

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

FORM 3

AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL						1. WELL NAME and NUMBER NBU 921-22M4CS								
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						3. FIELD OR WILDCAT NATURAL BUTTES								
4. TYPE OF WELL Gas Well Coalbed Methane Well: NO						5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES								
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.						7. OPERATOR PHONE 720 929-6515								
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217						9. OPERATOR E-MAIL julie.jacobson@anadarko.com								
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) UTU 010950-A			11. MINERAL OWNERSHIP FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>			12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>								
13. NAME OF SURFACE OWNER (if box 12 = 'fee')						14. SURFACE OWNER PHONE (if box 12 = 'fee')								
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')						16. SURFACE OWNER E-MAIL (if box 12 = 'fee')								
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN') Ute Indian Tribe			18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>			19. SLANT VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>								
20. LOCATION OF WELL		FOOTAGES		QTR-QTR		SECTION		TOWNSHIP		RANGE		MERIDIAN		
LOCATION AT SURFACE		670 FSL 643 FWL		SWSW		22		9.0 S		21.0 E		S		
Top of Uppermost Producing Zone		86 FSL 823 FWL		SWSW		22		9.0 S		21.0 E		S		
At Total Depth		86 FSL 823 FWL		SWSW		22		9.0 S		21.0 E		S		
21. COUNTY UINTAH			22. DISTANCE TO NEAREST LEASE LINE (Feet) 86			23. NUMBER OF ACRES IN DRILLING UNIT 800								
			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 491			26. PROPOSED DEPTH MD: 11132 TVD: 11069								
27. ELEVATION - GROUND LEVEL 4906			28. BOND NUMBER WYB000291			29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE 43-8496								
Hole, Casing, and Cement Information														
String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement		Sacks	Yield	Weight			
Surf	11	8.625	0 - 2810	28.0	J-55 LT&C	0.2	Type V		180	1.15	15.8			
							Class G		270	1.15	15.8			
Prod	7.875	4.5	0 - 11132	11.6	HCP-110 LT&C	13.0	Premium Lite High Strength		340	3.38	12.0			
							50/50 Poz		1590	1.31	14.3			
ATTACHMENTS														
VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES														
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER						<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN								
<input 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 checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)						<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP								
NAME Laura Abrams				TITLE Regulatory Analyst II				PHONE 720 929-6356						
SIGNATURE				DATE 05/01/2012				EMAIL Laura.Abrams@anadarko.com						
API NUMBER ASSIGNED 43047525890000				APPROVAL  Permit Manager										

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

	<u>NBU 921-22M4CS</u>	
Surface:	670 FSL / 643 FWL	SWSW
BHL:	86 FSL / 823 FWL	SWSW

Section 22 T9S R21E

Unitah County, Utah
Mineral Lease: UTU 010950-A**ONSHORE ORDER NO. 1****DRILLING PROGRAM****1. & 2.a 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	1,542'	
Birds Nest	1,828'	Water
Mahogany	2,361'	Water
Wasatch	4,887'	Gas
Mesaverde	7,757'	Gas
Sego	9,996'	Gas
Castlegate	10,061'	Gas
MN5	10,469'	Gas
TVD =	11,069'	
TD =	11,132'	

- 2.c** Kerr McGee Oil & Gas Onshore LP (Kerr McGee) will either drill to the the Blackhawk formation, which is part of the Mesaverde formation, or the Wasatch/Mesaverde formation. If Kerr McGee drills to the Blackhawk formation (part of the Mesaverde formation), please refer to MN5 as the bottom formation. The attached Blackhawk Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the deeper formation.

If Kerr McGee drills to the Wasatch/Mesaverde formation please refer to Sego as the bottom formation. The attached Wasatch/Mesaverde Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the depths the Wasatch/Mesaverde formations are found.

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

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

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

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

6. **Evaluation Program:**

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

7. **Abnormal Conditions:****7.a Blackhawk (Part of Mesaverde Formation) Target Formation**

Maximum anticipated bottom hole pressure calculated at 11069' TVD, approximately equals
7,306 psi (0.66 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,921 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))

7.b Wasach/Mesaverde Target Formation

Maximum anticipated bottom hole pressure calculated at 9996' TVD, approximately equals
6,397 psi (0.64 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,184 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 Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program
Onshore Order #2 – Air Drilling Variance

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

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

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

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

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

Background

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

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

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole 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 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 Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program



KERR-McGEE OIL & GAS ONSHORE LP
BLACKHAWK DRILLING PROGRAM

CASING PROGRAM

							DESIGN FACTORS			
	SIZE	INTERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	LTC	DQX
		TENSION								
CONDUCTOR	14"	0-40'					3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to 2,810	28.00	IJ-55	LTC	1.91	1.43	5.05	N/A
PRODUCTION	4-1/2"	0	to 5,000	11.60	HCP-110	DQX	1.19	1.16	279,000	367,174
	4-1/2"	5,000	to 11,132'	11.60	HCP-110	LTC	1.19	1.16	4.89	

Surface Casing:

(Burst Assumptions: TD = 13.0 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 @ 9000 psi) 0.66 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	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
Option 1	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
NOTE: If well will circulate water to surface, option 2 will be utilized							
SURFACE	LEAD	2,310'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	210	35%	11.00	3.82
Option 2	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	4,382'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	340	35%	12.00	3.38
	TAIL	6,750'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,590	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:

Nick Spence / Danny Showers / Chad Loesel

DATE:

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

DATE:



KERR-McGEE OIL & GAS ONSHORE LP

WASATCH/MESAVERDE DRILLING PROGRAM

CASING PROGRAM

							DESIGN FACTORS			
	SIZE	INTERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	LTC	DQX
									TENSION	
CONDUCTOR	14"	0-40'								
							3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to 2,810	28.00	IJ-55	LTC	1.91	1.43	5.05	N/A
							7,780	6,350		267,035
PRODUCTION	4-1/2"	0	to 5,000	11.60	I-80	DQX	1.11	0.98		2.83
							10,690	8,650	223,000	
	4-1/2"	5,000	to 10,059'	11.60	HCP-110	LTC	1.53	1.33	4.70	

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	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
Option 1							
	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
SURFACE			NOTE: If well will circulate water to surface, option 2 will be utilized				
Option 2	LEAD	2,310'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	210	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	4,379'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	340	35%	12.00	3.38
	TAIL	5,680'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,340	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

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DRILLING ENGINEER:

Nick Spence / Danny Showers / Chad Loesel

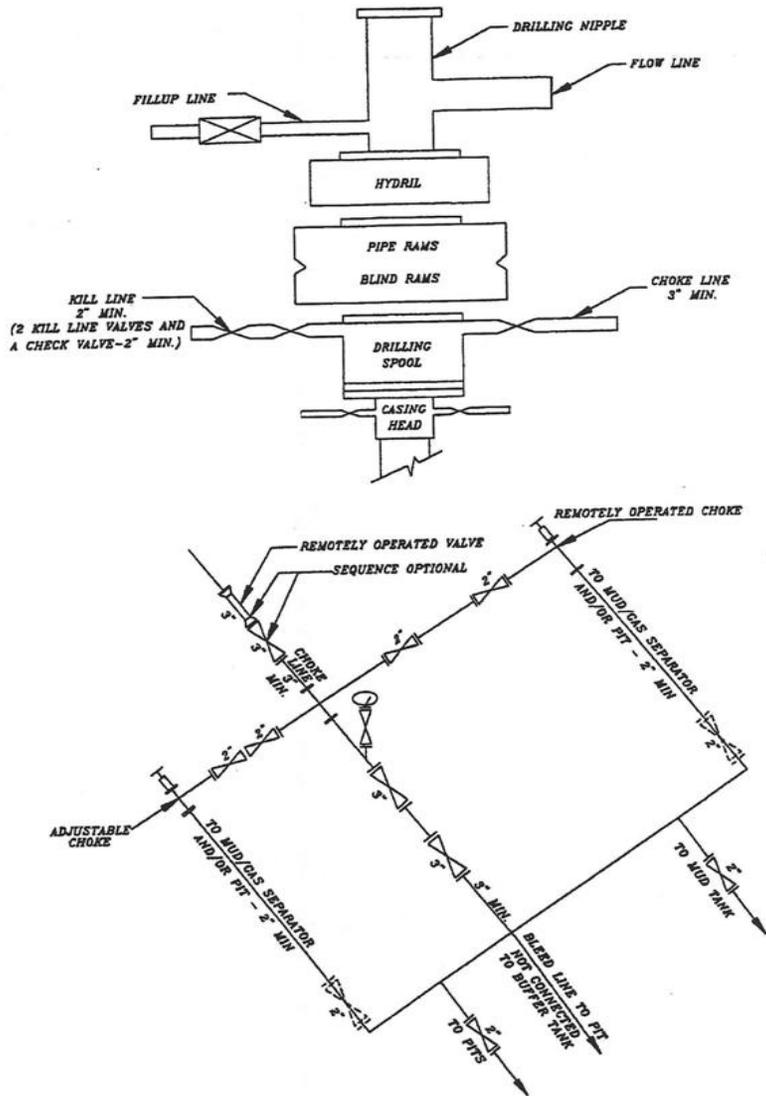
DATE:

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

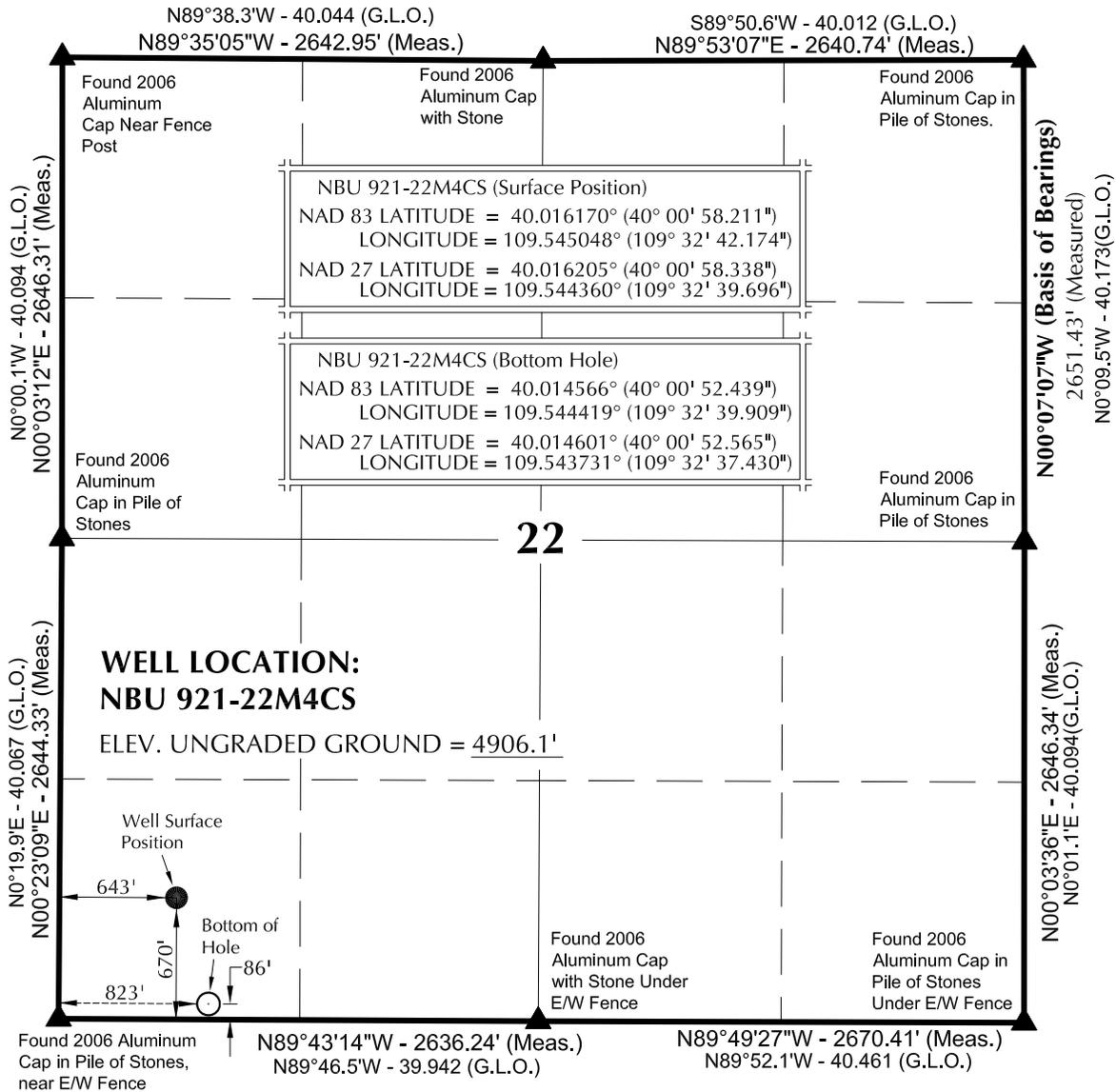
DATE:

EXHIBIT A
NBU 921-22M4CS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

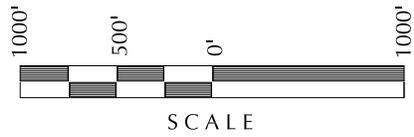
T9S, R21E, S.L.B.&M.



**WELL LOCATION:
NBU 921-22M4CS**
ELEV. UNGRADED GROUND = 4906.1'

NOTES:

- ▲ = Section Corners Located
- 1. Well footages are measured at right angles to the Section Lines.
- 2. G.L.O. distances are shown in feet or chains. 1 chain = 66 feet.
- 3. The Bottom of hole bears S16°44'25"E 610.34' from the Surface Position.
- 4. Bearings are based on Global Positioning Satellite observations.
- 5. 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 9-14-11
 JOHN R SAUGH
 PROFESSIONAL LAND SURVEYOR
 REGISTRATION No. 6028691
 STATE OF UTAH

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

WELL PAD: NBU 921-22M

**NBU 921-22M4CS
 WELL PLAT**
 86' FSL, 823' FWL (Bottom Hole)
 SW ¼ SW ¼ OF SECTION 22, T9S, R21E,
 S.L.B.&M., UTAH COUNTY, UTAH.

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

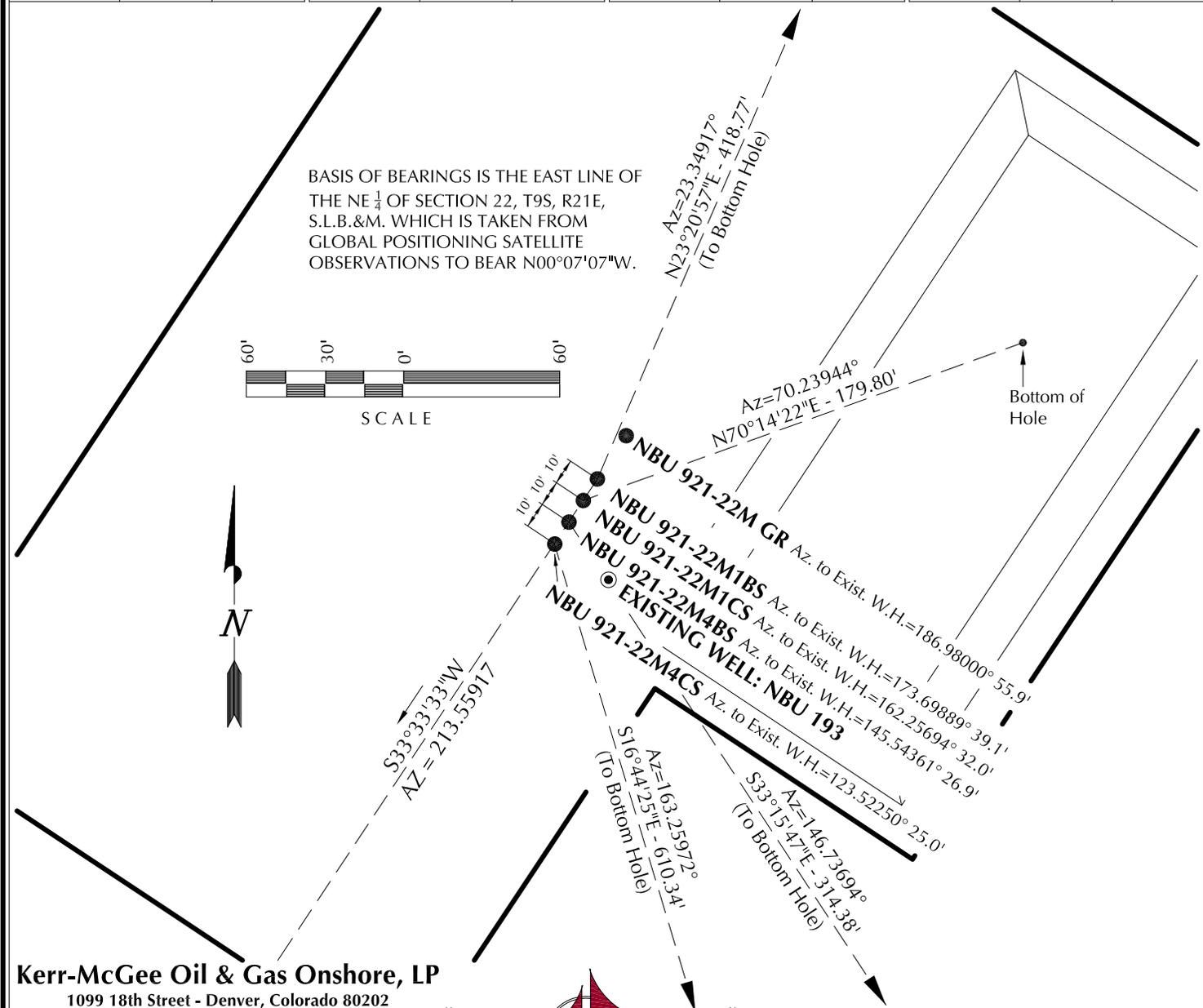
TIMBERLINE (435) 789-1365
 ENGINEERING & LAND SURVEYING, INC.
 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 7-19-11	SURVEYED BY: W.W.	SHEET NO: 5
DATE DRAWN: 8-23-11	DRAWN BY: T.J.R.	
SCALE: 1" = 1000'		5 OF 17

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 921-22M GR	40°00'58.624"	109°32'41.820"	40°00'58.750"	109°32'39.342"	711' FSL					
NBU 921-22M1BS	40°00'58.459"	109°32'41.962"	40°00'58.586"	109°32'39.484"	695' FSL	40°01'02.259"	109°32'39.834"	40°01'02.386"	109°32'37.356"	1080' FSL
NBU 921-22M1CS	40°00'58.377"	109°32'42.033"	40°00'58.504"	109°32'39.554"	686' FSL	40°01'17.294"	109°32'39.859"	40°01'17.329"	109°32'37.381"	823' FSL
NBU 921-22M4BS	40°00'58.294"	109°32'42.103"	40°00'58.421"	109°32'39.624"	678' FSL	40°01'22.997"	109°32'39.884"	40°01'23.026"	109°32'37.406"	823' FSL
NBU 921-22M4CS	40°00'58.211"	109°32'42.174"	40°00'58.338"	109°32'39.696"	670' FSL	40°01'22.997"	109°32'39.909"	40°01'23.026"	109°32'37.430"	86' FSL
NBU 193	40°00'58.075"	109°32'41.907"	40°00'58.202"	109°32'39.428"	656' FSL	40°01'16.170"	109°32'39.909"	40°01'16.170"	109°32'37.430"	823' FSL

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 921-22M1BS	384.5'	166.0'	NBU 921-22M1CS	60.8'	169.2'	NBU 921-22M4BS	-262.9'	172.4'	NBU 921-22M4CS	-584.5'	175.8'



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

WELL PAD - NBU 921-22M

WELL PAD INTERFERENCE PLAT
 WELLS - NBU 921-22M GR,
 NBU 921-22M1BS, NBU 921-22M1CS,
 NBU 921-22M4BS & NBU 921-22M4CS
 LOCATED IN SECTION 22, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH.

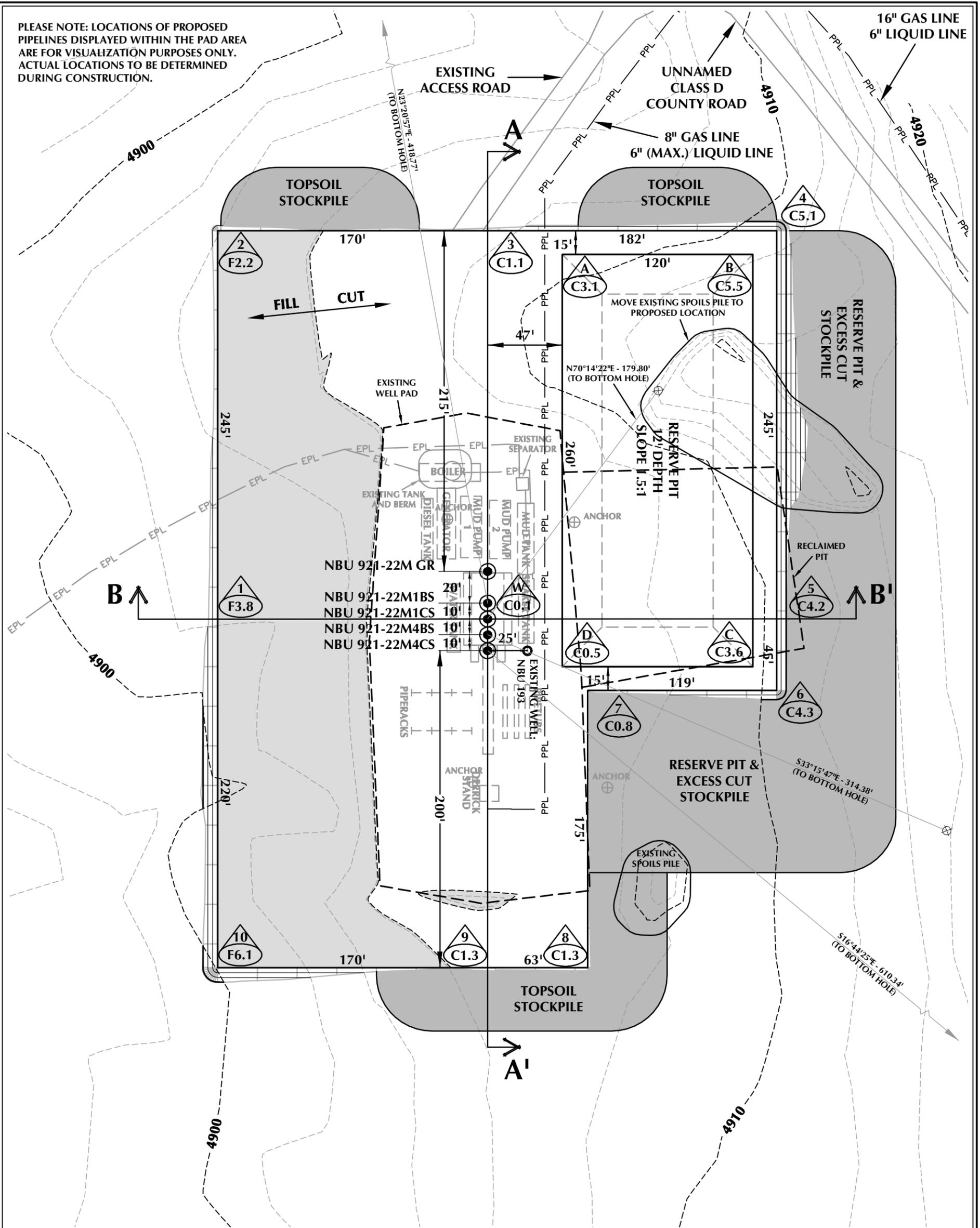


609
CONSULTING, LLC
 2155 North Main Street
 Sheridan WY 82801
 Phone 307-674-0609
 Fax 307-674-0182

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

DATE SURVEYED: 7-19-11	SURVEYED BY: W.W.	SHEET NO: 6 6 OF 17
DATE DRAWN: 8-26-11	DRAWN BY: T.J.R.	
SCALE: 1" = 60'		Date Last Revised:

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



WELL PAD - NBU 921-22M DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4906.2'
 FINISHED GRADE ELEVATION = 4906.1'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.48 ACRES
 TOTAL DISTURBANCE AREA = 4.80 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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

WELL PAD - NBU 921-22M

WELL PAD - LOCATION LAYOUT
 NBU 921-22M GR,
 NBU 921-22M1BS, NBU 921-22M1CS,
 NBU 921-22M4BS & NBU 921-22M4CS
 LOCATED IN SECTION 22, T9S, R21E,
 S.L.B.&M., UTAH COUNTY, UTAH

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 7,273 C.Y.
 TOTAL FILL FOR WELL PAD = 5,795 C.Y.
 TOPSOIL @ 6" DEPTH = 2,100 C.Y.
 EXCESS MATERIAL = 1,478 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT
 +/- 11,020 C.Y.
 RESERVE PIT CAPACITY (2' OF FREEBOARD)
 +/- 42,290 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

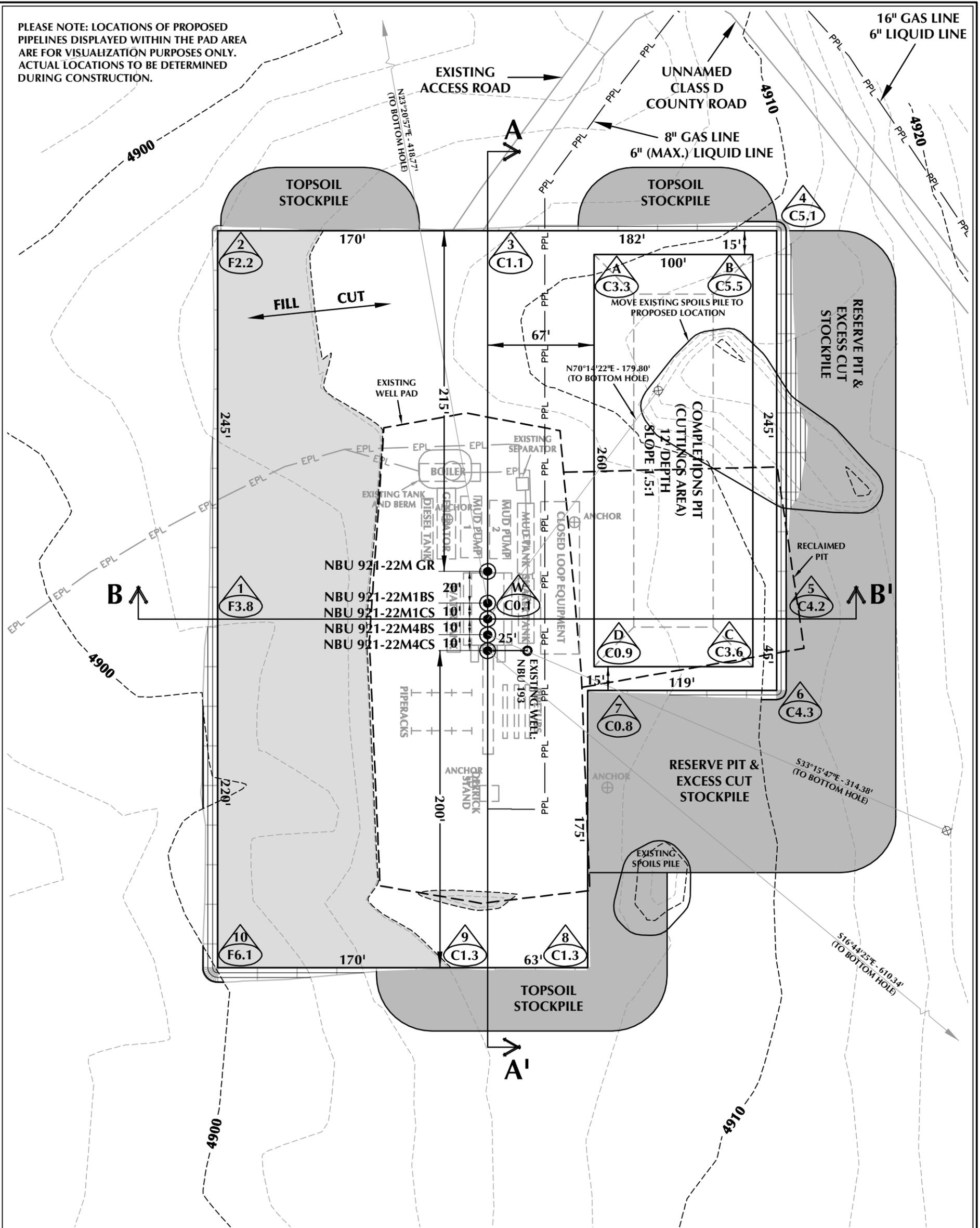


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 2155 North Main Street
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 Phone 307-674-0609
 Fax 307-674-0182

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

SCALE: 1"=60' DATE: 9/14/11 SHEET NO:
 REVISED: **7** 7 OF 17

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



WELL PAD - NBU 921-22M (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4906.2'
 FINISHED GRADE ELEVATION = 4906.1'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.48 ACRES
 TOTAL DISTURBANCE AREA = 4.80 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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WELL PAD - NBU 921-22M
WELL PAD - LOCATION LAYOUT
 NBU 921-22M GR,
 NBU 921-22M1BS, NBU 921-22M1CS,
 NBU 921-22M4BS & NBU 921-22M4CS
 LOCATED IN SECTION 22, T9S, R21E,
 S.L.B.&M., UTAH COUNTY, UTAH



CONSULTING, LLC
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 Sheridan, WY 82801
 Phone 307-674-0609
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WELL PAD QUANTITIES

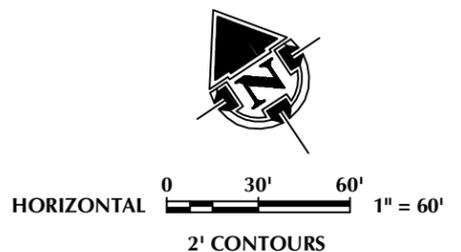
TOTAL CUT FOR WELL PAD = 7,273 C.Y.
 TOTAL FILL FOR WELL PAD = 5,795 C.Y.
 TOPSOIL @ 6" DEPTH = 2,100 C.Y.
 EXCESS MATERIAL = 1,478 C.Y.

