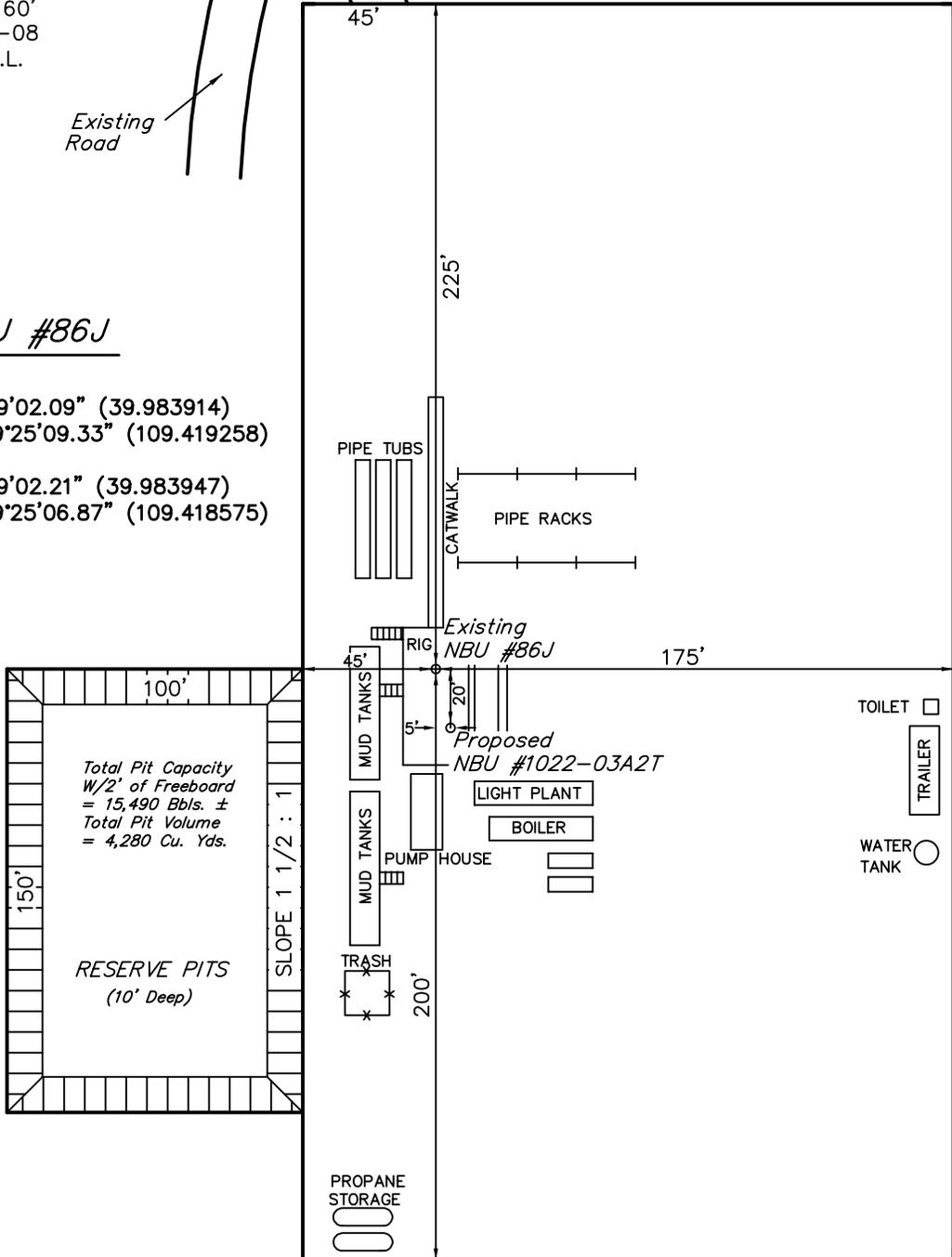


SCALE: 1" = 60'  
DATE: 08-20-08  
Drawn By: S.L.



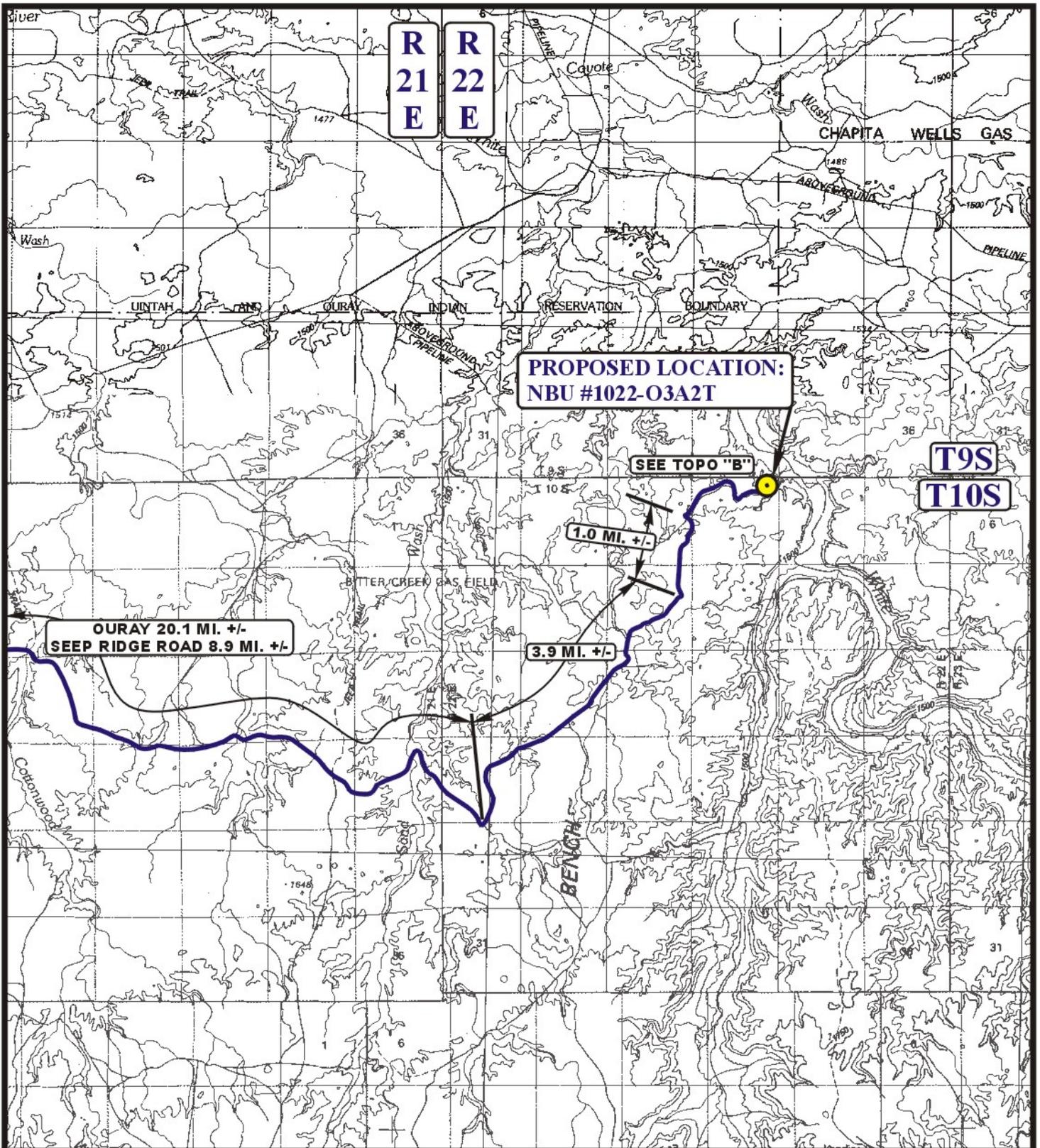
NBU #86J

(NAD 83)  
LATITUDE = 39°59'02.09" (39.983914)  
LONGITUDE = 109°25'09.33" (109.419258)  
(NAD 27)  
LATITUDE = 39°59'02.21" (39.983947)  
LONGITUDE = 109°25'06.87" (109.418575)



NOTES:

FINISHED GRADE ELEV. AT LOC. STAKE = 4942.0'



**LEGEND:**

 PROPOSED LOCATION



**Kerr McGee Oil & Gas Onshore LP**

**NBU #1022-03A2T  
SECTION 3, T10S, R22E, S.L.B.&M.  
478' FNL 706' FEL**



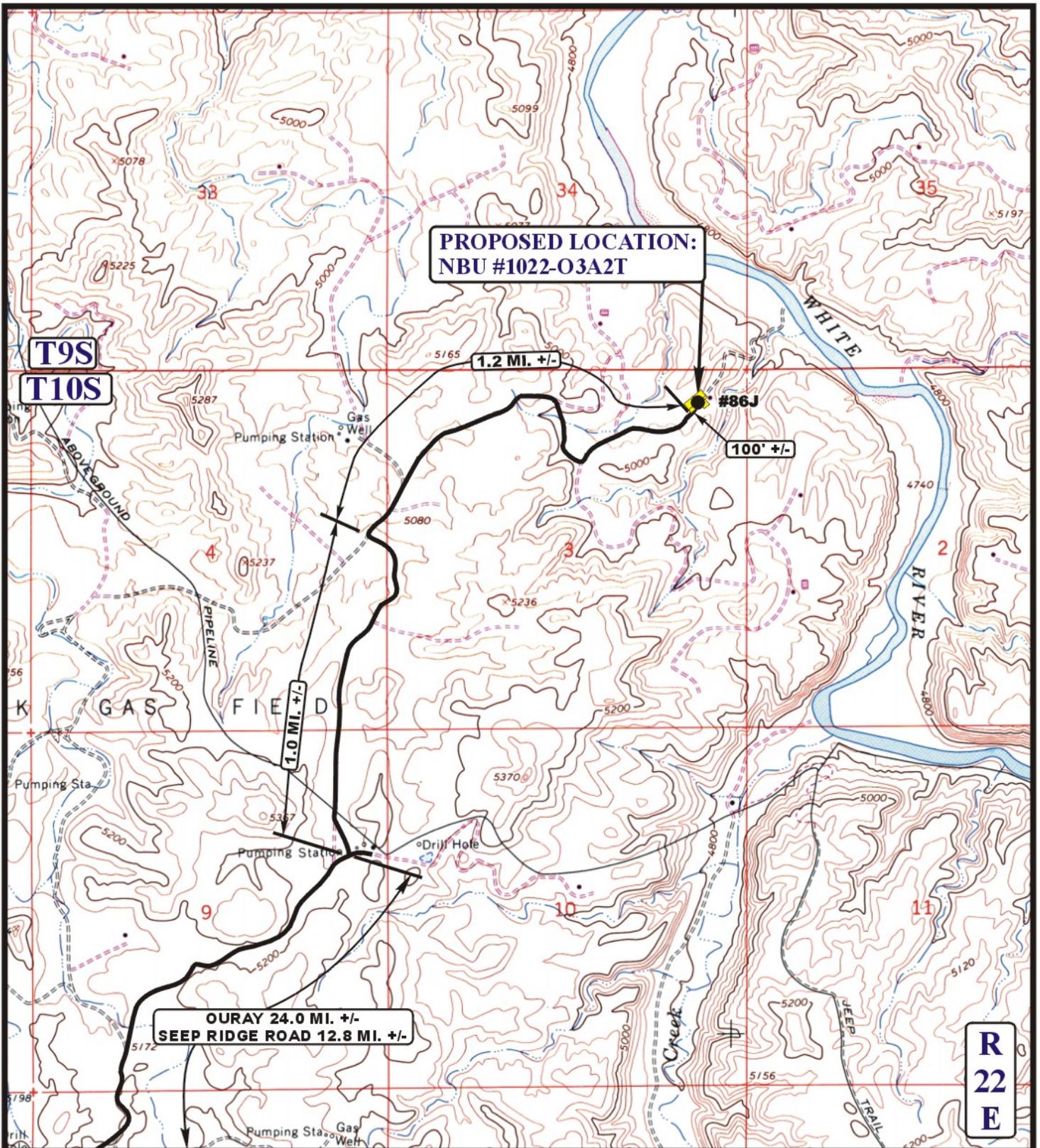
**Utah Engineering & Land Surveying**  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC  
MAP**

**08 19 08**  
MONTH DAY YEAR

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





**LEGEND:**

- EXISTING ROAD
- PROPOSED ACCESS ROAD

**Kerr McGee Oil & Gas Onshore LP**

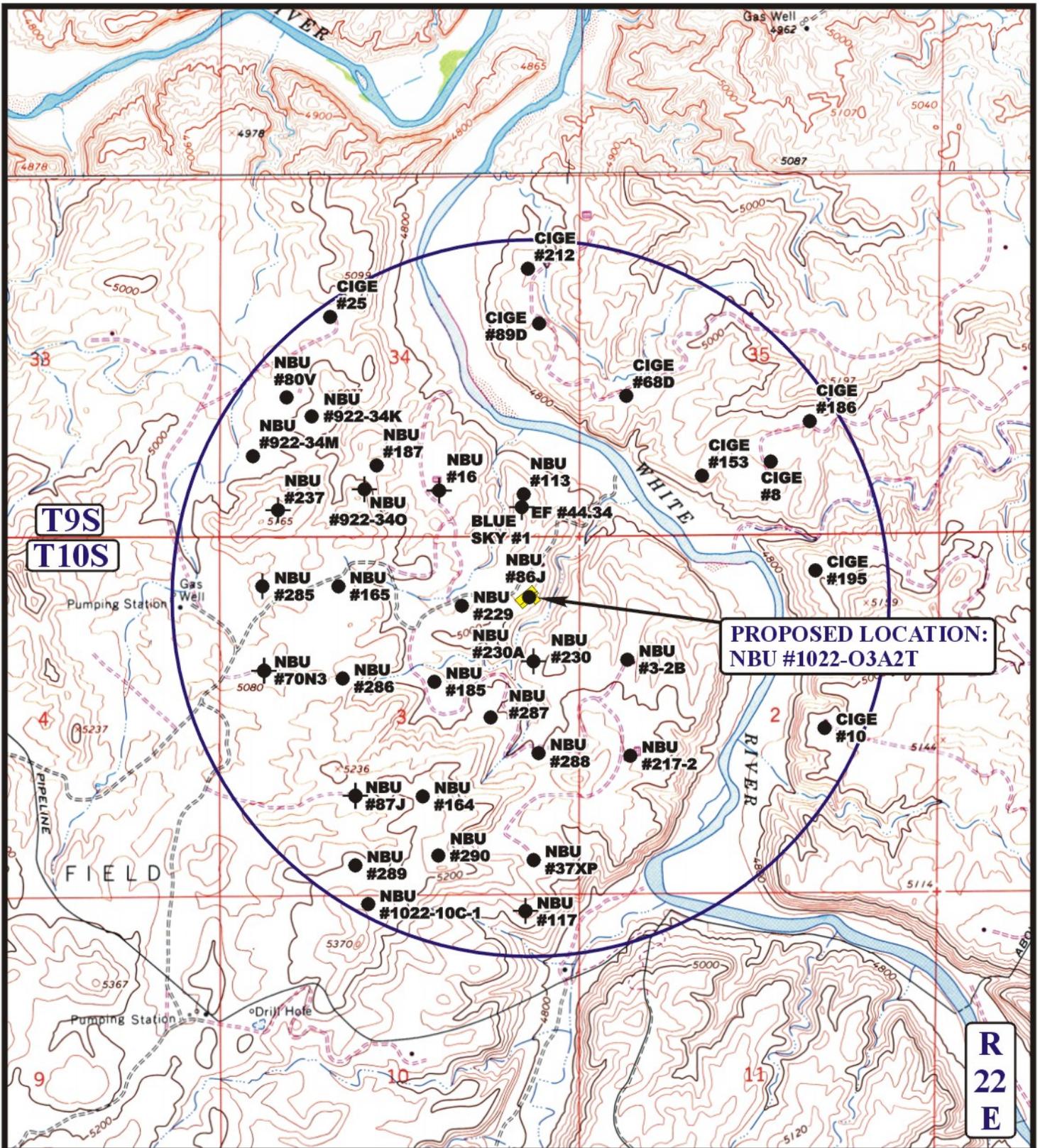
**NBU #1022-03A2T**  
**SECTION 3, T10S, R22E, S.L.B.&M.**  
**478' FNL 706' FEL**

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



**TOPOGRAPHIC MAP** **08 19 08**  
 MONTH DAY YEAR  
 SCALE: 1" = 2000' DRAWN BY: J.J. REVISED: 00-00-00

**B**  
**TOPO**



**PROPOSED LOCATION:  
NBU #1022-O3A2T**

**LEGEND:**

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

**Kerr McGee Oil & Gas Onshore LP**

**NBU #1022-O3A2T  
SECTION 3, T10S, R22E, S.L.B.&M.  
478' FNL 706' FEL**

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

**TOPOGRAPHIC MAP** **08 19 08**  
MONTH DAY YEAR  
SCALE: 1" = 2000' DRAWN BY: J.J. REVISED: 00-00-00

**C**  
**TOPO**



**NBU 1022-03A2T  
NENE Sec. 3, T10S,R22E  
UINTAH COUNTY, UTAH  
UTU-01191-A**

**ONSHORE ORDER NO. 1**

***DRILLING PROGRAM***

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

<u>Formation</u>	<u>Depth</u>
Uinta	0- Surface
Green River	1105'
Bird's Nest	1350'
Mahogany	2574'
Wasatch	4180'
Mesaverde	6569'
MVU2	7403'
MVL1	8026'
TD	8600'

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

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
	Green River	1105'
	Bird's Nest	1350'
	Mahogany	2574'
Gas	Wasatch	4180'
Gas	Mesaverde	6569'
Gas	MVU2	7403'
Gas	MVL1	8026'
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.*

**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 8600' TD, approximately equals 5332 psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 3440 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 blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.*

*Conclusion*

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

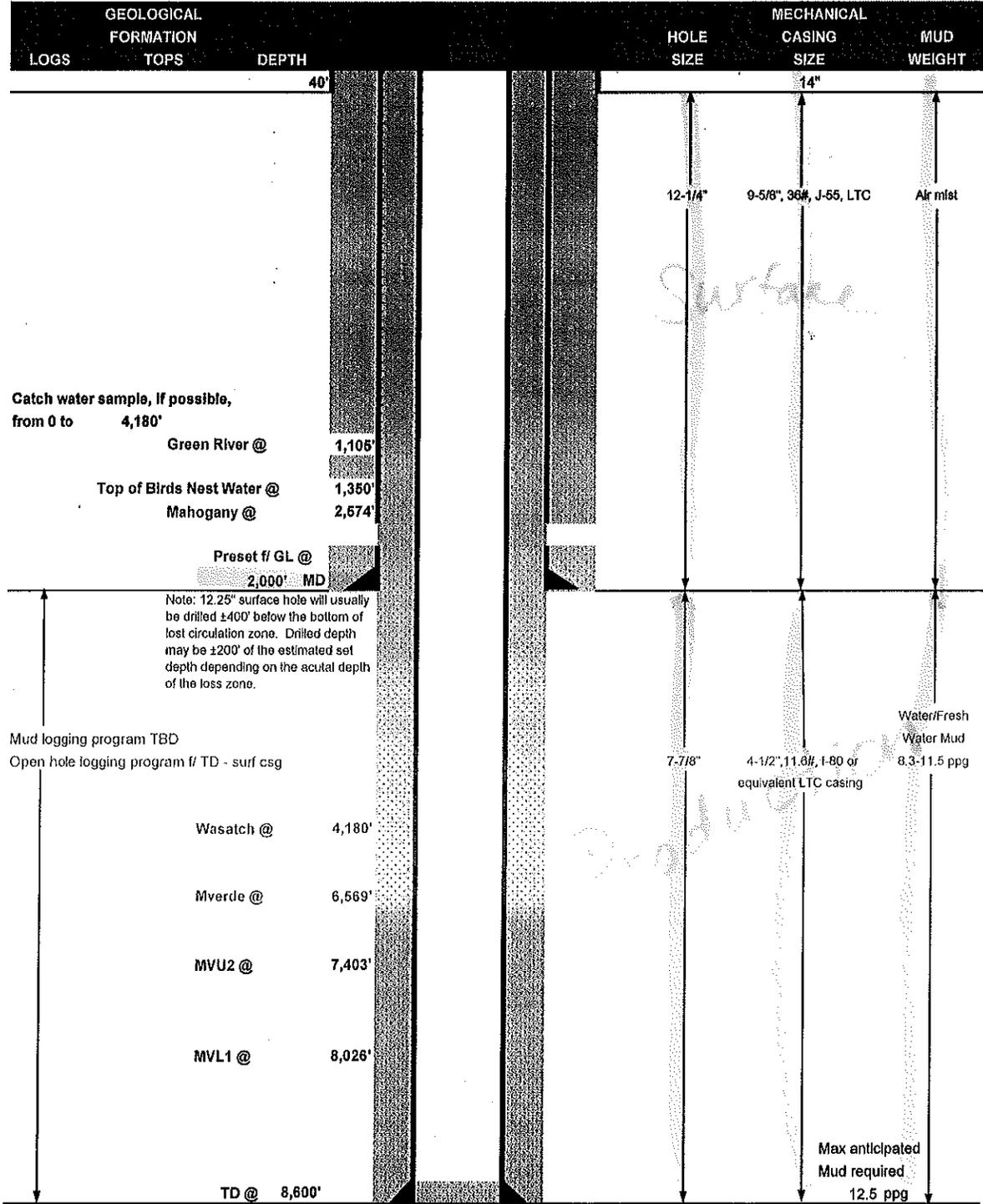
**10. Other Information:**

*Please see Natural Buttes Unit SOP.*



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

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	September 11, 2008		
WELL NAME	NBU 1022-03A2T		TD	8,800' MD/TVD		
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	
ELEVATION	4,920' GL		KB 4,935'			
SURFACE LOCATION	NENE 478' FNL, 708' FEL, LOT 1, SECTION 3, T10S, R22E				BHL	Straight Hole
Latitude:	39.983983	Longitude:	-109.418522	NAD 27		
OBJECTIVE ZONE(S)	Wasatch/Mesaverde					
ADDITIONAL INFO	Regulatory Agencies: BLM (MINERALS), BLM (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	45000
SURFACE	9-5/8"	0 to 2,000'	36.00	J-55	LTC	0.95	2.16	7.18
						7780	8860	201000
PRODUCTION	4-1/2"	0 to 8600	11.60	I-80	LTC	2.10	1.14	2.31

- 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 = 12.5 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 4320 psi

**CEMENT PROGRAM**

add for cement

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE Option 1	LEAD	500	Premium cmt + 2% CaCl	215	60%	15.60	1.18
			+ 25 pps floccle				
	TOP OUT CMT (1)	250	20 gals sodium silicate + Premium cmt	100		15.60	1.18
			+ 2% CaCl + 25 pps floccle				
	TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
SURFACE Option 2			NOTE: If well will circulate water to surface, option 2 will be utilized				
	LEAD	2000	Prem cmt + 16% Gel + 10 pps gilsonite	230	35%	11.00	3.82
			+ 25 pps floccle + 3% salt BWOC				
	TAIL	500	Premium cmt + 2% CaCl	180	35%	15.60	1.18
			+ 25 pps floccle				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	3,680'	Premium Lite II + 3% KCl + 0.25 pps celluloflake + 6 pps gilsonite + 10% gel + 0.5% extender	400	60%	11.80	3.38
	TAIL	4,920'	50/50 Poz/G + 10% salt + 2% gel + 1% R-3	1380	60%	14.30	1.31

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

**FLOAT EQUIPMENT & CENTRALIZERS**

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

**ADDITIONAL INFORMATION**

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

BOPE: 11" 5M with one annular and 2 rams. 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 1022-03A2T

**NBU 1022-03A2T  
NENW SEC 03 ,T10S,R22E  
UINTAH COUNTY, UTAH  
UTU-01191-A**

**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:**

No new access road is planned, as this is a twin location. 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:**

Utilizing existing pipeline

*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 Grey 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. 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.*

**11. Surface/Mineral Ownership:**

The well pad, access road and pipeline are located on lands owned by:

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

**12. Other Information:**

A Class III archaeological survey, T&E Clearance 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.

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

Raleen White  
Sr. Regulatory Analyst  
Kerr-McGee Oil & Gas Onshore LP  
P.O. Box 173779  
Denver, CO 80217-3779  
(720) 929-6666

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

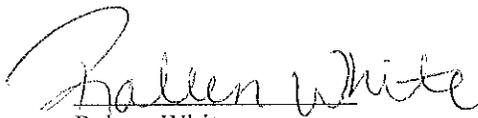
Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

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 Bureau of Land Management 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.

  
Raleen White

9/11/2008  
Date



**Kerr-McGee Oil & Gas Onshore LP**  
**NBU #1022-O3A2T**  
**SECTION 3, T10S, R22E, S.L.B.&M.**

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 14.0 MILES TO THE JUNCTION OF STATE HIGHWAY 88; EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.0 MILES TO OURAY, UTAH; PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 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 8.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN LEFT AND PROCEED IN AN NORTHEASTERLY DIRECTION APPROXIMATELY 3.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTH; TURN LEFT AND PROCEED IN A NORTHERLY DIRECTION APPROXIMATELY 1.0 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORHTEAST; TURN RIGHT AND PROCEED IN A NORTHEASTERLY, THEN SOUTHERLY, THEN NORTHEASTERLY DIRECTION APPROXIMATELY 1.2 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTH; TURN LEFT AND PROCEED IN A NORTHERLY DIRECTION APPROXIMATELY 100' TO THE EXISTING WELL #86J AND THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 57.2 MILES.

# Kerr McGee Oil & Gas Onshore LP

NBU #1022-O3A2T  
LOCATED IN UTAH COUNTY, UTAH  
SECTION 3, T10S, R22E, S.L.B.&M.

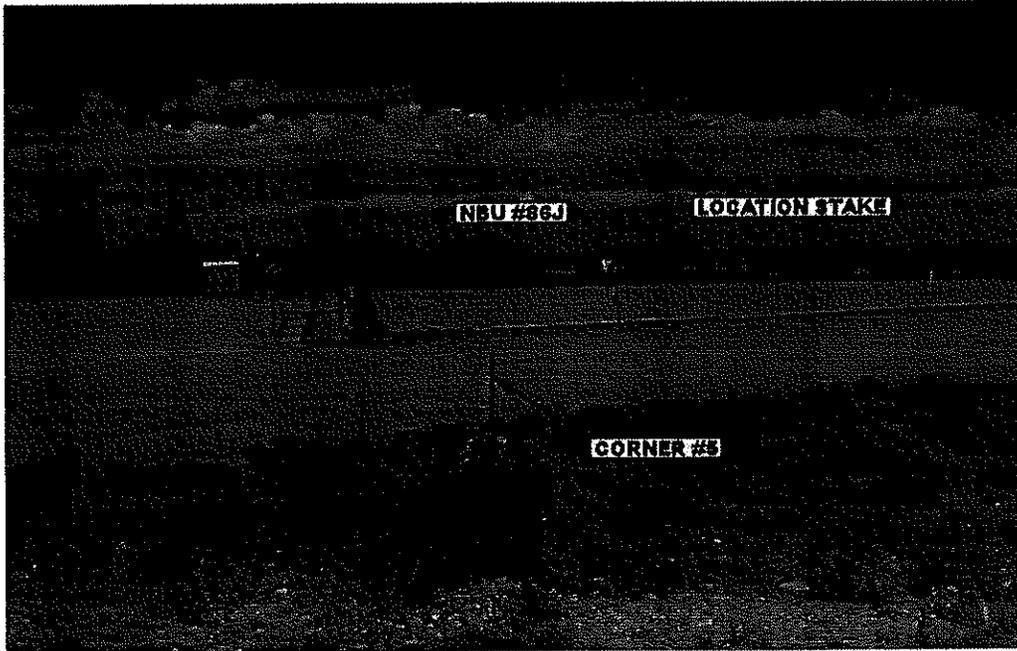


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY



PHOTO: VIEW OF EXISTING ACCESS

CAMERA ANGLE: NORTHEASTERLY



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

LOCATION PHOTOS	08	19	08	PHOTO
	MONTH	DAY	YEAR	
TAKEN BY: D.K.	DRAWN BY: J.J.		REVISED: 00-00-00	

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

## Kerr-McGee Oil & Gas Onshore LP

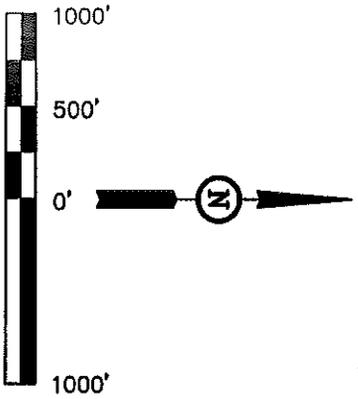
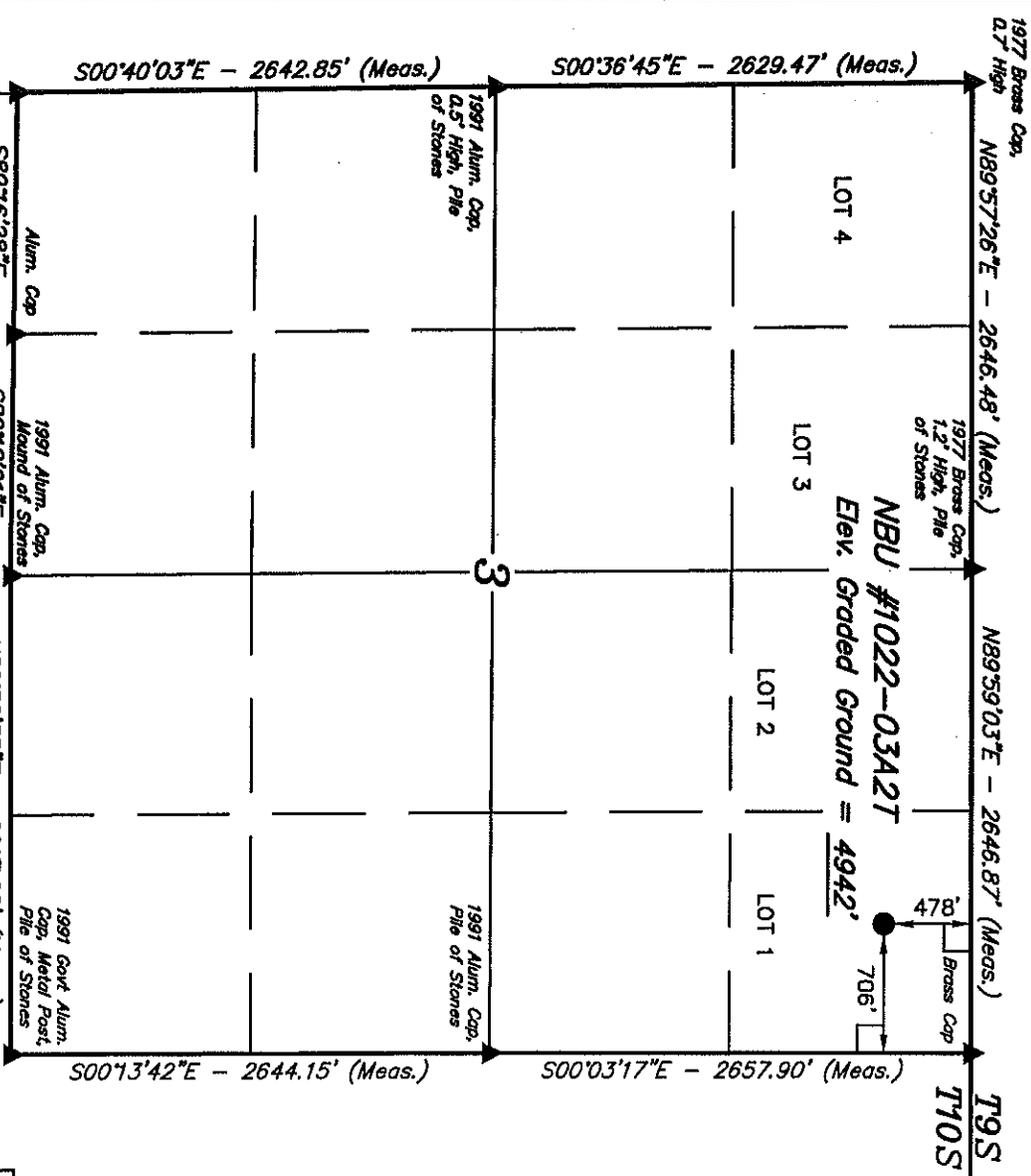
Well location, NBU #1022-03A2T, located as shown in the LOT 1 of Section 3, T10S, R22E, S.L.B.&M., Uintah County, Utah.

### BASIS OF ELEVATION

BENCH MARK (20EAM) LOCATED IN THE SE 1/4 OF SECTION 35, T8S, R21E, S.L.B.&M. TAKEN FROM THE OURAY SE QUADRANGLE, UTAH, UTAH COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 4697 FEET.

