

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 922-31A2BS				
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) UO 01530 ST			11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>			12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" 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')			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		965 FNL 2222 FEL		NWNE	31	9.0 S	22.0 E	S		
Top of Uppermost Producing Zone		76 FNL 1100 FEL		NENE	31	9.0 S	22.0 E	S		
At Total Depth		76 FNL 1100 FEL		NENE	31	9.0 S	22.0 E	S		
21. COUNTY UINTAH			22. DISTANCE TO NEAREST LEASE LINE (Feet) 76			23. NUMBER OF ACRES IN DRILLING UNIT 40				
			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 478			26. PROPOSED DEPTH MD: 10614 TVD: 10382				
27. ELEVATION - GROUND LEVEL 4892			28. BOND NUMBER 22013542			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	12.25	8.625	0 - 2470	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 - 10614	11.6	P-110 LT&C	13.0	Premium Lite High Strength	310	3.38	12.0
							50/50 Poz	1570	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 Gina Becker			TITLE Regulatory Analyst II			PHONE 720 929-6086				
SIGNATURE			DATE 04/17/2012			EMAIL gina.becker@anadarko.com				
API NUMBER ASSIGNED 43047524890000			APPROVAL  Permit Manager							

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 922-31A2BS**

Surface:	965 FNL / 2222 FEL	NWNE
BHL:	76 FNL / 1100 FEL	NENE

Section 31 T9S R22E

Unitah County, Utah
Mineral Lease: ST UT UO 01530 ST

ONSHORE ORDER NO. 1**DRILLING PROGRAM**

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

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,253'	
Birds Nest	1,567'	Water
Mahogany	2,021'	Water
Wasatch	4,482'	Gas
Mesaverde	7,020'	Gas
Sego	9,280'	Gas
Castlegate	9,335'	Gas
Blackhawk	9,782'	Gas
TVD	10,382'	
TD	10,614'	

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

Please refer to the attached Drilling Program

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

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 10382' TVD, approximately equals
 6,852 psi (0.66 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,615 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. Variations:

Please refer to the attached Drilling Program.
 Onshore Order #2 – Air Drilling Variance

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

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

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

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

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

Background

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

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may

be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole 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.

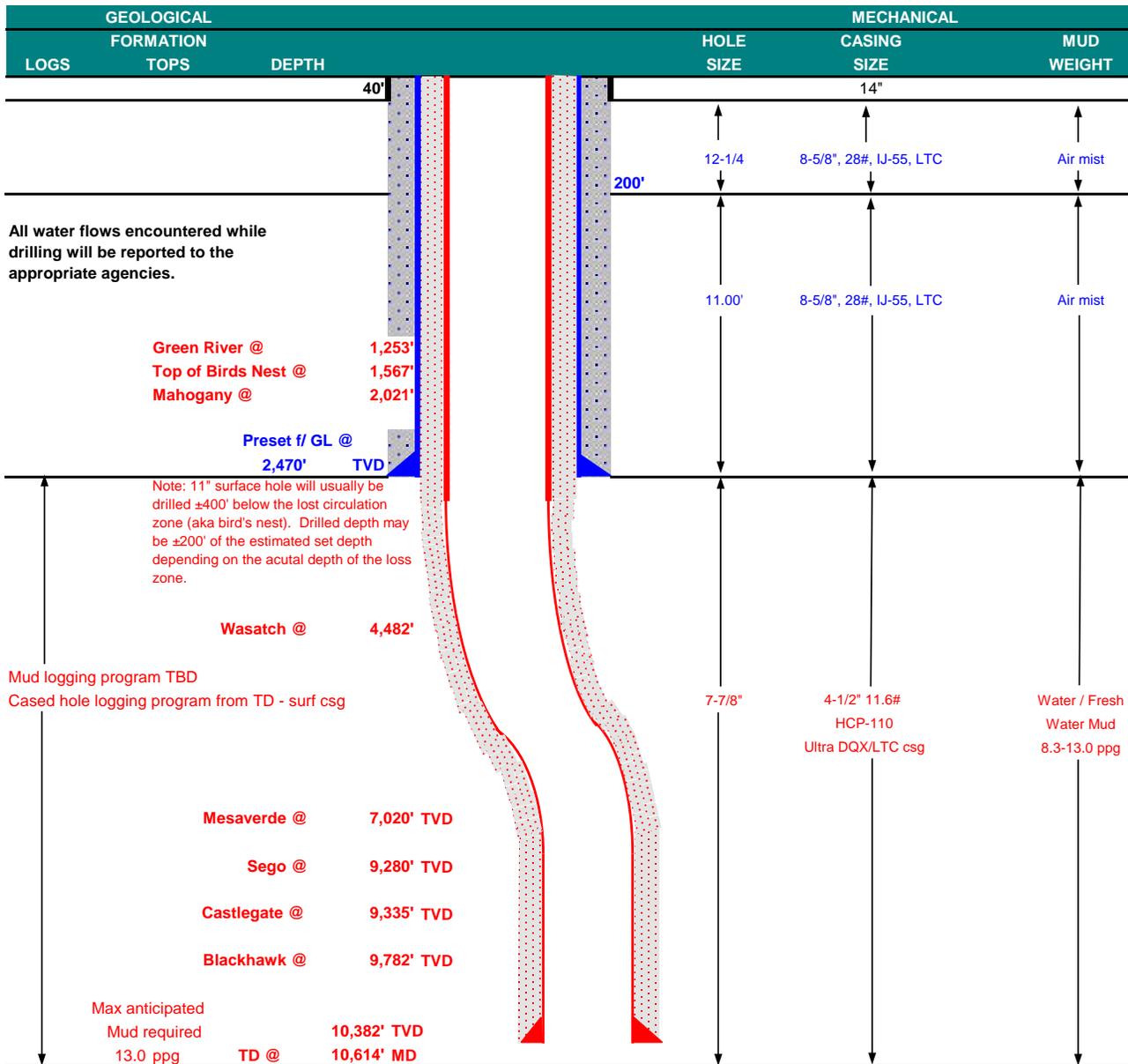
10. Other Information:

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	April 11, 2012	
WELL NAME	NBU 922-31A2BS		TD	10,382'	TVD 10,614' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
SURFACE LOCATION	NWNE	965 FNL	2222 FEL	Sec 31	T 9S R 22E
	Latitude:	39.997143	Longitude:	-109.480528	NAD 27
BTM HOLE LOCATION	NENE	76 FNL	1100 FEL	Sec 31	T 9S R 22E
	Latitude:	39.999593	Longitude:	-109.476528	NAD 27
OBJECTIVE ZONE(S)	BLACKHAWK (Part of the Mesaverde Group)				
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), SITLA (Surface), UDOGM Tri-County Health Dept.				





KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	LTC	DQX
								TENSION	
CONDUCTOR	14"	0-40'							
SURFACE	8-5/8"	0 to 2,470	28.00	IJ-55	LTC	3,390	1,880	348,000	N/A
						10,690	8,650	279,000	367,174
PRODUCTION	4-1/2"	0 to 5,000	11.60	HCP-110	DQX	1.19	1.23		3.72
						1.19	1.23	5.35	

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 Option 1	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
NOTE: If well will circulate water to surface, option 2 will be utilized							
SURFACE Option 2	LEAD	1,970'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	180	35%	11.00	3.82
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	3,974'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	310	35%	12.00	3.38
	TAIL	6,640'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,570	35%	14.30	1.31

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

FLOAT EQUIPMENT & CENTRALIZERS

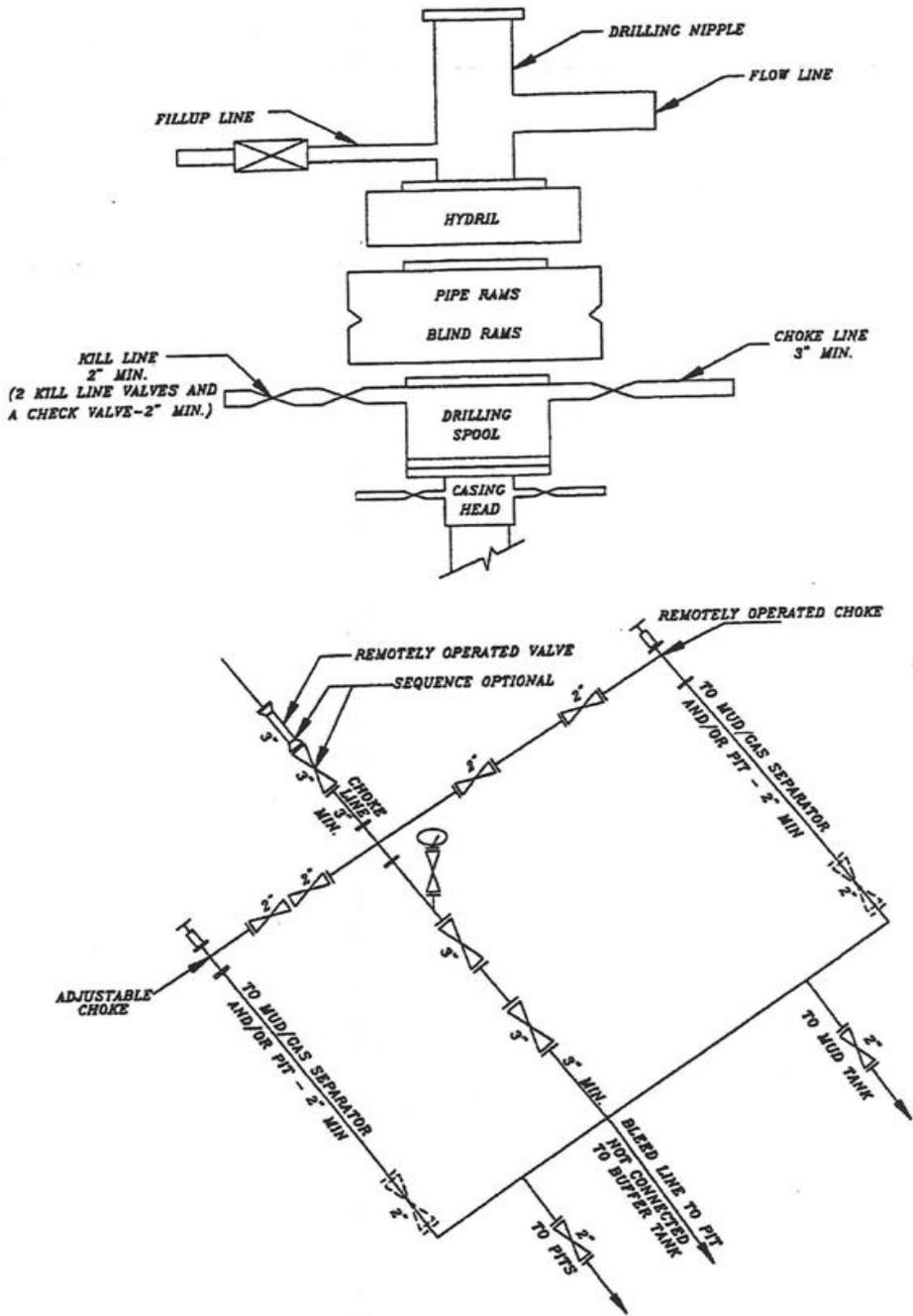
SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter.

ADDITIONAL INFORMATION

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

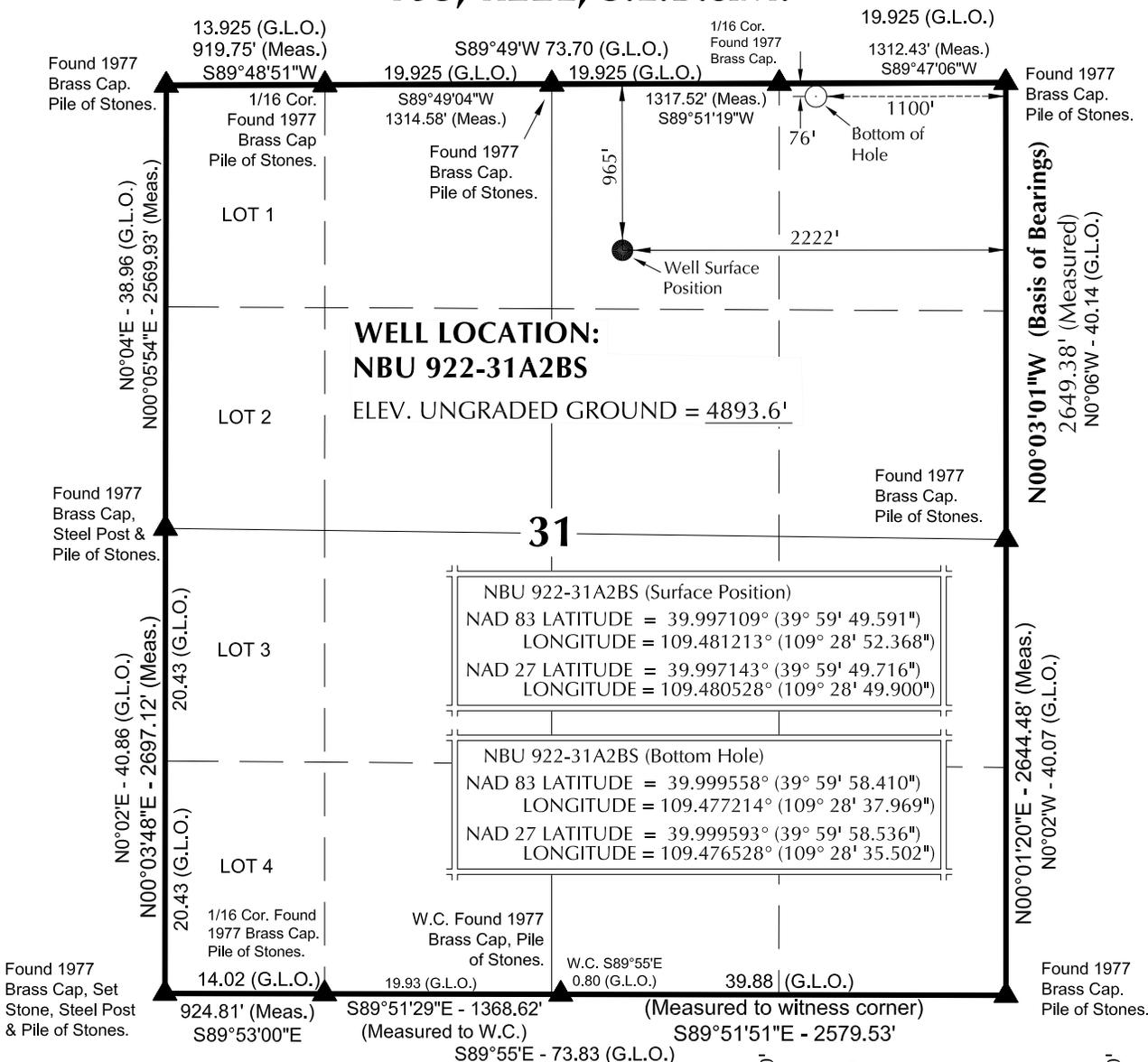
DRILLING ENGINEER: _____ **DATE:** _____
 Nick Spence / Danny Showers / Chad Loesel
DRILLING SUPERINTENDENT: _____ **DATE:** _____
 Kenny Gathings / Lovel Young

EXHIBIT A NBU 922-31A2BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

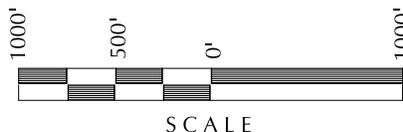
T9S, R22E, S.L.B.&M.



NOTES:

▲ = Section Corners Located

- Well footages are measured at right angles to the Section Lines.
- G.L.O. distances are shown in feet or chains.
1 chain = 66 feet.
- The Bottom of hole bears N51°28'31"E 1432.86' from the Surface Position.
- Bearings are based on Global Positioning Satellite observations.
- Basis of elevation is Tri-Sta "Two Water" located in the NW ¼ of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.



SURVEYOR'S CERTIFICATE

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

11-04-11
 No. 6028691
 JOHN R. LAUGH
 PROFESSIONAL LAND SURVEYOR
 REGISTRATION No. 6028691
 STATE OF UTAH

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

WELL PAD: NBU 922-31B

**NBU 922-31A2BS
 WELL PLAT**

**76' FNL, 1100' FEL (Bottom Hole)
 NE ¼ NE ¼ OF SECTION 31, T9S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH.**

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

TIMBERLINE

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

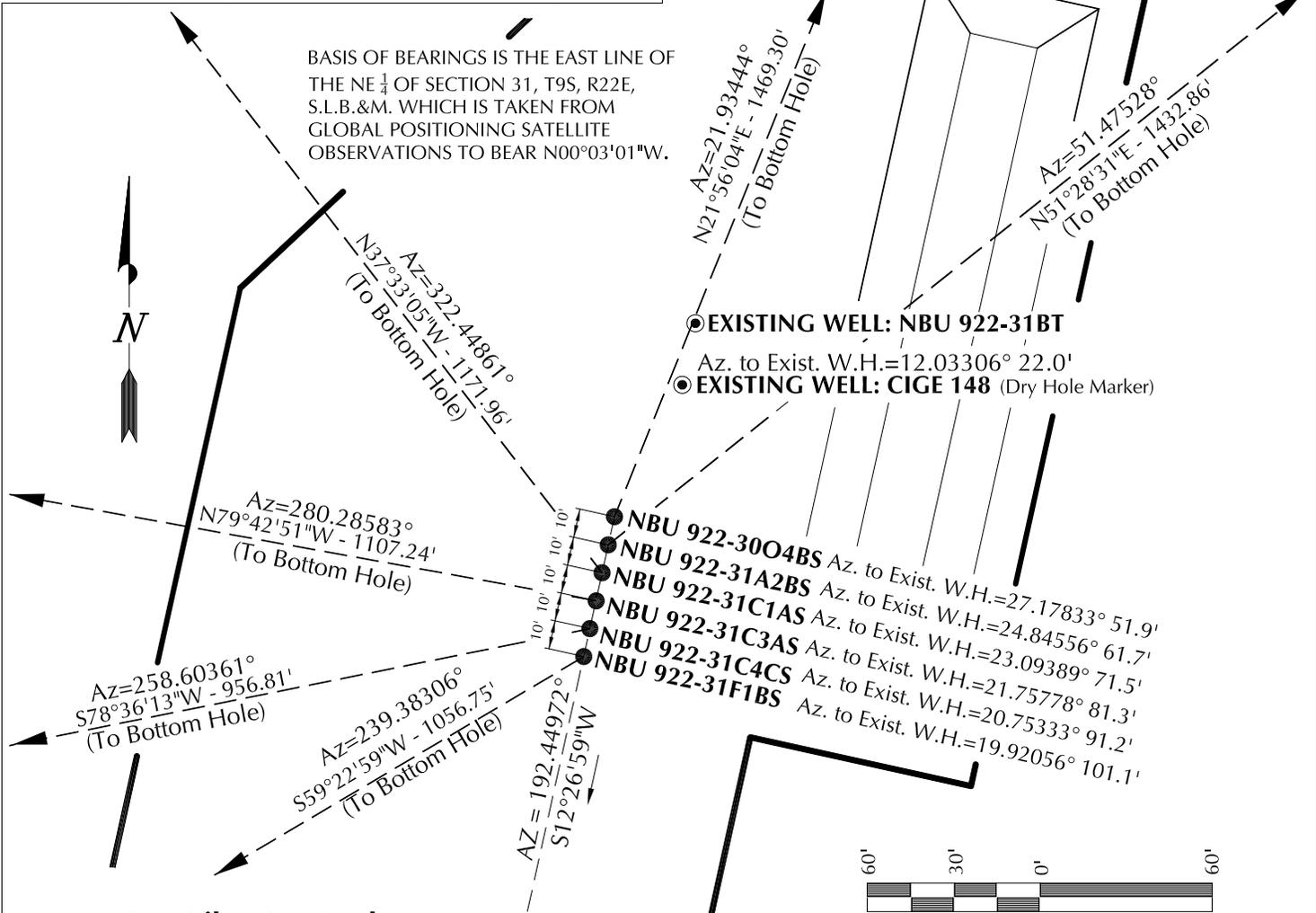
(435) 789-1365

DATE SURVEYED: 10-25-11	SURVEYED BY: M.S.B.	SHEET NO: 2
DATE DRAWN: 08-02-10	DRAWN BY: B.M.	
SCALE: 1" = 1000'		2 OF 18

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 922-3004BS	39°59'49.688"	109°28'52.339"	39°59'49.814"	109°28'49.871"	956' FNL 2220' FEL	40°00'03.154"	109°28'45.292"	40°00'03.280"	109°28'42.824"	406' FSL 1670' FEL
NBU 922-31A2BS	39°59'49.591"	109°28'52.368"	39°59'49.716"	109°28'49.900"	965' FNL 2222' FEL	39°59'58.410"	109°28'37.969"	39°59'58.536"	109°28'35.502"	76' FNL 1100' FEL
NBU 922-31C1AS	39°59'49.494"	109°28'52.395"	39°59'49.620"	109°28'49.927"	975' FNL 2224' FEL	39°59'58.672"	109°29'01.573"	39°59'58.798"	109°28'59.105"	44' FNL 1927' FWL
NBU 922-31C3AS	39°59'49.398"	109°28'52.422"	39°59'49.523"	109°28'49.954"	985' FNL 2226' FEL	39°59'51.348"	109°29'06.417"	39°59'51.474"	109°29'03.949"	784' FNL 1551' FWL
NBU 922-31C4CS	39°59'49.301"	109°28'52.450"	39°59'49.427"	109°28'49.982"	995' FNL 2228' FEL	39°59'47.431"	109°29'04.498"	39°59'47.557"	109°29'02.030"	1181' FNL 1701' FWL
NBU 922-31F1BS	39°59'49.204"	109°28'52.477"	39°59'49.330"	109°28'50.009"	1004' FNL 2230' FEL	39°59'43.885"	109°29'04.158"	39°59'44.011"	109°29'01.690"	1540' FNL 1728' FWL
CIGE 148	39°59'50.143"	109°28'52.035"	39°59'50.269"	109°28'49.567"	909' FNL 2196' FEL	39°59'50.143"	109°28'52.035"	39°59'50.269"	109°28'49.567"	
NBU 922-31BT	39°59'50.356"	109°28'51.976"	39°59'50.482"	109°28'49.508"	888' FNL 2191' FEL	39°59'50.356"	109°28'51.976"	39°59'50.482"	109°28'49.508"	

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 922-3004BS	1362.9'	548.8'	NBU 922-31A2BS	892.5'	1121.0'	NBU 922-31C1AS	929.1'	-714.3'	NBU 922-31C3AS	197.7'	-1089.4'
NBU 922-31C4CS	-189.1'	-937.9'	NBU 922-31F1BS	-538.2'	-909.4'						



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

WELL PAD - NBU 922-31B

WELL PAD INTERFERENCE PLAT
WELLS - NBU 922-3004BS, NBU 922-31A2BS,
NBU 922-31C1AS, NBU 922-31C3AS,
NBU 922-31C4CS & NBU 922-31F1BS
LOCATED IN SECTION 31, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH.

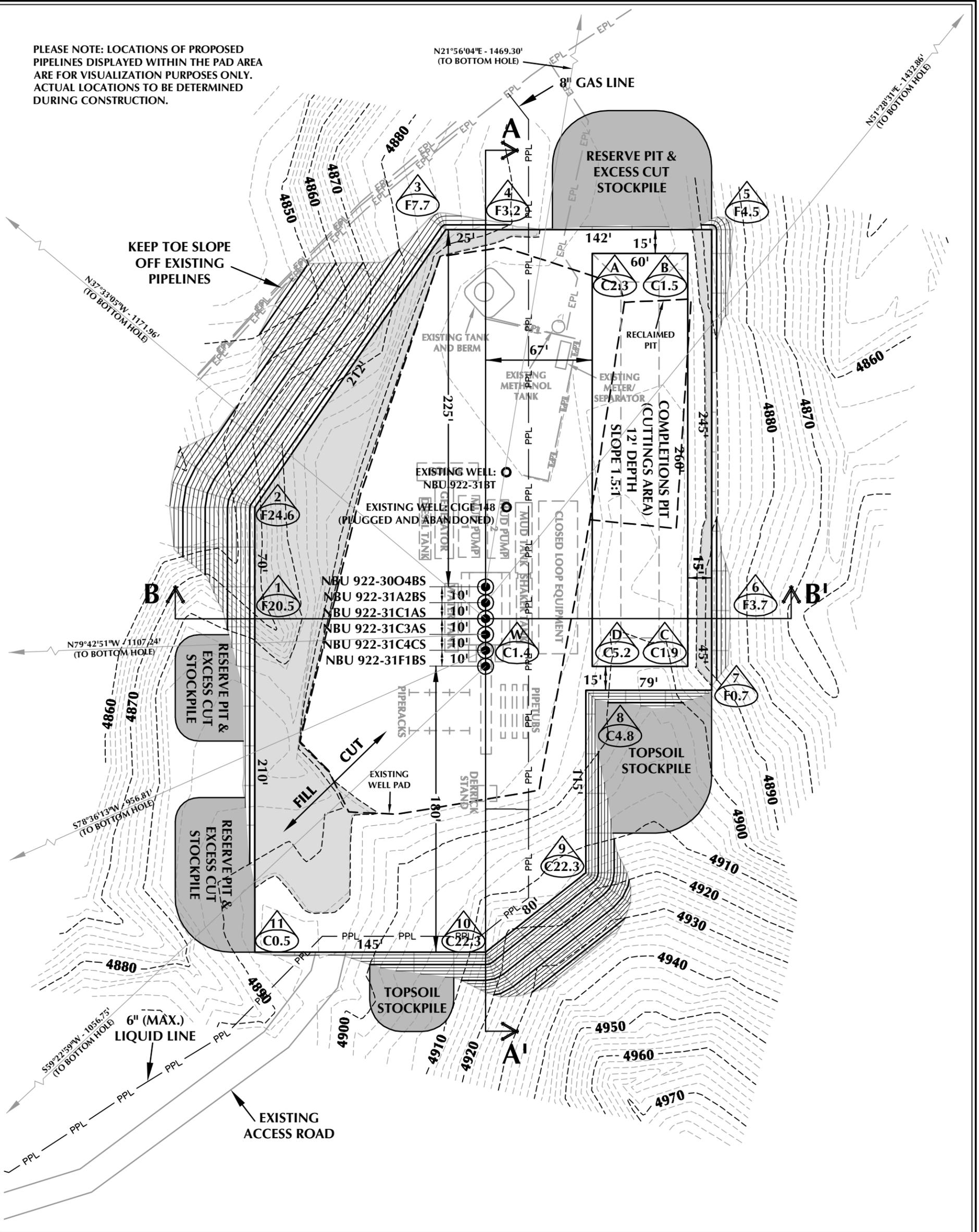


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209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 10-25-11	SURVEYED BY: M.S.B.	SHEET NO: 7
DATE DRAWN: 08-02-10	DRAWN BY: B.M.	7 OF 18
SCALE: 1" = 60'		Date Last Revised 11-04-11 T.J.R.

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 922-31B (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4893.6'
 FINISHED GRADE ELEVATION = 4892.2'
 CUT SLOPES = 1:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 2.98 ACRES
 TOTAL DISTURBANCE AREA = 3.46 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 12,248 C.Y.
 TOTAL FILL FOR WELL PAD = 11,350 C.Y.
 TOPSOIL @ 6" DEPTH = 1,506 C.Y.
 EXCESS MATERIAL = 898 C.Y.