COMPLETIONS PIT QUANTITIES

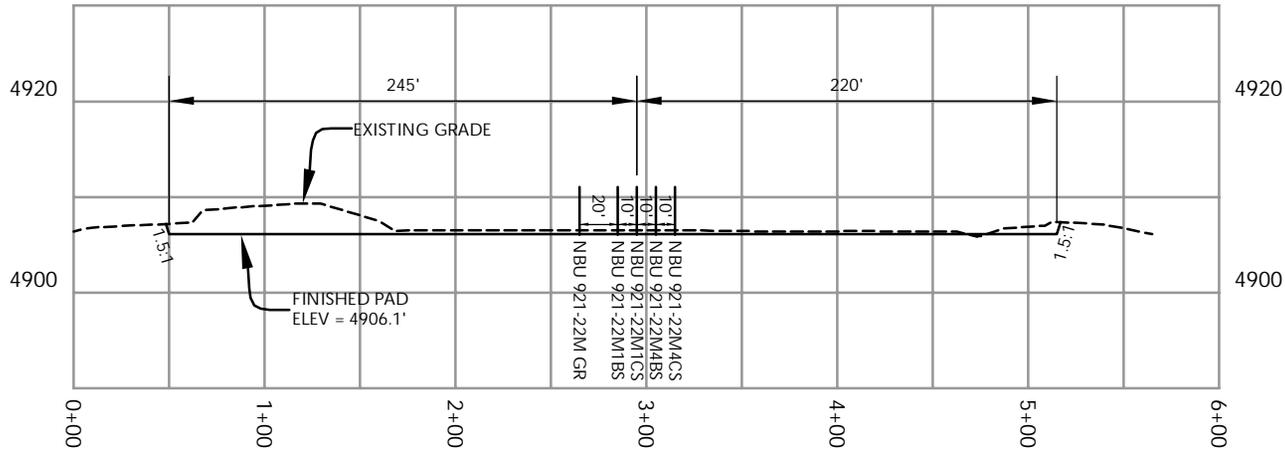
TOTAL CUT FOR COMPLETIONS PIT
 +/- 8,870 C.Y.
 COMPLETIONS PIT CAPACITY
 (2' OF FREEBOARD)
 +/- 33,770 BARRELS

WELL PAD LEGEND

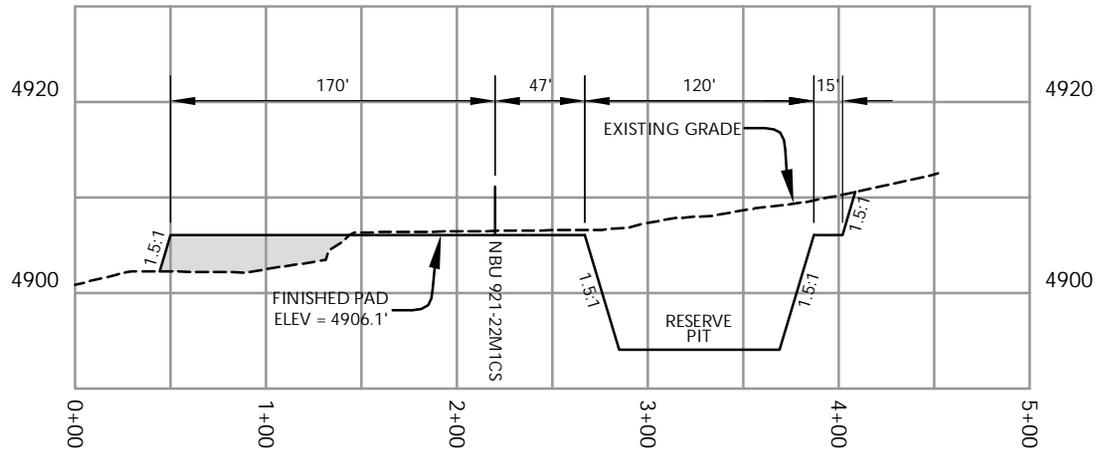
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PROPOSED PIPELINE
- EXISTING PIPELINE



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



CROSS SECTION A-A'



CROSS SECTION B-B'

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

WELL PAD - NBU 921-22M

WELL PAD - CROSS SECTIONS

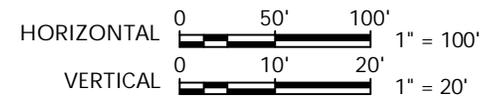
NBU 921-22M GR,
NBU 921-22M1BS, NBU 921-22M1CS,
NBU 921-22M4BS & NBU 921-22M4CS
LOCATED IN SECTION 22, T9S, R21E,
S.L.B.&M., Uintah County, Utah



CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
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TIMBERLINE
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365



Scale: 1"=100'

Date: 9/14/11

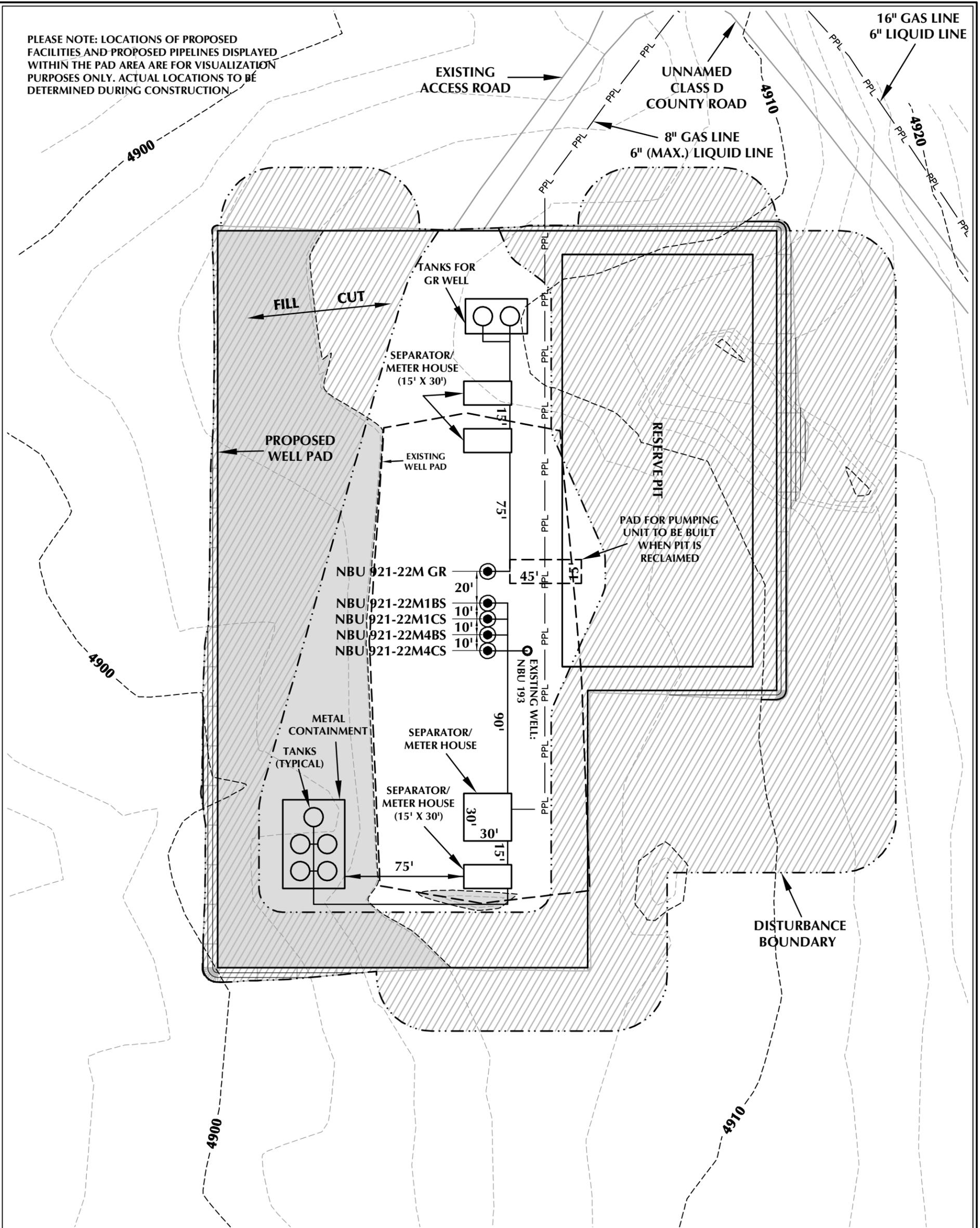
SHEET NO:

REVISED:

8

8 OF 17

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



WELL PAD - NBU 921-22M DESIGN SUMMARY

TOTAL DISTURBANCE AREA = 4.80 ACRES (INCLUDING EXISTING)
 RECLAMATION AREA = 3.35 ACRES
 TOTAL WELL PAD AREA AFTER RECLAMATION = 1.45 ACRES

WELL PAD LEGEND

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



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

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 1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-22M

WELL PAD - RECLAMATION LAYOUT
 NBU 921-22M GR,
 NBU 921-22M1BS, NBU 921-22M1CS,
 NBU 921-22M4BS & NBU 921-22M4CS
 LOCATED IN SECTION 22, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC
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 Sheridan, WY 82801
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TIMBERLINE
 ENGINEERING & LAND SURVEYING, INC.
 209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

SCALE: 1"=60' DATE: 12/1/11 SHEET NO:

REVISED:

9

9 OF 17

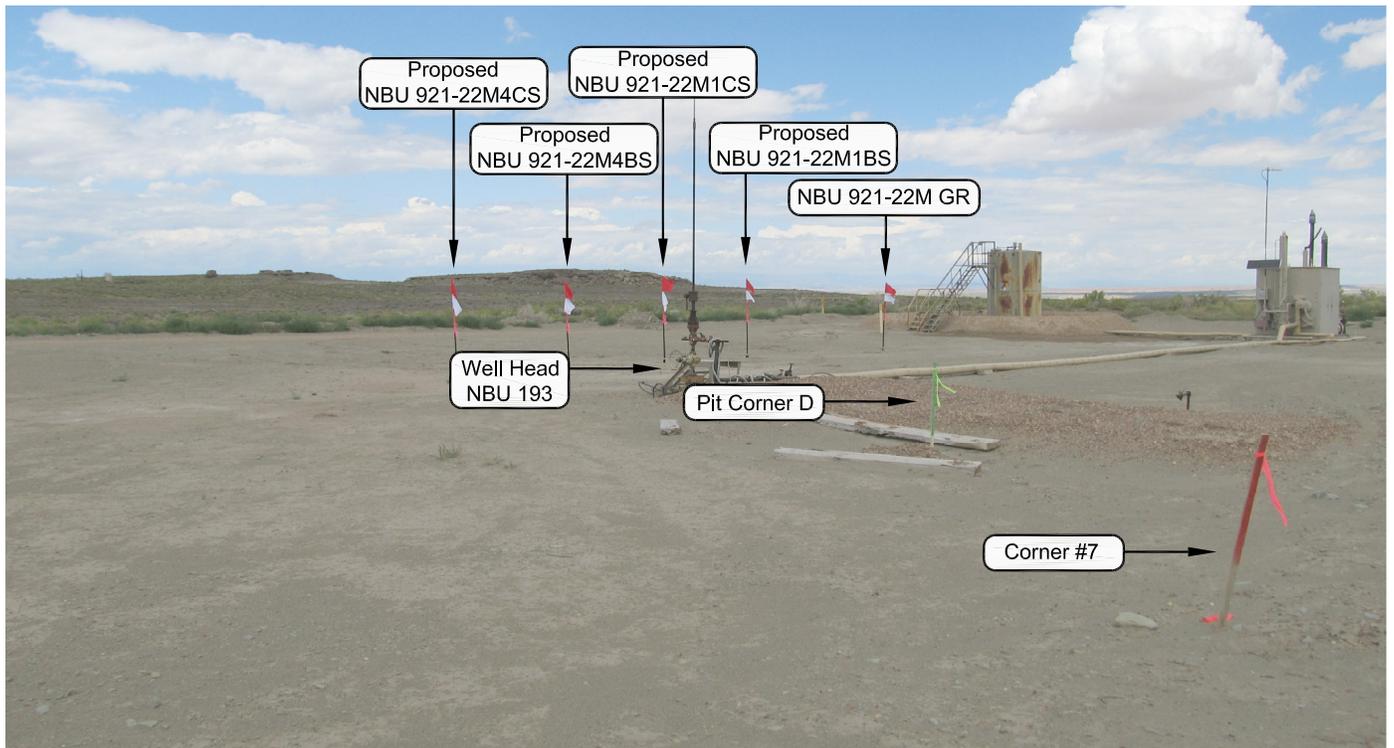


PHOTO VIEW: FROM CORNER #7 TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: SOUTHERLY

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

WELL PAD - NBU 921-22M

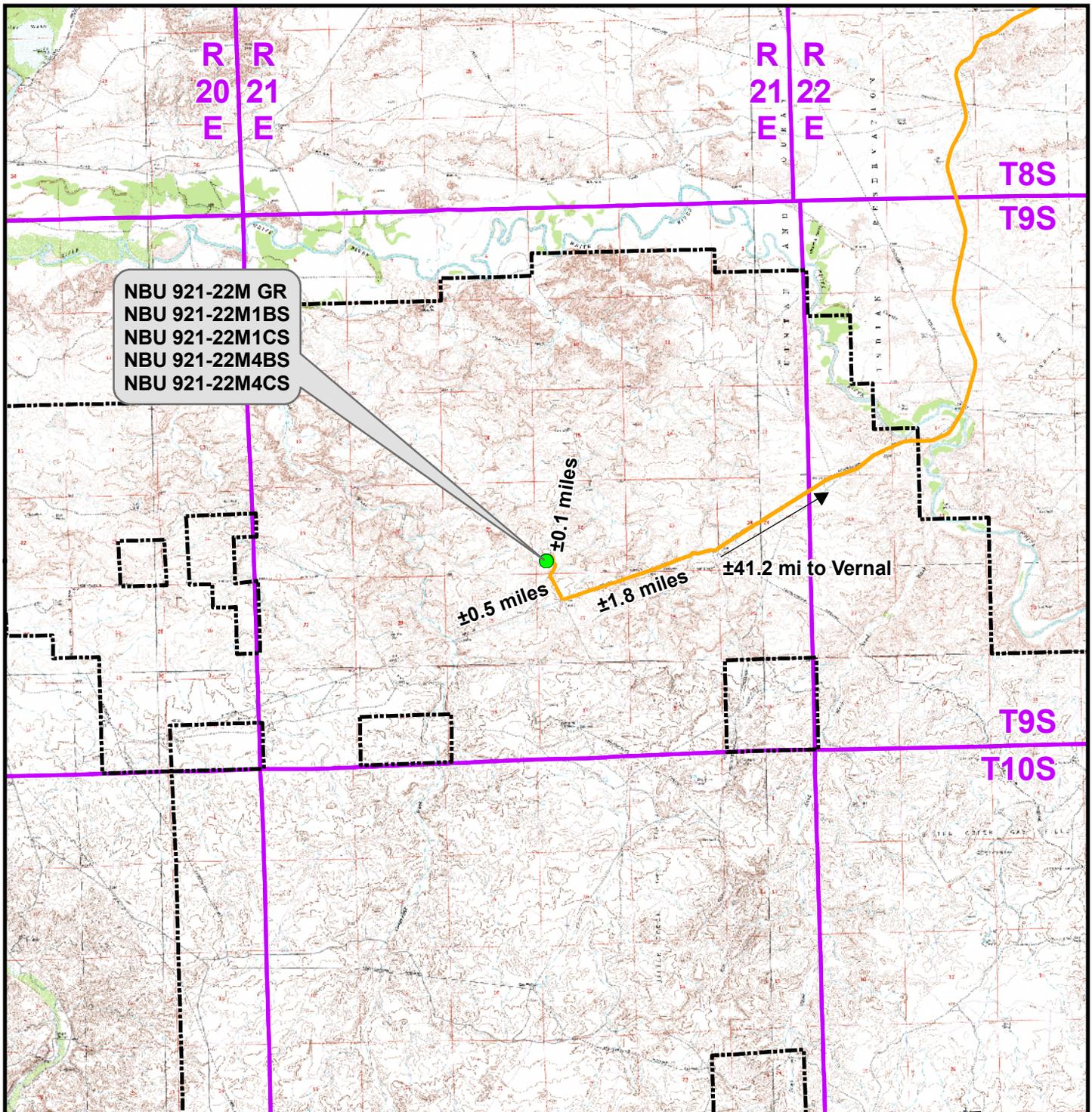
LOCATION PHOTOS
 NBU 921-22M GR,
 NBU 921-22M1BS, NBU 921-22M1CS,
 NBU 921-22M4BS & NB921-22M4CS,
 LOCATED IN SECTION 22, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH.



CONSULTING, LLC
 2155 North Main Street
 Sheridan WY 82801
 Phone 307-674-0609
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TIMBERLINE (435) 789-1365
 ENGINEERING & LAND SURVEYING, INC.
 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 7-19-11	PHOTOS TAKEN BY: W.W.	SHEET NO: 10
DATE DRAWN: 8-23-11	DRAWN BY: T.J.R.	
Date Last Revised:		10 OF 17



Legend

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

Distance From Well Pad - NBU 921-22M To Unit Boundary: ±10,394ft

WELL PAD - NBU 921-22M

TOPO A
 NBU 921-22M GR,
 NBU 921-22M1BS, NBU 921-22M1CS,
 NBU 921-22M4BS & NBU 921-22M4CS
 LOCATED IN SECTION 22, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

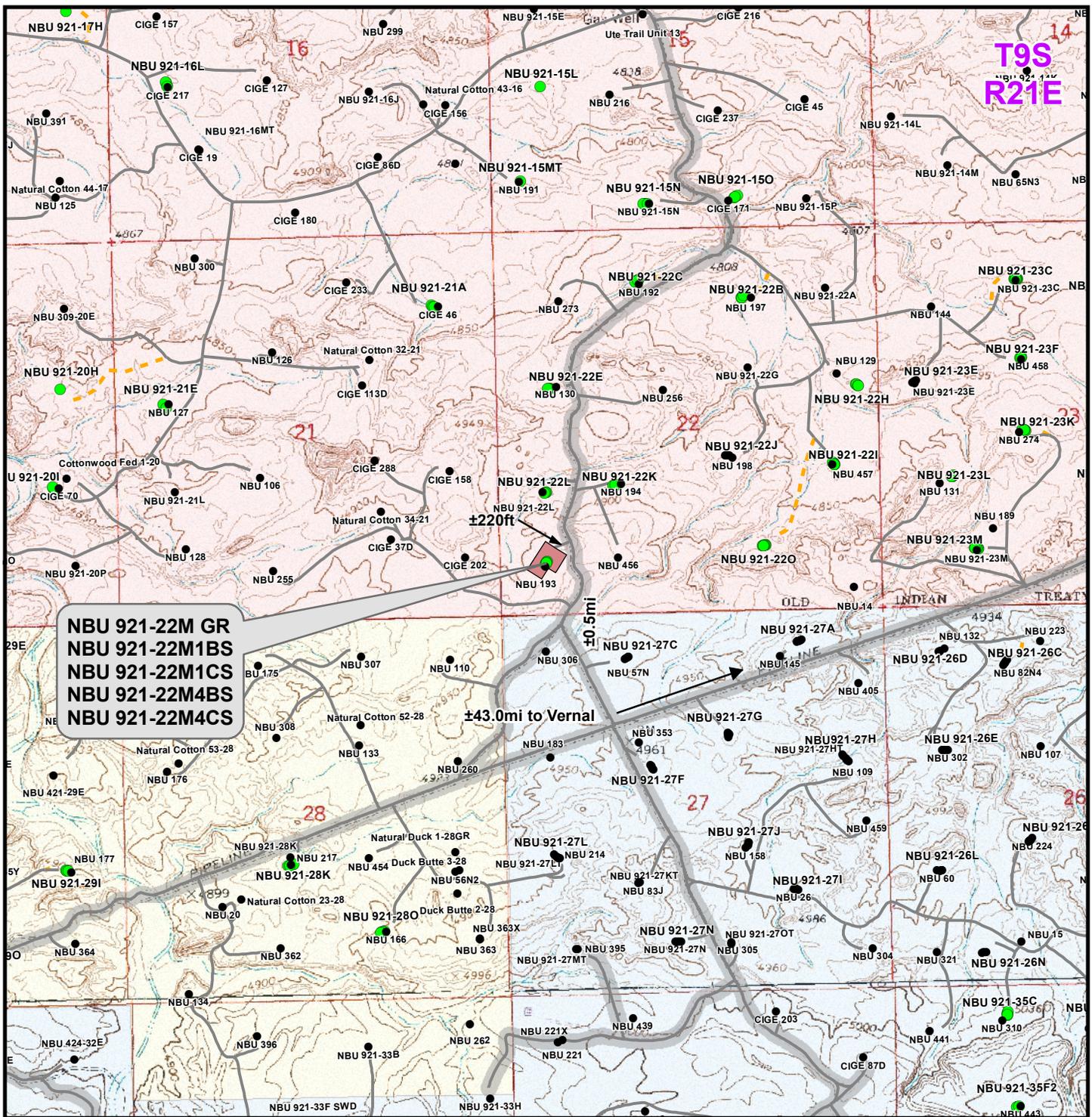
1099 18th Street
 Denver, Colorado 80202



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 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: 14 Sept 2011	11
REVISED:	DATE:	



**NBU 921-22M GR
 NBU 921-22M1BS
 NBU 921-22M1CS
 NBU 921-22M4BS
 NBU 921-22M4CS**

±43.0mi to Vernal

**T9S
 R21E**

Legend

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

Total Proposed Road Length: ±0ft

WELL PAD - NBU 921-22M

**TOPO B
 NBU 921-22M GR,
 NBU 921-22M1BS, NBU 921-22M1CS,
 NBU 921-22M4BS & NBU 921-22M4CS
 LOCATED IN SECTION 22, T9S, R21E,
 S.L.B.&M., Uintah County, UTAH**

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

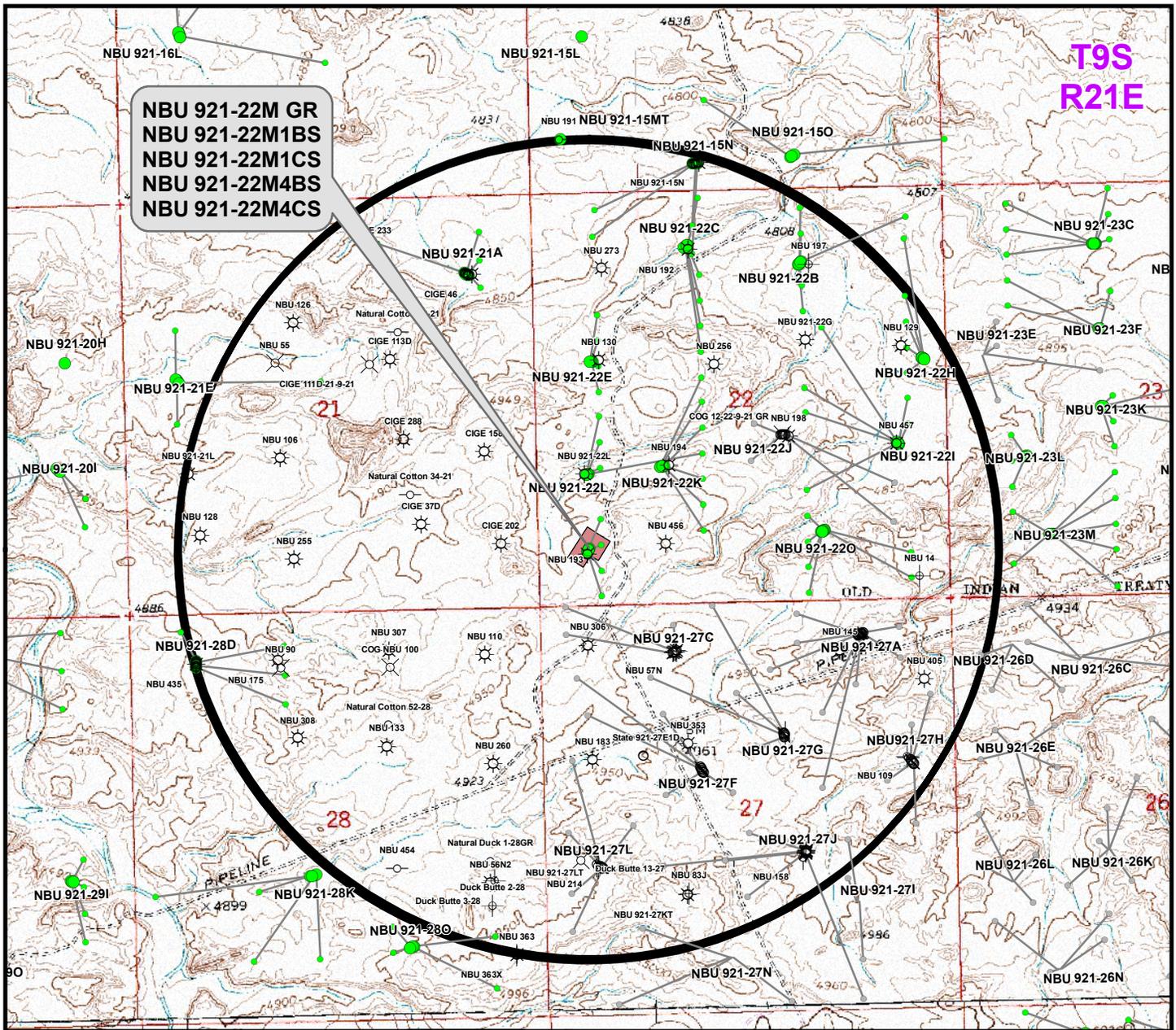
**1099 18th Street
 Denver, Colorado 80202**



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



SCALE: 1" = 2,000ft	NAD83 USP Central	12	SHEET NO:
DRAWN: TL	DATE: 14 Sept 2011		12 OF 17
REVISED:	DATE:		



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 921-22M GR	NBU 193	56ft
NBU 921-22M1BS	NBU 193	453ft
NBU 921-22M1CS	NBU 193	184ft
NBU 921-22M4BS	NBU 193	287ft
NBU 921-22M4CS	NBU 921-27D2AS BH	491ft

Legend

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

WELL PAD - NBU 921-22M

TOPO C
 NBU 921-22M GR,
 NBU 921-22M1BS, NBU 921-22M1CS,
 NBU 921-22M4BS & NBU 921-22M4CS
 LOCATED IN SECTION 22, T9S, R21E,
 S.L.B.&M., Uintah County, Utah

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
 Denver, Colorado 80202

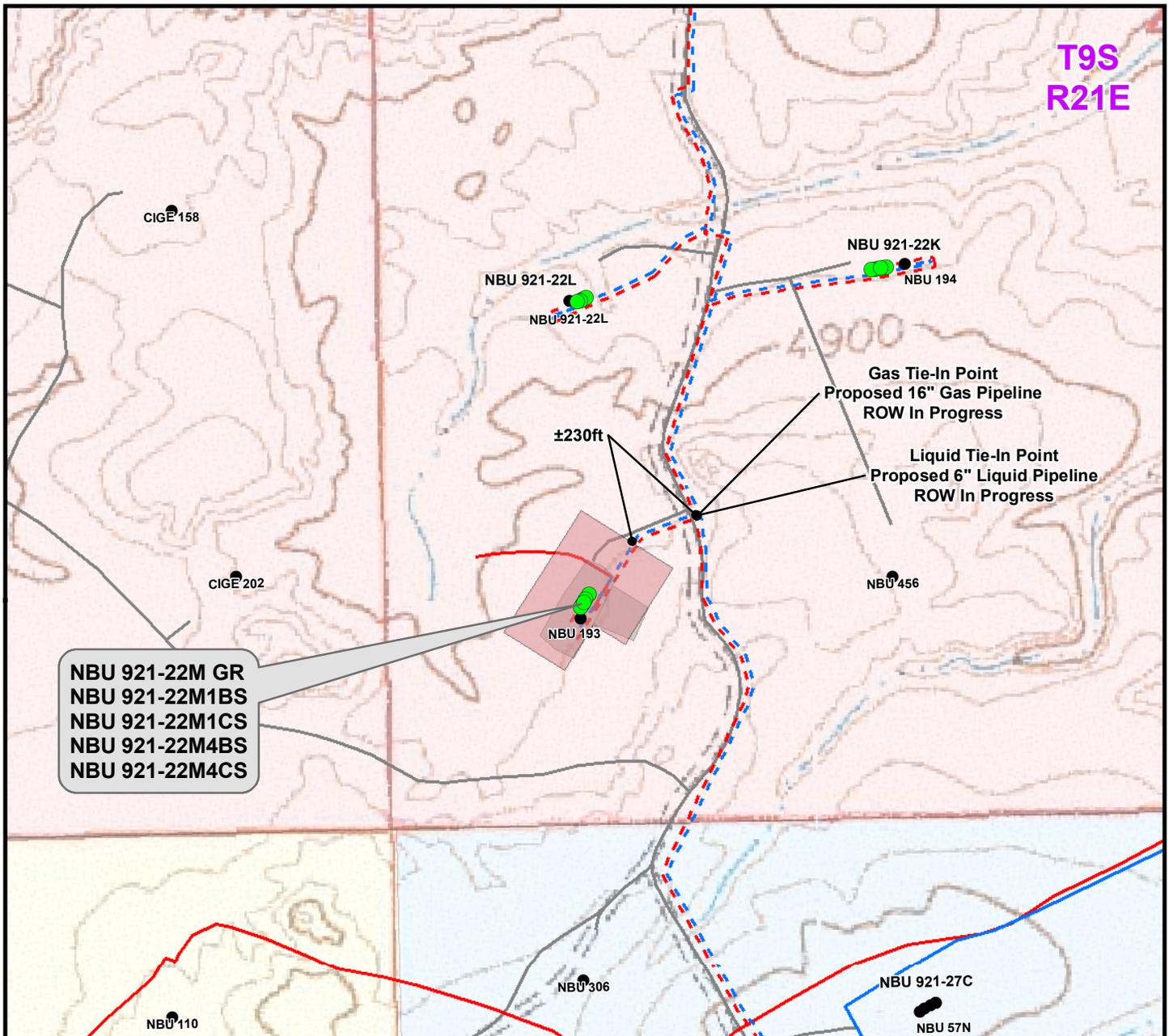


CONSULTING, LLC

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

SCALE: 1" = 2,000ft	NAD83 USP Central	13
DRAWN: TL	DATE: 14 Sept 2011	
REVISED:	DATE:	

SHEET NO:
13 OF 17



Proposed Liquid Pipeline	Length
Buried 6" (Max.) (Meter House to Edge of Pad)	±385ft
Buried 6" (Max.) (Edge of Pad to Proposed 6" Liquid Pipeline ROW In Progress)	±230ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±615ft

Proposed Gas Pipeline	Length
Buried 8" (Meter House to Edge of Pad)	±385ft
Buried 8" (Edge of Pad to Proposed 16" Gas Pipeline ROW In Progress)	±230ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±615ft

Legend

- Well - Proposed
- Well - Existing
- Well Pad - Proposed
- Well Pad - Existing
- - - 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 921-22M

TOPO D2 (PAD & PIPELINE DETAIL)
 NBU 921-22M GR,
 NBU 921-22M1BS, NBU 921-22M1CS,
 NBU 921-22M4BS & NBU 921-22M4CS
 LOCATED IN SECTION 22, T9S, R21E,
 S.L.B.&M., Uintah County, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