### BASIS OF BEARINGS

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



### CERTIFICATE

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

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

### LEGEND:

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

(NAD 83)  
 LATITUDE = 39°59'02.22" (39.983950)  
 LONGITUDE = 109°25'09.14" (109.419206)  
 (NAD 27)  
 LATITUDE = 39°59'02.34" (39.983983)  
 LONGITUDE = 109°25'06.68" (109.418522)

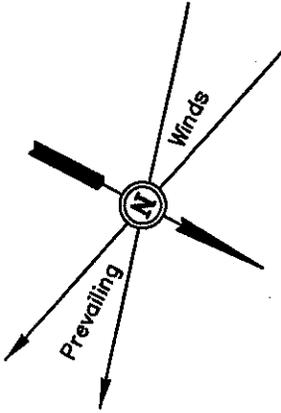
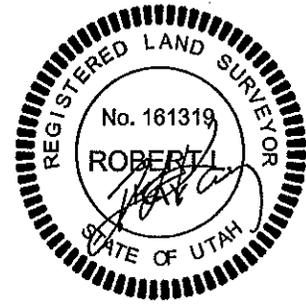
<b>UINTAH ENGINEERING &amp; LAND SURVEYING</b>			
<b>85 SOUTH 200 EAST - VERNAL, UTAH 84078</b>			
(435) 789-1017			
SCALE	1" = 1000'	DATE SURVEYED:	08-06-08
PARTY	L.K. D.D. S.L.	DATE DRAWN:	08-20-08
WEATHER	WARM	REFERENCES	G.L.O. PLAT
		FILE	Kerr-McGee Oil & Gas Onshore LP

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

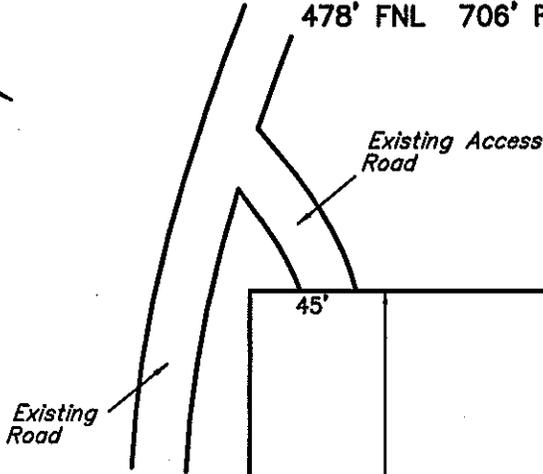
**FIGURE #1**

**LOCATION LAYOUT FOR**

**NBU #1022-03A2T**  
**SECTION 3, T10S, R22E, S.L.B.&M.**  
**478' FNL 706' FEL**

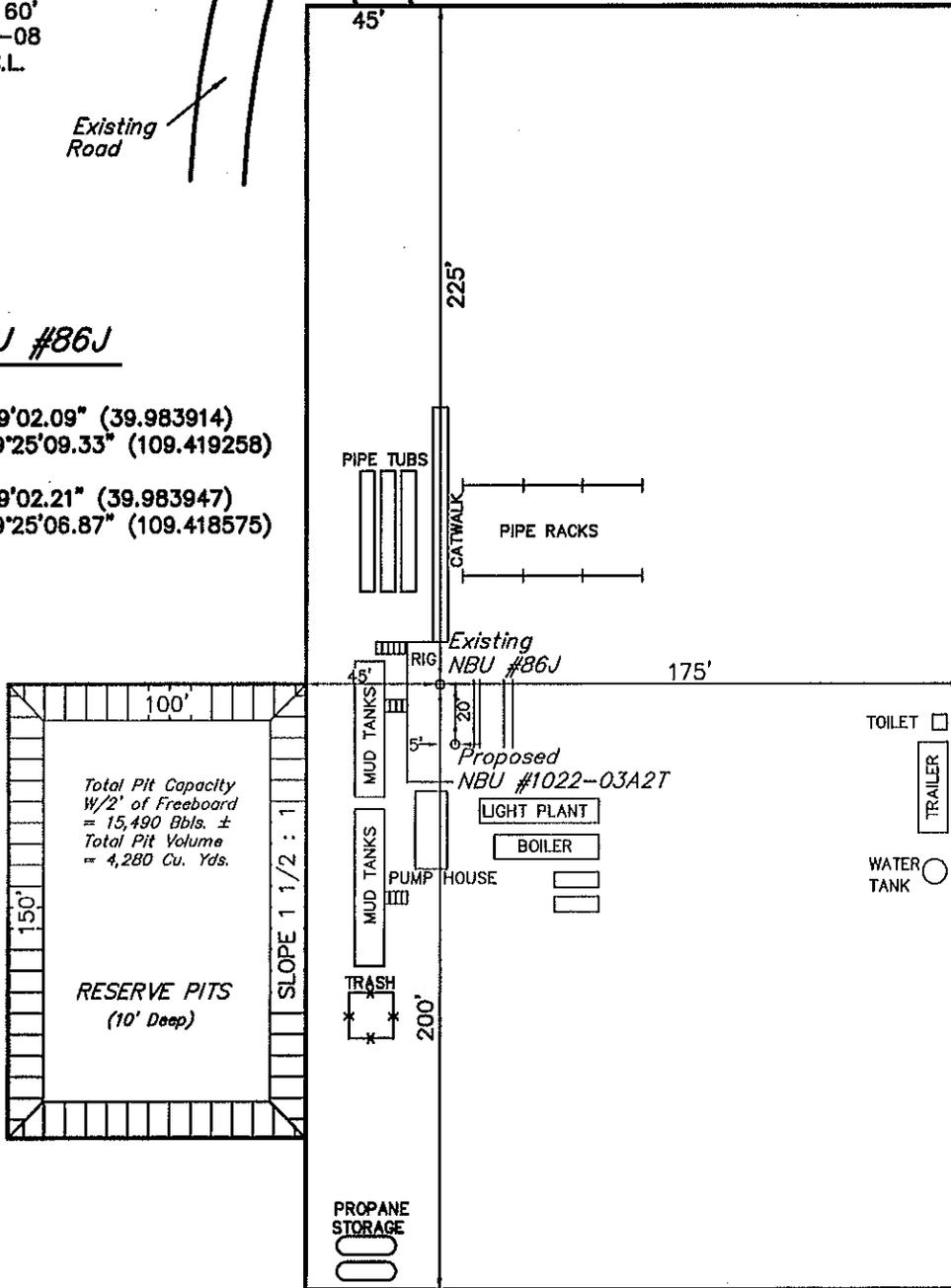


SCALE: 1" = 60'  
 DATE: 08-20-08  
 Drawn By: S.L.



**NBU #86J**

(NAD 83)  
 LATITUDE = 39°59'02.09" (39.983914)  
 LONGITUDE = 109°25'09.33" (109.419258)  
 (NAD 27)  
 LATITUDE = 39°59'02.21" (39.983947)  
 LONGITUDE = 109°25'06.87" (109.418575)

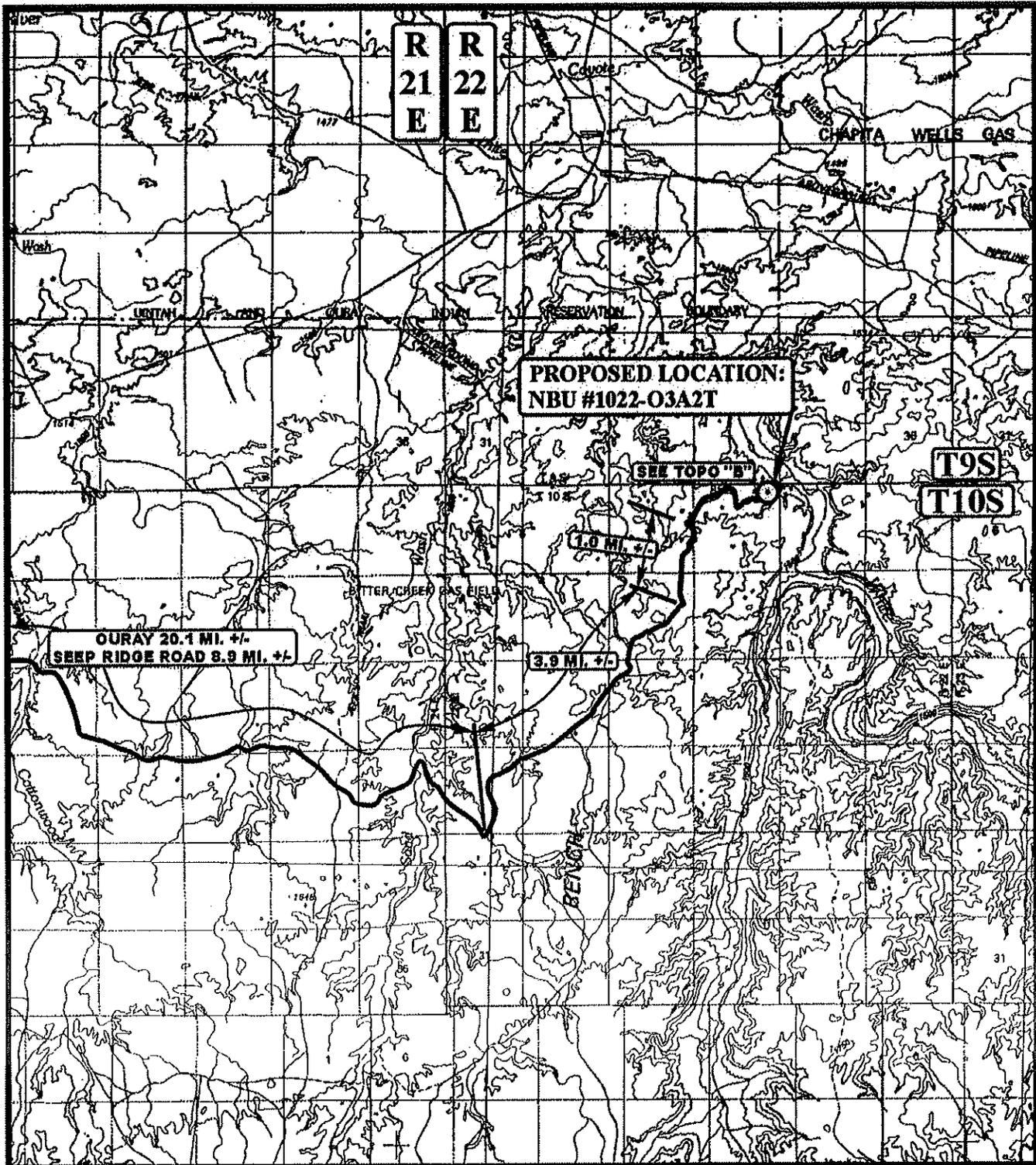


Total Pit Capacity  
 W/2' of Freeboard  
 = 15,490 Bbls. ±  
 Total Pit Volume  
 = 4,280 Cu. Yds.

**RESERVE PITS**  
 (10' Deep)

**NOTES:**

FINISHED GRADE ELEV. AT LOC. STAKE = 4942.0'



**LEGEND:**

⊙ PROPOSED LOCATION

**Kerr McGee Oil & Gas Onshore LP**

**NBU #1022-03A2T  
SECTION 3, T10S, R22E, S.L.B.&M.  
478' FNL 706' FEL**

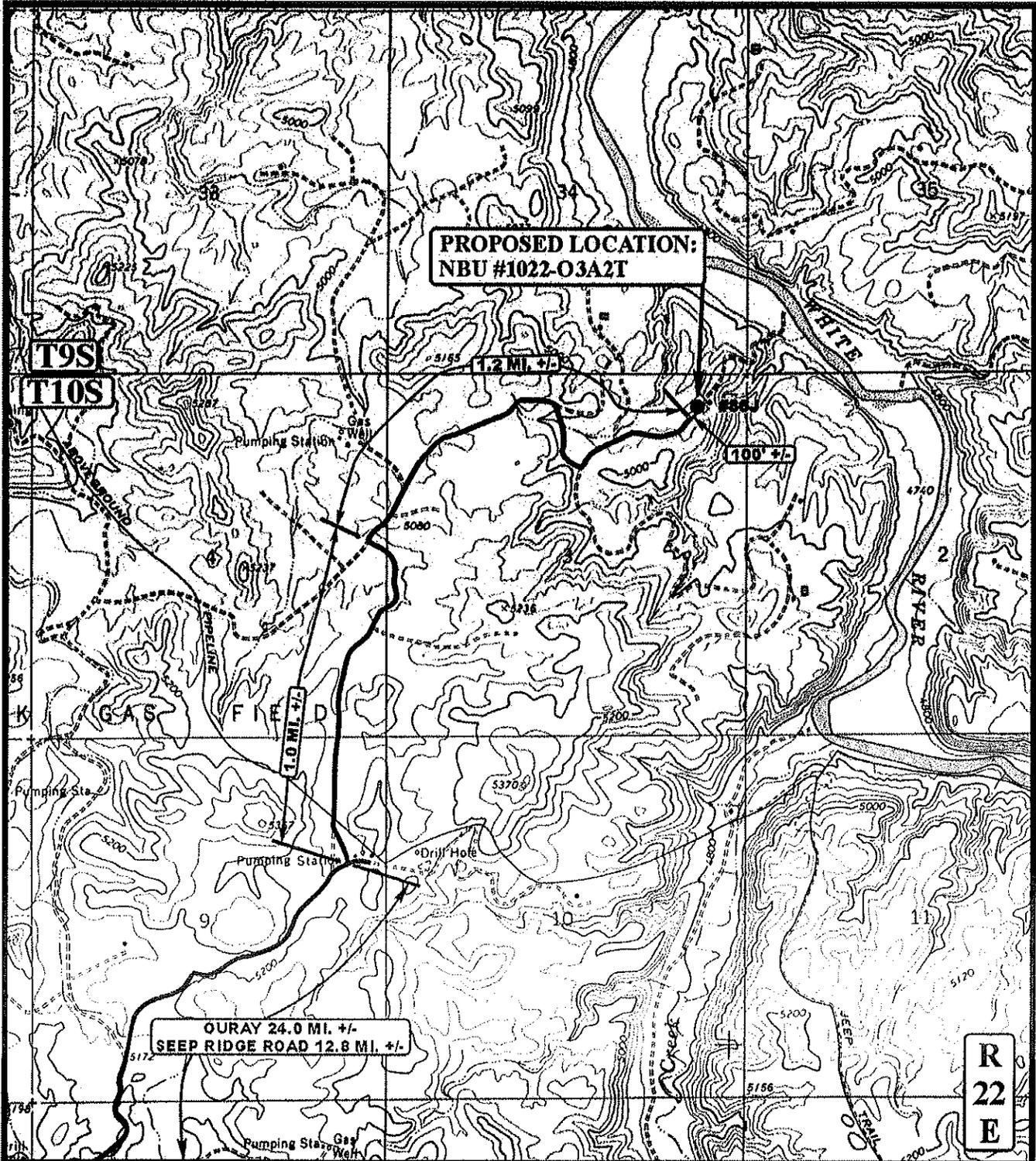


**Utah Engineering & Land Surveying**  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC** 08 19 08  
**MAP** MONTH DAY YEAR

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





**LEGEND:**

- EXISTING ROAD
- PROPOSED ACCESS ROAD



**Kerr McGee Oil & Gas Onshore LP**

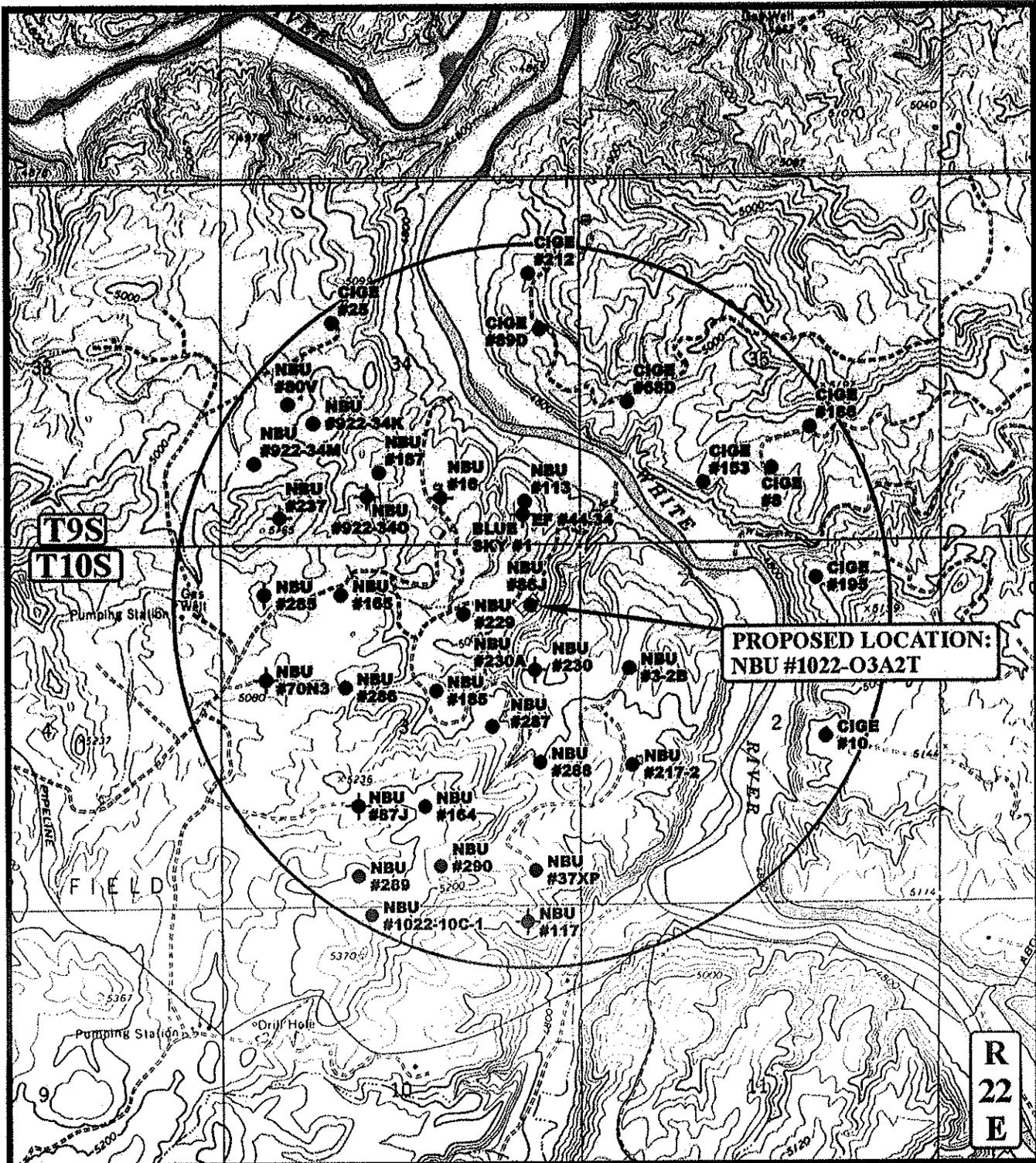
**NBU #1022-03A2T  
SECTION 3, T10S, R22E, S.L.B.&M.  
478' FNL 706' FEL**



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

**TOPOGRAPHIC** 08 19 08  
**MAP** MONTH DAY YEAR  
SCALE: 1" = 2000' DRAWN BY: JJ. REVISED: 00-00-00



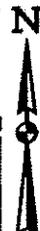


**PROPOSED LOCATION:  
NBU #1022-03A2T**

**R  
22  
E**

**LEGEND:**

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



**Kerr McGee Oil & Gas Onshore LP**

**NBU #1022-03A2T  
SECTION 3, T10S, R22E, S.L.B.&M.  
478' FNL 706' FEL**



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

**TOPOGRAPHIC  
MAP**

<b>08</b>	<b>19</b>	<b>08</b>
MONTH	DAY	YEAR



SCALE: 1" = 2000' DRAWN BY: J.L. REVISED: 00-00-00

# 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 6, 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 MESA VERDE)

43-047-50166	NBU 1022-03H2T Sec 03 T10S R22E 1809 FNL 0662 FEL	
43-047-50167	NBU 1022-03N4T Sec 03 T10S R22E 0467 FSL 2043 FWL	
43-047-50168	NBU 1022-03O3T Sec 03 T10S R22E 0561 FSL 2042 FEL	
43-047-50170	NBU 1022-03L2T Sec 03 T10S R22E 2092 FSL 0607 FWL	
43-047-50171	NBU 1022-03A2T Sec 03 T10S R22E 0478 FNL 0706 FEL	
43-047-50172	NBU 1022-03J1T Sec 03 T10S R22E 2639 FSL 1316 FEL	
43-047-50173	NBU 1022-03P4T Sec 03 T10S R22E 0559 FSL 0659 FEL	

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

/s/ Michael L. Coulthard

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

MCoulthard:mc:10-6-08

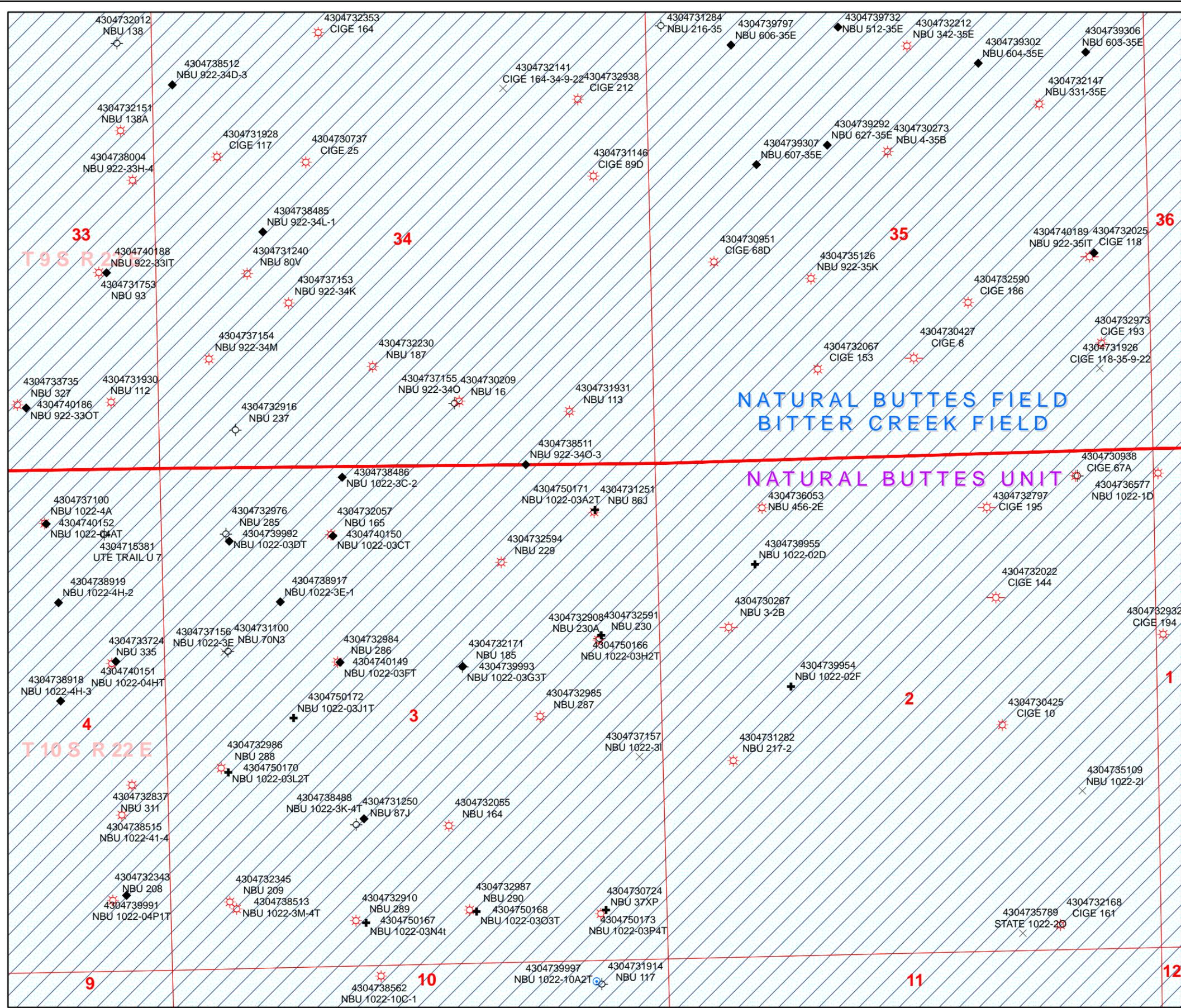
API Number: 4304750171

Well Name: NBU 1022-03A2T

Township 10.0 S Range 22.0 E Section 3

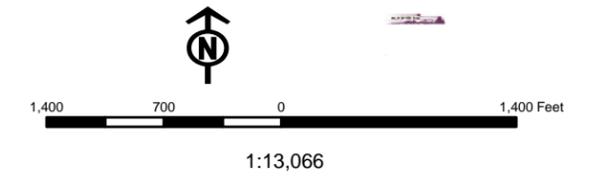
Meridian: SLBM

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>	<Null>
ACTIVE	APD
EXPLORATORY	DRL
GAS STORAGE	GI
NF PP OIL	GS
NF SECONDARY	LA
PI OIL	NEW
PP GAS	OPS
PP GEOTHERML	PA
PP OIL	PGW
SECONDARY	POW
TERMINATED	RET
<b>Fields</b>	SGW
<b>STATUS</b>	SOW
ACTIVE	TA
COMBINED	TW
Sections	WD
Township	WI
	WS
	Bottom Hole Location



**WORKSHEET  
APPLICATION FOR PERMIT TO DRILL**

---

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**APD RECEIVED:** 10/2/2008

**API NO. ASSIGNED:** 43047501710000

**WELL NAME:** NBU 1022-03A2T

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

**PHONE NUMBER:** 720 929-6666

**CONTACT:** Raleen White

**PROPOSED LOCATION:** NENE 3 100S 220E

**Permit Tech Review:**

**SURFACE:** 0478 FNL 0706 FEL

**Engineering Review:**

**BOTTOM:** 0478 FNL 0706 FEL

**Geology Review:**

**COUNTY:** UINTAH

**LATITUDE:** 39.98386

**LONGITUDE:** -109.41848

**UTM SURF EASTINGS:** 635037.00

**NORTHINGS:** 4426953.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 1 - Federal

**LEASE NUMBER:** UTU-01191-A

**PROPOSED FORMATION:** WSMVD

**SURFACE OWNER:** 1 - Federal

**COALBED METHANE:** NO

---

**RECEIVED AND/OR REVIEWED:**

- PLAT**
- Bond:** FEDERAL - WYB-000291
- Potash**
- Oil Shale 190-5**
- Oil Shale 190-3**
- Oil Shale 190-13**
- Water Permit:** zpermit #43-849
- RDCC Review:**
- Fee Surface Agreement**
- Intent to Commingle**

**LOCATION AND SITING:**

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

**Comments:** Presite Completed

**Stipulations:** 3 - Commingling - ddoucet  
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 1022-03A2T  
**API Well Number:** 43047501710000  
**Lease Number:** UTU-01191-A  
**Surface Owner:** FEDERAL  
**Approval Date:** 12/23/2008

**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 Cause 173-14 .

**Duration:**

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

**Commingling:**

In accordance with Cause No. 173-14, commingling the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

**General:**

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

**Conditions of Approval:**

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.

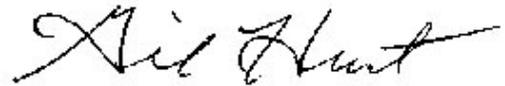
Notify the Division prior to commencing operations to plug and abandon the well.

- 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 written in a cursive, flowing style with a long horizontal stroke at the end.

Gil Hunt  
Associate Director, Oil & Gas

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-01191-A
<b>SUNDRY NOTICES AND REPORTS ON WELLS</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.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> NBU 1022-03A2T
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047501710000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6007 Ext
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0478 FNL 0706 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 3 Township: 10.0S Range: 22.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES  <b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 12/22/2009	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input checked="" type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: _____

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

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

**Approved by the Utah Division of Oil, Gas and Mining**

**Date:** December 21, 2009

**By:**

<b>NAME (PLEASE PRINT)</b> Danielle Piernot	<b>PHONE NUMBER</b> 720 929-6156	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 12/17/2009	



**The Utah Division of Oil, Gas, and Mining**

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

**Request for Permit Extension Validation Well Number 43047501710000**

**API:** 43047501710000

**Well Name:** NBU 1022-03A2T

**Location:** 0478 FNL 0706 FEL QTR NENE SEC 3 TWNP 100S RNG 220E MER S

**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 12/23/2008

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 rightof- 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

**Approved by the  
Utah Division of  
Oil, Gas and Mining**

**Signature:** Danielle Piernot

**Date:** 12/17/2009

**Title:** Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date:** December 21, 2009

**By:** 

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-01191-A
<b>SUNDRY NOTICES AND REPORTS ON WELLS</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.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> NBU 1022-03A2T
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047501710000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6007 Ext
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0478 FNL 0706 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 03 Township: 10.0S Range: 22.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES  <b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 12/23/2010  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>

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

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

**Approved by the  
Utah Division of  
Oil, Gas and Mining**

Date: 12/23/2010  
 By: 

<b>NAME (PLEASE PRINT)</b> Danielle Piernot	<b>PHONE NUMBER</b> 720 929-6156	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A		<b>DATE</b> 12/20/2010



**The Utah Division of Oil, Gas, and Mining**

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

**Request for Permit Extension Validation Well Number 43047501710000**

**API:** 43047501710000

**Well Name:** NBU 1022-03A2T

**Location:** 0478 FNL 0706 FEL QTR NENE SEC 03 TWP 100S RNG 220E MER S

**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 12/23/2008

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.

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- 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 rightof- 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

**Approved by the  
Utah Division of  
Oil, Gas and Mining**

**Signature:** Danielle Piernot

**Date:** 12/20/2010

**Title:** Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE,

**Date:** 12/23/2010  
**By:** 

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-01191-A
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</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.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>1. TYPE OF WELL</b> Gas Well		<b>8. WELL NAME and NUMBER:</b> NBU 1022-03A2T
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>9. API NUMBER:</b> 43047501710000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6515 Ext	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0478 FNL 0706 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 03 Township: 10.0S Range: 22.0E Meridian: S		<b>COUNTY:</b> UINTAH
		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 12/23/2011  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> <b>ACIDIZE</b> <input type="checkbox"/> <b>ALTER CASING</b> <input type="checkbox"/> <b>CASING REPAIR</b> <input type="checkbox"/> <b>CHANGE TO PREVIOUS PLANS</b> <input type="checkbox"/> <b>CHANGE TUBING</b> <input type="checkbox"/> <b>CHANGE WELL NAME</b> <input type="checkbox"/> <b>CHANGE WELL STATUS</b> <input type="checkbox"/> <b>COMMINGLE PRODUCING FORMATIONS</b> <input type="checkbox"/> <b>CONVERT WELL TYPE</b> <input type="checkbox"/> <b>DEEPEN</b> <input type="checkbox"/> <b>FRACTURE TREAT</b> <input type="checkbox"/> <b>NEW CONSTRUCTION</b> <input type="checkbox"/> <b>OPERATOR CHANGE</b> <input type="checkbox"/> <b>PLUG AND ABANDON</b> <input type="checkbox"/> <b>PLUG BACK</b> <input type="checkbox"/> <b>PRODUCTION START OR RESUME</b> <input type="checkbox"/> <b>RECLAMATION OF WELL SITE</b> <input type="checkbox"/> <b>RECOMPLETE DIFFERENT FORMATION</b> <input type="checkbox"/> <b>REPERFORATE CURRENT FORMATION</b> <input type="checkbox"/> <b>SIDETRACK TO REPAIR WELL</b> <input type="checkbox"/> <b>TEMPORARY ABANDON</b> <input type="checkbox"/> <b>TUBING REPAIR</b> <input type="checkbox"/> <b>VENT OR FLARE</b> <input type="checkbox"/> <b>WATER DISPOSAL</b> <input type="checkbox"/> <b>WATER SHUTOFF</b> <input type="checkbox"/> <b>SI TA STATUS EXTENSION</b> <input checked="" type="checkbox"/> <b>APD EXTENSION</b> <input type="checkbox"/> <b>WILDCAT WELL DETERMINATION</b> <input type="checkbox"/> <b>OTHER</b> OTHER: <input type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
<p>Kerr-McGee Oil &amp; Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.</p> <p style="text-align: right;"><b>Approved by the Utah Division of Oil, Gas and Mining</b></p> <p style="text-align: right;"><b>Date:</b> <u>01/03/2012</u></p> <p style="text-align: right;"><b>By:</b> </p>		
<b>NAME (PLEASE PRINT)</b> Danielle Piernot	<b>PHONE NUMBER</b> 720 929-6156	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A		<b>DATE</b> 12/21/2011



## The Utah Division of Oil, Gas, and Mining

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

### Request for Permit Extension Validation Well Number 43047501710000

**API:** 43047501710000

**Well Name:** NBU 1022-03A2T

**Location:** 0478 FNL 0706 FEL QTR NENE SEC 03 TWP 100S RNG 220E MER S

**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 12/23/2008

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- 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 rightof- 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:** Danielle Piernot

**Date:** 12/21/2011

**Title:** Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9  5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-01191-A
<b>SUNDRY NOTICES AND REPORTS ON WELLS</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:  7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 1022-3A1CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047501710000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6514
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0462 FNL 0733 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 03 Township: 10.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES  COUNTY: UINTAH  STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 6/1/2012  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE  <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION  OTHER: <input style="width: 100px;" type="text"/>

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

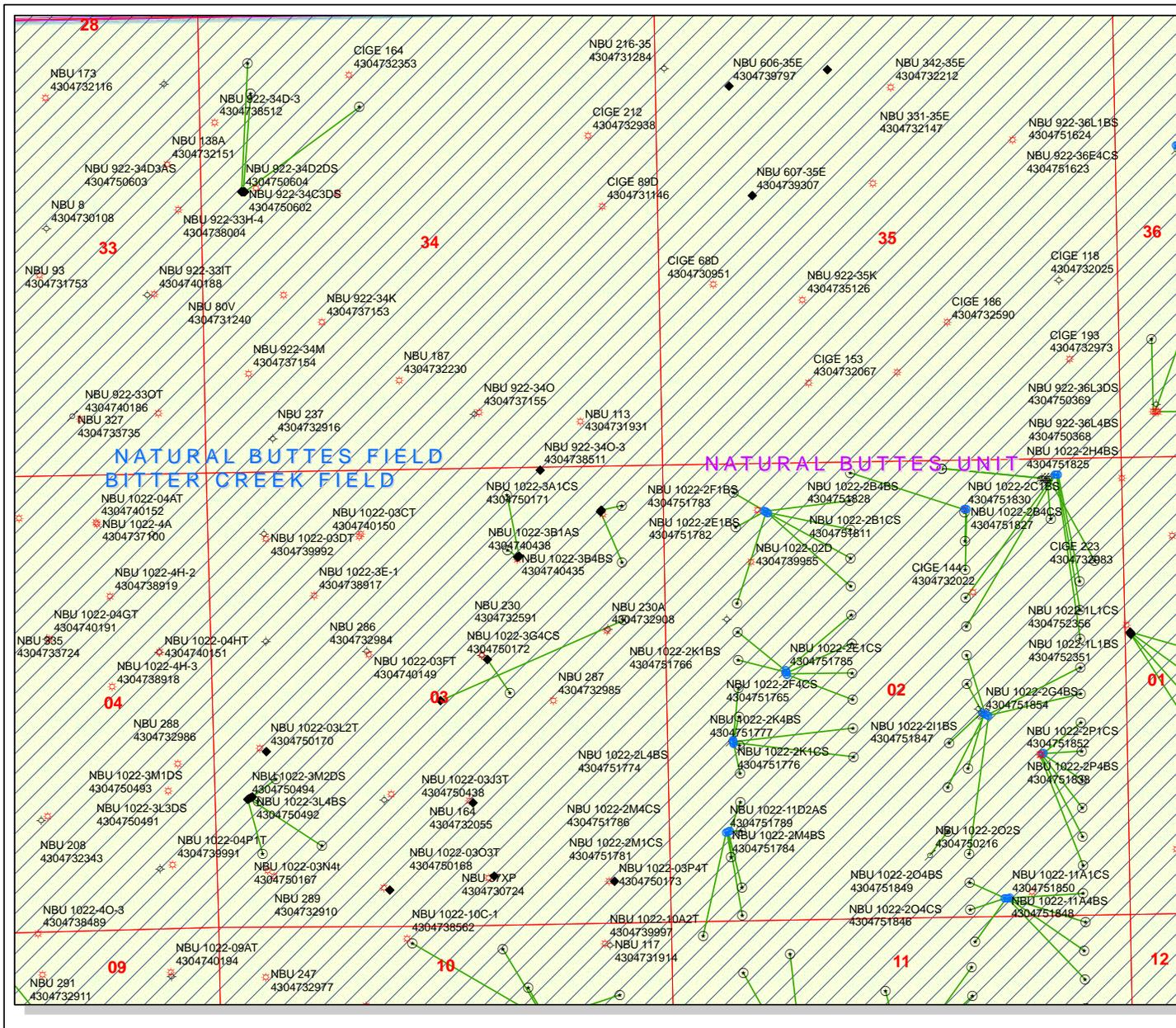
The operator is requesting the approval of the following changes to the originally approved APD: 1. Change the Well Name = from NBU 1022-03A2T to NBU 1022-3A1CS / 2. Surface & Bottom Hole Location Change (New Plat is Attached) / a. From = 478 FNL/ 706 FEL To = 462 FNL/ 733 FEL / 3. Proposed Total Depth (New Drilling Program Attached) / 4. Surface Hole Size and Casing Grade (New Wellbore Diagram Attached) / 5. Change to a Directional Well (Directional Drilling Survey Attached) / 6. Surface Use Plan of Operation (Updated Plan Attached) / 7. Updated Topos & Directions (Attached)