COMPLETIONS PIT QUANTITIES

TOTAL CUT FOR COMPLETIONS PIT +/- 4,570 C.Y.
 COMPLETIONS PIT CAPACITY (2' OF FREEBOARD) +/- 16,750 BARRELS

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 1099 18th Street - Denver, Colorado 80202



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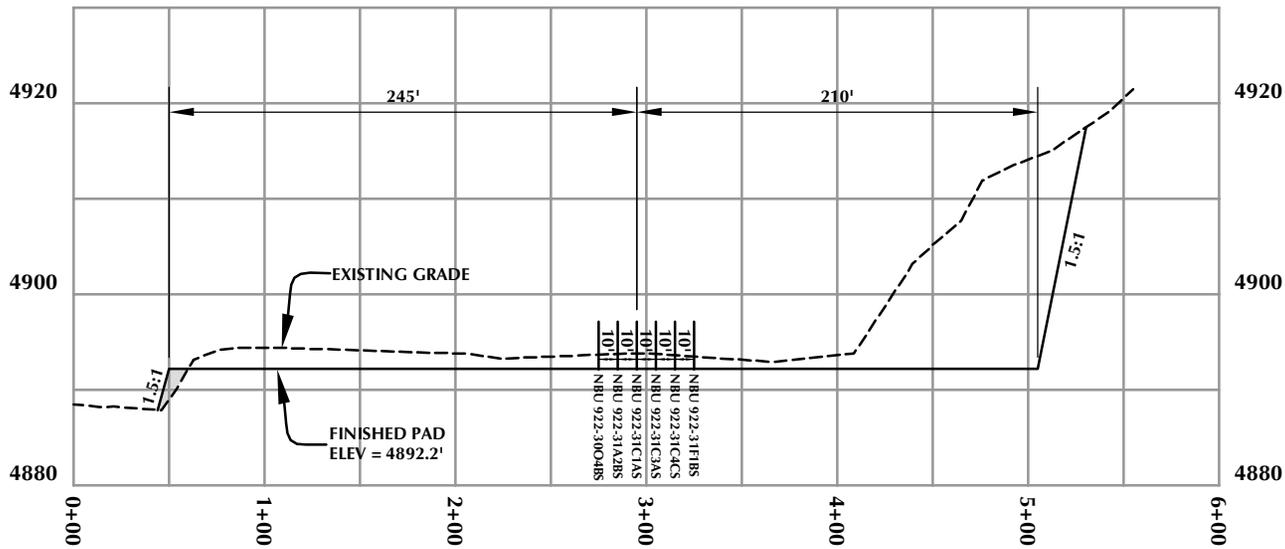
WELL PAD LEGEND

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

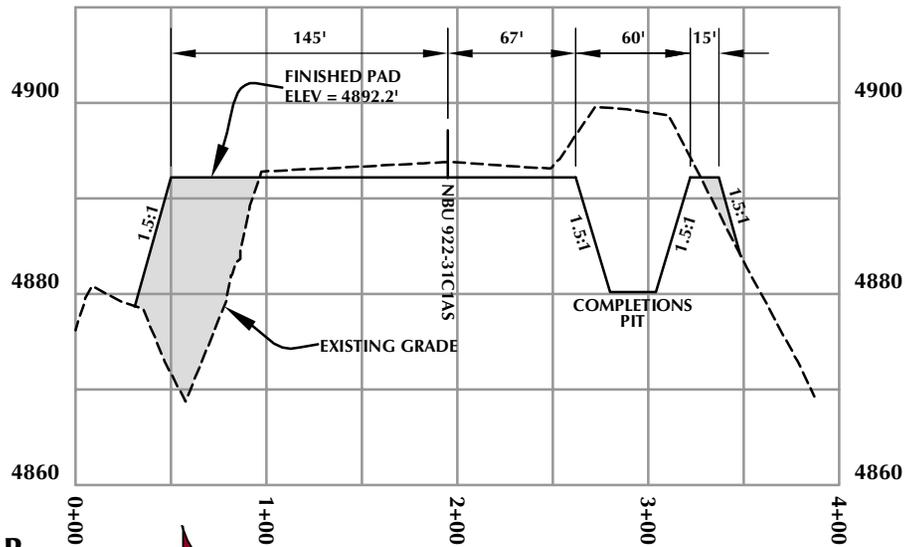


HORIZONTAL 0 30' 60' 1" = 60'
 2' CONTOURS

SCALE: 1"=60' DATE: 1/4/11 SHEET NO: 8 OF 18
 REVISED: DJD 6/14/12



CROSS SECTION A-A'



CROSS SECTION B-B'

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

WELL PAD - NBU 922-31B

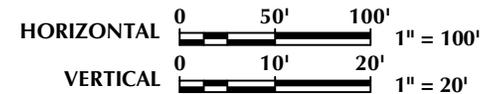
WELL PAD - CROSS SECTIONS
NBU 922-3004BS, NBU 922-31A2BS,
NBU 922-31C1AS, NBU 922-31C3AS,
NBU 922-31C4CS & NBU 922-31F1BS
LOCATED IN SECTION 31, T9S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH



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

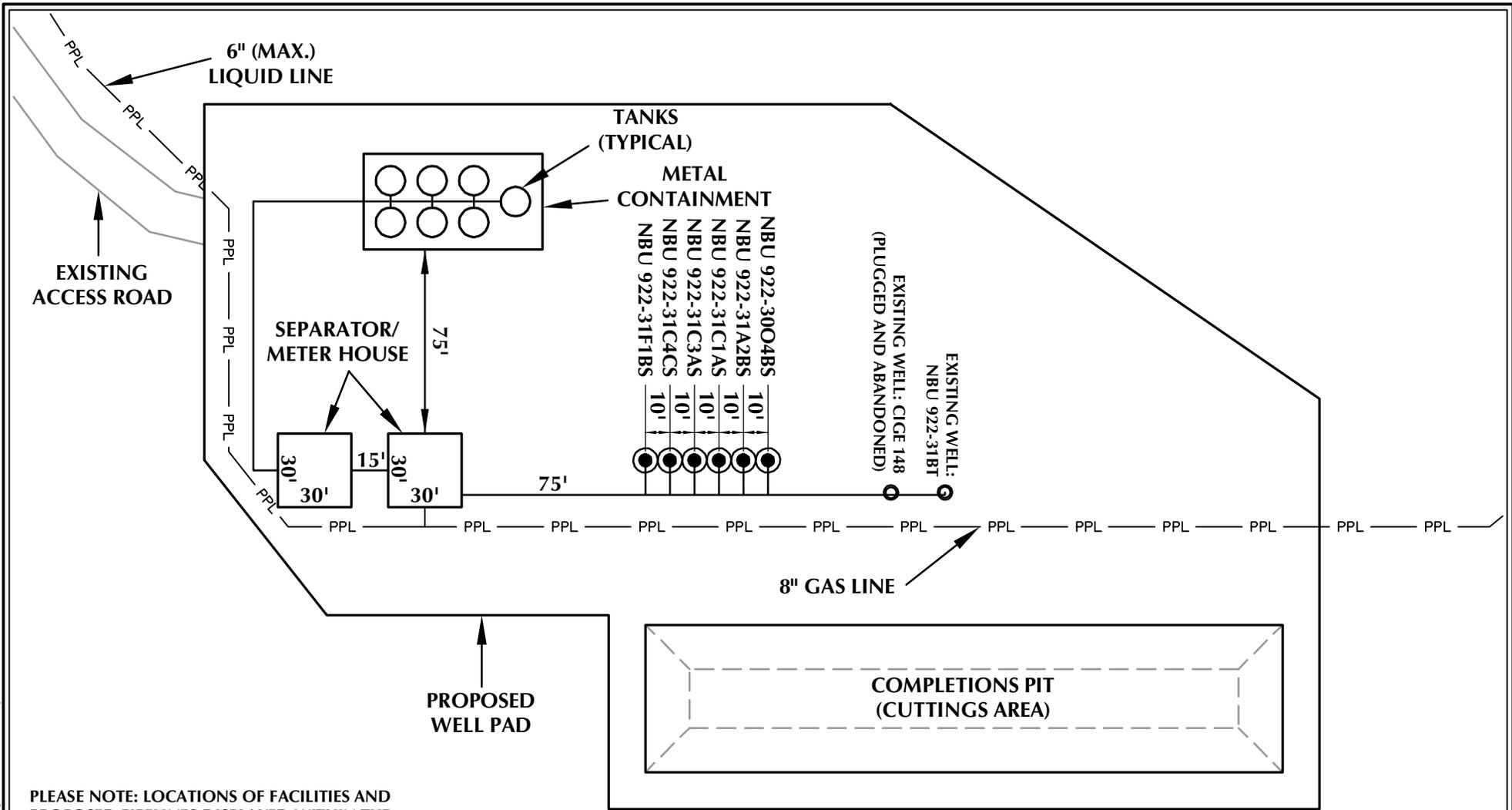
TIMBERLINE
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365



Scale: 1"=100'	Date: 1/4/11	SHEET NO:
REVISED:	JFE 11/4/11	9 9 OF 18

K:\MADR\2010\2010_30_NBU_FOODS_SEC_922_30\DWG\NBU_922_31B\NBU_922_31B.dwg, 11/2/2011 3:54:45 PM, jke



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

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

WELL PAD - NBU 922-31B

WELL PAD - FACILITIES DIAGRAM
NBU 922-3004BS, NBU 922-31A2BS,
NBU 922-31C1AS, NBU 922-31C3AS,
NBU 922-31C4CS & NBU 922-31F1BS
LOCATED IN SECTION 31, T9S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH



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

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE



HORIZONTAL 0 30' 60' 1" = 60'

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

(435) 789-1365

Scale: 1"=60'

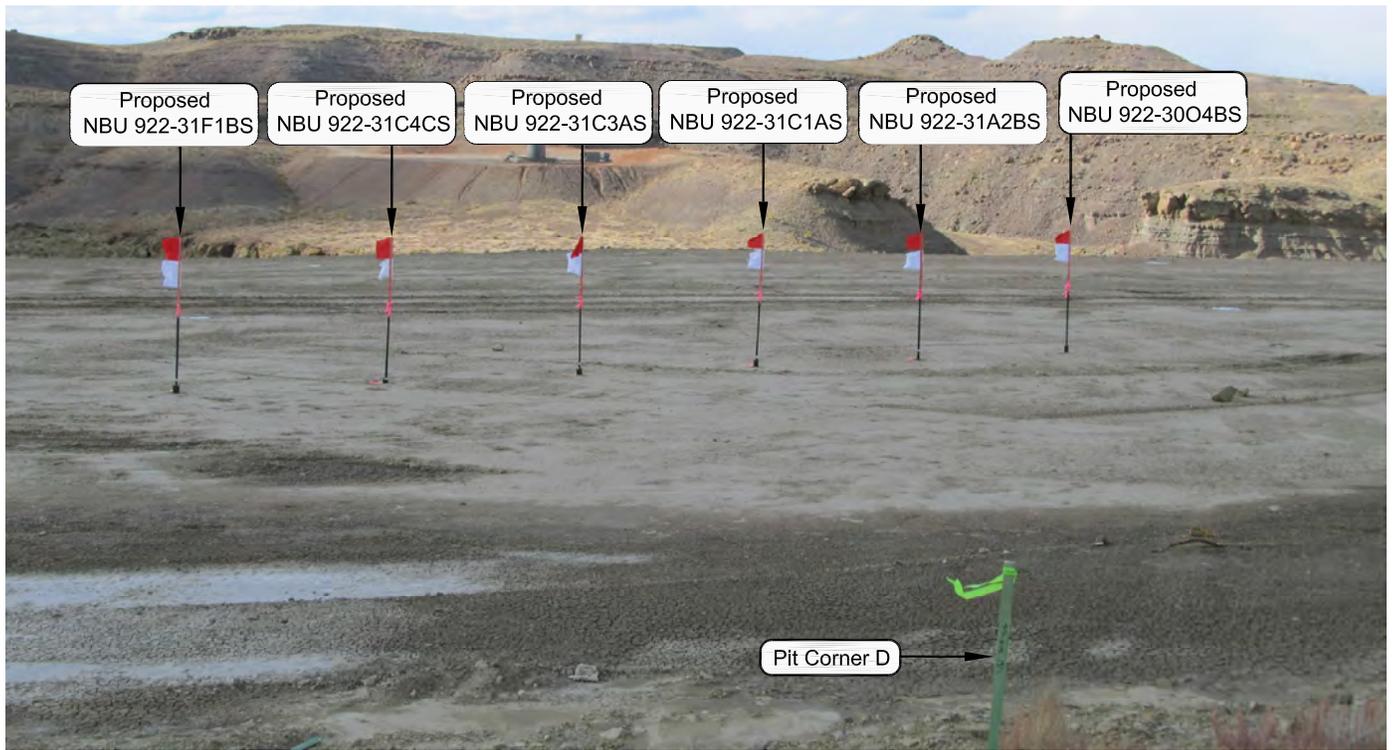
Date: 1/4/11

SHEET NO:

REVISED:

DJD
6/14/12

10 10 OF 18



Proposed NBU 922-31F1BS Proposed NBU 922-31C4CS Proposed NBU 922-31C3AS Proposed NBU 922-31C1AS Proposed NBU 922-31A2BS Proposed NBU 922-30O4BS

Pit Corner D

PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY



Existing Access Road

PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: NORTHEASTERLY

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

WELL PAD - NBU 922-31B

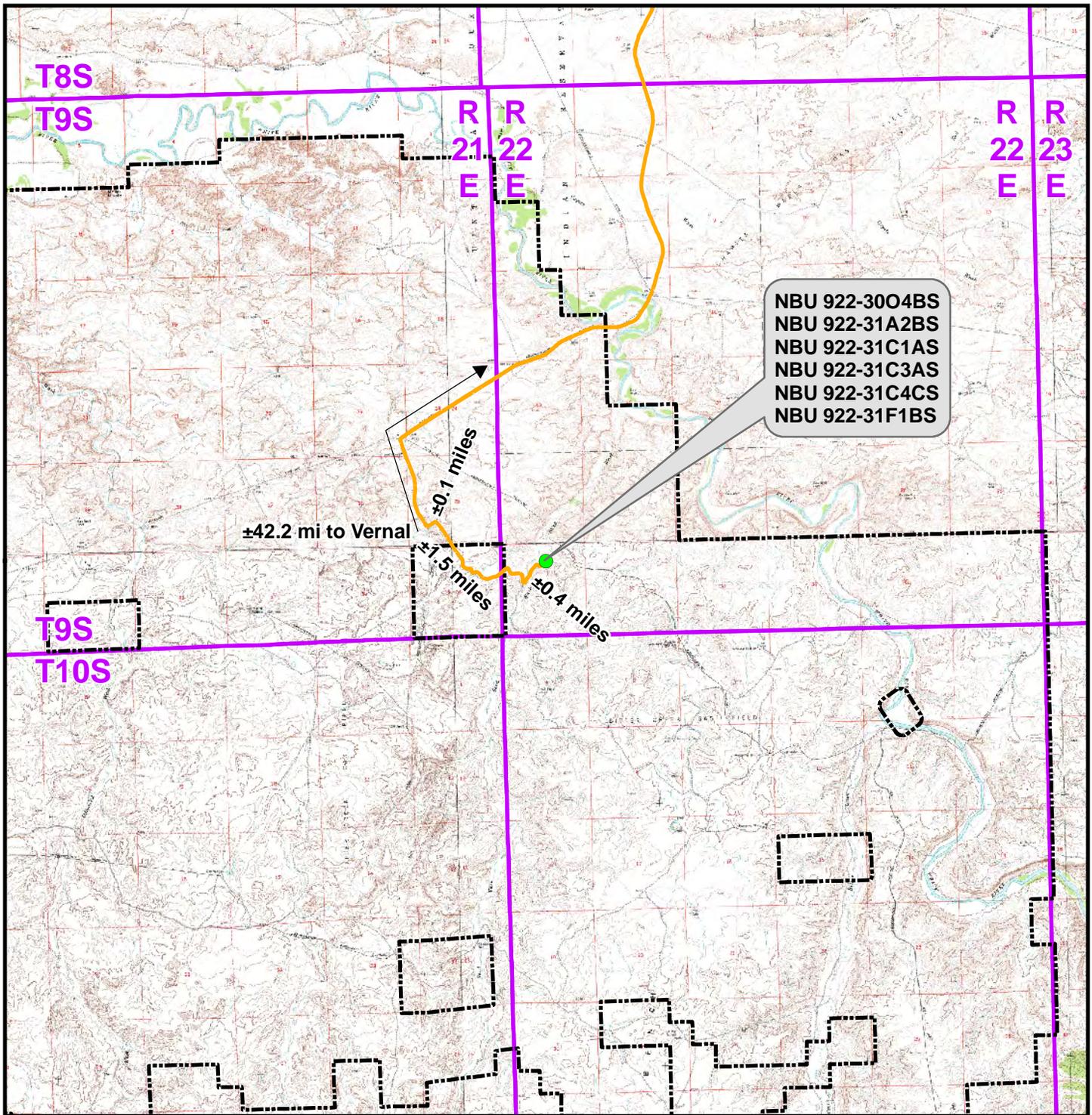
LOCATION PHOTOS
NBU 922-30O4BS, NBU 922-31A2BS,
NBU 922-31C1AS, NBU 922-31C3AS,
NBU 922-31C4CS & NBU 922-31F1BS
LOCATED IN SECTION 31, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH.



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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 PHOTOS TAKEN: 10-25-11	PHOTOS TAKEN BY: M.S.B.	SHEET NO: 11
DATE DRAWN: 08-02-10	DRAWN BY: B.M.	
Date Last Revised: 11-04-11 T.J.R.		11 OF 18



NBU 922-3004BS
 NBU 922-31A2BS
 NBU 922-31C1AS
 NBU 922-31C3AS
 NBU 922-31C4CS
 NBU 922-31F1BS

Legend

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

Distance From Well Pad - NBU 922-31B To Unit Boundary: ±2,637ft

WELL PAD - NBU 922-31B

TOPO A
 NBU 922-3004BS, NBU 922-31A2BS,
 NBU 922-31C1AS, NBU 922-31C3AS,
 NBU 922-31C4CS & NBU 922-31F1BS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

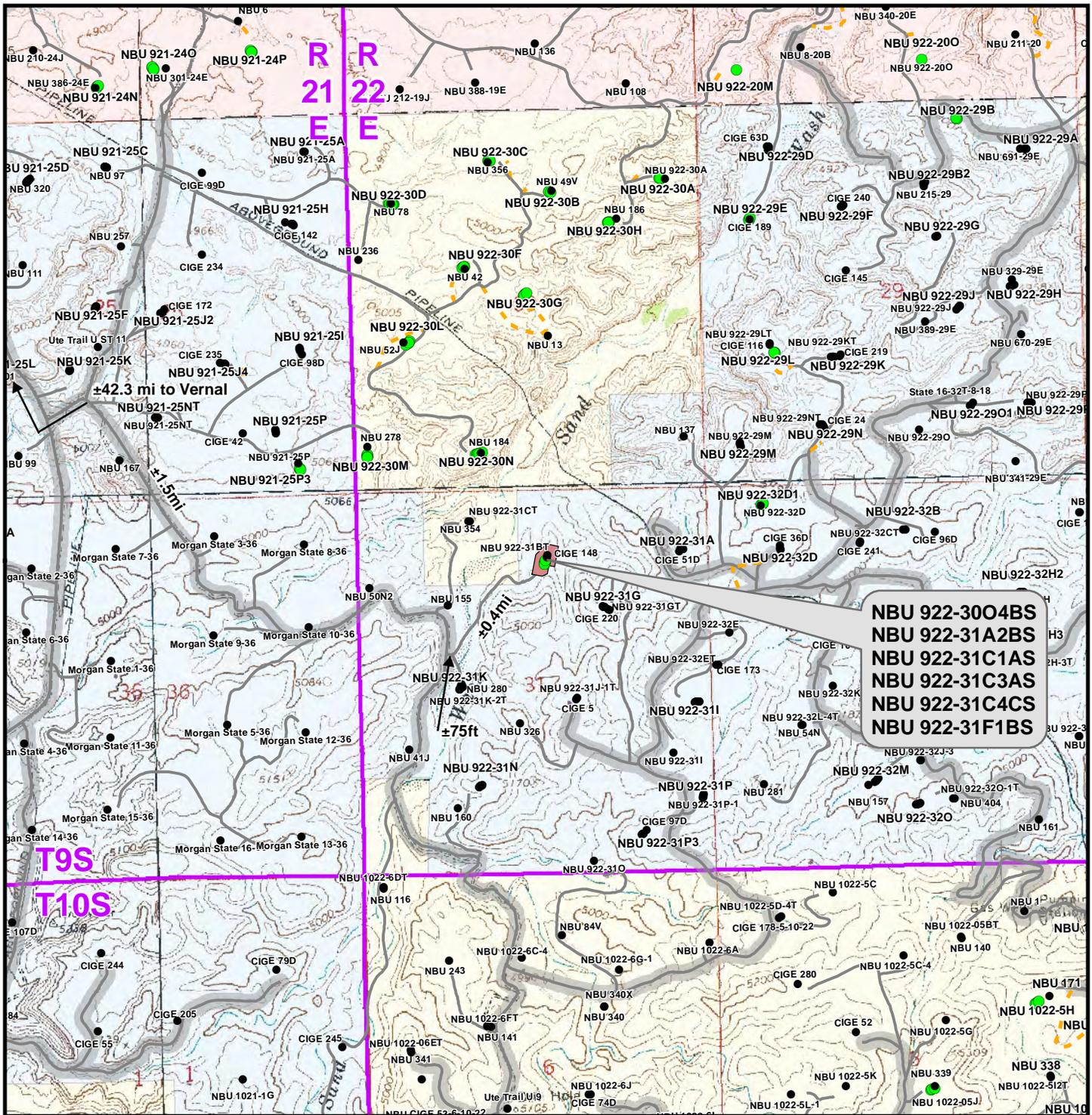
1099 18th Street
 Denver, Colorado 80202



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



SCALE: 1:100,000	NAD83 USP Central	12 12 OF 18
DRAWN: TL	DATE: 14 Jan 2011	
REVISED: TL	DATE: 4 Nov 2011	



NBU 922-3004BS
NBU 922-31A2BS
NBU 922-31C1AS
NBU 922-31C3AS
NBU 922-31C4CS
NBU 922-31F1BS

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 922-31B

TOPO B
 NBU 922-3004BS, NBU 922-31A2BS,
 NBU 922-31C1AS, NBU 922-31C3AS,
 NBU 922-31C4CS & NBU 922-31F1BS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

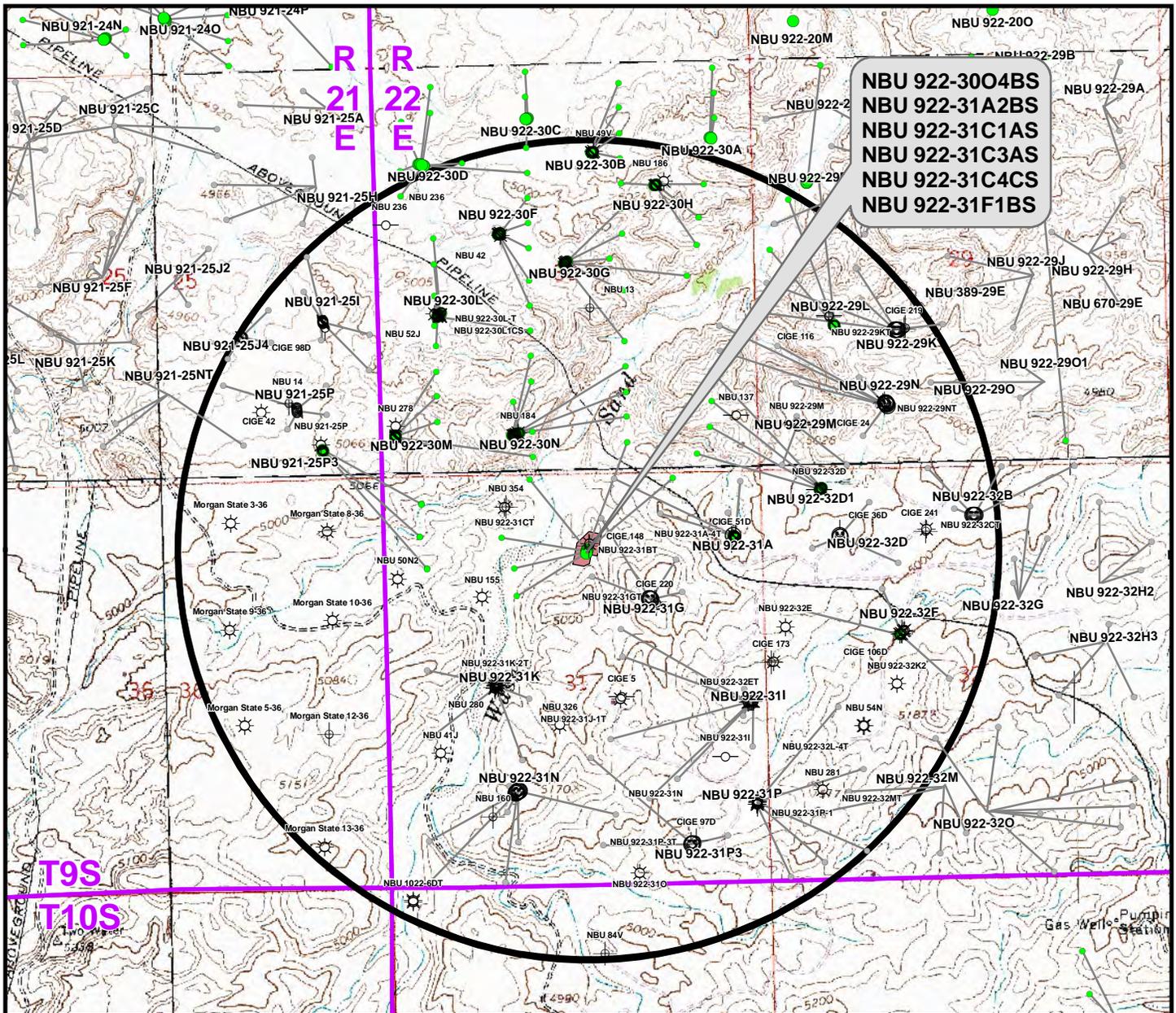
1099 18th Street
 Denver, Colorado 80202



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



SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 13 <small>13 OF 18</small>
DRAWN: TL	DATE: 14 Jan 2011	
REVISED: TL	DATE: 4 Nov 2011	



NBU 922-3004BS
NBU 922-31A2BS
NBU 922-31C1AS
NBU 922-31C3AS
NBU 922-31C4CS
NBU 922-31F1BS

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 922-3004BS	NBU 922-31B1BS BH	502ft
NBU 922-31A2BS	NBU 922-31A2CS BH	478ft
NBU 922-31C1AS	NBU 354	465ft
NBU 922-31C3AS	NBU 922-31CT	397ft
NBU 922-31C4CS	NBU 155	556ft
NBU 922-31F1BS	NBU 155	447ft