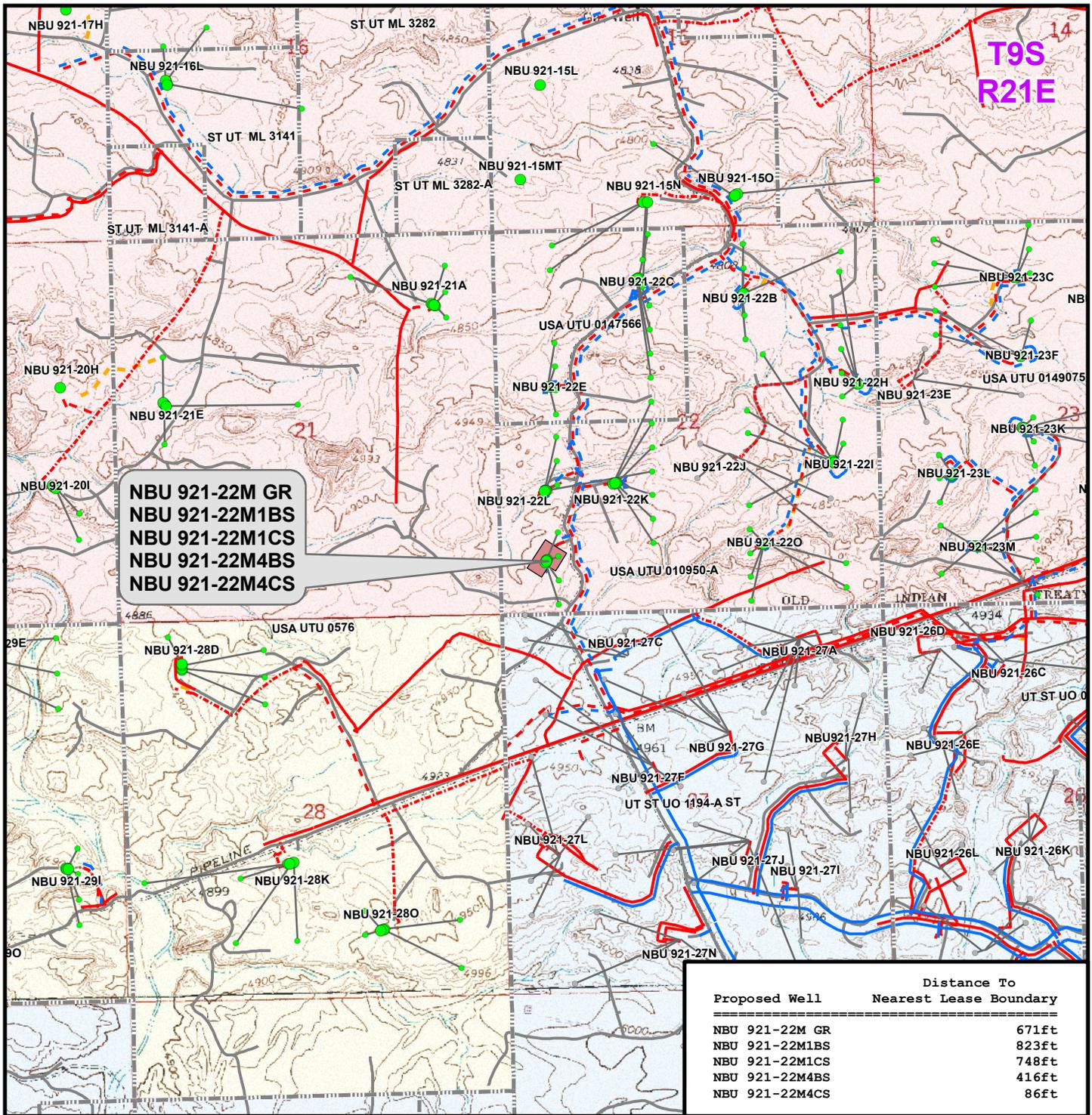
1099 18th Street
 Denver, Colorado 80202



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



SCALE: 1" = 500ft	NAD83 USP Central	15 15 OF 17
DRAWN: TL	DATE: 14 Sept 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 921-22M

TOPO E
NBU 921-22M GR,
NBU 921-22M1BS, NBU 921-22M1CS,
NBU 921-22M4BS & NBU 921-22M4CS
LOCATED IN SECTION 22, T9S, R21E,
S.L.B.&M., Uintah County, Utah

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

1099 18th Street
Denver, Colorado 80202



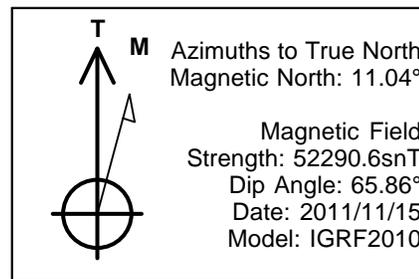
CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

SCALE: 1" = 2,000ft	NAD83 USP Central	16 16 OF 17
DRAWN: TL	DATE: 14 Sept 2011	
REVISED:	DATE:	

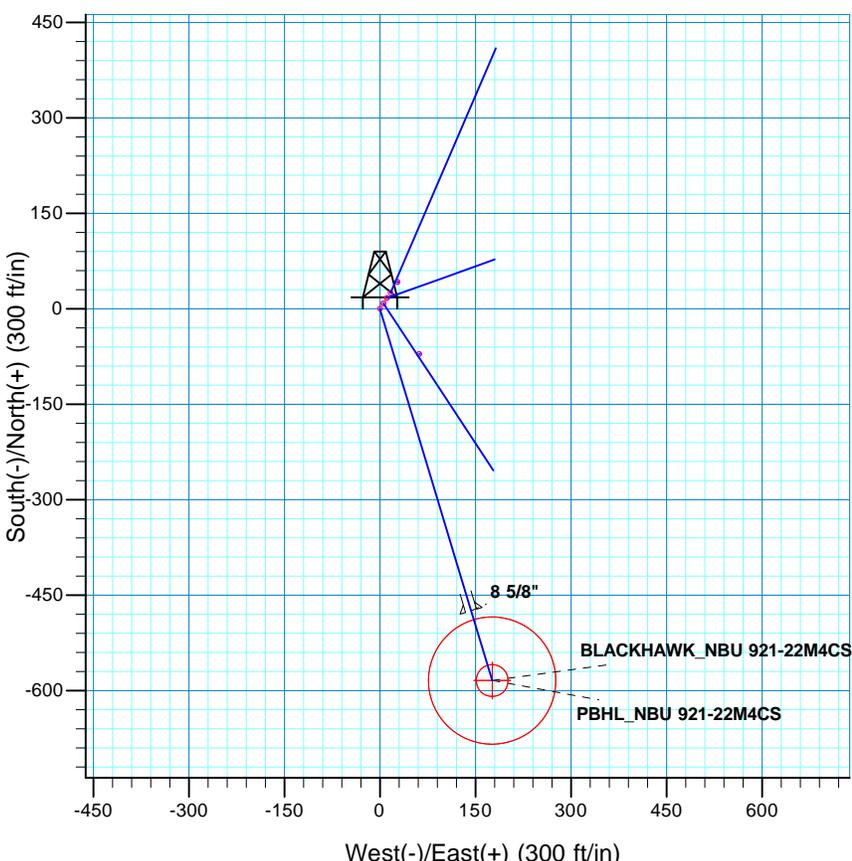
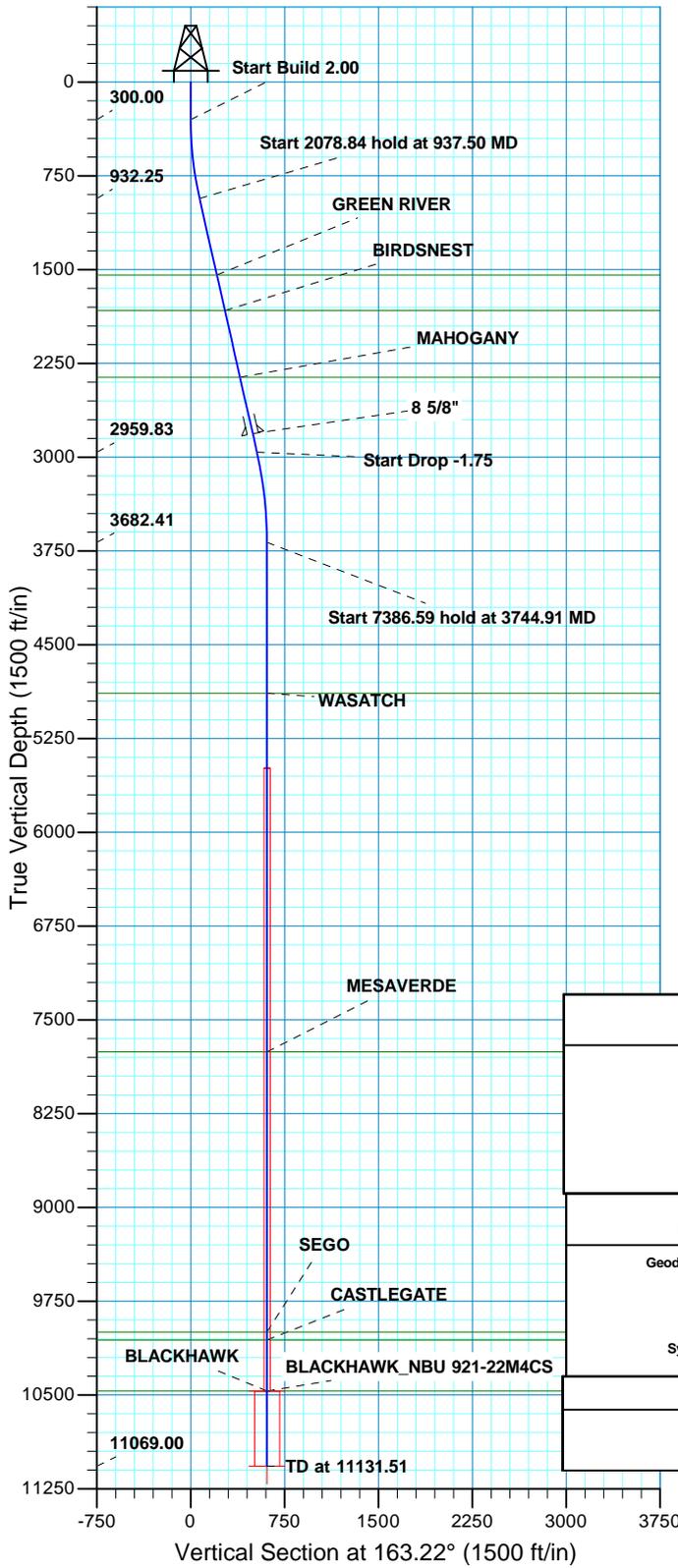
**Kerr-McGee Oil & Gas Onshore, LP
WELL PAD - NBU 921-22M
WELLS – NBU 921-22M GR,
NBU 921-22M1BS, NBU 921-22M1CS,
NBU 921-22M4BS & NBU 921-22M4CS
Section 22, T9S, R21E, S.L.B.&M.**

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 17.7 miles to a Class D County Road to the southwest. Exit right and proceed in a southwesterly direction along the Class D County Road approximately 1.8 miles to a second Class D County Road to the north. Exit right and proceed in a northerly direction along the second Class D County Road approximately 0.5 miles to a service road to the southwest. Exit left and proceed in a southwesterly direction along the service road approximately 220 Feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 43.5 miles in a southerly direction.



WELL DETAILS: NBU 921-22M4CS									
GL 4906 & KB 4 @ 4910.00ft (ASSUMED)									
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude				
0.00	0.00	14535274.64	2047992.05	40° 0' 58.338 N	109° 32' 39.696 W				
DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
BLACKHAWK	10469.00	-584.18	176.15	14534693.41	2048177.72	40° 0' 52.564 N	109° 32' 37.432 W	Circle (Radius: 25.00)	
- plan hits target center									
PBHL	11069.00	-584.18	176.15	14534693.41	2048177.72	40° 0' 52.564 N	109° 32' 37.432 W	Circle (Radius: 100.00)	
- plan hits target center									



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
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	
937.50	12.75	163.22	932.25	-67.63	20.39	2.00	163.22	70.64	
3016.34	12.75	163.22	2959.83	-506.89	152.85	0.00	0.00	529.43	
3744.91	0.00	0.00	3682.41	-584.18	176.15	1.75	180.00	610.16	
11131.51	0.00	0.00	11069.00	-584.18	176.15	0.00	0.00	610.16	PBHL_NBU 921-22M4CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N			
Geodetic System: Universal Transverse Mercator (US Survey Feet)			
Datum: NAD 1927 (NADCON CONUS)			
Ellipsoid: Clarke 1866			
Zone: Zone 12N (114 W to 108 W)			
Location: SECTION 22 T9S R21E			
System Datum: Mean Sea Level			

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1542.00	1562.66	GREEN RIVER
1828.00	1855.89	BIRDSNEST
2361.00	2402.37	MAHOGANY
4887.00	4949.51	WASATCH
7757.00	7819.51	MESAVERDE
9996.00	10058.51	SEGO
10061.00	10123.51	CASTLEGATE
10469.00	10531.51	BLACKHAWK

CASING DETAILS			
TVD	MD	Name	Size
2811.00	2863.75	8 5/8"	8.625

RECEIVED



US ROCKIES REGION PLANNING

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

NBU 921-22M PAD

NBU 921-22M4CS

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

16 November, 2011





SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 921-22M4CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4906 & KB 4 @ 4910.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4906 & KB 4 @ 4910.00ft (ASSUMED)
Site:	NBU 921-22M PAD	North Reference:	True
Well:	NBU 921-22M4CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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

Site	NBU 921-22M PAD, SECTION 22 T9S R21E				
Site Position:	Northing:	14,535,316.97 usft	Latitude:	40° 0' 58.752 N	
From: Lat/Long	Easting:	2,048,018.80 usft	Longitude:	109° 32' 39.343 W	
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.94 °

Well	NBU 921-22M4CS, 670 FSL 643 FWL					
Well Position	+N/-S	-41.88 ft	Northing:	14,535,274.64 usft	Latitude:	40° 0' 58.338 N
	+E/-W	-27.44 ft	Easting:	2,047,992.04 usft	Longitude:	109° 32' 39.696 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,906.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/11/15	11.04	65.86	52,291

Design	PLAN #1 PRELIMINARY			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	163.22

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
937.50	12.75	163.22	932.25	-67.63	20.39	2.00	2.00	0.00	163.22	
3,016.34	12.75	163.22	2,959.83	-506.89	152.85	0.00	0.00	0.00	0.00	
3,744.91	0.00	0.00	3,682.41	-584.18	176.15	1.75	-1.75	0.00	180.00	
11,131.51	0.00	0.00	11,069.00	-584.18	176.15	0.00	0.00	0.00	0.00	PBHL_NBU 921-22M



SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 921-22M4CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4906 & KB 4 @ 4910.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4906 & KB 4 @ 4910.00ft (ASSUMED)
Site:	NBU 921-22M PAD	North Reference:	True
Well:	NBU 921-22M4CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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	0.00
100.00	0.00	0.00	100.00	0.00	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	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00										
400.00	2.00	163.22	399.98	-1.67	0.50	1.75	2.00	2.00	2.00	0.00
500.00	4.00	163.22	499.84	-6.68	2.01	6.98	2.00	2.00	2.00	0.00
600.00	6.00	163.22	599.45	-15.03	4.53	15.69	2.00	2.00	2.00	0.00
700.00	8.00	163.22	698.70	-26.69	8.05	27.88	2.00	2.00	2.00	0.00
800.00	10.00	163.22	797.47	-41.67	12.56	43.52	2.00	2.00	2.00	0.00
900.00	12.00	163.22	895.62	-59.94	18.07	62.60	2.00	2.00	2.00	0.00
937.50	12.75	163.22	932.25	-67.63	20.39	70.64	2.00	2.00	2.00	0.00
Start 2078.84 hold at 937.50 MD										
1,000.00	12.75	163.22	993.21	-80.84	24.38	84.43	0.00	0.00	0.00	0.00
1,100.00	12.75	163.22	1,090.74	-101.97	30.75	106.50	0.00	0.00	0.00	0.00
1,200.00	12.75	163.22	1,188.28	-123.10	37.12	128.57	0.00	0.00	0.00	0.00
1,300.00	12.75	163.22	1,285.81	-144.23	43.49	150.64	0.00	0.00	0.00	0.00
1,400.00	12.75	163.22	1,383.35	-165.36	49.86	172.71	0.00	0.00	0.00	0.00
1,500.00	12.75	163.22	1,480.88	-186.49	56.23	194.78	0.00	0.00	0.00	0.00
1,562.66	12.75	163.22	1,542.00	-199.73	60.23	208.61	0.00	0.00	0.00	0.00
GREEN RIVER										
1,600.00	12.75	163.22	1,578.42	-207.62	62.60	216.85	0.00	0.00	0.00	0.00
1,700.00	12.75	163.22	1,675.95	-228.75	68.98	238.92	0.00	0.00	0.00	0.00
1,800.00	12.75	163.22	1,773.48	-249.88	75.35	260.99	0.00	0.00	0.00	0.00
1,855.89	12.75	163.22	1,828.00	-261.69	78.91	273.33	0.00	0.00	0.00	0.00
BIRDSNEST										
1,900.00	12.75	163.22	1,871.02	-271.01	81.72	283.06	0.00	0.00	0.00	0.00
2,000.00	12.75	163.22	1,968.55	-292.14	88.09	305.13	0.00	0.00	0.00	0.00
2,100.00	12.75	163.22	2,066.09	-313.27	94.46	327.20	0.00	0.00	0.00	0.00
2,200.00	12.75	163.22	2,163.62	-334.40	100.83	349.27	0.00	0.00	0.00	0.00
2,300.00	12.75	163.22	2,261.16	-355.53	107.20	371.34	0.00	0.00	0.00	0.00
2,400.00	12.75	163.22	2,358.69	-376.66	113.58	393.41	0.00	0.00	0.00	0.00
2,402.37	12.75	163.22	2,361.00	-377.16	113.73	393.93	0.00	0.00	0.00	0.00
MAHOGANY										
2,500.00	12.75	163.22	2,456.22	-397.79	119.95	415.48	0.00	0.00	0.00	0.00
2,600.00	12.75	163.22	2,553.76	-418.92	126.32	437.55	0.00	0.00	0.00	0.00
2,700.00	12.75	163.22	2,651.29	-440.05	132.69	459.62	0.00	0.00	0.00	0.00
2,800.00	12.75	163.22	2,748.83	-461.18	139.06	481.69	0.00	0.00	0.00	0.00
2,863.75	12.75	163.22	2,811.00	-474.65	143.12	495.76	0.00	0.00	0.00	0.00
8 5/8"										
2,900.00	12.75	163.22	2,846.36	-482.31	145.43	503.76	0.00	0.00	0.00	0.00
3,000.00	12.75	163.22	2,943.90	-503.44	151.80	525.83	0.00	0.00	0.00	0.00
3,016.34	12.75	163.22	2,959.83	-506.89	152.85	529.43	0.00	0.00	0.00	0.00
Start Drop -1.75										
3,100.00	11.29	163.22	3,041.66	-523.57	157.87	546.85	1.75	-1.75	0.00	0.00
3,200.00	9.54	163.22	3,140.01	-540.87	163.09	564.92	1.75	-1.75	0.00	0.00
3,300.00	7.79	163.22	3,238.86	-555.29	167.44	579.98	1.75	-1.75	0.00	0.00
3,400.00	6.04	163.22	3,338.13	-566.81	170.91	592.01	1.75	-1.75	0.00	0.00
3,500.00	4.29	163.22	3,437.72	-575.42	173.51	601.01	1.75	-1.75	0.00	0.00
3,600.00	2.54	163.22	3,537.54	-581.11	175.23	606.96	1.75	-1.75	0.00	0.00
3,700.00	0.79	163.22	3,637.50	-583.89	176.06	609.86	1.75	-1.75	0.00	0.00
3,744.91	0.00	0.00	3,682.41	-584.18	176.15	610.16	1.75	-1.75	0.00	0.00
Start 7386.59 hold at 3744.91 MD										



SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 921-22M4CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4906 & KB 4 @ 4910.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4906 & KB 4 @ 4910.00ft (ASSUMED)
Site:	NBU 921-22M PAD	North Reference:	True
Well:	NBU 921-22M4CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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	3,737.49	-584.18	176.15	610.16	0.00	0.00	0.00
3,900.00	0.00	0.00	3,837.49	-584.18	176.15	610.16	0.00	0.00	0.00
4,000.00	0.00	0.00	3,937.49	-584.18	176.15	610.16	0.00	0.00	0.00
4,100.00	0.00	0.00	4,037.49	-584.18	176.15	610.16	0.00	0.00	0.00
4,200.00	0.00	0.00	4,137.49	-584.18	176.15	610.16	0.00	0.00	0.00
4,300.00	0.00	0.00	4,237.49	-584.18	176.15	610.16	0.00	0.00	0.00
4,400.00	0.00	0.00	4,337.49	-584.18	176.15	610.16	0.00	0.00	0.00
4,500.00	0.00	0.00	4,437.49	-584.18	176.15	610.16	0.00	0.00	0.00
4,600.00	0.00	0.00	4,537.49	-584.18	176.15	610.16	0.00	0.00	0.00
4,700.00	0.00	0.00	4,637.49	-584.18	176.15	610.16	0.00	0.00	0.00
4,800.00	0.00	0.00	4,737.49	-584.18	176.15	610.16	0.00	0.00	0.00
4,900.00	0.00	0.00	4,837.49	-584.18	176.15	610.16	0.00	0.00	0.00
4,949.51	0.00	0.00	4,887.00	-584.18	176.15	610.16	0.00	0.00	0.00
WASATCH									
5,000.00	0.00	0.00	4,937.49	-584.18	176.15	610.16	0.00	0.00	0.00
5,100.00	0.00	0.00	5,037.49	-584.18	176.15	610.16	0.00	0.00	0.00
5,200.00	0.00	0.00	5,137.49	-584.18	176.15	610.16	0.00	0.00	0.00
5,300.00	0.00	0.00	5,237.49	-584.18	176.15	610.16	0.00	0.00	0.00
5,400.00	0.00	0.00	5,337.49	-584.18	176.15	610.16	0.00	0.00	0.00
5,500.00	0.00	0.00	5,437.49	-584.18	176.15	610.16	0.00	0.00	0.00
5,600.00	0.00	0.00	5,537.49	-584.18	176.15	610.16	0.00	0.00	0.00
5,700.00	0.00	0.00	5,637.49	-584.18	176.15	610.16	0.00	0.00	0.00
5,800.00	0.00	0.00	5,737.49	-584.18	176.15	610.16	0.00	0.00	0.00
5,900.00	0.00	0.00	5,837.49	-584.18	176.15	610.16	0.00	0.00	0.00
6,000.00	0.00	0.00	5,937.49	-584.18	176.15	610.16	0.00	0.00	0.00
6,100.00	0.00	0.00	6,037.49	-584.18	176.15	610.16	0.00	0.00	0.00
6,200.00	0.00	0.00	6,137.49	-584.18	176.15	610.16	0.00	0.00	0.00
6,300.00	0.00	0.00	6,237.49	-584.18	176.15	610.16	0.00	0.00	0.00
6,400.00	0.00	0.00	6,337.49	-584.18	176.15	610.16	0.00	0.00	0.00
6,500.00	0.00	0.00	6,437.49	-584.18	176.15	610.16	0.00	0.00	0.00
6,600.00	0.00	0.00	6,537.49	-584.18	176.15	610.16	0.00	0.00	0.00
6,700.00	0.00	0.00	6,637.49	-584.18	176.15	610.16	0.00	0.00	0.00
6,800.00	0.00	0.00	6,737.49	-584.18	176.15	610.16	0.00	0.00	0.00
6,900.00	0.00	0.00	6,837.49	-584.18	176.15	610.16	0.00	0.00	0.00
7,000.00	0.00	0.00	6,937.49	-584.18	176.15	610.16	0.00	0.00	0.00
7,100.00	0.00	0.00	7,037.49	-584.18	176.15	610.16	0.00	0.00	0.00
7,200.00	0.00	0.00	7,137.49	-584.18	176.15	610.16	0.00	0.00	0.00
7,300.00	0.00	0.00	7,237.49	-584.18	176.15	610.16	0.00	0.00	0.00
7,400.00	0.00	0.00	7,337.49	-584.18	176.15	610.16	0.00	0.00	0.00
7,500.00	0.00	0.00	7,437.49	-584.18	176.15	610.16	0.00	0.00	0.00
7,600.00	0.00	0.00	7,537.49	-584.18	176.15	610.16	0.00	0.00	0.00
7,700.00	0.00	0.00	7,637.49	-584.18	176.15	610.16	0.00	0.00	0.00
7,800.00	0.00	0.00	7,737.49	-584.18	176.15	610.16	0.00	0.00	0.00
7,819.51	0.00	0.00	7,757.00	-584.18	176.15	610.16	0.00	0.00	0.00
MESAVERDE									
7,900.00	0.00	0.00	7,837.49	-584.18	176.15	610.16	0.00	0.00	0.00
8,000.00	0.00	0.00	7,937.49	-584.18	176.15	610.16	0.00	0.00	0.00
8,100.00	0.00	0.00	8,037.49	-584.18	176.15	610.16	0.00	0.00	0.00
8,200.00	0.00	0.00	8,137.49	-584.18	176.15	610.16	0.00	0.00	0.00
8,300.00	0.00	0.00	8,237.49	-584.18	176.15	610.16	0.00	0.00	0.00
8,400.00	0.00	0.00	8,337.49	-584.18	176.15	610.16	0.00	0.00	0.00
8,500.00	0.00	0.00	8,437.49	-584.18	176.15	610.16	0.00	0.00	0.00
8,600.00	0.00	0.00	8,537.49	-584.18	176.15	610.16	0.00	0.00	0.00
8,700.00	0.00	0.00	8,637.49	-584.18	176.15	610.16	0.00	0.00	0.00



SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 921-22M4CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4906 & KB 4 @ 4910.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4906 & KB 4 @ 4910.00ft (ASSUMED)
Site:	NBU 921-22M PAD	North Reference:	True
Well:	NBU 921-22M4CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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)
8,800.00	0.00	0.00	8,737.49	-584.18	176.15	610.16	0.00	0.00	0.00
8,900.00	0.00	0.00	8,837.49	-584.18	176.15	610.16	0.00	0.00	0.00
9,000.00	0.00	0.00	8,937.49	-584.18	176.15	610.16	0.00	0.00	0.00
9,100.00	0.00	0.00	9,037.49	-584.18	176.15	610.16	0.00	0.00	0.00
9,200.00	0.00	0.00	9,137.49	-584.18	176.15	610.16	0.00	0.00	0.00
9,300.00	0.00	0.00	9,237.49	-584.18	176.15	610.16	0.00	0.00	0.00
9,400.00	0.00	0.00	9,337.49	-584.18	176.15	610.16	0.00	0.00	0.00
9,500.00	0.00	0.00	9,437.49	-584.18	176.15	610.16	0.00	0.00	0.00
9,600.00	0.00	0.00	9,537.49	-584.18	176.15	610.16	0.00	0.00	0.00
9,700.00	0.00	0.00	9,637.49	-584.18	176.15	610.16	0.00	0.00	0.00
9,800.00	0.00	0.00	9,737.49	-584.18	176.15	610.16	0.00	0.00	0.00
9,900.00	0.00	0.00	9,837.49	-584.18	176.15	610.16	0.00	0.00	0.00
10,000.00	0.00	0.00	9,937.49	-584.18	176.15	610.16	0.00	0.00	0.00
10,058.51	0.00	0.00	9,996.00	-584.18	176.15	610.16	0.00	0.00	0.00
SEGO									
10,100.00	0.00	0.00	10,037.49	-584.18	176.15	610.16	0.00	0.00	0.00
10,123.51	0.00	0.00	10,061.00	-584.18	176.15	610.16	0.00	0.00	0.00
CASTLEGATE									
10,200.00	0.00	0.00	10,137.49	-584.18	176.15	610.16	0.00	0.00	0.00
10,300.00	0.00	0.00	10,237.49	-584.18	176.15	610.16	0.00	0.00	0.00
10,400.00	0.00	0.00	10,337.49	-584.18	176.15	610.16	0.00	0.00	0.00
10,500.00	0.00	0.00	10,437.49	-584.18	176.15	610.16	0.00	0.00	0.00
10,531.51	0.00	0.00	10,469.00	-584.18	176.15	610.16	0.00	0.00	0.00
BLACKHAWK - BLACKHAWK_NBU 921-22M4CS									
10,600.00	0.00	0.00	10,537.49	-584.18	176.15	610.16	0.00	0.00	0.00
10,700.00	0.00	0.00	10,637.49	-584.18	176.15	610.16	0.00	0.00	0.00
10,800.00	0.00	0.00	10,737.49	-584.18	176.15	610.16	0.00	0.00	0.00
10,900.00	0.00	0.00	10,837.49	-584.18	176.15	610.16	0.00	0.00	0.00
11,000.00	0.00	0.00	10,937.49	-584.18	176.15	610.16	0.00	0.00	0.00
11,100.00	0.00	0.00	11,037.49	-584.18	176.15	610.16	0.00	0.00	0.00
11,131.51	0.00	0.00	11,069.00	-584.18	176.15	610.16	0.00	0.00	0.00
TD at 11131.51 - PBHL_NBU 921-22M4CS									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BLACKHAWK_NBU 921 - hit/miss target - Shape - Circle (radius 25.00)	0.00	0.00	10,469.00	-584.18	176.15	14,534,693.41	2,048,177.71	40° 0' 52.564 N	109° 32' 37.432 W
PBHL_NBU 921-22M4C - plan hits target center - Circle (radius 100.00)	0.00	0.00	11,069.00	-584.18	176.15	14,534,693.41	2,048,177.71	40° 0' 52.564 N	109° 32' 37.432 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,863.75	2,811.00	8 5/8"	8.625	11.000	



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 921-22M4CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4906 & KB 4 @ 4910.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4906 & KB 4 @ 4910.00ft (ASSUMED)
Site:	NBU 921-22M PAD	North Reference:	True
Well:	NBU 921-22M4CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,562.66	1,542.00	GREEN RIVER			
1,855.89	1,828.00	BIRDSNEST			
2,402.37	2,361.00	MAHOGANY			
4,949.51	4,887.00	WASATCH			
7,819.51	7,757.00	MESAVERDE			
10,058.51	9,996.00	SEGO			
10,123.51	10,061.00	CASTLEGATE			
10,531.51	10,469.00	BLACKHAWK			

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	
937.50	932.25	-67.63	20.39	Start 2078.84 hold at 937.50 MD	
3,016.34	2,959.83	-506.89	152.85	Start Drop -1.75	
3,744.91	3,682.41	-584.18	176.15	Start 7386.59 hold at 3744.91 MD	
11,131.51	11,069.00	-584.18	176.15	TD at 11131.51	

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 921-22M Pad**

<u>API #</u>	<u>NBU 921-22M GR</u>			
	Surface:	711 FSL / 671 FWL	SWSW	Lot
	BHL:	711 FSL / 671 FWL	SWSW	Lot
<u>API #</u>	<u>NBU 921-22M1BS</u>			
	Surface:	695 FSL / 660 FWL	SWSW	Lot
	BHL:	1080 FSL / 823 FWL	SWSW	Lot
<u>API #</u>	<u>NBU 921-22M1CS</u>			
	Surface:	686 FSL / 654 FWL	SWSW	Lot
	BHL:	748 FSL / 823 FWL	SWSW	Lot
<u>API #</u>	<u>NBU 921-22M4BS</u>			
	Surface:	678 FSL / 649 FWL	SWSW	Lot
	BHL:	416 FSL / 823 FWL	SWSW	Lot
<u>API #</u>	<u>NBU 921-22M4CS</u>			
	Surface:	670 FSL / 643 FWL	SWSW	Lot
	BHL:	86 FSL / 823 FWL	SWSW	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 October 3-4, 2011. Present were:

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- Bucky Secakuku (10/4/2011 only) - BIA;
- LeAllen Blackhair, Rainey Longhair - Ute Indian Tribe;
- Kelly Jo Jackson - Montgomery Archeological Consultants Inc.;
- Scott Carson - Smiling Lake Consulting;
- John Slaugh, Mitch Batty - Timberline Engineering & Land Surveying, Inc.;
- Laura Abrams, Charles Chase, Raleen White, Doyle Holmes, Lovel Young, 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 BIA.

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.

No new access road is proposed for this well pad.

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 193, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on November 7, 2011. 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 (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 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 $\pm 615'$ and the individual segments are broken up as follows:

The following segments will require a ROW to be submitted under a different cover to the Ute Indian Tribe.

$\pm 615'$ (0.1 miles) – Section 22 T9S R21E (SW/4) – On-lease UTU010950A Ute Indian Tribe surface, New 8" buried gas gathering pipeline from the meter to the proposed 16" gas pipeline- ROW in progress. Please refer to Topo D2 - Pad and Pipeline Detail.

LIQUID GATHERING

Please refer to Topo D2- Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is $\pm 615'$ and the individual segments are broken up as follows:

The following segments will require a ROW to be submitted under a different cover to the Ute Indian Tribe.

$\pm 615'$ (0.1 miles) – Section 22 T9S R21E (SW/4) – On-lease UTU010950A Ute Indian Tribe surface, New 6" buried liquid gathering pipeline from the separator to the proposed 6" liquid pipeline- ROW in progress. Please refer to Topo D2 - Pad and Pipeline Detail.