**Approved by the  
Utah Division of  
Oil, Gas and Mining**

Date: June 04, 2012

By:

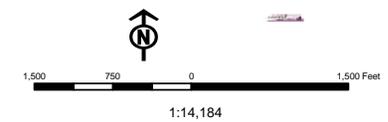
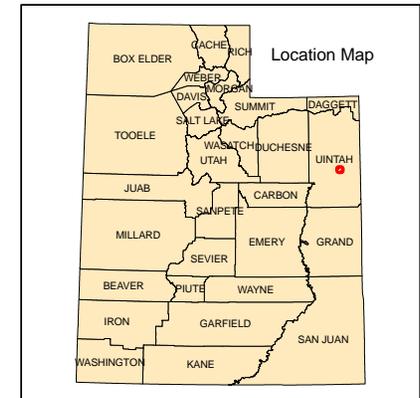
NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 5/17/2012	



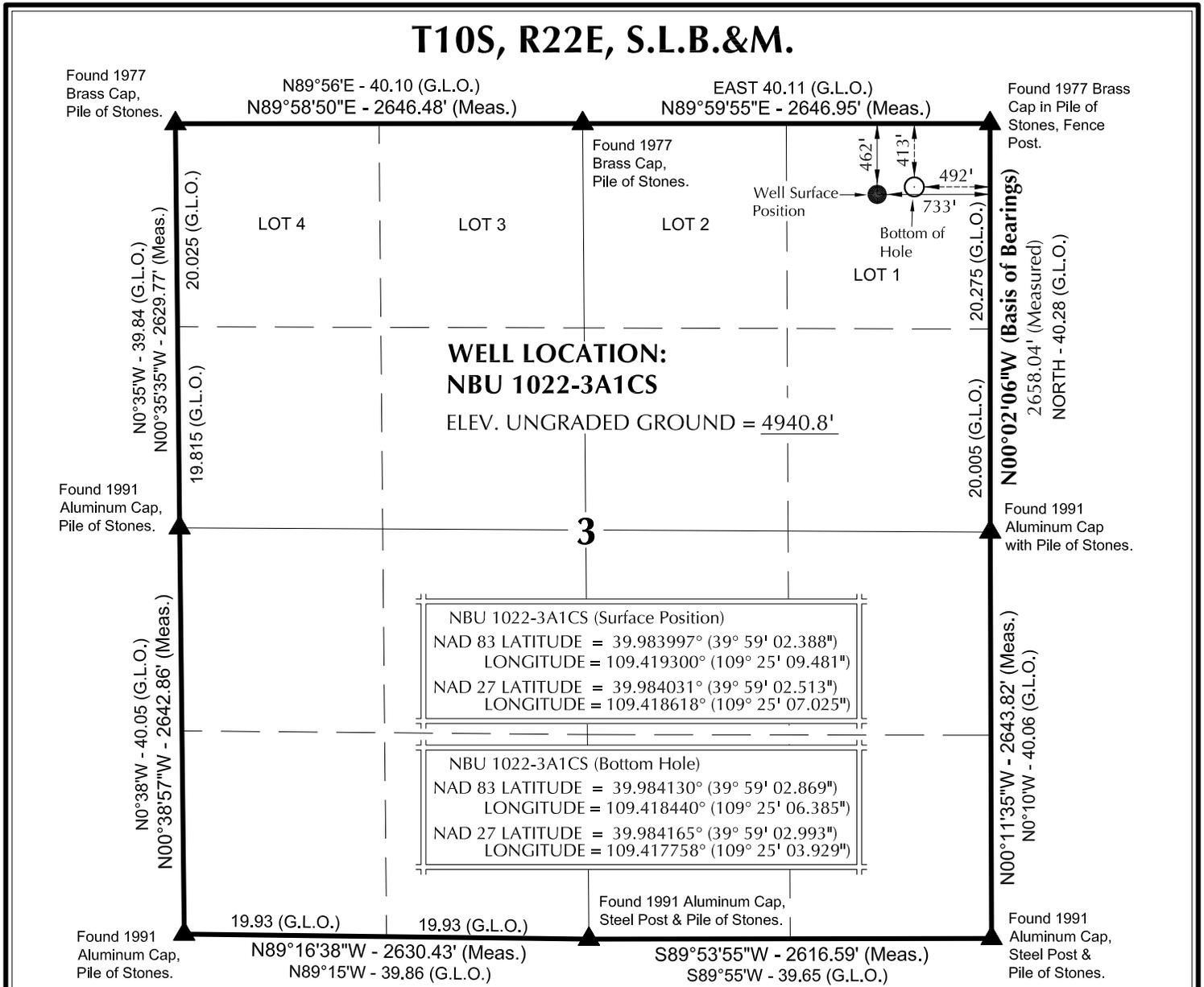
**API Number: 4304750171**  
**Well Name: NBU 1022-3A1CS**  
 Township T1.0 Range R2.2 Section 03  
 Meridian: SLBM  
 Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:  
 Map Produced by Diana Mason

- |               |                                    |
|---------------|------------------------------------|
| <b>Units</b>  | <b>Wells Query</b>                 |
| ACTIVE        | APD - Approved Permit              |
| EXPLORATORY   | DRL - Spudded (Drilling Commenced) |
| GAS STORAGE   | GIW - Gas Injection                |
| NF PP OIL     | GS - Gas Storage                   |
| NF SECONDARY  | LA - Location Abandoned            |
| PI OIL        | LOC - New Location                 |
| PP GAS        | OPS - Operation Suspended          |
| PP GEOTHERM   | PA - Plugged Abandoned             |
| PP OIL        | PGW - Producing Gas Well           |
| SECONDARY     | POW - Producing Oil Well           |
| TERMINATED    | RET - Returned APD                 |
| <b>Fields</b> | SGW - Shut-in Gas Well             |
| Unknown       | SOW - Shut-in Oil Well             |
| ABANDONED     | TA - Temp. Abandoned               |
| ACTIVE        | TW - Test Well                     |
| COMBINED      | WDW - Water Disposal               |
| INACTIVE      | WWI - Water Injection Well         |
| STORAGE       | WSW - Water Supply Well            |
| TERMINATED    |                                    |



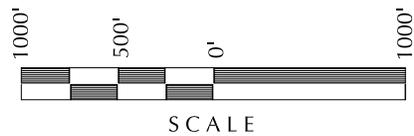
# T10S, R22E, S.L.B.&M.



**NOTES:**

▲ = Section Corners Located

- Well footages are measured at right angles to the Section Lines.
- G.L.O. distances are shown in feet or chains.  
1 chain = 66 feet.
- The Bottom of hole bears N78°33'10"E 245.88' from the Surface Position.
- Bearings are based on Global Positioning Satellite observations.
- Basis of elevation is Tri-Sta "Two Water" located in the NW ¼ of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.



**SURVEYOR'S 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.

No. 6028691 11-17-11  
 JOHN R. LAUGH  
 PROFESSIONAL LAND SURVEYOR  
 REGISTRATION No. 6028691  
 STATE OF UTAH

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

**WELL PAD: NBU 1022-3A**

**NBU 1022-3A1CS  
 WELL PLAT  
 413' FNL, 492' FEL (Bottom Hole)  
 LOT 1 OF SECTION 3, T10S, R22E,  
 S.L.B.&M., UTAH COUNTY, UTAH.**



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

**TIMBERLINE** (435) 789-1365  
 ENGINEERING & LAND SURVEYING, INC.  
 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 11-08-11	SURVEYED BY: W.W.	SHEET NO: <b>2</b>
DATE DRAWN: 11-14-11	DRAWN BY: M.W.W.	
SCALE: 1" = 1000'		2 OF 17

**Kerr-McGee Oil & Gas Onshore, LP  
WELL PAD – NBU 1022-3A  
WELLS - NBU 1022-3A1BS,  
NBU 1022-3A1CS, NBU 1022-3A4BS,  
NBU 1022-3A4CS & NBU 1022-3H1BS  
Section 3, T10S, R22E, S.L.B.&M.**

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 23.8 miles to the intersection of the Bitter Creek Road (County B Road 4120). Exit left and proceed in a southeasterly direction along the Bitter Creek Road approximately 4.0 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the Class D County Road approximately 4.9 miles to a second Class D County Road to the northeast. Exit right and proceed in a northeasterly, then southerly direction along the second Class D County Road approximately 1.2 miles to a third Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the third Class D County Road approximately 0.2 miles to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 57.6 miles in a southerly direction.

**Kerr-McGee Oil & Gas Onshore. L.P.**

	<b><u>NBU 1022-3A1CS</u></b>	
Surface:	462 FNL / 733 FEL	NENE
BHL:	413 FNL / 492 FEL	NENE

Section 3 T10S R22E

Uintah County, Utah  
Mineral Lease: UTU-01191A

**ONSHORE ORDER NO. 1****DRILLING PROGRAM**

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

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,091'	
Birds Nest	1,342'	Water
Mahogany	1,818'	Water
Wasatch	4,187'	Gas
Mesaverde	6,542'	Gas
Sego	8,705'	Gas
TVD	8,705'	
TD	8,718'	

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

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**7. Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 8705' TVD, approximately equals  
5,571 psi (0.64 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,644 psi (bottom hole pressure  
 minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-  
 (0.22 psi/ft-partial evac gradient x TVD of next csg point))

**8. Anticipated Starting Dates:**

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

**9. Variances:**

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

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

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

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

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

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

**Background**

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

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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 for the first 200 feet, then will drill a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 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 8-5/8 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

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on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

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

**Variance for FIT Requirements**

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

**Conclusion**

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

10. **Other Information:**

Please refer to the attached Drilling Program.

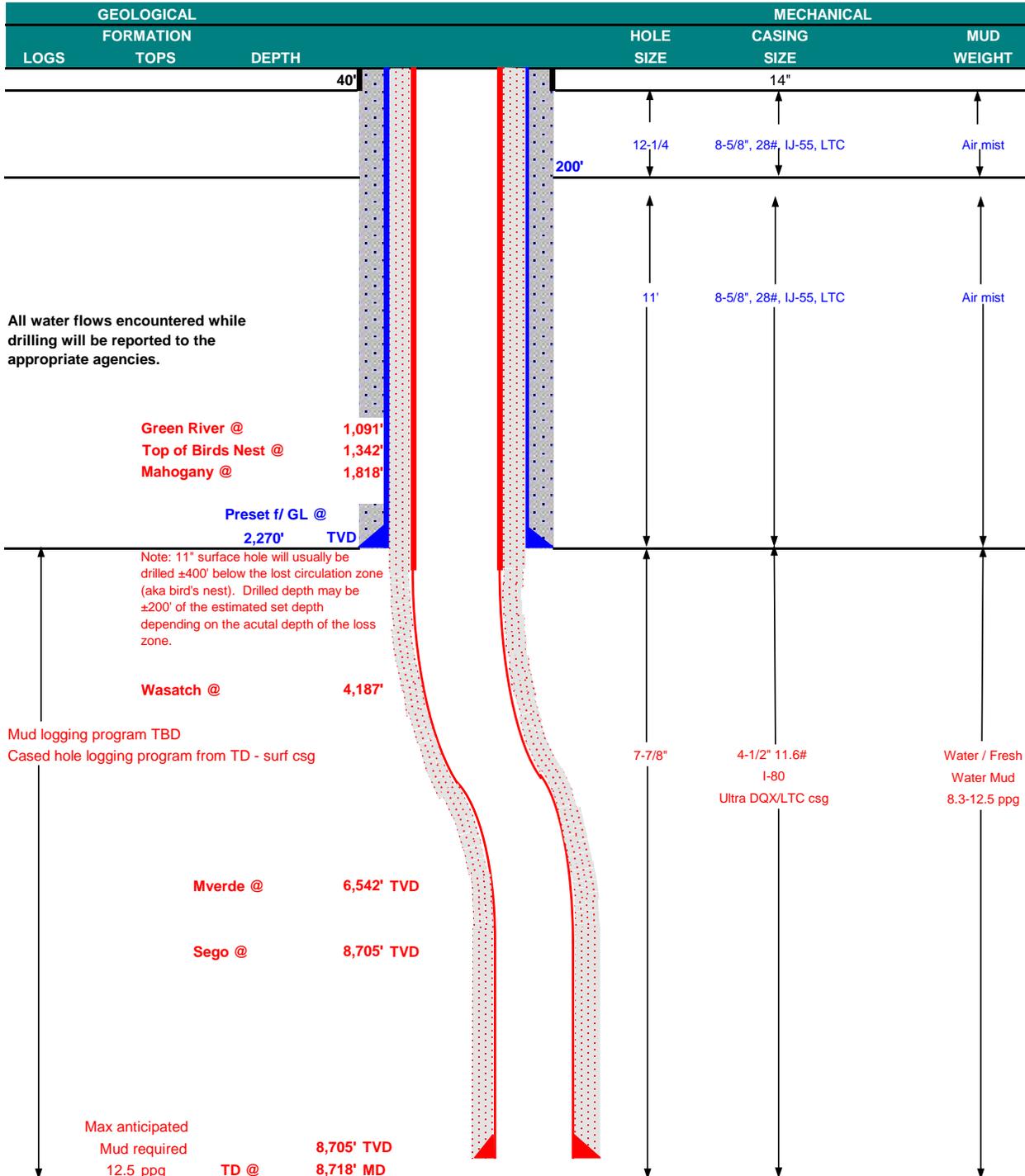
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## KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP			DATE	February 13, 2012	
WELL NAME	<b>NBU 1022-3A1CS</b>			TD	8,705'	8,718' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	
SURFACE LOCATION	NENE	462 FNL	733 FEL	Sec 3	T 10S	R 22E
	Latitude: 39.983997		Longitude: -109.419300		NAD 83	
BTM HOLE LOCATION	NENE	413 FNL	492 FEL	Sec 3	T 10S	R 22E
	Latitude: 39.984130		Longitude: -109.418440		NAD 83	
OBJECTIVE ZONE(S)	Wasatch/Mesaverde					
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept.					





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

**CASING PROGRAM**

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	LTC		DQX
							COLLAPSE	TENSION	
CONDUCTOR	14"	0-40'							
SURFACE	8-5/8"	0 to 2,270	28.00	IJ-55	LTC	3,390	1,880	348,000	N/A
						2.38	1.77	6.25	N/A
PRODUCTION	4-1/2"	0 to 5,000	11.60	I-80	DQX	7,780	6,350	223,000	267,000
						1.11	1.12		3.26
	4-1/2"	5,000 to 8,718'	11.60	I-80	LTC	1.11	1.12	6.39	

**Surface Casing:**

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe  
 Fracture at surface shoe with 0.1 psi/ft gas gradient above  
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**Production casing:**

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient  
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD
SURFACE Option 1	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80		1.15
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80		1.15
<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>								
SURFACE Option 2	LEAD	1,770'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	160	35%	11.00		3.82
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80		1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	3,678'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	290	35%	12.00		3.38
	TAIL	5,040'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,190	35%	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**

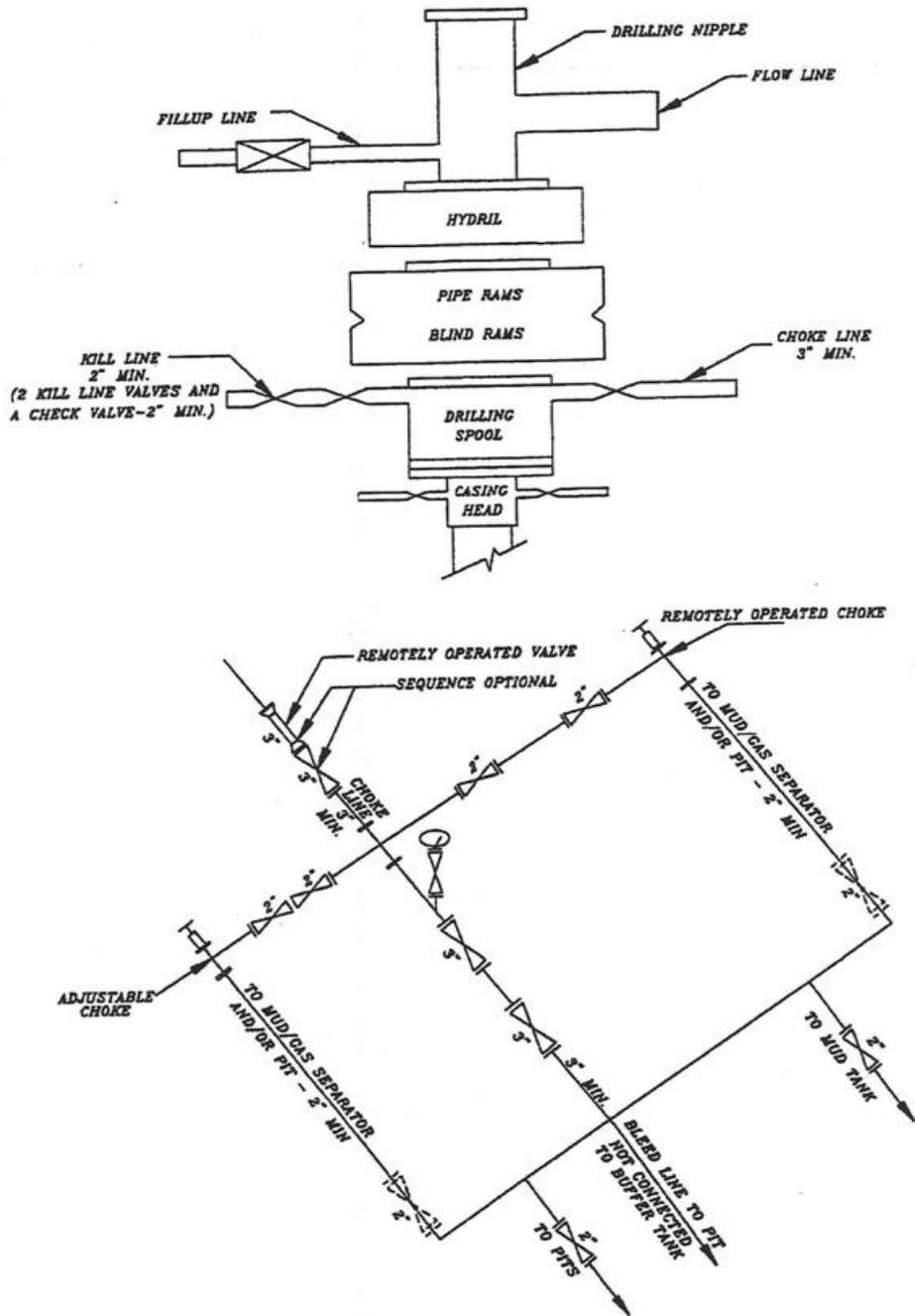
SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter.

**ADDITIONAL INFORMATION**

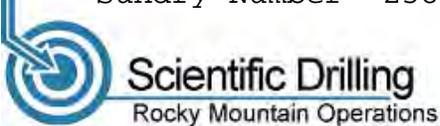
Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.  
 BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.  
 Surveys will be taken at 1,000' minimum intervals.  
 Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

**DRILLING ENGINEER:** \_\_\_\_\_ **DATE:** \_\_\_\_\_  
 Nick Spence / Danny Showers / Chad Loesel  
**DRILLING SUPERINTENDENT:** \_\_\_\_\_ **DATE:** \_\_\_\_\_  
 Kenny Gathings / Lovel Young

### EXHIBIT A NBU 1022-3A1CS



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

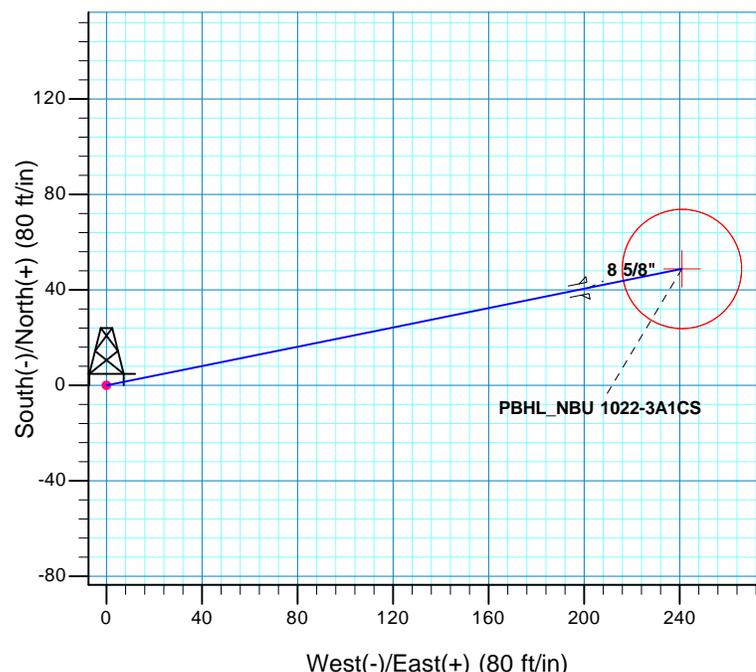
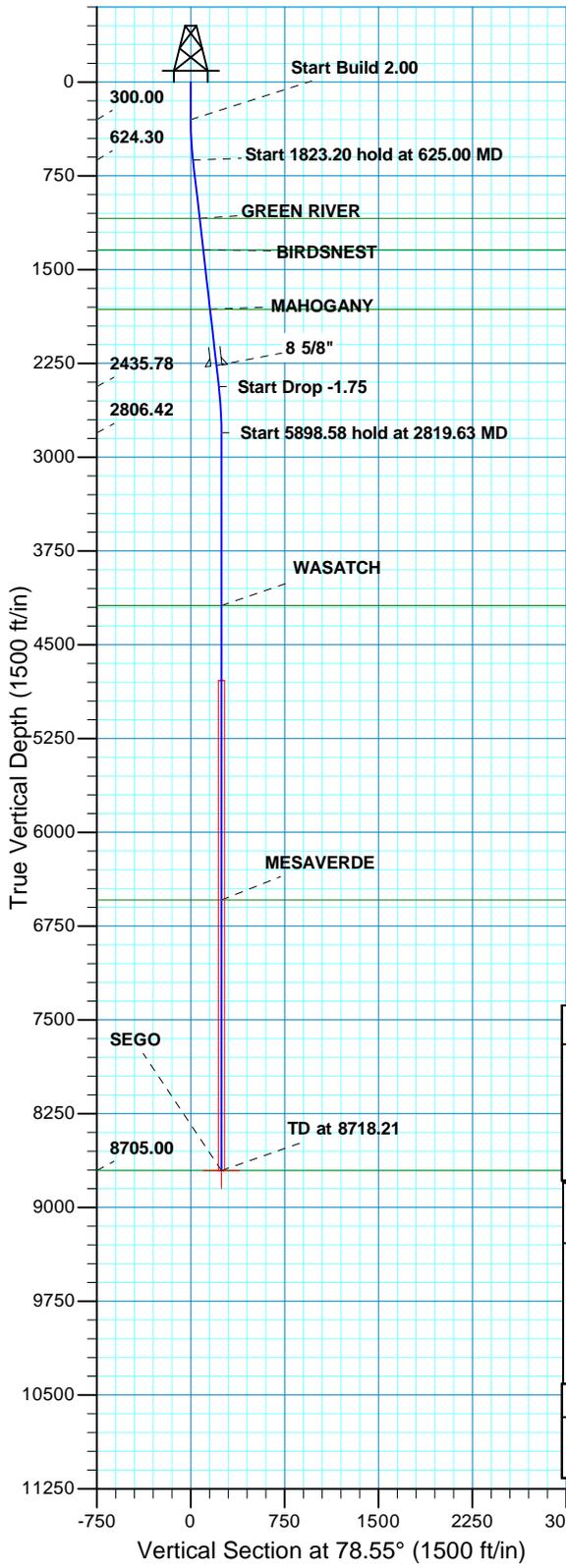


Site: NBU 1022-3A PAD  
Well: NBU 1022-3A1CS  
Wellbore: OH  
Design: PLAN #1



WELL DETAILS: NBU 1022-3A1CS								
GL 4941 & KB 4 @ 4945.00ft (ASSUMED)								
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude			
0.00	0.00	14524158.36	2083408.90	39.984031	-109.418618			
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8705.00	48.81	240.96	14524211.44	2083648.95	39.984165	-109.417758	Circle (Radius: 25.00)
- plan hits target center								

Azimuths to True North  
 Magnetic North: 10.96°  
 Magnetic Field  
 Strength: 52267.6snT  
 Dip Angle: 65.85°  
 Date: 02/06/2012  
 Model: IGRF2010



SECTION DETAILS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00		
625.00	6.50	78.55	624.30	3.66	18.05	2.00	78.55	18.42		
2448.20	6.50	78.55	2435.78	44.63	220.33	0.00	0.00	224.81		
2819.63	0.00	0.00	2806.42	48.81	240.96	1.75	180.00	245.85		
8718.21	0.00	0.00	8705.00	48.81	240.96	0.00	0.00	245.85	PBHL_NBU 1022-3A1CS	

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N			FORMATION TOP DETAILS		
Geodetic System:	Universal Transverse Mercator (US Survey Feet)		TVDPath	MDPath	Formation
Datum:	NAD 1927 (NADCON CONUS)		1342.00	1094.72	GREEN RIVER
Ellipsoid:	Clarke 1866		1818.00	1347.34	BIRDSNEST
Zone:	Zone 12N (114 W to 108 W)		4187.00	1826.42	MAHOGANY
Location:	SECTION 3 T10S R22E		6542.00	4200.21	WASATCH
System Datum:	Mean Sea Level		8705.00	6555.21	MESAVERDE
				8718.21	SEGO

CASING DETAILS			
TVD	MD	Name	Size
2268.00	2279.33	8 5/8"	8.625



# **US ROCKIES REGION PLANNING**

**UTAH - UTM (feet), NAD27, Zone 12N**

**NBU 1022-3A PAD**

**NBU 1022-3A1CS**

**OH**

**Plan: PLAN #1**

## **Standard Planning Report**

**06 February, 2012**





**SDI**  
Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3A1CS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4941 & KB 4 @ 4945.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 4941 & KB 4 @ 4945.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-3A PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-3A1CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

<b>Project</b>	UTAH - UTM (feet), NAD27, Zone 12N		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

<b>Site</b>	NBU 1022-3A PAD, SECTION 3 T10S R22E				
<b>Site Position:</b>	<b>Northing:</b>	14,524,167.20 usft	<b>Latitude:</b>	39.984055	
<b>From:</b> Lat/Long	<b>Easting:</b>	2,083,413.78 usft	<b>Longitude:</b>	-109.418600	
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	1.02 °

<b>Well</b>	NBU 1022-3A1CS, 462 FNL 733 FEL					
<b>Well Position</b>	<b>+N/-S</b>	-8.74 ft	<b>Northing:</b>	14,524,158.37 usft	<b>Latitude:</b>	39.984031
	<b>+E/-W</b>	-5.04 ft	<b>Easting:</b>	2,083,408.89 usft	<b>Longitude:</b>	-109.418618
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	4,941.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	02/06/12	10.96	65.85	52,268

<b>Design</b>	PLAN #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	78.55

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
625.00	6.50	78.55	624.30	3.66	18.05	2.00	2.00	0.00	78.55	
2,448.20	6.50	78.55	2,435.78	44.63	220.33	0.00	0.00	0.00	0.00	
2,819.63	0.00	0.00	2,806.42	48.81	240.96	1.75	-1.75	0.00	180.00	
8,718.21	0.00	0.00	8,705.00	48.81	240.96	0.00	0.00	0.00	0.00	PBHL_NBU 1022-3A'



**SDI**  
Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3A1CS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4941 & KB 4 @ 4945.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 4941 & KB 4 @ 4945.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-3A PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-3A1CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Start Build 2.00</b>										
400.00	2.00	78.55	399.98	0.35	1.71	1.75	2.00	2.00	0.00	
500.00	4.00	78.55	499.84	1.39	6.84	6.98	2.00	2.00	0.00	
600.00	6.00	78.55	599.45	3.12	15.38	15.69	2.00	2.00	0.00	
625.00	6.50	78.55	624.30	3.66	18.05	18.42	2.00	2.00	0.00	
<b>Start 1823.20 hold at 625.00 MD</b>										
700.00	6.50	78.55	698.82	5.34	26.37	26.91	0.00	0.00	0.00	
800.00	6.50	78.55	798.18	7.59	37.47	38.23	0.00	0.00	0.00	
900.00	6.50	78.55	897.54	9.84	48.56	49.55	0.00	0.00	0.00	
1,000.00	6.50	78.55	996.89	12.08	59.66	60.87	0.00	0.00	0.00	
1,094.72	6.50	78.55	1,091.00	14.21	70.16	71.59	0.00	0.00	0.00	
<b>GREEN RIVER</b>										
1,100.00	6.50	78.55	1,096.25	14.33	70.75	72.19	0.00	0.00	0.00	
1,200.00	6.50	78.55	1,195.61	16.58	81.85	83.51	0.00	0.00	0.00	
1,300.00	6.50	78.55	1,294.96	18.82	92.94	94.83	0.00	0.00	0.00	
1,347.34	6.50	78.55	1,342.00	19.89	98.19	100.19	0.00	0.00	0.00	
<b>BIRDSNEST</b>										
1,400.00	6.50	78.55	1,394.32	21.07	104.04	106.15	0.00	0.00	0.00	
1,500.00	6.50	78.55	1,493.68	23.32	115.13	117.47	0.00	0.00	0.00	
1,600.00	6.50	78.55	1,593.04	25.57	126.23	128.79	0.00	0.00	0.00	
1,700.00	6.50	78.55	1,692.39	27.81	137.32	140.11	0.00	0.00	0.00	
1,800.00	6.50	78.55	1,791.75	30.06	148.42	151.43	0.00	0.00	0.00	
1,826.42	6.50	78.55	1,818.00	30.65	151.35	154.42	0.00	0.00	0.00	
<b>MAHOGANY</b>										
1,900.00	6.50	78.55	1,891.11	32.31	159.51	162.75	0.00	0.00	0.00	
2,000.00	6.50	78.55	1,990.46	34.56	170.61	174.07	0.00	0.00	0.00	
2,100.00	6.50	78.55	2,089.82	36.80	181.70	185.39	0.00	0.00	0.00	
2,200.00	6.50	78.55	2,189.18	39.05	192.80	196.71	0.00	0.00	0.00	
2,279.33	6.50	78.55	2,268.00	40.83	201.60	205.69	0.00	0.00	0.00	
<b>8 5/8"</b>										
2,300.00	6.50	78.55	2,288.54	41.30	203.89	208.03	0.00	0.00	0.00	
2,400.00	6.50	78.55	2,387.89	43.54	214.99	219.35	0.00	0.00	0.00	
2,448.20	6.50	78.55	2,435.78	44.63	220.33	224.81	0.00	0.00	0.00	
<b>Start Drop -1.75</b>										
2,500.00	5.59	78.55	2,487.29	45.71	225.68	230.26	1.75	-1.75	0.00	
2,600.00	3.84	78.55	2,586.95	47.34	233.74	238.49	1.75	-1.75	0.00	
2,700.00	2.09	78.55	2,686.81	48.37	238.82	243.67	1.75	-1.75	0.00	
2,800.00	0.34	78.55	2,786.79	48.79	240.90	245.79	1.75	-1.75	0.00	
2,819.63	0.00	0.00	2,806.42	48.81	240.96	245.85	1.75	-1.75	0.00	
<b>Start 5898.58 hold at 2819.63 MD</b>										
2,900.00	0.00	0.00	2,886.79	48.81	240.96	245.85	0.00	0.00	0.00	
3,000.00	0.00	0.00	2,986.79	48.81	240.96	245.85	0.00	0.00	0.00	
3,100.00	0.00	0.00	3,086.79	48.81	240.96	245.85	0.00	0.00	0.00	
3,200.00	0.00	0.00	3,186.79	48.81	240.96	245.85	0.00	0.00	0.00	
3,300.00	0.00	0.00	3,286.79	48.81	240.96	245.85	0.00	0.00	0.00	
3,400.00	0.00	0.00	3,386.79	48.81	240.96	245.85	0.00	0.00	0.00	
3,500.00	0.00	0.00	3,486.79	48.81	240.96	245.85	0.00	0.00	0.00	
3,600.00	0.00	0.00	3,586.79	48.81	240.96	245.85	0.00	0.00	0.00	
3,700.00	0.00	0.00	3,686.79	48.81	240.96	245.85	0.00	0.00	0.00	