Legend

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

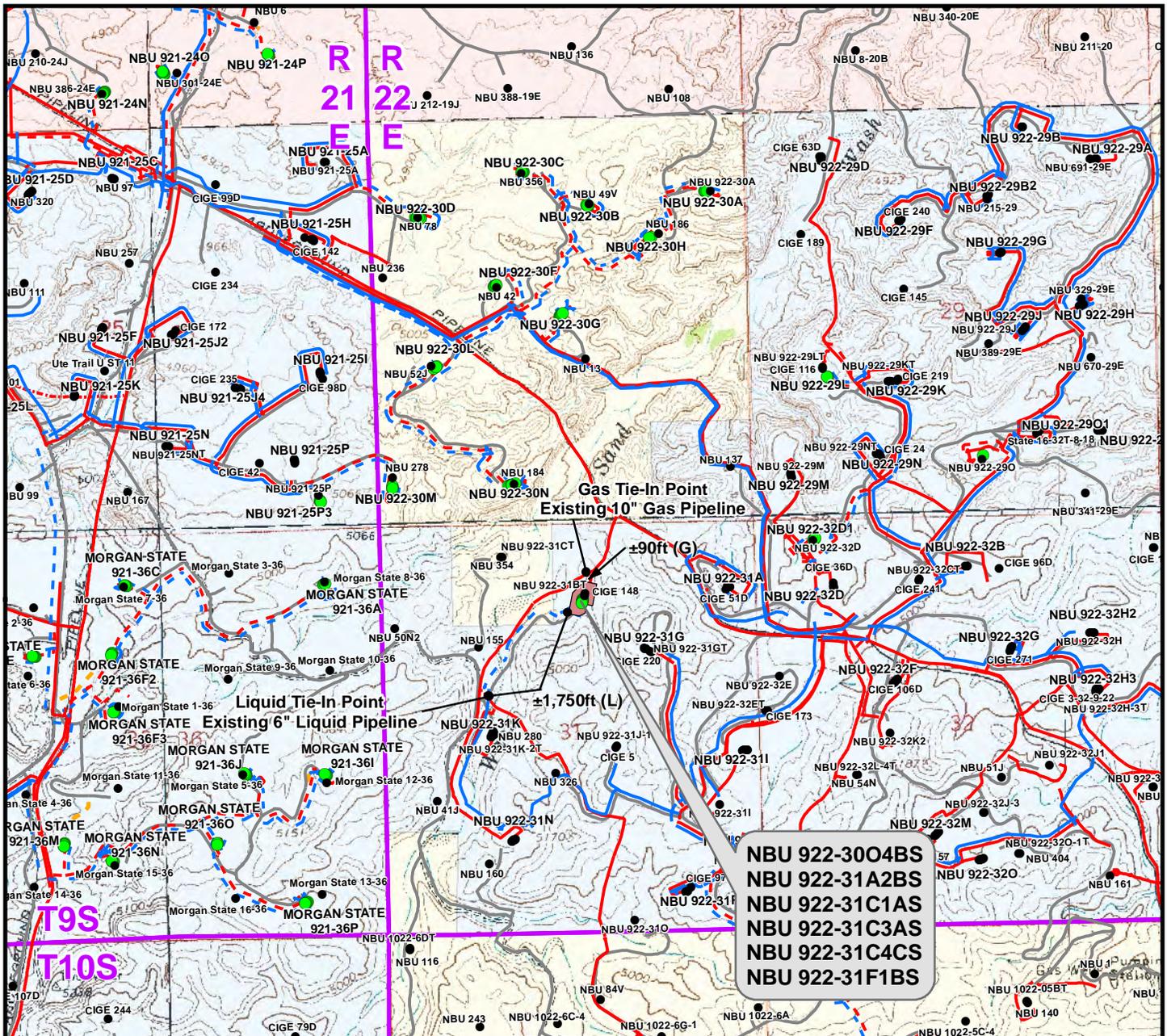
WELL PAD - NBU 922-31B
 TOPO C
 NBU 922-3004BS, NBU 922-31A2BS,
 NBU 922-31C1AS, NBU 922-31C3AS,
 NBU 922-31C4CS & NBU 922-31F1BS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., Uintah County, Utah

**Kerr-McGee Oil &
 Gas Onshore L.P.**
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 Denver, Colorado 80202

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 Sheridan, Wyoming 82801
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 Fax 307-674-0182

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SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO:
DRAWN: TL	DATE: 14 Jan 2011	14
REVISED: TL	DATE: 4 Nov 2011	



NBU 922-3004BS
 NBU 922-31A2BS
 NBU 922-31C1AS
 NBU 922-31C3AS
 NBU 922-31C4CS
 NBU 922-31F1BS

Proposed Liquid Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±215ft
Proposed 6" (Max.) (Edge of Pad to Existing 6" Liquid Pipeline)	±1,750ft
TOTAL PROPOSED LIQUID PIPELINE =	±1,965ft

Proposed Gas Pipeline	Length
Proposed 8" (Meter House to Edge of Pad)	±375ft
Proposed 8" (Edge of Pad to Existing 10" Gas Pipeline)	±90ft
TOTAL PROPOSED GAS PIPELINE =	±465ft

Legend

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

WELL PAD - NBU 922-31B

TOPO D
 NBU 922-3004BS, NBU 922-31A2BS,
 NBU 922-31C1AS, NBU 922-31C3AS,
 NBU 922-31C4CS & NBU 922-31F1BS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

1099 18th Street
 Denver, Colorado 80202

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

SCALE: 1" = 2,000ft

DRAWN: TL

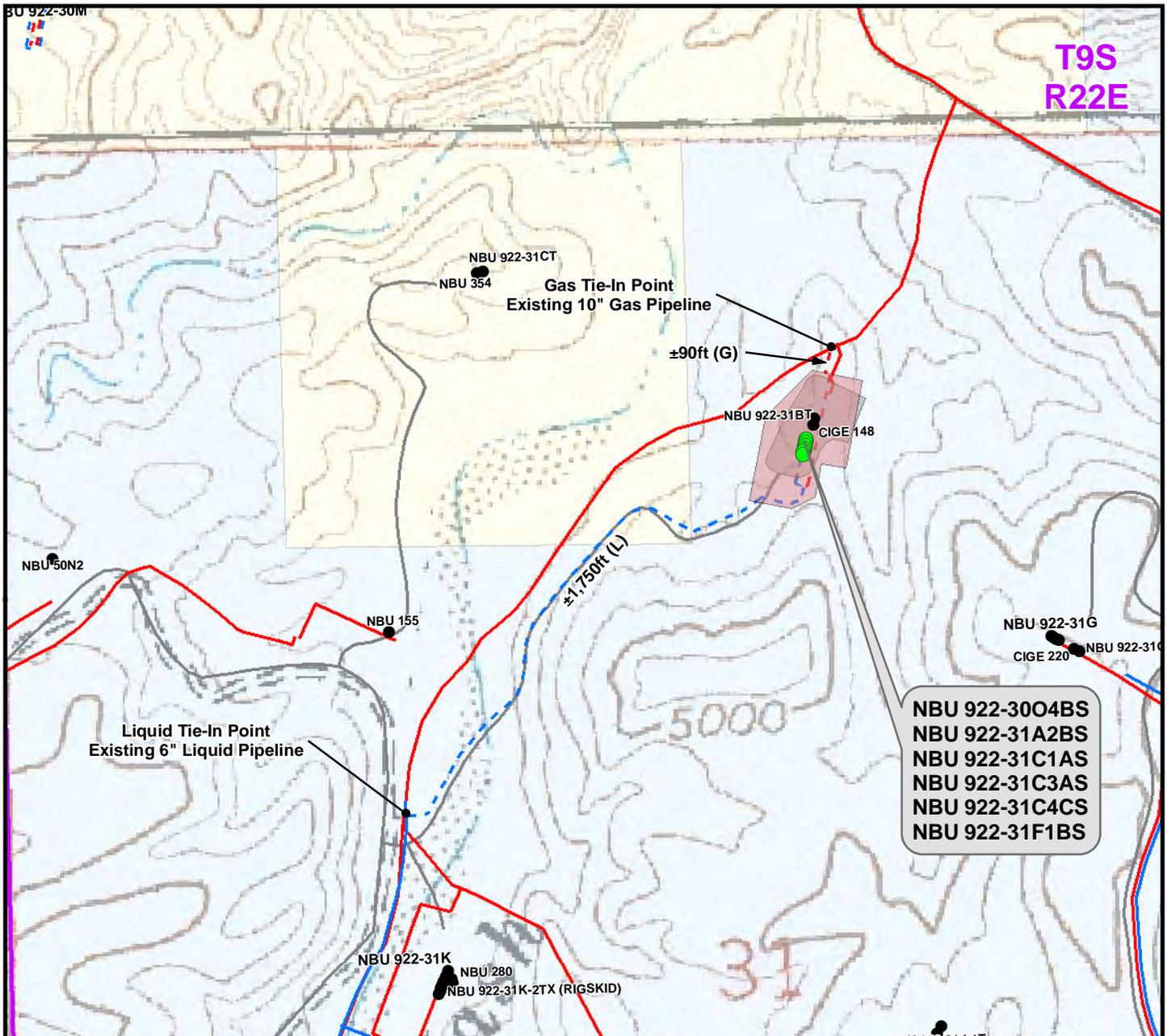
REVISED: TL

NAD83 USP Central

DATE: 14 Jan 2011

DATE: 15 June 2012

SHEET NO:
15
 15 OF 18



Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±215ft	Proposed 8" (Meter House to Edge of Pad)	±375ft
Proposed 6" (Max.) (Edge of Pad to Existing 6" Liquid Pipeline)	±1,750ft	Proposed 8" (Edge of Pad to Existing 10" Gas Pipeline)	±90ft
TOTAL PROPOSED LIQUID PIPELINE =	±1,965ft	TOTAL PROPOSED GAS PIPELINE =	±465ft

Legend

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

WELL PAD - NBU 922-31B

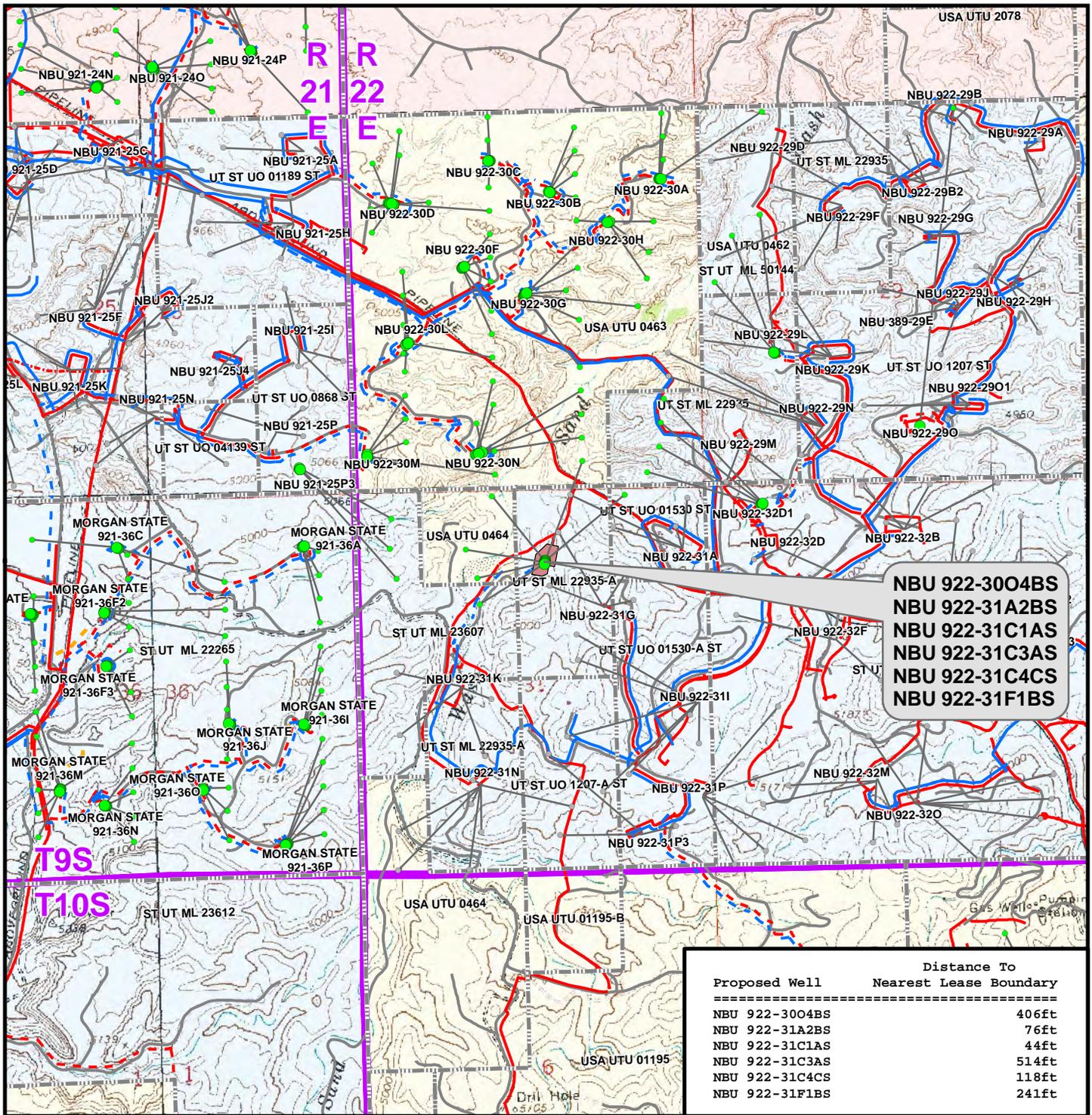
TOPO D2 (PAD & PIPELINE DETAIL)
 NBU 922-3004BS, NBU 922-31A2BS,
 NBU 922-31C1AS, NBU 922-31C3AS,
 NBU 922-31C4CS & NBU 922-31F1BS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

1099 18th Street
 Denver, Colorado 80202

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

SCALE: 1" = 500ft	NAD83 USP Central	16 16 OF 18
DRAWN: TL	DATE: 14 Jan 2011	
REVISED: TL	DATE: 15 June 2012	



**NBU 922-3004BS
 NBU 922-31A2BS
 NBU 922-31C1AS
 NBU 922-31C3AS
 NBU 922-31C4CS
 NBU 922-31F1BS**

Proposed Well	Distance To Nearest Lease Boundary
NBU 922-3004BS	406ft
NBU 922-31A2BS	76ft
NBU 922-31C1AS	44ft
NBU 922-31C3AS	514ft
NBU 922-31C4CS	118ft
NBU 922-31F1BS	241ft

Legend

- Well - Proposed (Green dot)
- Bottom Hole - Proposed (Green circle)
- Bottom Hole - Existing (Grey circle)
- Well Path (Black line)
- Well Pad (Red shaded area)
- Lease Boundary (Black dashed line)
- Gas Pipeline - Proposed (Red dashed line)
- Gas Pipeline - To Be Upgraded (Red dotted line)
- Gas Pipeline - Existing (Red solid line)
- Liquid Pipeline - Proposed (Blue dashed line)
- Liquid Pipeline - Existing (Blue solid line)
- Road - Proposed (Yellow dashed line)
- Road - Existing (Grey solid line)
- Bureau of Land Management (Yellow shaded area)
- Indian Reservation (Red shaded area)
- State (Light blue shaded area)
- Private (White shaded area)

WELL PAD - NBU 922-31B
 TOPO E
 NBU 922-3004BS, NBU 922-31A2BS,
 NBU 922-31C1AS, NBU 922-31C3AS,
 NBU 922-31C4CS & NBU 922-31F1BS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

**Kerr-McGee Oil &
 Gas Onshore L.P.**
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 Denver, Colorado 80202

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

SCALE: 1" = 2,000ft
 DRAWN: TL
 REVISED: TL

NAD83 USP Central
 DATE: 14 Jan 2011
 DATE: 15 June 2012

SHEET NO:
17
 17 OF 18

**Kerr-McGee Oil & Gas Onshore, LP
WELL PAD - NBU 922-31B
WELLS – NBU 922-30O4BS, NBU 922-31A2BS,
NBU 922-31C1AS, NBU 922-31C3AS,
NBU 922-31C4CS & NBU 922-31F1BS
Section 31, T9S, R22E, S.L.B.&M.**

From the intersection of U.S. Highway 40 and 500 East street in Vernal, Utah proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 18.7 miles to a Class D County Road to the northeast. Exit right and proceed in a northeasterly direction along the Class D County Road approximately 0.1 miles to a second Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the second Class D County Road approximately 1.5 miles to a service road to the southeast. Exit right and proceed in a southeasterly direction along the service road approximately 75 feet to a second service road to the northeast. Exit left and proceed in a northeasterly direction along the second service road approximately 0.4 miles to the proposed well pad.

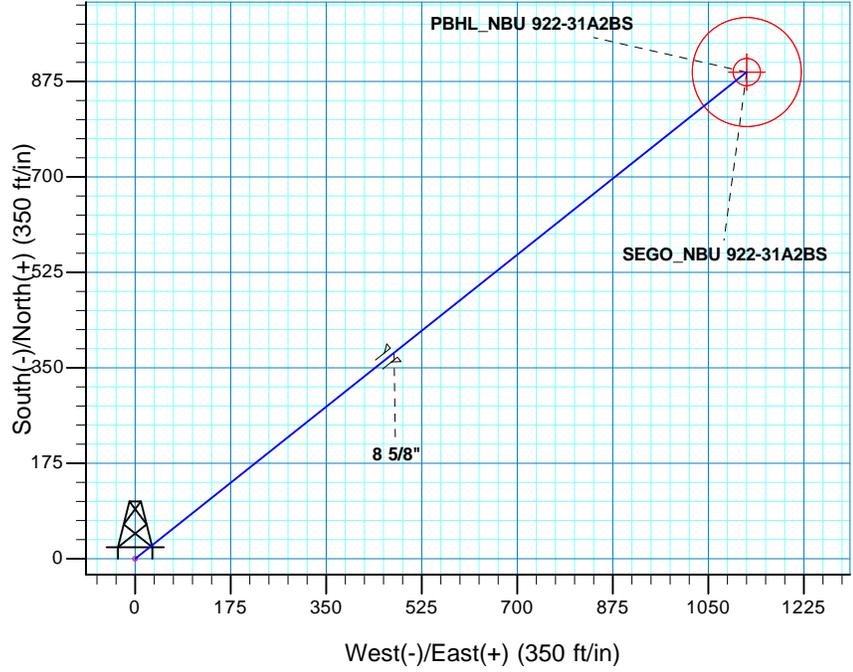
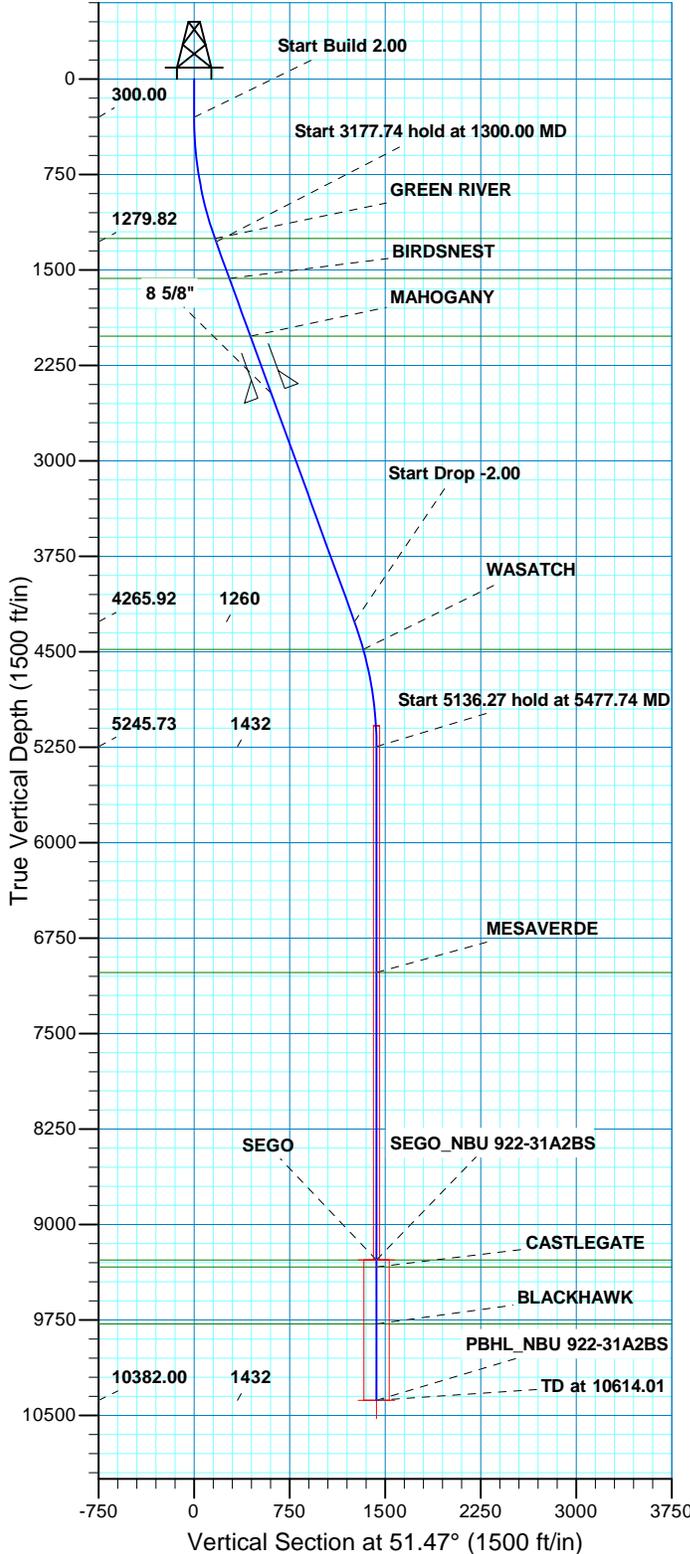
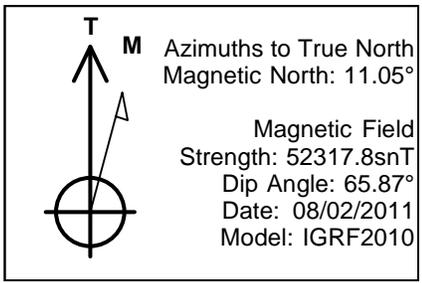
Total distance from Vernal, Utah to the proposed well location is approximately 44.2 miles in a southerly direction.



Site: NBU 922-31B PAD
 Well: NBU 922-31A2BS
 Wellbore: OH
 Design: PLAN #2



WELL DETAILS: NBU 922-31A2BS									
GL 4892 & KB 4 @ 4896.00ft (ASSUMED)									
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude				
0.00	0.00	14528631.53	2065983.93	39.997143	-109.480528				
DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
SEGO	9280.00	892.34	1120.48	14529542.84	2067089.03	39.999593	-109.476528	Circle (Radius: 25.00)	
- plan hits target center									
PBHL	10382.00	892.34	1120.48	14529542.84	2067089.03	39.999593	-109.476528	Circle (Radius: 100.00)	
- plan hits target center									



SECTION DETAILS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00		
1300.00	20.00	51.47	1279.82	107.63	135.15	2.00	51.47	172.77		
4477.74	20.00	51.47	4265.92	784.71	985.33	0.00	0.00	1259.62		
5477.74	0.00	0.00	5245.73	892.34	1120.48	2.00	180.00	1432.39		
10614.01	0.00	0.00	10382.00	892.34	1120.48	0.00	0.00	1432.39	PBHL_NBU 922-31A2BS	

PROJECT DETAILS: Uintah County, UT UTM12			FORMATION TOP DETAILS		
Geodetic System: Universal Transverse Mercator (US Survey Feet)	TVDPath	MDPath	Formation		
Datum: NAD 1927 - Western US	1253.00	1271.51	1253.00	1271.51	GREEN RIVER
Ellipsoid: Clarke 1866	1567.00	1605.62	1567.00	1605.62	BIRDSNEST
Zone: Zone 12N (114 W to 108 W)	2021.00	2088.75	2021.00	2088.75	MAHOGANY
Location: SECTION 31 T9S R22E	4482.00	4704.66	4482.00	4704.66	WASATCH
System Datum: Mean Sea Level	7020.00	7252.01	7020.00	7252.01	MESAVERDE
	9280.00	9512.01	9280.00	9512.01	SEGO
	9335.00	9567.01	9335.00	9567.01	CASTLEGATE
	9782.00	10014.01	9782.00	10014.01	BLACKHAWK

CASING DETAILS			
TVD	MD	Name	Size
2471.00	2567.63	8 5/8"	8.625

RECEIVED



Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12

NBU 922-31B PAD

NBU 922-31A2BS

OH

Plan: PLAN #2

Standard Planning Report

08 March, 2012





SDI
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 922-31A2BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Site:	NBU 922-31B PAD	North Reference:	True
Well:	NBU 922-31A2BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

Project	Uintah County, UT UTM12		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	NBU 922-31B PAD, SECTION 31 T9S R22E				
Site Position:	Northing:	14,528,641.40 usft	Latitude:	39.997170	
From: Lat/Long	Easting:	2,065,986.00 usft	Longitude:	-109.480520	
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.98 °

Well	NBU 922-31A2BS, 965 FNL 2222 FEL					
Well Position	+N/-S	-9.83 ft	Northing:	14,528,631.53 usft	Latitude:	39.997143
	+E/-W	-2.24 ft	Easting:	2,065,983.93 usft	Longitude:	-109.480528
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,892.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/02/11	11.05	65.87	52,318

Design	PLAN #2			
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	51.47

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	
1,300.00	20.00	51.47	1,279.82	107.63	135.15	2.00	2.00	0.00	51.47	
4,477.74	20.00	51.47	4,265.92	784.71	985.33	0.00	0.00	0.00	0.00	
5,477.74	0.00	0.00	5,245.73	892.34	1,120.48	2.00	-2.00	0.00	180.00	
10,614.01	0.00	0.00	10,382.00	892.34	1,120.48	0.00	0.00	0.00	0.00	PBHL_NBU 922-31A2



SDI
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 922-31A2BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Site:	NBU 922-31B PAD	North Reference:	True
Well:	NBU 922-31A2BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