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 its successor will consult with the Vernal BIA Office before terminating of the use of the pipeline(s).

The Anadarko Completions Transportation System (ACTS) information:

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.

The collected hydrocarbons 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. 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 temporary ACTS lines will be permitted under a separate cover to the Ute Indian Tribe.

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, BIA considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BIA.

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 Tribal lands without prior approval from the BIA. 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 BIA.

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 BIA, 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 BIA, 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 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 BIA. 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 BIA.

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:

ancillary facilities are

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 BIA.

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 BIA 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 BIA 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 BIA/Tribe. 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 as proposed below in "Measures Common to Interim and Final Reclamation".

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

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 reseeding, 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 BIA/Tribe or a specific seed mix will be proposed by Kerr-McGee to the BIA/Tribe 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):

Indian Ricegrass (Nezpar)	3
Sandberg Bluegrass	0.75
Bottlebrush Squirreltail	1
Great Basin Wildrye	0.5
Crested Wheatgrass	1.5
Winterfat	0.25
Shadscale	1.5
Four-wing Saltbrush	0.75
Forage Kochia	0.25
Total	9.5

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.

Weed Control

Noxious weeds will be controlled in all affected areas in accordance with all applicable rules and regulations.

K. Surface/Mineral Ownership:

Ute Indian Tribe
 P.O. Box 70
 988 South 7500 East Annex Building
 Fort Duchesne, UT 84026
 (435) 722-4307

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

L. Other Information:**Onsite Specifics:**

- Round corner #10
- Arch and Paleo monitoring during construction.
- Divert drainage from east to west.

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 BIA.

Resource Reports:

A Class I literature survey was completed in December, 2011 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 11-406.

A paleontological reconnaissance survey was completed on August 12, 2010 by SWCA Environmental Consultants. For additional details please refer to report UT11-14314-121.

Biological field survey was completed on August 8 and 16, 2011 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-572.

Proposed Action Annual Emissions Tables:

Table 1: Proposed Action Annual Emissions (tons/year)¹			
Pollutant	Development	Production	Total
NOx	3.8	0.12	3.92
CO	2.2	0.11	2.31
VOC	0.1	4.9	5
SO ₂	0.005	0.0043	0.0093
PM ₁₀	1.7	0.11	1.81
PM _{2.5}	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

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

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison			
Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory^a (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	19.6	16,547	0.12%
VOC	25	127,495	0.02%

^a http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html

Uintah Basin Data

NBU 921-22M GR/ 921-22M1BS/ 921-22M1CS/ 921-22M4BS/ 921-22M4CS
Kerr-McGee Oil Gas Onshore, L.P.

NBU 921-22M Pad
Surface Use Plan of Operations
11 of 11

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

Laura Abrams
Regulatory Analyst II
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6356

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

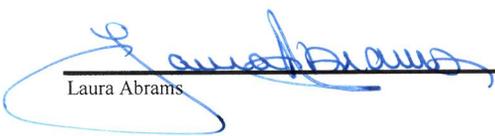
Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

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.



Laura Abrams

December 21, 2011

Date



Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
DENVER, CO 80217-3779

October 10, 2011

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 921-22M4CS
T9S-R21E
Section 22 SWSW (Surface and Bottom Hole)
Surface: 670' FSL, 643' FWL
Bottom Hole: 86' FSL, 823' FWL
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 Directional Drilling.

- Kerr-McGee's NBU 921-22M4CS 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 roads 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.

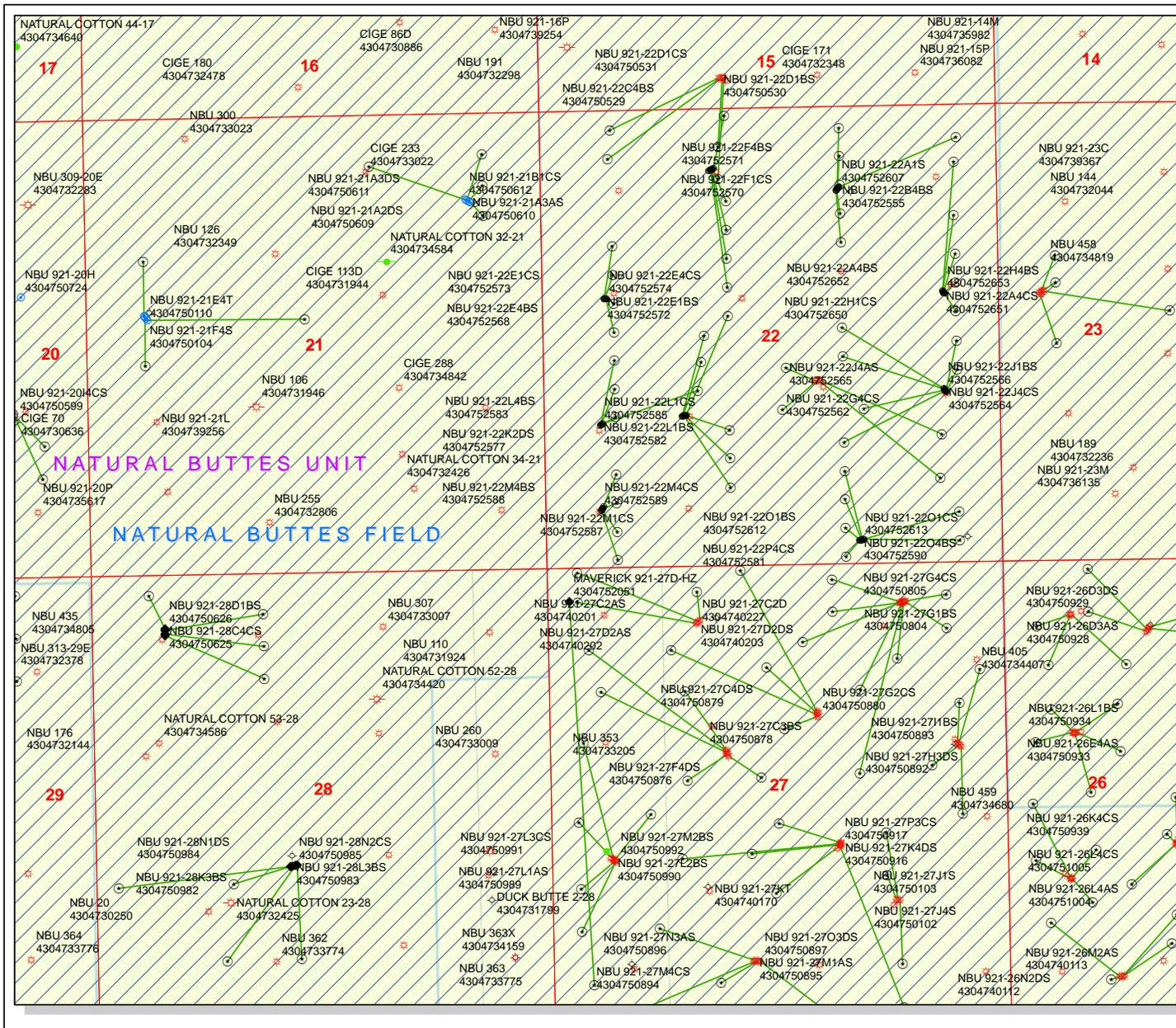
Therefore, based on the above stated information, Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink that reads 'Joe Matney'.

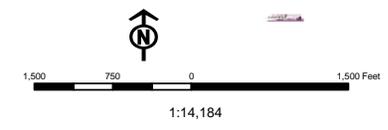
Joe Matney
Sr. Staff Landman



API Number: 4304752589
Well Name: NBU 921-22M4CS
 Township T0.9 . Range R2.1 . Section 22
 Meridian: SLBM
 Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
 Map Produced by Diana Mason

- | | |
|----------------------|------------------------------------|
| Units STATUS | Wells Query Status |
| ACTIVE | APD - Approved Permit |
| EXPLORATORY | DRL - Spudded (Drilling Commenced) |
| GAS STORAGE | GW - 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 |
| Fields STATUS | SGW - Shut-in Gas Well |
| Unknown | SOW - Shut-in Oil Well |
| ABANDONED | TA - Temp. Abandoned |
| ACTIVE | TW - Test Well |
| COMBINED | WDW - Water Disposal |
| INACTIVE | WW - Water Injection Well |
| STORAGE | WSW - Water Supply Well |
| TERMINATED | |



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)

May 14, 2012

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2012 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 2012 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
WELL PAD - NBU 921-22K		
43-047-52550	NBU 921-22K2AS	Sec 22 T09S R21E 1748 FSL 1611 FWL
	BHL	Sec 22 T09S R21E 2366 FSL 1832 FWL
43-047-52551	NBU 921-22K4CS	Sec 22 T09S R21E 1753 FSL 1640 FWL
	BHL	Sec 22 T09S R21E 1576 FSL 2147 FWL
43-047-52552	NBU 921-22N1BS	Sec 22 T09S R21E 1751 FSL 1630 FWL
	BHL	Sec 22 T09S R21E 1244 FSL 2147 FWL
43-047-52575	NBU 921-22F4CS	Sec 22 T09S R21E 1755 FSL 1650 FWL
	BHL	Sec 22 T09S R21E 2406 FNL 2148 FWL
43-047-52576	NBU 921-22F3DS	Sec 22 T09S R21E 1747 FSL 1601 FWL
	BHL	Sec 22 T09S R21E 2634 FNL 1870 FWL
43-047-52580	NBU 921-22N1CS	Sec 22 T09S R21E 1750 FSL 1620 FWL
	BHL	Sec 22 T09S R21E 0912 FSL 2146 FWL
WELL PAD - NBU 921-22B		
43-047-52553	NBU 921-22G1CS	Sec 22 T09S R21E 0973 FNL 1861 FEL
	BHL	Sec 22 T09S R21E 1574 FNL 1818 FEL
43-047-52554	NBU 921-22B4CS	Sec 22 T09S R21E 0965 FNL 1854 FEL
	BHL	Sec 22 T09S R21E 1243 FNL 1819 FEL
43-047-52555	NBU 921-22B4BS	Sec 22 T09S R21E 0935 FNL 1828 FEL
	BHL	Sec 22 T09S R21E 0911 FNL 1819 FEL
43-047-52556	NBU 921-22B1CS	Sec 22 T09S R21E 0950 FNL 1841 FEL
	BHL	Sec 22 T09S R21E 0579 FNL 1819 FEL

RECEIVED: May 15, 2012

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-52557	NBU 921-22B1BS	Sec 22 T09S R21E 0958 FNL 1848 FEL
	BHL	Sec 22 T09S R21E 0249 FNL 1819 FEL
43-047-52607	NBU 921-22A1S	Sec 22 T09S R21E 0943 FNL 1835 FEL
	BHL	Sec 22 T09S R21E 0386 FNL 0464 FEL
WELL PAD - NBU 921-22C		
43-047-52558	NBU 921-22C1BS	Sec 22 T09S R21E 0691 FNL 2010 FWL
	BHL	Sec 22 T09S R21E 0085 FNL 2150 FWL
43-047-52567	NBU 921-22C4CS	Sec 22 T09S R21E 0696 FNL 2001 FWL
	BHL	Sec 22 T09S R21E 1078 FNL 2149 FWL
43-047-52569	NBU 921-22F1BS	Sec 22 T09S R21E 0701 FNL 1993 FWL
	BHL	Sec 22 T09S R21E 1410 FNL 2149 FWL
43-047-52570	NBU 921-22F1CS	Sec 22 T09S R21E 0707 FNL 1984 FWL
	BHL	Sec 22 T09S R21E 1742 FNL 2149 FWL
43-047-52571	NBU 921-22F4BS	Sec 22 T09S R21E 0712 FNL 1976 FWL
	BHL	Sec 22 T09S R21E 2073 FNL 2149 FWL
WELL PAD - NBU 921-22I		
43-047-52560	NBU 921-22I1CS	Sec 22 T09S R21E 1973 FSL 0620 FEL
	BHL	Sec 22 T09S R21E 2237 FSL 0494 FEL
43-047-52561	NBU 921-22I1BS	Sec 22 T09S R21E 1981 FSL 0626 FEL
	BHL	Sec 22 T09S R21E 2569 FSL 0494 FEL
43-047-52562	NBU 921-22G4CS	Sec 22 T09S R21E 2013 FSL 0650 FEL
	BHL	Sec 22 T09S R21E 2569 FNL 1818 FEL
43-047-52564	NBU 921-22J4CS	Sec 22 T09S R21E 1989 FSL 0632 FEL
	BHL	Sec 22 T09S R21E 1410 FSL 1817 FEL
43-047-52565	NBU 921-22J4AS	Sec 22 T09S R21E 1997 FSL 0638 FEL
	BHL	Sec 22 T09S R21E 1796 FSL 1580 FEL
43-047-52566	NBU 921-22J1BS	Sec 22 T09S R21E 2005 FSL 0644 FEL
	BHL	Sec 22 T09S R21E 2405 FSL 1817 FEL
WELL PAD - NBU 921-22H		
43-047-52563	NBU 921-22H4CS	Sec 22 T09S R21E 2196 FNL 0627 FEL
	BHL	Sec 22 T09S R21E 2403 FNL 0494 FEL
43-047-52650	NBU 921-22H1CS	Sec 22 T09S R21E 2179 FNL 0637 FEL
	BHL	Sec 22 T09S R21E 1740 FNL 0494 FEL
43-047-52651	NBU 921-22A4CS	Sec 22 T09S R21E 2170 FNL 0642 FEL
	BHL	Sec 22 T09S R21E 1288 FNL 0504 FEL
43-047-52652	NBU 921-22A4BS	Sec 22 T09S R21E 2162 FNL 0647 FEL
	BHL	Sec 22 T09S R21E 0670 FNL 0494 FEL
43-047-52653	NBU 921-22H4BS	Sec 22 T09S R21E 2188 FNL 0632 FEL
	BHL	Sec 22 T09S R21E 2071 FNL 0494 FEL

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
WELL PAD - NBU 921-22E		
43-047-52568	NBU 921-22E4BS	Sec 22 T09S R21E 2179 FNL 0750 FWL
	BHL	Sec 22 T09S R21E 2239 FNL 0824 FWL
43-047-52572	NBU 921-22E1BS	Sec 22 T09S R21E 2179 FNL 0720 FWL
	BHL	Sec 22 T09S R21E 1576 FNL 0824 FWL
43-047-52573	NBU 921-22E1CS	Sec 22 T09S R21E 2179 FNL 0730 FWL
	BHL	Sec 22 T09S R21E 1908 FNL 0824 FWL
43-047-52574	NBU 921-22E4CS	Sec 22 T09S R21E 2179 FNL 0740 FWL
	BHL	Sec 22 T09S R21E 2572 FNL 0824 FWL
WELL PAD - NBU 921-22L		
43-047-52577	NBU 921-22K2DS	Sec 22 T09S R21E 1668 FSL 0666 FWL
	BHL	Sec 22 T09S R21E 2038 FSL 1784 FWL
43-047-52582	NBU 921-22L1BS	Sec 22 T09S R21E 1660 FSL 0648 FWL
	BHL	Sec 22 T09S R21E 2408 FSL 0824 FWL
43-047-52583	NBU 921-22L4BS	Sec 22 T09S R21E 1672 FSL 0675 FWL
	BHL	Sec 22 T09S R21E 1744 FSL 0824 FWL
43-047-52585	NBU 921-22L1CS	Sec 22 T09S R21E 1664 FSL 0657 FWL
	BHL	Sec 22 T09S R21E 2076 FSL 0824 FWL
WELL PAD - NBU 921-22O		
43-047-52578	NBU 921-22O4CS	Sec 22 T09S R21E 0269 FSL 1655 FEL
	BHL	Sec 22 T09S R21E 0086 FSL 1816 FEL
43-047-52579	NBU 921-22P4BS	Sec 22 T09S R21E 0280 FSL 1606 FEL
	BHL	Sec 22 T09S R21E 0581 FSL 0494 FEL
43-047-52581	NBU 921-22P4CS	Sec 22 T09S R21E 0278 FSL 1616 FEL
	BHL	Sec 22 T09S R21E 0251 FSL 0494 FEL
43-047-52590	NBU 921-22O4BS	Sec 22 T09S R21E 0271 FSL 1645 FEL
	BHL	Sec 22 T09S R21E 0416 FSL 1816 FEL
43-047-52612	NBU 921-22O1BS	Sec 22 T09S R21E 0276 FSL 1625 FEL
	BHL	Sec 22 T09S R21E 1079 FSL 1817 FEL
43-047-52613	NBU 921-22O1CS	Sec 22 T09S R21E 0274 FSL 1635 FEL
	BHL	Sec 22 T09S R21E 0747 FSL 1816 FEL
WELL PAD - NBU 921-22M		
43-047-52586	NBU 921-22M1BS	Sec 22 T09S R21E 0695 FSL 0660 FWL
	BHL	Sec 22 T09S R21E 1080 FSL 0823 FWL
43-047-52587	NBU 921-22M1CS	Sec 22 T09S R21E 0686 FSL 0654 FWL
	BHL	Sec 22 T09S R21E 0748 FSL 0823 FWL
43-047-52588	NBU 921-22M4BS	Sec 22 T09S R21E 0678 FSL 0649 FWL
	BHL	Sec 22 T09S R21E 0416 FSL 0823 FWL
43-047-52589	NBU 921-22M4CS	Sec 22 T09S R21E 0670 FSL 6043 FWL
	BHL	Sec 22 T09S R21E 0086 FSL 0823 FWL

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

Michael L. Coulthard

Digitally signed by Michael L. Coulthard
DN: cn=Michael L. Coulthard, o=Bureau of Land Management,
ou=Branch of Minerals, email=Michael_Coulthard@blm.gov, c=US
Date: 2012.05.15 07:17:01 -06'00'

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

MCoulthard:mc:5-14-12

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 5/1/2012

API NO. ASSIGNED: 43047525890000

WELL NAME: NBU 921-22M4CS

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

PHONE NUMBER: 720 929-6356

CONTACT: Laura Abrams

PROPOSED LOCATION: SWSW 22 090S 210E

Permit Tech Review:

SURFACE: 0670 FSL 0643 FWL

Engineering Review:

BOTTOM: 0086 FSL 0823 FWL

Geology Review:

COUNTY: UINTAH

LATITUDE: 40.01608

LONGITUDE: -109.54496

UTM SURF EASTINGS: 624175.00

NORTHINGS: 4430556.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU 010950-A

PROPOSED PRODUCING FORMATION(S): BLACKHAWK

SURFACE OWNER: 2 - Indian

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

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

Commingling Approved

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: Suspends General Siting
- R649-3-11. Directional Drill

Comments: Presite Completed

Stipulations: 3 - Commingling - dducet
4 - Federal Approval - dmason
15 - Directional - dmason
17 - Oil Shale 190-5(b) - dmason



GARY R. HERBERT
Governor

GREGORY S. BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: NBU 921-22M4CS
API Well Number: 43047525890000
Lease Number: UTU 010950-A
Surface Owner: INDIAN
Approval Date: 5/30/2012

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. The expected producing formation or pool is the BLACKHAWK Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

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

Commingle:

In accordance with Board Cause No. 173-14, commingling of 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 Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil

shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Notification Requirements:

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

- Within 24 hours following the spudding of the well - contact Carol Daniels at 801-538-5284

(please leave a voicemail message if not available)

OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at <http://oilgas.ogm.utah.gov>

Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) - due within 5 days of spudding the well
- Monthly Status Report (Form 9) - due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) - due prior to implementation
- Written Notice of Emergency Changes (Form 9) - due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) - due prior to implementation
- Report of Water Encountered (Form 7) - due within 30 days after completion
- Well Completion Report (Form 8) - due within 30 days after completion or plugging

Approved By:



For John Rogers
Associate Director, Oil & Gas

RECEIVED

Form 3160-3
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JAN 10 2012

FORM APPROVED
OMB No. 1004-0136
Expires July 31, 2010

APPLICATION FOR PERMIT TO DRILL OR REENTER **BLM Vernal Utah**

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU010950A
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator KERR MCGEE OIL&GAS ONSHORE LP Contact: LAURA ABRAMS Laura.Abrams@anadarko.com		7. If Unit or CA Agreement, Name and No. UTU63047A
3a. Address PO BOX 173779 DENVER, CO 80202-3779		8. Lease Name and Well No. NBU 921-22M4CS
3b. Phone No. (include area code) Ph: 720-929-6356 Fx: 720-929-7356		9. API Well No. 43-047-52589
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWSW 670FSL 643FWL 40.016170 N Lat, 109.545048 W Lon At proposed prod. zone SWSW 86FSL 823FWL 40.014566 N Lat, 109.544419 W Lon		10. Field and Pool, or Exploratory NATURAL BUTTES
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 43.5 MILES SOUTH OF VERNAL, UT		11. Sec., T., R., M., or Blk. and Survey or Area Sec 22 T9S R21E Mer SLB
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 86'	16. No. of Acres in Lease 800.00	12. County or Parish UINTAH
17. Spacing Unit dedicated to this well	13. State UT	20. BLM/BIA Bond No. on file WYB000291
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 491'	19. Proposed Depth 11132 MD 11069 TVD	23. Estimated duration 60-90 DAYS
21. Elevations (Show whether DF, KB, RT, GL, etc.) 4906 GL	22. Approximate date work will start 06/30/2012	

24. Attachments

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

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

25. Signature (Electronic Submission)	Name (Printed/Typed) LAURA ABRAMS Ph: 720-929-6356	Date 12/21/2011
Title REGULATORY ANALYST II		
Approved by (Signature) 	Name (Printed/Typed) Jerry Kenczka	Date JUN 05 2012
Title Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

Application approval does not warrant or certify 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.

Additional Operator Remarks (see next page)

Electronic Submission #126472 verified by the BLM Well Information System
For KERR MCGEE OIL&GAS ONSHORE, LP, sent to the Vernal

RECEIVED
JUN 11 2012

UDOGM GAS & MINING

NOTICE OF APPROVAL

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

12RRH1319AE

NO NOS APD DATED 2/8/12



**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:	SWSW, Sec. 22, T9S, R21E
Well No:	NBU 921-22M4CS	Lease No:	UTU-010950A
API No:	43-047-52589	Agreement:	Natural Butte

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

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	- The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	- Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.
Spud Notice (Notify BLM Petroleum Engineer)	- Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to running casing and cementing all casing strings to: blm_ut_vn_opreport@blm.gov .
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify BLM 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)**

- Paint facilities "Shadow Gray"
- Conduct a raptor survey prior to construction operation if such activities would take place during raptor nesting season (January 1- September 30). If active raptor nests are identified during the survey, operations should be conducted according to the seasonal restrictions detailed in the Uinta Basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah
- If construction and/or drilling operations have not been initiated prior to August 8, 2012, conduct a biological survey to determine the guidelines specified in the USFWS Rare Plant Conservation Measures and the BLM RMP ROD. KMG will implement commitment contained in the GNB BO.
- Monitor construction operation with a permitted archaeologist.
- Monitor construction operation with a permitted paleontologist.
- Route drainage from east to west
- Round corner #10

Pipeline Route from North Compressor to West Cottonwood Compressor

- If construction and/or drilling operations have not been initiated prior to August 8, 2012, conduct a biological survey to determine the guidelines specified in the USFWS Rare Plant Conservation Measures and the BLM RMP ROD. KMG will implement commitment contained in the GNB BO.
- Monitor areas with a permitted paleontologist where pipeline travels through Sections 15, 16, 17, and 22. Monitor section 27 at the beginning of construction and spot monitor thereafter.

ACTS line

- If construction and/or drilling operations have not been initiated prior to August 8, 2012, conduct a biological survey to determine the guidelines specified in the USFWS Rare Plant Conservation Measures and the BLM RMP ROD. KMG will implement commitment contained in the GNB BO.
- Monitor areas with a permitted paleontologist where ACTS line travels through Section 15 SWSE, and Section 22 NWNE, NENW, SWSW, and SWSE.

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

SITE SPECIFIC DOWNHOLE COAs:

- A copy of Kerr McGee's Standard Operating Practices (SOP version: dated 7/17/08 and approved 7/28/08) shall be on location.
- Surface casing cement shall be brought to surface.
- Production casing cement shall be brought 200' up and into the surface casing.
- Electronic/mechanical mud monitoring equipment shall be required, from surface casing shoe to TD, which shall include as a minimum: pit volume totalizer (PVT); stroke counter; and flow sensor.
- Require usage of an modified 5m stack. The 5M BOPE (minimum) shall be a modified 5m BOPE stack to include a third (3) pipe ram and one (1) remote kill line.

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.
- 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 (¼¼, 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.

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
 Submitted By J. Scharnowske Phone Number 720.929.6304
 Well Name/Number NBU 921-22M4CS
 Qtr/Qtr SWSW Section 22 Township 9S Range 21E
 Lease Serial Number UTU010950A
 API Number 4304752589

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 08/18/2012 13:00 HRS AM PM

Casing – Please report time casing run starts, not cementing times.

- Surface Casing
- Intermediate Casing
- Production Casing
- Liner
- Other

Date/Time 09/08/2012 08:00 HRS AM PM

BOPE

- Initial BOPE test at surface casing point
- BOPE test at intermediate casing point
- 30 day BOPE test
- Other

RECEIVED
AUG 17 2012
 DIV. OF OIL, GAS & MINING

Date/Time _____ AM PM

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT

435.828.0986 OR LOVEL YOUNG AT 435.781.7051

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 010950-A
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SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In 7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
--	---

1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-22M4CS
------------------------------------	---

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047525890000
---	---

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
---	--------------------------------------	--

4. LOCATION OF WELL FOOTAGES AT SURFACE: 0670 FSL 0643 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 22 Township: 09.0S Range: 21.0E Meridian: S	COUNTY: Uintah STATE: UTAH
---	---

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input 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: 8/18/2012	<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.

MIRU TRIPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'.
 RAN 14" 36.7# SCHEDULE 10 CONDUCTOR PIPE. CEMENT WITH 28 SACKS READY MIX. SPUD WELL LOCATION ON AUGUST 18, 2012 AT 15:00 HRS.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 August 24, 2012**

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regularatory Analyst
SIGNATURE N/A	DATE 8/23/2012	

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

FORM 6

ENTITY ACTION FORM

Operator: KERR MCGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995
 Address: P.O. Box 173779
city DENVER
state CO zip 80217 Phone Number: (720) 929-6304

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752588	NBU 921-22M4BS		SWSW	22	9S	21e	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	9999	2900	8/18/2012		8/28/2012		
Comments: MIRU TRIPLE A BUCKET RIG. SPUD WELL LOCATION ON 8/18/2012 AT 13:00 HRS. BHL: SWSW WSMVD							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752589	NBU 921-22M4CS		SWSW	22	9S	21e	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	9999	2900	8/18/2012		8/28/2012		
Comments: MIRU TRIPLE A BUCKET RIG. SPUD WELL LOCATION ON 8/18/2012 AT 15:00 HRS. BHL: SWSW WSMVD							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
Comments:							

ACTION CODES:

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

JAIME SCHARNOWSKE

Name (Please Print)

Jaime Scharnowske

Signature

REGULATORY ANALYST

8/23/2012

Title

Date

RECEIVED

AUG 27 2012

Div. of Oil, Gas & Mining

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 010950-A
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In
		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well		8. WELL NAME and NUMBER: NBU 921-22M4CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		9. API NUMBER: 43047525890000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0670 FSL 0643 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 22 Township: 09.0S Range: 21.0E Meridian: S		COUNTY: Uintah
		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> OTHER	
<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: 11/5/2012		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. No Activity for the month of October 2012. Well TD at 2,910.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY November 05, 2012		
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regularatory Analyst
SIGNATURE N/A	DATE 11/5/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 010950-A	
SUNDRY NOTICES AND REPORTS ON WELLS	
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-22M4CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047525890000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0670 FSL 0643 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 22 Township: 09.0S Range: 21.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
	COUNTY: UINTAH
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 1/2/2013	<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.

Started completing the well. Well TD at 10,027

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 January 03, 2013**

NAME (PLEASE PRINT) Lindsey Frazier	PHONE NUMBER 720 929-6857	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 1/2/2013	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS	
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	
1. TYPE OF WELL Gas Well	5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 010950-A
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0670 FSL 0643 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 22 Township: 09.0S Range: 21.0E Meridian: S	8. WELL NAME and NUMBER: NBU 921-22M4CS
PHONE NUMBER: 720 929-6511	9. API NUMBER: 43047525890000
9. FIELD and POOL or WILDCAT: NATURAL BUTTES	COUNTY: Uintah
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 11/22/2012	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: ACTS PIT

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

FINISHED DRILLING TO 10,027' ON 11/20/2012. CEMENTED PRODUCTION CASING. RELEASED H&P 318 RIG ON 11/22/2012. DETAILS OF CASING AND CEMENT WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES. THE PIT ON THIS LOCATION WILL BE REFURBISHED AND UTILIZED AS PART OF THE ACTS SYSTEM.

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

Date: January 17, 2013

By: 

NAME (PLEASE PRINT) Lindsey Frazier	PHONE NUMBER 720 929-6857	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 11/26/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 010950-A
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In
1. TYPE OF WELL Gas Well	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	8. WELL NAME and NUMBER: NBU 921-22M4CS
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	9. API NUMBER: 43047525890000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0670 FSL 0643 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 22 Township: 09.0S Range: 21.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES COUNTY: Uintah STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA	

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 1/21/2013	<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 checked="" type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" 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 01/21/2013. The Chronological Well History will be submitted with the well completion report.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 January 25, 2013

NAME (PLEASE PRINT) Lindsey Frazier	PHONE NUMBER 720 929-6857	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 1/25/2013	

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
UTU010950A

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

2. Name of Operator **KERR MCGEE OIL & GAS ONSHORE** Contact: LINDSEY A FRAZIER
 Mail: lindsey.frazier@anadarko.com

3. Address **PO BOX 173779 DENVER, CO 80217** 3a. Phone No. (include area code) Ph: 720-929-6857

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
 At surface **SWSW 670FSL 643FWL 40.016170 N Lat, 109.545048 W Lon**
 At top prod interval reported below **SWSW 104FSL 813FWL**
 At total depth **SWSW 78FSL 825FWL**

6. If Indian, Allottee or Tribe Name _____
 7. Unit or CA Agreement Name and No. **UTU63047A**
 8. Lease Name and Well No. **NBU 921-22M4CS**
 9. API Well No. **43-047-52589**
 10. Field and Pool, or Exploratory **NATURAL BUTTES**
 11. Sec., T., R., M., or Block and Survey or Area **Sec 22 T9S R21E Mer SLB**
 12. County or Parish **UINTAH** 13. State **UT**
 14. Date Spudded **08/18/2012** 15. Date T.D. Reached **11/20/2012** 16. Date Completed D & A Ready to Prod. **01/21/2013**
 17. Elevations (DF, KB, RT, GL)* **4930 KB**
 18. Total Depth: MD **10027** TVD **9968** 19. Plug Back T.D.: MD **9961** TVD **9902** 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 Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20.000	14.000 STL	36.7	0	40		28			
11.000	8.625 IJ-55	28.0	0	2879		480		0	
7.875	4.500 I-80	11.6	0	4864		1873		1116	
7.875	4.500 P-110	11.6	4864	10008					

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	9236							

25. Producing Intervals

26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) WASATCH	6754	7940	6754 TO 7940	0.360	72	OPEN
B) MESAVERDE	8084	9773	8084 TO 9773	0.360	156	OPEN
C)						
D)						

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

Depth Interval	Amount and Type of Material
6754 TO 9773	PUMP 8110 BBLs SLICK H2O AND 174,108 LBS 30/50 OTTAWA 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
01/21/2013	01/23/2013	24	→	0.0	1987.0	0.0			FLOWS FROM WELL
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
20/64	1199	2002.0	→	0	1987	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. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

RECEIVED
FEB 20 2013

DIV OF OIL, GAS & MINING

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

ELECTRONIC SUBMISSION #199002 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	1560
				BIRD'S NEST	1893
				MAHOGANY	2376
				WASATCH	4967
				MESAVERDE	8073

32. Additional remarks (include plugging procedure):

The first 210 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 4864 ft; LTC P-110 csg was run from 4864 ft. to 10,008 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 #199002 Verified by the BLM Well Information System.
For KERR MCGEE OIL & GAS ONSHORE L, sent to the Vernal**

Name (please print) LINDSEY A FRAZIER Title REGUALTORY ANALYST

Signature _____ (Electronic Submission) Date 02/14/2013

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.