**SDI**  
Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3A1CS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4941 & KB 4 @ 4945.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 4941 & KB 4 @ 4945.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-3A PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-3A1CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,800.00	0.00	0.00	3,786.79	48.81	240.96	245.85	0.00	0.00	0.00
3,900.00	0.00	0.00	3,886.79	48.81	240.96	245.85	0.00	0.00	0.00
4,000.00	0.00	0.00	3,986.79	48.81	240.96	245.85	0.00	0.00	0.00
4,100.00	0.00	0.00	4,086.79	48.81	240.96	245.85	0.00	0.00	0.00
4,200.00	0.00	0.00	4,186.79	48.81	240.96	245.85	0.00	0.00	0.00
4,200.21	0.00	0.00	4,187.00	48.81	240.96	245.85	0.00	0.00	0.00
<b>WASATCH</b>									
4,300.00	0.00	0.00	4,286.79	48.81	240.96	245.85	0.00	0.00	0.00
4,400.00	0.00	0.00	4,386.79	48.81	240.96	245.85	0.00	0.00	0.00
4,500.00	0.00	0.00	4,486.79	48.81	240.96	245.85	0.00	0.00	0.00
4,600.00	0.00	0.00	4,586.79	48.81	240.96	245.85	0.00	0.00	0.00
4,700.00	0.00	0.00	4,686.79	48.81	240.96	245.85	0.00	0.00	0.00
4,800.00	0.00	0.00	4,786.79	48.81	240.96	245.85	0.00	0.00	0.00
4,900.00	0.00	0.00	4,886.79	48.81	240.96	245.85	0.00	0.00	0.00
5,000.00	0.00	0.00	4,986.79	48.81	240.96	245.85	0.00	0.00	0.00
5,100.00	0.00	0.00	5,086.79	48.81	240.96	245.85	0.00	0.00	0.00
5,200.00	0.00	0.00	5,186.79	48.81	240.96	245.85	0.00	0.00	0.00
5,300.00	0.00	0.00	5,286.79	48.81	240.96	245.85	0.00	0.00	0.00
5,400.00	0.00	0.00	5,386.79	48.81	240.96	245.85	0.00	0.00	0.00
5,500.00	0.00	0.00	5,486.79	48.81	240.96	245.85	0.00	0.00	0.00
5,600.00	0.00	0.00	5,586.79	48.81	240.96	245.85	0.00	0.00	0.00
5,700.00	0.00	0.00	5,686.79	48.81	240.96	245.85	0.00	0.00	0.00
5,800.00	0.00	0.00	5,786.79	48.81	240.96	245.85	0.00	0.00	0.00
5,900.00	0.00	0.00	5,886.79	48.81	240.96	245.85	0.00	0.00	0.00
6,000.00	0.00	0.00	5,986.79	48.81	240.96	245.85	0.00	0.00	0.00
6,100.00	0.00	0.00	6,086.79	48.81	240.96	245.85	0.00	0.00	0.00
6,200.00	0.00	0.00	6,186.79	48.81	240.96	245.85	0.00	0.00	0.00
6,300.00	0.00	0.00	6,286.79	48.81	240.96	245.85	0.00	0.00	0.00
6,400.00	0.00	0.00	6,386.79	48.81	240.96	245.85	0.00	0.00	0.00
6,500.00	0.00	0.00	6,486.79	48.81	240.96	245.85	0.00	0.00	0.00
6,555.21	0.00	0.00	6,542.00	48.81	240.96	245.85	0.00	0.00	0.00
<b>MESAVERDE</b>									
6,600.00	0.00	0.00	6,586.79	48.81	240.96	245.85	0.00	0.00	0.00
6,700.00	0.00	0.00	6,686.79	48.81	240.96	245.85	0.00	0.00	0.00
6,800.00	0.00	0.00	6,786.79	48.81	240.96	245.85	0.00	0.00	0.00
6,900.00	0.00	0.00	6,886.79	48.81	240.96	245.85	0.00	0.00	0.00
7,000.00	0.00	0.00	6,986.79	48.81	240.96	245.85	0.00	0.00	0.00
7,100.00	0.00	0.00	7,086.79	48.81	240.96	245.85	0.00	0.00	0.00
7,200.00	0.00	0.00	7,186.79	48.81	240.96	245.85	0.00	0.00	0.00
7,300.00	0.00	0.00	7,286.79	48.81	240.96	245.85	0.00	0.00	0.00
7,400.00	0.00	0.00	7,386.79	48.81	240.96	245.85	0.00	0.00	0.00
7,500.00	0.00	0.00	7,486.79	48.81	240.96	245.85	0.00	0.00	0.00
7,600.00	0.00	0.00	7,586.79	48.81	240.96	245.85	0.00	0.00	0.00
7,700.00	0.00	0.00	7,686.79	48.81	240.96	245.85	0.00	0.00	0.00
7,800.00	0.00	0.00	7,786.79	48.81	240.96	245.85	0.00	0.00	0.00
7,900.00	0.00	0.00	7,886.79	48.81	240.96	245.85	0.00	0.00	0.00
8,000.00	0.00	0.00	7,986.79	48.81	240.96	245.85	0.00	0.00	0.00
8,100.00	0.00	0.00	8,086.79	48.81	240.96	245.85	0.00	0.00	0.00
8,200.00	0.00	0.00	8,186.79	48.81	240.96	245.85	0.00	0.00	0.00
8,300.00	0.00	0.00	8,286.79	48.81	240.96	245.85	0.00	0.00	0.00
8,400.00	0.00	0.00	8,386.79	48.81	240.96	245.85	0.00	0.00	0.00
8,500.00	0.00	0.00	8,486.79	48.81	240.96	245.85	0.00	0.00	0.00
8,600.00	0.00	0.00	8,586.79	48.81	240.96	245.85	0.00	0.00	0.00
8,700.00	0.00	0.00	8,686.79	48.81	240.96	245.85	0.00	0.00	0.00



**SDI**  
Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3A1CS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4941 & KB 4 @ 4945.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 4941 & KB 4 @ 4945.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-3A PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-3A1CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,718.21	0.00	0.00	8,705.00	48.81	240.96	245.85	0.00	0.00	0.00
PBHL_NBU 1022-3A1CS									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 1022-3A1C: - hit/miss target - Shape - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,705.00	48.81	240.96	14,524,211.44	2,083,648.95	39.984165	-109.417758

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,279.33	2,268.00	8 5/8"	8.625	11.000	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,094.72	1,091.00	GREEN RIVER				
1,347.34	1,342.00	BIRDSNEST				
1,826.42	1,818.00	MAHOGANY				
4,200.21	4,187.00	WASATCH				
6,555.21	6,542.00	MESAVERDE				
8,718.21	8,705.00	SEGO				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
300.00	300.00	0.00	0.00	Start Build 2.00	
625.00	624.30	3.66	18.05	Start 1823.20 hold at 625.00 MD	
2,448.20	2,435.78	44.63	220.33	Start Drop -1.75	
2,819.63	2,806.42	48.81	240.96	Start 5898.58 hold at 2819.63 MD	
8,718.21	8,705.00	48.81	240.96	TD at 8718.21	

**Kerr-McGee Oil & Gas Onshore. L.P.****NBU 1022-3A Pad****API #4304750171****NBU 1022-3A1CS**

Surface:	437 FNL / 732 FEL	NENE	Lot
BHL:	413 FNL / 492 FEL	NENE	Lot

**API #****NBU 1022-3A1BS**

Surface:	437 FNL / 732 FEL	NENE	Lot
BHL:	83 FNL / 488 FEL	NENE	Lot

**API #4304740436****NBU 1022-3A4CS**

Surface:	437 FSL / 732 FEL	NWNE	Lot
BHL:	1070 FNL / 502 FEL	NENE	Lot

**API #****NBU 1022-3A4BS**

Surface:	437 FNL / 732 FEL	NENE	Lot
BHL:	744 FNL / 495 FEL	NENE	Lot

**API #****NBU 1022-3H1BS**

Surface:	437 FNL / 732 FEL	SENE	Lot
BHL:	1405 FNL / 495 FEL	SENE	Lot

This Surface Use Plan of Operations (SUPO) or 13-point plan provides site-specific information for the above-referenced wells.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

An on-site meeting was held on December 6, 2011. Present were:

- David Gordon, Tyler Cox - BLM;
- Jacob Dunham - 609 Consulting;
- John Slaugh, Mitch Batty - Timberline Engineering & Land Surveying, Inc.; and
- Gina Becker, Charles Chase, Doyle Holmes, Casey McGee, Grizz Oleen, Sheila Wopsock - Kerr-McGee

**A. Existing Roads:**

Existing roads consist of county and improved/unimproved access roads (two-tracks). In accordance with Onshore Order #1, Kerr-McGee will, in accordance with BMPs, improve or maintain existing roads in a condition that is the same as or better than before operations began. New or reconstructed proposed access roads are discussed in Section B.

The existing roads will be maintained in a safe and usable condition. Maintenance for existing roads will continue until final abandonment and reclamation of well pads and/or other facilities, as applicable. Road maintenance will include, but is not limited to, blading, ditching, and/or culvert installation and cleanout. To ensure safe operating conditions, gravel surfacing will be performed where excessive rutting or erosion may occur. Dust control will be performed as necessary to ensure safe operating conditions.

Roads, gathering lines and electrical distribution lines will occupy common disturbance corridors where possible. Where available, roadways will be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor will overlap each other to the maximum extent possible, while maintaining

safe and sound construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

Please refer to Topo B, for existing roads.

**B. New or Reconstructed Access Roads:**

All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BLM. BMPs. Described in the BLM's Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition (Gold Book) (USDI and USDA, 2007) and/or BLM Manual Section 9113 (1985) will be considered in consultation with the BLM in the design, construction, improvement and maintenance of all new or reconstructed roads. If a new road would cross a water of the United States, Kerr-McGee will adhere to the requirements of applicable Nationwide Permits of the Department of Army Corps of Engineers.

Each new well pad or pad expansion may require construction of a new access road and/or de-commissioning of an older road. Plans, routes, and distances for new roads and road improvements are provided in design packages, exhibits and maps for a project. Project-specific maps are submitted to depict the locations of existing, proposed, and/or decommissioned and include the locations for supporting structures, including, but not limited to, culverts, bridges, low water crossings, range infrastructure, and haul routes, as per OSO 1. Designs for cuts and fills, including spoils source and storage areas, are provided with the road designs, as necessary.

Where safety objectives can be met. As applicable, Kerr-McGee may use unimproved and/or two-track roads for lease operations, to lessen total disturbance.

Road designs will be based on the road safety requirements, traffic characteristics, environmental conditions, and the vehicles the road is intended to carry. Generally, newly constructed unpaved lease roads will be crowned and ditched with the running surfaces of the roads approximately 12-18 feet wide and a total road corridor width not to exceed 45 feet, except where noted in the road design for a specific project. Maximum grade will generally not exceed 8%. Borrow ditches will be back sloped 3:1 or less. Construction BMPs will be employed to control onsite and offsite erosion.

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities, such as V- or wing-ditches, will be constructed to divert surface water runoff. Drainage features, including culverts, will be constructed or installed prior to commencing other operations, including drilling or facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s), as necessary.

Prior to construction, new access road(s) will be staked according to the requirements of OSO 1. Construction activity will not be conducted using frozen or saturated materials or during periods when significant watershed damage (e.g. rutting, extensive sheet soil erosion, formation of rills/gullies, etc.) is likely to occur. Vegetative debris will not be placed in or under fill embankments.

New road maintenance will include, but is not limited to, blading, ditching, culvert installation and cleanout, gravel surfacing where excessive rutting or erosion may occur and dust control, as necessary to ensure safe operating conditions. All vehicular traffic, personnel movement, construction/restoration operations will be confined to the approved area and to existing roadways and/or access routes.

Snow removal will be conducted on an as-needed basis to accommodate safe travel. Snow removal will occur as necessary throughout the year, as will necessary drainage ditch construction. Removed snow may be stored on permitted well pads to reduce hauling distances and/or at the aerial extent of approved disturbance boundaries to facilitate snow removal for the remainder of the season.

If a county road crossing or encroachment permit is needed, it will be obtained prior to construction.

**The following segments are "on-lease"**

±120' (0.02 miles) – Section 3 T10S R22E (NE/4 NE/4) – On-lease UTU-01191A, Re-route the county road from the North edge of pad and curve northeasterly to merge with the existing county road. Please refer to Topo B.

**C. Location of Existing Wells:**

A) Refer to Topo Map C.

**D. Location of Existing and/or Proposed Facilities:**

This pad will expand the existing pad for the NBU 86J well, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on February 6, 2012. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad. A berm will be constructed completely around production components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will generally be constructed of compacted subsoil or corrugated metal, and will hold the capacity of the largest tank and have sufficient freeboard to accommodate a 25 year rainfall event. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with the BLM (typically Shadow Gray). A production facility layout is provided as part of a project-specific APD, ROW or NOS submission.

**GAS GATHERING**

*Please refer to Exhibit D and Topo D2- Pad and Pipeline Detail.*

The gas gathering pipeline material: Steel line pipe. Surface = Bare pipe. Buried = Coated with fusion bonded epoxy coating (or equivalent). The total gas gathering pipeline distance from the meter to the tie in point is ±2,220' and the individual segments are broken up as follows:

**The following segments are "onlease", no ROW needed.**

- ±195' (0.04 miles) – Section 3 T10S R22E (NE/4 NE/4) – On-lease UTU-01191A, BLM surface, New 10" buried gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 Pad and Pipeline Detail.
- ±1,135' (0.21 miles) – Section 3 T10S R22E (NE/4 NE/4) – On-lease UTU-01191A, BLM surface, New 10" buried gas gathering pipeline from the edge of the pad to the 1022-3B intersection. Please refer to Exhibit A, Line 13.
- ±890' (0.17 miles) – Section 3 T10S R22E (NW/4 NE/4) – On-lease UTU-01191A, BLM surface, New 10" buried gas gathering pipeline from the 1022-3B intersection to the approved 16" gas pipeline. This pipeline will be used concurrently with the NBU 1022-3B Pad. Please refer to Exhibit A, Lines 12.

**LIQUID GATHERING**

*Please refer to Exhibit D and Topo D2- Pad and Pipeline Detail.*

The total liquid gathering pipeline distance from the separator to the tie in point is ±2,220' and the individual segments are broken up as follows:

**The following segments are "onlease", no ROW needed.**

- ±195' (0.04 miles) – Section 3 T10S R22E (NE/4 NE/3) – On-lease UTU-01191A, BLM surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 Pad and Pipeline Detail.
- ±1,135' (0.21 miles) – Section 3 T10S R22E (NE/4 NE/4) – Lease UTU-01191A, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad to the 1022-3B intersection. Please refer to Exhibit B, Line 13.
- ±890' (0.17 miles) – Section 3 T10S R22E (NW/4 NE/4) – Lease UTU-01191A, BLM surface, New 6" buried liquid gathering pipeline from the 1022-3B intersection to the approved liquid pipeline. This pipeline will be used concurrently with the NBU 1022-3B Pad. Please refer to Exhibit B, Lines 12.

**Pipeline Gathering Construction**

Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee. Gas gathering pipeline(s), gas lift, or liquids pipelines may be constructed to lie on the surface or be buried. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. The area of disturbance during construction from the edge of road or well pad will typically be 30' in width. Where pipelines run cross country, the width of disturbance will typically be 45 ft for buried lines and 30 ft for surface lines. In addition, Kerr-McGee requests for a permanent 30' disturbance width that will be maintained for the portion adjacent to the road. The need for the 30' permanent disturbance width is for maintenance and repairs. Cross country permanent disturbance width also are required to be 30ft.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. In some surface pipeline installation instances pipe cannot be constructed where it will lay. In these cases where an above-ground pipeline is constructed parallel and adjacent to a road, it will be welded/fused on the road and then lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment.

Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2 inches (typically fuel gas lines) to 24 inches (typically transportation lines) in diameter, but 6 to 16 inches is typical for a buried gas line. The diameter of liquids pipelines may vary from 2 inches to 12 inches, but 6 inches is the typical diameter. Gas lift lines may vary from 2 to 12 inches in diameter, but 6-inch diameter pipes are generally used for gas lift. If two or more pipelines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

Typically, to install a buried pipeline, topsoil will be removed, windrowed and placed on the non-working side of the route for later reclamation. Because working room is limited, the spoil may be spread out across the working side and construction will take place on the spoil. The working side of the corridor will be used for pipe stringing, bending, welding and equipment travel. Small areas on the working side displaying ruts or uneven ground will be groomed to facilitate the safe passage of equipment. After the pipelines are installed, spoil will be placed back into the trench, and the topsoil will be redistributed over the disturbed corridor prior to final reclamation. Typical depth of the trench will be 6 feet, but depths may vary according to site-specific conditions (presence of bedrock, etc.). The proposed trench width for the pipeline would range from 18-48 inches.

The pipeline will be welded along the proposed route and lowered into place. Trenching equipment will cut through the soil or into the bedrock and create good backfill, eliminating the need to remove large rocks. The proposed buried pipeline will be visually and radiographically inspected and the entire pipeline will be pneumatically or hydrostatically tested before being placed into service. Routine vehicle traffic will be prevented from using pipeline routes as travel ways by posting signs at the route's intersection with an access road.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections

for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, Kerr-McGee will apply all applicable Army Corps mandates as well as the BLM's Hydraulic Considerations for Pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface.

Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations for production integrity and safety purposes.

Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation.

When no longer deemed necessary by the operator, Kerr-McGee or it's successor will consult with the BLM, Vernal Field Office before terminating of the use of the pipeline(s).

**The Anadarko Completions Transportation System (ACTS) information:**

Please refer to Exhibit C for ACTs Lines

Kerr-McGee will use either a closed loop drilling system that will require one pit and one storage area to be constructed on the drilling pad or a traditional drilling operation with one pit. The storage area will be used to contain only the de-watered drill cuttings and will be lined and reclaimed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit is lined and will be used for the wells drilled on the pad or used as part of our Anadarko Completions Transportation (ACTS) system which is discussed in more detail below. Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completion pit.

If Kerr-McGee does not use a closed loop system, it will construct a drilling reserve pit to contain drill cuttings and for use in completion operations. Depending on the location of the pit, its relation to future drilling locations, the reserve/completion pit will be utilized for the completion of the wells on that pad and/or be used as part of our ACTS system.

Kerr-McGee will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of frac fluids by utilizing existing reserve pits and temporary, surface-laid aluminum liquids transfer lines between frac locations. The pit will be refurbished as follows when a traditional drill pit is used: mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom of pit with cat. Kerr-McGee will reline the pit with a 30 mil liner and double felt padding. The refurbished pit will be the same size or smaller as specified in the originally approved ROW/APD. The pit refurb will be done in a normal procedure and there will be no modification to the pit.

All four sides of the completions pit will be fenced in according to standard pit fencing procedures. Netting will be installed over all pits.

Any hydrocarbons collected will be treated and sold at approved sales facilities. A loading rack with drip containment will also be installed where water trucks would unload and load to prevent damage caused from pulling hoses in and out of the pit.

ACTS will require temporarily laying multiple 6" aluminum water transfer lines on the surface between either existing or refurbished reserve pits. Please see the attached ACTS exhibit C for placement of the proposed temporary lines. The temporary aluminum transfer lines will be utilized to transport frac fluid being injected and/or recovered during the completion process and will be laid adjacent to existing access roads or pipeline corridors. Upon completion of the frac operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. Kerr-McGee requests to keep the netted pit open for one year from first production of the first produced well on the pad. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other frac jobs in the area. After one year Kerr-McGee will backfill the pit and reclaim. If the pit is not needed for an entire year it will be backfilled and reclaimed earlier. Kerr-McGee understands that due to the temporary nature of this system, BLM considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BLM.

#### **E. Location and Types of Water Supply:**

Water for drilling and completion operations will be obtained from the following sources:

Permit # 49-2307	JD Field Services	Green River- Section 15, T2N, R22E
Permit # 49-2321	R.N. Industries	White River- Section 2, T10S, R24E
Permit # 49-2319	R.N. Industries	White River- Various Sources
Permit # 49-2320	R.N. Industries	Green River- Section 33, T8S, R23E

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.

#### **F. Construction Materials:**

Construction operations will typically be completed with native materials found on location. Construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source (described in site-specific documents). No construction materials will be removed from federal lands without prior approval from the BLM. A source location other than an on-location construction site will be designated either via a map or narrative within the project specific materials provided to the BLM.

#### **G. Methods for Handling Waste:**

All wastes subject to regulation will be handled in compliance with applicable laws to minimize the potential for leaks or spills to the environment. Kerr-McGee also maintains a Spill Control and Countermeasure Plan, which includes notification requirements, including the BLM, for all reportable spills of oil, produced liquids, and hazardous materials.

Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of CERCLA, Section 102 B. If a release involves petroleum hydrocarbons or produced liquids, Kerr-McGee will comply with the notification requirements of NTL-3A. Drill cuttings and/or drilling fluids will be contained in the reserve/frac pit whether a closed loop system is used or not. Cuttings will be buried in pit(s) upon closure. Unless specifically approved by the BLM, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface precipitation runoff into the pit (via appropriate placement of subsoil storage areas and/or construction of berms, ditches, etc). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a reserve/completion pit,

they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by the BLM. Should timely removal not be feasible, the pit will be netted as soon as practical. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with an impermeable liner. The liner will be a synthetic material 30 mil or thicker. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. After evaporation and when dry, the reserve pit liners will be cut off, ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions (freeboard, etc.) allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per Onshore Order Number 7 (OSO 7). Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Otherwise, fluids disposal locations and associated haul routes, for ROW consideration, are typically depicted on Topo A of individual projects. Revisions to the water source or method of transportation will be subject to written approval from the BLM.

Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after one year from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse (trash and other solid waste including cans, paper, cable, etc.) generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility. Immediately after removal of the drilling rig, all debris and other waste materials not contained within trash receptacles will be collected and removed from the well location.

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as 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. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

### **Materials Management**

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. Kerr-McGee maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time. Chemicals meeting the criteria for being an acutely hazardous material/substance or meet the quantities criteria per BLM Instruction Memorandum No. 93-344 will not be used.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities (crude oil/condensate, produced water). They may also be kept in limited quantities on drilling sites (barite, diesel fuel, cement, cottonseed hulls etc.) for short periods of time during drilling or completion activities.

Fluids disposal and pipeline/haul routes are depicted on Topo Map A.

Any produced water separated from recoverable condensate from the proposed well will be contained in a water tank and will then be transported by pipeline and/or truck to one of the pre-approved disposal sites:

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

Or to one of the following Kerr-McGee active Salt Water Disposal (SWD) wells:

NBU 159 SWD in Sec. 35 T9S R21E  
CIGE 112D SWD in Sec. 19 T9S R21E  
CIGE 114 SWD in Sec. 34 T9S R21E  
NBU 921-34K SWD in Sec. 34 T9S R21E  
NBU 921-33F SWD in Sec. 34 T9S R21E

#### **H. Ancillary Facilities:**

No additional ancillary facilities are planned for this location.

#### **I. Well Site Layout:**

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit (for closed loop or non-closed loop operations), access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure, proposed cuts and fills, and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment depending on whether a closed loop system is used. Surface distance may be less if using closed loop. But in either case, the area of disturbance will not exceed the maximum disturbance outlined in the attached exhibits.

For the protection of livestock and wildlife, all open pits and cellars will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as 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.

Each well will utilize either a centralized tank battery, centralized fluids management system, or have tanks installed on its pad. Production/ Produced Liquid tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks will be kept reasonably free from surface accumulations of liquid hydrocarbons. The tanks are not to be used for disposal of liquids from additional sources without prior approval of BLM.

#### **J. Plans for Surface Reclamation:**

The surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. Interim reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

##### **Interim Reclamation**

Interim reclamation may include pit evaporation, fluid removal, pit solidification, re-contouring, ripping, spreading top soil, seeding, and/or weed control. Interim reclamation will be performed in accordance with OSO 1, or written notification will be provided to the BLM for approval. Where feasible, drilling locations, reserve pits, or access routes not utilized for production operations will be re-contoured to a natural appearance.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit. Disposal of pit fluids and linings is discussed in Section G.

##### **Final Reclamation**

Final reclamation will be performed for unproductive wells and after the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by Kerr-McGee. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BLM will be notified prior to commencement of reclamation operations. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring the site to the approximate contour that existed prior to pad construction, final grading will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers, where practical. The surface soil material will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep, where practical. The entire area will be uniformly covered with the depressions constructed perpendicular to the natural flow of water.

Reclamation of roads will be performed at the discretion of the BLM. All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded in accordance with the seeding specifications of the BLM.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to the BLM.

#### **Measures Common to Interim and Final Reclamation**

Soil preparation will be conducted using a disk for areas in need of more soil preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeded, compacted areas will be scarified by ripping or chiseling to loosen compacted soils, promote water infiltration, and improve soil aeration and root penetration.

Seeding will occur year-round as conditions allow and will typically be accomplished through the use of a no-till rangeland style seed drill with a “picker box” in order to seed “fluffy” seed. Where drill seeding is not the preferred method, seed will be broadcast and then raked into the ground at double the rate of drill seeding. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The seed mixes will be selected from a list provided by or approved by the BLM, or a specific seed mix will be proposed by Kerr-McGee to the BLM and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be maintained by Kerr-McGee. Every effort will be made to obtain “cheat grass free seed”.

Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

<b>Bonanza Area Mix</b>	<b>Pure Live Seed lbs/acre</b>
Crested Wheat (Hycrest)	2
Bottlebrush Squirreltail	1
Western Wheatgrass (Arriba)	1
Indian Ricegrass	1
Fourwing Saltbush	2
Shadscale	2
Forage Kochia	0.25
Rocky Mountain Bee	0.5
<b>Total</b>	<b>9.75</b>

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. Slopes will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to: erosion control blankets, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage. Soil amendments such as “Sustain” (an organic fertilizer that will be applied at the rate 1,800 – 2,100 lbs/acre with seed) may also be dry broadcast or applied with hydro-seeding equipment.

#### **Weed Control**

All weed management will be done in accordance with the Vernal BLM Surface Disturbance Weed Policy. Noxious weeds will be controlled, as applicable, on project areas. Monitoring and management of noxious and/or invasive weeds of concern will be completed annually until the project is deemed successfully reclaimed by the surface management agency and/or owner according to the Anadarko Integrated Weed Management Plan. Noxious weed infestations will be mapped using a GPS unit and submitted to the BLM with information required in the Vernal BLM Surface Disturbance Weed Policy. If herbicide is to be applied it will be done according to an approved Pesticide Use Permit (PUP), inclusive of applicable locations. All pesticide applications will be recorded using a Pesticide Application Record (PAR) and will be submitted along with a Pesticide Use Report (PUR) annually prior to Dec. 31.

### **Monitoring**

Monitoring of reclaimed project areas will be completed annually during the growing season and actions to ensure reclamation success will be taken as needed. During the first two growing seasons an ocular methodology will be used to determine the success of the reclamation activities. During the 3rd growing season a 200 point line intercept (quantitative) methodology will be used to obtain basal cover. The goal is to have the reclaimed area reach 30% basal cover when compared to the reference site. If after three growing seasons the area has not reached 30% basal cover, additional reclamation activities may be necessary. Monitoring will continue until the reclaimed area reaches 75% basal cover of desirable vegetation when compared to the reference site. (Green River District Reclamation Guidelines)

All monitoring reports will be submitted electronically to the Vernal BLM in the form of a geo-database no later than March 1st of the calendar year following the data collection.

### **K. Surface/Mineral Ownership:**

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

### **L. Other Information:**

#### **Onsite Specifics:**

- None

### **Cultural and Paleontological Resources**

All personnel are strictly prohibited from collecting artifacts, any paleontological specimens or fossils, and from disturbing any significant cultural resources in the area. If artifacts, fossils, or any culturally sensitive materials are exposed or identified in the area of construction, all construction operations that would affect the newly discovered resource will cease, and Kerr-McGee will provide immediate notification to the BLM.

### **Resource Reports:**

A Class I literature review was completed on February 1, 2012 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 11-404.

A paleontological reconnaissance survey was completed on February 3, 2012 by Intermountain Paleo Consultants. For additional details please refer to report IPC 11-202PRE.

Biological field survey was completed on June 15, 2011 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-682.

**Proposed Action Annual Emissions Tables:**

<b>Table 1: Proposed Action Annual Emissions (tons/year)<sup>1</sup></b>			
<b>Pollutant</b>	<b>Development</b>	<b>Production</b>	<b>Total</b>
NO <sub>x</sub>	3.8	0.12	3.92
CO	2.2	0.11	2.31
VOC	0.1	4.9	5
SO <sub>2</sub>	0.005	0.0043	0.0093
PM <sub>10</sub>	1.7	0.11	1.81
PM <sub>2.5</sub>	0.4	0.025	0.425
Benzene	2.2E-03	0.044	0.046
Toluene	1.6E-03	0.103	0.105
Ethylbenzene	3.4E-04	0.005	0.005
Xylene	1.1E-03	0.076	0.077
n-Hexane	1.7E-04	0.145	0.145
Formaldehyde	1.3E-02	8.64E-05	1.31E-02

<sup>1</sup> Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

<b>Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison</b>			
<b>Species</b>	<b>Proposed Action Production Emissions (ton/yr)</b>	<b>WRAP Phase III 2012 Uintah Basin Emission Inventory<sup>a</sup> (ton/yr)</b>	<b>Percentage of Proposed Action to WRAP Phase III</b>
NO <sub>x</sub>	19.6	16,547	0.12%
VOC	25	127,495	0.02%

<sup>a</sup> [http://www.wrapair.org/forums/ogwg/PhaseIII\\_Inventory.html](http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html)

Uintah Basin Data

NBU 1022-3A1CS/ 1022-3A1BS/  
1022-3A4CS/ 1022-3A4BS/ 1022-3H1BS

Surface Use Plan of Operations  
13 of 13

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

Gina T. Becker  
Regulatory Analyst II  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6086

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

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

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

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

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management 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 I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

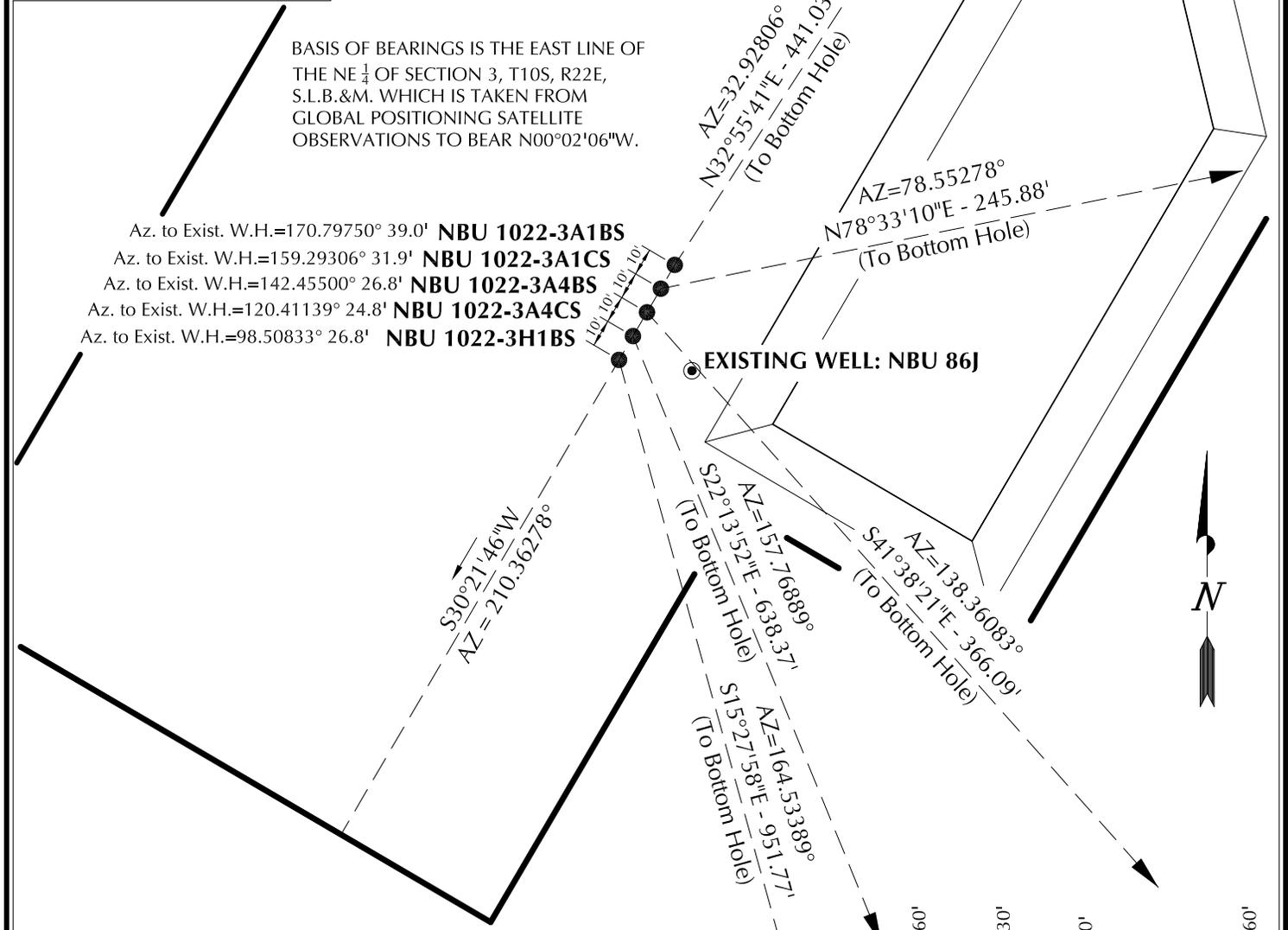
  
\_\_\_\_\_  
Gina T. Becker

February 13, 2012  
\_\_\_\_\_  
Date

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 1022-3A1BS	39°59'02.473" 39.984020°	109°25'09.416" 109.419282°	39°59'02.598" 39.984055°	109°25'06.960" 109.418600°	453' FNL 728' FEL	39°59'06.130" 39.985036°	109°25'06.334" 109.418426°	39°59'06.254" 39.985071°	109°25'03.878" 109.417744°	83' FNL 488' FEL
NBU 1022-3A1CS	39°59'02.388" 39.983997°	109°25'09.481" 109.419300°	39°59'02.513" 39.984031°	109°25'07.025" 109.418618°	462' FNL 733' FEL	39°59'02.869" 39.984130°	109°25'06.385" 109.418440°	39°59'02.993" 39.984165°	109°25'03.929" 109.417758°	413' FNL 492' FEL
NBU 1022-3A4BS	39°59'02.303" 39.983973°	109°25'09.546" 109.419318°	39°59'02.428" 39.984008°	109°25'07.089" 109.418636°	470' FNL 738' FEL	39°58'59.599" 39.983222°	109°25'06.423" 109.418451°	39°58'59.723" 39.983256°	109°25'03.967" 109.417769°	744' FNL 495' FEL
NBU 1022-3A4CS	39°59'02.218" 39.983949°	109°25'09.611" 109.419336°	39°59'02.342" 39.983984°	109°25'07.155" 109.418654°	479' FNL 743' FEL	39°58'56.378" 39.982327°	109°25'06.513" 109.418476°	39°58'56.502" 39.982362°	109°25'04.057" 109.417794°	1070' FNL 502' FEL
NBU 1022-3H1BS	39°59'02.133" 39.983926°	109°25'09.676" 109.419355°	39°59'02.257" 39.983960°	109°25'07.220" 109.418672°	488' FNL 748' FEL	39°58'53.068" 39.981408°	109°25'06.423" 109.418451°	39°58'53.193" 39.981442°	109°25'03.967" 109.417769°	1405' FNL 495' FEL
NBU 86J	39°59'02.093" 39.983915°	109°25'09.336" 109.419260°	39°59'02.218" 39.983949°	109°25'06.880" 109.418578°	492' FNL 722' FEL					

RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 1022-3A1BS	370.2'	239.7'	NBU 1022-3A1CS	48.8'	241.0'	NBU 1022-3A4BS	-273.6'	243.2'	NBU 1022-3A4CS	-590.9'	241.5'
NBU 1022-3H1BS	-917.3'	253.8'									



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

**WELL PAD - NBU 1022-3A**

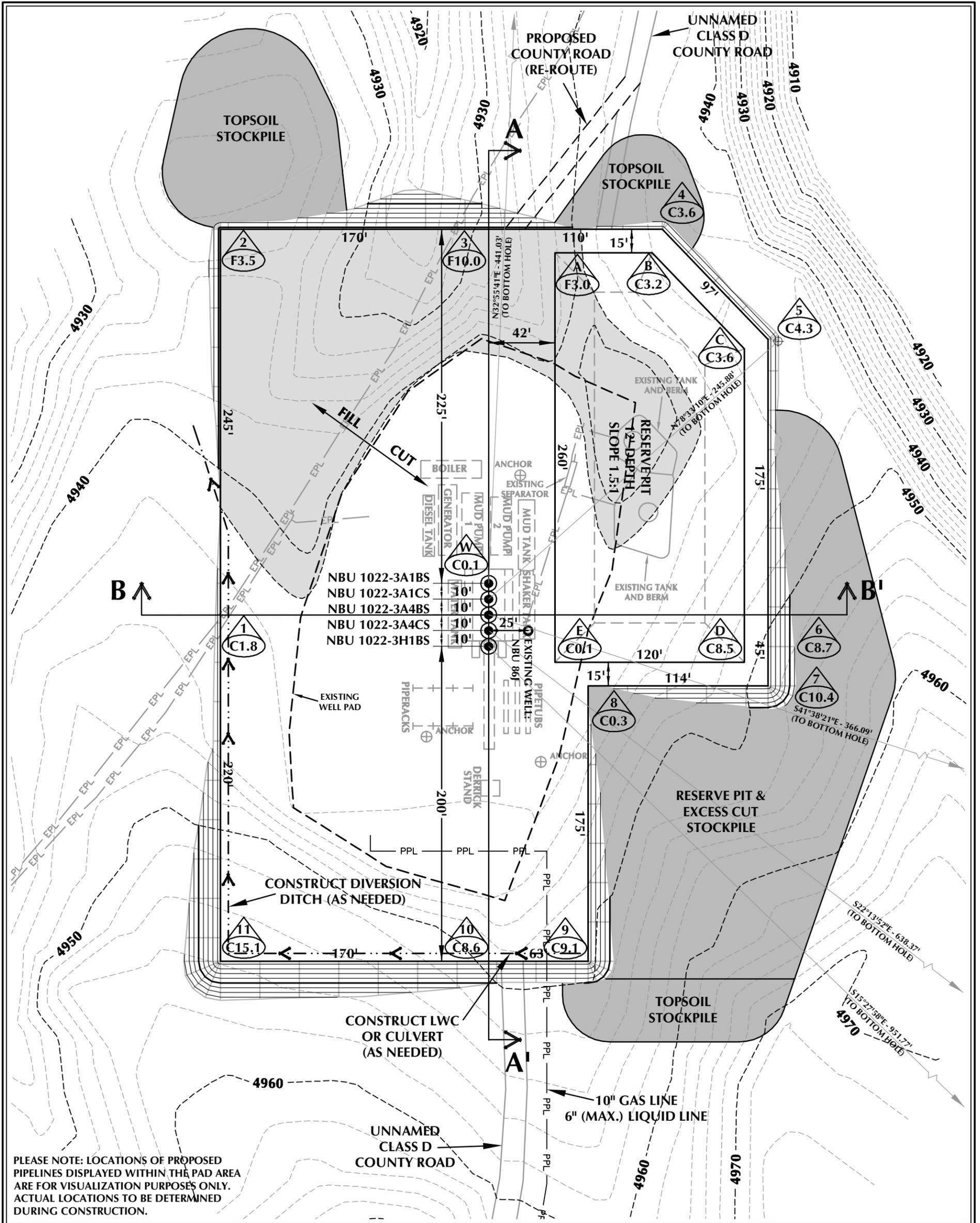
**WELL PAD INTERFERENCE PLAT**  
WELLS - NBU 1022-3A1BS,  
NBU 1022-3A1CS, NBU 1022-3A4BS,  
NBU 1022-3A4CS & NBU 1022-3H1BS  
LOCATED IN SECTION 3, T10S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH.