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	51.47	399.98	1.09	1.37	1.75	2.00	2.00	2.00	0.00
500.00	4.00	51.47	499.84	4.35	5.46	6.98	2.00	2.00	2.00	0.00
600.00	6.00	51.47	599.45	9.78	12.28	15.69	2.00	2.00	2.00	0.00
700.00	8.00	51.47	698.70	17.37	21.81	27.88	2.00	2.00	2.00	0.00
800.00	10.00	51.47	797.47	27.11	34.05	43.52	2.00	2.00	2.00	0.00
900.00	12.00	51.47	895.62	39.00	48.97	62.60	2.00	2.00	2.00	0.00
1,000.00	14.00	51.47	993.06	53.01	66.57	85.10	2.00	2.00	2.00	0.00
1,100.00	16.00	51.47	1,089.64	69.14	86.81	110.98	2.00	2.00	2.00	0.00
1,200.00	18.00	51.47	1,185.27	87.35	109.68	140.21	2.00	2.00	2.00	0.00
1,271.51	19.43	51.47	1,253.00	101.64	127.63	163.16	2.00	2.00	2.00	0.00
GREEN RIVER										
1,300.00	20.00	51.47	1,279.82	107.63	135.15	172.77	2.00	2.00	2.00	0.00
Start 3177.74 hold at 1300.00 MD										
1,400.00	20.00	51.47	1,373.78	128.94	161.90	206.97	0.00	0.00	0.00	0.00
1,500.00	20.00	51.47	1,467.75	150.24	188.66	241.17	0.00	0.00	0.00	0.00
1,600.00	20.00	51.47	1,561.72	171.55	215.41	275.37	0.00	0.00	0.00	0.00
1,605.62	20.00	51.47	1,567.00	172.75	216.91	277.29	0.00	0.00	0.00	0.00
BIRDSNEST										
1,700.00	20.00	51.47	1,655.69	192.86	242.16	309.58	0.00	0.00	0.00	0.00
1,800.00	20.00	51.47	1,749.66	214.16	268.92	343.78	0.00	0.00	0.00	0.00
1,900.00	20.00	51.47	1,843.63	235.47	295.67	377.98	0.00	0.00	0.00	0.00
2,000.00	20.00	51.47	1,937.60	256.78	322.43	412.18	0.00	0.00	0.00	0.00
2,088.75	20.00	51.47	2,021.00	275.69	346.17	442.54	0.00	0.00	0.00	0.00
MAHOGANY										
2,100.00	20.00	51.47	2,031.57	278.09	349.18	446.38	0.00	0.00	0.00	0.00
2,200.00	20.00	51.47	2,125.54	299.39	375.94	480.59	0.00	0.00	0.00	0.00
2,300.00	20.00	51.47	2,219.51	320.70	402.69	514.79	0.00	0.00	0.00	0.00
2,400.00	20.00	51.47	2,313.48	342.01	429.44	548.99	0.00	0.00	0.00	0.00
2,500.00	20.00	51.47	2,407.45	363.31	456.20	583.19	0.00	0.00	0.00	0.00
2,567.63	20.00	51.47	2,471.00	377.72	474.29	606.32	0.00	0.00	0.00	0.00
8 5/8"										
2,600.00	20.00	51.47	2,501.42	384.62	482.95	617.39	0.00	0.00	0.00	0.00
2,700.00	20.00	51.47	2,595.39	405.93	509.71	651.60	0.00	0.00	0.00	0.00
2,800.00	20.00	51.47	2,689.35	427.23	536.46	685.80	0.00	0.00	0.00	0.00
2,900.00	20.00	51.47	2,783.32	448.54	563.22	720.00	0.00	0.00	0.00	0.00
3,000.00	20.00	51.47	2,877.29	469.85	589.97	754.20	0.00	0.00	0.00	0.00
3,100.00	20.00	51.47	2,971.26	491.15	616.72	788.40	0.00	0.00	0.00	0.00
3,200.00	20.00	51.47	3,065.23	512.46	643.48	822.61	0.00	0.00	0.00	0.00
3,300.00	20.00	51.47	3,159.20	533.77	670.23	856.81	0.00	0.00	0.00	0.00
3,400.00	20.00	51.47	3,253.17	555.08	696.99	891.01	0.00	0.00	0.00	0.00
3,500.00	20.00	51.47	3,347.14	576.38	723.74	925.21	0.00	0.00	0.00	0.00
3,600.00	20.00	51.47	3,441.11	597.69	750.50	959.41	0.00	0.00	0.00	0.00
3,700.00	20.00	51.47	3,535.08	619.00	777.25	993.62	0.00	0.00	0.00	0.00
3,800.00	20.00	51.47	3,629.05	640.30	804.00	1,027.82	0.00	0.00	0.00	0.00
3,900.00	20.00	51.47	3,723.02	661.61	830.76	1,062.02	0.00	0.00	0.00	0.00
4,000.00	20.00	51.47	3,816.99	682.92	857.51	1,096.22	0.00	0.00	0.00	0.00
4,100.00	20.00	51.47	3,910.95	704.22	884.27	1,130.42	0.00	0.00	0.00	0.00
4,200.00	20.00	51.47	4,004.92	725.53	911.02	1,164.63	0.00	0.00	0.00	0.00



SDI
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 922-31A2BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Site:	NBU 922-31B PAD	North Reference:	True
Well:	NBU 922-31A2BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,300.00	20.00	51.47	4,098.89	746.84	937.78	1,198.83	0.00	0.00	0.00
4,400.00	20.00	51.47	4,192.86	768.15	964.53	1,233.03	0.00	0.00	0.00
4,477.74	20.00	51.47	4,265.92	784.71	985.33	1,259.62	0.00	0.00	0.00
Start Drop -2.00									
4,500.00	19.55	51.47	4,286.86	789.40	991.22	1,267.15	2.00	-2.00	0.00
4,600.00	17.55	51.47	4,381.66	809.22	1,016.11	1,298.97	2.00	-2.00	0.00
4,700.00	15.55	51.47	4,477.51	826.97	1,038.40	1,327.46	2.00	-2.00	0.00
4,704.66	15.46	51.47	4,482.00	827.75	1,039.37	1,328.71	2.00	-2.00	0.00
WASATCH									
4,800.00	13.55	51.47	4,574.29	842.63	1,058.06	1,352.59	2.00	-2.00	0.00
4,900.00	11.55	51.47	4,671.90	856.17	1,075.06	1,374.33	2.00	-2.00	0.00
5,000.00	9.55	51.47	4,770.20	867.58	1,089.39	1,392.65	2.00	-2.00	0.00
5,100.00	7.55	51.47	4,869.08	876.85	1,101.02	1,407.52	2.00	-2.00	0.00
5,200.00	5.55	51.47	4,968.42	883.96	1,109.95	1,418.93	2.00	-2.00	0.00
5,300.00	3.55	51.47	5,068.10	888.91	1,116.16	1,426.88	2.00	-2.00	0.00
5,400.00	1.55	51.47	5,168.00	891.68	1,119.65	1,431.33	2.00	-2.00	0.00
5,477.74	0.00	0.00	5,245.73	892.34	1,120.48	1,432.39	2.00	-2.00	0.00
Start 5136.27 hold at 5477.74 MD									
5,500.00	0.00	0.00	5,267.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
5,600.00	0.00	0.00	5,367.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
5,700.00	0.00	0.00	5,467.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
5,800.00	0.00	0.00	5,567.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
5,900.00	0.00	0.00	5,667.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
6,000.00	0.00	0.00	5,767.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
6,100.00	0.00	0.00	5,867.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
6,200.00	0.00	0.00	5,967.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
6,300.00	0.00	0.00	6,067.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
6,400.00	0.00	0.00	6,167.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
6,500.00	0.00	0.00	6,267.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
6,600.00	0.00	0.00	6,367.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
6,700.00	0.00	0.00	6,467.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
6,800.00	0.00	0.00	6,567.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
6,900.00	0.00	0.00	6,667.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
7,000.00	0.00	0.00	6,767.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
7,100.00	0.00	0.00	6,867.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
7,200.00	0.00	0.00	6,967.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
7,252.01	0.00	0.00	7,020.00	892.34	1,120.48	1,432.39	0.00	0.00	0.00
MESAVERDE									
7,300.00	0.00	0.00	7,067.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
7,400.00	0.00	0.00	7,167.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
7,500.00	0.00	0.00	7,267.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
7,600.00	0.00	0.00	7,367.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
7,700.00	0.00	0.00	7,467.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
7,800.00	0.00	0.00	7,567.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
7,900.00	0.00	0.00	7,667.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
8,000.00	0.00	0.00	7,767.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
8,100.00	0.00	0.00	7,867.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
8,200.00	0.00	0.00	7,967.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
8,300.00	0.00	0.00	8,067.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
8,400.00	0.00	0.00	8,167.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
8,500.00	0.00	0.00	8,267.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
8,600.00	0.00	0.00	8,367.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
8,700.00	0.00	0.00	8,467.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00



SDI
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 922-31A2BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Site:	NBU 922-31B PAD	North Reference:	True
Well:	NBU 922-31A2BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

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	8,567.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
8,900.00	0.00	0.00	8,667.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
9,000.00	0.00	0.00	8,767.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
9,100.00	0.00	0.00	8,867.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
9,200.00	0.00	0.00	8,967.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
9,300.00	0.00	0.00	9,067.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
9,400.00	0.00	0.00	9,167.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
9,500.00	0.00	0.00	9,267.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
9,512.01	0.00	0.00	9,280.00	892.34	1,120.48	1,432.39	0.00	0.00	0.00
SEGO - SEGO_NBU 922-31A2BS									
9,567.01	0.00	0.00	9,335.00	892.34	1,120.48	1,432.39	0.00	0.00	0.00
CASTLEGATE									
9,600.00	0.00	0.00	9,367.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
9,700.00	0.00	0.00	9,467.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
9,800.00	0.00	0.00	9,567.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
9,900.00	0.00	0.00	9,667.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
10,000.00	0.00	0.00	9,767.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
10,014.01	0.00	0.00	9,782.00	892.34	1,120.48	1,432.39	0.00	0.00	0.00
BLACKHAWK									
10,100.00	0.00	0.00	9,867.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
10,200.00	0.00	0.00	9,967.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
10,300.00	0.00	0.00	10,067.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
10,400.00	0.00	0.00	10,167.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
10,500.00	0.00	0.00	10,267.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
10,600.00	0.00	0.00	10,367.99	892.34	1,120.48	1,432.39	0.00	0.00	0.00
10,614.01	0.00	0.00	10,382.00	892.34	1,120.48	1,432.39	0.00	0.00	0.00
TD at 10614.01 - PBHL_NBU 922-31A2BS									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SEGO_NBU 922-31A2B - hit/miss target - Shape - plan hits target center - Circle (radius 25.00)	0.00	0.00	9,280.00	892.34	1,120.48	14,529,542.84	2,067,089.02	39.999593	-109.476528
PBHL_NBU 922-31A2B - hit/miss target - Shape - plan hits target center - Circle (radius 100.00)	0.00	0.00	10,382.00	892.34	1,120.48	14,529,542.84	2,067,089.02	39.999593	-109.476528

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,567.63	2,471.00	8 5/8"	8.625	11.000	



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 922-31A2BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Site:	NBU 922-31B PAD	North Reference:	True
Well:	NBU 922-31A2BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,271.51	1,253.00	GREEN RIVER			
1,605.62	1,567.00	BIRDSNEST			
2,088.75	2,021.00	MAHOGANY			
4,704.66	4,482.00	WASATCH			
7,252.01	7,020.00	MESAVERDE			
9,512.01	9,280.00	SEGO			
9,567.01	9,335.00	CASTLEGATE			
10,014.01	9,782.00	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	
1,300.00	1,279.82	107.63	135.15	Start 3177.74 hold at 1300.00 MD	
4,477.74	4,265.92	784.71	985.33	Start Drop -2.00	
5,477.74	5,245.73	892.34	1,120.48	Start 5136.27 hold at 5477.74 MD	
10,614.01	10,382.00	892.34	1,120.48	TD at 10614.01	

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 922-31B PAD**

<u>API #</u>	<u>NBU 922-3004BS</u>		
Mineral Lease #UTU-463	Surface: 956 FNL / 2220 FEL BHL: 406 FSL / 1670 FEL	NWNE SWSE	Lot Lot
<u>API #</u>	<u>NBU 922-31A2BS</u>		
Mineral Lease #ST UT UO 01530 ST	Surface: 965 FNL / 2222 FEL BHL: 76 FNL / 1100 FEL	NWNE NENE	Lot Lot
<u>API #4304751086</u>	<u>NBU 922-31C1AS</u>		
Mineral Lease #UTU-464	Surface: 975 FNL / 2224 FEL BHL: 44 FNL / 1927 FWL	NWNE NENW	Lot Lot
<u>API #4304751087</u>	<u>NBU 922-31C3AS</u>		
Mineral Lease #UTU-464	Surface: 985 FNL / 2226 FEL BHL: 784 FNL / 1551 FWL	NWNE NENW	Lot Lot
<u>API #4304751088</u>	<u>NBU 922-31C4CS</u>		
Mineral Lease #UTU-464	Surface: 995 FNL / 2228 FEL BHL: 1181 FNL / 1701 FWL	NWNE NENW	Lot Lot
<u>API #4304751092</u>	<u>NBU 922-31F1BS</u>		
Mineral Lease #ST UT ML-23607	Surface: 1004 FNL / 2230 FEL BHL: 1540 FNL / 1728 FWL	NWNE SENE	Lot 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.

A. Existing Roads:

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

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

Roads, gathering lines and electrical distribution lines will occupy common disturbance corridors where possible. Where available, roadways will be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor will overlap each other to the maximum extent possible, while maintaining safe and sound construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

Please refer to Topo B, for existing roads.

B. New or Reconstructed Access Roads:

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

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

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

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

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

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

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

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

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

No new access road is proposed. Please see Topo B

C. Location of Existing Wells:

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A) Refer to Topo Map C.

D. Location of Existing and/or Proposed Facilities:

This pad will expand the existing pad for the NBU 922-31BT, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on April 11, 2012. The CIGE 148 has been plugged and abandoned since December 23, 2008. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

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

GAS GATHERING

Please refer to 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 $\pm 465'$ and the individual segments are broken up as follows:

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

- $\pm 375'$ (0.1 miles) – Section 31 T9S R22E (NW/4 NE/4) – On-lease UT ST ML-22935-A, SITLA surface, New 8" surface gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 90'$ (0.01 miles) – Section 31 T9S R22E (NW/4 NE/4) – On-lease UT ST ML-22935-A, SITLA surface, New 8" surface gas gathering pipeline from the edge of the pad to the tie-in at the existing 10" surface gas gathering pipeline. Please refer to Topo D2.

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 $\pm 1,965'$ and the individual segments are broken up as follows:

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

- $\pm 215'$ (0.04 miles) – Section 31 T9S R22E (NW/4 NE/4) – On-lease UT ST ML-22935-A, SITLA surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 1,750'$ (0.4 miles) – Section 31 T9S R22E (NW/4 NE/4) – On-lease UT ST ML-22935-A, SITLA surface and UTU-464, BLM surface, New 6" buried liquid gathering pipeline from the south edge of the pad and traveling southwest to tie-in to the existing buried liquid gathering line at SE/4 NW/4 of Section 31. Please refer to Topo D & D2.

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

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on the surface or be buried. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. The area of disturbance during construction from the edge of road or well pad will typically be 30' in width. Where pipelines run cross country, the width of disturbance will typically be 45 ft for buried lines and 30 ft for surface lines. In addition, Kerr-McGee requests for a permanent 30' disturbance width that will be maintained for the portion adjacent to the road. The need for the 30' permanent disturbance width is for maintenance and repairs. Cross country permanent disturbance width also are required to be 30ft.

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

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

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

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

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

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

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

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

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

The Anadarko Completions Transportation System (ACTS) information:

Please refer to Exhibit C for ACTs Lines

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

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

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

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

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

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

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

E. Location and Types of Water Supply:

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

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

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

No water well is to be drilled on this lease.

F. Construction Materials:

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

G. Methods for Handling Waste:

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

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

Pits will be constructed to minimize the accumulation of surface precipitation runoff into the pit (via appropriate placement of subsoil storage areas and/or construction of berms, ditches, etc). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a reserve/completion pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by the BLM. Should timely removal not be feasible, the pit will be netted as soon as practical. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

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

Where necessary and if conditions (freeboard, etc.) allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per Onshore Order Number 7 (OSO 7). Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Otherwise, fluids disposal locations and associated haul routes, for

ROW consideration, are typically depicted on Topo A of individual projects. Revisions to the water source or method of transportation will be subject to written approval from the BLM.

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

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

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

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

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

Materials Management

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

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

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

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

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

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

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

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

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

H. Ancillary Facilities:

No additional ancillary facilities are planned for this location.

I. Well Site Layout:

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

For the protection of livestock and wildlife, all open pits and cellars will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

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

J. Plans for Surface Reclamation:

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

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

Interim Reclamation

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

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

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

Final Reclamation

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

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

Reclamation of roads will be performed at the discretion of the BLM. All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches

where practical, re-contoured to approximate the original contour of the ground and seeded in accordance with the seeding specifications of the BLM.

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

Measures Common to Interim and Final Reclamation

Soil preparation will be conducted using a disk for areas in need of more soil preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to 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 BLM, or a specific seed mix will be proposed by Kerr-McGee to the BLM and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be maintained by Kerr-McGee. Every effort will be made to obtain “cheat grass free seed”.

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

Shadescale Mix	Pure Live Seed lbs/acre
Indian Ricegrass (Nezpar)	3
Sandberg bluegrass	0.75
Bottlebrush squirreltail	1
Great Basin Wildrye	0.5
Crested wheatgrass	1.5
Winterfat	0.25
Shadescale	1.5
Four-wing saltbush	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. Soil amendments such as “Sustain” (an organic fertilizer that will be applied at the rate 1,800 – 2,100 lbs/acre with seed) may also be dry broadcast or applied with hydro-seeding equipment.

Weed Control

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

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Monitoring

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

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

K. Surface/Mineral Ownership:

SITLA
675 East 500 South, Suite 500
Salt Lake City, UT 84102
(801) 538-5100

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

L. Other Information:**Cultural and Paleontological Resources**

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

Resource Reports:

A Class I literature survey was completed on December 14, 2011 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 11-403

A paleontological reconnaissance survey was completed on November 11, 2011 by Intermountain Paleo-Consulting. For additional details please refer to report IPC 11-210.

Biological field survey was completed on November 15, 2011 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-646.

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	10.94	11.04
SO ₂	0.005	0.00	0.01
PM ₁₀	1.7	0.11	1.81
PM _{2.5}	0.4	0.03	0.43
Benzene	2.2E-03	0.08	0.09
Toluene	1.6E-03	0.13	0.14
Ethylbenzene	3.4E-04	0.00	0.00
Xylene	1.1E-03	0.06	0.06
n-Hexane	1.7E-04	0.34	0.34
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	23.52	16,547	0.14%
VOC	66.25734	127,495	0.05%

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

Uintah Basin Data

NBU 922-3004BS/ NBU 922-31A2BS/ NBU 922-31C1AS/
NBU 922-31C3AS/ NBU 922-31C4CS/ NBU 922-31F1BS

Surface Use Plan of Operations
13 of 13

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

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

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

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

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

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

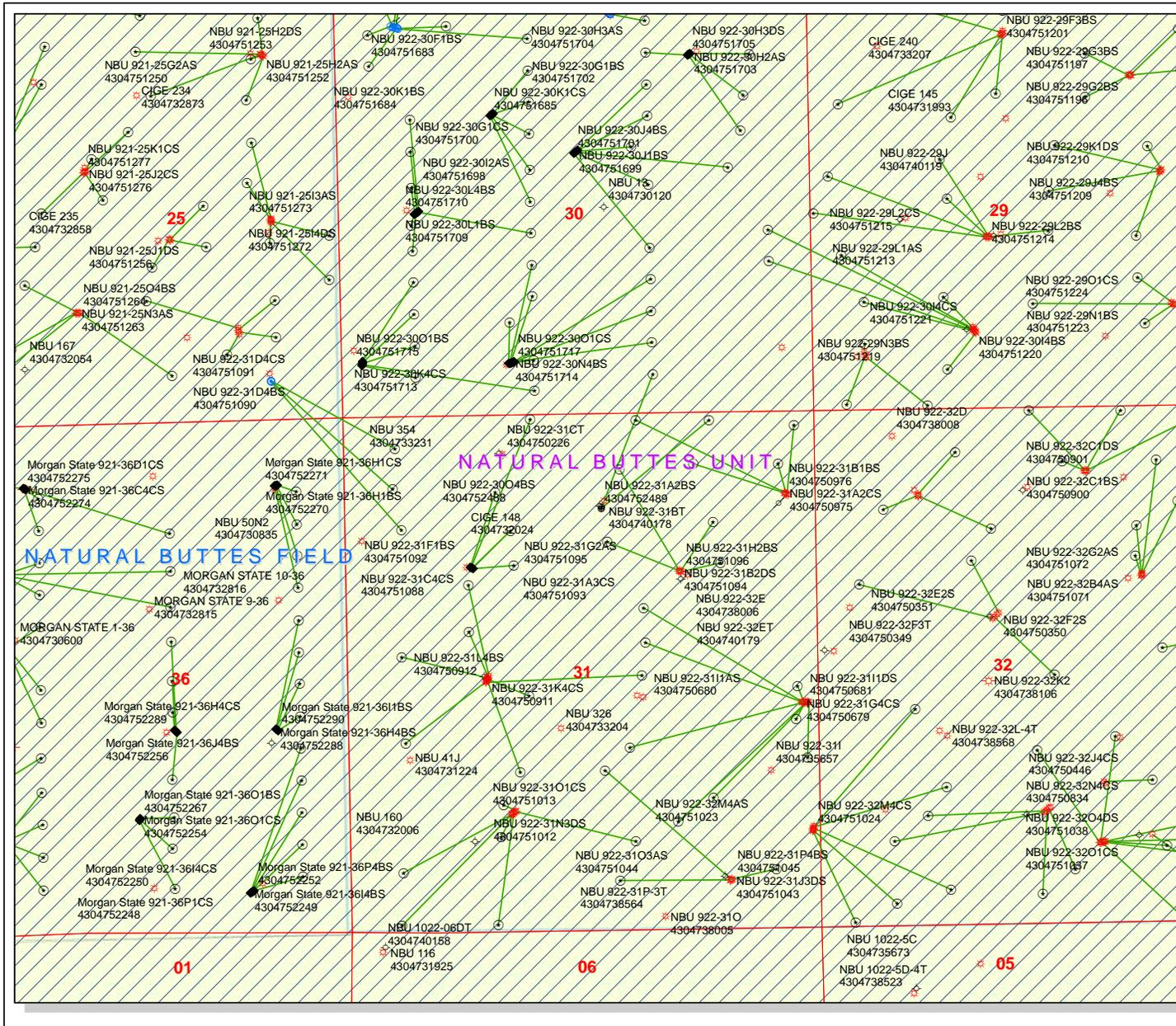
Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

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



Gina T. Becker

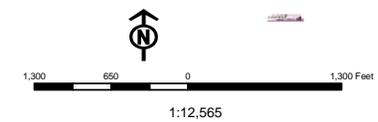
June 21, 2012
Date



API Number: 4304752489
Well Name: NBU 922-31A2BS
 Township T0.9 . Range R2.2 . Section 31
 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 |
| PI OIL | LA - Location Abandoned |
| NF GAS | LOC - New Location |
| PP GEOTHERM. | OPS - Operation Suspended |
| PP OIL | PA - Plugged Abandoned |
| SECONDARY | PGW - Producing Gas Well |
| TERMINATED | POW - Producing Oil Well |
| | 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)

April 24, 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 922-31B

43-047-52488	NBU 922-3004BS	Sec 31 T09S R22E 0956 FNL 2220 FEL
	BHL Sec 30 T09S R22E 0406 FSL 1670 FEL	

43-047-52489	NBU 922-31A2BS	Sec 31 T09S R22E 0965 FNL 2222 FEL
	BHL Sec 31 T09S R22E 0076 FNL 1100 FEL	

Well Pad NBU 921-7J

43-047-52514	NBU 921-7J	Sec 07 T09S R21E 2211 FSL 2441 FEL
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This office has no other objection to permitting the wells at this time.

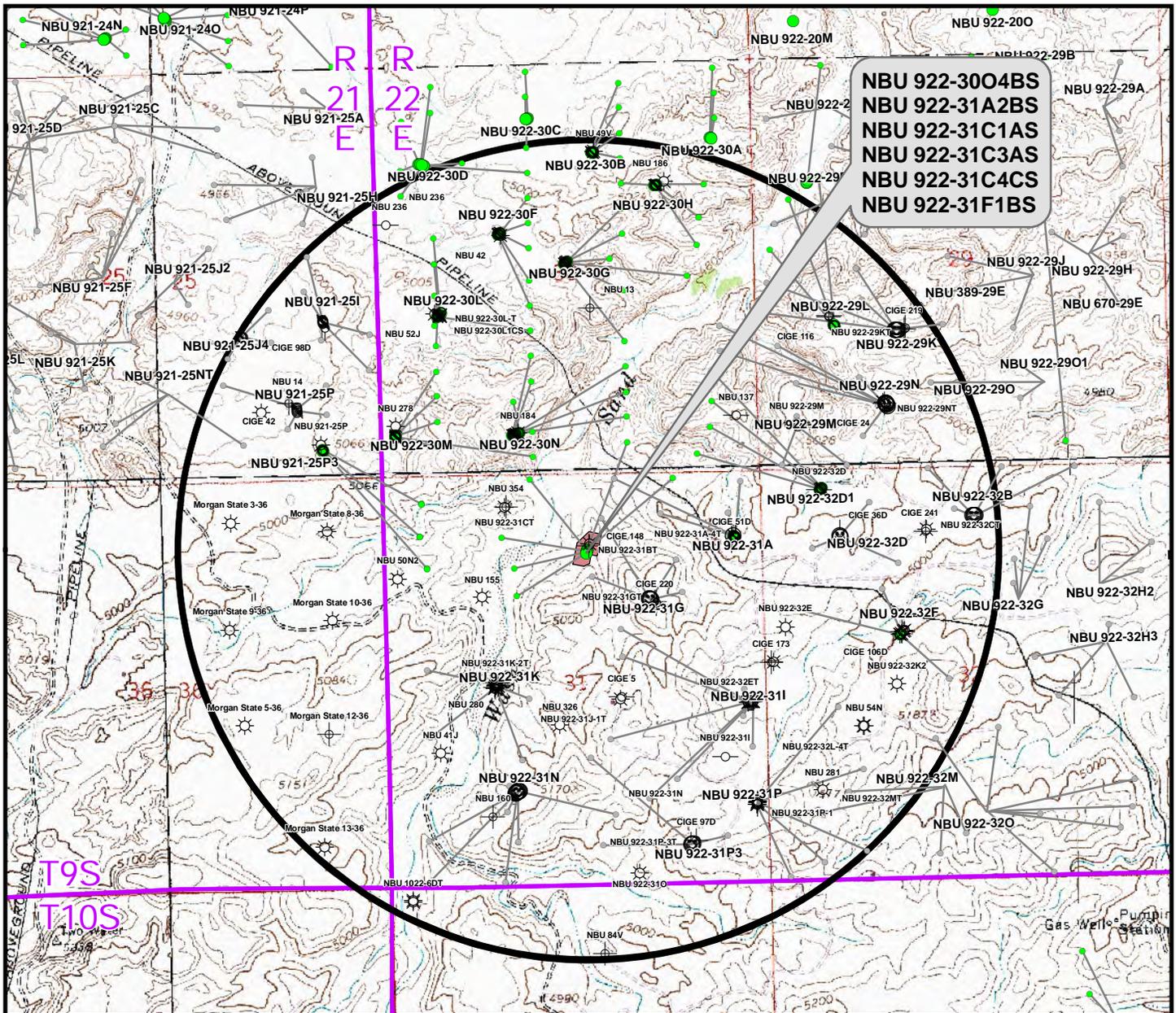
Michael L. Coulthard

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: 2012.04.24 10:29:56 -0600

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

MCoulthard:mc:4-24-12

RECEIVED: April 24, 2012



NBU 922-3004BS
NBU 922-31A2BS
NBU 922-31C1AS
NBU 922-31C3AS
NBU 922-31C4CS
NBU 922-31F1BS

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 922-3004BS	NBU 922-31B1BS BH	502ft
NBU 922-31A2BS	NBU 922-31A2CS BH	478ft
NBU 922-31C1AS	NBU 354	465ft
NBU 922-31C3AS	NBU 922-31CT	397ft
NBU 922-31C4CS	NBU 155	556ft
NBU 922-31F1BS	NBU 155	447ft

Legend

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

WELL PAD - NBU 922-31B
 TOPO C
 NBU 922-3004BS, NBU 922-31A2BS,
 NBU 922-31C1AS, NBU 922-31C3AS,
 NBU 922-31C4CS & NBU 922-31F1BS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