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-22M4CS ORANGE

Spud Date: 10/1/2012

Project: UTAH-UINTAH

Site: NBU 921-22M PAD

Rig Name No: H&P 318/318, PROPETRO 11/11

Event: DRILLING

Start Date: 9/19/2012

End Date: 9/22/2012

Active Datum: RKB @4,930.00usft (above Mean Sea Level)

UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/1/2012	17:30 - 21:00	3.50	MIRU	01	B	P		INSTALL DIVERTER HEAD, RIG UP NOV EQUIPMENT, SPOT IN RIG, CATWALK & PIPE RACKS, RIG UP & PRIME PUMP INSPECT RIG,
	21:00 - 21:30	0.50	DRLSUR	06	A	P		PICK UP 12.25" BIT & 8" MUD MOTOR & TIH
	21:30 - 23:00	1.50	DRLSUR	02	B	P		DRL F/44' - T/210' (166' @ 110.6' ROP) W.O.B 18/20K RPM ~ 45 POWERHEAD / 83 MUD MOTOR UP/DWN/ROT ~ 22/20/20 ~ 2K DRAG PSI ON/OFF ~ 600/400 M.W. 8.5# VIS 27 NOV-ONLINE HOLE CONDITION ~ GOOD
	23:00 - 23:30	0.50	DRLSUR	06	A	P		TOOH WITH #1 BHA
	23:30 - 0:00	0.50	DRLSUR	06	A	P		TIH WITH #2 BHA W/11" BIT
10/2/2012	0:00 - 0:30	0.50	DRLSUR	06	A	P		TIH WITH #2 BHA W/11" BIT
	0:30 - 12:00	11.50	DRLSUR	02	B	P		DRL F/210' - T/1310' (1100' @ 95.7' ROP) W.O.B. 18/20K RPM RPM ~ 45 POWERHEAD / 83 MUD MOTOR UP/DWN/ROT ~ 60/45/50 ~ 10K DRAG PSI ON/OFF ~ 1400/1200 M.W. 8.5# VIS 27 491 GPM PUMP RATE / NO AIR TORQUE ON/OFF ~ 3100/1200 NOV-ONLINE HOLE CONDITION ~ GOOD 6.38' HIGH ~ 0.79' RIGHT OF LINE
	12:00 - 16:00	4.00	DRLSUR	02	B	P		DRL F/1310' - T/1600' (290' @ 82.9' ROP) W.O.B. 18/20K RPM ~ 45 POWERHEAD / 83 MUD MOTOR UP/DWN/ROT ~ 65/47/58 ~ 7K DRAG PSI ON/OFF ~ 1470/1230 M.W. 8.5# VIS 27 491 GPM PUMP RATE / NO AIR TORQUE ON/OFF ~ 3100/1300 NOV-ONLINE HOLE CONDITION ~ GOOD 1.05' LOW ~ 1.99' RIGHT OF LINE
	16:00 - 19:30	3.50	DRLSUR	02	B	P		DRL F/1600' - T/1780' (180' @ 51.4' ROP)
	19:30 - 20:30	1.00	DRLSUR	08	B	Z		*** CHANGE OUT SWABS IN MUD PUMP
	20:30 - 0:00	3.50	DRLSUR	02	B	P		DRL F/1780' - T/2060' (280' @ 80' ROP) W.O.B. 18/20K RPM ~ 45 POWERHEAD / 83 MUD MOTOR UP/DWN/ROT ~ 74/50/60 ~ 14K DRAG PSI ON/OFF ~ 1540/1320 M.W. 8.5# VIS 27 491 GPM PUMP RATE / NO AIR TORQUE ON/OFF ~ 3100/1500 NOV-ONLINE HOLE CONDITION ~ OK 1.66' HIGH ~ 2.15' LEFT OF LINE

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-22M4CS ORANGE

Spud Date: 10/11/2012

Project: UTAH-UINTAH

Site: NBU 921-22M PAD

Rig Name No: H&P 318/318, PROPETRO 11/11

Event: DRILLING

Start Date: 9/19/2012

End Date: 9/22/2012

Active Datum: RKB @4,930.00usft (above Mean Sea Level)

UWI: SW/SW0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/3/2012	0:00 - 6:30	6.50	DRLSUR	02	B	P		DRL F/2060' - T/2510' (450' @ 69.2' ROP) W.O.B. 18/20K RPM ~ 45 POWERHEAD / 83 MUD MOTOR UP/DWN/ROT ~ 84/57/69 ~ 15K DRAG PSI ON/OFF ~ 1690/1470 M.W. 8.6# VIS 27 491 GPM PUMP RATE / NO AIR TORQUE ON/OFF ~ 3100/1500 NOV-ONLINE HOLE CONDITION ~ OK
	6:30 - 8:30	2.00	DRLSUR	08	B	Z		***CHANGE OUT SWABS AND LINERS IN MUD PUMP
	8:30 - 15:00	6.50	DRLSUR	02	B	P		DRL F/2510' - T/2890' (380' @ 58.5' ROP) W.O.B. 18/20K RPM ~ 45 POWERHEAD / 83 MUD MOTOR UP/DWN/ROT ~ 90/65/73 ~17K DRAG PSI ON/OFF ~ 1850/1630 M.W. 8.6# VIS 27 491 GPM PUMP RATE / NO AIR TORQUE ON/OFF ~ 3100/1650 NOV-ONLINE HOLE CONDITION ~ OK 8.12' LOW ~ 7.04' LEFT OF TARGET CIRCULATE PRIOR TO TRIP FOR CASING
	15:00 - 17:00	2.00	DRLSUR	05	C	P		LDDS, BHA & DIRECTIONAL TOOLS
	17:00 - 20:30	3.50	DRLSUR	06	A	P		MOVE PIPE RACKS AND CATWALK; PULL DIVERter HEAD; RIG UP TO RUN CASING; MOVE CASING INTO POSITION
	20:30 - 21:30	1.00	CSGSUR	12	A	P		TIH 65 JOINTS 8 5/8", 28#, J55 CASING; SHOE IS AT 2855' BAFFLE IS AT 2810.65'
	21:30 - 0:00	2.50	CSGSUR	12	C	P		
10/4/2012	0:00 - 1:00	1.00	CSGSUR	12	B	P		HOLD SAFETY MEETING; RUN 200' OF 1" TUBING; RIG DOWN MOVE OFF WELL; RIG UP CEMENTERS AND CEMENT HEAD.
	1:00 - 4:00	3.00	CSGSUR	12	E	P		RIG UP PRO PETRO PUMP TRUCK; LOAD PLUG; TEST LINES TO 2000 PSI.; PUMP 160 BBLS WATER FOLLOWED BY 20 BBL GEL WATER FLUSH; LEAD = 280sx CLASS G CMT @ 12.0 WT & 2.86 YIELD; TAIL = 200sx OF 15.8 WT & 1.15 YIELD; DROP PLUG & DISPLACE W/ 175.6 BBLS WATER; PLUG DOWN @ 01:54 10/04/2012; BUMP PLUG @ 1000 PSI; FINAL LIFT = 700 PSI.; CHECK FLOAT DIDN'T HOLD, HELD PRESSURE ON CSG, DURING JOB; FULL RETURNS THROUGH OUT JOB; 35 BBLS CMT TO SURFACE; PUMP 125 SX 15.8# CMT W/4% CALCIUM DOWN 1"; CEMENT TO SURFACE BUT FELL BACK. PUMP 2ND TOP OFF OF 40SX 15.8# CEMENT TO SURFACE. RELEASED RIG @ 04:00 PREP TO SKID RIG
11/15/2012	14:00 - 15:30	1.50	MIRU3	01	E	P		SKID RIG CENTER UP OVER WLL
	15:30 - 16:30	1.00	MIRU3	01	C	P		RIG UP ROTARY TOOLS
	16:30 - 17:30	1.00	PRPSPD	01	B	P		NIPPLE UP BOPS
	17:30 - 19:00	1.50	PRPSPD	14	A	P		TESTING BOPS PIPE, BLINDS, IBOP, HCR, FLOOR VAVLES CHOKE LOW PSI 250 HIHG 5000 ANN 2500 HIGH 250 LOW 8 5/8 CASING 1500 PSI FOR 30 MINS
	19:00 - 0:00	5.00	PRPSPD	15	A	P		

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-22M4CS ORANGE

Spud Date: 10/1/2012

Project: UTAH-UINTAH

Site: NBU 921-22M PAD

Rig Name No: H&P 318/318, PROPETRO 11/11

Event: DRILLING

Start Date: 9/19/2012

End Date: 9/22/2012

Active Datum: RKB @4,930.00usft (above Mean Sea Level)

UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
11/16/2012	0:00 - 2:30	2.50	PRSPD	15	A	P		TEST SWACO LINES & EQUIP. TO 1,000 PSI
	2:30 - 3:00	0.50	PRSPD	14	A	P		INSTALL WEAR BUSHING
	3:00 - 4:00	1.00	PRSPD	06	A	P		P/U BHA , MWD TOOLS SCRIBE IN
	4:00 - 6:30	2.50	PRSPD	06	A	P		TIH TAGED TOP CMT @ 2710
	6:30 - 8:00	1.50	DRLINC	02	F	P		DRILL SHOE TRACK F/ 2710 TO 2934
	8:00 - 13:00	5.00	DRLINC	02	D	P		DRILL SLID F/ 2934 TO 3645 FT 711 ROP 142.2 WT ON BIT 20 TD RPM 50-55 MM RPM 113 MUD WT 8.4 VIS 26 PUMP PSI ON/OFF 1625 / 1250 GPM 486 SPM 108 TRQ. ON / OFF 8 / 3 NOV - DEWATERING SWACO - OFF LINE P/U 117 S/O 94 R/T 104 SLIDE 60 FT TIME 1 HOUR ROP 60
	13:00 - 14:30	1.50	DRLINC	02	D	P		DRILL SLID F/ 3645 TO 3862 FT 217 ROP 144.6 WT ON BIT 18- 20 TD RPM 40 MM RPM 113 MUD WT 8.4 VIS 26 PUMP PSI ON/OFF 1625 / 1250 GPM 486 SPM 108 TRQ. ON / OFF 8 / 3 NOV - DEWATERING SWACO - OFF LINE P/U 117 S/O 94 R/T 104 SLIDE FT TIME HOUR ROP
	14:30 - 17:30	3.00	DRLPRV	02	B	P		DRILL SLID F/ 3862 TO 4150 FT 288 ROP 96.0 WT ON BIT 18- 20 TD RPM 40 MM RPM 113 MUD WT 8.5 VIS 26 PUMP PSI ON/OFF 1625 / 1250 GPM 486 SPM 108 TRQ. ON / OFF 7 / 3 NOV - DEWATERING SWACO - OFF LINE P/U 117 S/O 94 R/T 104 SLIDE 29 FT TIME 45 MINS ROP 38.66 P/U 131 S/O 101 R/T 114 RIG SER
	17:30 - 18:00	0.50	DRLPRV	07	A	P		
	18:00 - 0:00	6.00	DRLPRV	02	B	P		DRILL SLID F/ 4150 TO 4880 FT 730 ROP 121.66 WT ON BIT 18- 20 TD RPM 40 MM RPM 113 MUD WT 8.5 VIS 26 PUMP PSI ON/OFF 1625 / 1250 GPM 486 SPM 108 TRQ. ON / OFF 7 / 3 NOV - DEWATERING SWACO - OFF LINE P/U 117 S/O 94 R/T 104 SLIDE FT TIME MINS ROP

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-22M4CS ORANGE		Spud Date: 10/1/2012	
Project: UTAH-UINTAH		Site: NBU 921-22M PAD	Rig Name No: H&P 318/318, PROPETRO 11/11
Event: DRILLING		Start Date: 9/19/2012	End Date: 9/22/2012
Active Datum: RKB @4,930.00usft (above Mean Sea Level)		UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
11/17/2012	0:00 - 0:30	0.50	DRLPRV	02	B	P		DRILL SLID F/ 4880 TO 4895 FT 15 ROP 30 WT ON BIT 18- 20 TD RPM 40 MM RPM 113 MUD WT 8.4 VIS 26 PUMP PSI ON/OFF 1625 / 1250 GPM 486 SPM 108 TRQ. ON / OFF 8 / 3 NOV - DEWATERING SWACO - OFF LINE P/U 117 S/O 94 R/T 104 *** WORK TIGHT HOLE @ 4895'
	0:30 - 1:00	0.50	DRLPRV	22	M	X		
	1:00 - 12:30	11.50	DRLPRV	02	B	P		DRILL SLID F/ 4895 TO 5750 FT 855 ROP 74.34 WT ON BIT 24- 28 TD RPM 46-60 MM RPM 124 MUD WT 8.8 VIS 38 PUMP ON / OFF 2150 / 1700 GPM 540 SPM 60/60 TRQ. ON / OFF 8 / 6 NOV - CONVENTIONAL SWACO - OFF LINE P/U 161 S/O 116 R/T 134 SLIDE FT 19 TIME 35 MINS BIT 10'WEST & 14.5' NORTH OF CENTER OF TARGET
	12:30 - 13:00	0.50	DRLPRV	07	A	P		RIG SER CHANGE OUT FAN BELT ON # 1 GEN SET
	13:00 - 19:00	6.00	DRLPRV	02	B	P		DRILL SLID F/ 5750 TO 6182 FT 432 ROP 72 WT ON BIT 24- 28 TD RPM 46-60 MM RPM 124 MUD WT 8.8 VIS 38 PUMP ON / OFF 2150 / 1700 GPM 540 SPM 60/60 TRQ. ON / OFF 8 / 6 NOV - CONVENTIONAL SWACO - OFF LINE P/U 161 S/O 116 R/T 134 SLIDE FT TIME MINS
	19:00 - 20:00	1.00	DRLPRV	22	G	X		LOST CIRCULATAION NO FLOW BUILT UP SWEEPS WITH 15 % LCM PUMP DOWN HOLE REGAINED FLOW
	20:00 - 0:00	4.00	DRLPRV	02	B	P		DRILL SLID F/ 6182 TO 6480 FT 298 ROP 74.5 WT ON BIT 24- 28 TD RPM -52 MM RPM 124 MUD WT 8.8 VIS 37 PUMP ON / OFF 2400 / 2100 GPM 540 SPM 60/60 TRQ. ON / OFF 10 / 7 NOV - CONVENTIONAL SWACO - OFF LINE P/U 175 S/O 125 R/T 146 SLIDE FT 10 TIME 30 MINS TOTAL LOSS 250 BBLs

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-22M4CS ORANGE

Spud Date: 10/1/2012

Project: UTAH-UINTAH

Site: NBU 921-22M PAD

Rig Name No: H&P 318/318, PROPETRO 11/11

Event: DRILLING

Start Date: 9/19/2012

End Date: 9/22/2012

Active Datum: RKB @4,930.00usft (above Mean Sea Level)

UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
11/18/2012	0:00 - 12:00	12.00	DRLPRV	02	B	P		DRILL SLID F/ 6480 TO 7330 FT 850 ROP 70.83 WT ON BIT 24- 28 TD RPM -52 MM RPM 124 MUD WT 8.7 VIS 37 PUMP ON / OFF 2250 / 1825 GPM 540 SPM 60/60 TRQ. ON / OFF 10 / 7 NOV - CONVENTIONAL SWACO - OFF LINE P/U 200 S/O 131 R/T 161 SLIDE FT 29 TIME 1 HRS 50 MINS TOTAL LOSS 250 BBLs
	12:00 - 16:00	4.00	DRLPRV	02	B	P		DRILL SLID F/ 7330 TO 7640 FT 310 ROP 77.5 WT ON BIT 24- 28 TD RPM -52 MM RPM 124 MUD WT 8.7 VIS 37 PUMP ON / OFF 2250 / 1825 GPM 540 SPM 60/60 TRQ. ON / OFF 10 / 7 NOV - CONVENTIONAL SWACO - OFF LINE P/U 200 S/O 131 R/T 161 SLIDE FT TIME HRS MINS TOTAL LOSS 250 BBLs
	16:00 - 16:30	0.50	DRLPRV	07	A	P		RIG SER
	16:30 - 19:00	2.50	DRLPRV	02	B	P		DRILL SLID F/ 7640 TO 7829 FT 189 ROP 75.6 WT ON BIT 24- 28 TD RPM -52 MM RPM 124 MUD WT 8.7 VIS 37 PUMP ON / OFF 2250 / 1825 GPM 540 SPM 60/60 TRQ. ON / OFF 10 / 7 NOV - CONVENTIONAL SWACO - OFF LINE P/U 200 S/O 131 R/T 161 SLIDE FT 10 TIME 30 MINS TOTAL LOSS 270 BBLs
	19:00 - 20:00	1.00	DRLPRV	22	L	Z		*** LOST SIGNAL HAD TO MOVE GROUND WIRE AROUND
	20:00 - 0:00	4.00	DRLPRV	02	B	P		DRILL SLID F/ 7829 TO 8058 FT 229 ROP 57.25 WT ON BIT 24- 28 TD RPM -52 MM RPM 124 MUD WT 8.9 VIS 37 PUMP ON / OFF 2300 / 1987 GPM 540 SPM 60/60 TRQ. ON / OFF 12 / 10 NOV - CONVENTIONAL SWACO - OFF LINE P/U 216 S/O 143 R/T 170 SLIDE FT TIME MINS TOTAL LOSS 270 BBLs

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-22M4CS ORANGE Spud Date: 10/1/2012
 Project: UTAH-UINTAH Site: NBU 921-22M PAD Rig Name No: H&P 318/318, PROPETRO 11/11
 Event: DRILLING Start Date: 9/19/2012 End Date: 9/22/2012
 Active Datum: RKB @4,930.00usft (above Mean Sea Level) UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
11/19/2012	0:00 - 12:00	12.00	DRLPRV	02	B	P		DRILL SLID F/ 8058 TO 8727 FT 669 ROP 55.75 WT ON BIT 26- 28 TD RPM -52 MM RPM 124 MUD WT 9.1 VIS 37 PUMP ON / OFF 2500 / 2175 GPM 540 SPM 60/60 TRQ. ON / OFF 12 / 11 NOV - CONVENTIONAL SWACO - OFF LINE P/U 235 S/O 150 R/T 184 SLIDE FT 20' TIME 2 HRS ROP 10' TOTAL LOSS 270 BBLS
	12:00 - 17:30	5.50	DRLPRV	02	B	P		DRILL SLID F/ 8727 TO 9055 FT ROP 59.63 WT ON BIT 26- 28 TD RPM -52 MM RPM 124 MUD WT 9.1 VIS 37 PUMP ON / OFF 2500 / 2175 GPM 540 SPM 60/60 TRQ. ON / OFF 12 / 11 NOV - CONVENTIONAL SWACO - OFF LINE P/U 235 S/O 150 R/T 184 SLIDE 10 FT TIME 1 HRS ROP 10 TOTAL LOSS 270 BBLS
	17:30 - 18:00	0.50	DRLPRV	07	A	P		RIG SER.
	18:00 - 0:00	6.00	DRLPRV	02	B	P		DRILL SLID F/ 9055 TO 9454 FT 399 ROP 66.5 WT ON BIT 26- 28 TD RPM -52 MM RPM 124 MUD WT 9.1 VIS 37 PUMP ON / OFF 2500 / 2175 GPM 540 SPM 60/60 TRQ. ON / OFF 14 / 13 NOV - CONVENTIONAL SWACO - OFF LINE P/U 248 S/O 1155 R/T 190 SLIDE 10 FT TIME 1 HRS ROP 10 TOTAL LOSS 270 BBLS
11/20/2012	0:00 - 2:00	2.00	DRLPRV	02	B	P		DRILL SLID F/ 9454 TO 9624 F T170 ROP 85.0 WT ON BIT 26- 28 TD RPM -52 MM RPM 124 MUD WT 9.1 VIS 37 PUMP ON / OFF 2500 / 2175 GPM 540 SPM 60/60 TRQ. ON / OFF 14 / 13 NOV - CONVENTIONAL SWACO - OFF LINE P/U 248 S/O 1155 R/T 190 SLIDE FT TIME HRS ROP TOTAL LOSS 270 BBLS
	2:00 - 2:30	0.50	DRLPRV	22	L	Z		*** LOST SIGNAL W/ MWD TOOLS HAD TO RE SYNC TOOLS

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-22M4CS ORANGE

Spud Date: 10/1/2012

Project: UTAH-UINTAH

Site: NBU 921-22M PAD

Rig Name No: H&P 318/318, PROPETRO 11/11

Event: DRILLING

Start Date: 9/19/2012

End Date: 9/22/2012

Active Datum: RKB @4,930.00usft (above Mean Sea Level)

UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	2:30 - 9:00	6.50	DRLPRV	02	B	P		DRILL SLID F/ 9624 TO 10027 F T 403 ROP 67.16 WT ON BIT 26- 28 TD RPM -52 MM RPM 124 MUD WT 9.1 VIS 37 PUMP ON / OFF 2500 / 2175 GPM 540 SPM 60/60 TRQ. ON / OFF 14 / 13 NOV - CONVENTIONAL SWACO - OFF LINE P/U 248 S/O 1155 R/T 190 SLIDE FT TIME HRS ROP TOTAL LOSS 270 BBLS
	9:00 - 12:00	3.00	DRLPRV	05	B	P		DISPLACE HOLE WITH 12.2 MUD HAD 12.2 MUD TO SURFACE LOST CIRC
	12:00 - 12:30	0.50	DRLPRV	06	K	X		*** PULLED 5 STANDS OUT HOLE TO REESTABLISH RETURNS LOST 400BBLS
	12:30 - 14:30	2.00	DRLPRV	05	B	X		*** CIRC BUILD VOLUME TO TRIP WITH
	14:30 - 20:30	6.00	DRLPRV	06	E	P		TRIP OUT HOLE WPER TO RUN 4.5 CASING
	20:30 - 22:00	1.50	DRLPRV	06	A	P		LAY DOWN MWD TOOL MONEL DC
	22:00 - 0:00	2.00	DRLPRV	06	E	P		TIH TO LAY DOWN 4.5 DRILL PIPE
11/21/2012	0:00 - 3:00	3.00	DRLPRV	06	E	P		TIH TO LAY DOWN 4.5 DRILL PIPE
	3:00 - 4:00	1.00	DRLPRV	03	E	P		WASHED F/ 10,000 TO 10, 027
	4:00 - 6:00	2.00	DRLPRV	05	C	P		CIRCULATE & CONDITION
	6:00 - 13:30	7.50	DRLPRV	06	A	P		LAY DOWN DRILLSTRING
	13:30 - 14:00	0.50	DRLPRV	07	A	P		RIG SERVICE
	14:00 - 14:30	0.50	DRLPRV	14	B	P		PULL WEAR BUSHING
	14:30 - 15:30	1.00	DRLPRV	12	A	P		SAFETY MEETING W/ KIMZEY, RIG UP CASERS
	15:30 - 22:30	7.00	DRLPRV	12	C	P		RUN 228 JTS 4.5 PROD CASING (117 JTS LTC & 111 JTS DQX) SHOE 10008', TOP OF FLOAT 9960', TOP OF MARKER 7768', TOP OF X/O 4864'
	22:30 - 0:00	1.50	DRLPRV	05	D	P		CIRCULATE OUT GAS F/ CEMENT, RIG DOWN CASERS, SAFETY MEETING W/ BJ SERVICES
11/22/2012	0:00 - 0:30	0.50	CSGPRO	12	B	P		RIG UP BJ SERVICES
	0:30 - 4:30	4.00	CSGPRO	12	E	P		CEMENT PROD CASING, PRESSURE TEST TO 5700 PSI, DROP BOTTOM PLUG , PUMP 25 BBLS SPACER , 633 SX, 200 BBLS, PREMIUM LITE II CEMENT + .05 LBS/SX STATIC FREE+ 0.4% BWOC FL-52 + 0.4% BWOC SODIUM METASILICATE + 6% BWOC BENTONITE II + 0.6% BWOC R-3 +0.25 LBS/SACK CELLO FLAKE +5 LBS/SX KOL-SEAL,50 LB BAG 84.8 % FRESH WATER ,13# 1.77 YLD, LEAD , 1240 SACKS , 294 BBLS , (50:50) POZ (FLY ASH): CLASS G CEMENT + 0.05 LBS/SACK STATIC FREE + 10% BWOW SODIUM CHLORIDE + 0.9% BWOC R-3 +.5% BWOC EC-1+ 0.002 GPS FP-6L +1.2% BWOC SODIUM METASILICATE 2% BWOC BENTONITE II + 59% FRESH WATER 14.3#, 1.33 YLD TAIL, SHUT DOWN WASH UP ,DROP TOP PLUG, DISPLACE W/ 154.8 BBLS CLAY CARE + 1 GAL MAGNACIDE @ 8.34 PPG, FINAL LIFT 2966 PSI , BUMP PLUG @ 3430 PSI HELD F/ 5 MIN , FLOATS HELD ,LOST RETURNS 130 BBLS INTO DISPLACMENT, SLOWED RATE TO 2 BBL/MIN, 15 BBLS SPACER BACK, NO CEMENT BACK TO SURFACE ,TOP OF TAIL EST 4448',

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-22M4CS ORANGE

Spud Date: 10/1/2012

Project: UTAH-UINTAH

Site: NBU 921-22M PAD

Rig Name No: H&P 318/318, PROPETRO 11/11

Event: DRILLING

Start Date: 9/19/2012

End Date: 9/22/2012

Active Datum: RKB @4,930.00usft (above Mean Sea Level)

UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	4:30 - 5:00	0.50	CSGPRO	12	B	P		RIG DOWN CEMENTERS
	5:00 - 6:00	1.00	CSGPRO	14	B	P		INSTALL PACK OFF, L/D LANDING JOINT
	6:00 - 10:00	4.00	CSGPRO	14	A	P		NIPPLE DOWN BOP & EQUIPMENT ,CLEAN PITS W/ PRICE WATER SERVICE SUPER VAC TRUCK, RELEASE RIG @ 10:00 11/22/2012 TO NBU 921-22E4BS

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 921-22M4CS ORANGE	Wellbore No.	OH
Well Name	NBU 921-22M4CS	Wellbore Name	NBU 921-22M4CS
Report No.	1	Report Date	12/5/2012
Project	UTAH-UINTAH	Site	NBU 921-22M PAD
Rig Name/No.		Event	COMPLETION
Start Date	12/5/2012	End Date	1/21/2013
Spud Date	10/1/2012	Active Datum	RKB @4,930.00usft (above Mean Sea Level)
UWI	SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0		

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	6,754.0 (usft)-9,773.0 (usft)	Start Date/Time	12/31/2012 12:00AM
No. of Intervals	62	End Date/Time	12/31/2012 12:00AM
Total Shots	228	Net Perforation Interval	72.00 (usft)
Avg Shot Density	3.17 (shot/ft)	Final Surface Pressure	
		Final Press Date	

2 Intervals

2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/2012 12:00AM	WASATCH/ 2			6,754.0	6,756.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/2012 12:00AM	WASATCH/			6,874.0	6,876.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			6,904.0	6,906.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			7,253.0	7,255.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			7,466.0	7,468.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			7,562.0	7,564.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			7,726.0	7,727.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			7,761.0	7,762.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			7,791.0	7,792.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			7,832.0	7,834.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			7,906.0	7,907.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			7,938.0	7,940.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,084.0	8,085.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,118.0	8,119.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,130.0	8,131.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr. Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/2012 12:00AM	MESAVERDE/			8,143.0	8,144.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,172.0	8,173.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,191.0	8,192.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,210.0	8,211.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,249.0	8,250.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,257.0	8,258.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,268.0	8,269.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,305.0	8,306.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,337.0	8,338.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,344.0	8,345.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,364.0	8,365.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,424.0	8,425.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,434.0	8,435.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,501.0	8,502.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr. Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/2012 12:00AM	MESAVERDE/			8,616.0	8,617.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,624.0	8,625.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,638.0	8,639.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,675.0	8,677.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,721.0	8,722.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,780.0	8,781.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,786.0	8,787.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,796.0	8,797.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,865.0	8,866.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,880.0	8,881.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,944.0	8,946.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,043.0	9,044.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,060.0	9,061.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,089.0	9,090.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr. Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/2012 12:00AM	MESAVERDE/			9,139.0	9,140.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,149.0	9,150.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,205.0	9,206.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,213.0	9,214.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,285.0	9,286.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,328.0	9,329.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,373.0	9,374.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,406.0	9,407.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,452.0	9,453.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,463.0	9,464.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,486.0	9,487.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,531.0	9,532.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,551.0	9,552.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,570.0	9,571.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/Reservoir	CCL@ (usft)	CCL-T S (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
12/31/2012 12:00AM	MESAVERDE/			9,594.0	9,595.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,671.0	9,672.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,706.0	9,707.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,717.0	9,718.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,772.0	9,773.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

3 Plots

3.1 Wellbore Schematic



**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-22M4CS ORANGE

Spud Date: 10/1/2012

Project: UTAH-UINTAH

Site: NBU 921-22M PAD

Rig Name No: MILES 2/2

Event: COMPLETION

Start Date: 12/5/2012

End Date: 1/21/2013

Active Datum: RKB @4,930.00usft (above Mean Sea Level)

UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/5/2012	12:30 - 12:45	0.25	FRAC	33	C	P		RU HOT OILER, FILLED 8 5/8 X 4 1/2" ANNULAR WITH 2 BBLs H2O, PRESSURED TO 1500 PSI NO BLEED OFF, BLED WELL DOWN, MOVED TO BONANZA 1023-5L PAD
12/6/2012	-							
12/20/2012	15:00 - 15:30	0.50	FRAC	33	C	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST 54 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. SWMFN NOTE TESTED SURFACE TO 1500 PSI NO LEAK HSM. HIGH PSI LINES & WL SAFETY.
1/1/2013	6:45 - 7:00	0.25	FRAC	48		P		PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH PERF AS PER DESIGN. POOH. SWMFN.
	7:00 - 18:00	11.00	FRAC	36	B	P		
1/2/2013	6:45 - 7:00	0.25	FRAC	36	B	P		-15* PSI TEST FRAC LINES T/ 8500 PSI. LOST 500 PSI. BLEED OFF PSI. BEG FRAC. FRAC STG 1)WHP 1645 PSI, BRK 3685 PSI@4.7 BPM. ISIP 2731 PSI, FG. 0.72 CALC PERFS OPEN @ 49.4 BPM @ 5334 PSI = 100% ISIP 3051 PSI, FG. 0.75, NPI 320 PSI. MP 5728 PSI, MR 50.3 BPM, AP 5360 PSI, AR 49.3 BPM, PUMPED 30/50 OWATTA SAND. SWM, XO T/ WL. PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 9517' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC. FRAC STG 2)WHP 1870 PSI, BRK 3370 PSI@4.7 BPM. ISIP 2349 PSI, FG. 0.69 CALC PERFS OPEN @ 49.5 BPM @ 5705 PSI = 91% ISIP 3063 PSI, FG. 0.77, NPI 714 PSI. MP 6021 PSI, MR 52.5 BPM, AP 5370 PSI, AR 50.2 BPM, PUMPED 30/50 OWATTA SAND. SWM, XO T/ WL. PERF STG 3)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 9244' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC. FRAC STG 3)WHP 2435 PSI, BRK 3416 PSI@4.7 BPM. ISIP 2413 PSI, FG. 0.7 CALC PERFS OPEN @ 49.6 BPM @ 5837 PSI = 86% ISIP 2938 PSI, FG. 0.76, NPI 525 PSI. MP 6369 PSI, MR 52.4 BPM, AP 5640 PSI, AR 51.2 BPM, PUMPED 30/50 OWATTA SAND. SWMFN.