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

**TIMBERLINE** (435) 789-1365  
ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 11-08-11	SURVEYED BY: W.W.	SHEET NO: <b>6</b>
DATE DRAWN: 11-14-11	DRAWN BY: M.W.W.	
SCALE: 1" = 60'		6 OF 17



**WELL PAD - NBU 1022-3A DESIGN SUMMARY**

EXISTING GRADE @ CENTER OF WELL PAD = 4940.9'  
 FINISHED GRADE ELEVATION = 4940.8'  
 CUT SLOPES = 1.5:1  
 FILL SLOPES = 1.5:1  
 TOTAL WELL PAD AREA = 3.58 ACRES  
 TOTAL DISTURBANCE AREA = 4.88 ACRES  
 SHRINKAGE FACTOR = 1.10  
 SWELL FACTOR = 1.00

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 1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 1022-3A**  
 WELL PAD - LOCATION LAYOUT  
 NBU 1022-3A1BS,  
 NBU 1022-3A1CS, NBU 1022-3A4BS,  
 NBU 1022-3A4CS & NBU 1022-3H1BS  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., Uintah County, Utah



**609 CONSULTING, LLC**  
 2155 North Main Street  
 Sheridan, WY 82801  
 Phone 307-674-0609  
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**WELL PAD QUANTITIES**

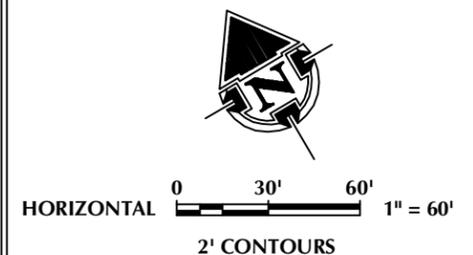
TOTAL CUT FOR WELL PAD = 10,046 C.Y.  
 TOTAL FILL FOR WELL PAD = 8,443 C.Y.  
 TOPSOIL @ 6" DEPTH = 1,898 C.Y.  
 EXCESS MATERIAL = 1,603 C.Y.

**RESERVE PIT QUANTITIES**

TOTAL CUT FOR RESERVE PIT  
 +/- 10,360 C.Y.  
 RESERVE PIT CAPACITY (2' OF FREEBOARD)  
 +/- 39,730 BARRELS

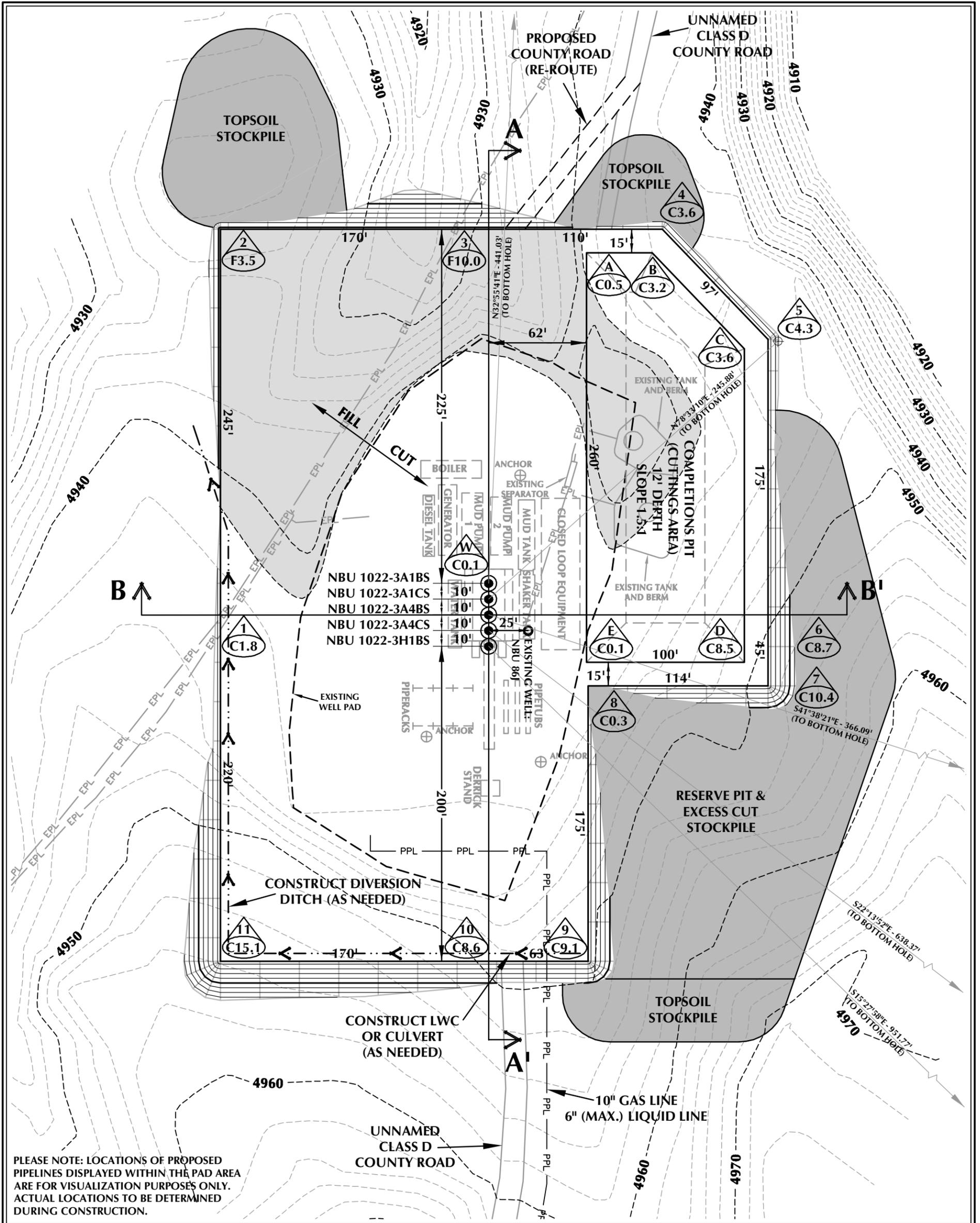
**WELL PAD LEGEND**

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PROPOSED PIPELINE
- EXISTING PIPELINE



**TIMBERLINE ENGINEERING & LAND SURVEYING, INC.**  
 209 NORTH 300 WEST - VERNAL, UTAH 84078  
 (435) 789-1365

SCALE: 1"=60' DATE: 11/18/11 SHEET NO:  
 REVISED: **7** 7 OF 17



**WELL PAD - NBU 1022-3A (CLOSED LOOP) DESIGN SUMMARY**

EXISTING GRADE @ CENTER OF WELL PAD = 4940.9'  
 FINISHED GRADE ELEVATION = 4940.8'  
 CUT SLOPES = 1.5:1  
 FILL SLOPES = 1.5:1  
 TOTAL WELL PAD AREA = 3.58 ACRES  
 TOTAL DISTURBANCE AREA = 4.88 ACRES  
 SHRINKAGE FACTOR = 1.10  
 SWELL FACTOR = 1.00

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

**WELL PAD - NBU 1022-3A**  
 WELL PAD - LOCATION LAYOUT  
 NBU 1022-3A1BS,  
 NBU 1022-3A1CS, NBU 1022-3A4BS,  
 NBU 1022-3A4CS & NBU 1022-3H1BS  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., Uintah County, Utah



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

**WELL PAD QUANTITIES**

TOTAL CUT FOR WELL PAD = 10,046 C.Y.  
 TOTAL FILL FOR WELL PAD = 8,443 C.Y.  
 TOPSOIL @ 6" DEPTH = 1,898 C.Y.  
 EXCESS MATERIAL = 1,603 C.Y.

**COMPLETIONS PIT QUANTITIES**

TOTAL CUT FOR COMPLETIONS PIT  
 +/- 8,210 C.Y.  
 COMPLETIONS PIT CAPACITY  
 (2' OF FREEBOARD)  
 +/- 31,210 BARRELS

**WELL PAD LEGEND**

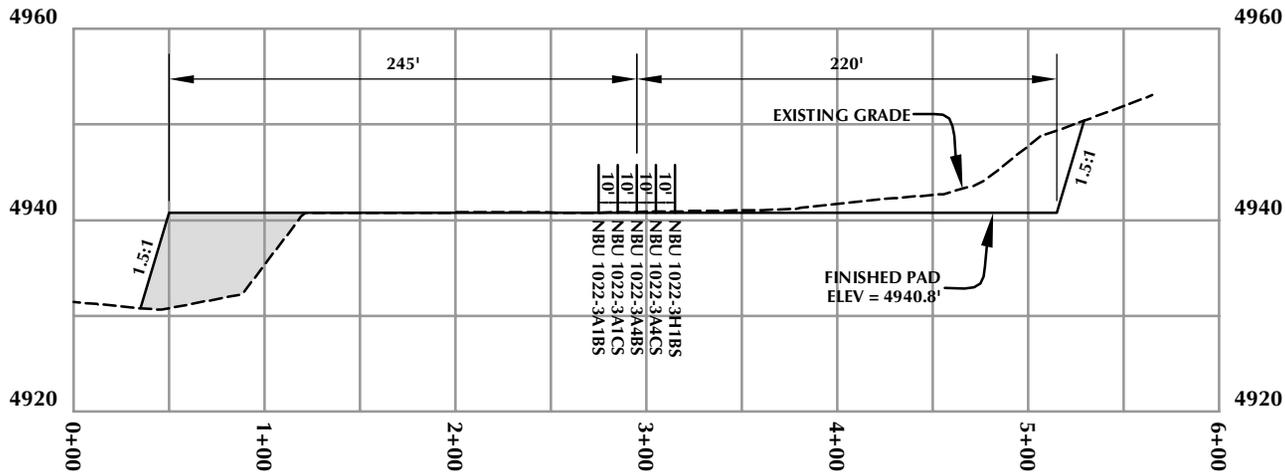
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PROPOSED PIPELINE
- EXISTING PIPELINE



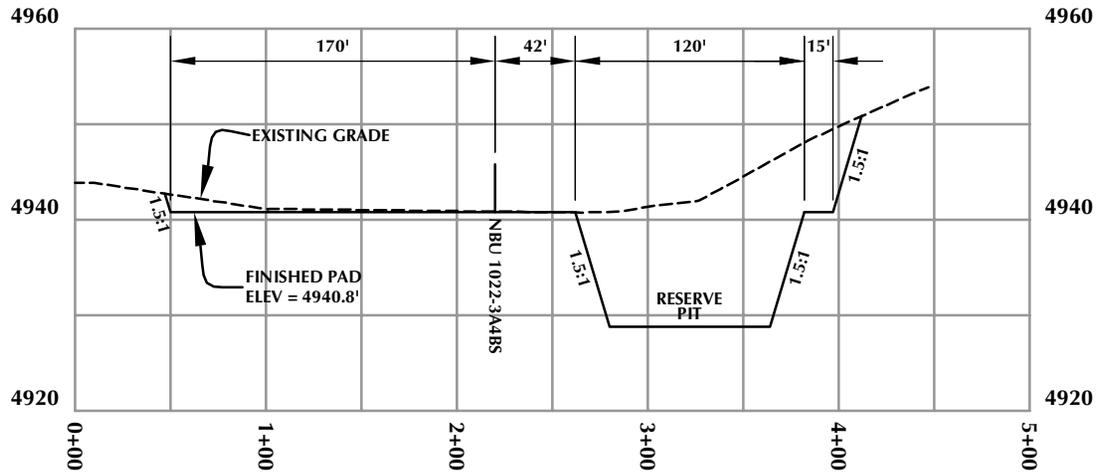
HORIZONTAL 0 30' 60' 1" = 60'  
 2' CONTOURS

SCALE: 1"=60' DATE: 1/11/12 SHEET NO:  
 REVISED: **7B** 7B OF 17

**TIMBERLINE** (435) 789-1365  
 ENGINEERING & LAND SURVEYING, INC.  
 209 NORTH 300 WEST - VERNAL, UTAH 84078



**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

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

**WELL PAD - NBU 1022-3A**

**WELL PAD - CROSS SECTIONS**

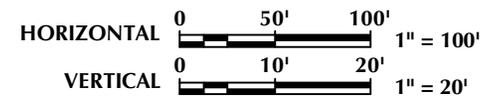
**NBU 1022-3A1BS,  
NBU 1022-3A1CS, NBU 1022-3A4BS,  
NBU 1022-3A4CS & NBU 1022-3H1BS  
LOCATED IN SECTION 3, T10S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH**



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

**TIMBERLINE**  
**ENGINEERING & LAND SURVEYING, INC.**  
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365



Scale: 1"=100'

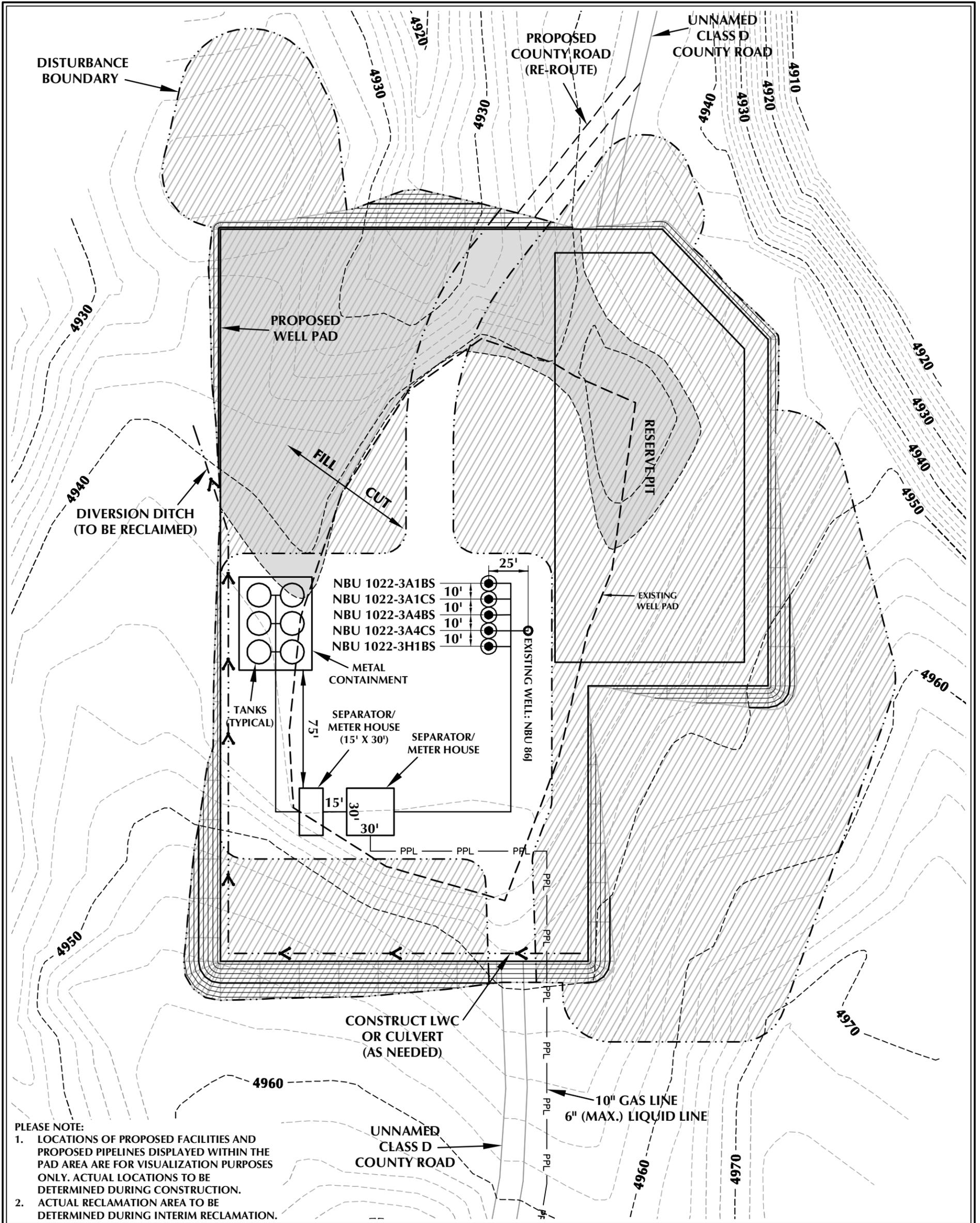
Date: 11/18/11

SHEET NO:

REVISED:

**8**

8 OF 17



PLEASE NOTE:  
 1. LOCATIONS OF PROPOSED FACILITIES AND PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.  
 2. ACTUAL RECLAMATION AREA TO BE DETERMINED DURING INTERIM RECLAMATION.

**WELL PAD - NBU 1022-3A DESIGN SUMMARY**

TOTAL DISTURBANCE AREA = 4.88 ACRES (INCLUDING EXISTING)  
 RECLAMATION AREA = 3.74 ACRES  
 TOTAL WELL PAD AREA AFTER RECLAMATION = 1.14 ACRES

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

**WELL PAD - NBU 1022-3A**

WELL PAD - RECLAMATION LAYOUT  
 NBU 1022-3A1BS,  
 NBU 1022-3A1CS, NBU 1022-3A4BS,  
 NBU 1022-3A4CS & NBU 1022-3H1BS  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., UINTAH COUNTY, UTAH



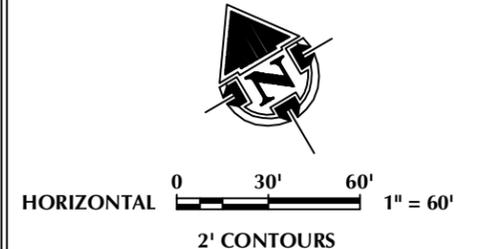
CONSULTING, LLC  
 2155 North Main Street  
 Sheridan, WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

**TIMBERLINE**  
 ENGINEERING & LAND SURVEYING, INC.  
 209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

**WELL PAD LEGEND**

	EXISTING WELL LOCATION
	PROPOSED WELL LOCATION
	PROPOSED BOTTOM HOLE LOCATION
	EXISTING CONTOURS (2' INTERVAL)
	PROPOSED CONTOURS (2' INTERVAL)
	PROPOSED PIPELINE
	EXISTING PIPELINE
	RECLAMATION AREA



SCALE: 1"=60'	DATE: 1/11/12	SHEET NO:
REVISED:		<b>9</b>

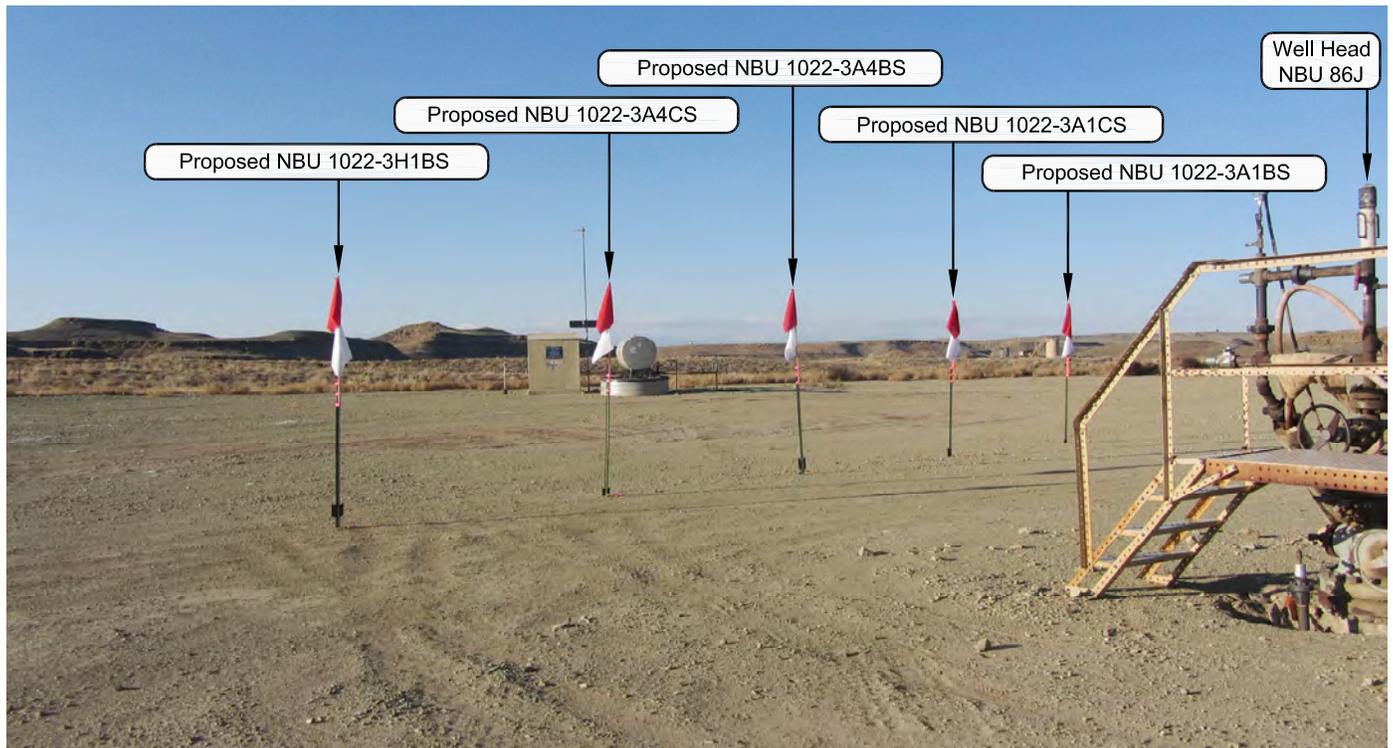


PHOTO VIEW: FROM PIT CORNER E TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: NORTHEASTERLY

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

**WELL PAD - NBU 1022-3A**

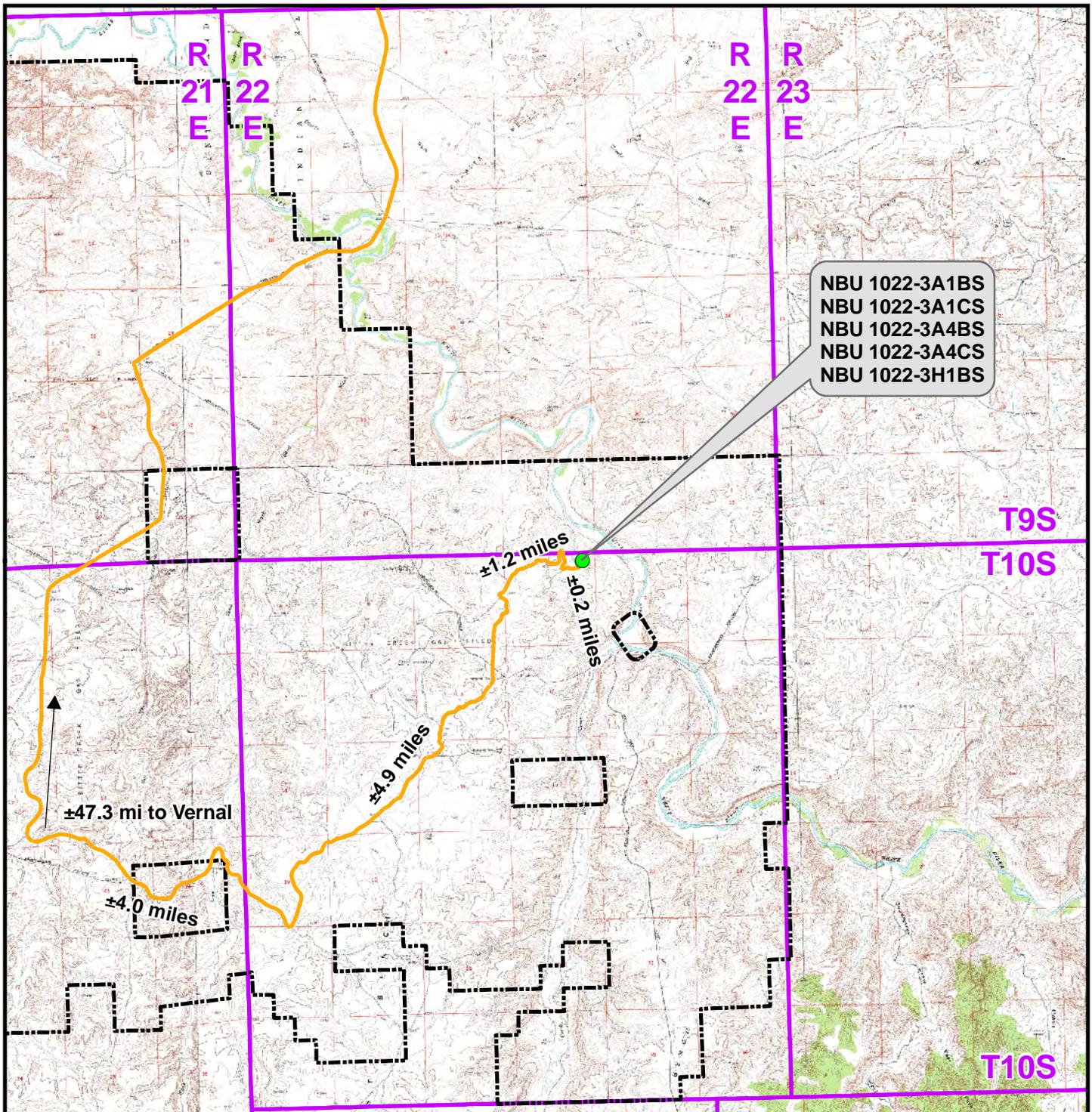
**LOCATION PHOTOS**  
 NBU 1022-3A1BS,  
 NBU 1022-3A1CS, NBU 1022-3A4BS,  
 NBU 1022-3A4CS & NBU 1022-3H1BS  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., Uintah County, Utah.



**CONSULTING, LLC**  
 2155 North Main Street  
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**TIMBERLINE** (435) 789-1365  
 ENGINEERING & LAND SURVEYING, INC.  
 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 11-08-11	PHOTOS TAKEN BY: W.W.	SHEET NO: <b>10</b>
DATE DRAWN: 11-14-11	DRAWN BY: M.W.W.	
Date Last Revised:		10 OF 17



NBU 1022-3A1BS  
 NBU 1022-3A1CS  
 NBU 1022-3A4BS  
 NBU 1022-3A4CS  
 NBU 1022-3H1BS

T9S  
 T10S

T10S

**Legend**

- Proposed Well Location
- Natural Buttes Unit Boundary
- Access Route - Proposed

Distance From Well Pad - NBU 1022-3A To Unit Boundary: ±4,570ft

**WELL PAD - NBU 1022-3A**

TOPO A  
 NBU 1022-3A1BS,  
 NBU 1022-3A1CS, NBU 1022-3A4BS,  
 NBU 1022-3A4CS & NBU 1022-3H1BS  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., UINTAH COUNTY, UTAH

**Kerr-McGee Oil &  
 Gas Onshore L.P.**

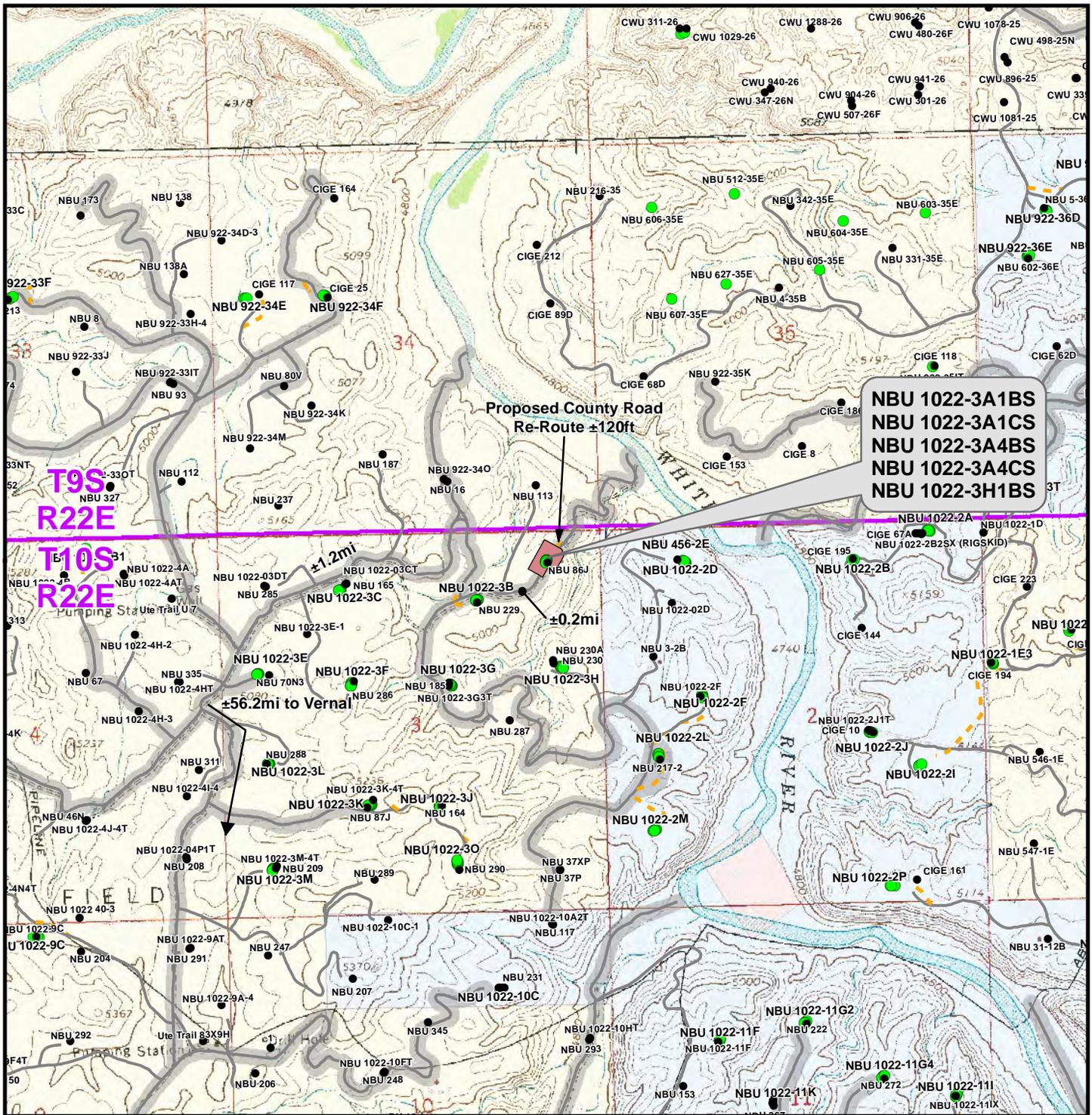
1099 18th Street  
 Denver, Colorado 80202



**CONSULTING, LLC**  
 2155 North Main Street  
 Sheridan, Wyoming 82801  
 Phone 307-674-0609  
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SCALE: 1:100,000	NAD83 USP Central	SHEET NO:
DRAWN: TL	DATE: 18 Nov 2011	<b>11</b>
REVISED:	DATE:	



**NBU 1022-3A1BS  
 NBU 1022-3A1CS  
 NBU 1022-3A4BS  
 NBU 1022-3A4CS  
 NBU 1022-3H1BS**

**Legend**

- Well - Proposed
- Well - Existing
- Well Pad
- Road - Proposed
- Road - Existing
- County Road
- Bureau of Land Management
- Indian Reservation
- State
- Private

Total Proposed County Road Re-Route Length: ±120ft

**WELL PAD - NBU 1022-3A**

**TOPO B  
 NBU 1022-3A1BS,  
 NBU 1022-3A1CS, NBU 1022-3A4BS,  
 NBU 1022-3A4CS & NBU 1022-3H1BS  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., UINTAH COUNTY, UTAH**