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

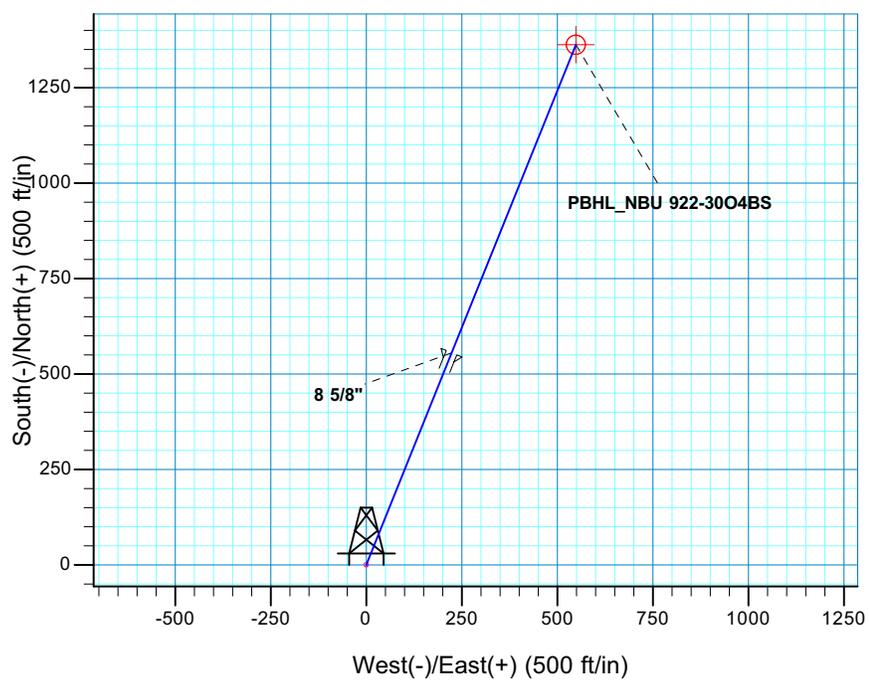
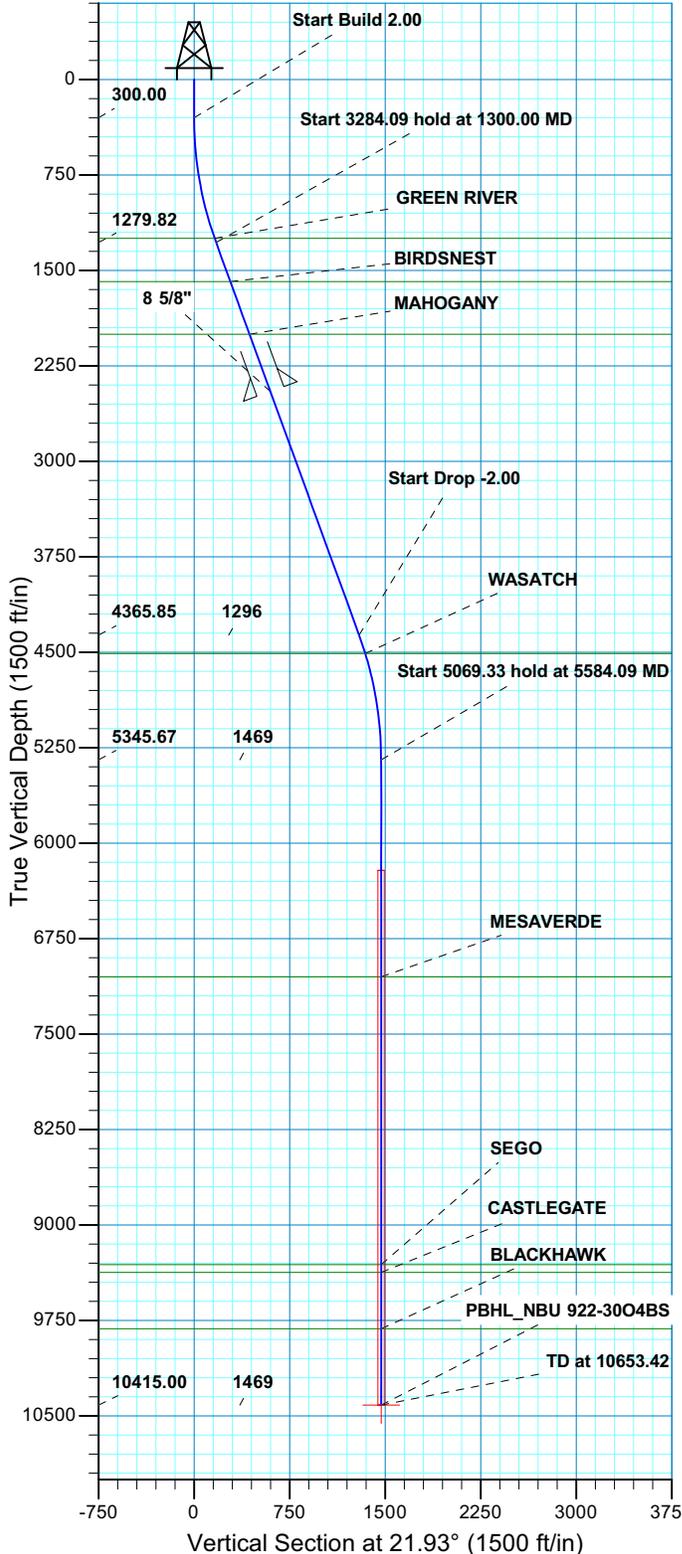
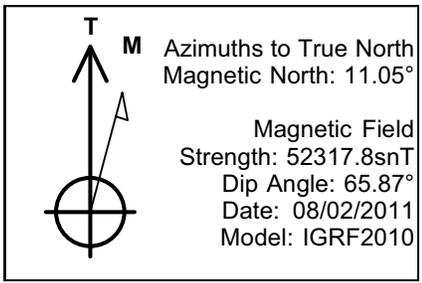
N

SCALE: 1" = 2,000ft	NAD83 USP Central	14
DRAWN: TL	DATE: 14 Jan 2011	
REVISED: TL	DATE: 4 Nov 2011	

SHEET NO:
14 OF 18



WELL DETAILS: NBU 922-3004BS								
GL 4892 & KB 4 @ 4896.00ft (ASSUMED)								
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude			
0.00	0.00	14528641.40	2065986.00	39.997170	-109.480520			
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	10415.00	1362.52	548.46	14530013.07	2066511.16	40.000911	-109.478562	Circle (Radius: 25.00)
- plan hits target center								



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	21.93	1279.82	160.27	64.51	2.00	21.93	172.77	
4584.09	20.00	21.93	4365.85	1202.25	483.95	0.00	0.00	1295.99	
5584.09	0.00	0.00	5345.67	1362.52	548.46	2.00	180.00	1468.76	
10653.42	0.00	0.00	10415.00	1362.52	548.46	0.00	0.00	1468.76	PBHL_NBU 922-3004BS

PROJECT DETAILS: Uintah County, UT UTM12			FORMATION TOP DETAILS		
Geodetic System:	Universal Transverse Mercator (US Survey Feet)		TVDPath	MDPath	Formation
Datum:	NAD 1927 - Western US		1247.00	1265.15	GREEN RIVER
Ellipsoid:	Clarke 1866		1587.00	1626.90	BIRDSNEST
Zone:	Zone 12N (114 W to 108 W)		2001.00	2067.47	MAHOGANY
Location:	SECTION 31 T9S R22E		4509.00	4735.05	WASATCH
System Datum:	Mean Sea Level		7050.00	7288.42	MESAVERDE
			9311.00	9549.42	SEGO
			9373.00	9611.42	CASTLEGATE
			9815.00	10053.42	BLACKHAWK

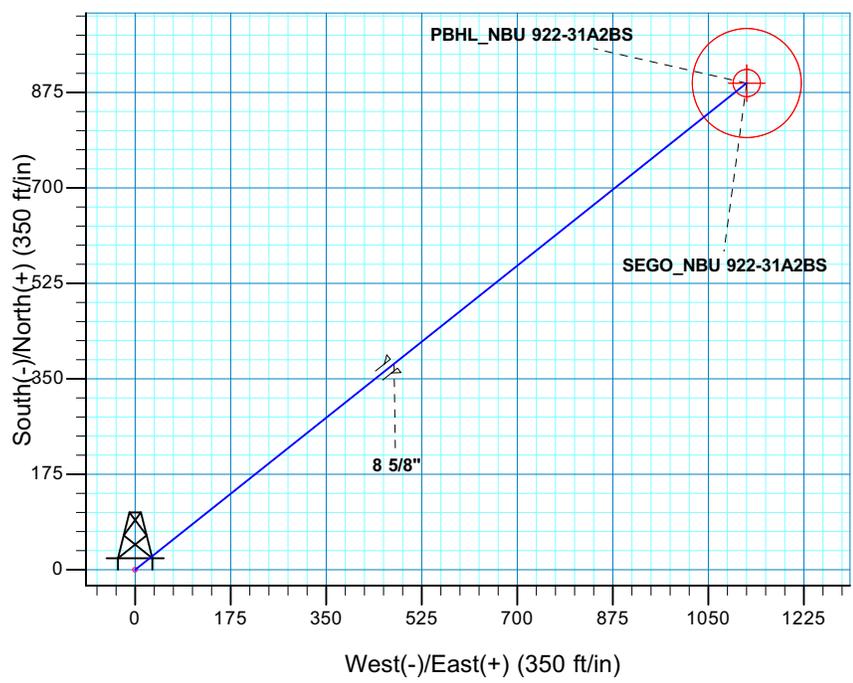
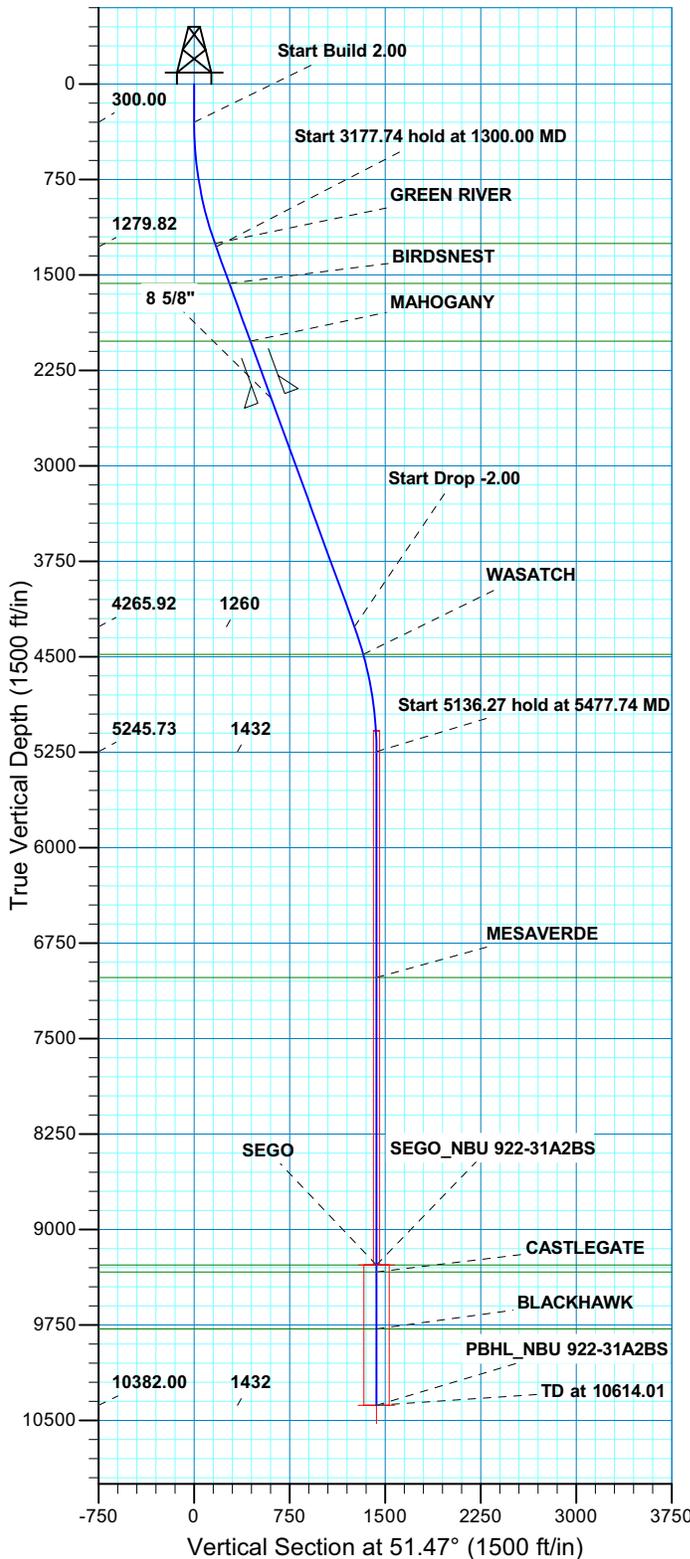
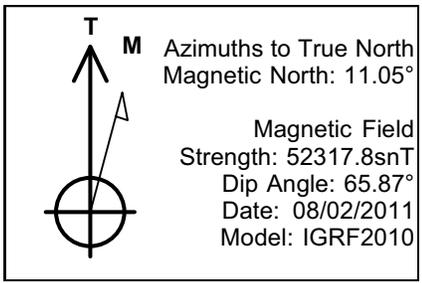
CASING DETAILS			
TVD	MD	Name	Size
2451.00	2546.35	8 5/8"	8.625



Site: NBU 922-31B PAD
Well: NBU 922-31A2BS
Wellbore: OH
Design: PLAN #2



WELL DETAILS: NBU 922-31A2BS								
GL 4892 & KB 4 @ 4896.00ft (ASSUMED)								
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude			
0.00	0.00	14528631.53	2065983.93	39.997143	-109.480528			
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	9280.00	892.34	1120.48	14529542.84	2067089.03	39.999593	-109.476528	Circle (Radius: 25.00)
- plan hits target center								
PBHL	10382.00	892.34	1120.48	14529542.84	2067089.03	39.999593	-109.476528	Circle (Radius: 100.00)
- plan hits target center								



SECTION DETAILS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00		
1300.00	20.00	51.47	1279.82	107.63	135.15	2.00	51.47	172.77		
4477.74	20.00	51.47	4265.92	784.71	985.33	0.00	0.00	1259.62		
5477.74	0.00	0.00	5245.73	892.34	1120.48	2.00	180.00	1432.39		
10614.01	0.00	0.00	10382.00	892.34	1120.48	0.00	0.00	1432.39	PBHL_NBU 922-31A2BS	

PROJECT DETAILS: Uintah County, UT UTM12			FORMATION TOP DETAILS		
Geodetic System: Universal Transverse Mercator (US Survey Feet)	TVDPath	MDPath	Formation		
Datum: NAD 1927 - Western US	1253.00	1271.51	1253.00	1271.51	GREEN RIVER
Ellipsoid: Clarke 1866	1567.00	1605.62	1567.00	1605.62	BIRDSNEST
Zone: Zone 12N (114 W to 108 W)	2021.00	2088.75	2021.00	2088.75	MAHOGANY
Location: SECTION 31 T9S R22E	4482.00	4704.66	4482.00	4704.66	WASATCH
System Datum: Mean Sea Level	7020.00	7252.01	7020.00	7252.01	MESAVERDE
	9280.00	9512.01	9280.00	9512.01	SEGO
	9335.00	9567.01	9335.00	9567.01	CASTLEGATE
	9782.00	10014.01	9782.00	10014.01	BLACKHAWK

CASING DETAILS			
TVD	MD	Name	Size
2471.00	2567.63	8 5/8"	8.625

From: Jim Davis
To: APD APPROVAL
CC: Becker Gina
Date: 8/20/2012 12:34 PM
Subject: APD approvals NBU 922-31B pad

The following wells have been approved by SITLA under the following condition. Paleo clearance is granted on the condition that, as the paleo survey report recommends, paleo monitoring be conducted on all ground-disturbing activities. Arch clearance is granted.
NBU 922-31A2BS (4304752489)
NBU 922-30O4BS (4304752488)

Thanks.
-Jim

Jim Davis
Utah Trust Lands Administration
jimdavis1@utah.gov
Phone: (801) 538-5156

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 922-31A2BS 43047524			
String	SURF	PROD		
Casing Size(")	8.625	4.500		
Setting Depth (TVD)	2470	10382		
Previous Shoe Setting Depth (TVD)	0	2470		
Max Mud Weight (ppg)	8.3	13.0		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	10690		
Operators Max Anticipated Pressure (psi)	6852	12.7		

Calculations	SURF String	8.625	"	
Max BHP (psi)	.052*Setting Depth*MW=	1070		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	774	NO	air/mist system, air bowl
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	527	NO	Reasonable depth in area
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	527	NO	
Required Casing/BOPE Test Pressure=		2373	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient	

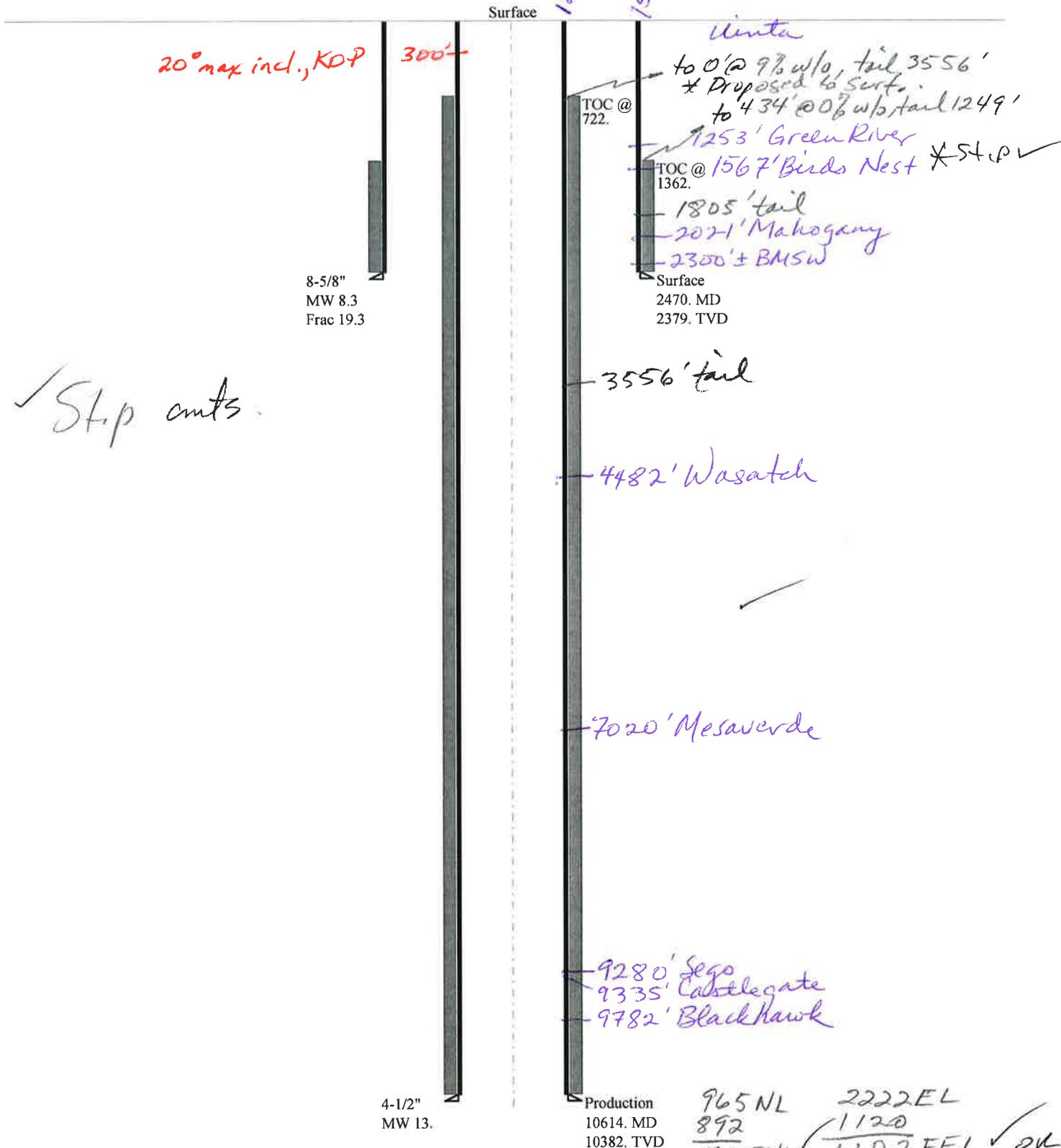
Calculations	PROD String	4.500	"	
Max BHP (psi)	.052*Setting Depth*MW=	7018		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	5772	NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	4734	YES	OK
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	5277	NO	Reasonable
Required Casing/BOPE Test Pressure=		5000	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		2470	psi *Assumes 1psi/ft frac gradient	

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

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

43047524890000 NBU 922-31A2BS

Casing Schematic



✓ St.p cuts

965 NL 2222 EL

892 1120

73 FNL 1102 FEL ✓ OK.

NENE Sec 31-9S-22E

Well name:	43047524890000 NBU 922-31A2BS	
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.	
String type:	Surface	Project ID: 43-047-52489
Location:	UINTAH COUNTY	

Design parameters:

Collapse

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

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 107 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 1,362 ft

Burst

Max anticipated surface pressure: 2,094 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,379 psi

No backup mud specified.

Tension:

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

Tension is based on air weight.
Neutral point: 2,160 ft

Directional Info - Build & Drop

Kick-off point 300 ft
Departure at shoe: 573 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 20 °

Re subsequent strings:

Next setting depth: 10,382 ft
Next mud weight: 13.000 ppg
Next setting BHP: 7,011 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,379 ft
Injection pressure: 2,379 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2470	8.625	28.00	I-55	LT&C	2379	2470	7.892	97812
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	1026	1880	1.833	2379	3390	1.42	66.6	348	5.22 J

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

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

Date: November 5, 2012
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2379 ft, a mud weight of 8.3 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Well name:	43047524890000 NBU 922-31A2BS	
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.	
String type:	Production	Project ID: 43-047-52489
Location:	UINTAH COUNTY	

Design parameters:

Collapse

Mud weight: 13.000 ppg
Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 4,727 psi
Internal gradient: 0.220 psi/ft
Calculated BHP: 7,011 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor: 1.125

Burst:

Design factor: 1.00

Tension:

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

Tension is based on air weight.
Neutral point: 8,596 ft

Estimated cost: 159,048 (\$)

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 219 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,000 ft

Cement top: 722 ft

Directional Info - Build & Drop

Kick-off point: 300 ft
Departure at shoe: 1432 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 0 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
2	5000	4.5	11.60	HCP-110	DQX	4770	5000	3.875	132000
1	5614	4.5	11.60	HCP-110	LT&C	10382	10614	3.875	27048

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
2	3221	8056	2.501	5777	10690	1.85	120.4	367.2	3.05 B
1	7011	8650	1.234	7011	10690	1.52	65.1	279	4.29 J

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

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

Date: November 5, 2012
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 10382 ft, a mud weight of 13 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.
Well Name NBU 922-31A2BS
API Number 43047524890000 **APD No** 5609 **Field/Unit** NATURAL BUTTES
Location: 1/4,1/4 NWNE **Sec** 31 **Tw** 9.0S **Rng** 22.0E 965 FNL 2222 FEL
GPS Coord (UTM) 629652 4428538 **Surface Owner**

Participants

Jaime Scharnowske, Gina Becker, Cara Mahler, Doyle Holmes, (Anadarko). Mitch Batty, (Timberline). Jim Davis (SITLA), David Hackford, (DOGM).

Regional/Local Setting & Topography

The general area is in the Natural Buttes Unit on the east slope of the Sand Wash drainage of Uintah, County approximately 44.2 miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Topography of the general area is characterized by wide drainage bottoms and open flats bordered or dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the area. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. Also, no springs exist in the area. An occasional constructed pond occurs furnishing water for antelope or livestock. The bottom of Sand Wash is 1000' to the northwest. The White River is two miles to the northeast.

The existing pad of the producing NBU 922-31BT gas well will be slightly enlarged to add six wells that will be directionally drilled. They are the NBU 922-30O4BS, NBU 922-31A2BS, NBU 922-31C1AS, NBU 922-31C3AS, NBU 922-31C4CS, and the NBU 922-31F1BS. Kerr McGee representatives at the pre-site did not know the future of the existing well. The reserve pit will be on the east side of the location. No stability concerns were noted with the existing pad. The selected site appears to be an acceptable site for constructing a pad, drilling and operating the additional wells.

Surface Use Plan

Current Surface Use

Grazing
Wildlfe Habitat
Existing Well Pad

New Road Miles

0

Well Pad

Width 287 **Length** 405

Src Const Material

Onsite

Surface Formation

UNTA

Ancillary Facilities N

Waste Management Plan Adequate? Y

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Vegetation includes black sagebrush, bud sage, horsebrush, halogeton, curly mesquite, shadscale, cheatgrass, broom snakeweed, rabbit brush and spring annuals.

Antelope, coyote, small mammals and birds. Endangered fish species exist in the White River. Domestic sheep graze the area in the winter.

Soil Type and Characteristics

Rocky sandy clay loam.

Erosion Issues N**Sedimentation Issues** N**Site Stability Issues** N**Drainage Diversion Required?** N**Berm Required?** N**Erosion Sedimentation Control Required?** N

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

Reserve Pit**Site-Specific Factors****Site Ranking**

Distance to Groundwater (feet)	100 to 200	5
Distance to Surface Water (feet)	>1000	0
Dist. Nearest Municipal Well (ft)	>5280	0
Distance to Other Wells (feet)		20
Native Soil Type	Mod permeability	10
Fluid Type	Fresh Water	5
Drill Cuttings	Normal Rock	0
Annual Precipitation (inches)		0
Affected Populations		
Presence Nearby Utility Conduits	Not Present	0
Final Score		40
		1 Sensitivity Level

Characteristics / Requirements

The reserve pit is planned in an area of cut on the east side of the location. Dimensions are 260' x 79' x 12' deep with two feet of freeboard. Kerr McGee has agreed to line this pit with a 30 mil synthetic liner and a felt sub-liner.

Closed Loop Mud Required? N **Liner Required?** Y **Liner Thickness** 30 **Pit Underlayment Required?** Y

Other Observations / Comments

API Well Number: 43047524890000

Of the additional six wells proposed for this location, four will be directionally drilled into Federal minerals. These are the NBU 922-30O4BS, NBU 922-31C1AS, NBU 922-31C4CS, and the NBU 922-31F1BS.

David Hackford
Evaluator

5/23/2012
Date / Time

RECEIVED: November 08, 2012

**Application for Permit to Drill
Statement of Basis
Utah Division of Oil, Gas and Mining**

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
5609	43047524890000	LOCKED	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		Surface Owner-APD		
Well Name	NBU 922-31A2BS		Unit	NATURAL BUTTES	
Field	NATURAL BUTTES		Type of Work	DRILL	
Location	NWNE 31 9S 22E S 965 FNL (UTM) 629659E 4428548N	2222 FEL	GPS Coord		

Geologic Statement of Basis

Kerr McGee proposes to set 2,470' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 2,300'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of section 31. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed casing and cement should adequately protect ground water in this area.

Brad Hill
APD Evaluator

11/1/2012
Date / Time

Surface Statement of Basis

The general area is in the Natural Buttes Unit of Uintah County, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Topography of the general area is characterized by wide drainage bottoms and open flats bordered or dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the area. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. Also, no springs exist in the area. An occasional constructed pond occurs furnishing water for antelope or livestock.

The existing pad of the producing NBU 922-31BT gas well will be slightly enlarged to add six wells that will be directionally drilled. They are the NBU 922-30O4BS, NBU 922-31A2BS, NBU 922-31C1AS, NBU 922-31C3AS, NBU 922-31C4CS, and the NBU 922-31F1BS. Kerr McGee representatives at the pre-site did not know the future of the existing well. The White River is approximately 2 miles to the northeast. No stability concerns were noted with the existing pad. The selected site appears to be an acceptable site for constructing a pad, drilling and operating the additional wells.