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-22M4CS ORANGE Spud Date: 10/1/2012

Project: UTAH-UINTAH Site: NBU 921-22M PAD Rig Name No: MILES 2/2

Event: COMPLETION Start Date: 12/5/2012 End Date: 1/21/2013

Active Datum: RKB @4,930.00usft (above Mean Sea Level) UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/3/2013	6:30 - 7:00	0.50	FRAC	48		P		JSA-SAFETY MEETING, - 13* ORANGE AND YELLOW WELL FRAC VALVE FROZE UP,
	7:00 - 17:00	10.00	FRAC	36	E	P		PERF STG #4) P/U 4 1/2" 8K HAL CBP & 3 1/8" EXP GUN, 21 GM, .36 HOLE SIZE, 120 DEG PHASING, RIH SET CBP @ 8976', P/U PERF AS DESING, POOH, XO TO FRAC, FRAC STG 4) WHP 720 PSI, BRK 3229 PSI @ 4.7 BPM. ISIP = 2296 PSI, FG. 0.70, CALC PERFS OPEN @ 51.4 BPM @ 5511 PSI = 83% (20/24 HOLES OPEN), ISIP = 3040 PSI, FG. 0.78, NPI = 744 PSI. MP = 5815 PSI, MR = 52.4 BPM, AP = 5054 PSI, AR = 51.1 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL. PERF STG 5)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8707' P/U PERF AS PER DESIGN. POOH. XO T/ FRAC. FRAC STG 5) WHP 2060 PSI, BRK 2860 PSI, @ 4.7 BPM. ISIP = 2107 PSI, FG. 0.69, CALC PERFS OPEN @ 51.9 BPM @ 5887 PSI = 81%, (17/24 HOLES OPEN) ISIP = 2934 PSI, FG. 0.78, NPI = 827 PSI. MP = 5693 PSI, MR = 52.8 BPM, AP = 4960 PSI, AR = 51.1 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL. PERF STG 6)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8395' P/U PERF AS PER DESIGN. XO TO FRAC FRAC STG 6) WHP 1355 PSI, BRK 2153 PSI @ 4.7 BPM. ISIP = 1752 PSI, FG.0.65, CALC PERFS OPEN @ 50.9 BPM @ 5447 PSI = 81%, (17/21 HOLES OPEN) ISIP = 2395 PSI, FG.0.73 , NPI = 643 PSI. MP = 5688 PSI, MR = 51.4 BPM, AP = 4819 PSI, AR = 50.6 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL. PERF STG 7)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8221 ' P/U PERF AS PER DESIGN. POOH. SVMFN
1/4/2013	6:30 - 7:00	0.50	FRAC	48		P		JSA-SAFETY MEETING, - 22* WORKING IN COLD BE CAREFUL

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-22M4CS ORANGE

Spud Date: 10/1/2012

Project: UTAH-UINTAH

Site: NBU 921-22M PAD

Rig Name No: MILES 2/2

Event: COMPLETION

Start Date: 12/5/2012

End Date: 1/21/2013

Active Datum: RKB @4,930.00usft (above Mean Sea Level)

UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:00 - 17:00	10.00	FRAC	36	E	P		<p>BLEED OFF LINE FROZE UP AS SOON AS WTR HIT THE LINE, CHANGE OUT 2" LINE,</p> <p>FRAC STG 7) WHP 1520 PSI, BRK 2958 PSI, @ 4.7 BPM. ISIP = 1809 PSI, FG. 0.66, CALC PERFS OPEN @ 52.3 BPM @ 4926 PSI = 100%, (21/21 HOLES OPEN) ISIP = 2349 PSI, FG.0.73 , NPI = 73 PSI. MP = 5223 PSI, MR = 52.5 BPM, AP = 4367 PSI, AR = 50.7 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 8)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7970' P/U PERF AS PER DESIGN. XO TO FRAC</p> <p>FRAC STG 8) WHP 1457 PSI, BRK 2811 PSI @ 4.7 BPM. ISIP = 1711 PSI, FG.0.66, CALC PERFS OPEN @ 49.7 BPM @ 4982 PSI = 75%, (18/24 HOLES OPEN) ISIP = 2786 PSI, FG. 0.79, NPI = 1075 PSI. MP = 5250 PSI, MR = 50.6 BPM, AP = 4646 PSI, AR = 48.8 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 9)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7594' P/U PERF AS PER DESIGN. XO TO FRAC</p> <p>FRAC STG 9) WHP 1650 PSI, BRK 2610 PSI @ 7.4 BPM. ISIP = 2274 PSI, FG 0.75, CALC PERFS OPEN @ 49.3 BPM @ 5277 PSI = 79%, (19/24 HOLES OPEN) ISIP = 2539 PSI, FG.0.78 , NPI = 265 PSI. MP = 5963 PSI, MR = 50.2 BPM, AP = 4787 PSI, AR = 48.9 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 10)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 6936' P/U PERF AS PER DESIGN. XO TO FRAC</p> <p>FRAC STG 10) WHP 420 PSI, BRK 1411 PSI @ 4.8 BPM. ISIP = 903 PSI, FG. 0.57, CALC PERFS OPEN @ 48.8 BPM @ 3974 PSI = 75%, (18/24 HOLES OPEN) ISIP = 1831 PSI, FG 0.71, NPI = 928 PSI. MP = 4570 PSI, MR = 50.3 BPM, AP = 3404 PSI, AR = 48.6 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>(KILL PLUG) RIH W/ HAL 8K CBP, SET CBP @ 6704', SHUT WELL IN, R/D WIRELINE AND FRAC,</p>

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-22M4CS ORANGE

Spud Date: 10/1/2012

Project: UTAH-UINTAH

Site: NBU 921-22M PAD

Rig Name No: MILES 2/2

Event: COMPLETION

Start Date: 12/5/2012

End Date: 1/21/2013

Active Datum: RKB @4,930.00usft (above Mean Sea Level)

UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

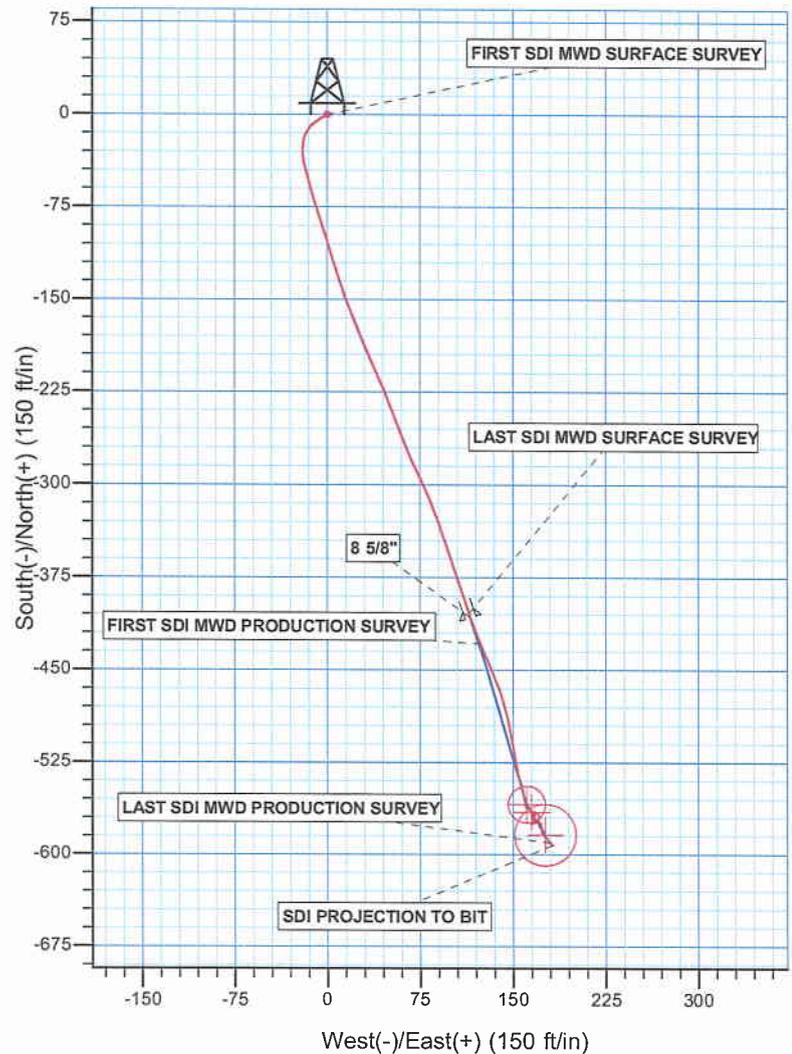
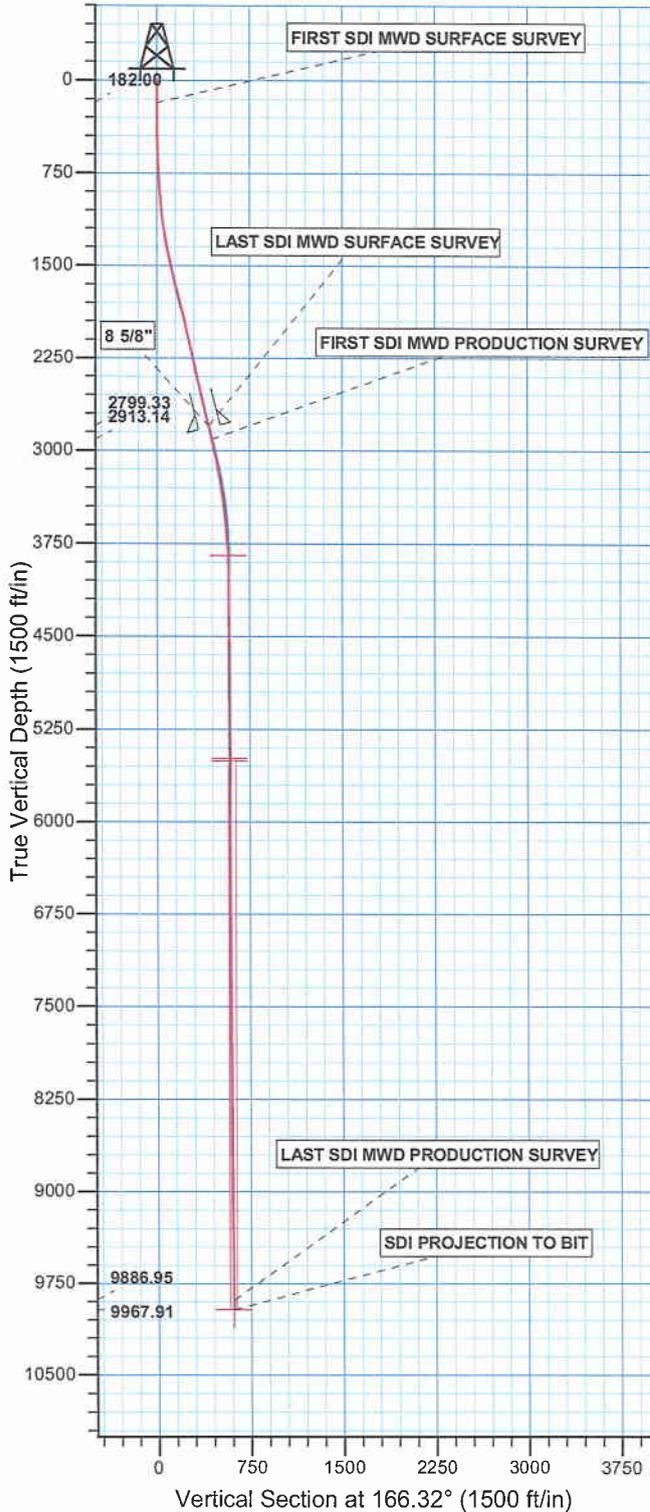
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/18/2013	7:00 - 7:30	0.50	DRLOUT	48		P		TOTAL WATER = 8110 BBLS TOTAL SAND = 174108# MIRU MIRU, NDWH, NU BOP'S, PU POBS, BIT, SN, TIH TBG, 212 JTS, 6704', TAG KILL PLUG, BREAK CIRC, PRESSURE TEST BOP'S, 3000#, PU PWR SWIVEL, MILL 6 CBP, 286 JTS, 8437', WINTERIZE RIG, SWMFWE
	7:30 - 16:30	9.00	DRLOUT	44	C	P		
1/21/2013	7:00 - 7:30	0.50	DRLOUT	48		P		PLUG# 1 6704' 10' SAND 5 MIN 0# KICK PLUG# 2 6936' 20' SAND 5 MIN 200# KICK PLUG# 3 7594' 30' SAND 5 MIN 600# KICK PLUG# 4 7970' 50' SAND 5 MIN 600# KICK PLUG# 5 8221' 30' SAND 5 MIN 500# KICK PLUG# 6 8395' 10' SAND 5 MIN 600# KICK JSA LANDING TBG PU PWR SWIVEL, MILL 4 CBP'S, C/O 45' SAND, TO PBTD, 314 JTS, 9961', POOH TO 9235.86', 291 JTS, LAND TBG, ND BOP'S, NUWH, TEST FLOW LINE, 3000#, POBS 1100#, TURN TO FBC 12 NOON, RDMO TO MORGAN STATE 921-36F2 PAD
	7:30 - 17:30	10.00	DRLOUT	44	C	P		
								PLUG# 7 8707' 10' SAND 5 MIN 500# KICK PLUG# 8 8976' 20' SAND 5 MIN 500# KICK PLUG# 9 9244' 30 SAND 5 MIN 500# KICK PLUG# 10 9510' 10' SAND 5 MIN 500# KICK
								PBTD 9,961' BTM PERF 9773'
								TBG 292 JTS 9208.83' KB 14.00' HANGER 4.125" .83' SN 1.875" 2.20' EOT 9235.86'
	17:30 - 17:30	0.00	DRLOUT	50				FRAC WTR 8110 BBLS RCVD 2100 BBLS LTR 6010 BBLS WELL TURNED TO SALES @ 1400 HR ON 1/21/2013. 3800 MCFD, 1560 BWPD, 20/64" CK.
1/22/2013	-							
1/23/2013	-							
	7:00 -			50				WELL IP'D ON 1/23/13 - 1987 MCFD, 0 BWPD, 0 BOPD, CP 2002#, FTP 1199#, LP 68#, 24 HRS, CK 20/64

WELL DETAILS: NBU 921-22M4CS					
GL 4906 & KB 24 @ 4930.00ft (HP 318)					
+N/-S 0.00	+E/-W 0.00	Northing 14535274.64	Easting 2047992.05	Latitude 40.016205	Longitude -109.544360



Azimuths to True North
 Magnetic North: 11.04°

Magnetic Field
 Strength: 52290.4snT
 Dip Angle: 65.86°
 Date: 11/15/2011
 Model: IGRF2010



PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N
Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 22 T9S R21E
System Datum: Mean Sea Level

Design: OH (NBU 921-22M4CS/OH)
Created By: Gabe Kendall Date: 9:31, November 29 2012



Scientific Drilling

US ROCKIES REGION PLANNING

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

NBU 921-22M PAD

NBU 921-22M4CS

OH

Design: OH

Standard Survey Report

29 November, 2012

Anadarko 
Petroleum Corporation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 921-22M4CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4906 & KB 24 @ 4930.00ft (HP 318)
Site:	NBU 921-22M PAD	MD Reference:	GL 4906 & KB 24 @ 4930.00ft (HP 318)
Well:	NBU 921-22M4CS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

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

Site	NBU 921-22M PAD, SECTION 22 T9S R21E				
Site Position:		Northing:	14,535,316.97 usft	Latitude:	40.016320
From:	Lat/Long	Easting:	2,048,018.80 usft	Longitude:	-109.544262
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.94 °

Well	NBU 921-22M4CS, 670 FSL 643 FWL					
Well Position	+N/-S	0.00 ft	Northing:	14,535,274.64 usft	Latitude:	40.016205
	+E/-W	0.00 ft	Easting:	2,047,992.04 usft	Longitude:	-109.544360
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,906.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/15/11	11.04	65.86	52,290

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	166.32	

Survey Program	Date	11/29/12			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
162.00	2,844.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
2,961.00	10,027.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162.00	0.44	215.54	162.00	-0.51	-0.36	0.41	0.27	0.27	0.00	
182.00	0.44	224.15	182.00	-0.62	-0.46	0.50	0.33	-0.01	43.07	
FIRST SDI MWD SURFACE SURVEY										
191.00	0.44	228.02	191.00	-0.67	-0.51	0.53	0.33	0.02	42.95	
218.00	0.70	243.75	218.00	-0.81	-0.73	0.62	1.12	0.96	58.26	
245.00	1.14	236.11	244.99	-1.04	-1.10	0.75	1.69	1.63	-28.30	
271.00	1.41	244.98	270.99	-1.32	-1.61	0.90	1.28	1.04	34.12	
300.00	1.82	244.05	299.97	-1.67	-2.35	1.07	1.42	1.41	-3.21	
329.00	2.20	237.78	328.96	-2.17	-3.23	1.34	1.51	1.31	-21.62	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 921-22M4CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4906 & KB 24 @ 4930.00ft (HP 318)
Site:	NBU 921-22M PAD	MD Reference:	GL 4906 & KB 24 @ 4930.00ft (HP 318)
Well:	NBU 921-22M4CS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
360.00	2.46	239.27	359.93	-2.82	-4.31	1.72	0.86	0.84	4.81	
450.00	2.64	236.37	449.84	-4.96	-7.69	3.00	0.25	0.20	-3.22	
540.00	3.25	233.38	539.72	-7.63	-11.47	4.70	0.70	0.68	-3.32	
630.00	3.61	212.82	629.56	-11.53	-15.05	7.64	1.42	0.40	-22.84	
720.00	3.87	202.89	719.37	-16.71	-17.77	12.03	0.77	0.29	-11.03	
810.00	4.48	186.10	809.14	-23.00	-19.32	17.78	1.51	0.68	-18.66	
900.00	5.01	179.77	898.83	-30.43	-19.68	24.91	0.83	0.59	-7.03	
990.00	5.45	167.55	988.46	-38.53	-18.74	33.01	1.33	0.49	-13.58	
1,080.00	6.24	165.38	1,077.99	-47.44	-16.59	42.17	0.91	0.88	-2.41	
1,170.00	7.56	165.27	1,167.34	-57.90	-13.85	52.98	1.47	1.47	-0.12	
1,260.00	8.79	162.72	1,256.42	-70.19	-10.30	65.76	1.42	1.37	-2.83	
1,350.00	10.73	162.54	1,345.11	-84.75	-5.74	80.99	2.16	2.16	-0.20	
1,440.00	11.61	162.10	1,433.41	-101.36	-0.44	98.38	0.98	0.98	-0.49	
1,530.00	12.75	162.63	1,521.38	-119.46	5.30	117.32	1.27	1.27	0.59	
1,620.00	13.98	162.54	1,608.94	-139.31	11.53	138.08	1.37	1.37	-0.10	
1,710.00	14.42	157.80	1,696.19	-160.05	19.03	160.01	1.38	0.49	-5.27	
1,800.00	14.98	158.67	1,783.25	-181.26	27.49	182.62	0.67	0.62	0.97	
1,890.00	13.72	155.07	1,870.44	-201.78	36.22	204.62	1.71	-1.40	-4.00	
1,980.00	13.45	157.62	1,957.92	-221.14	44.71	225.44	0.73	-0.30	2.83	
2,070.00	13.54	159.12	2,045.44	-240.66	52.45	246.24	0.40	0.10	1.67	
2,160.00	13.89	157.89	2,132.87	-260.51	60.27	267.37	0.51	0.39	-1.37	
2,250.00	12.13	157.71	2,220.56	-279.27	67.92	287.41	1.96	-1.96	-0.20	
2,340.00	11.61	154.28	2,308.63	-296.18	75.44	305.62	0.97	-0.58	-3.81	
2,430.00	12.22	156.74	2,396.70	-313.09	83.13	323.87	0.88	0.68	2.73	
2,520.00	12.75	160.96	2,484.57	-331.23	90.13	343.15	1.17	0.59	4.69	
2,610.00	13.81	162.02	2,572.16	-350.83	96.69	363.75	1.21	1.18	1.18	
2,700.00	13.72	160.79	2,659.58	-371.13	103.51	385.08	0.34	-0.10	-1.37	
2,790.00	13.98	161.05	2,746.96	-391.49	110.56	406.53	0.30	0.29	0.29	
2,844.00	14.25	162.19	2,799.33	-403.99	114.71	419.66	0.72	0.50	2.11	
LAST SDI MWD SURFACE SURVEY										
2,961.00	12.57	156.81	2,913.14	-429.40	124.13	446.58	1.79	-1.44	-4.60	
FIRST SDI MWD PRODUCTION SURVEY										
3,055.00	12.31	156.90	3,004.93	-448.02	132.09	466.55	0.28	-0.28	0.10	
3,149.00	10.73	160.50	3,097.04	-465.49	138.94	485.14	1.85	-1.68	3.83	
3,244.00	10.90	165.33	3,190.35	-482.51	144.17	502.92	0.97	0.18	5.08	
3,338.00	10.02	169.73	3,282.79	-499.16	147.87	519.97	1.26	-0.94	4.68	
3,433.00	8.44	170.70	3,376.56	-514.17	150.48	535.17	1.67	-1.66	1.02	
3,527.00	6.68	170.08	3,469.74	-526.37	152.53	547.51	1.87	-1.87	-0.66	
3,621.00	5.54	162.61	3,563.20	-536.08	154.83	557.49	1.48	-1.21	-7.95	
3,716.00	4.40	165.51	3,657.84	-543.99	157.11	565.71	1.23	-1.20	3.05	
3,810.00	3.08	167.88	3,751.64	-549.95	158.55	571.84	1.41	-1.40	2.52	
3,904.00	1.76	173.60	3,845.56	-553.85	159.24	575.80	1.43	-1.40	6.09	
3,999.00	1.93	169.20	3,940.51	-556.87	159.70	578.84	0.23	0.18	-4.63	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 921-22M4CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4906 & KB 24 @ 4930.00ft (HP 318)
Site:	NBU 921-22M PAD	MD Reference:	GL 4906 & KB 24 @ 4930.00ft (HP 318)
Well:	NBU 921-22M4CS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,093.00	1.93	167.71	4,034.45	-559.97	160.33	582.01	0.05	0.00	-1.59
4,187.00	0.35	157.69	4,128.43	-561.79	160.78	583.87	1.69	-1.68	-10.66
4,282.00	0.26	77.36	4,223.43	-562.01	161.10	584.16	0.42	-0.09	-84.56
4,376.00	0.35	77.79	4,317.43	-561.90	161.59	584.18	0.10	0.10	0.46
4,470.00	0.62	121.56	4,411.43	-562.11	162.30	584.54	0.47	0.29	46.56
4,564.00	0.70	146.26	4,505.42	-562.85	163.05	585.45	0.31	0.09	26.28
4,659.00	0.79	143.54	4,600.41	-563.86	163.76	586.59	0.10	0.09	-2.86
4,753.00	0.86	145.85	4,694.40	-564.96	164.55	587.85	0.08	0.07	2.46
4,848.00	0.97	128.95	4,789.39	-566.06	165.57	589.16	0.31	0.12	-17.79
4,942.00	0.97	127.45	4,883.38	-567.04	166.82	590.41	0.03	0.00	-1.60
5,037.00	0.14	129.37	4,978.37	-567.61	167.55	591.13	0.87	-0.87	2.02
5,131.00	0.42	165.29	5,072.37	-568.01	167.73	591.57	0.34	0.30	38.21
5,226.00	0.35	188.19	5,167.37	-568.64	167.77	592.18	0.18	-0.07	24.11
5,320.00	0.44	186.16	5,261.37	-569.28	167.69	592.79	0.10	0.10	-2.16
5,415.00	0.44	177.46	5,356.36	-570.01	167.67	593.49	0.07	0.00	-9.16
5,509.00	0.62	184.32	5,450.36	-570.87	167.65	594.33	0.20	0.19	7.30
5,603.00	0.62	274.32	5,544.36	-571.34	167.10	594.66	0.93	0.00	95.74
5,698.00	0.88	296.73	5,639.35	-570.98	165.94	594.02	0.41	0.27	23.59
5,792.00	1.14	348.67	5,733.33	-569.73	165.11	592.62	0.97	0.28	55.26
5,887.00	1.06	355.70	5,828.32	-567.93	164.86	590.81	0.16	-0.08	7.40
5,981.00	1.06	346.65	5,922.30	-566.22	164.59	589.08	0.18	0.00	-9.63
6,075.00	0.00	292.51	6,016.30	-565.37	164.39	588.21	1.13	-1.13	0.00
6,170.00	0.00	238.55	6,111.30	-565.37	164.39	588.21	0.00	0.00	0.00
6,265.00	0.40	83.68	6,206.30	-565.34	164.72	588.26	0.42	0.42	0.00
6,359.00	0.53	59.73	6,300.29	-565.08	165.42	588.17	0.25	0.14	-25.48
6,454.00	0.62	97.57	6,395.29	-564.93	166.31	588.23	0.40	0.09	39.83
6,548.00	0.70	107.15	6,489.28	-565.16	167.37	588.71	0.14	0.09	10.19
6,642.00	0.70	118.14	6,583.27	-565.60	168.42	589.39	0.14	0.00	11.69
6,737.00	0.94	125.65	6,678.26	-566.33	169.57	590.37	0.28	0.25	7.91
6,831.00	0.46	164.02	6,772.26	-567.14	170.30	591.33	0.69	-0.51	40.82
6,926.00	0.62	142.92	6,867.25	-567.92	170.71	592.18	0.27	0.17	-22.21
7,020.00	0.84	157.87	6,961.25	-568.96	171.28	593.33	0.31	0.23	15.90
7,115.00	0.70	206.03	7,056.24	-570.13	171.28	594.47	0.67	-0.15	50.69
7,209.00	0.88	207.08	7,150.23	-571.29	170.70	595.45	0.19	0.19	1.12
7,303.00	0.88	199.52	7,244.22	-572.61	170.13	596.61	0.12	0.00	-8.04
7,398.00	0.88	252.43	7,339.21	-573.52	169.19	597.27	0.83	0.00	55.69
7,492.00	0.70	249.01	7,433.20	-573.94	167.97	597.39	0.20	-0.19	-3.64
7,587.00	0.88	248.92	7,528.19	-574.41	166.75	597.56	0.19	0.19	-0.09
7,681.00	0.53	237.93	7,622.18	-574.90	165.71	597.79	0.40	-0.37	-11.69
7,775.00	0.53	244.52	7,716.18	-575.32	164.95	598.01	0.06	0.00	7.01
7,870.00	0.44	9.15	7,811.18	-575.15	164.61	597.77	0.91	-0.09	131.19
7,964.00	0.50	8.34	7,905.17	-574.39	164.72	597.05	0.06	0.06	-0.86
8,058.00	0.53	45.10	7,999.17	-573.68	165.09	596.45	0.35	0.03	39.11
8,153.00	0.62	76.48	8,094.17	-573.25	165.90	596.22	0.34	0.09	33.03

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 921-22M PAD
Well: NBU 921-22M4CS
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 921-22M4CS
TVD Reference: GL 4906 & KB 24 @ 4930.00ft (HP 318)
MD Reference: GL 4906 & KB 24 @ 4930.00ft (HP 318)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
8,247.00	0.88	91.15	8,188.16	-573.14	167.12	596.41	0.34	0.28	15.61
8,341.00	1.06	98.80	8,282.15	-573.29	168.70	596.92	0.24	0.19	8.14
8,435.00	0.79	92.12	8,376.13	-573.45	170.21	597.43	0.31	-0.29	-7.11
8,530.00	0.44	109.61	8,471.13	-573.59	171.20	597.81	0.41	-0.37	18.41
8,624.00	0.53	150.48	8,565.12	-574.09	171.76	598.43	0.37	0.10	43.48
8,719.00	0.53	147.05	8,660.12	-574.84	172.21	599.27	0.03	0.00	-3.61
8,813.00	0.70	168.32	8,754.11	-575.77	172.57	600.25	0.30	0.18	22.63
8,907.00	0.62	174.21	8,848.11	-576.84	172.73	601.33	0.11	-0.09	6.27
9,002.00	0.79	161.38	8,943.10	-577.97	172.99	602.49	0.24	0.18	-13.51
9,096.00	0.12	210.40	9,037.10	-578.67	173.15	603.20	0.76	-0.71	52.15
9,190.00	0.35	189.24	9,131.10	-579.04	173.06	603.54	0.26	0.24	-22.51
9,285.00	0.53	173.07	9,226.09	-579.76	173.06	604.24	0.23	0.19	-17.02
9,379.00	0.70	158.48	9,320.09	-580.73	173.33	605.24	0.24	0.18	-15.52
9,474.00	0.79	154.17	9,415.08	-581.86	173.82	606.46	0.11	0.09	-4.54
9,568.00	1.23	150.57	9,509.07	-583.32	174.60	608.06	0.47	0.47	-3.83
9,663.00	1.32	145.38	9,604.04	-585.11	175.72	610.07	0.15	0.09	-5.46
9,757.00	1.41	138.62	9,698.02	-586.87	177.10	612.10	0.20	0.10	-7.19
9,851.00	1.58	139.67	9,791.98	-588.72	178.71	614.28	0.18	0.18	1.12
9,946.00	1.67	135.45	9,886.95	-590.71	180.53	616.64	0.16	0.09	-4.44
LAST SDI MWD PRODUCTION SURVEY									
10,027.00	1.67	135.45	9,967.91	-592.39	182.18	618.67	0.00	0.00	0.00
SDI PROJECTION TO BIT									

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,859.00	2,813.87	8 5/8"	8.625	11.000

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
9,946.00	9,886.95	-590.71	180.53	LAST SDI MWD PRODUCTION SURVEY
10,027.00	9,967.91	-592.39	182.18	SDI PROJECTION TO BIT

Checked By: _____ Approved By: _____ Date: _____

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
UTU010950A

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

2. Name of Operator: KERR MCGEE OIL & GAS ONSHORE
 Contact: LINDSEY A FRAZIER
 Mail: lindsey.frazier@anadarko.com

3. Address: PO BOX 173779
 DENVER, CO 80217

3a. Phone No. (include area code)
 Ph: 720-929-6857

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
 At surface SWSW 670FSL 643FWL 40.016170 N Lat, 109.545048 W Lon
 At top prod interval reported below SWSW 104FSL 813FWL
 At total depth SWSW 78FSL 825FWL

6. If Indian, Allottee or Tribe Name _____

7. Unit or CA Agreement Name and No.
 UTU63047A

8. Lease Name and Well No.
 NBU 921-22M4CS

9. API Well No.
 43-047-52589

10. Field and Pool, or Exploratory
 NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey
 or Area Sec 22 T9S R21E Mer SLB

12. County or Parish
 JINTAH

13. State
 UT

14. Date Spudded
 08/18/2012

15. Date T.D. Reached
 11/20/2012

16. Date Completed
 D & A Ready to Prod.
 01/21/2013

17. Elevations (DF, KB, RT, GL)*
 4930 KB

18. Total Depth: MD 10027
 TVD 9968

19. Plug Back T.D.: MD 9961
 TVD 9902

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 Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20.000	14.000 STL	36.7	0	40		28			
11.000	8.625 IJ-55	28.0	0	2879		480		0	
7.875	4.500 I-80	11.6	0	4864		1873		1116	
7.875	4.500 P-110	11.6	4864	10008					

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	9236							

25. Producing Intervals

26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) WASATCH	6754	7940	6754 TO 7940	0.360	72	OPEN
B) MESAVERDE	8084	9773	8084 TO 9773	0.360	156	OPEN
C)						
D)						

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

Depth Interval	Amount and Type of Material
6754 TO 9773	PUMP 8110 BBLs SLICK H2O AND 174,108 LBS 30/50 OTTAWA 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
01/21/2013	01/23/2013	24	→	0.0	1987.0	0.0			FLOWS FROM WELL
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
20/64	1199	2002.0	→	0	1987	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. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

RECEIVED
FEB 20 2013

DIV OF OIL, GAS & MINING

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

ELECTRONIC SUBMISSION #199002 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	1560
				BIRD'S NEST	1893
				MAHOGANY	2376
				WASATCH	4967
				MESAVERDE	8073

32. Additional remarks (include plugging procedure):

The first 210 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 4864 ft; LTC P-110 csg was run from 4864 ft. to 10,008 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 #199002 Verified by the BLM Well Information System.
For KERR MCGEE OIL & GAS ONSHORE L, sent to the Vernal**

Name (please print) LINDSEY A FRAZIER Title REGUALTORY ANALYST

Signature _____ (Electronic Submission) Date 02/14/2013

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.