**Kerr-McGee Oil &  
 Gas Onshore L.P.**

**1099 18th Street  
 Denver, Colorado 80202**



**CONSULTING, LLC**

2155 North Main Street  
 Sheridan, Wyoming 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

SCALE: 1" = 2,000ft

DRAWN: TL

REVISED:

NAD83 USP Central

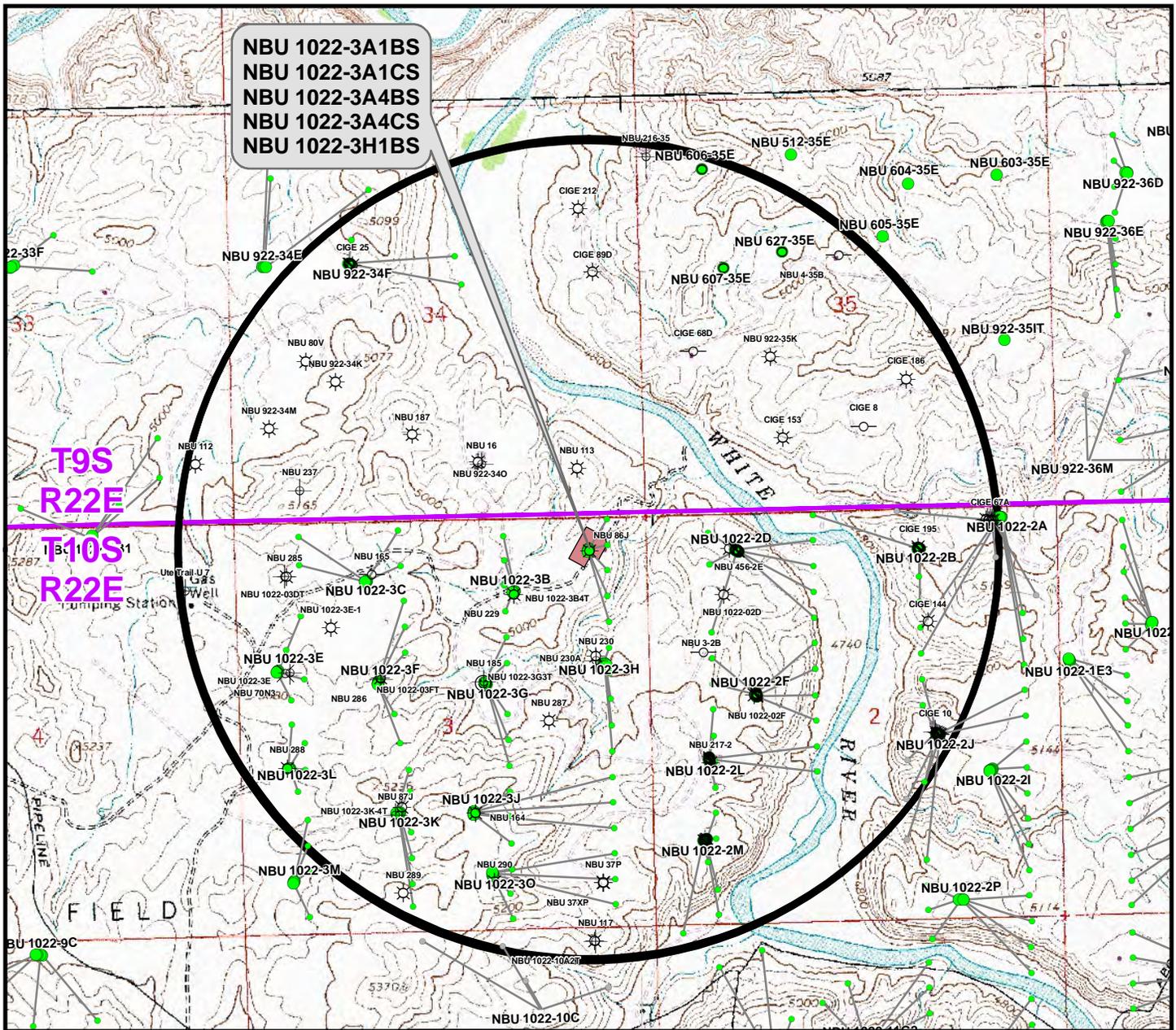
DATE: 18 Nov 2011

DATE:

SHEET NO:

**12**

12 OF 17



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 1022-3A1BS	NBU 86J	471ft
NBU 1022-3A1CS	NBU 86J	243ft
NBU 1022-3A4BS	NBU 86J	339ft
NBU 1022-3A4CS	NBU 86J	619ft
NBU 1022-3H1BS	NBU 230	470ft

**Legend**

- Well - Proposed
- Well Path
- ☀ Producing
- ⊕ Deferred
- ☀ Active Injector
- ⊕ Plugged & Abandoned
- Bottom Hole - Proposed
- Well Pad
- ☺ Spudded
- ⊗ Cancelled
- ☀ Location Abandoned
- ⊕ Shut-In
- Bottom Hole - Existing
- ◻ Well - 1 Mile Radius
- APD Approved
- ⊖ Temporarily Abandoned
- ⊖ Preliminary Location

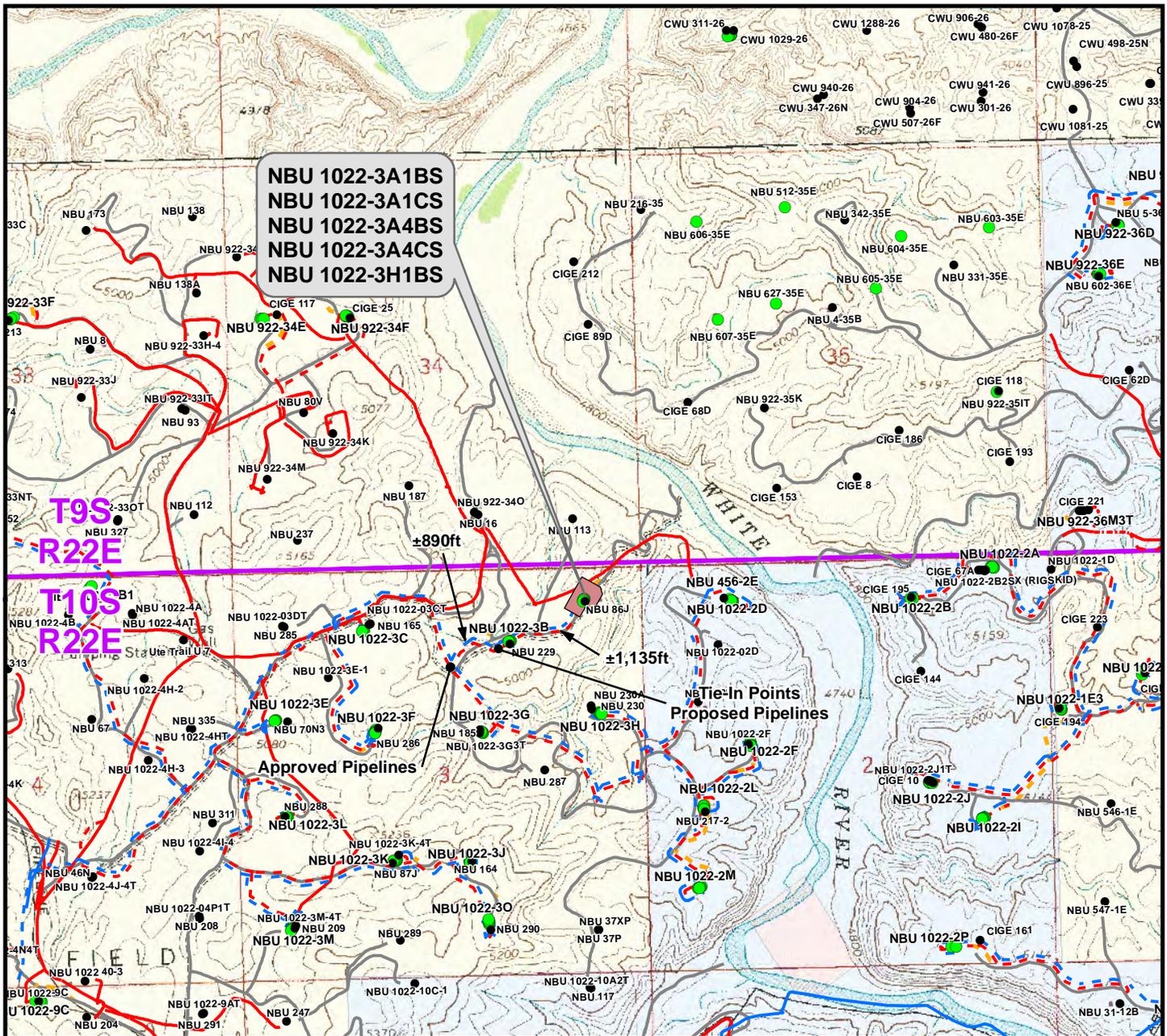
**WELL PAD - NBU 1022-3A**  
 TOPO C  
 NBU 1022-3A1BS,  
 NBU 1022-3A1CS, NBU 1022-3A4BS,  
 NBU 1022-3A4CS & NBU 1022-3H1BS  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., UINTAH COUNTY, UTAH

**Kerr-McGee Oil &  
 Gas Onshore L.P.**  
 1099 18th Street  
 Denver, Colorado 80202



**CONSULTING, LLC**  
 2155 North Main Street  
 Sheridan, Wyoming 82801  
 Phone 307-674-0609  
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SCALE: 1" = 2,000ft	NAD83 USP Central	<b>13</b>
DRAWN: TL	DATE: 18 Nov 2011	
REVISED:	DATE:	



Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
-----	-----	-----	-----
Buried 6" (Max.) (Meter House to Edge of Pad)	±195ft	Buried 10" (Meter House to Edge of Pad)	±195ft
Buried 6" (Max.) (Edge of Pad to 3B Intersection)	±1,135ft	Buried 10" (Edge of Pad to 3B Intersection)	±1,135ft
<b>TOTAL PROPOSED BURIED LIQUID PIPELINE =</b>	<b>±1,330ft</b>	<b>TOTAL PROPOSED BURIED GAS PIPELINE =</b>	<b>±1,330ft</b>

**Legend**

- Well - Proposed    - - - Gas Pipeline - Proposed    - - - Liquid Pipeline - Proposed    - - - Road - Proposed    Bureau of Land Management    State
- Well - Existing    - - - Gas Pipeline - To Be Upgraded    - - - Liquid Pipeline - Existing    - - - Road - Existing    Indian Reservation    Private
- Well Pad    - - - Gas Pipeline - Existing

**WELL PAD - NBU 1022-3A**  
**TOPO D**  
**NBU 1022-3A1BS,**  
**NBU 1022-3A1CS, NBU 1022-3A4BS,**  
**NBU 1022-3A4CS & NBU 1022-3H1BS**  
**LOCATED IN SECTION 3, T10S, R22E,**  
**S.L.B.&M., UINTAH COUNTY, UTAH**

**Kerr-McGee Oil & Gas Onshore L.P.**  
 1099 18th Street  
 Denver, Colorado 80202

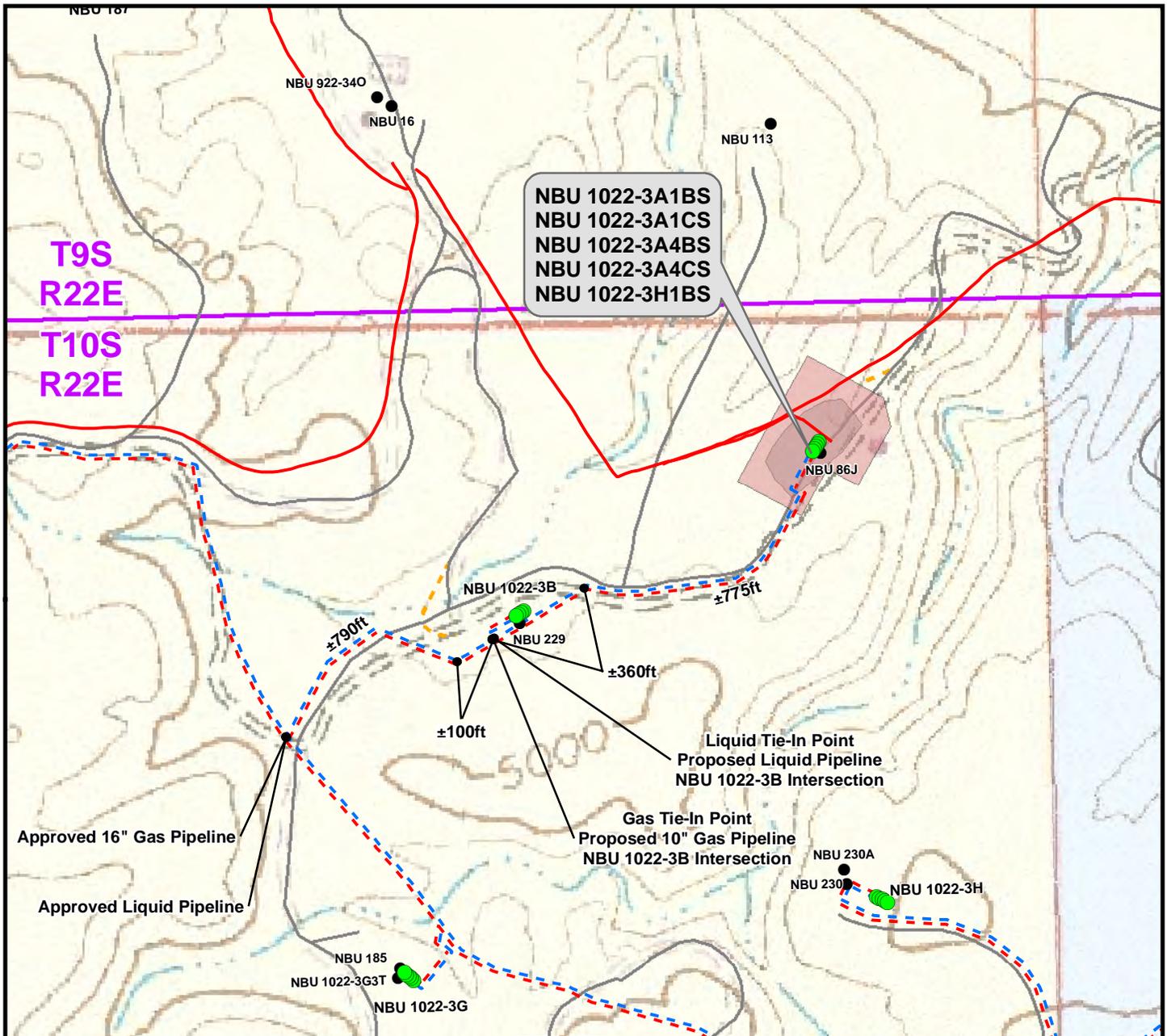


**609 CONSULTING, LLC**  
 2155 North Main Street  
 Sheridan, Wyoming 82801  
 Phone 307-674-0609  
 Fax 307-674-0182



SCALE: 1" = 2,000ft	NAD83 USP Central	<b>14</b>
DRAWN: TL	DATE: 18 Nov 2011	
REVISED:	DATE:	

SHEET NO:  
14 OF 17



Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
----- Buried 6" (Max.) (Meter House to Edge of Pad)	±195ft	----- Buried 10" (Meter House to Edge of Pad)	±195ft
----- Buried 6" (Max.) (Edge of Pad to 3B Intersection)	±1,135ft	----- Buried 10" (Edge of Pad to 3B Intersection)	±1,135ft
<b>TOTAL PROPOSED BURIED LIQUID PIPELINE =</b>	<b>±1,330ft</b>	<b>TOTAL PROPOSED BURIED GAS PIPELINE =</b>	<b>±1,330ft</b>

**Legend**

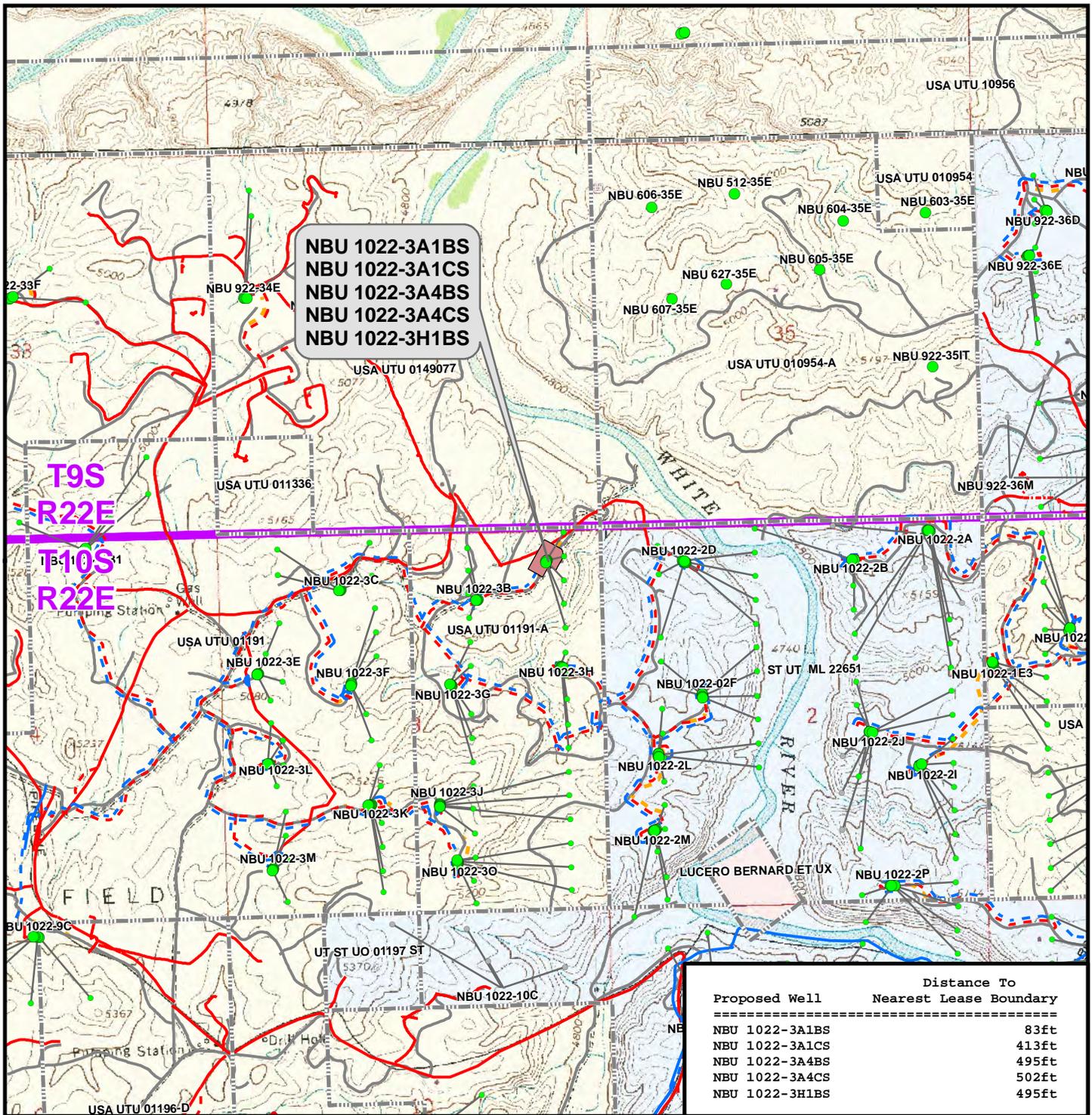
<span style="color: green;">●</span> Well - Proposed	<span style="background-color: #d3d3d3; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Well Pad - Proposed	<span style="color: red; font-weight: bold;">---</span> Gas Pipeline - Proposed	<span style="color: blue; font-weight: bold;">---</span> Liquid Pipeline - Proposed	<span style="color: orange; font-weight: bold;">---</span> Road - Proposed	<span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Bureau of Land Management
<span style="color: black;">●</span> Well - Existing	<span style="background-color: #808080; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Well Pad - Existing	<span style="color: red; font-weight: bold;">---</span> Gas Pipeline - To Be Upgraded	<span style="color: blue; font-weight: bold;">---</span> Liquid Pipeline - Existing	<span style="color: gray; font-weight: bold;">---</span> Road - Existing	<span style="background-color: #f08080; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Indian Reservation
		<span style="color: red; font-weight: bold;">---</span> Gas Pipeline - Existing			<span style="background-color: #add8e6; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> State
					<span style="border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Private

**WELL PAD - NBU 1022-3A**  
**TOPO D2 (PAD & PIPELINE DETAIL)**  
 NBU 1022-3A1BS,  
 NBU 1022-3A1CS, NBU 1022-3A4BS,  
 NBU 1022-3A4CS & NBU 1022-3H1BS  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., UINTAH COUNTY, UTAH

**Kerr-McGee Oil &  
 Gas Onshore L.P.**  
 1099 18th Street  
 Denver, Colorado 80202

**CONSULTING, LLC**  
 2155 North Main Street  
 Sheridan, Wyoming 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

SCALE: 1" = 500ft	NAD83 USP Central	<b>15</b> 15 OF 17
DRAWN: TL	DATE: 18 Nov 2011	
REVISED:	DATE:	



**Legend**

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- ▭ Lease Boundary
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Liquid Pipeline - Proposed
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

**WELL PAD - NBU 1022-3A**

TOPO E  
 NBU 1022-3A1BS,  
 NBU 1022-3A1CS, NBU 1022-3A4BS,  
 NBU 1022-3A4CS & NBU 1022-3H1BS  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., UINTAH COUNTY, UTAH

**Kerr-McGee Oil &  
 Gas Onshore L.P.**

1099 18th Street  
 Denver, Colorado 80202



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 Sheridan, Wyoming 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

SCALE: 1" = 2,000ft	NAD83 USP Central	<b>16</b>
DRAWN: TL	DATE: 18 Nov 2011	
REVISED:	DATE:	

SHEET NO:  
16 OF 17



Kerr-McGee Oil & Gas Onshore LP  
1099 18TH STREET STE. 1800  
DENVER, CO 80202  
720-929-6708 • FAX 720-929-7708  
E-MAIL: JOE.JOHNSON@ANADARKO.COM

February 13, 2012

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

Re: Directional Drilling R649-3-11  
NBU 1022-3A1CS  
T10S-R22E  
Section 3: NENE/NENE  
Surface: 462' FNL, 733' FEL  
Bottom Hole: 413' FNL, 492' FEL  
Uintah County, Utah

Dear Ms. Mason:

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

- Kerr-McGee's NBU 1022-3A1CS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

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

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink, appearing to read 'Joe D. Johnson', with a horizontal line underneath.

Joseph D. Johnson  
Landman

RECEIVED

AUG 08 2012

RECEIVED

Sept 18 2008  
FEB 27 2012

FORM APPROVED  
DIV. OF OIL GAS & MINING  
OMB NO. 1004-0137  
Expires: July 31, 2010

Form 3160-3  
(August, 2007)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

BLM, Vernal Utah

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU-01191A
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. If Unit or CA Agreement, Name and No. UTU63047A
3a. Address P.O. BOX 173779 DENVER, COLORADO 80202-3779		8. Lease Name and Well No. NBU 1022-3A1CS
3b. Phone No. (include area code) PHONE 720-929-6086 FAX 720-929-7086		9. API Well No. 4304750171
4. Location of well (Report location clearly and in accordance with any State requirements. *) At surface <sup>lot 1</sup> NENE 462 FNL 733 FEL LAT = 39.984031 LONG = -109.418618 At proposed <sup>lot 1</sup> NENE 413 FNL 492 FEL LAT = 39.984165 LONG = -109.417758 prod. Zone		10. Field and Pool, or Exploratory NATURAL BUTTES
14. Distance in miles and direction from the nearest town or post office* Approximately 58 miles Southeast from Vernal, Utah		11. Sec., T., R., M., or Blk. and Survey or Area 3 T 10S R 22E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any) 413	16. No. of acres in lease 1363.21	12. County or Parish UINTAH
17. Spacing Unit dedicated to this well	13. State UT	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 243	19. Proposed Depth 8718 MD 8705 TVD	20. BLM/ BIA Bond No. on file WYB000291
21. Elevations (Show whether DF, RT, GR, etc.) 4940.8 GR	22. Approximate date work will start* 8/8/2012	23. Estimated duration 60-90 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1 shall be attached to this form:

- |                                                                                                                                                  |                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| 1. Well plat certified by a registered surveyor.                                                                                                 | 4. Bond to cover the operations unless covered by existing bond on file(see item 20 above).           |
| 2. A Drilling Plan.                                                                                                                              | 5. Operator certification.                                                                            |
| 3. A Surface Use Plan ( if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/ or plans as may be required by the a authorized officer. |

25. Signature 	Name (Printed/ Typed) GINA T BECKER	Date February 16, 2012
Title REGULATORY ANALYST II		

Approved By (Signature) 	Name (Printed/ Typed) Jerry Kenczka	Date JUL 31 2012
Title Assistant Field Manager Lands & Mineral Resources		Office VERNAL FIELD OFFICE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

CONDITIONS OF APPROVAL ATTACHED

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Kerr-McGee Oil & Gas Onshore, L.P. hereby certifies that it is authorized by the proper lease interest owners and responsible under the terms and conditions of the lease to conduct lease operation associated with this application.



NOTICE OF APPROVAL



UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
VERNAL FIELD OFFICE

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



**CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL**

Company: Kerr-McGee Oil & Gas Onshore, LP      Location: Lot 1, Sec. 3, T10S, R22E  
Well No: NBU 1022-3A1CS      Lease No: UTU-01191A  
API No: 43-047-50171      Agreement: Natural Buttes Unit

**OFFICE NUMBER: (435) 781-4400**

**OFFICE FAX NUMBER: (435) 781-3420**

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR  
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

**NOTIFICATION REQUIREMENTS**

Location Construction (Notify Environmental Scientist)	- Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	- Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	- Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <a href="mailto:blm_ut_vn_opreport@blm.gov">blm_ut_vn_opreport@blm.gov</a>
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	- Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

**SURFACE USE PROGRAM  
CONDITIONS OF APPROVAL (COAs)**

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.
- The following will be used as standard operating procedures: Green completion or controlled VOC emissions methods with 90% efficiency for Oil or Gas Atmospheric Storage Tanks, VOC Venting controls or flaring, Glycol Dehydration and Amine Unites, Well Completion, Re-Completion, Venting, and Planned Blowdown Emissions.
- All reclamation activities will comply with the Green River Reclamation Guidelines.
- All vehicles and equipment shall be cleaned either through power-washing, or other approved method, if the vehicles or equipment were previously operated outside the Uinta Basin, to prevent weed seed introduction.
- All disturbance areas shall be monitored for noxious weeds annually, for a minimum of three growing seasons following completion of project or until desirable vegetation is established.
- Noxious and invasive weeds will be controlled by the proponent throughout the area of project disturbance.
- Noxious weeds will be inventoried and reported to BLM in the annual reclamation report. Where an integrated pest management program is applicable, coordination has been undertaken with the state and local management program (if existing). A copy of the pest management plan will be submitted for each project.
- A pesticide use proposal (PUP) will be obtained for the project, by the proponent if applicable.
- A permitted paleontologist is to be present to monitor construction at all well pads during all surface disturbing activities: examples include the following; building of the well pad, access road, and pipelines.

To maintain compliance with current cactus survey protocols, the following measures will be required:

1. If construction does not occur within 4 years of the original survey date, new 100% clearance surveys will be required.
2. Prior to construction within 4 years of the original survey date, a spot check survey will be required during the year of construction. KMG and their respective 3<sup>rd</sup> party surveyor will refer to the current

*Sclerocactus* Spot Check Survey Methods, to determine site specific survey distances and intensity levels.

3. Spot check reports will be reported to the BLM and the US Fish and Wildlife Service.
4. Construction will not commence until written approval is received from the BLM.

*Discovery Stipulation:* Reinitiation of section 7 consultation with the USFWS will be sought immediately if any loss of plants or occupied habitat for Uinta Basin hookless cactus is anticipated as a result of project activities.

- Construction or drilling is not allowed from January 1 – August 31 on the NBU 1022-3O pad to minimize impacts during golden eagle nesting.
- If it is anticipated that construction or drilling will occur during the given timing restriction, a BLM or qualified biologist shall be notified to conduct surveys for raptors. Depending upon the results of the surveys, permission to proceed may or may not be granted by the Authorized Officer.
- The best method to avoid entrainment is to pump from an off-channel location – one that does not connect to the river during high spring flows. An infiltration gallery constructed in a BLM and Service approved location is best.
- If the pump head is located in the river channel where larval fish are known to occur, the following measures apply:
  - a. do not situate the pump in a low-flow or no-flow area as these habitats tend to concentrate larval fishes;
  - b. limit the amount of pumping, to the greatest extent possible, during that period of the year when larval fish may be present (April 1 to August 31); and
  - c. limit the amount of pumping, to the greatest extent possible, during the pre-dawn hours as larval drift studies indicate that this is a period of greatest daily activity.
- Screen all pump intakes with 3/32 inch mesh material.
- Approach velocities for intake structures will follow the National Marine Fisheries Service's document "Fish Screening Criteria for Anadromous Salmonids." For projects with an in-stream intake that operate in stream reaches where larval fish may be present, the approach velocity will not exceed 0.33 feet per second (ft/s).
- Report any fish impinged on the intake screen to the Service (801.975.3330) and the Utah Division of Wildlife Resources:

Northeastern Region  
318 North Vernal Avenue  
Vernal, UT 84078  
Phone: (435) 781-9453
- Kerr McGee can only use the following water source:  
Permit # 49-2307 JD Field Services Green River-Section 15, T2N, R22E

**DOWNHOLE PROGRAM  
CONDITIONS OF APPROVAL (COAs)**

**SITE SPECIFIC DOWNHOLE COAs:**

Site Specific Drilling Plan COA's:

- Gamma ray Log shall be run from Total Depth to Surface.

Variations Granted:

Air Drilling

- Properly lubricated and maintained rotating head. Variance granted to use a properly maintained and lubricated diverter bowl in place of a rotating head.
- Blooie line discharge 100' from the well bore. Variance granted for blooie line discharge to be 45' from the well bore.
- Compressors located in the opposite direction from the blooie line a minimum of 100' from the well bore. Variance granted for truck/trailer mounted air compressors located 40' from the well bore.
- In lieu of mud products on location, Kerr McGee will fill the reserve pit with water for the kill medium and will utilize a skid pump near the reserve pit to supply the water to the well bore if necessary.
- Automatic igniter. Variance granted for igniter due to there being no productive formations encountered while air drilling.
- FIT Test. Variance granted due to well known geology and the problems that can occur with the FIT test.

**All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:**

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order

No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.

- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well in LAS format to BLM\_UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

## OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at [www.ONRR.gov](http://www.ONRR.gov).
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location ( $\frac{1}{4}$  Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs,

core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</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.	
<b>1. TYPE OF WELL</b> Gas Well	<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-01191-A
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>PHONE NUMBER:</b> 720 929-6501	<b>8. WELL NAME and NUMBER:</b> NBU 1022-3A1CS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0462 FNL 0733 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 03 Township: 10.0S Range: 22.0E Meridian: S	<b>9. API NUMBER:</b> 43047501710000
	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
	<b>COUNTY:</b> Uintah
	<b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 12/23/2012	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input checked="" type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: December 12, 2012

By:

<b>NAME (PLEASE PRINT)</b> Luke Urban	<b>PHONE NUMBER</b> 720 929-6501	<b>TITLE</b> Regulatory Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 12/11/2012	



**The Utah Division of Oil, Gas, and Mining**

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

**Request for Permit Extension Validation Well Number 43047501710000**

API: 43047501710000

Well Name: NBU 1022-3A1CS

Location: 0462 FNL 0733 FEL QTR NENE SEC 03 TWNP 100S RNG 220E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 12/23/2008

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 rightof- 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: Luke Urban

Date: 12/11/2012

Title: Regulatory Specialist Representing: KERR-MCGEE OIL & GAS ONSHORE, L.P.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-01191-A
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.		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> NBU 1022-3A1CS	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047501710000	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6511	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0462 FNL 0733 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 03 Township: 10.0S Range: 22.0E Meridian: S	<b>COUNTY:</b> UINTAH	
	<b>STATE:</b> UTAH	
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 7/9/2013  <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION  OTHER: <input style="width: 100px;" type="text"/>
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
<p>Spud well 7/9/2013 @ 08:30. MIRU Triple A Bucket Rig, drill 20" conductor hole to 40', run 14", 36.7# schedule 10 conductor pipe, cement with 28 sacks ready mix. Anticipated surface spud date and surface casing cement 12/28/2013.</p>		
		<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY July 11, 2013</b>
<b>NAME (PLEASE PRINT)</b> Teena Paulo	<b>PHONE NUMBER</b> 720 929-6236	<b>TITLE</b> Staff Regulatory Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 7/11/2013	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9	
<b>SUNDRY NOTICES AND REPORTS ON WELLS</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.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-01191-A	
		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>	
<b>1. TYPE OF WELL</b> Gas Well		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>8. WELL NAME and NUMBER:</b> NBU 1022-3A1CS	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>9. API NUMBER:</b> 43047501710000	
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0462 FNL 0733 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 03 Township: 10.0S Range: 22.0E Meridian: S		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES	
		<b>COUNTY:</b> UINTAH	
		<b>STATE:</b> UTAH	
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 9/5/2013	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION  OTHER: <input style="width: 100px;" type="text"/>
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.			
No activity for the month of August 2013. Well TD at 40 ft.			
<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY October 02, 2013</b>			
<b>NAME (PLEASE PRINT)</b> Matthew P Wold	<b>PHONE NUMBER</b> 720 929-6993	<b>TITLE</b> Regulatory Analyst I	
<b>SIGNATURE</b> N/A		<b>DATE</b> 9/5/2013	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-01191-A	
<b>SUNDRY NOTICES AND REPORTS ON WELLS</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.	
<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>	
<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES	
<b>8. WELL NAME and NUMBER:</b> NBU 1022-3A1CS	
<b>9. API NUMBER:</b> 43047501710000	
<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES	
<b>1. TYPE OF WELL</b> Gas Well	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 <span style="float: right;"><b>PHONE NUMBER:</b> 720 929-6511</span>	
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0462 FNL 0733 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 03 Township: 10.0S Range: 22.0E Meridian: S	
<b>COUNTY:</b> UINTAH	
<b>STATE:</b> UTAH	

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 10/4/2013	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

No new activity since last report. Well TD at 40 ft.

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**  
**FOR RECORD ONLY**  
 October 07, 2013

<b>NAME (PLEASE PRINT)</b> Teena Paulo	<b>PHONE NUMBER</b> 720 929-6236	<b>TITLE</b> Staff Regulatory Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 10/4/2013	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</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.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-01191-A
		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>1. TYPE OF WELL</b> Gas Well		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>8. WELL NAME and NUMBER:</b> NBU 1022-3A1CS
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>9. API NUMBER:</b> 43047501710000
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0462 FNL 0733 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 03 Township: 10.0S Range: 22.0E Meridian: S		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
		<b>COUNTY:</b> UINTAH
		<b>STATE:</b> UTAH

11.