New construction will amount to 60" or less on all sides of the existing location. Reserve pit will be constructed in the same area as the reserve pit for the original location.

Jim Davis of SITLA and Ben Williams of DWR were invited to the pre-site evaluation. Jim Davis attended and had no concerns regarding the drilling of these wells or the enlargement of the location.

David Hackford
Onsite Evaluator

5/23/2012
Date / Time

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Pits	The reserve pit should be located on the east side of the location.

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 4/17/2012

API NO. ASSIGNED: 43047524890000

WELL NAME: NBU 922-31A2BS

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

PHONE NUMBER: 720 929-6086

CONTACT: Gina Becker

PROPOSED LOCATION: NWNE 31 090S 220E

Permit Tech Review:

SURFACE: 0965 FNL 2222 FEL

Engineering Review:

BOTTOM: 0076 FNL 1100 FEL

Geology Review:

COUNTY: UINTAH

LATITUDE: 39.99717

LONGITUDE: -109.48112

UTM SURF EASTINGS: 629659.00

NORTHINGS: 4428548.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: UO 01530 ST

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

SURFACE OWNER: 3 - State

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

- PLAT
- Bond: STATE - 22013542
- 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

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



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 922-31A2BS
API Well Number: 43047524890000
Lease Number: UO 01530 ST
Surface Owner: STATE
Approval Date: 11/8/2012

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 WASATCH-MESA VERDE 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:

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.

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

Surface casing shall be cemented to the surface.

Additional Approvals:

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

- Any changes to the approved drilling plan - contact Dustin Doucet
- Significant plug back of the well - contact Dustin Doucet
- Plug and abandonment of the well - contact Dustin Doucet

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
OR
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website
at <http://oilgas.ogm.utah.gov>
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing - contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program
- contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well - contact Dan Jarvis

Contact Information:

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

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office
801-231-8956 - after office hours

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:

A handwritten signature in black ink, appearing to read "J. Rogers", written in a cursive style.

For John Rogers
Associate Director, Oil & Gas

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
		5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01530 ST
SUNDRY NOTICES AND REPORTS ON WELLS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
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.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well		8. WELL NAME and NUMBER: NBU 922-31A2BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		9. API NUMBER: 43047524890000
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: 0965 FNL 2222 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 31 Township: 09.0S Range: 22.0E Meridian: S		COUNTY: UINTAH
		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 8/7/2013 <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	
	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
<p>Spud well 08/07/2013 @ 17:00. MIRU Triple A Bucket Rig, drill 20" conductor hole to 40', run 14", 36.7# schedule 10 conductor pipe, cement with 28 sacks ready mix. Anticipated surface spud date and surface casing cement 08/12/2013.</p>		
		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY August 09, 2013
NAME (PLEASE PRINT) Doreen Green	PHONE NUMBER 435 781-9758	TITLE Regulatory Analyst II
SIGNATURE N/A		DATE 8/9/2013

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01530 ST	
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	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	8. WELL NAME and NUMBER: NBU 922-31A2BS
PHONE NUMBER: 720 929-6511	9. API NUMBER: 43047524890000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0965 FNL 2222 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 31 Township: 09.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
	COUNTY: UINTAH
	STATE: UTAH

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

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

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

No new activity since last report. Well TD at 2,640 ft.

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

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

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: UO 01530 ST
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
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
PHONE NUMBER: 720 929-6514	8. WELL NAME and NUMBER: NBU 922-31A2BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0965 FNL 2222 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 31 Township: 09.0S Range: 22.0E Meridian: S	9. API NUMBER: 43047524890000
	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: 1/2/2014	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

Drilled to 9,575 ft. TD in Quarter 4 of 2013.

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

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01530 ST
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 922-31A2BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047524890000	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6100	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0965 FNL 2222 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 31 Township: 09.0S Range: 22.0E Meridian: S	COUNTY: UINTAH	
	STATE: UTAH	
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 3/27/2014 <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input checked="" type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> OTHER	
	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
<p>The NBU 922-31A2BS was placed on production 03/27/2014 after a new well completion. Producing from the MESAVERDE.</p>		
<p>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY March 28, 2014</p>		
NAME (PLEASE PRINT) Doreen Green	PHONE NUMBER 435 781-9758	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 3/28/2014	

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

AMENDED REPORT FORM 8
(highlight changes)

5. LEASE DESIGNATION AND SERIAL NUMBER:
ST UT UO 01530 ST

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL GAS WELL DRY OTHER _____

b. TYPE OF WORK: NEW WELL HORIZ. LATS DEEP-EN RE-ENTRY DIFF. RESVR. OTHER _____

7. UNIT or CA AGREEMENT NAME
UTU63047A

8. WELL NAME and NUMBER:
NBU 922-31A2BS

2. NAME OF OPERATOR:
KERR-MCGEE OIL AND GAS ONSHORE LP

9. API NUMBER:
43-047-52489

3. ADDRESS OF OPERATOR:
P.O. Box 173779 CITY Denver STATE Co ZIP 82017

PHONE NUMBER:
720-929-6000

10. FIELD AND POOL, OR WILDCAT
Natural Buttes

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: **NWNE 965 FNL 2222 FEL**
AT TOP PRODUCING INTERVAL REPORTED BELOW: **NENE 61 FNL 1111 FEL**
AT TOTAL DEPTH: **NENE 84 FNL 1084 FEL**

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
NWNE 31 9S 22E SLB

12. COUNTY **UINTAH** 13. STATE **UTAH**

14. DATE SPUDDED: **8/7/2013** 15. DATE T. D. REACHED: **12/26/2013** 16. DATE COMPLETED: **3/27/2014**

17. ELEVATIONS (DF, RKB, RT, GL):
4916 RKB

18. TOTAL DEPTH: MD **9575** TVD **9309**

19. PLUG BACK T.D.: MD **9515** TVD **9248**

20. IF MULTIPLE COMPLETIONS, HOW MANY? * ABANDONED READY TO PRODUCE

21. DEPTH BRIDGE MD **MD** PLUG SET: TVD **MD**

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
RADIAL CBL/GR/CCL/TEMP

23
WAS WELL CORED? YES (Submit analysis)
WAS DST RUN? YES (Submit report)
DIRECTIONAL SURVEY? NO YES (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20	14 STL	36.7	0	40		28			
11	8.63 J-55	28	24	2632		1105		0	
7.875	4.5 I-80	11.601	24	9562		3250		2555	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2.375	9021							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A) MESAVERDE	7503	9418		
(B)				
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
7,503 9,418	0.41	210	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
			Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
			Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
			Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

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

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
7503-9418	PUMP 10,100 BBLs SLICKWATER, 54 BBLs 15% ACID, AND 201,222 LBS 30/50 SAND

29. ENCLOSED ATTACHMENTS:

- ELECTRICAL/MECHANICAL LOGS GEOLOGICAL REPORT DST REPORT DIRECTIONAL SURVEY
- SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION CORE ANALYSIS OTHER:

30. WELL STATUS:

PRODUCING

31. INITIAL PRODUCTION

INTERVAL A (As shown in Item #26)

DATE FIRST PRODUCED: 3/27/2014		TEST DATE: 4/7/2014		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL - BBL: 12	GAS - MCF: 1619	WATER - BBL: 0	PROD. METHOD: Flowing
CHOKE SIZE: 20/64	TBG. PRESS. 1094	CSG. PRESS. 1655	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR RATES: →	OIL - BBL: 12	GAS - MCF: 1619	WATER - BBL: 0	INTERVAL STATUS Producing

INTERVAL B (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS

INTERVAL C (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS

INTERVAL D (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

SOLD

33. SUMMARY OF POROUS ZONES (Include Aquifers):

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

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				GREEN RIVER	1290
				BIRD'S NEST	1702
				MAHOGANY	2167
				WASATCH	4793
				MESAVERDE	7455

35. ADDITIONAL REMARKS (Include plugging procedures)

The first 210 ft. of the surface hole was drilled with a 12 1/4 in. bit. The remainder of surface hole was drilled with an 11 in. bit. A DV tool was placed in the well from 5030 feet – 5032 feet. DQX csg was run from surface to 5009 ft.; LTC csg was run from 5009 ft. to 9562 ft. Attached is the chronological well history, perforation report & final survey.

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

NAME (PLEASE PRINT) Ila Beale

TITLE Staff Regulatory Specialist

SIGNATURE 

DATE 4-15-2014

This report must be submitted within 30 days of

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

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

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

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

Phone: 801-538-5340
Fax: 801-359-3940

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-31A2BS BLUE		Spud Date: 8/19/2013						
Project: UTAH-UINTAH			Site: NBU 922-31B PAD			Rig Name No: PROPETRO 12/12, SST 54/54		
Event: DRILLING			Start Date: 8/1/2013			End Date: 12/28/2013		
Active Datum: RKB @4,916.00usft (above Mean Sea Level)				UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/965/E/0/2222/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/19/2013	0:00 - 3:00	3.00	DRLSUR	01	B	P	64	SKID RIG 20' TO NBU 922-31A2BS, RIG UP SET MATTING BOARD, SET RIG IN PLACE, CATWALK, PIPE RACKS, PLACE BOTTOM HOLE ASSEMBLY
	3:00 - 3:30	0.50	DRLSUR	01	B	P	64	PRE SPUD JOB SAFETY MEETING REVIEW DIRECTIONAL PLANS AND PLATS AND VERIFY LAT/LONGS AND WELL ORDER VERIFY DIRECTIONAL DRILLERS PLAN IS THE MOST RECENT AND APPROVED VERSION REFERENCE WELLBORE DIAGRAMS FOR EXACT CASING DESIGN AND GENERAL OVERVIEW OF WELLBORE, PRIOR TO SPUD.
	3:30 - 5:30	2.00	DRLSUR	08	A	Z	64	***FAILURE: RIG EQUIPMENT - (MUD PUMP) TIGHTEN MOUNTING BOLTS THAT MOUNT PUMP TO SKID.
	5:30 - 7:00	1.50	DRLSUR	02	B	P	64	PICK UP NOV 1.83 DEGREE BENT MOTOR (RUN # 3) .17 REV/GAL PICK UP 12 1/4 DRILL BIT FINISH PICKING UP BHA SPUD @ 08/19/2013 03:30. DRILL 12.25" HOLE 44'-210' (166', 166'/PER HOUR). WEIGHT ON BIT 5-15 K. STROKES PER MINUTE=120, GALLONS PER MINUTE=491. PRESSURE ON/OFF (BOTTOM) 800/600. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROTATE 20/20/20 K. DRAG 0 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.3# WATER. RUNNING VOLUME THROUGH 1 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS.
	7:00 - 9:00	2.00	DRLSUR	06	A	P	230	PRE JOB SAFETY MEETING, CIRC 15 MINUTES AND, TRIP OUT TO CHANGE ASSEMBLY. BREAK 12 1/4" BIT. MAKE UP REED 11" BIT. PICK UP 8" DIRECTIONAL ASSEMBLY SCIBE MOTOR. INSTALL EM TOOL, TRIP IN HOLE.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31A2BS BLUE

Spud Date: 8/19/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 12/28/2013

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NW/NE/09/S/22/E/31/0/0/26/PM/N/965/E/0/2222/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	9:00 - 12:00	3.00	DRLSUR	02	B	P	230	DRILL 11". SURFACE HOLE FROM 210' TO 620', (410', 136'/PER HOUR). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 960/700. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 60/57/50 K. DRAG 10 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 3.0' HIGH & 0.5' RIGHT OF THE LINE WITH 50' OF SLIDE @ 3.25%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 1 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	12:00 - 18:00	6.00	DRLSUR	02	B	P	640	DRILL 11". SURFACE HOLE FROM 620' TO 1,100', (480', 80'/PER HOUR). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1,006/740. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 55/45/50 K. DRAG 5 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 1.5' HIGH & 1.2' RIGHT OF THE LINE WITH 161' OF SLIDE @ 29.94%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 1 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	18:00 - 0:00	6.00	DRLSUR	02	B	P	1120	DRILL 11". SURFACE HOLE FROM 1,100' TO 1,550', (450', 75'/PER HOUR). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1,120/840. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 62/48/57 K. DRAG 5 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 3.5' HIGH & 3.7' LEFT OF THE LINE WITH 167' OF SLIDE @ 36.94%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 1 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31A2BS BLUE

Spud Date: 8/19/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 12/28/2013

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NWN/E/09/S/22/E/31/0/0/26/PM/N/965/E/0/2222/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/20/2013	0:00 - 6:00	6.00	DRLSUR	02	B	P	1570	DRILL 11". SURFACE HOLE FROM 1,550' TO 1,900' (350', 58' PER HOUR). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1,080/870. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 72/50/60 K. DRAG 12 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 2.2' HIGH & 6.6' LEFT OF THE LINE WITH 85' OF SLIDE @ 25%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 1 CENTRAFUGE DEWATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	6:00 - 12:00	6.00	DRLSUR	02	B	P	1920	DRILL 11". SURFACE HOLE FROM 1,900' TO 2,270' (370', 61' PER HOUR). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1,300/1150. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 80/55/70 K. DRAG 10 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 1.0' HIGH & 2.3' RIGHT OF THE LINE WITH 115' OF SLIDE @ 15.54%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 1 CENTRAFUGE DEWATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	12:00 - 19:00	7.00	DRLSUR	02	B	P	2290	DRILL 11". SURFACE HOLE FROM 2,270' TO 2,640' (370', 52' PER HOUR) TD @ 08/20/2013 19:00 WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1,300/1150. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 85/60/70 K. DRAG 15 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 0.0' HIGH & 6.4' RIGHT OF THE LINE WITH 115' OF SLIDE @ 15.54%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 1 CENTRAFUGE DEWATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	19:00 - 21:00	2.00	DRLSUR	05	A	P	2660	CIRCULATE AND CONDITION HOLE, VOLUME IS CLEAN COMING OVER SHAKERS, 4-400 BBL UPRIGHT'S FULL AND 2-400 BBL UPRIGHTS EMPTY, MUD TANKS FULL.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31A2BS BLUE

Spud Date: 8/19/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 12/28/2013

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NWN/E/0/9/S/22/E/31/0/0/26/PM/N/965/E/0/2222/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	21:00 - 0:00	3.00	CSGSUR	06	D	P	2660	TRIP OUT OF HOLE, LAY DOWN DRILL STRING, BOTTOM HOLE ASSEMBLY, LAY DOWN DIRECTIONAL TOOLS, MOTOR AND, BIT. CLEAR TOOL AREA.
8/21/2013	0:00 - 1:30	1.50	CSGSUR	06	D	P	2660	TRIP OUT OF HOLE, LAY DOWN DRILL STRING, BOTTOM HOLE ASSEMBLY, LAY DOWN DIRECTIONAL TOOLS, MOTOR AND, BIT. CLEAR TOOL AREA.
	1:30 - 2:30	1.00	CSGSUR	12	A	P	2660	PRE JOB SAFETY MEETING WITH PRO PETRO RIG CREW . MOVE PIPE RACKS AND CATWALK. RIG UP TO RUN SURFACE CASING. CLEAR UNRELATED TOOLS.
	2:30 - 5:30	3.00	CSGSUR	12	C	P	2660	RUN 59 JOINTS OF 8-5/8". 28# J-55 LTC CASING. RAN 1 CENTRALIZER ON FIRST THREE JOINTS, AND EVERY OTHER JOINT FOR 2 JOINTS FOR A TOTAL OF 5 CENTRALIZERS. RUN A TOTAL OF 59 JOINTS. RUN CASING TO BOTTOM WITH NO PROBLEMS. SET FLOAT SHOE @ 2,611.64' KB. SET TOP OF BAFFLE PLATE @ 2,565.64' KB

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31A2BS BLUE		Spud Date: 8/19/2013	
Project: UTAH-UINTAH		Site: NBU 922-31B PAD	Rig Name No: PROPETRO 12/12, SST 54/54
Event: DRILLING		Start Date: 8/1/2013	End Date: 12/28/2013
Active Datum: RKB @4,916.00usft (above Mean Sea Level)		UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/965/E/0/2222/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	5:30 - 7:00	1.50	CSGSUR	12	E	P	2660	<p>PRE JOB SAFETY MEETING WITH PRO PETRO CEMENTERS. RELEASE RIG @ 8/21/2013 07:00 RAN 200' OF 1". PIPE DOWN BACK-SIDE OF CASING.</p> <p>PRESSURE TEST LINES TO 1,500 PSI.</p> <p>PUMP 142.9 BBLS OF WATER AHEAD CLEARING SHOE.</p> <p>MIX AND PUMP 20 BBLS OF GEL WATER FLUSH AHEAD OF CEMENT.</p> <p>MIX AND PUMP 280 SX OF PREMIUM LEAD CEMENT WITH 16% GEL, 10 LB/SX GILSONITE, 2 LB/SX GR-3, 3% SALT, & 0.25 LB/SX FLOCELE. 142.6 BBLS OF SLURRY MIXED @ 12.0 PPG WITH YIELD OF 2.86 CF/SX.</p> <p>MIX & PUMP 175 SX OF PREMIUM TAIL CEMENT WITH 2% CACL2 & 0.25 LB/SX FLOCELE. 35.8 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX.</p> <p>DROP PLUG ON FLY.</p> <p>DISPLACE WITH 160.1 BBLS OF FRESH WATER. PARTIAL RETURNS THROUGH OUT JOB. FINAL LIFT OF 650 PSI AT 3.5 BBL/MINUTE.</p> <p>BUMPED PLUG @ 950 PSI. HELD @ 950 PSI FOR 5 MINUTES WITHOUT BLEED OFF.</p> <p>TESTED FLOAT AND FLOAT HELD.</p> <p>SHUT DOWN AND WASH UP</p> <p>TOP JOB # 1: PUMP CEMENT DOWN ONE INCH PIPE WITH 100 SX (20.4 BBLS) PREMIUM CEMENT WITH 4% CACL2 & .25 LB/SX FLOCELE. 20.4 BBLS OF SLURRY MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. NO CEMENT RETURNS TO SURFACE</p> <p>SHUT DOWN AND WASH UP.</p> <p>WAIT 1.5 HOURS ON CEMENT,</p> <p>TOP JOB # 2 : PUMPCEMENT DOWN BACKSIDE W/ 175 SX (26.6 BBLS) SAME CEMENT, NO CEMENT RETURNS TO SURFACE.</p> <p>RIG DOWN CEMENTERS.</p> <p>TOP JOB # 3 : PUMPCEMENT DOWN BACKSIDE W/ 175 SX (26.6 BBLS) SAME CEMENT, NO CEMENT RETURNS TO SURFACE.</p> <p>RIG DOWN CEMENTERS.</p> <p>TOP JOB # 4 : PUMPCEMENT DOWN BACKSIDE W/ 175 SX (26.6 BBLS) SAME CEMENT, 3 BBLS CEMENT RETURNS TO SURFACE.</p> <p>RIG DOWN CEMENTERS. (CEMENT JOB FINISHED @ 08/21/2013 14:10)</p>
12/21/2013	0:00 - 1:00	1.00	MIRU3	01	C	P	2660	SKID RIG 10' TO NBU 922-31A2BS
	1:00 - 2:00	1.00	PRPSPD	14	A	P	2660	NIPPLE UP BOPE
	2:00 - 7:30	5.50	PRPSPD	15	A	P	2660	<p>HOLD SAFETY MEETING, RUN TEST ASSY, TEST BOP WITH A-1 TESTERS - TEST ANNULAR TO 250 PSI LOW/ 5 MIN 2500 PSI HIGH 10 MIN, PIPE & BLIND RAMS, FLOOR VALVES, IBOP, HCR VALVE, KILL LINE VALVES, TEST BOP'S, CHOKE MANIFOLD TO 250 PSI LOW/ 5 MIN - 5000 PSI HIGH 10 MIN, HOLD ACCUMULATOR FUNCTION TEST, TEST CSG 1500 PSI - 30 MIN, RIG DOWN</p>

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31A2BS BLUE

Spud Date: 8/19/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 12/28/2013

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/965/E/0/2222/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:30 - 8:00	0.50	PRSPD	14	B	P	2660	INSTALL WEAR BUSHING
	8:00 - 9:30	1.50	PRSPD	09	A	P	2660	CUT AND SLIP DRILL LINE 101', 19 WRAPS
	9:30 - 11:00	1.50	PRSPD	06	A	P	2660	PICK UP SMITH MDI616 BIT AND SDI MOTOR, PICK UP DIRECTIONAL TOOLS.
	11:00 - 12:30	1.50	PRSPD	06	A	P	2660	TRIP IN HOLE
	12:30 - 14:30	2.00	PRSPD	22	I	W	2660	FREEZING CONDITIONS, THAW OUT FLOW LINE
	14:30 - 15:30	1.00	PRSPD	06	A	P	2660	TRIP IN HOLE TO TOP OF CEMENT
	15:30 - 16:00	0.50	DRLPRC	02	B	P	2660	DRILL OUT CEMENT, BAFFLE, FLOAT SHOE
	16:00 - 17:00	1.00	DRLPRC	02	B	P	2660	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 2,660' TO 2,738' (78' @ 78 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=160. GALLONS PER MINUTE=562. MUD WEIGHT = 8.5 PPG / VIS- 32 PRESSURE ON/OFF(BOTTOM) 1,820/1,400. ROTARY RPM 60, MOTOR RPM 130, TOTAL RPM 190. UP/DOWN/ ROT 82/60/70 K. DRAG 12 K. TORQUE = ON/OFF (BOTTOM) 7K / 9K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 3.2' HIGH & 1.2' LEFT OF THE LINE WITH 67' OF SLIDE @ 8.48%. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	17:00 - 17:30	0.50	DRLPRC	07	A	P	2738	RIG SERVICE
	17:30 - 18:30	1.00	DRLPRC	02	B	P	2738	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 2,738' TO 2,830' (92' @ 92 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=160. GALLONS PER MINUTE=562. MUD WEIGHT = 8.5 PPG / VIS- 32 PRESSURE ON/OFF(BOTTOM) 1,820/1,400. ROTARY RPM 60, MOTOR RPM 130, TOTAL RPM 190. UP/DOWN/ ROT 82/60/70 K. DRAG 12 K. TORQUE = ON/OFF (BOTTOM) 7K / 9K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 3.2' HIGH & 1.2' LEFT OF THE LINE WITH 67' OF SLIDE @ 8.48%. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	18:30 - 21:00	2.50	DRLPRC	08	A	S	2830	***REPAIR STAND PIPE (LEAKING FROM THE HAMMER UNION)

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31A2BS BLUE

Spud Date: 8/19/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 12/28/2013

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: N/W/E/0/9/S/22/E/31/0/0/26/P/M/N/965/E/0/2222/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	21:00 - 0:00	3.00	DRLPRC	02	B	P	2830	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 2,830' TO 3,259' (429' @ 143 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=160. GALLONS PER MINUTE=562. MUD WEIGHT = 8.9 PPG / VIS- 32 PRESSURE ON/OFF(BOTTOM) 2,100/1,500. ROTARY RPM 60, MOTOR RPM 130, TOTAL RPM 190. UP/DOWN/ ROT 82/60/70 K. DRAG 12 K. TORQUE = ON/OFF (BOTTOM) 11K / 9K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 1.54' LOW / 9' LEFT OF THE LINE WITH 117' OF SLIDE @ 39%. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
12/22/2013	0:00 - 6:00	6.00	DRLPRC	02	B	P	3259	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 3,259' TO 4,070' (811' @ 135 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=110. GALLONS PER MINUTE=387. MUD WEIGHT = 9.1 PPG / VIS- 37 PRESSURE ON/OFF(BOTTOM) 1,000/800. ROTARY RPM 60, MOTOR RPM 88, TOTAL RPM 148. UP/DOWN/ ROT 120/105/118 K. DRAG 2 K. TORQUE = ON/OFF (BOTTOM) 10K / 8K FROM DIRECTIONAL PLAN WE ARE CURRENTLY .43' HIGH/ 7.5' LEFT OF THE LINE WITH 173' OF SLIDE @ 38%. RUNNING VOLUME THROUGH 1 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	6:00 - 12:00	6.00	DRLPRC	02	B	P	4070	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 4,070' TO 4,480' (410' @ 68 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=110. GALLONS PER MINUTE=387. MUD WEIGHT = 9.1 PPG / VIS- 35 PRESSURE ON/OFF(BOTTOM) 1,300/1,100. ROTARY RPM 60, MOTOR RPM 88, TOTAL RPM 148. UP/DOWN/ ROT 130/110/121 K. DRAG 9 K. TORQUE = ON/OFF (BOTTOM) 12K / 8K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 8.7' LOW/ 4.01' RIGHT OF THE LINE WITH 144' OF SLIDE @ 20.3%. RUNNING VOLUME THROUGH 1 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31A2BS BLUE

Spud Date: 8/19/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 12/28/2013

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NWN/E/09/S/22/E/31/O/0/26/PM/N/965/E/0/2222/O/O

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	12:00 - 17:00	5.00	DRLPRC	02	B	P	4480	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 4,480' TO 4,832' (352' @ 70 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=110. GALLONS PER MINUTE=387. MUD WEIGHT = 9.3 PPG / VIS- 38 PRESSURE ON/OFF(BOTTOM) 1,500/1,200. ROTARY RPM 60, MOTOR RPM 88, TOTAL RPM 148. UP/DOWN/ ROT 135/112/123 K. DRAG 12 K. TORQUE = ON/OFF (BOTTOM) 12K / 8K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 9.34' LOW / 10.95' RIGHT OF THE LINE WITH 30' OF SLIDE @ 24.9%. RUNNING VOLUME THROUGH 1 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	17:00 - 17:30	0.50	DRLPRC	07	A	P	4832	RIG SERVICE
	17:30 - 0:00	6.50	DRLPRV	02	A	P	4832	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 4,832' TO 5,129' (297' @ 45 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=110. GALLONS PER MINUTE=387. MUD WEIGHT = 9.3 PPG / VIS- 38 PRESSURE ON/OFF(BOTTOM) 1,500/1,200. ROTARY RPM 60, MOTOR RPM 88, TOTAL RPM 148. UP/DOWN/ ROT 158/122/138 K. DRAG 20 K. TORQUE = ON/OFF (BOTTOM) 14K / 10K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 8' NORTH / 18' WEST OF THE LINE WITH 50' OF SLIDE @ 32%. RUNNING VOLUME THROUGH 1 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
12/23/2013	0:00 - 6:00	6.00	DRLPRV	02	B	P	5129	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 5,129' TO 5,594' (465' @ 77 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=110. GALLONS PER MINUTE=387. MUD WEIGHT = 9.3 PPG / VIS- 38 PRESSURE ON/OFF(BOTTOM) 1,600/1,300. ROTARY RPM 60, MOTOR RPM 88, TOTAL RPM 148. UP/DOWN/ ROT 185/110/140 K. DRAG 45 K. TORQUE = ON/OFF (BOTTOM) 15K / 12K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 14' NORTH/ 10' WEST OF THE LINE WITH 28' OF SLIDE @ 16%. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31A2BS BLUE		Spud Date: 8/19/2013	
Project: UTAH-UINTAH		Site: NBU 922-31B PAD	Rig Name No: PROPETRO 12/12, SST 54/54
Event: DRILLING		Start Date: 8/1/2013	End Date: 12/28/2013
Active Datum: RKB @4,916.00usft (above Mean Sea Level)		UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/965/E/0/2222/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:00 - 12:00	6.00	DRLPRV	02	B	P	5594	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 5,594' TO 6,059' (465' @ 77 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=110. GALLONS PER MINUTE=387. MUD WEIGHT = 9.3 PPG / VIS- 38 PRESSURE ON/OFF(BOTTOM) 1,700/1,400. ROTARY RPM 60, MOTOR RPM 88, TOTAL RPM 148. UP/DOWN/ ROT 200/125/150 K. DRAG 50 K. TORQUE = ON/OFF (BOTTOM) 15K / 12K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 10.07' NORTH/ 14.01' WEST OF THE LINE WITH 0' OF SLIDE @ 0%. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	12:00 - 16:30	4.50	DRLPRV	02	B	P	6059	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 6,059' TO 6,352' (293' @ 65 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=110. GALLONS PER MINUTE=387. MUD WEIGHT = 9.3 PPG / VIS- 38 PRESSURE ON/OFF(BOTTOM) 1,700/1,400. ROTARY RPM 60, MOTOR RPM 88, TOTAL RPM 148. UP/DOWN/ ROT 210/130/155 K. DRAG 55 K. TORQUE = ON/OFF (BOTTOM) 15K / 12K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 10.07' NORTH/ 14.01' WEST OF THE LINE WITH 0' OF SLIDE @ 0%. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	16:30 - 17:00	0.50	DRLPRV	07	A	P	6352	RIG SERVICE
	17:00 - 0:00	7.00	DRLPRV	02	B	P	6352	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 6,352' TO 6,826' (474' @ 79 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=180. GALLONS PER MINUTE=633. MUD WEIGHT = 9.3 PPG / VIS- 38 PRESSURE ON/OFF(BOTTOM) 2,400/2,000. ROTARY RPM 60, MOTOR RPM 145, TOTAL RPM 205. UP/DOWN/ ROT 220/120/152 K. DRAG 68 K. TORQUE = ON/OFF (BOTTOM) 17K / 12K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 1' SOUTH / 14' WEST OF THE LINE WITH 15' OF SLIDE @ 5%. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
12/24/2013	0:00 - 3:00	3.00	DRLPRV	08	A	S	6826	***RIG REPAIR, REPAIR TOP DRIVE GRABBER BOX AND SAVER SUB