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-22M4CS ORANGE

Spud Date: 10/1/2012

Project: UTAH-UINTAH

Site: NBU 921-22M PAD

Rig Name No: H&P 318/318, PROPETRO 11/11

Event: DRILLING

Start Date: 9/19/2012

End Date: 9/22/2012

Active Datum: RKB @4,930.00usft (above Mean Sea Level)

UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/1/2012	17:30 - 21:00	3.50	MIRU	01	B	P		INSTALL DIVERTER HEAD, RIG UP NOV EQUIPMENT, SPOT IN RIG, CATWALK & PIPE RACKS, RIG UP & PRIME PUMP INSPECT RIG,
	21:00 - 21:30	0.50	DRLSUR	06	A	P		PICK UP 12.25" BIT & 8" MUD MOTOR & TIH
	21:30 - 23:00	1.50	DRLSUR	02	B	P		DRL F/44' - T/210' (166' @ 110.6' ROP) W.O.B 18/20K RPM ~ 45 POWERHEAD / 83 MUD MOTOR UP/DWN/ROT ~ 22/20/20 ~ 2K DRAG PSI ON/OFF ~ 600/400 M.W. 8.5# VIS 27 NOV-ONLINE HOLE CONDITION ~ GOOD
	23:00 - 23:30	0.50	DRLSUR	06	A	P		TOOH WITH #1 BHA
	23:30 - 0:00	0.50	DRLSUR	06	A	P		TIH WITH #2 BHA W/11" BIT
10/2/2012	0:00 - 0:30	0.50	DRLSUR	06	A	P		TIH WITH #2 BHA W/11" BIT
	0:30 - 12:00	11.50	DRLSUR	02	B	P		DRL F/210' - T/1310' (1100' @ 95.7' ROP) W.O.B. 18/20K RPM RPM ~ 45 POWERHEAD / 83 MUD MOTOR UP/DWN/ROT ~ 60/45/50 ~ 10K DRAG PSI ON/OFF ~ 1400/1200 M.W. 8.5# VIS 27 491 GPM PUMP RATE / NO AIR TORQUE ON/OFF ~ 3100/1200 NOV-ONLINE HOLE CONDITION ~ GOOD 6.38' HIGH ~ 0.79' RIGHT OF LINE
	12:00 - 16:00	4.00	DRLSUR	02	B	P		DRL F/1310' - T/1600' (290' @ 82.9' ROP) W.O.B. 18/20K RPM ~ 45 POWERHEAD / 83 MUD MOTOR UP/DWN/ROT ~ 65/47/58 ~ 7K DRAG PSI ON/OFF ~ 1470/1230 M.W. 8.5# VIS 27 491 GPM PUMP RATE / NO AIR TORQUE ON/OFF ~ 3100/1300 NOV-ONLINE HOLE CONDITION ~ GOOD 1.05' LOW ~ 1.99' RIGHT OF LINE
	16:00 - 19:30	3.50	DRLSUR	02	B	P		DRL F/1600' - T/1780' (180' @ 51.4' ROP)
	19:30 - 20:30	1.00	DRLSUR	08	B	Z		*** CHANGE OUT SWABS IN MUD PUMP
	20:30 - 0:00	3.50	DRLSUR	02	B	P		DRL F/1780' - T/2060' (280' @ 80' ROP) W.O.B. 18/20K RPM ~ 45 POWERHEAD / 83 MUD MOTOR UP/DWN/ROT ~ 74/50/60 ~ 14K DRAG PSI ON/OFF ~ 1540/1320 M.W. 8.5# VIS 27 491 GPM PUMP RATE / NO AIR TORQUE ON/OFF ~ 3100/1500 NOV-ONLINE HOLE CONDITION ~ OK 1.66' HIGH ~ 2.15' LEFT OF LINE

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-22M4CS ORANGE

Spud Date: 10/1/2012

Project: UTAH-UINTAH

Site: NBU 921-22M PAD

Rig Name No: H&P 318/318, PROPETRO 11/11

Event: DRILLING

Start Date: 9/19/2012

End Date: 9/22/2012

Active Datum: RKB @4,930.00usft (above Mean Sea Level)

UWI: SW/SW0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/3/2012	0:00 - 6:30	6.50	DRLSUR	02	B	P		DRL F/2060' - T/2510' (450' @ 69.2' ROP) W.O.B. 18/20K RPM ~ 45 POWERHEAD / 83 MUD MOTOR UP/DWN/ROT ~ 84/57/69 ~ 15K DRAG PSI ON/OFF ~ 1690/1470 M.W. 8.6# VIS 27 491 GPM PUMP RATE / NO AIR TORQUE ON/OFF ~ 3100/1500 NOV-ONLINE HOLE CONDITION ~ OK
	6:30 - 8:30	2.00	DRLSUR	08	B	Z		***CHANGE OUT SWABS AND LINERS IN MUD PUMP
	8:30 - 15:00	6.50	DRLSUR	02	B	P		DRL F/2510' - T/2890' (380' @ 58.5' ROP) W.O.B. 18/20K RPM ~ 45 POWERHEAD / 83 MUD MOTOR UP/DWN/ROT ~ 90/65/73 ~17K DRAG PSI ON/OFF ~ 1850/1630 M.W. 8.6# VIS 27 491 GPM PUMP RATE / NO AIR TORQUE ON/OFF ~ 3100/1650 NOV-ONLINE HOLE CONDITION ~ OK 8.12' LOW ~ 7.04' LEFT OF TARGET CIRCULATE PRIOR TO TRIP FOR CASING
	15:00 - 17:00	2.00	DRLSUR	05	C	P		LDDS, BHA & DIRECTIONAL TOOLS
	17:00 - 20:30	3.50	DRLSUR	06	A	P		MOVE PIPE RACKS AND CATWALK; PULL DIVERter HEAD; RIG UP TO RUN CASING; MOVE CASING INTO POSITION
	20:30 - 21:30	1.00	CSGSUR	12	A	P		TIH 65 JOINTS 8 5/8", 28#, J55 CASING; SHOE IS AT 2855' BAFFLE IS AT 2810.65'
	21:30 - 0:00	2.50	CSGSUR	12	C	P		
10/4/2012	0:00 - 1:00	1.00	CSGSUR	12	B	P		HOLD SAFETY MEETING; RUN 200' OF 1" TUBING; RIG DOWN MOVE OFF WELL; RIG UP CEMENTERS AND CEMENT HEAD.
	1:00 - 4:00	3.00	CSGSUR	12	E	P		RIG UP PRO PETRO PUMP TRUCK; LOAD PLUG; TEST LINES TO 2000 PSI; PUMP 160 BBLS WATER FOLLOWED BY 20 BBL GEL WATER FLUSH; LEAD = 280sx CLASS G CMT @ 12.0 WT & 2.86 YIELD; TAIL = 200sx OF 15.8 WT & 1.15 YIELD; DROP PLUG & DISPLACE W/ 175.6 BBLS WATER; PLUG DOWN @ 01:54 10/04/2012; BUMP PLUG @ 1000 PSI; FINAL LIFT = 700 PSI; CHECK FLOAT DIDN'T HOLD, HELD PRESSURE ON CSG, DURING JOB; FULL RETURNS THROUGH OUT JOB; 35 BBLS CMT TO SURFACE; PUMP 125 SX 15.8# CMT W/4% CALCIUM DOWN 1"; CEMENT TO SURFACE BUT FELL BACK. PUMP 2ND TOP OFF OF 40SX 15.8# CEMENT TO SURFACE. RELEASED RIG @ 04:00
11/15/2012	14:00 - 15:30	1.50	MIRU3	01	E	P		PREP TO SKID RIG
	15:30 - 16:30	1.00	MIRU3	01	C	P		SKID RIG CENTER UP OVER WLL
	16:30 - 17:30	1.00	PRPSPD	01	B	P		RIG UP ROTARY TOOLS
	17:30 - 19:00	1.50	PRPSPD	14	A	P		NIPPLE UP BOPS
	19:00 - 0:00	5.00	PRPSPD	15	A	P		TESTING BOPS PIPE, BLINDS, IBOP, HCR, FLOOR VAVLES CHOKE LOW PSI 250 HIHG 5000 ANN 2500 HIGH 250 LOW 8 5/8 CASING 1500 PSI FOR 30 MINS

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-22M4CS ORANGE		Spud Date: 10/1/2012	
Project: UTAH-UINTAH		Site: NBU 921-22M PAD	Rig Name No: H&P 318/318, PROPETRO 11/11
Event: DRILLING		Start Date: 9/19/2012	End Date: 9/22/2012
Active Datum: RKB @4,930.00usft (above Mean Sea Level)		UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
11/16/2012	0:00 - 2:30	2.50	PRSPD	15	A	P		TEST SWACO LINES & EQUIP. TO 1,000 PSI
	2:30 - 3:00	0.50	PRSPD	14	A	P		INSTALL WEAR BUSHING
	3:00 - 4:00	1.00	PRSPD	06	A	P		P/U BHA , MWD TOOLS SCRIBE IN
	4:00 - 6:30	2.50	PRSPD	06	A	P		TIH TAGED TOP CMT @ 2710
	6:30 - 8:00	1.50	DRLINC	02	F	P		DRILL SHOE TRACK F/ 2710 TO 2934
	8:00 - 13:00	5.00	DRLINC	02	D	P		DRILL SLID F/ 2934 TO 3645 FT 711 ROP 142.2 WT ON BIT 20 TD RPM 50-55 MM RPM 113 MUD WT 8.4 VIS 26 PUMP PSI ON/OFF 1625 / 1250 GPM 486 SPM 108 TRQ. ON / OFF 8 / 3 NOV - DEWATERING SWACO - OFF LINE P/U 117 S/O 94 R/T 104 SLIDE 60 FT TIME 1 HOUR ROP 60
	13:00 - 14:30	1.50	DRLINC	02	D	P		DRILL SLID F/ 3645 TO 3862 FT 217 ROP 144.6 WT ON BIT 18- 20 TD RPM 40 MM RPM 113 MUD WT 8.4 VIS 26 PUMP PSI ON/OFF 1625 / 1250 GPM 486 SPM 108 TRQ. ON / OFF 8 / 3 NOV - DEWATERING SWACO - OFF LINE P/U 117 S/O 94 R/T 104 SLIDE FT TIME HOUR ROP
	14:30 - 17:30	3.00	DRLPRV	02	B	P		DRILL SLID F/ 3862 TO 4150 FT 288 ROP 96.0 WT ON BIT 18- 20 TD RPM 40 MM RPM 113 MUD WT 8.5 VIS 26 PUMP PSI ON/OFF 1625 / 1250 GPM 486 SPM 108 TRQ. ON / OFF 7 / 3 NOV - DEWATERING SWACO - OFF LINE P/U 117 S/O 94 R/T 104 SLIDE 29 FT TIME 45 MINS ROP 38.66 P/U 131 S/O 101 R/T 114 RIG SER
	17:30 - 18:00	0.50	DRLPRV	07	A	P		
	18:00 - 0:00	6.00	DRLPRV	02	B	P		DRILL SLID F/ 4150 TO 4880 FT 730 ROP 121.66 WT ON BIT 18- 20 TD RPM 40 MM RPM 113 MUD WT 8.5 VIS 26 PUMP PSI ON/OFF 1625 / 1250 GPM 486 SPM 108 TRQ. ON / OFF 7 / 3 NOV - DEWATERING SWACO - OFF LINE P/U 117 S/O 94 R/T 104 SLIDE FT TIME MINS ROP

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-22M4CS ORANGE		Spud Date: 10/1/2012	
Project: UTAH-UINTAH		Site: NBU 921-22M PAD	Rig Name No: H&P 318/318, PROPETRO 11/11
Event: DRILLING		Start Date: 9/19/2012	End Date: 9/22/2012
Active Datum: RKB @4,930.00usft (above Mean Sea Level)		UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
11/17/2012	0:00 - 0:30	0.50	DRLPRV	02	B	P		DRILL SLID F/ 4880 TO 4895 FT 15 ROP 30 WT ON BIT 18- 20 TD RPM 40 MM RPM 113 MUD WT 8.4 VIS 26 PUMP PSI ON/OFF 1625 / 1250 GPM 486 SPM 108 TRQ. ON / OFF 8 / 3 NOV - DEWATERING SWACO - OFF LINE P/U 117 S/O 94 R/T 104 *** WORK TIGHT HOLE @ 4895'
	0:30 - 1:00	0.50	DRLPRV	22	M	X		
	1:00 - 12:30	11.50	DRLPRV	02	B	P		DRILL SLID F/ 4895 TO 5750 FT 855 ROP 74.34 WT ON BIT 24- 28 TD RPM 46-60 MM RPM 124 MUD WT 8.8 VIS 38 PUMP ON / OFF 2150 / 1700 GPM 540 SPM 60/60 TRQ. ON / OFF 8 / 6 NOV - CONVENTIONAL SWACO - OFF LINE P/U 161 S/O 116 R/T 134 SLIDE FT 19 TIME 35 MINS BIT 10'WEST & 14.5' NORTH OF CENTER OF TARGET
	12:30 - 13:00	0.50	DRLPRV	07	A	P		RIG SER CHANGE OUT FAN BELT ON # 1 GEN SET
	13:00 - 19:00	6.00	DRLPRV	02	B	P		DRILL SLID F/ 5750 TO 6182 FT 432 ROP 72 WT ON BIT 24- 28 TD RPM 46-60 MM RPM 124 MUD WT 8.8 VIS 38 PUMP ON / OFF 2150 / 1700 GPM 540 SPM 60/60 TRQ. ON / OFF 8 / 6 NOV - CONVENTIONAL SWACO - OFF LINE P/U 161 S/O 116 R/T 134 SLIDE FT TIME MINS
	19:00 - 20:00	1.00	DRLPRV	22	G	X		LOST CIRCULATAION NO FLOW BUILT UP SWEEPS WITH 15 % LCM PUMP DOWN HOLE REGAINED FLOW
	20:00 - 0:00	4.00	DRLPRV	02	B	P		DRILL SLID F/ 6182 TO 6480 FT 298 ROP 74.5 WT ON BIT 24- 28 TD RPM -52 MM RPM 124 MUD WT 8.8 VIS 37 PUMP ON / OFF 2400 / 2100 GPM 540 SPM 60/60 TRQ. ON / OFF 10 / 7 NOV - CONVENTIONAL SWACO - OFF LINE P/U 175 S/O 125 R/T 146 SLIDE FT 10 TIME 30 MINS TOTAL LOSS 250 BBLs

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-22M4CS ORANGE Spud Date: 10/1/2012
 Project: UTAH-UINTAH Site: NBU 921-22M PAD Rig Name No: H&P 318/318, PROPETRO 11/11
 Event: DRILLING Start Date: 9/19/2012 End Date: 9/22/2012
 Active Datum: RKB @4,930.00usft (above Mean Sea Level) UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
11/18/2012	0:00 - 12:00	12.00	DRLPRV	02	B	P		DRILL SLID F/ 6480 TO 7330 FT 850 ROP 70.83 WT ON BIT 24- 28 TD RPM -52 MM RPM 124 MUD WT 8.7 VIS 37 PUMP ON / OFF 2250 / 1825 GPM 540 SPM 60/60 TRQ. ON / OFF 10 / 7 NOV - CONVENTIONAL SWACO - OFF LINE P/U 200 S/O 131 R/T 161 SLIDE FT 29 TIME 1 HRS 50 MINS TOTAL LOSS 250 BBLs
	12:00 - 16:00	4.00	DRLPRV	02	B	P		DRILL SLID F/ 7330 TO 7640 FT 310 ROP 77.5 WT ON BIT 24- 28 TD RPM -52 MM RPM 124 MUD WT 8.7 VIS 37 PUMP ON / OFF 2250 / 1825 GPM 540 SPM 60/60 TRQ. ON / OFF 10 / 7 NOV - CONVENTIONAL SWACO - OFF LINE P/U 200 S/O 131 R/T 161 SLIDE FT TIME HRS MINS TOTAL LOSS 250 BBLs
	16:00 - 16:30	0.50	DRLPRV	07	A	P		RIG SER
	16:30 - 19:00	2.50	DRLPRV	02	B	P		DRILL SLID F/ 7640 TO 7829 FT 189 ROP 75.6 WT ON BIT 24- 28 TD RPM -52 MM RPM 124 MUD WT 8.7 VIS 37 PUMP ON / OFF 2250 / 1825 GPM 540 SPM 60/60 TRQ. ON / OFF 10 / 7 NOV - CONVENTIONAL SWACO - OFF LINE P/U 200 S/O 131 R/T 161 SLIDE FT 10 TIME 30 MINS TOTAL LOSS 270 BBLs
	19:00 - 20:00	1.00	DRLPRV	22	L	Z		*** LOST SIGNAL HAD TO MOVE GROUND WIRE AROUND
	20:00 - 0:00	4.00	DRLPRV	02	B	P		DRILL SLID F/ 7829 TO 8058 FT 229 ROP 57.25 WT ON BIT 24- 28 TD RPM -52 MM RPM 124 MUD WT 8.9 VIS 37 PUMP ON / OFF 2300 / 1987 GPM 540 SPM 60/60 TRQ. ON / OFF 12 / 10 NOV - CONVENTIONAL SWACO - OFF LINE P/U 216 S/O 143 R/T 170 SLIDE FT TIME MINS TOTAL LOSS 270 BBLs

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-22M4CS ORANGE Spud Date: 10/1/2012
 Project: UTAH-UINTAH Site: NBU 921-22M PAD Rig Name No: H&P 318/318, PROPETRO 11/11
 Event: DRILLING Start Date: 9/19/2012 End Date: 9/22/2012
 Active Datum: RKB @4,930.00usft (above Mean Sea Level) UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
11/19/2012	0:00 - 12:00	12.00	DRLPRV	02	B	P		DRILL SLID F/ 8058 TO 8727 FT 669 ROP 55.75 WT ON BIT 26- 28 TD RPM -52 MM RPM 124 MUD WT 9.1 VIS 37 PUMP ON / OFF 2500 / 2175 GPM 540 SPM 60/60 TRQ. ON / OFF 12 / 11 NOV - CONVENTIONAL SWACO - OFF LINE P/U 235 S/O 150 R/T 184 SLIDE FT 20' TIME 2 HRS ROP 10' TOTAL LOSS 270 BBLS
	12:00 - 17:30	5.50	DRLPRV	02	B	P		DRILL SLID F/ 8727 TO 9055 FT ROP 59.63 WT ON BIT 26- 28 TD RPM -52 MM RPM 124 MUD WT 9.1 VIS 37 PUMP ON / OFF 2500 / 2175 GPM 540 SPM 60/60 TRQ. ON / OFF 12 / 11 NOV - CONVENTIONAL SWACO - OFF LINE P/U 235 S/O 150 R/T 184 SLIDE 10 FT TIME 1 HRS ROP 10 TOTAL LOSS 270 BBLS
	17:30 - 18:00	0.50	DRLPRV	07	A	P		RIG SER.
	18:00 - 0:00	6.00	DRLPRV	02	B	P		DRILL SLID F/ 9055 TO 9454 FT 399 ROP 66.5 WT ON BIT 26- 28 TD RPM -52 MM RPM 124 MUD WT 9.1 VIS 37 PUMP ON / OFF 2500 / 2175 GPM 540 SPM 60/60 TRQ. ON / OFF 14 / 13 NOV - CONVENTIONAL SWACO - OFF LINE P/U 248 S/O 1155 R/T 190 SLIDE 10 FT TIME 1 HRS ROP 10 TOTAL LOSS 270 BBLS
11/20/2012	0:00 - 2:00	2.00	DRLPRV	02	B	P		DRILL SLID F/ 9454 TO 9624 F T170 ROP 85.0 WT ON BIT 26- 28 TD RPM -52 MM RPM 124 MUD WT 9.1 VIS 37 PUMP ON / OFF 2500 / 2175 GPM 540 SPM 60/60 TRQ. ON / OFF 14 / 13 NOV - CONVENTIONAL SWACO - OFF LINE P/U 248 S/O 1155 R/T 190 SLIDE FT TIME HRS ROP TOTAL LOSS 270 BBLS
	2:00 - 2:30	0.50	DRLPRV	22	L	Z		*** LOST SIGNAL W/ MWD TOOLS HAD TO RE SYNC TOOLS

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-22M4CS ORANGE

Spud Date: 10/1/2012

Project: UTAH-UINTAH

Site: NBU 921-22M PAD

Rig Name No: H&P 318/318, PROPETRO 11/11

Event: DRILLING

Start Date: 9/19/2012

End Date: 9/22/2012

Active Datum: RKB @4,930.00usft (above Mean Sea Level)

UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	2:30 - 9:00	6.50	DRLPRV	02	B	P		DRILL SLID F/ 9624 TO 10027 F T 403 ROP 67.16 WT ON BIT 26- 28 TD RPM -52 MM RPM 124 MUD WT 9.1 VIS 37 PUMP ON / OFF 2500 / 2175 GPM 540 SPM 60/60 TRQ. ON / OFF 14 / 13 NOV - CONVENTIONAL SWACO - OFF LINE P/U 248 S/O 1155 R/T 190 SLIDE FT TIME HRS ROP TOTAL LOSS 270 BBLS
	9:00 - 12:00	3.00	DRLPRV	05	B	P		DISPLACE HOLE WITH 12.2 MUD HAD 12.2 MUD TO SURFACE LOST CIRC
	12:00 - 12:30	0.50	DRLPRV	06	K	X		*** PULLED 5 STANDS OUT HOLE TO REESTABLISH RETURNS LOST 400BBLS
	12:30 - 14:30	2.00	DRLPRV	05	B	X		*** CIRC BUILD VOLUME TO TRIP WITH
	14:30 - 20:30	6.00	DRLPRV	06	E	P		TRIP OUT HOLE WPER TO RUN 4.5 CASING
	20:30 - 22:00	1.50	DRLPRV	06	A	P		LAY DOWN MWD TOOL MONEL DC
	22:00 - 0:00	2.00	DRLPRV	06	E	P		TIH TO LAY DOWN 4.5 DRILL PIPE
11/21/2012	0:00 - 3:00	3.00	DRLPRV	06	E	P		TIH TO LAY DOWN 4.5 DRILL PIPE
	3:00 - 4:00	1.00	DRLPRV	03	E	P		WASHED F/ 10,000 TO 10, 027
	4:00 - 6:00	2.00	DRLPRV	05	C	P		CIRCULATE & CONDITION
	6:00 - 13:30	7.50	DRLPRV	06	A	P		LAY DOWN DRILLSTRING
	13:30 - 14:00	0.50	DRLPRV	07	A	P		RIG SERVICE
	14:00 - 14:30	0.50	DRLPRV	14	B	P		PULL WEAR BUSHING
	14:30 - 15:30	1.00	DRLPRV	12	A	P		SAFETY MEETING W/ KIMZEY, RIG UP CASERS
	15:30 - 22:30	7.00	DRLPRV	12	C	P		RUN 228 JTS 4.5 PROD CASING (117 JTS LTC & 111 JTS DQX) SHOE 10008', TOP OF FLOAT 9960', TOP OF MARKER 7768', TOP OF X/O 4864'
	22:30 - 0:00	1.50	DRLPRV	05	D	P		CIRCULATE OUT GAS F/ CEMENT, RIG DOWN CASERS, SAFETY MEETING W/ BJ SERVICES
11/22/2012	0:00 - 0:30	0.50	CSGPRO	12	B	P		RIG UP BJ SERVICES
	0:30 - 4:30	4.00	CSGPRO	12	E	P		CEMENT PROD CASING, PRESSURE TEST TO 5700 PSI, DROP BOTTOM PLUG , PUMP 25 BBLS SPACER , 633 SX, 200 BBLS, PREMIUM LITE II CEMENT + .05 LBS/SX STATIC FREE+ 0.4% BWOC FL-52 + 0.4% BWOC SODIUM METASILICATE + 6% BWOC BENTONITE II + 0.6% BWOC R-3 +0.25 LBS/SACK CELLO FLAKE +5 LBS/SX KOL-SEAL,50 LB BAG 84.8 % FRESH WATER ,13# 1.77 YLD, LEAD , 1240 SACKS , 294 BBLS , (50:50) POZ (FLY ASH): CLASS G CEMENT + 0.05 LBS/SACK STATIC FREE + 10% BWOW SODIUM CHLORIDE + 0.9% BWOC R-3 +.5% BWOC EC-1+ 0.002 GPS FP-6L +1.2% BWOC SODIUM METASILICATE 2% BWOC BENTONITE II + 59% FRESH WATER 14.3#, 1.33 YLD TAIL, SHUT DOWN WASH UP ,DROP TOP PLUG, DISPLACE W/ 154.8 BBLS CLAY CARE + 1 GAL MAGNACIDE @ 8.34 PPG, FINAL LIFT 2966 PSI , BUMP PLUG @ 3430 PSI HELD F/ 5 MIN , FLOATS HELD ,LOST RETURNS 130 BBLS INTO DISPLACMENT, SLOWED RATE TO 2 BBL/MIN, 15 BBLS SPACER BACK, NO CEMENT BACK TO SURFACE ,TOP OF TAIL EST 4448',

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-22M4CS ORANGE

Spud Date: 10/1/2012

Project: UTAH-UINTAH

Site: NBU 921-22M PAD

Rig Name No: H&P 318/318, PROPETRO 11/11

Event: DRILLING

Start Date: 9/19/2012

End Date: 9/22/2012

Active Datum: RKB @4,930.00usft (above Mean Sea Level)

UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	4:30 - 5:00	0.50	CSGPRO	12	B	P		RIG DOWN CEMENTERS
	5:00 - 6:00	1.00	CSGPRO	14	B	P		INSTALL PACK OFF, L/D LANDING JOINT
	6:00 - 10:00	4.00	CSGPRO	14	A	P		NIPPLE DOWN BOP & EQUIPMENT ,CLEAN PITS W/ PRICE WATER SERVICE SUPER VAC TRUCK, RELEASE RIG @ 10:00 11/22/2012 TO NBU 921-22E4BS

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 921-22M4CS ORANGE	Wellbore No.	OH
Well Name	NBU 921-22M4CS	Wellbore Name	NBU 921-22M4CS
Report No.	1	Report Date	12/5/2012
Project	UTAH-UINTAH	Site	NBU 921-22M PAD
Rig Name/No.		Event	COMPLETION
Start Date	12/5/2012	End Date	1/21/2013
Spud Date	10/1/2012	Active Datum	RKB @4,930.00usft (above Mean Sea Level)
UWI	SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0		

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	6,754.0 (usft)-9,773.0 (usft)	Start Date/Time	12/31/2012 12:00AM
No. of Intervals	62	End Date/Time	12/31/2012 12:00AM
Total Shots	228	Net Perforation Interval	72.00 (usft)
Avg Shot Density	3.17 (shot/ft)	Final Surface Pressure	
		Final Press Date	

2 Intervals

2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/2012 12:00AM	WASATCH/ 2			6,754.0	6,756.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/2012 12:00AM	WASATCH/			6,874.0	6,876.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			6,904.0	6,906.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			7,253.0	7,255.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			7,466.0	7,468.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			7,562.0	7,564.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			7,726.0	7,727.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			7,761.0	7,762.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			7,791.0	7,792.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			7,832.0	7,834.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			7,906.0	7,907.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	WASATCH/			7,938.0	7,940.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,084.0	8,085.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,118.0	8,119.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,130.0	8,131.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr. Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/2012 12:00AM	MESAVERDE/			8,143.0	8,144.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,172.0	8,173.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,191.0	8,192.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,210.0	8,211.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,249.0	8,250.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,257.0	8,258.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,268.0	8,269.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,305.0	8,306.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,337.0	8,338.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,344.0	8,345.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,364.0	8,365.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,424.0	8,425.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,434.0	8,435.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,501.0	8,502.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr. Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/2012 12:00AM	MESAVERDE/			8,616.0	8,617.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,624.0	8,625.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,638.0	8,639.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,675.0	8,677.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,721.0	8,722.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,780.0	8,781.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,786.0	8,787.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,796.0	8,797.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,865.0	8,866.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,880.0	8,881.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			8,944.0	8,946.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,043.0	9,044.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,060.0	9,061.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,089.0	9,090.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

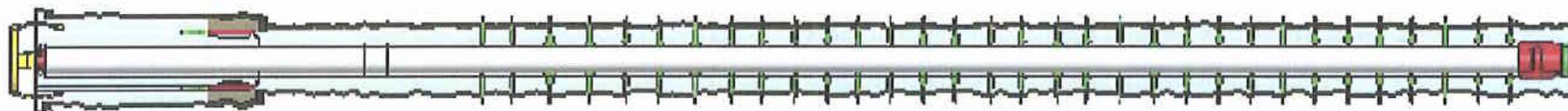
Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr. Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/2012 12:00AM	MESAVERDE/			9,139.0	9,140.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,149.0	9,150.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,205.0	9,206.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,213.0	9,214.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,285.0	9,286.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,328.0	9,329.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,373.0	9,374.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,406.0	9,407.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,452.0	9,453.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,463.0	9,464.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,486.0	9,487.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,531.0	9,532.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,551.0	9,552.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,570.0	9,571.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/2012 12:00AM	MESAVERDE/			9,594.0	9,595.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,671.0	9,672.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,706.0	9,707.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,717.0	9,718.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/2012 12:00AM	MESAVERDE/			9,772.0	9,773.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

3 Plots

3.1 Wellbore Schematic



**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-22M4CS ORANGE

Spud Date: 10/1/2012

Project: UTAH-UINTAH

Site: NBU 921-22M PAD

Rig Name No: MILES 2/2

Event: COMPLETION

Start Date: 12/5/2012

End Date: 1/21/2013

Active Datum: RKB @4,930.00usft (above Mean Sea Level)

UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/5/2012	12:30 - 12:45	0.25	FRAC	33	C	P		RU HOT OILER, FILLED 8 5/8 X 4 1/2" ANNULAR WITH 2 BBLs H2O, PRESSURED TO 1500 PSI NO BLEED OFF, BLED WELL DOWN, MOVED TO BONANZA 1023-5L PAD
12/6/2012	-							
12/20/2012	15:00 - 15:30	0.50	FRAC	33	C	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST 54 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. SWM FN NOTE TESTED SURFACE TO 1500 PSI NO LEAK HSM. HIGH PSI LINES & WL SAFETY.
1/1/2013	6:45 - 7:00	0.25	FRAC	48		P		PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH PERF AS PER DESIGN. POOH. SWM FN.
	7:00 - 18:00	11.00	FRAC	36	B	P		
1/2/2013	6:45 - 7:00	0.25	FRAC	36	B	P		-15* PSI TEST FRAC LINES T/ 8500 PSI. LOST 500 PSI. BLEED OFF PSI. BEG FRAC. FRAC STG 1)WHP 1645 PSI, BRK 3685 PSI@4.7 BPM. ISIP 2731 PSI, FG. 0.72 CALC PERFS OPEN @ 49.4 BPM @ 5334 PSI = 100% ISIP 3051 PSI, FG. 0.75, NPI 320 PSI. MP 5728 PSI, MR 50.3 BPM, AP 5360 PSI, AR 49.3 BPM, PUMPED 30/50 OWATTA SAND. SWM, XO T/ WL. PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 9517' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC. FRAC STG 2)WHP 1870 PSI, BRK 3370 PSI@4.7 BPM. ISIP 2349 PSI, FG. 0.69 CALC PERFS OPEN @ 49.5 BPM @ 5705 PSI = 91% ISIP 3063 PSI, FG. 0.77, NPI 714 PSI. MP 6021 PSI, MR 52.5 BPM, AP 5370 PSI, AR 50.2 BPM, PUMPED 30/50 OWATTA SAND. SWM, XO T/ WL. PERF STG 3)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 9244' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC. FRAC STG 3)WHP 2435 PSI, BRK 3416 PSI@4.7 BPM. ISIP 2413 PSI, FG. 0.7 CALC PERFS OPEN @ 49.6 BPM @ 5837 PSI = 86% ISIP 2938 PSI, FG. 0.76, NPI 525 PSI. MP 6369 PSI, MR 52.4 BPM, AP 5640 PSI, AR 51.2 BPM, PUMPED 30/50 OWATTA SAND. SWM FN.