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 1/2/2014	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

Drilled to 8,726 ft. in Quarter 4 of 2013.

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY  
January 03, 2014**

<b>NAME (PLEASE PRINT)</b> Kay E. Kelly	<b>PHONE NUMBER</b> 720 929 6582	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 1/2/2014	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-01191-A
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.		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> NBU 1022-3A1CS	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047501710000	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6100	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0462 FNL 0733 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 03 Township: 10.0S Range: 22.0E Meridian: S	<b>COUNTY:</b> UINTAH	
	<b>STATE:</b> UTAH	
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 2/7/2014	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input checked="" type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> OTHER	
	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 2/7/2014. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.		
<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY February 11, 2014</b>		
<b>NAME (PLEASE PRINT)</b> Teena Paulo	<b>PHONE NUMBER</b> 720 929-6236	<b>TITLE</b> Staff Regulatory Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 2/11/2014	

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

5. Lease Serial No.  
UTU01191A

1a. Type of Well  Oil Well  Gas Well  Dry  Other  
 b. Type of Completion  New Well  Work Over  Deepen  Plug Back  Diff. Resvr.  
 Other \_\_\_\_\_

6. If Indian, Allottee or Tribe Name \_\_\_\_\_

7. Unit or CA Agreement Name and No.  
UTU63047A

2. Name of Operator  
KERR-MCGEE OIL AND GAS ONSHORE  
Contact: KAY KELLY  
Email: kay.kelly@anadarko.com

8. Lease Name and Well No.  
NBU 1022-3A1CS

3. Address P.O. BOX 173779  
DENVER, CO 82017  
3a. Phone No. (include area code)  
Ph: 720-929-6000

9. API Well No.  
43-047-50171

4. Location of Well (Report location clearly and in accordance with Federal requirements)\*  
 At surface NENE 462FNL 733FEL 39.983997 N Lat, 109.419300 W Lon  
 At top prod interval reported below NENE 401FNL 499FEL  
 At total depth NENE 422FNL 489FEL

10. Field and Pool, or Exploratory  
NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey  
or Area Sec 3 T10S R22E Mer SLB

12. County or Parish  
UINTAH

13. State  
UT

14. Date Spudded  
07/09/2013

15. Date T.D. Reached  
11/14/2013

16. Date Completed  
 D & A  Ready to Prod.  
02/07/2014

17. Elevations (DF, KB, RT, GL)\*  
4959 KB

18. Total Depth: MD 8726  
TVD 8712

19. Plug Back T.D.: MD 8669  
TVD 8656

20. Depth Bridge Plug Set: MD  
TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)  
CBL/GR/CCL/TEMP

22. Was well cored?  No  Yes (Submit analysis)  
 Was DST run?  No  Yes (Submit analysis)  
 Directional Survey?  No  Yes (Submit analysis)

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20.000	14.000 STL	36.7	0	40		28			
12.250	8.625 J-55	28.0	18	2303		570		0	
7.875	4.500 I-80	11.6	18	8716		1505		1710	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	8142							

25. Producing Intervals

26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) WASATCH	5108	6499	5108 TO 6499	0.410	99	OPEN
B) MESAVERDE	6523	8612	6523 TO 8612	0.410	213	OPEN
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
5108 TO 8612	PUMP 18,952 BBLs SLICK H2O & 448,933 LBS 30/50 MESH SAND

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
02/07/2014	02/19/2014	24	→	11.0	2201.0	0.0			FLOWS FROM WELL
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
20/64	SI 1491	2201.0	→	11	2201	0		PGW	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
	SI		→						

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #238118 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

29. Disposition of Gas(Sold, used for fuel, vented, etc.)  
SOLD

30. Summary of Porous Zones (Include Aquifers):

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

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
				GREEN RIVER BIRD'S NEST MAHOGANY WASATCH MESAVERDE	988 1327 1869 4222 6506

32. Additional remarks (include plugging procedure):

The first 200 ft. of the surface hole was drilled with a 12 ? in. bit. The remainder of surface hole was drilled with an 11 in. bit. DQX csg was run from surface to 5003 ft.; LTC csg was run from 5003 ft. to 8716 ft. Attached is the chronological well history, perforation report & final survey.

33. Circle enclosed attachments:

- 1. Electrical/Mechanical Logs (1 full set req'd)
- 2. Geologic Report
- 3. DST Report
- 4. Directional Survey
- 5. Sundry Notice for plugging and cement verification
- 6. Core Analysis
- 7 Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

**Electronic Submission #238118 Verified by the BLM Well Information System.  
For KERR-MCGEE OIL AND GAS ONSHORE, sent to the Vernal**

Name (please print) KAY KELLY Title SR STAFF REGULATORY SPECIALIST

Signature (Electronic Submission) Date 03/07/2014

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**\*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\***

RECEIVED: Mar. 07, 2014

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 1022-3A1CS BLUE		Spud Date: 10/6/2013	
Project: UTAH-UINTAH		Site: NBU 1022-03A PAD	Rig Name No: SST 57/57, CAPSTAR 310/310
Event: DRILLING		Start Date: 10/5/2013	End Date: 11/15/2013
Active Datum: RKB @4,959.00usft (above Mean Sea Level)		UWI: NE/NE/0/10/S/22/E/3/0/0/26/PM/N/462/E/0/733/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/5/2013	20:30 - 23:00	2.50	MIRU	01	C	P	58	RIG DOWN / SKID RIG / RIG UP
	23:00 - 0:00	1.00	MIRU	01	B	P	58	WELD ON ROTATING HEAD
10/6/2013	0:00 - 1:00	1.00	MIRU	01	C	P	58	WELD ON ROTATING HEAD AND RIG UP FLOW LINE
	1:00 - 4:00	3.00	MIRU	08	A	Z	58	***RIG REPAIR: REMOVE AND REPLACE GOOSENECK ON TOP DRIVE
	4:00 - 5:00	1.00	PRSPD	01	B	P	58	SET UP PIPE RACKS / LOAD BHA AND STRAP BHA / PICK UP BHA TRIP IN HOLE
	5:00 - 5:30	0.50	PRSPD	23		P	58	CONDUCTED PRE SPUD SAFETY MEETING WITH RIG CREW AND SCIENTIFIC CREWS / REVIEW DIRECTIONAL PLANS WITH DIRECTIONAL DRILLERS
	5:30 - 7:00	1.50	DRLSUR	02	B	P	58	DRILL 12 1/4" SURFACE HOLE F/ 49' TO 200' , 151' @ 100.6 FPH WOB = 8 TO 12K ROTARY RPM = 60 / MUD MOTOR RPM = 101 / TOTAL = 166 PUMPING 594 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 800/600 TORQUE ON/OFF = 2250/740 PU = 30 / SO = 28 / ROT = 28 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 NO HOLE ISSUE
	7:00 - 7:30	0.50	DRLSUR	06	A	P	209	TRIP OUT TO CHANGE BITS F/12 1/4" TO 11" AND PICK UP DIRECTIONAL TOOLS
	7:30 - 10:00	2.50	DRLSUR	06	A	P	209	CHANGE BITS / PICK UP DIRECTIONAL TOOLS / TRIP IN HOLE
	10:00 - 12:00	2.00	DRLSUR	02	B	P	209	DRILL 11" SURFACE HOLE F/ 200' TO 397', 197' @ 98.5 FPH WOB = 15 TO 25K ROTARY RPM = 60 / MUD MOTOR RPM = 101 / TOTAL = 166 PUMPING 594 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 1250/950 TORQUE ON/OFF = 2750/2000 PU = 40 / SO = 35 / ROT = 38 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 35' = 16.91% .99' ABOVE & .13' LEFT OF THE LINE NO HOLE ISSUES

## Operation Summary Report

Well: NBU 1022-3A1CS BLUE

Spud Date: 10/6/2013

Project: UTAH-UINTAH

Site: NBU 1022-03A PAD

Rig Name No: SST 57/57, CAPSTAR 310/310

Event: DRILLING

Start Date: 10/5/2013

End Date: 11/15/2013

Active Datum: RKB @4,959.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/3/0/0/26/PM/N/462/E/0/733/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	12:00 - 14:30	2.50	DRLSUR	02	B	P	406	DRILL 11" SURFACE HOLE F/ 397' TO 751', 354' @ 141.6 FPH WOB = 15 TO 29K ROTARY RPM = 60 / MUD MOTOR RPM = 101 / TOTAL = 166 PUMPING 594 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 1250/950 TORQUE ON/OFF = 2750/2000 PU = 45 / SO = 38 / ROT = 42 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 50' = 14.41% .71' ABOVE & 1.70' LEFT OF THE LINE NO HOLE ISSUES
	14:30 - 15:00	0.50	DRLSUR	07	A	P	760	RIG SERVICE
	15:00 - 18:00	3.00	DRLSUR	02	B	P	760	DRILL 11" SURFACE HOLE F/ 751' TO 1,129', 378' @ 108 FPH WOB = 15 TO 29K ROTARY RPM = 60 / MUD MOTOR RPM = 101 / TOTAL = 166 PUMPING 594 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 1250/950 TORQUE ON/OFF = 2750/2000 PU = 60 / SO = 50 / ROT = 54 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 22' = 5.87% 3.68' ABOVE & 1.42' LEFT OF THE LINE NO HOLE ISSUES
	18:00 - 0:00	6.00	DRLSUR	02	B	P	1138	DRILL 11" SURFACE HOLE F/ 1,129' TO 1,680', 378' @ 108 FPH WOB = 15 TO 29K ROTARY RPM = 50 / MUD MOTOR RPM = 92 / TOTAL = 142 PUMPING 542 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 1250/950 TORQUE ON/OFF = 2550/2000 PU = 79 / SO = 70 / ROT = 74 PEAK ON LINE ARCHER ON LINE @ 300 CFM MUD WT 8.4 SLID 49' = 9.32% 7.3' ABOVE & .82' LEFT OF THE LINE HOLE ISSUES: LOST RETURNS @ 1,443'

## Operation Summary Report

Well: NBU 1022-3A1CS BLUE

Spud Date: 10/6/2013

Project: UTAH-UINTAH

Site: NBU 1022-03A PAD

Rig Name No: SST 57/57, CAPSTAR 310/310

Event: DRILLING

Start Date: 10/5/2013

End Date: 11/15/2013

Active Datum: RKB @4,959.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/3/0/0/26/PM/N/462/E/0/733/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/7/2013	0:00 - 6:00	6.00	DRLSUR	02	B	P	1689	DRILL 11" SURFACE HOLE F/ 1,680' TO 2,199', 519' @ 86.5 FPH WOB = 15 TO 29K ROTARY RPM = 50 / MUD MOTOR RPM = 92 / TOTAL = 142 PUMPING 542 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 1250/950 TORQUE ON/OFF = 2550/2000 PU = 88 / SO = 75 / ROT = 84 PEAK ON LINE ARCHER ON LINE @ 300 CFM MUD WT 8.4 SLID 37' = 7.20% 4.32' ABOVE & 1.35' RIGHT OF THE LINE HOLE ISSUES: LOST RETURNS @ 1,443'
	6:00 - 8:00	2.00	DRLSUR	02	B	P	2208	DRILL 11" SURFACE HOLE F/ 2,199' to 2,315', 116' @ 86.5 FPH WOB = 15 TO 29K ROTARY RPM = 50 / MUD MOTOR RPM = 92 / TOTAL = 142 PUMPING 542 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 1250/950 TORQUE ON/OFF = 2550/2000 PU = 88 / SO = 75 / ROT = 84 PEAK ON LINE ARCHER ON LINE @ 300 CFM MUD WT 8.4 SLID 37' = 7.20% 4.32' ABOVE & 1.35' RIGHT OF THE LINE HOLE ISSUES: LOST RETURNS @ 1,443'
	8:00 - 9:00	1.00	DRLSUR	05	A	P	2324	CIRCULATE AND CONDITION HOLE
	9:00 - 11:00	2.00	DRLSUR	06	D	P	2324	LAY DOWN DRILL PIPE AND BHA
	11:00 - 12:00	1.00	DRLSUR	06	D	P	2324	LAY DOWN DIRECTIONAL TOOLS
	12:00 - 14:30	2.50	DRLSUR	12	C	P	2324	PREJOB SAFETY MEETING WITH RIG CREW. RAN 52 JTS (2,293') OF 8 5/8", 28#, J-55, LT&C CASING WITH CTE FLOAT GUIDE SHOE AND BAFFLE PLATE LOCATED 1 JOINT ABOVE THE SHOE. 5 CENTRALIZERS SPACED 10' ABOVE THE SHOE, 2ND & 3RD COLLARS, AND EVERY THIRD COLLAR TO 1,892'. LANDED CASING SHOE AT 2,293'. BAFFLE PLATE @ 2,247'

Operation Summary Report

Well: NBU 1022-3A1CS BLUE		Spud Date: 10/6/2013	
Project: UTAH-UINTAH		Site: NBU 1022-03A PAD	Rig Name No: SST 57/57, CAPSTAR 310/310
Event: DRILLING		Start Date: 10/5/2013	End Date: 11/15/2013
Active Datum: RKB @4,959.00usft (above Mean Sea Level)		UWI: NE/NE/0/10/S/22/E/3/0/0/26/PM/N/462/E/0/733/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	14:30 - 18:30	4.00	DRLSUR	12	E	P	2324	<p>PREJOB SAFETY MEETING WITH PRO PETRO CEMENTERS &amp; RIG CREW.</p> <p>TESTED LINES TO 2000 PSI</p> <p>PUMPED 130 BBLs FRESH WATER CLEARING SHOE MIXED AND PUMPED 20 BBL GELLED WATER FLUSH AHEAD OF CEMENT</p> <p>MIXED AND PUMPED 300 SX OF PREMIUM CEMENT WITH 2% CACL2 &amp; 1/4 LB/SX FLOCELE. 61.4 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX.</p> <p>DROP PLUG ON FLY.</p> <p>DISPLACE WITH 140.4 BBL FRESH WATER. NO RETURNS THROUGH OUT DISPLACEMENT. FINAL LIFT OF 225 PSI @ 4 BBL/MINUTE.</p> <p>BUMP PLUG WITH 200 PSI. HELD 600 PSI FOR 5 MINUTES.</p> <p>CHECK FLOAT. FLOAT HELD.</p> <p>TOP JOB # 1: PUMP CEMENT DOWN 1" PIPE WITH 150 SX PREMIUM CEMENT WITH 4% CACL2, 2% GR-3, &amp; 1/4 LB/SX FLOCELE. 30.7 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. NO RETURNS</p> <p>RELEASE RIG @ 18:30</p> <p>WAIT ON CEMENT 2 HRS</p> <p>TOP JOB # 2: CEMENT DOWN BACK SIDE WITH 175 SX PREMIUM CEMENT WITH 4% CACL2, 2% GR-3, &amp; 1/4 LB/SX FLOCELE. 35.8 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. NO RETURNS</p> <p>WAIT ON CEMENT 2 HRS</p> <p>TOP JOB # 3: CEMENT DOWN BACK SIDE WITH 150 SX PREMIUM CEMENT WITH 4% CACL2, 2% GR-3, &amp; 1/4 LB/SX FLOCELE. 30.7 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. CEMENT TO SURFACE. FELL BACK.</p> <p>WAIT ON CEMENT 2 HRS</p> <p>TOP JOB # 4: CEMENT DOWN BACK SIDE WITH 125 SX PREMIUM CEMENT WITH 4% CACL2, 2% GR-3, &amp; 1/4 LB/SX FLOCELE. 25.6 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. CEMENT TO SURFACE.</p> <p>RELEASE CEMENTERS @ 22:30, 10/07/2013.</p>
11/11/2013	6:00 - 7:00	1.00	MIRU3	01	C	P	2324	RIG DOWN - SKID RIG - RIG UP
	7:00 - 10:00	3.00	MIRU3	14	A	P	2324	NIPPLE UP BOP'S - CHOKE & KILL LINES / ROTATING HEAD - CHANGE OUT IBOP VALVE AND OUTSIDE KILL LINE VALVE
	10:00 - 14:00	4.00	PRPSPD	15	A	P	2324	<p>HOLD SAFETY MEETING, RUN TEST ASSY, TEST BOP WITH A-1 TESTERS - TEST ANNULAR TO 250 PSI LOW/ 5 MIN 2500 PSI HIGH 10 MIN, PIPE &amp; BLIND RAMS, FLOOR VALVES, IBOP, HCR VALVE, KILL LINE VALVES, TEST BOP'S, CHOKE MANIFOLD TO 250 PSI LOW/ 5 MIN - 5000 PSI HIGH 10 MIN, HOLD ACCUMULATOR FUNCTION TEST, TEST CSG 1500 PSI - 30 MIN, RIG DOWN</p>

## Operation Summary Report

Well: NBU 1022-3A1CS BLUE

Spud Date: 10/6/2013

Project: UTAH-UINTAH

Site: NBU 1022-03A PAD

Rig Name No: SST 57/57, CAPSTAR 310/310

Event: DRILLING

Start Date: 10/5/2013

End Date: 11/15/2013

Active Datum: RKB @4,959.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/3/0/0/26/PM/N/462/E/0/733/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	14:00 - 14:30	0.50	PRPSPD	14	B	P	2324	INSTALL WEAR BUSHING
	14:30 - 15:30	1.00	PRPSPD	09	A	P	2324	SLIP & CUT 99' OF DRILLING LINE
	15:30 - 16:30	1.00	PRPSPD	06	J	P	2324	PICK UP HUNTING 6 1/2", 1.5 BEND, HR, 7/8 LOBE, 3.5 STAGE 0.22 RPG MUD MOTOR, ( SER #6403) - MAKE UP SECURITY MM65M PDC BIT, DRESSED WITH 6 X 15 JETS, (TFA = 1.035), SER #12249880 - INSTALL MWD TOOL, ORIENT & SCRIBE TOOLS
	16:30 - 17:00	0.50	PRPSPD	06	A	P	2324	TIH TO TOC AT 2210' / INSTALL ROTATING RUBBER
	17:00 - 18:00	1.00	DRLPRC	02	F	P	2324	DRILL CEMENT & FLOAT EQUIPMENT, CLEAN OUT TO 2324'
	18:00 - 0:00	6.00	DRLPRC	02	B	P	2324	DIR DRILL FROM 2324' TO 3170' = 846' = 141 FPH 18-24K ON BIT 105 SPM = 515 GPM - MOTOR = 108 RPM 50-70 RPM ON TOP DRIVE 5-10K FT/LBS TORQUE 1500 PSI ON BTM - 1100 PSI OFF BTM P/U = 110K - SO = 85K - ROT = 95K HOLE IN GOOD SHAPE SLIDE 20% OF TIME & 7% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WT = 8.8 - VIS = 35
11/12/2013	0:00 - 8:00	8.00	DRLPRV	02	B	P	3170	DIR DRILL FROM 3170' TO 4447' = 1277' = 159.6 FPH 18-24K ON BIT 105 SPM = 515 GPM - MOTOR = 108 RPM 50-70 RPM ON TOP DRIVE 5-10K FT/LBS TORQUE 1900 PSI ON BTM - 1450 PSI OFF BTM P/U = 115K - SO = 95K - ROT = 112K HOLE IN GOOD SHAPE SLIDE 9% OF TIME & 3% OF FOOTAGE BOS DEWATERING - OFF CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WT = 9.2 - VIS = 33
	8:00 - 15:00	7.00	DRLPRV	02	B	P	4447	DIR DRILL FROM 4447' TO 5302' = 855' = 122.1 FPH 18-24K ON BIT 105 SPM = 515 GPM - MOTOR = 108 RPM 50-70 RPM ON TOP DRIVE 6-12K FT/LBS TORQUE 1900 PSI ON BTM - 1550 PSI OFF BTM P/U = 135K - SO = 105K - ROT = 125K HOLE IN GOOD SHAPE SLIDE 7% OF TIME & 3% OF FOOTAGE BOS DEWATERING - OFF CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WT = 9.2 - VIS = 33
	15:00 - 15:30	0.50	DRLPRV	07	A	P	5302	LUBRICATE RIG

## Operation Summary Report

Well: NBU 1022-3A1CS BLUE

Spud Date: 10/6/2013

Project: UTAH-UINTAH

Site: NBU 1022-03A PAD

Rig Name No: SST 57/57, CAPSTAR 310/310

Event: DRILLING

Start Date: 10/5/2013

End Date: 11/15/2013

Active Datum: RKB @4,959.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/3/0/0/26/PM/N/462/E/0/733/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	15:30 - 0:00	8.50	DRLPRV	02	B	P	5302	DIR DRILL FROM 5302' TO 6157' = 855' = 100.6 FPH 18-24K ON BIT 105 SPM = 515 GPM - MOTOR = 108 RPM 50-70 RPM ON TOP DRIVE 6-12K FT/LBS TORQUE 2100 PSI ON BTM - 1600 PSI OFF BTM P/U = 170K - SO = 120K - ROT = 145K HOLE IN GOOD SHAPE SLIDE 16% OF TIME & 6% OF FOOTAGE BOS DEWATERING - OFF CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WT = 9.2 - VIS = 33
11/13/2013	0:00 - 8:00	8.00	DRLPRV	02	B	P	6157	DIR DRILL FROM 6157' TO 6934' = 777' = 97.1 FPH 18-24K ON BIT 105 SPM = 515 GPM - MOTOR = 108 RPM 50-70 RPM ON TOP DRIVE 6-12K FT/LBS TORQUE 2100 PSI ON BTM - 1600 PSI OFF BTM P/U = 180K - SO = 125K - ROT = 150K HOLE IN GOOD SHAPE SLIDE 5% OF TIME & 2% OF FOOTAGE BOS DEWATERING - OFF CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WT = 9.4 - VIS = 33
	8:00 - 16:00	8.00	DRLPRV	02	B	P	6934	DIR DRILL FROM 6934' TO 7583' = 645' = 81.1 FPH 18-24K ON BIT 105 SPM = 515 GPM - MOTOR = 108 RPM 50-70 RPM ON TOP DRIVE 8-14K FT/LBS TORQUE 2100 PSI ON BTM - 1600 PSI OFF BTM P/U = 190K - SO = 130K - ROT = 160K HOLE IN GOOD SHAPE SLIDE 18% OF TIME & 10% OF FOOTAGE BOS DEWATERING - OFF CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WT = 9.4 - VIS = 33
	16:00 - 16:30	0.50	DRLPRV	07	A	P	7583	LUBRICATE RIG
	16:30 - 0:00	7.50	DRLPRV	02	B	P	7583	DIR DRILL FROM 7583' TO 8129' = 546' = 72.8 FPH 18-24K ON BIT 105 SPM = 515 GPM - MOTOR = 108 RPM 50-70 RPM ON TOP DRIVE 9-15K FT/LBS TORQUE 2300 PSI ON BTM - 1900 PSI OFF BTM P/U = 195K - SO = 130K - ROT = 165K HOLE IN GOOD SHAPE SLIDE 16% OF TIME & 6% OF FOOTAGE BOS DEWATERING - OFF CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WT = 9.5 - VIS = 33

## Operation Summary Report

Well: NBU 1022-3A1CS BLUE

Spud Date: 10/6/2013

Project: UTAH-UINTAH

Site: NBU 1022-03A PAD

Rig Name No: SST 57/57, CAPSTAR 310/310

Event: DRILLING

Start Date: 10/5/2013

End Date: 11/15/2013

Active Datum: RKB @4,959.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/3/0/0/26/PM/N/462/E/0/733/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
11/14/2013	0:00 - 8:00	8.00	DRLPRV	02	B	P	8126	DIR DRILL FROM 8126' TO 8450' = 324' = 40.5 FPH 18-24K ON BIT 105 SPM = 515 GPM - MOTOR = 108 RPM 50-70 RPM ON TOP DRIVE 9-15K FT/LBS TORQUE 2300 PSI ON BTM - 1900 PSI OFF BTM P/U = 195K - SO = 145K - ROT = 165K HOLE IN GOOD SHAPE BOS DEWATERING - OFF CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WT = 11.2 - VIS = 36 BEGIN DISPLACING WITH 11.8# MUD @ 8250'
	8:00 - 16:00	8.00	DRLPRV	02	B	P	8450	DIR DRILL FROM 8450' TO 8726' = 276' = 40.5 FPH 23-28K ON BIT 105 SPM = 515 GPM - MOTOR = 108 RPM 50-70 RPM ON TOP DRIVE 9-15K FT/LBS TORQUE 2700 PSI ON BTM - 2350 PSI OFF BTM P/U = 210K - SO = 150K - ROT = 175K HOLE IN GOOD SHAPE BOS DEWATERING - OFF CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WT = 11.8 - VIS = 38
	16:00 - 17:30	1.50	DRLPRV	05	A	P	8726	CONDITION MUD & CIRCULATE - PUMP HIGH VIS LCM SWEEP AROUND HELD EYES ON TRAINING WITH KENNETH GATHINGS WITH BOTH CREWS ON TOUR
	17:30 - 19:00	1.50	DRLPRV	06	E	P	8726	SHORT TRIP OUT 15 STDS OF DRILL PIPE - STRAIGHT PULL OFF BTM @ 240K - HOLE IN GOOD SHAPE
	19:00 - 20:30	1.50	DRLPRV	05	A	P	8726	CONDITION MUD & CIRCULATE - PUMP HIGH VIS LCM SWEEP AROUND - BUILD & PUMP PILL
	20:30 - 0:00	3.50	DRLPRV	06	A	P	8726	PUMP PILL @ BLOW DOWN TOP DRIVE - TRIP OUT OF HOLE - TIGHT FROM 4127' TO 4073', 3838' TO 3757', 2975' TO 2510' - PRECAUTIONARY BACKREAMED THROUGH ALL TIGHT SPOTS
11/15/2013	0:00 - 1:30	1.50	DRLPRV	06	A	P	8726	PUMP PILL @ BLOW DOWN TOP DRIVE - TRIP OUT OF HOLE - TIGHT FROM 4127' TO 4073', 3838' TO 3757', 2975' TO 2510' - PRECAUTIONARY BACKREAMED THROUGH ALL TIGHT SPOTS LAYDOWN MWD TOOLS & MUD MOTOR
	1:30 - 2:00	0.50	DRLPRV	14	B	P	8726	PULL WEAR BUSHING
	2:00 - 3:00	1.00	DRLPRV	12	A	P	8726	HOLD SAFETY MEETING WITH WYOMING CASING - RIG UP CASING CREW & LAYDOWN TRUCK TO RUN 4 1/2 CASING
	3:00 - 8:30	5.50	CSGPRO	12	C	P	8726	RAN 83 JTS + MARKER JT 4 1/2", 11.6# I80, LT&C CASING + 113 JTS + CROSSOVER + PUP JT, 4 1/2", 11.6#, I80/ DQX CASING, SHOE AT 8716.48', TOP FLOAT COLLAR AT 8669.33', RAN 15 CENT'S - TOP OF MESEVERDE MK JT 6527.11'

## Operation Summary Report

Well: NBU 1022-3A1CS BLUE

Spud Date: 10/6/2013

Project: UTAH-UINTAH

Site: NBU 1022-03A PAD

Rig Name No: SST 57/57, CAPSTAR 310/310

Event: DRILLING

Start Date: 10/5/2013

End Date: 11/15/2013

Active Datum: RKB @4,959.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/3/0/0/26/PM/N/462/E/0/733/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	8:30 - 9:30	1.00	CSGPRO	05	D	P	8726	CIRCULATE / RIG DOWN WYOMING CASING SERVICE CASING TOOLS / RIG UP BAKER CEMENTING EQUIPMENT - CIRCULATE @ 100 SPM = 490 GPM @ 1150 PSI HAD 15-20' FLARE ON BTMS UP GAS BAKER CEMENT TRUCK VALVES NOT WORKING ON PUMP TRUCK - ATTEMPT TO REPAIR
	9:30 - 13:00	3.50	CSGPRO	21	D	Z	8726	***BAKER CEMENT TRUCK VALVES NOT WORKING ON PUMP TRUCK - ATTEMPT TO REPAIR - WAIT ON DIFFERENT PUMP TRUCK - TRUCK ARRIVED ON LOCATION @ 1230 HRS - RIG UP PUMP TRUCK
	13:00 - 16:00	3.00	CSGPRO	12	E	P	8726	CEMENT W/ BAKER - HOLD SAFETY MEETING - TEST LINES TO 4500 PSI - PUMP 25 BBLS WATER SPACER - 164 BBLS LEAD CEMENT 465 SKS @ 12.5 PPG W/ 1.98 YIELD, MIX & PUMP 245 BBLS TAIL CEMENT 1040 SKS @ 14.3 PPG W/ 1.32 YIELD - WASH UP LINES - DISPLACE W/ 134.3 BBLS WATER - BUMP PLUG TO 3200 PSI - HAD 2300 PSI LIFT PRESSURE PRIOR TO BUMP PLUG / GOOD RETURNS THROUGHOUT JOB - 25 BBLS SPACER BACK TO SURFACE - RIG DOWN CEMENTERS
	16:00 - 17:00	1.00	CSGPRO	14	A	P	8726	BACK OUT LANDING JT - INSTALL PACKOFF
	17:00 - 18:00	1.00	CSGPRO	14	A	P	8726	NIPPLE DOWN BOP & CLEAN MUD TANKS - RIG RELEASED @ 1800 HRS ON 11/15/2013

US ROCKIES REGION

**1 General**

**1.1 Customer Information**

Company	US ROCKIES REGION
Representative	
Address	

**1.2 Well/Wellbore Information**

Well	NBU 1022-3A1CS BLUE	Wellbore No.	OH
Well Name	NBU 1022-3A1CS	Wellbore Name	NBU 1022-3A1CS
Report No.	1	Report Date	1/13/2014
Project	UTAH-UINTAH	Site	NBU 1022-03A PAD
Rig Name/No.		Event	COMPLETION
Start Date	1/2/2014	End Date	2/8/2014
Spud Date	10/6/2013	Active Datum	RKB @4,959.00usft (above Mean Sea Level)
UWI	NE/NE/010/S/22/E/3/0/0/26/PM/N/462/E/0/733/0/0		

**1.3 General**

Contractor		Job Method		Supervisor	
Perforated Assembly		Conveyed Method			

**1.4 Initial Conditions**

Fluid Type		Fluid Density	
Surface Press		Estimate Res Press	
TVD Fluid Top		Fluid Head	
Hydrostatic Press		Press Difference	
Balance Cond	NEUTRAL		

**1.5 Summary**

Gross Interval	5,108.0 (usft)-8,612.0 (usft)	Start Date/Time	1/13/2014 12:00AM
No. of Intervals	79	End Date/Time	1/13/2014 12:00AM
Total Shots	312	Net Perforation Interval	104.00 (usft)
Avg Shot Density	3.00 (shot/ft)	Final Surface Pressure	
		Final Press Date	

**2 Intervals**

**2.1 Perforated Interval**

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US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc./Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
1/13/2014 12:00AM	WASATCH/			5,108.0	5,110.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			5,262.0	5,265.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			5,367.0	5,370.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			5,732.0	5,734.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			5,866.0	5,869.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			5,880.0	5,883.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			5,948.0	5,949.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			5,955.0	5,956.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			5,995.0	5,996.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			6,018.0	6,019.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			6,040.0	6,041.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			6,082.0	6,083.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			6,190.0	6,192.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			6,241.0	6,242.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			6,265.0	6,266.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			6,297.0	6,298.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			6,349.0	6,350.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			6,362.0	6,363.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			6,374.0	6,375.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	

US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
1/13/2014 12:00AM	WASATCH/			6,391.0	6,393.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	WASATCH/			6,498.0	6,499.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			6,523.0	6,524.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			6,542.0	6,544.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			6,550.0	6,552.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			6,676.0	6,678.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			6,714.0	6,715.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			6,878.0	6,879.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			6,886.0	6,888.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			6,916.0	6,918.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			6,946.0	6,948.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			6,998.0	6,999.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,033.0	7,034.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,058.0	7,059.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,074.0	7,075.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,102.0	7,103.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,114.0	7,115.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,130.0	7,131.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,152.0	7,153.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	

US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
1/13/2014 12:00AM	MESAVERDE/			7,200.0	7,201.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,213.0	7,214.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,237.0	7,238.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,310.0	7,311.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,326.0	7,328.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,390.0	7,392.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,442.0	7,443.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,580.0	7,581.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,600.0	7,601.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,630.0	7,631.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,644.0	7,646.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,674.0	7,676.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,704.0	7,705.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,727.0	7,728.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,778.0	7,779.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,814.0	7,815.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,836.0	7,837.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,900.0	7,901.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,920.0	7,921.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	

US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
1/13/2014 12:00AM	MESAVERDE/			7,936.0	7,937.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			7,967.0	7,968.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,019.0	8,020.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,044.0	8,045.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,069.0	8,070.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,085.0	8,086.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,106.0	8,107.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,125.0	8,126.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,161.0	8,162.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,190.0	8,191.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,202.0	8,203.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,212.0	8,213.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,222.0	8,223.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,242.0	8,243.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,265.0	8,266.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,300.0	8,301.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,338.0	8,339.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,392.0	8,393.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,462.0	8,463.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION	

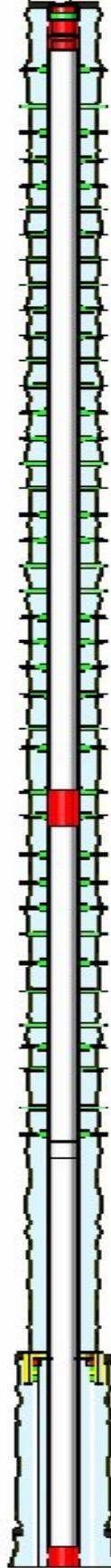
US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Weight (gram)	Reason	Misrun
1/13/2014 12:00AM	MESAVERDE/			8,470.0	8,472.0	3.00		0.410	EXP/	3.125	120.00	19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,536.0	8,538.0	3.00		0.410	EXP/	3.125	120.00	19.00	PRODUCTION	
1/13/2014 12:00AM	MESAVERDE/			8,610.0	8,612.0	3.00		0.410	EXP/	3.125	120.00	19.00	PRODUCTION	