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31A2BS BLUE

Spud Date: 8/19/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 12/28/2013

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NWN/E/09/S/22/E/31/0/0/26/PM/N/965/E/0/2222/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	3:00 - 6:00	3.00	DRLPRV	02	B	P	6826	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 6,826' TO 7,081' (255' @ 85 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=180. GALLONS PER MINUTE=633. MUD WEIGHT = 9.1 PPG / VIS- 36 PRESSURE ON/OFF(BOTTOM) 2,400/2,000. ROTARY RPM 60, MOTOR RPM 145, TOTAL RPM 205. UP/DOWN/ ROT 225/125/154 K. DRAG 72 K. TORQUE = ON/OFF (BOTTOM) 18K / 16K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 1' SOUTH / 14' WEST OF THE LINE WITH 15' OF SLIDE @ 5%. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	6:00 - 12:00	6.00	DRLPRV	02	B	P	7081	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 7,081' TO 7,542' (461' @ 76 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=180. GALLONS PER MINUTE=633. MUD WEIGHT = 9.1 PPG / VIS- 36 PRESSURE ON/OFF(BOTTOM) 2,400/2,000. ROTARY RPM 60, MOTOR RPM 145, TOTAL RPM 205. UP/DOWN/ ROT 220/120/152 K. DRAG 68 K. TORQUE = ON/OFF (BOTTOM) 17K / 12K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 10.55' NORTH/ 8.90' WEST OF THE LINE WITH 8' OF SLIDE @ 1.5%. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	12:00 - 15:30	3.50	DRLPRV	02	B	P	7542	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 7,542' TO 7,777' (235' @ 67 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=180. GALLONS PER MINUTE=633. MUD WEIGHT = 9.1 PPG / VIS- 36 PRESSURE ON/OFF(BOTTOM) 2,400/2,000. ROTARY RPM 60, MOTOR RPM 145, TOTAL RPM 205. UP/DOWN/ ROT 225/130/160 K. DRAG 65 K. TORQUE = ON/OFF (BOTTOM) 17K / 12K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 15.76' NORTH / 8.56' WEST OF THE LINE WITH 0' OF SLIDE @ 0%. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	15:30 - 16:00	0.50	DRLPRV	07	A	P	7777	RIG SERVICE

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31A2BS BLUE		Spud Date: 8/19/2013	
Project: UTAH-UINTAH		Site: NBU 922-31B PAD	Rig Name No: PROPETRO 12/12, SST 54/54
Event: DRILLING		Start Date: 8/1/2013	End Date: 12/28/2013
Active Datum: RKB @4,916.00usft (above Mean Sea Level)		UWI: N/W/E/0/9/S/22/E/31/0/0/26/P/M/N/965/E/0/2222/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	16:00 - 0:00	8.00	DRLPRV	02	B	P	7777	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 7,777' TO 8,254' (477' @ 60 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=180. GALLONS PER MINUTE=633. MUD WEIGHT = 9.1 PPG / VIS- 36 PRESSURE ON/OFF(BOTTOM) 2,500/2,200. ROTARY RPM 60, MOTOR RPM 145, TOTAL RPM 205. UP/DOWN/ ROT 250/130/170 K. DRAG 80 K. TORQUE = ON/OFF (BOTTOM) 20K / 15K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 15.82' NORTH / 4.66' WEST OF THE LINE WITH 0' OF SLIDE @ 0%. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
12/25/2013	0:00 - 6:00	6.00	DRLPRV	02	B	P	8254	6.2DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 8,254' TO 8,540' (477' @ 60 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=180. GALLONS PER MINUTE=633. MUD WEIGHT = 9.1 PPG / VIS- 36 PRESSURE ON/OFF(BOTTOM) 2,500/2,200. ROTARY RPM 60, MOTOR RPM 145, TOTAL RPM 205. UP/DOWN/ ROT 250/155/170 K. DRAG 80 K. TORQUE = ON/OFF (BOTTOM) 20K / 19K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 15.47' NORTH/ 3.88' WEST OF THE LINE WITH 12' OF SLIDE @ 6.2 %. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. HOLE ISSUES HIGH TORQUE.
	6:00 - 12:00	6.00	DRLPRV	02	B	P	8540	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 8,540' TO 8,817' (277' @ 46 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=180. GALLONS PER MINUTE=633. MUD WEIGHT = 9.3 PPG / VIS- 36 PRESSURE ON/OFF(BOTTOM) 2,600/2,400. ROTARY RPM 60, MOTOR RPM 145, TOTAL RPM 205. UP/DOWN/ ROT 250/155/170 K. DRAG 80 K. TORQUE = ON/OFF (BOTTOM) 20K / 19K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 10.18' NORTH/ .37' WEST OF THE LINE WITH 0' OF SLIDE @ 0%. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. HOLE ISSUES HIGH TORQUE.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31A2BS BLUE

Spud Date: 8/19/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 12/28/2013

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NWN/E/09/S/22/E/31/0/0/26/PM/N/965/E/0/2222/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	12:00 - 17:30	5.50	DRLPRV	02	B	P	8817	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 8,817' TO 9,112' (295' @ 53 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=180. GALLONS PER MINUTE=633. MUD WEIGHT = 9.3 PPG / VIS- 36 PRESSURE ON/OFF(BOTTOM) 2,600/2,400. ROTARY RPM 60, MOTOR RPM 145, TOTAL RPM 205. UP/DOWN/ ROT 300/150/185 K. DRAG 50 K. TORQUE = ON/OFF (BOTTOM) 17K / 16K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 10.18' NORTH/ .37' WEST OF THE LINE WITH 0' OF SLIDE @ 0%. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS.
	17:30 - 18:00	0.50	DRLPRV	07	A	P	9112	DAILY RIG SERVICE
	18:00 - 22:00	4.00	DRLPRV	02	B	P	9112	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 9,112' TO 9,262' (150' @ 37 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=180. GALLONS PER MINUTE=633. MUD WEIGHT = 9.3 PPG / VIS- 36 PRESSURE ON/OFF(BOTTOM) 2,600/2,400. ROTARY RPM 60, MOTOR RPM 145, TOTAL RPM 205. UP/DOWN/ ROT 325/150/185 K. DRAG 50 K. TORQUE = ON/OFF (BOTTOM) 17K / 16K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 10.18' NORTH/ .37' WEST OF THE LINE WITH 0' OF SLIDE @ 0%. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. HOLE ISSUES HIGH TORQUE.
	22:00 - 0:00	2.00	DRLPRV	05	A	P	9262	DISPLACE HOLE FROM 9 PPG WITH 11 PPG MUD AND CONDITION MUD FROM UPRIGHTS.
12/26/2013	0:00 - 2:00	2.00	DRLPRV	05	A	P	9262	DISPLACE HOLE FROM 9 PPG WITH 11 PPG MUD AND CONDITION MUD FROM UPRIGHTS.
	2:00 - 6:00	4.00	DRLPRV	02	B	P	9262	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 9,262' TO 9,397' (135' @ 33 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=180. GALLONS PER MINUTE=633. MUD WEIGHT = 11.0 PPG / VIS- 40 PRESSURE ON/OFF(BOTTOM) 2,600/2,400. ROTARY RPM 60, MOTOR RPM 145, TOTAL RPM 205. UP/DOWN/ ROT 325/150/185 K. DRAG 50 K. TORQUE = ON/OFF (BOTTOM) 17K / 16K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 10.18' NORTH/ .37' WEST OF THE LINE WITH 0' OF SLIDE @ 0%. RUNNING VOLUME THROUGH 0 CENTRIFUGE DE WATERING OFF LINE, RUNNING VOLUME OVER BOTH SHAKERS. HOLE ISSUES HIGH TORQUE.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31A2BS BLUE		Spud Date: 8/19/2013	
Project: UTAH-UINTAH		Site: NBU 922-31B PAD	Rig Name No: PROPETRO 12/12, SST 54/54
Event: DRILLING		Start Date: 8/1/2013	End Date: 12/28/2013
Active Datum: RKB @4,916.00usft (above Mean Sea Level)		UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/965/E/0/2222/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:00 - 11:30	5.50	DRLPRV	02	B	P	9397	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 9,397' TO 9,575' (178' @ 32 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=180. GALLONS PER MINUTE=633. MUD WEIGHT = 11.0 PPG / VIS- 40 PRESSURE ON/OFF(BOTTOM) 2,900/2,700. ROTARY RPM 60, MOTOR RPM 145, TOTAL RPM 205. UP/DOWN/ ROT 330/160/195 K. DRAG 50 K. TORQUE = ON/OFF (BOTTOM) 17K / 16K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 11.10 ' SOUTH/ 16.86' EAST OF THE LINE WITH 0' OF SLIDE @ 0%. RUNNING VOLUME THROUGH 0 CENTRIFUGE DE WATERING OFF LINE, RUNNING VOLUME OVER BOTH SHAKERS. HOLE ISSUES HIGH TORQUE.
	11:30 - 13:00	1.50	DRLPRV	05	C	P	9575	CONDITION MUD & CIRCULATE, WORKING DRILL STRING UP AND DOWN, MUD IN 11.5 PPG VISCOSITY=38, MUD OUT 11.5 PPG VISCOSITY=36, MUD COMING OVER SHAKERS IS CLEAN, CIRCULATE WITH NO GAINS AND NO LOSSES PUMPED 40 BBL CAL CARB SWEEPS WITH WALL NUT AND, MULTI SEAL, NO FLOW ON FLOW CHECKS
	13:00 - 15:00	2.00	DRLPRV	06	E	P	9575	10 STAND WIPER TRIP PUMPED 10 STANDS OFF BOTTOM.
	15:00 - 16:30	1.50	DRLPRV	05	C	P	9575	CONDITION MUD & CIRCULATE, WORKING DRILL STRING UP AND DOWN, MUD IN 11.5 PPG VISCOSITY=36, MUD OUT 11.5 PPG VISCOSITY=36, MUD COMING OVER SHAKERS IS CLEAN, BUILD 40 BBL 13.5# DRY JOB CIRCULATE WITH NO GAINS AND NO LOSSES PUMPED 40 BBL CAL CARB SWEEPS WITH WALL NUT AND, MULTI SEAL, NO FLOW ON FLOW CHECKS
	16:30 - 0:00	7.50	DRLPRV	06	D	P	9575	PUMP 40 BBL DRY JOB, BLOW DOWN TOP DRIVE, TRIP OUT OF HOLE FOR CASING RUN, PUMP 10 STANDS OFF BOTTOM @ 300K , HOLE TOOK PROPER FILL WITH NO GAINS NO LOSSES NO FLOW ON FLOW CHECKS
12/27/2013	0:00 - 1:00	1.00	DRLPRV	06	D	P	9575	RACK BACK DIRECTIONAL TOOLS LAY DOWN MOTOR AND BIT
	1:00 - 1:30	0.50	DRLPRV	14	B	P	9575	PULL WEAR BUSHING
	1:30 - 3:30	2.00	CSGPRO	12	A	P	9575	HOLD SAFETY MEETING / RIG UP WEATHERFORD CASING SERVICE CASING EQUIPMENT

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31A2BS BLUE		Spud Date: 8/19/2013	
Project: UTAH-UINTAH		Site: NBU 922-31B PAD	Rig Name No: PROPETRO 12/12, SST 54/54
Event: DRILLING		Start Date: 8/1/2013	End Date: 12/28/2013
Active Datum: RKB @4,916.00usft (above Mean Sea Level)		UWI: NWN/E/0/9/S/22/E/31/0/0/26/PM/N/965/E/0/2222/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	3:30 - 13:00	9.50	CSGPRO	12	C	P	9575	<p>WEATHERFORD CASING SERVICE, (INSPECT FLOAT EQUIPMENT WITH BAFFLE FOR DV TOOL)</p> <p>RIG UP TORQUE TURN, PERFORM DUMP TEST. DUMP TEST FAILED AND DAMAGED CASING JOINT, REPLACE JOINT AND REPERFORM DUMP TEST (PASSED).</p> <p>MAKE UP 4.5" K-55 LTC DRILLING & COMPLETION TECH. FLOAT SHOE ON SHOE JOINT WITH THREAD LOCK. MAKE UP 4.5" K-55 FLOAT COLLAR WITH THREAD LOCK ON TOP OF SHOE JOINT. RUN CENTRALIZERS ON FIRST 3 JOINTS AND EVERY THIRD JOINT FOR TOTAL OF 15 CENTRALIZERS.</p> <p>BREAK CIRCULATION @ 50', 968', 5000'. NO PROBLEMS WITH FLOAT SHOE OR COLLAR.</p> <p>RUN A TOTAL OF 102 JOINTS OF 4 1/2", 11.6#, I-80, LT&C CASING + 1 MARKER JOINT</p> <p>MAKE UP DQX CROSS OVER JOINT AND DV TOOL, RUN A TOTAL OF 113 JOINTS OF 4 1/2", 11.6#, I-80/ DQX, CASING, + 1 CROSSOVER + 1 PUP JOINT</p> <p>RUN A TOTAL OF 215 JOINTS OF CASING TO BOTTOM WITH NO PROBLEMS</p> <p>SET FLOAT SHOE @ 9,561.92',</p> <p>SET TOP FLOAT COLLAR @ 9,516.24',</p> <p>SET TOP OF MESAVERDE MARKER JOINT @ 7,284.5'</p> <p>LANDED CASING ON CAMERON CASING HANGER SET IN WELL HEAD.</p>
	13:00 - 16:00	3.00	CSGPRO	05	D	P	9575	<p>CIRCULATE GAS OUT TWO BOTTOMS UP AND RIG DOWN CASING CREW.</p>

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31A2BS BLUE		Spud Date: 8/19/2013	
Project: UTAH-UINTAH		Site: NBU 922-31B PAD	Rig Name No: PROPETRO 12/12, SST 54/54
Event: DRILLING		Start Date: 8/1/2013	End Date: 12/28/2013
Active Datum: RKB @4,916.00usft (above Mean Sea Level)		UWI: NWN/E/0/9/S/22/E/31/0/0/26/PM/N/965/E/0/2222/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	16:00 - 19:00	3.00	CSGPRO	12	E	P	9575	HOLD SAFETY MEETING WITH BAKER HUGHES TWO STAGE PRIMARY CEMENT JOB FIRST STAGE TEST LINES TO 6,400 PSI, PUMP 25 BBLS H2O 8.3 PPG SPACER, MIX & PUMP 1055 sacks (50:50) Poz (Fly Ash):Class G Cement + 0.05% bwoc Static Free + 10% bwow Sodium Chloride + 0.55% bwoc R-3 + 0.5% bwoc EC-1 + 0.25 lbs/sack Cello Flake + 0.002 gps FP-6 L + 0.7% bwoc Sodium Metasilicate + 2% bwoc Bentonite II + 5 lbs/sack Kol-Seal, 50 lb bag + 55.9% Fresh Water Slurry Weight (ppg) 14.30PPG Slurry Yield (cf/sack) 1.35 DROP PLUG DISPLACEMENT 80 bbls FRESH WATER @ 8.34 ppg CONTINUE TO DISPLACE WITH 58.5 BBLS OF 11.5 PPG MUD SLOW RATE TO BUMP PLUG 10BBLS 1,480 FINAL LIFT PRESSURE BUMP PLUG 500 OVER AND TEST FLOAT COLLER FLOAT HELD PRESSURE UP TO 3240 TO OPEN DV TOOL TO CIRCULATE 25 BBLS OF SPACER WATER BACK TO SERFACE 30 BBLS OF CEMENT BACK TO SURFACE.
	19:00 - 23:00	4.00	CSGPRO	13	A	P	9575	CIRCULATE THROUGH DV TOOL 4.5 HRS FOR FIRST STAGE CEMENT JOB TO SET UP

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31A2BS BLUE		Spud Date: 8/19/2013	
Project: UTAH-UINTAH		Site: NBU 922-31B PAD	Rig Name No: PROPETRO 12/12, SST 54/54
Event: DRILLING		Start Date: 8/1/2013	End Date: 12/28/2013
Active Datum: RKB @4,916.00usft (above Mean Sea Level)		UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/965/E/0/2222/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	23:00 - 0:00	1.00	CSGPRO	12	E	P	9575	HOLD SAFETY MEETING WITH BAKER HUGHES TWO STAGE PRIMARY CEMENT JOB SECOND STAGE PUMP 25 BBLs H2O 8.3 PPG SPACER, 2ND LEAD SLURRY MIX & PUMP 590 sacks Premium Lite II Cement + 0.05% bwoc Static Free + 3% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 5 lbs/sack Kol-Seal, 50 lb bag + 0.4% bwoc FL-52 + 0.4% bwoc Sodium Metasilicate + 6% bwoc Bentonite II + 121.5% Fresh Water 2ND TAIL MIX & PUMP 60 sacks Class G Cement + 1% bwoc Calcium Chloride + 0.4% bwoc Sodium Metasilicate + 44.4% Fresh Water Slurry Weight (ppg) SLURRY 1 12.5 SLURRY 2 15.8 Slurry Yield (cf/sack) SLURRY 1 2.01 SLURRY 2 1.16 DROP PLUG DISPLACEMENT 71 bbls FRESH WATER @ 8.3 ppg SLOW RATE TO BUMP PLUG 78BBLs 921 PSI FINAL LIFT PRESSURE BUMP PLUG 1500 OVER @ 2557 PSI TEST DV TOOL TOOL HELD 50 BBLs CEMENT BACK TO SERFACE.
12/28/2013	0:00 - 1:30	1.50	CSGPRO	12	E	P	9575	HOLD SAFETY MEETING WITH BAKER HUGHES TWO STAGE PRIMARY CEMENT JOB SECOND STAGE PUMP 25 BBLs H2O 8.3 PPG SPACER, 2ND LEAD SLURRY MIX & PUMP 590 sacks Premium Lite II Cement + 0.05% bwoc Static Free + 3% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 5 lbs/sack Kol-Seal, 50 lb bag + 0.4% bwoc FL-52 + 0.4% bwoc Sodium Metasilicate + 6% bwoc Bentonite II + 121.5% Fresh Water 2ND TAIL MIX & PUMP 60 sacks Class G Cement + 1% bwoc Calcium Chloride + 0.4% bwoc Sodium Metasilicate + 44.4% Fresh Water Slurry Weight (ppg) SLURRY 1 12.5 SLURRY 2 15.8 Slurry Yield (cf/sack) SLURRY 1 2.01 SLURRY 2 1.16 DROP PLUG DISPLACEMENT 71 bbls FRESH WATER @ 8.3 ppg SLOW RATE TO BUMP PLUG 78BBLs 921 PSI FINAL LIFT PRESSURE BUMP PLUG 1500 OVER @ 2557 PSI TEST DV TOOL TOOL HELD 50 BBLs CEMENT BACK TO SERFACE.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31A2BS BLUE				Spud Date: 8/19/2013				
Project: UTAH-UINTAH			Site: NBU 922-31B PAD			Rig Name No: PROPETRO 12/12, SST 54/54		
Event: DRILLING			Start Date: 8/1/2013		End Date: 12/28/2013			
Active Datum: RKB @4,916.00usft (above Mean Sea Level)				UWI: NWN/E/09/S/22/E/31/0/0/26/PM/N/965/E/0/2222/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	1:30 - 2:30	1.00	RDMO	17	A	P	9575	PJSM, CAMERON SET PACK OFF
	2:30 - 4:30	2.00	RDMO	14	A	P	9575	NIPPLE DOWN BOPE AND RELEASE RIG.

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 922-31A2BS BLUE	Wellbore No.	OH
Well Name	NBU 922-31A2BS	Wellbore Name	NBU 922-31A2BS
Report No.	1	Report Date	3/17/2014
Project	UTAH-UINTAH	Site	NBU 922-31B PAD
Rig Name/No.		Event	COMPLETION
Start Date	2/14/2014	End Date	3/27/2014
Spud Date	8/19/2013	Active Datum	RKB @4,916.00usft (above Mean Sea Level)
UWI	NWN/E/0/9/S/22/E/31/0/0/26/PM/N/965/E/0/2222/0/0		

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	7,503.0 (usft)-9,418.0 (usft)	Start Date/Time	3/17/2014 12:00AM
No. of Intervals	64	End Date/Time	3/17/2014 12:00AM
Total Shots	210	Net Perforation Interval	70.00 (usft)
Avg Shot Density	3.00 (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	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
3/17/2014 12:00AM	MESAVERDE/			7,503.0	7,504.0	3.00		0.410	EXP/	3.125	120.00		19.00	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
3/17/2014 12:00AM	MESAVERDE/			7,524.0	7,525.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,570.0	7,571.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,582.0	7,584.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,596.0	7,598.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,615.0	7,616.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,690.0	7,691.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,702.0	7,703.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,716.0	7,717.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,734.0	7,735.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,751.0	7,752.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,812.0	7,813.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,826.0	7,828.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,884.0	7,885.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,932.0	7,933.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,949.0	7,950.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,962.0	7,963.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,991.0	7,992.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,065.0	8,066.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,106.0	8,108.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,158.0	8,159.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,186.0	8,187.0	3.00		0.410	EXP/	3.125	120.00		19.00	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
3/17/2014 12:00AM	MESAVERDE/			8,240.0	8,241.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,277.0	8,278.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,292.0	8,293.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,298.0	8,299.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,333.0	8,335.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,402.0	8,403.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,417.0	8,418.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,470.0	8,471.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,506.0	8,507.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,529.0	8,530.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,541.0	8,542.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,549.0	8,550.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,563.0	8,564.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,613.0	8,614.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,628.0	8,629.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,654.0	8,655.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,675.0	8,676.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,682.0	8,683.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,695.0	8,696.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,742.0	8,743.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,758.0	8,759.0	3.00		0.410	EXP/	3.125	120.00		19.00	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
3/17/2014 12:00AM	MESAVERDE/			8,844.0	8,845.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,864.0	8,865.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,910.0	8,911.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,938.0	8,939.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,968.0	8,969.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,976.0	8,977.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,000.0	9,001.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,055.0	9,056.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,068.0	9,069.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,092.0	9,093.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,104.0	9,105.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,115.0	9,116.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,128.0	9,129.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,155.0	9,156.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,198.0	9,199.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,244.0	9,245.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,261.0	9,262.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,292.0	9,293.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,339.0	9,340.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,410.0	9,411.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,416.0	9,418.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	

US ROCKIES REGION
Operation Summary Report

US ROCKIES REGION								
Operation Summary Report								
Well: NBU 922-31A2BS BLUE					Spud Date: 8/19/2013			
Project: UTAH-UINTAH			Site: NBU 922-31B PAD			Rig Name No: SWABBCO 6/6		
Event: COMPLETION			Start Date: 2/14/2014		End Date: 3/27/2014			
Active Datum: RKB @4,916.00usft (above Mean Sea Level)				UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/965/E/0/2222/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
2/14/2014	7:00 - 11:00	4.00	SUBSPR	32	F	P		RU IPS RIH WITH 3 7/8" MILL TAGGED CEMENT AT 4877'DRILLED OUT CEMENT FROM 4,877 TO DV TOOL @ 5031, DRILLED OUT DV TOOL 15 MIN, RIH TAGGED @ 9498 CLEANED OUT TO FC @ 9515 CIRCULATE CLEAN, WITH TMAC, POOH, RU INSTALLED TREE MOVED OVER TO RED WELL
2/15/2014	8:00 - 13:00	5.00	SUBSPR	52	B	P		HOOKEED SURFACE CASING TO PIT OPENED WELL WELL SLIGHT FLOW ;WILL TEST FOR INJECTION RATE IN AM
2/18/2014	-							
3/4/2014	10:30 - 13:00	2.50	SUBSPR	52	B	P		RU HOT OILER PRESSURED SURFACE CASING TO 1500, PSI COULDN'T PUMP DOWN, PRESSURED TO 1900 PSI , WORKED FOR 2 1/2 HRS WELL WOULD LOSE 900 PSI 1N 1 MIN 45 SEC BLED WELL DOWN HOOK UP TO PIT
3/5/2014	8:00 - 9:00	1.00	SUBSPR	52	B	P		MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -63 PSI. NO COMMUNICATION BUT SURFACE HAS MIGRATION BLEED OFF PSI.
3/17/2014	7:00 - 7:15	0.25	FRAC	48		P		CAN'T PUMP DOWN SURFACE HSM-JSA
	7:15 - 11:00	3.75	FRAC	37	E	P		MIRU CASED HOLE SOLUTIONS, RIH PERF STG #1 AS DESIGNED, SWIFN.
3/18/2014	6:15 - 6:30	0.25	FRAC	48		P		HSM-JSA
	6:30 - 15:30	9.00	FRAC	36	H	P		FRAC STG #1) WHP 1531 PSI, BRK 3518 PSI @ 4.1 BPM. ISIP 2737 PSI, FG. 0.73 ISIP 2836 PSI, FG. 0.74, NPI 99 PSI, X/O TO WL.
3/19/2014	6:00 - 6:15	0.25	FRAC	48		P		SET CBP & PERF STG #2 AS DESIGNED, SWI, SDFN. HSM-JSA