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-22M4CS ORANGE Spud Date: 10/1/2012

Project: UTAH-UINTAH Site: NBU 921-22M PAD Rig Name No: MILES 2/2

Event: COMPLETION Start Date: 12/5/2012 End Date: 1/21/2013

Active Datum: RKB @4,930.00usft (above Mean Sea Level) UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/3/2013	6:30 - 7:00	0.50	FRAC	48		P		JSA-SAFETY MEETING, - 13* ORANGE AND YELLOW WELL FRAC VALVE FROZE UP,
	7:00 - 17:00	10.00	FRAC	36	E	P		PERF STG #4) P/U 4 1/2" 8K HAL CBP & 3 1/8" EXP GUN, 21 GM, .36 HOLE SIZE, 120 DEG PHASING, RIH SET CBP @ 8976', P/U PERF AS DESING, POOH, XO TO FRAC, FRAC STG 4) WHP 720 PSI, BRK 3229 PSI @ 4.7 BPM. ISIP = 2296 PSI, FG. 0.70, CALC PERFS OPEN @ 51.4 BPM @ 5511 PSI = 83% (20/24 HOLES OPEN), ISIP = 3040 PSI, FG. 0.78, NPI = 744 PSI. MP = 5815 PSI, MR = 52.4 BPM, AP = 5054 PSI, AR = 51.1 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL. PERF STG 5)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8707' P/U PERF AS PER DESIGN. POOH. XO T/ FRAC. FRAC STG 5) WHP 2060 PSI, BRK 2860 PSI, @ 4.7 BPM. ISIP = 2107 PSI, FG. 0.69, CALC PERFS OPEN @ 51.9 BPM @ 5887 PSI = 81%, (17/24 HOLES OPEN) ISIP = 2934 PSI, FG. 0.78, NPI = 827 PSI. MP = 5693 PSI, MR = 52.8 BPM, AP = 4960 PSI, AR = 51.1 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL. PERF STG 6)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8395' P/U PERF AS PER DESIGN. XO TO FRAC FRAC STG 6) WHP 1355 PSI, BRK 2153 PSI @ 4.7 BPM. ISIP = 1752 PSI, FG.0.65, CALC PERFS OPEN @ 50.9 BPM @ 5447 PSI = 81%, (17/21 HOLES OPEN) ISIP = 2395 PSI, FG.0.73 , NPI = 643 PSI. MP = 5688 PSI, MR = 51.4 BPM, AP = 4819 PSI, AR = 50.6 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL. PERF STG 7)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8221 ' P/U PERF AS PER DESIGN. POOH. SVMFN
1/4/2013	6:30 - 7:00	0.50	FRAC	48		P		JSA-SAFETY MEETING, - 22* WORKING IN COLD BE CAREFUL

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-22M4CS ORANGE

Spud Date: 10/1/2012

Project: UTAH-UINTAH

Site: NBU 921-22M PAD

Rig Name No: MILES 2/2

Event: COMPLETION

Start Date: 12/5/2012

End Date: 1/21/2013

Active Datum: RKB @4,930.00usft (above Mean Sea Level)

UWI: SW/SW/0/9/S/21/E/22/0/0/26/PM/S/670/W/0/643/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:00 - 17:00	10.00	FRAC	36	E	P		<p>BLEED OFF LINE FROZE UP AS SOON AS WTR HIT THE LINE, CHANGE OUT 2" LINE,</p> <p>FRAC STG 7) WHP 1520 PSI, BRK 2958 PSI, @ 4.7 BPM. ISIP = 1809 PSI, FG. 0.66, CALC PERFS OPEN @ 52.3 BPM @ 4926 PSI = 100%, (21/21 HOLES OPEN) ISIP = 2349 PSI, FG.0.73 , NPI = 73 PSI. MP = 5223 PSI, MR = 52.5 BPM, AP = 4367 PSI, AR = 50.7 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 8)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7970' P/U PERF AS PER DESIGN. XO TO FRAC</p> <p>FRAC STG 8) WHP 1457 PSI, BRK 2811 PSI @ 4.7 BPM. ISIP = 1711 PSI, FG.0.66, CALC PERFS OPEN @ 49.7 BPM @ 4982 PSI = 75%, (18/24 HOLES OPEN) ISIP = 2786 PSI, FG. 0.79, NPI = 1075 PSI. MP = 5250 PSI, MR = 50.6 BPM, AP = 4646 PSI, AR = 48.8 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 9)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7594' P/U PERF AS PER DESIGN. XO TO FRAC</p> <p>FRAC STG 9) WHP 1650 PSI, BRK 2610 PSI @ 7.4 BPM. ISIP = 2274 PSI, FG 0.75, CALC PERFS OPEN @ 49.3 BPM @ 5277 PSI = 79%, (19/24 HOLES OPEN) ISIP = 2539 PSI, FG.0.78 , NPI = 265 PSI. MP = 5963 PSI, MR = 50.2 BPM, AP = 4787 PSI, AR = 48.9 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 10)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 6936' P/U PERF AS PER DESIGN. XO TO FRAC</p> <p>FRAC STG 10) WHP 420 PSI, BRK 1411 PSI @ 4.8 BPM. ISIP = 903 PSI, FG. 0.57, CALC PERFS OPEN @ 48.8 BPM @ 3974 PSI = 75%, (18/24 HOLES OPEN) ISIP = 1831 PSI, FG 0.71, NPI = 928 PSI. MP = 4570 PSI, MR = 50.3 BPM, AP = 3404 PSI, AR = 48.6 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>(KILL PLUG) RIH W/ HAL 8K CBP, SET CBP @ 6704', SHUT WELL IN, R/D WIRELINE AND FRAC,</p>

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-22M4CS ORANGE

Spud Date: 10/1/2012

Project: UTAH-UINTAH

Site: NBU 921-22M PAD

Rig Name No: MILES 2/2

Event: COMPLETION

Start Date: 12/5/2012

End Date: 1/21/2013

Active Datum: RKB @4,930.00usft (above Mean Sea Level)

UWI: SW/SW/O/9/S/21/E/22/O/0/26/PM/S/670/W/O/643/O/0

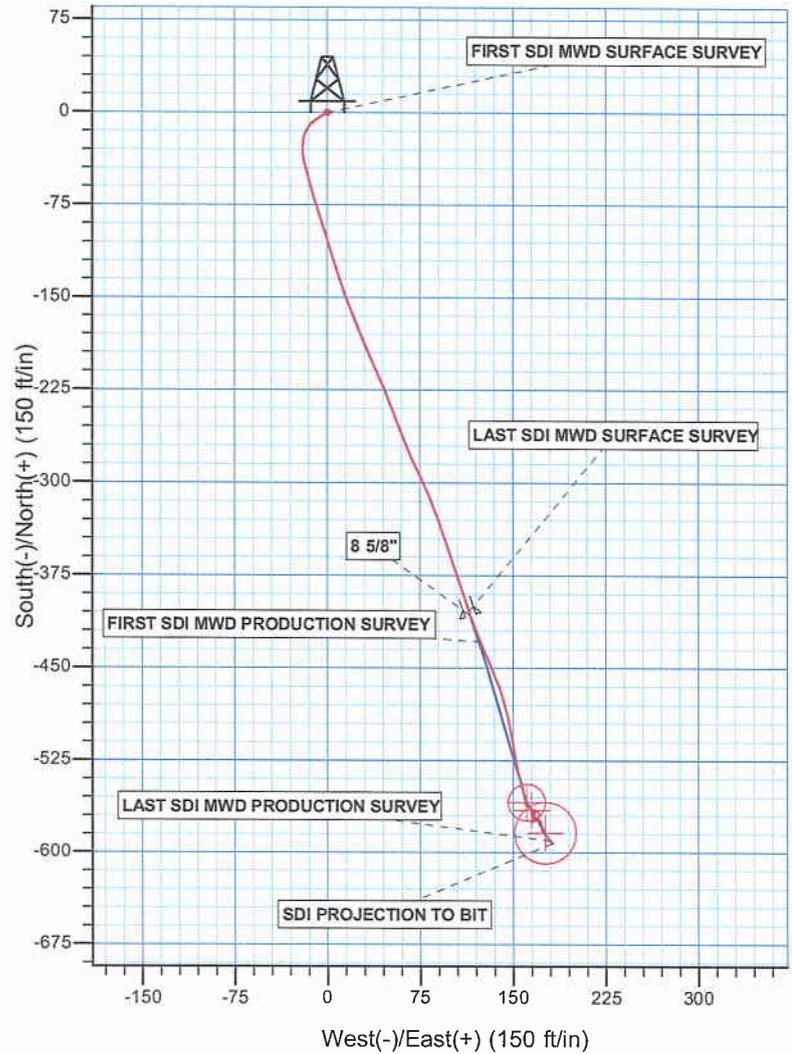
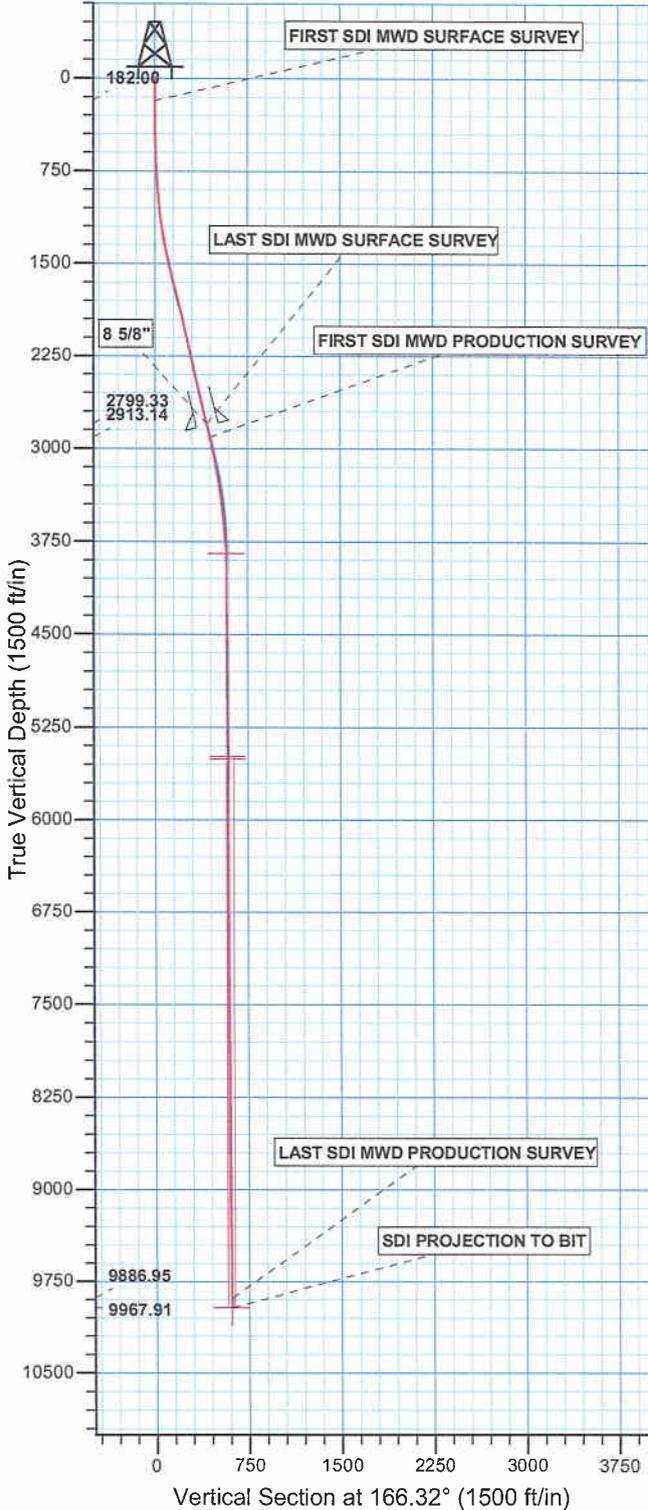
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/18/2013	7:00 - 7:30	0.50	DRLOUT	48		P		TOTAL WATER = 8110 BBLS TOTAL SAND = 174108# MIRU MIRU, NDWH, NU BOP'S, PU POBS, BIT, SN, TIH TBG, 212 JTS, 6704', TAG KILL PLUG, BREAK CIRC, PRESSURE TEST BOP'S, 3000#, PU PWR SWIVEL, MILL 6 CBP, 286 JTS, 8437', WINTERIZE RIG, SWMFWE
	7:30 - 16:30	9.00	DRLOUT	44	C	P		
1/21/2013	7:00 - 7:30	0.50	DRLOUT	48		P		PLUG# 1 6704' 10' SAND 5 MIN 0# KICK PLUG# 2 6936' 20' SAND 5 MIN 200# KICK PLUG# 3 7594' 30' SAND 5 MIN 600# KICK PLUG# 4 7970' 50' SAND 5 MIN 600# KICK PLUG# 5 8221' 30' SAND 5 MIN 500# KICK PLUG# 6 8395' 10' SAND 5 MIN 600# KICK JSA LANDING TBG PU PWR SWIVEL, MILL 4 CBP'S, C/O 45' SAND, TO PBTD, 314 JTS, 9961', POOH TO 9235.86', 291 JTS, LAND TBG, ND BOP'S, NUWH, TEST FLOW LINE, 3000#, POBS 1100#, TURN TO FBC 12 NOON, RDMO TO MORGAN STATE 921-36F2 PAD
	7:30 - 17:30	10.00	DRLOUT	44	C	P		
								PLUG# 7 8707' 10' SAND 5 MIN 500# KICK PLUG# 8 8976' 20' SAND 5 MIN 500# KICK PLUG# 9 9244' 30 SAND 5 MIN 500# KICK PLUG# 10 9510' 10' SAND 5 MIN 500# KICK
								PBTD 9,961' BTM PERF 9773'
								TBG 292 JTS 9208.83' KB 14.00' HANGER 4.125" .83' SN 1.875" 2.20' EOT 9235.86'
	17:30 - 17:30	0.00	DRLOUT	50				FRAC WTR 8110 BBLS RCVD 2100 BBLS LTR 6010 BBLS WELL TURNED TO SALES @ 1400 HR ON 1/21/2013. 3800 MCFD, 1560 BWPD, 20/64" CK.
1/22/2013	-							
1/23/2013	-							
	7:00 -			50				WELL IP'D ON 1/23/13 - 1987 MCFD, 0 BWPD, 0 BOPD, CP 2002#, FTP 1199#, LP 68#, 24 HRS, CK 20/64

WELL DETAILS: NBU 921-22M4CS					
GL 4906 & KB 24 @ 4930.00ft (HP 318)					
+N/-S 0.00	+E/-W 0.00	Northing 14535274.64	Easting 2047992.05	Latitude 40.016205	Longitude -109.544360



Azimuths to True North
 Magnetic North: 11.04°

Magnetic Field
 Strength: 52290.4snT
 Dip Angle: 65.86°
 Date: 11/15/2011
 Model: IGRF2010



PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N
Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 22 T9S R21E
System Datum: Mean Sea Level

Design: OH (NBU 921-22M4CS/OH)
Created By: Gabe Kendall Date: 9:31, November 29 2012



Scientific Drilling

US ROCKIES REGION PLANNING

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

NBU 921-22M PAD

NBU 921-22M4CS

OH

Design: OH

Standard Survey Report

29 November, 2012

Anadarko 
Petroleum Corporation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 921-22M4CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4906 & KB 24 @ 4930.00ft (HP 318)
Site:	NBU 921-22M PAD	MD Reference:	GL 4906 & KB 24 @ 4930.00ft (HP 318)
Well:	NBU 921-22M4CS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

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

Site	NBU 921-22M PAD, SECTION 22 T9S R21E				
Site Position:		Northing:	14,535,316.97 usft	Latitude:	40.016320
From:	Lat/Long	Easting:	2,048,018.80 usft	Longitude:	-109.544262
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.94 °

Well	NBU 921-22M4CS, 670 FSL 643 FWL					
Well Position	+N/-S	0.00 ft	Northing:	14,535,274.64 usft	Latitude:	40.016205
	+E/-W	0.00 ft	Easting:	2,047,992.04 usft	Longitude:	-109.544360
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,906.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/15/11	11.04	65.86	52,290

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	166.32	

Survey Program	Date	11/29/12			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
162.00	2,844.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
2,961.00	10,027.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162.00	0.44	215.54	162.00	-0.51	-0.36	0.41	0.27	0.27	0.00	
182.00	0.44	224.15	182.00	-0.62	-0.46	0.50	0.33	-0.01	43.07	
FIRST SDI MWD SURFACE SURVEY										
191.00	0.44	228.02	191.00	-0.67	-0.51	0.53	0.33	0.02	42.95	
218.00	0.70	243.75	218.00	-0.81	-0.73	0.62	1.12	0.96	58.26	
245.00	1.14	236.11	244.99	-1.04	-1.10	0.75	1.69	1.63	-28.30	
271.00	1.41	244.98	270.99	-1.32	-1.61	0.90	1.28	1.04	34.12	
300.00	1.82	244.05	299.97	-1.67	-2.35	1.07	1.42	1.41	-3.21	
329.00	2.20	237.78	328.96	-2.17	-3.23	1.34	1.51	1.31	-21.62	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 921-22M4CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4906 & KB 24 @ 4930.00ft (HP 318)
Site:	NBU 921-22M PAD	MD Reference:	GL 4906 & KB 24 @ 4930.00ft (HP 318)
Well:	NBU 921-22M4CS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
360.00	2.46	239.27	359.93	-2.82	-4.31	1.72	0.86	0.84	4.81	
450.00	2.64	236.37	449.84	-4.96	-7.69	3.00	0.25	0.20	-3.22	
540.00	3.25	233.38	539.72	-7.63	-11.47	4.70	0.70	0.68	-3.32	
630.00	3.61	212.82	629.56	-11.53	-15.05	7.64	1.42	0.40	-22.84	
720.00	3.87	202.89	719.37	-16.71	-17.77	12.03	0.77	0.29	-11.03	
810.00	4.48	186.10	809.14	-23.00	-19.32	17.78	1.51	0.68	-18.66	
900.00	5.01	179.77	898.83	-30.43	-19.68	24.91	0.83	0.59	-7.03	
990.00	5.45	167.55	988.46	-38.53	-18.74	33.01	1.33	0.49	-13.58	
1,080.00	6.24	165.38	1,077.99	-47.44	-16.59	42.17	0.91	0.88	-2.41	
1,170.00	7.56	165.27	1,167.34	-57.90	-13.85	52.98	1.47	1.47	-0.12	
1,260.00	8.79	162.72	1,256.42	-70.19	-10.30	65.76	1.42	1.37	-2.83	
1,350.00	10.73	162.54	1,345.11	-84.75	-5.74	80.99	2.16	2.16	-0.20	
1,440.00	11.61	162.10	1,433.41	-101.36	-0.44	98.38	0.98	0.98	-0.49	
1,530.00	12.75	162.63	1,521.38	-119.46	5.30	117.32	1.27	1.27	0.59	
1,620.00	13.98	162.54	1,608.94	-139.31	11.53	138.08	1.37	1.37	-0.10	
1,710.00	14.42	157.80	1,696.19	-160.05	19.03	160.01	1.38	0.49	-5.27	
1,800.00	14.98	158.67	1,783.25	-181.26	27.49	182.62	0.67	0.62	0.97	
1,890.00	13.72	155.07	1,870.44	-201.78	36.22	204.62	1.71	-1.40	-4.00	
1,980.00	13.45	157.62	1,957.92	-221.14	44.71	225.44	0.73	-0.30	2.83	
2,070.00	13.54	159.12	2,045.44	-240.66	52.45	246.24	0.40	0.10	1.67	
2,160.00	13.89	157.89	2,132.87	-260.51	60.27	267.37	0.51	0.39	-1.37	
2,250.00	12.13	157.71	2,220.56	-279.27	67.92	287.41	1.96	-1.96	-0.20	
2,340.00	11.61	154.28	2,308.63	-296.18	75.44	305.62	0.97	-0.58	-3.81	
2,430.00	12.22	156.74	2,396.70	-313.09	83.13	323.87	0.88	0.68	2.73	
2,520.00	12.75	160.96	2,484.57	-331.23	90.13	343.15	1.17	0.59	4.69	
2,610.00	13.81	162.02	2,572.16	-350.83	96.69	363.75	1.21	1.18	1.18	
2,700.00	13.72	160.79	2,659.58	-371.13	103.51	385.08	0.34	-0.10	-1.37	
2,790.00	13.98	161.05	2,746.96	-391.49	110.56	406.53	0.30	0.29	0.29	
2,844.00	14.25	162.19	2,799.33	-403.99	114.71	419.66	0.72	0.50	2.11	
LAST SDI MWD SURFACE SURVEY										
2,961.00	12.57	156.81	2,913.14	-429.40	124.13	446.58	1.79	-1.44	-4.60	
FIRST SDI MWD PRODUCTION SURVEY										
3,055.00	12.31	156.90	3,004.93	-448.02	132.09	466.55	0.28	-0.28	0.10	
3,149.00	10.73	160.50	3,097.04	-465.49	138.94	485.14	1.85	-1.68	3.83	
3,244.00	10.90	165.33	3,190.35	-482.51	144.17	502.92	0.97	0.18	5.08	
3,338.00	10.02	169.73	3,282.79	-499.16	147.87	519.97	1.26	-0.94	4.68	
3,433.00	8.44	170.70	3,376.56	-514.17	150.48	535.17	1.67	-1.66	1.02	
3,527.00	6.68	170.08	3,469.74	-526.37	152.53	547.51	1.87	-1.87	-0.66	
3,621.00	5.54	162.61	3,563.20	-536.08	154.83	557.49	1.48	-1.21	-7.95	
3,716.00	4.40	165.51	3,657.84	-543.99	157.11	565.71	1.23	-1.20	3.05	
3,810.00	3.08	167.88	3,751.64	-549.95	158.55	571.84	1.41	-1.40	2.52	
3,904.00	1.76	173.60	3,845.56	-553.85	159.24	575.80	1.43	-1.40	6.09	
3,999.00	1.93	169.20	3,940.51	-556.87	159.70	578.84	0.23	0.18	-4.63	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 921-22M4CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4906 & KB 24 @ 4930.00ft (HP 318)
Site:	NBU 921-22M PAD	MD Reference:	GL 4906 & KB 24 @ 4930.00ft (HP 318)
Well:	NBU 921-22M4CS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,093.00	1.93	167.71	4,034.45	-559.97	160.33	582.01	0.05	0.00	-1.59
4,187.00	0.35	157.69	4,128.43	-561.79	160.78	583.87	1.69	-1.68	-10.66
4,282.00	0.26	77.36	4,223.43	-562.01	161.10	584.16	0.42	-0.09	-84.56
4,376.00	0.35	77.79	4,317.43	-561.90	161.59	584.18	0.10	0.10	0.46
4,470.00	0.62	121.56	4,411.43	-562.11	162.30	584.54	0.47	0.29	46.56
4,564.00	0.70	146.26	4,505.42	-562.85	163.05	585.45	0.31	0.09	26.28
4,659.00	0.79	143.54	4,600.41	-563.86	163.76	586.59	0.10	0.09	-2.86
4,753.00	0.86	145.85	4,694.40	-564.96	164.55	587.85	0.08	0.07	2.46
4,848.00	0.97	128.95	4,789.39	-566.06	165.57	589.16	0.31	0.12	-17.79
4,942.00	0.97	127.45	4,883.38	-567.04	166.82	590.41	0.03	0.00	-1.60
5,037.00	0.14	129.37	4,978.37	-567.61	167.55	591.13	0.87	-0.87	2.02
5,131.00	0.42	165.29	5,072.37	-568.01	167.73	591.57	0.34	0.30	38.21
5,226.00	0.35	188.19	5,167.37	-568.64	167.77	592.18	0.18	-0.07	24.11
5,320.00	0.44	186.16	5,261.37	-569.28	167.69	592.79	0.10	0.10	-2.16
5,415.00	0.44	177.46	5,356.36	-570.01	167.67	593.49	0.07	0.00	-9.16
5,509.00	0.62	184.32	5,450.36	-570.87	167.65	594.33	0.20	0.19	7.30
5,603.00	0.62	274.32	5,544.36	-571.34	167.10	594.66	0.93	0.00	95.74
5,698.00	0.88	296.73	5,639.35	-570.98	165.94	594.02	0.41	0.27	23.59
5,792.00	1.14	348.67	5,733.33	-569.73	165.11	592.62	0.97	0.28	55.26
5,887.00	1.06	355.70	5,828.32	-567.93	164.86	590.81	0.16	-0.08	7.40
5,981.00	1.06	346.65	5,922.30	-566.22	164.59	589.08	0.18	0.00	-9.63
6,075.00	0.00	292.51	6,016.30	-565.37	164.39	588.21	1.13	-1.13	0.00
6,170.00	0.00	238.55	6,111.30	-565.37	164.39	588.21	0.00	0.00	0.00
6,265.00	0.40	83.68	6,206.30	-565.34	164.72	588.26	0.42	0.42	0.00
6,359.00	0.53	59.73	6,300.29	-565.08	165.42	588.17	0.25	0.14	-25.48
6,454.00	0.62	97.57	6,395.29	-564.93	166.31	588.23	0.40	0.09	39.83
6,548.00	0.70	107.15	6,489.28	-565.16	167.37	588.71	0.14	0.09	10.19
6,642.00	0.70	118.14	6,583.27	-565.60	168.42	589.39	0.14	0.00	11.69
6,737.00	0.94	125.65	6,678.26	-566.33	169.57	590.37	0.28	0.25	7.91
6,831.00	0.46	164.02	6,772.26	-567.14	170.30	591.33	0.69	-0.51	40.82
6,926.00	0.62	142.92	6,867.25	-567.92	170.71	592.18	0.27	0.17	-22.21
7,020.00	0.84	157.87	6,961.25	-568.96	171.28	593.33	0.31	0.23	15.90
7,115.00	0.70	206.03	7,056.24	-570.13	171.28	594.47	0.67	-0.15	50.69
7,209.00	0.88	207.08	7,150.23	-571.29	170.70	595.45	0.19	0.19	1.12
7,303.00	0.88	199.52	7,244.22	-572.61	170.13	596.61	0.12	0.00	-8.04
7,398.00	0.88	252.43	7,339.21	-573.52	169.19	597.27	0.83	0.00	55.69
7,492.00	0.70	249.01	7,433.20	-573.94	167.97	597.39	0.20	-0.19	-3.64
7,587.00	0.88	248.92	7,528.19	-574.41	166.75	597.56	0.19	0.19	-0.09
7,681.00	0.53	237.93	7,622.18	-574.90	165.71	597.79	0.40	-0.37	-11.69
7,775.00	0.53	244.52	7,716.18	-575.32	164.95	598.01	0.06	0.00	7.01
7,870.00	0.44	9.15	7,811.18	-575.15	164.61	597.77	0.91	-0.09	131.19
7,964.00	0.50	8.34	7,905.17	-574.39	164.72	597.05	0.06	0.06	-0.86
8,058.00	0.53	45.10	7,999.17	-573.68	165.09	596.45	0.35	0.03	39.11
8,153.00	0.62	76.48	8,094.17	-573.25	165.90	596.22	0.34	0.09	33.03

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 921-22M PAD
Well: NBU 921-22M4CS
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 921-22M4CS
TVD Reference: GL 4906 & KB 24 @ 4930.00ft (HP 318)
MD Reference: GL 4906 & KB 24 @ 4930.00ft (HP 318)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
8,247.00	0.88	91.15	8,188.16	-573.14	167.12	596.41	0.34	0.28	15.61
8,341.00	1.06	98.80	8,282.15	-573.29	168.70	596.92	0.24	0.19	8.14
8,435.00	0.79	92.12	8,376.13	-573.45	170.21	597.43	0.31	-0.29	-7.11
8,530.00	0.44	109.61	8,471.13	-573.59	171.20	597.81	0.41	-0.37	18.41
8,624.00	0.53	150.48	8,565.12	-574.09	171.76	598.43	0.37	0.10	43.48
8,719.00	0.53	147.05	8,660.12	-574.84	172.21	599.27	0.03	0.00	-3.61
8,813.00	0.70	168.32	8,754.11	-575.77	172.57	600.25	0.30	0.18	22.63
8,907.00	0.62	174.21	8,848.11	-576.84	172.73	601.33	0.11	-0.09	6.27
9,002.00	0.79	161.38	8,943.10	-577.97	172.99	602.49	0.24	0.18	-13.51
9,096.00	0.12	210.40	9,037.10	-578.67	173.15	603.20	0.76	-0.71	52.15
9,190.00	0.35	189.24	9,131.10	-579.04	173.06	603.54	0.26	0.24	-22.51
9,285.00	0.53	173.07	9,226.09	-579.76	173.06	604.24	0.23	0.19	-17.02
9,379.00	0.70	158.48	9,320.09	-580.73	173.33	605.24	0.24	0.18	-15.52
9,474.00	0.79	154.17	9,415.08	-581.86	173.82	606.46	0.11	0.09	-4.54
9,568.00	1.23	150.57	9,509.07	-583.32	174.60	608.06	0.47	0.47	-3.83
9,663.00	1.32	145.38	9,604.04	-585.11	175.72	610.07	0.15	0.09	-5.46
9,757.00	1.41	138.62	9,698.02	-586.87	177.10	612.10	0.20	0.10	-7.19
9,851.00	1.58	139.67	9,791.98	-588.72	178.71	614.28	0.18	0.18	1.12
9,946.00	1.67	135.45	9,886.95	-590.71	180.53	616.64	0.16	0.09	-4.44
LAST SDI MWD PRODUCTION SURVEY									
10,027.00	1.67	135.45	9,967.91	-592.39	182.18	618.67	0.00	0.00	0.00
SDI PROJECTION TO BIT									

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,859.00	2,813.87	8 5/8"	8.625	11.000

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
9,946.00	9,886.95	-590.71	180.53	LAST SDI MWD PRODUCTION SURVEY
10,027.00	9,967.91	-592.39	182.18	SDI PROJECTION TO BIT

Checked By: _____ Approved By: _____ Date: _____