3 Plots

3.1 Wellbore Schematic



RECEIVED: Mar. 07, 2014

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 1022-3A1CS BLUE				Spud Date: 10/6/2013			
Project: UTAH-UINTAH			Site: NBU 1022-03A PAD			Rig Name No: MILES 3/3	
Event: COMPLETION			Start Date: 1/2/2014		End Date: 2/8/2014		
Active Datum: RKB @4,959.00usft (above Mean Sea Level)				UWI: NE/NE/0/10/S/22/E/3/0/0/26/PM/N/462/E/0/733/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/14/2013	-							
1/2/2014	8:00 - 9:00	1.00	SUBSPR	52	B	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -63 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI.  PRESSURE TEST 8 5/8 X 4 1/2 TO 520 PSI HELD FOR 5 MIN LOST -520 PSI, BLED PSI OFF, REINSTALLED POP OFF SWIFN 300 PRESSURE ON SURFACE CASING SURFACE WAS FULL BELCHING CEMENT COLORED WATER WILL TEST WITH HOT OILER
1/10/2014	8:00 - 9:00	1.00	SUBSPR	36		P		PERF STG 1)PU 3 1/8 EXP GUN, 19 GM, .40 HOLE SIZE. RIH PERF WELL, AS PER PERF DESIGN. POOH. SWIFW
1/13/2014	9:00 - 9:15	0.25	FRAC	48		P		HSM,JSA
	9:55 - 10:05	0.17	FRAC	52	B	P		PRESSURE TEST TO 8800 PSI HOLD FOR 5 MINUTES DUE TO COLD WEATHER
	10:16 - 10:58	0.70	FRAC	36	H	P		REFER TO STIMULATION PJR FOR FLUID, SAND AND CHEMICAL VOLUMES, ALL STAGES WERE PERFORATED ACCORDING TO PERF RECORD IN OPEN WELLS, ALL STAGES WERE STIMULATED TO VENDOR POST JOB REPORT. ALL PLUGS ARE HALIBURTON 8K CBPS  FRAC STG #1] WHP=1574#, BRK DN PERFS=3566#, @=4.8 BPM, INTIAL ISIP=2607#, FG=.74, FINAL ISIP=2531#, FG=.73,
	14:40 - 14:50	0.17	FRAC	36	H	P		COULD NOT GET PLUG PAST 4821' POOH WITH PLUG FLOWED WELL, REFLUSH WELL WITH 135 BBLS + ADDS
	14:50 - 17:00	2.17	FRAC	36	H	P		NOT ABLE TO GET WIRELINE PAST +/- 4826' SWI W/O WIRELINE
1/16/2014	6:30 - 6:45	0.25	FRAC	48		P		HSM,JSA

Operation Summary Report

Well: NBU 1022-3A1CS BLUE			Spud Date: 10/6/2013		
Project: UTAH-UINTAH		Site: NBU 1022-03A PAD		Rig Name No: MILES 3/3	
Event: COMPLETION		Start Date: 1/2/2014		End Date: 2/8/2014	
Active Datum: RKB @4,959.00usft (above Mean Sea Level)			UWI: NE/NE/0/10/S/22/E/3/0/0/26/PM/N/462/E/0/733/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:00 - 18:00	11.00	FRAC	36	H	P		SET PLUG & PERFORATE STG #2  FRAC STG #2] WHP=425#, BRK DN PERFS=3252#, @=4.1 BPM, INTIAL ISIP=2496#, FG=.73, FINAL ISIP=2777#, FG=.77,  SET PLUG & PERFORATE STG #3  FRAC STG #3] WHP=1641#, BRK DN PERFS=2842#, @=3.1 BPM, INTIAL ISIP=1950#, FG=.66, FINAL ISIP=2667#, FG=.76,  SET PLUG & PERFORATE STG #4  FRAC STG #4] WHP=2219#, BRK DN PERFS=3384#, @=5.6 BPM, INTIAL ISIP=2458#, FG=.75, FINAL ISIP=2268#, FG=.72,  SWIFN W/O WIRELINE HSM,JSA
1/17/2014	6:30 - 6:45	0.25	FRAC	48		P		HSM,JSA
	7:00 - 15:00	8.00	FRAC	36	H	P		SET PLUG PERFORATE STG #5  FRAC STG #5] WHP=141#, BRK DN PERFS=2168#, @=3.5 BPM, INTIAL ISIP=1528#, FG=.65, FINAL ISIP=2551#, FG=.77,  SET PLUG AND PERFORATE STG #6  FRAC STG #6] WHP=1450#, BRK DN PERFS=1743#, @=3.0 BPM, INTIAL ISIP=1508#, FG=.64, FINAL ISIP=2368#, FG=.76,  SET PLUG AND PERFORATE STG #7  FRAC STG #7] WHP=886#, BRK DN PERFS=6511#, @=4.3 BPM, INTIAL ISIP=1604#, FG=.66, FINAL ISIP=2312#, FG=.76,  SET PLUG AND PERFORATE STG #8  FRAC STG #8] WHP=278#, BRK DN PERFS=2065#, @=3.9 BPM, INTIAL ISIP=1083#, FG=.59, FINAL ISIP=#, FG=.,  SWIFN W/O FRAC BLENDER DISCHARGE MANIFOLD NEEDS WELDED
1/18/2014	6:15 - 6:30	0.25	FRAC	48		P		HSM,JSA

Operation Summary Report

Well: NBU 1022-3A1CS BLUE		Spud Date: 10/6/2013	
Project: UTAH-UINTAH		Site: NBU 1022-03A PAD	Rig Name No: MILES 3/3
Event: COMPLETION		Start Date: 1/2/2014	End Date: 2/8/2014
Active Datum: RKB @4,959.00usft (above Mean Sea Level)		UWI: NE/NE/0/10/S/22/E/3/0/0/26/PM/N/462/E/0/733/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:30 - 15:00	8.50	FRAC	36	H	P		FRAC STG #8] WHP=264#, BRK DN PERFS=2065#, @=3.9 BPM, INTIAL ISIP=1083#, FG=.59, FINAL ISIP=2298#, FG=.77,  SET PLUG AND PERFORATE STG #9  FRAC STG #9] WHP=659#, BRK DN PERFS=2285#, @=4.0 BPM, INTIAL ISIP=801#, FG=.56, FINAL ISIP=1540#, FG=.67,  SET PLUG AND PERFORATE STG #10  FRAC STG #10] WHP=242#, BRK DN PERFS=5486#, @=4.3 BPM, INTIAL ISIP=2125#, FG=.77, FINAL ISIP=2775#, FG=.87,  SET PLUG AND PERFORATE STG #11  FRAC STG #11] WHP=681#, BRK DN PERFS=3054#, @=4.8 BPM, INTIAL ISIP=1702#, FG=.71, FINAL ISIP=1888#, FG=.74,  SET PLUG AND PERFORATE STG #12  FRAC STG #12] WHP=1150#, BRK DN PERFS=1941#, @ 3.8BPM, INITIAL ISIP=1491#, FG = .69, FINAL ISIP= 1368#, FG=.67  SET PLUG AND PERFORATE STG #13  FRAC STG #13] WHP=183#, BRK DN PERFS=1538#, @=1.6 BPM, INTIAL ISIP=1136#, FG=.65, FINAL ISIP=1370#, FG=.69,  SET TOP KILL  TOTAL BBLS= 18952 TOTAL SAND=448,933
2/4/2014	7:00 - 7:30	0.50	DRLOUT	48		P		HSM,WORKING W/ FISHING TOOLS.
	7:30 - 17:00	9.50	DRLOUT	31	B	P		TALLY & PU 3 3/4 SWEDGE, DRAIN SUB,31/8 COLLARBS,JARS,4 COLLARS,INTEN,3 COLLARS, X/O,TBG PUP JT. 143 JTS 23/8 L-80 WORKED SWEDGE TROUGH TIGHT SPOT @ 4826' RIH TO 4968' NOTHING MORE TAGGED, POOH W/ TBG & BHA PU 3.875 OD SWEDGE RIH W/ BHA SWEDEGED TROUGH @ 4826' WORKED TROUGH SEVERAL TIMES SMOOTHED UP, L/D 1 JT ABOVE TIGHT SPOT SWI SDFN.
2/5/2014	7:00 - 7:30	0.50	DRLOUT	48		P		HSM, LAYING DOWN SWEDGING EQUIP.
	7:30 - 11:00	3.50	DRLOUT	31	I	P		5 OF 5, SICP O, RUN SWEDGE BACK TROUGH 4826' NOTHING TAGGED, RIH TO 4968' OK, L/D 147 JTS 23/8 L-80 & SWEDGING BHA.
	11:00 - 15:30	4.50	DRLOUT	31	I	P		TALLY & PU 37/8 BIT, POBS, 1.875 X/N 150 JTS 23/8 J-55, 6' L-80 PUP JT, 28 TS 23/8 L-80 TAG UP @ 5041', RU DRLG EQUIP PREP TO D/O IN AM.

## Operation Summary Report

Well: NBU 1022-3A1CS BLUE

Spud Date: 10/6/2013

Project: UTAH-UINTAH

Site: NBU 1022-03A PAD

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 1/2/2014

End Date: 2/8/2014

Active Datum: RKB @4,959.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/3/0/0/26/PM/N/462/E/0/733/0/0

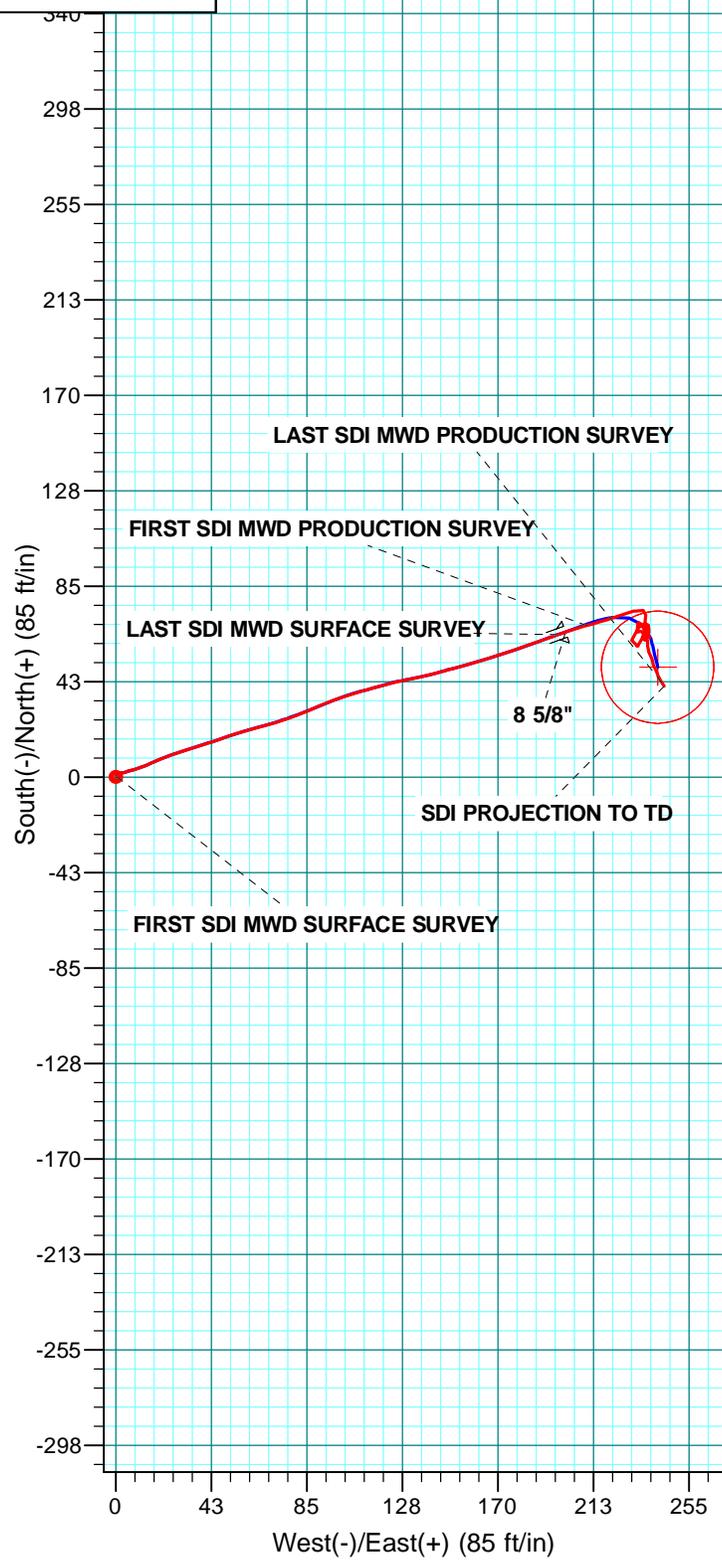
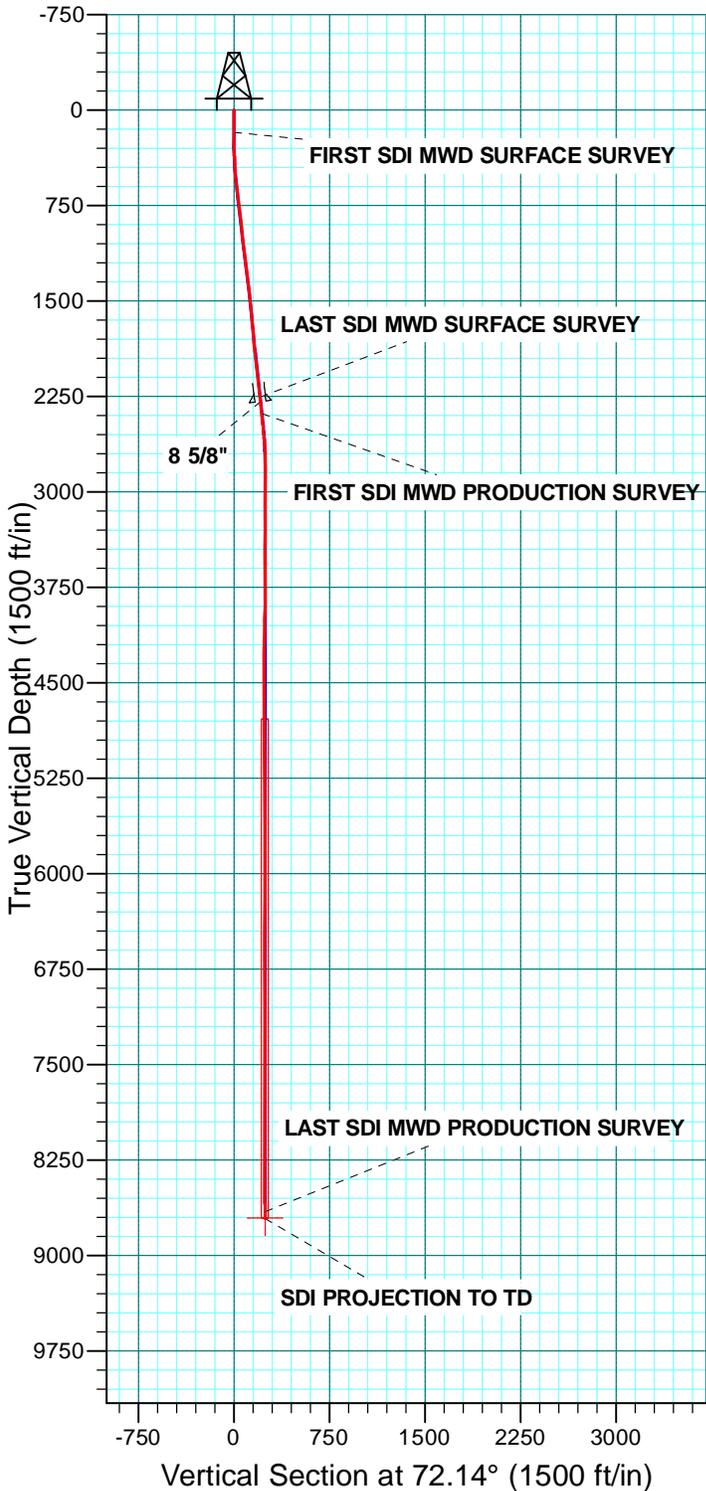
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
2/6/2014	7:00 - 7:30	0.50	DRLOUT	48		P		HSM DRILL CBPS W/ FOAM INIT.
	7:30 - 17:00	9.50	DRLOUT	44	C	P		- 6 DEGS, 5 OF 5,BROKE CIRC CONV HAD TROUBLE W/ WTR FREEZING IN LINES, TEST BOPS TO 3,000 PSI, INSTALLED TSF, BROKE CIRC W/ AIR/FOAM RIH.  C/O 25' SAND TAG 1ST PLUG @ 5074' SUPPOSED TO BE @ 5047' DRL PLG IN 12 MIN, 0 PSI INCREASE RIH.  C/O 0' SAND NEVER TAGGED 2ND PLUG @ 5408' RIH. KILL TBG PULL TO REM TSF, RIH  TAG 2ND & 3RD PLUG @ 6010' DRL PLGS IN 30 MIN, 0 PSI INCREASE RIH.  C/O 0' SAND TAG 4TH PLUG @ 6225' SUPPOSED TO BE @ 6205 DRL PLG IN 1 HR 0 PSI INCREASE RIH TO 6255' CIRC CLN KILL TBG. POOH W/ 100 JTS SWI EOT @ 3084', DRAIN UP SDFN.
2/7/2014	7:00 - 7:30	0.50	DRLOUT	48		P		HSM, KEEPING WELL DEAD WHILE TRIPPING FOR NEW BIT.
	7:30 - 10:00	2.50	DRLOUT	31	I	P		5 OF 5, SICP 1300 PSI, OPEN TO PIT, CONTROL CSG W/ 80 BBLs T-MAC, POOH W/ REM 97 JTS 23/8 J-55, L/D BIT. ALL INSIDE TEETH WERE GONE, RIH W/ 37/8 HURRICAN MILL & TBG TAG UP @ 6360', 201 JTS IN. RU DRLG EQUIP BROKE CIRC W/ AIR/FOAM RIH,
	10:00 - 17:30	7.50	DRLOUT	44	C	P		C/O 60' SAND TAG 5TH PLUG @ 6426' DRL PLG IN 15 MIN, 100 PSI INCREASE KILL TBG PULL UP REM TSF RIH. C/O 25' SAND TAG 6TH PLUG @ 6835 SHOULD HAVE BEEN @ 6698' DRL PLG IN 18 MIN, 200 PSI INCREASE RIH.  C/O 00' SAND TAG 7TH PLUG @ 7161' SHOULD HAVE BEEN @ 6978' DRL PLG IN 0 MIN, 0 PSI INCREASE RIH.  C/O 20' SAND TAG 8TH PLUG @ 7183' DRL PLG IN 25 MIN, 900 PSI INCREASE RIH.  C/O 0' SAND TAG 9TH PLUG @ 7420' DRL PLG IN 3 MIN, 0 PSI INCREASE RIH.  C/O 0' SAND TAG 10TH PLUG @ 7717' SHOULD HAVE BEEN @ 7691' DRL PLG IN 10 MIN, 0 PSI INCREASE RIH. TAG @ 7932 DRL FOR 1 HR TO GET TO 11TH PLUG.  C/O 20' SAND TAG 11TH PLUG @ 7952' DRL PLG IN 28 MIN, 0 PSI INCREASE CIRC CLN RD SWIVEL POOH 8 JTS EOT @ 7717' SWI LOCK RAMS DRAIN EQUIP.
2/8/2014	7:00 - 7:30	0.50	DRLOUT	48		P		HSM, OPENING WELL TO PIT TO GET STARTED DRILLING.

Operation Summary Report

Well: NBU 1022-3A1CS BLUE		Spud Date: 10/6/2013	
Project: UTAH-UINTAH		Site: NBU 1022-03A PAD	Rig Name No: MILES 3/3
Event: COMPLETION		Start Date: 1/2/2014	End Date: 2/8/2014
Active Datum: RKB @4,959.00usft (above Mean Sea Level)		UWI: NE/NE/0/10/S/22/E/3/0/0/26/PM/N/462/E/0/733/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:30 - 15:00	7.50	DRLOUT	44	C	P		<p>5 OF 5, SICP 2500 PSI, OPEN WELL TO PIT, RIH W/ 8 JTS RU SWIVEL BROKE CIRC CONV, RIH TAG REMS OF 11TH PLG @ 7957 DRILLED IN 33 MINS 300 INCREASE RIH.</p> <p>C/O 0' SAND TAG 12TH PLUG @ 8175' DRL PLG IN 35 MIN, 1000 PSI INCREASE RIH.</p> <p>C/O 20' SAND TAG 13TH PLUG @ 8369' DRL PLG IN 1HR 10 MIN, 500 PSI INCREASE RIH.</p> <p>C/O TO 8640', CIRC CLN, RD SWIVEL, L/D 16 JTS, LAND TBG, ND BOPS NU WH, PUMPED OFF BIT, TURN WELL TO FB CREW. RIG DOWN ( SURFACE OPEN &amp; LOCKED ) SICP 1900 , FTP 100</p> <p>KB = 18'                      41/16 HANGER = .83' ( TIGHT SPOT IN CSG @ 4826' SWEDGED W/ 3.875 OD )                      106 JTS 23/8 L-80 = 3371.22'                      6' L-80 PUP JT = 6.13'                      150 JTS 23/8 J-55 = 4743.40'                      POBS W/ 1.875 X/N = 2.20'                      EOT @ 8141.78'</p> <p>TWTR = 19,739 BBLS                      TWR = 1800 BBLS                      TWLTR = 17,939 BBLS</p> <p>314 JT HAULED OUT, 150 J-55, 164 L-80.                      256 LANDED                      58 TO RETURN L-80</p>
	15:00 - 15:00	0.00	DRLOUT	50				<p>WELL TURNED TO SALES @ 12:30 HR ON 2/7/2014.                      1.1 MCFD, 1560 BWPD, FCP 1900#, FTP 1800#, 20/64" CK.</p>

WELL DETAILS: NBU 1022-3A1CS					
GL 4941 & KB 18 @ 4959.00ft (SST 57)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14524158.36	2083408.90	39.9840310	-109.4186180





# **US ROCKIES REGION PLANNING**

**UTAH - UTM (feet), NAD27, Zone 12N**

**NBU 1022-3A PAD**

**NBU 1022-3A1CS**

**OH**

**Design: OH**

## **Standard Survey Report**

**18 November, 2013**





<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3A1CS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 4941 & KB 18 @ 4959.00ft (SST 57)
<b>Site:</b>	NBU 1022-3A PAD	<b>MD Reference:</b>	GL 4941 & KB 18 @ 4959.00ft (SST 57)
<b>Well:</b>	NBU 1022-3A1CS	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

<b>Project</b>	UTAH - UTM (feet), NAD27, Zone 12N		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

<b>Site</b>	NBU 1022-3A PAD, SECTION 3 T10S R22E				
<b>Site Position:</b>	<b>Northing:</b>	14,524,167.20 usft	<b>Latitude:</b>	39.9840550	
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,083,413.78 usft	<b>Longitude:</b>	-109.4186000
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	1.02 °

<b>Well</b>	NBU 1022-3A1CS, 462 FNL 733 FEL					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,524,158.37 usft	<b>Latitude:</b>	39.9840310
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,083,408.89 usft	<b>Longitude:</b>	-109.4186180
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,941.00 ft	

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2013	10/22/2013	10.82	65.80	52,018

<b>Design</b>	OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	72.14	

<b>Survey Program</b>	<b>Date</b>	11/18/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
9.00	2,271.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
2,398.00	8,726.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.00	0.00	0.00	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
179.00	0.17	32.90	179.00	0.21	0.14	0.20	0.10	0.10	0.10	0.00
<b>FIRST SDI MWD SURFACE SURVEY</b>										
270.00	0.88	45.81	270.00	0.81	0.71	0.93	0.79	0.78	14.19	
363.00	2.29	73.05	362.96	1.85	3.00	3.42	1.68	1.52	29.29	
458.00	3.93	74.64	457.82	3.27	7.96	8.57	1.73	1.73	1.67	
551.00	5.33	65.28	550.51	5.92	14.95	16.05	1.71	1.51	-10.06	
647.00	6.49	69.51	646.00	9.68	24.09	25.89	1.29	1.21	4.41	
741.00	7.03	74.02	739.35	13.13	34.59	36.95	0.81	0.57	4.80	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3A1CS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 4941 & KB 18 @ 4959.00ft (SST 57)
<b>Site:</b>	NBU 1022-3A PAD	<b>MD Reference:</b>	GL 4941 & KB 18 @ 4959.00ft (SST 57)
<b>Well:</b>	NBU 1022-3A1CS	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
835.00	7.47	70.68	832.59	16.73	45.89	48.81	0.65	0.47	-3.55	
929.00	6.01	73.62	925.94	20.14	56.38	59.84	1.60	-1.55	3.13	
1,023.00	6.30	74.64	1,019.40	22.89	66.07	69.91	0.33	0.31	1.09	
1,116.00	6.60	71.12	1,111.81	25.98	76.05	80.35	0.53	0.32	-3.78	
1,210.00	7.22	67.34	1,205.13	30.00	86.61	91.64	0.82	0.66	-4.02	
1,305.00	7.39	69.01	1,299.36	34.49	97.82	103.69	0.29	0.18	1.76	
1,399.00	6.76	75.36	1,392.64	38.05	108.82	115.25	1.07	-0.67	6.76	
1,494.00	6.41	73.75	1,487.02	40.95	119.32	126.13	0.42	-0.37	-1.69	
1,586.00	5.82	79.14	1,578.49	43.26	128.83	135.89	0.89	-0.64	5.86	
1,680.00	5.45	77.45	1,672.04	45.13	137.87	145.07	0.43	-0.39	-1.80	
1,774.00	5.19	73.84	1,765.64	47.29	146.31	153.76	0.45	-0.28	-3.84	
1,867.00	5.72	75.60	1,858.21	49.61	154.84	162.59	0.60	0.57	1.89	
1,959.00	6.42	72.35	1,949.70	52.31	164.18	172.31	0.85	0.76	-3.53	
2,052.00	6.33	72.26	2,042.12	55.45	174.02	182.64	0.10	-0.10	-0.10	
2,146.00	6.03	70.95	2,135.58	58.64	183.62	192.76	0.35	-0.32	-1.39	
2,241.00	6.42	69.36	2,230.02	62.14	193.31	203.05	0.45	0.41	-1.67	
2,271.00	6.68	70.24	2,259.82	63.32	196.52	206.47	0.93	0.87	2.93	
<b>LAST SDI MWD SURFACE SURVEY</b>										
2,303.00	6.45	71.34	2,291.61	64.52	199.98	210.13	0.83	-0.73	3.44	
<b>8 5/8"</b>										
2,398.00	5.77	75.13	2,386.07	67.46	209.65	220.23	0.83	-0.71	3.99	
<b>FIRST SDI MWD PRODUCTION SURVEY</b>										
2,493.00	4.84	71.86	2,480.66	69.93	218.07	229.01	1.03	-0.98	-3.44	
2,588.00	4.31	72.69	2,575.36	72.24	225.29	236.58	0.56	-0.56	0.87	
2,683.00	2.82	75.24	2,670.17	73.90	230.95	242.49	1.58	-1.57	2.68	
2,778.00	1.66	112.83	2,765.10	73.96	234.48	245.87	1.91	-1.22	39.57	
2,872.00	1.68	186.59	2,859.07	72.06	235.58	246.33	2.13	0.02	78.47	
2,968.00	1.93	180.97	2,955.03	69.05	235.39	245.22	0.32	0.26	-5.85	
3,063.00	2.02	169.63	3,049.97	65.80	235.67	244.49	0.42	0.09	-11.94	
3,158.00	0.62	170.16	3,144.94	63.65	236.05	244.20	1.47	-1.47	0.56	
3,253.00	0.79	179.65	3,239.94	62.48	236.15	243.93	0.22	0.18	9.99	
3,347.00	0.65	15.80	3,333.93	62.35	236.30	244.03	1.52	-0.15	-174.31	
3,443.00	0.10	105.70	3,429.93	62.85	236.52	244.40	0.68	-0.57	93.65	
3,538.00	0.51	184.76	3,524.93	62.41	236.57	244.31	0.53	0.43	83.22	
3,632.00	0.97	11.52	3,618.93	62.77	236.69	244.54	1.57	0.49	-184.30	
3,727.00	2.17	11.29	3,713.89	65.32	237.21	245.81	1.26	1.26	-0.24	
3,823.00	1.03	305.80	3,809.86	67.61	236.86	246.18	2.06	-1.19	-68.22	
3,918.00	0.97	266.31	3,904.84	68.06	235.37	244.90	0.71	-0.06	-41.57	
4,013.00	1.06	237.66	3,999.83	67.53	233.82	243.27	0.54	0.09	-30.16	
4,107.00	1.19	217.36	4,093.81	66.29	232.50	241.62	0.44	0.14	-21.60	
4,202.00	1.27	212.59	4,188.79	64.62	231.33	240.00	0.14	0.08	-5.02	
4,298.00	0.44	196.26	4,284.78	63.37	230.65	238.97	0.89	-0.86	-17.01	
4,392.00	0.62	214.04	4,378.77	62.60	230.27	238.37	0.26	0.19	18.91	
4,487.00	0.85	205.82	4,473.77	61.54	229.67	237.48	0.27	0.24	-8.65	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3A1CS
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<b>Site:</b>	NBU 1022-3A PAD	<b>MD Reference:</b>	GL 4941 & KB 18 @ 4959.00ft (SST 57)
<b>Well:</b>	NBU 1022-3A1CS	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,581.00	0.26	138.34	4,567.76	60.76	229.51	237.08	0.84	-0.63	-71.79	
4,676.00	0.62	131.66	4,662.76	60.25	230.04	237.43	0.38	0.38	-7.03	
4,772.00	0.70	138.52	4,758.75	59.47	230.81	237.93	0.12	0.08	7.15	
4,866.00	0.85	143.36	4,852.74	58.48	231.61	238.39	0.17	0.16	5.15	
4,961.00	0.97	22.50	4,947.74	58.66	232.34	239.13	1.67	0.13	-127.22	
5,056.00	0.70	32.52	5,042.73	59.89	232.96	240.10	0.32	-0.28	10.55	
5,152.00	0.64	25.81	5,138.72	60.87	233.51	240.92	0.10	-0.06	-6.99	
5,247.00	0.62	26.81	5,233.71	61.80	233.97	241.65	0.02	-0.02	1.05	
5,342.00	0.53	37.97	5,328.71	62.61	234.47	242.38	0.15	-0.09	11.75	
5,436.00	0.44	62.40	5,422.71	63.12	235.06	243.09	0.24	-0.10	25.99	
5,531.00	0.44	95.10	5,517.70	63.26	235.75	243.79	0.26	0.00	34.42	
5,626.00	0.61	126.73	5,612.70	62.92	236.52	244.41	0.35	0.18	33.29	
5,721.00	0.67	139.15	5,707.69	62.20	237.28	244.92	0.16	0.06	13.07	
5,816.00	0.46	309.66	5,802.69	62.02	237.35	244.94	1.19	-0.22	179.48	
5,911.00	0.74	329.26	5,897.69	62.79	236.75	244.60	0.36	0.29	20.63	
6,006.00	0.38	314.57	5,992.68	63.54	236.21	244.31	0.40	-0.38	-15.46	
6,102.00	1.28	334.26	6,088.67	64.73	235.52	244.02	0.97	0.94	20.51	
6,196.00	1.14	324.14	6,182.65	66.43	234.51	243.59	0.27	-0.15	-10.77	
6,291.00	0.88	325.11	6,277.64	67.80	233.54	243.08	0.27	-0.27	1.02	
6,386.00	0.69	306.93	6,372.63	68.74	232.67	242.54	0.33	-0.20	-19.14	
6,481.00	0.70	180.88	6,467.62	68.50	232.20	242.02	1.30	0.01	-132.68	
6,576.00	0.97	189.58	6,562.61	67.13	232.06	241.46	0.31	0.28	9.16	
6,671.00	1.14	180.70	6,657.60	65.39	231.91	240.79	0.25	0.18	-9.35	
6,766.00	0.35	81.12	6,752.59	64.49	232.19	240.78	1.31	-0.83	-104.82	
6,862.00	0.60	67.72	6,848.59	64.73	232.94	241.57	0.28	0.26	-13.96	
6,957.00	0.53	113.12	6,943.58	64.74	233.81	242.40	0.46	-0.07	47.79	
7,052.00	0.61	157.53	7,038.58	64.10	234.40	242.77	0.46	0.08	46.75	
7,148.00	0.50	184.47	7,134.58	63.21	234.57	242.65	0.29	-0.11	28.06	
7,243.00	0.53	160.40	7,229.57	62.39	234.68	242.51	0.23	0.03	-25.34	
7,338.00	0.87	172.19	7,324.56	61.26	234.93	242.39	0.39	0.36	12.41	
7,433.00	0.56	39.99	7,419.56	60.90	235.32	242.66	1.38	-0.33	-139.16	
7,528.00	0.35	72.69	7,514.56	61.34	235.90	243.34	0.34	-0.22	34.42	
7,624.00	0.34	146.64	7,610.56	61.19	236.34	243.71	0.43	-0.01	77.03	
7,719.00	0.51	187.97	7,705.55	60.54	236.43	243.60	0.36	0.18	43.51	
7,814.00	0.65	172.69	7,800.55	59.58	236.44	243.32	0.22	0.15	-16.08	
7,910.00	0.79	169.19	7,896.54	58.39	236.64	243.14	0.15	0.15	-3.65	
8,005.00	0.97	171.30	7,991.53	56.96	236.88	242.93	0.19	0.19	2.22	
8,100.00	0.79	161.28	8,086.52	55.54	237.21	242.81	0.25	-0.19	-10.55	
8,196.00	0.97	158.29	8,182.51	54.16	237.72	242.88	0.19	0.19	-3.11	
8,291.00	1.41	161.46	8,277.49	52.30	238.39	242.95	0.47	0.46	3.34	
8,386.00	1.67	160.31	8,372.45	49.89	239.23	243.00	0.28	0.27	-1.21	
8,481.00	1.58	159.96	8,467.41	47.36	240.15	243.10	0.10	-0.09	-0.37	
8,576.00	1.76	155.39	8,562.37	44.80	241.20	243.32	0.24	0.19	-4.81	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3A1CS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 4941 & KB 18 @ 4959.00ft (SST 57)
<b>Site:</b>	NBU 1022-3A PAD	<b>MD Reference:</b>	GL 4941 & KB 18 @ 4959.00ft (SST 57)
<b>Well:</b>	NBU 1022-3A1CS	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,671.00	2.00	147.33	8,657.32	42.08	242.71	243.92	0.38	0.25	-8.48
<b>LAST SDI MWD PRODUCTION SURVEY</b>									
8,726.00	2.00	147.33	8,712.29	40.46	243.74	244.41	0.00	0.00	0.00
<b>SDI PROJECTION TO TD</b>									

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 1022-3A1C:	0.00	0.00	8,705.00	48.81	240.96	14,524,211.44	2,083,648.95	39.9841650	-109.4177580
- hit/miss target									
- Shape									
- actual wellpath misses target center by 8.54ft at 8718.42ft MD (8704.71 TVD, 40.69 N, 243.60 E)									
- Circle (radius 25.00)									

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,303.00	2,291.61	8 5/8"	8.625	11.000

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
179.00	179.00	0.21	0.14	FIRST SDI MWD SURFACE SURVEY
2,271.00	2,259.82	63.32	196.52	LAST SDI MWD SURFACE SURVEY
2,398.00	2,386.07	67.46	209.65	FIRST SDI MWD PRODUCTION SURVEY
8,671.00	8,657.32	42.08	242.71	LAST SDI MWD PRODUCTION SURVEY
8,726.00	8,712.29	40.46	243.74	SDI PROJECTION TO TD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_