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31A2BS BLUE		Spud Date: 8/19/2013	
Project: UTAH-UINTAH		Site: NBU 922-31B PAD	Rig Name No: SWABBCO 6/6
Event: COMPLETION		Start Date: 2/14/2014	End Date: 3/27/2014
Active Datum: RKB @4,916.00usft (above Mean Sea Level)		UWI: NWN/E/09/S/22/E/31/0/0/26/PM/N/965/E/0/2222/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:15 - 18:00	11.75	FRAC	36	H	P		FRAC STG #2) WHP 2261 PSI, BRK 5027 PSI @ 4.1 BPM. ISIP 2975 PSI, FG. 0.76 ISIP 3028 PSI, FG. 0.77, NPI 53 PSI, X/O TO WL. SET CBP & PERF STG #3 AS DESIGNED, X/O TO FRAC. FRAC STG #3) WHP 1839 PSI, BRK 2738 PSI @ 3.5 BPM. ISIP 2206 PSI, FG. 0.69 ISIP 2886 PSI, FG. 0.76, NPI 680 PSI, X/O TO WL. SET CBP & PERF STG #4 AS DESIGNED, X/O TO FRAC. FRAC STG #4) WHP 2040 PSI, BRK 2755 PSI @ 4 BPM. ISIP 1765 PSI, FG. 0.64 ISIP 2435 PSI, FG. 0.72, NPI 670 PSI, X/O TO WL. SET CBP & PERF STG #5 AS DESIGNED, SWI, SDFN. HSM-JSA
3/20/2014	6:00 - 6:15	0.25	FRAC	48		P		
	6:15 - 17:00	10.75	FRAC	36	H	P		FRAC STG #5) WHP 1234 PSI, BRK 2882 PSI @ 5.2 BPM. ISIP 1829 PSI, FG. 0.65 ISIP 2308 PSI, FG. 0.71, NPI 479 PSI, X/O TO WL. SET CBP & PERF STG #6 AS DESIGNED, SWI, SDFN. HSM-JSA
3/22/2014	6:00 - 6:15	0.25	FRAC	48		P		
	6:15 - 18:30	12.25	FRAC	36	H	P		FRAC STG #6) WHP 1223 PSI, BRK 2841 PSI @ 4.3 BPM. ISIP 1904 PSI, FG. 0.67 ISIP 2539 PSI, FG. 0.75, NPI 635 PSI, X/O TO WL. SET CBP & PERF STG #7 AS DESIGNED, X/O TO FRAC. FRAC STG #7) WHP 1385 PSI, BRK 2200 PSI @ 4.5 BPM. ISIP 1634 PSI, FG. 0.64 ISIP 2377 PSI, FG. 0.74, NPI 743 PSI, X/O TO WL. SET CBP & PERF STG #8 AS DESIGNED, X/O TO FRAC. FRAC STG #8) WHP 1718 PSI, BRK 2286 PSI @ 3.6 BPM. ISIP 1931 PSI, FG. 0.69 ISIP 2123 PSI, FG. 0.71, NPI 192 PSI, X/O TO WL. SET CBP & PERF STG #9 AS DESIGNED, SWI, SDFN. HSM-JSA
3/23/2014	7:00 - 7:15	0.25	FRAC	48		P		
	7:15 - 14:00	6.75	FRAC	36	H	P		FRAC STG #9) WHP 1163 PSI, BRK 1832 PSI @ 5.7 BPM. ISIP 1520 PSI, FG. 0.64 ISIP 1870 PSI, FG. 0.69, NPI 350 PSI, X/O TO WL. SET KILL PLUG RDMO WL & FRAC EQUIP. TOTAL CLEAN FLUID- 10154 BBLS TOTAL SAND- 201222 LBS
3/26/2014	7:00 - 7:30	0.50	DRLOUT	48		P		TEST BOP'S

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-31A2BS BLUE		Spud Date: 8/19/2013	
Project: UTAH-UINTAH		Site: NBU 922-31B PAD	Rig Name No: SWABBCO 6/6
Event: COMPLETION		Start Date: 2/14/2014	End Date: 3/27/2014
Active Datum: RKB @4,916.00usft (above Mean Sea Level)		UWI: NWN/E/0/9/S/22/E/31/0/0/26/PM/N/965/E/0/2222/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:30 - 15:00	7.50	DRLOUT	31	I	P		RD, MIRU, NDWH, NU BOP'S, BJD, TEST BOP'S 3000#, PU POBS, BIT, SN, TIH 150 JTS J-55 TBG, PU 6' PUP, 6 JTS L-80, TIH TAG KILL PLUG, 236JTS, PU PWR SWIVEL BREAK CIRC., ,SWIFN
3/27/2014	7:00 - 7:30	0.50	DRLOUT	48		P		TRIPPING
	7:30 - 16:00	8.50	DRLOUT	44	C			BREAK CIRC, MILL 9 CBP'S THRU BJD, C/O TO PBTD, 50' SAND PU, LAND TBG, ND BOP'S, NUWH, POBS 2000#, TURN TO PROD RDMO
								PLUG# 1 7453' 20' SAND 9 MIN 100# KICK PLUG# 2 7646' 30' SAND 7 MIN 100# KICK PLUG# 3 7858' 30' SAND 9 MIN 50# KICK PLUG# 4 8138' 60' SAND 8 MIN 100# KICK PLUG# 5 8365' 30' SAND 5 MIN 100# KICK PLUG# 6 8594' 30' SAND 9 MIN 100# KICK PLUG# 7 8789' 50' SAND 9 MIN 200# KICK PLUG# 8 9031' 25' SAND 5 MIN 200# KICK PLUG# 9 9224' 40 SAND 8 MIN 100# KICK PBTD 9515' BTM PERF 9418' KB 24.00' HANGER 4.125" .83' TBG 136 JTS L-80 4307.94' TBG PUP JT L-80 6.00' TBG 150 JTS J-55 4679.57' XN SN 1.875" 2.20' EOT 9020.54' FRAC WTR 10,154 BBLS RCVD 2,300 BBLS LTR 7,854 BBLS GAS RCVD ON MILL OUT 968 MCF WELL TURNED TO SALES @ 15:30 HR ON 3/27/2014. 700 MCFD, 1680 BWPD, FCP 2000#, FTP 1540#, 20/64" CK.
	16:00 - 16:00	0.00	DRLOUT	50				

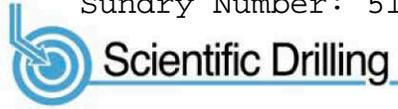
Sundry Number: 51208 API Well Number: 43047524890000

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

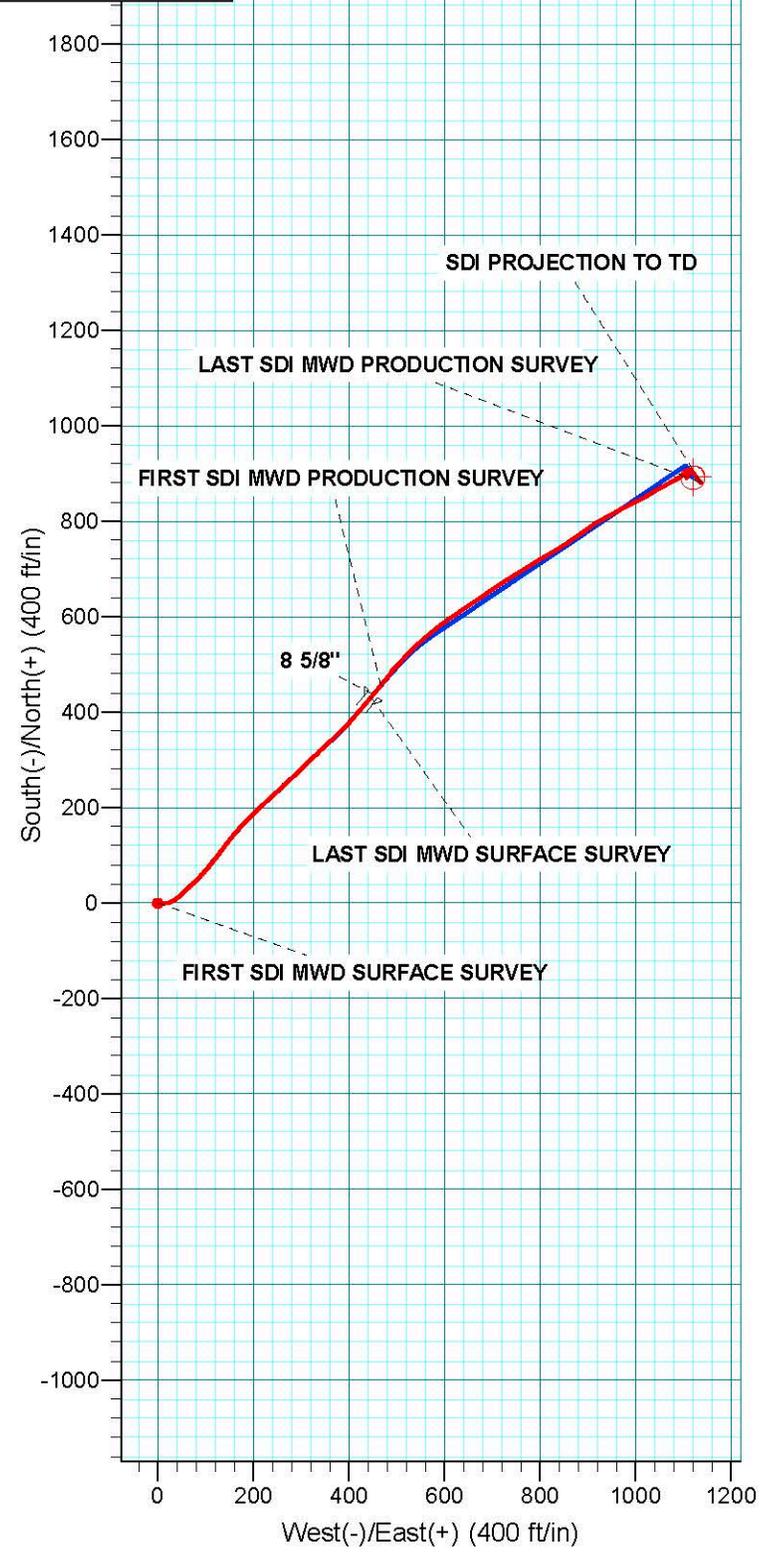
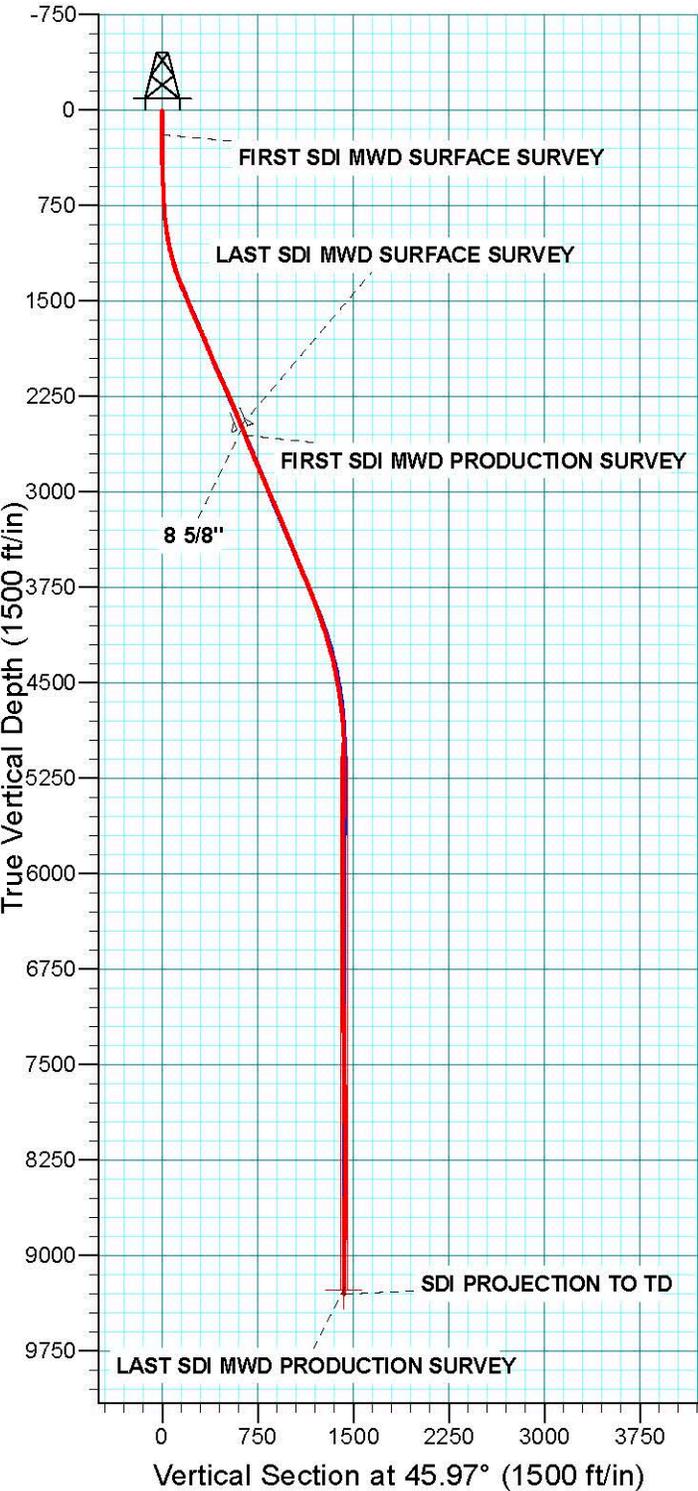
Site: NBU 922-31B PAD

Well: NBU 922-31A2BS

Wellbore: OH



WELL DETAILS: NBU 922-31A2BS					
GL 4892 & KB 24 @ 4916.00ft (SST 54)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14528631.53	2065983.93	39.9971430	-109.4805280





Scientific Drilling

US ROCKIES REGION PLANNING

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

NBU 922-31B PAD

NBU 922-31A2BS

OH

Design: OH

Standard Survey Report

03 January, 2014



Scientific Drilling

Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 922-31A2BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Site:	NBU 922-31B PAD	MD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Well:	NBU 922-31A2BS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

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 922-31B PAD, SECTION 31 T9S R22E				
Site Position:		Northing:	14,528,641.40 usft	Latitude:	39.9971700
From:	Lat/Long	Easting:	2,065,986.00 usft	Longitude:	-109.4805200
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.98 °

Well	NBU 922-31A2BS, 965 FNL 2222 FEL					
Well Position	+N/-S	0.00 ft	Northing:	14,528,631.53 usft	Latitude:	39.9971430
	+E/-W	0.00 ft	Easting:	2,065,983.93 usft	Longitude:	-109.4805280
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,892.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	10/29/2013	10.84	65.80	52,014

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	45.97	

Survey Program	Date	1/3/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
20.00	2,595.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
2,680.00	9,575.00	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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
196.00	0.18	308.91	196.00	0.17	-0.22	-0.03	0.10	0.10	0.00	
FIRST SDI MWD SURFACE SURVEY										
279.00	0.57	101.81	279.00	0.17	0.09	0.18	0.89	0.47	184.22	
365.00	2.11	86.64	364.97	0.18	2.09	1.62	1.82	1.79	-17.64	
455.00	2.37	91.83	454.90	0.21	5.60	4.18	0.37	0.29	5.77	
545.00	2.73	89.10	544.81	0.19	9.60	7.04	0.42	0.40	-3.03	
635.00	3.08	93.50	634.70	0.07	14.16	10.23	0.46	0.39	4.89	
725.00	3.17	81.54	724.57	0.29	19.03	13.89	0.73	0.10	-13.29	



Scientific Drilling

Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 922-31A2BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Site:	NBU 922-31B PAD	MD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Well:	NBU 922-31A2BS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
815.00	4.84	71.43	814.34	1.87	25.10	19.34	2.01	1.86	-11.23	
905.00	7.39	59.39	903.83	6.03	33.68	28.40	3.16	2.83	-13.38	
995.00	9.76	49.11	992.82	13.97	44.43	41.65	3.13	2.63	-11.42	
1,085.00	12.31	45.95	1,081.15	25.63	57.09	58.87	2.91	2.83	-3.51	
1,175.00	14.95	46.56	1,168.61	40.29	72.42	80.07	2.94	2.93	0.68	
1,265.00	18.03	44.01	1,254.90	58.29	90.53	105.61	3.51	3.42	-2.83	
1,355.00	21.07	39.15	1,339.70	80.86	110.43	135.60	3.83	3.38	-5.40	
1,445.00	23.30	37.25	1,423.04	107.58	131.42	169.26	2.60	2.48	-2.11	
1,535.00	22.60	37.60	1,505.91	135.45	152.75	203.96	0.79	-0.78	0.39	
1,625.00	23.04	43.22	1,588.88	161.99	175.36	238.67	2.47	0.49	6.24	
1,715.00	23.98	44.40	1,671.41	187.89	200.22	274.54	1.17	1.04	1.31	
1,805.00	23.39	48.50	1,753.83	212.80	226.40	310.68	1.94	-0.66	4.56	
1,895.00	22.69	47.35	1,836.65	236.40	252.54	345.88	0.92	-0.78	-1.28	
1,985.00	21.81	46.83	1,919.95	259.60	277.50	379.95	1.00	-0.98	-0.58	
2,075.00	22.86	45.68	2,003.20	283.25	302.21	414.15	1.26	1.17	-1.28	
2,165.00	24.22	46.28	2,085.71	308.22	328.06	450.09	1.53	1.51	0.67	
2,255.00	24.53	47.09	2,167.68	333.70	355.08	487.23	0.51	0.34	0.90	
2,345.00	23.74	44.72	2,249.82	359.30	381.51	524.02	1.39	-0.88	-2.63	
2,435.00	22.60	42.52	2,332.56	384.92	405.95	559.40	1.59	-1.27	-2.44	
2,525.00	22.60	40.50	2,415.65	410.81	428.87	593.88	0.86	0.00	-2.24	
2,595.00	22.86	40.06	2,480.21	431.45	446.36	620.79	0.44	0.37	-0.63	
LAST SDI MWD SURFACE SURVEY										
2,617.00	22.61	39.74	2,500.50	437.97	451.81	629.24	1.29	-1.16	-1.47	
8 5/8"										
2,680.00	21.88	38.77	2,558.82	456.43	466.90	652.93	1.29	-1.15	-1.53	
FIRST SDI MWD PRODUCTION SURVEY										
2,774.00	21.54	39.22	2,646.15	483.46	488.78	687.44	0.40	-0.36	0.48	
2,870.00	23.39	42.73	2,734.86	511.11	512.86	723.97	2.38	1.93	3.66	
2,965.00	22.51	46.25	2,822.35	537.54	538.79	760.98	1.72	-0.93	3.71	
3,060.00	23.65	49.85	2,909.75	562.40	566.49	798.18	1.91	1.20	3.79	
3,156.00	23.74	53.28	2,997.66	586.37	596.70	836.56	1.44	0.09	3.57	
3,251.00	23.39	55.57	3,084.74	608.47	627.58	874.13	1.03	-0.37	2.41	
3,346.00	23.83	57.15	3,171.78	629.54	659.26	911.55	0.81	0.46	1.66	
3,442.00	22.95	55.13	3,259.90	650.76	690.91	949.05	1.24	-0.92	-2.10	
3,537.00	22.60	57.68	3,347.49	671.11	721.53	985.21	1.10	-0.37	2.68	
3,632.00	23.13	57.85	3,435.03	690.80	752.76	1,021.35	0.56	0.56	0.18	
3,728.00	21.81	57.85	3,523.74	710.33	783.82	1,057.25	1.38	-1.38	0.00	
3,823.00	23.57	59.96	3,611.38	729.23	815.21	1,092.95	2.04	1.85	2.22	
3,918.00	22.77	58.12	3,698.72	748.45	847.26	1,129.36	1.14	-0.84	-1.94	
4,012.00	22.86	54.25	3,785.37	768.72	877.53	1,165.21	1.60	0.10	-4.12	
4,108.00	20.14	55.74	3,874.68	788.92	906.33	1,199.96	2.89	-2.83	1.55	
4,203.00	19.43	60.05	3,964.08	806.02	933.54	1,231.41	1.71	-0.75	4.54	
4,299.00	19.43	62.42	4,054.61	821.39	961.53	1,262.21	0.82	0.00	2.47	
4,394.00	17.67	63.92	4,144.67	835.04	988.48	1,291.08	1.92	-1.85	1.58	



Scientific Drilling

Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 922-31A2BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Site:	NBU 922-31B PAD	MD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Well:	NBU 922-31A2BS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,489.00	16.53	61.81	4,235.47	847.76	1,013.35	1,317.80	1.37	-1.20	-2.22
4,584.00	14.40	59.91	4,327.03	860.07	1,035.48	1,342.27	2.30	-2.24	-2.00
4,679.00	11.52	59.87	4,419.60	870.76	1,053.91	1,362.95	3.03	-3.03	-0.04
4,774.00	9.76	61.54	4,512.96	879.36	1,069.19	1,379.92	1.88	-1.85	1.76
4,870.00	8.88	61.19	4,607.69	886.81	1,082.84	1,394.90	0.92	-0.92	-0.36
4,965.00	7.21	56.80	4,701.76	893.61	1,094.25	1,407.84	1.87	-1.76	-4.62
5,060.00	4.84	56.01	4,796.23	899.11	1,102.57	1,417.64	2.50	-2.49	-0.83
5,155.00	2.55	46.34	4,891.02	902.81	1,107.42	1,423.70	2.49	-2.41	-10.18
5,250.00	0.58	356.86	4,985.99	904.75	1,108.92	1,426.13	2.33	-2.07	-52.08
5,345.00	0.18	328.91	5,080.98	905.36	1,108.82	1,426.48	0.45	-0.42	-29.42
5,440.00	0.35	310.54	5,175.98	905.67	1,108.52	1,426.48	0.20	0.18	-19.34
5,536.00	0.53	254.55	5,271.98	905.75	1,107.87	1,426.06	0.46	0.19	-58.32
5,630.00	0.62	231.00	5,365.98	905.31	1,107.06	1,425.18	0.27	0.10	-25.05
5,725.00	0.62	200.15	5,460.97	904.50	1,106.48	1,424.20	0.35	0.00	-32.47
5,820.00	0.53	166.84	5,555.97	903.59	1,106.40	1,423.51	0.36	-0.09	-35.06
5,915.00	0.58	216.93	5,650.96	902.78	1,106.21	1,422.81	0.50	0.05	52.73
6,009.00	0.53	185.73	5,744.96	901.97	1,105.89	1,422.01	0.32	-0.05	-33.19
6,104.00	0.35	181.51	5,839.95	901.24	1,105.83	1,421.47	0.19	-0.19	-4.44
6,199.00	0.44	194.79	5,934.95	900.60	1,105.73	1,420.95	0.13	0.09	13.98
6,294.00	0.70	176.33	6,029.95	899.67	1,105.68	1,420.26	0.33	0.27	-19.43
6,390.00	0.88	155.50	6,125.94	898.41	1,106.02	1,419.64	0.35	0.19	-21.70
6,484.00	0.97	173.69	6,219.93	896.96	1,106.41	1,418.91	0.33	0.10	19.35
6,579.00	1.23	168.77	6,314.91	895.16	1,106.69	1,417.86	0.29	0.27	-5.18
6,673.00	1.32	163.58	6,408.89	893.14	1,107.20	1,416.82	0.16	0.10	-5.52
6,769.00	0.09	193.29	6,504.88	892.00	1,107.49	1,416.24	1.29	-1.28	30.95
6,864.00	0.35	106.63	6,599.88	891.85	1,107.75	1,416.32	0.38	0.27	-91.22
6,959.00	1.58	17.16	6,694.86	893.01	1,108.42	1,417.61	1.70	1.29	-94.18
7,054.00	1.32	22.43	6,789.83	895.28	1,109.22	1,419.76	0.31	-0.27	5.55
7,150.00	1.41	16.98	6,885.81	897.43	1,109.99	1,421.81	0.16	0.09	-5.68
7,245.00	0.79	26.65	6,980.79	899.13	1,110.62	1,423.45	0.68	-0.65	10.18
7,341.00	1.14	0.90	7,076.77	900.68	1,110.93	1,424.75	0.57	0.36	-26.82
7,434.00	1.14	7.14	7,169.76	902.52	1,111.06	1,426.12	0.13	0.00	6.71
7,530.00	1.14	357.56	7,265.74	904.42	1,111.14	1,427.50	0.20	0.00	-9.98
7,625.00	0.88	13.82	7,360.72	906.08	1,111.28	1,428.74	0.40	-0.27	17.12
7,720.00	0.67	5.01	7,455.71	907.34	1,111.50	1,429.78	0.25	-0.22	-9.27
7,816.00	0.53	52.23	7,551.71	908.17	1,111.90	1,430.64	0.52	-0.15	49.19
7,911.00	0.70	75.78	7,646.70	908.58	1,112.81	1,431.58	0.32	0.18	24.79
8,005.00	1.06	61.81	7,740.69	909.13	1,114.13	1,432.92	0.44	0.38	-14.86
8,101.00	0.53	132.82	7,836.68	909.25	1,115.24	1,433.80	1.06	-0.55	73.97
8,196.00	0.97	151.81	7,931.68	908.24	1,115.94	1,433.60	0.53	0.46	19.99
8,291.00	0.31	138.33	8,026.67	907.34	1,116.49	1,433.37	0.71	-0.69	-14.19
8,387.00	0.44	140.03	8,122.67	906.87	1,116.90	1,433.34	0.14	0.14	1.77
8,482.00	0.53	155.23	8,217.66	906.19	1,117.32	1,433.17	0.16	0.09	16.00



Scientific Drilling

Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 922-31A2BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Site:	NBU 922-31B PAD	MD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Well:	NBU 922-31A2BS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,577.00	0.79	133.26	8,312.66	905.34	1,117.98	1,433.05	0.38	0.27	-23.13	
8,672.00	1.06	142.58	8,407.65	904.19	1,118.99	1,432.98	0.32	0.28	9.81	
8,768.00	1.23	138.45	8,503.63	902.72	1,120.22	1,432.83	0.20	0.18	-4.30	
8,863.00	1.49	142.49	8,598.60	900.97	1,121.64	1,432.65	0.29	0.27	4.25	
8,958.00	1.58	135.46	8,693.57	899.06	1,123.31	1,432.52	0.22	0.09	-7.40	
9,054.00	1.85	145.04	8,789.52	896.85	1,125.13	1,432.29	0.41	0.28	9.98	
9,149.00	2.02	146.71	8,884.47	894.19	1,126.93	1,431.74	0.19	0.18	1.76	
9,244.00	2.20	139.15	8,979.40	891.41	1,129.04	1,431.32	0.35	0.19	-7.96	
9,339.00	2.46	140.73	9,074.33	888.45	1,131.52	1,431.05	0.28	0.27	1.66	
9,435.00	2.29	142.40	9,170.24	885.34	1,134.00	1,430.67	0.19	-0.18	1.74	
9,517.00	2.46	141.87	9,252.17	882.66	1,136.08	1,430.30	0.21	0.21	-0.65	
LAST SDI MWD PRODUCTION SURVEY										
9,575.00	2.46	141.87	9,310.12	880.70	1,137.62	1,430.05	0.00	0.00	0.00	
SDI PROJECTION TO TD										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 922-31A2B:	0.00	0.00	9,280.00	892.34	1,120.48	14,529,542.84	2,067,089.02	39.9995930	-109.4765280
- actual wellpath misses target center by 33.34ft at 9517.00ft MD (9252.17 TVD, 882.66 N, 1136.08 E)									
- Circle (radius 25.00)									

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)		
2,617.00	2,500.50	8 5/8"	8.625	11.000		

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
196.00	196.00	0.17	-0.22	FIRST SDI MWD SURFACE SURVEY	
2,595.00	2,480.21	431.45	446.36	LAST SDI MWD SURFACE SURVEY	
2,680.00	2,558.82	456.43	466.90	FIRST SDI MWD PRODUCTION SURVEY	
9,517.00	9,252.17	882.66	1,136.08	LAST SDI MWD PRODUCTION SURVEY	
9,575.00	9,310.12	880.70	1,137.62	SDI PROJECTION TO TD	

Checked By: _____ Approved By: _____ Date: _____