

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

FORM 3

AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL						1. WELL NAME and NUMBER NBU 921-20P4BS				
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 <input type="checkbox"/> Coalbed Methane Well: NO <input type="checkbox"/>						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) UTU0575			11. MINERAL OWNERSHIP FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>			12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>				
13. NAME OF SURFACE OWNER (if box 12 = 'fee')						14. SURFACE OWNER PHONE (if box 12 = 'fee')				
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')						16. SURFACE OWNER E-MAIL (if box 12 = 'fee')				
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN') THE UTE INDIAN TRIBE			18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>			19. SLANT VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>				
20. LOCATION OF WELL		FOOTAGES		QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN		
LOCATION AT SURFACE		834 FSL 612 FEL		SESE	20	9.0 S	21.0 E	S		
Top of Uppermost Producing Zone		579 FSL 490 FEL		SESE	20	9.0 S	21.0 E	S		
At Total Depth		579 FSL 490 FEL		SESE	20	9.0 S	21.0 E	S		
21. COUNTY UINTAH			22. DISTANCE TO NEAREST LEASE LINE (Feet) 490			23. NUMBER OF ACRES IN DRILLING UNIT 1600				
			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 260			26. PROPOSED DEPTH MD: 11235 TVD: 10158				
27. ELEVATION - GROUND LEVEL 4874			28. BOND NUMBER WYB000291			29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE 43-8496				
Hole, Casing, and Cement Information										
String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
Surf	11	8.625	0 - 2840	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 - 11235	11.6	HCP-110 LT&C	12.5	Premium Lite High Strength	350	3.38	12.0
							50/50 Poz	1610	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 Cara Mahler				TITLE Regulatory Analyst I				PHONE 720 929-6029		
SIGNATURE				DATE 11/27/2012				EMAIL cara.mahler@anadarko.com		
API NUMBER ASSIGNED 43047533680000				APPROVAL  Permit Manager						

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

	<u>NBU 921-20P4BS</u>	
Surface:	834 FSL / 612 FEL	SESE
BHL:	579 FSL / 490 FEL	SESE

Section 20 T9S R21E

Unitah County, Utah
Mineral Lease: UTU 0575**ONSHORE ORDER NO. 1****DRILLING PROGRAM**

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

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,618'	
Birds Nest	1,884'	Water
Mahogany	2,387'	Water
Wasatch	4,940'	Gas
Mesaverde	7,951'	Gas
Sego	10,158'	Gas
Castlegate	10,227'	Gas
Blackhawk	10,621'	Gas
TVD =	11,221'	
TD =	11,235'	

- 2.c Kerr McGee Oil & Gas Onshore LP (Kerr McGee) may elect to drill to (i) the Blackhawk formation (part of the Mesaverde Group), (ii) to a shallower depth within the Mesaverde Group, or (iii) to the Wasatch Formation. If Kerr McGee drills to the Blackhawk formation, please refer to Blackhawk as the bottom formation. The attached Blackhawk Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the deeper formation.

If Kerr-McGee drills to a shallower depth in the Mesaverde Group or to the Wasatch Formation, please refer to the attached Wasatch/Mesaverde Drilling Program which includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the shallower formations.

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

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

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

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

5. **Drilling Fluids Program:**

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

6. **Evaluation Program:**

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

7. **Abnormal Conditions:**

7.a Blackhawk (Part of Mesaverde Group)

Maximum anticipated bottom hole pressure calculated at 11221' TVD, approximately equals
 7,181 psi (0.64 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,697 psi (bottom hole pressure
 minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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

7.b Wasach Formation/Mesaverde Group

Maximum anticipated bottom hole pressure calculated at 10158' TVD, approximately equals
 6,196 psi (0.61 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 3,988 psi (bottom hole pressure
 minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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

8. Anticipated Starting Dates:

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

9. Variances:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program
 Onshore Order #2 – Air Drilling Variance

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

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

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

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

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

Background

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

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

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

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

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

Variance for BOPE Requirements

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

Variance for Mud Material Requirements

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

Variance for Special Drilling Operation (surface equipment placement) Requirements

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

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

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

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

Variance for FIT Requirements

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

Conclusion

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

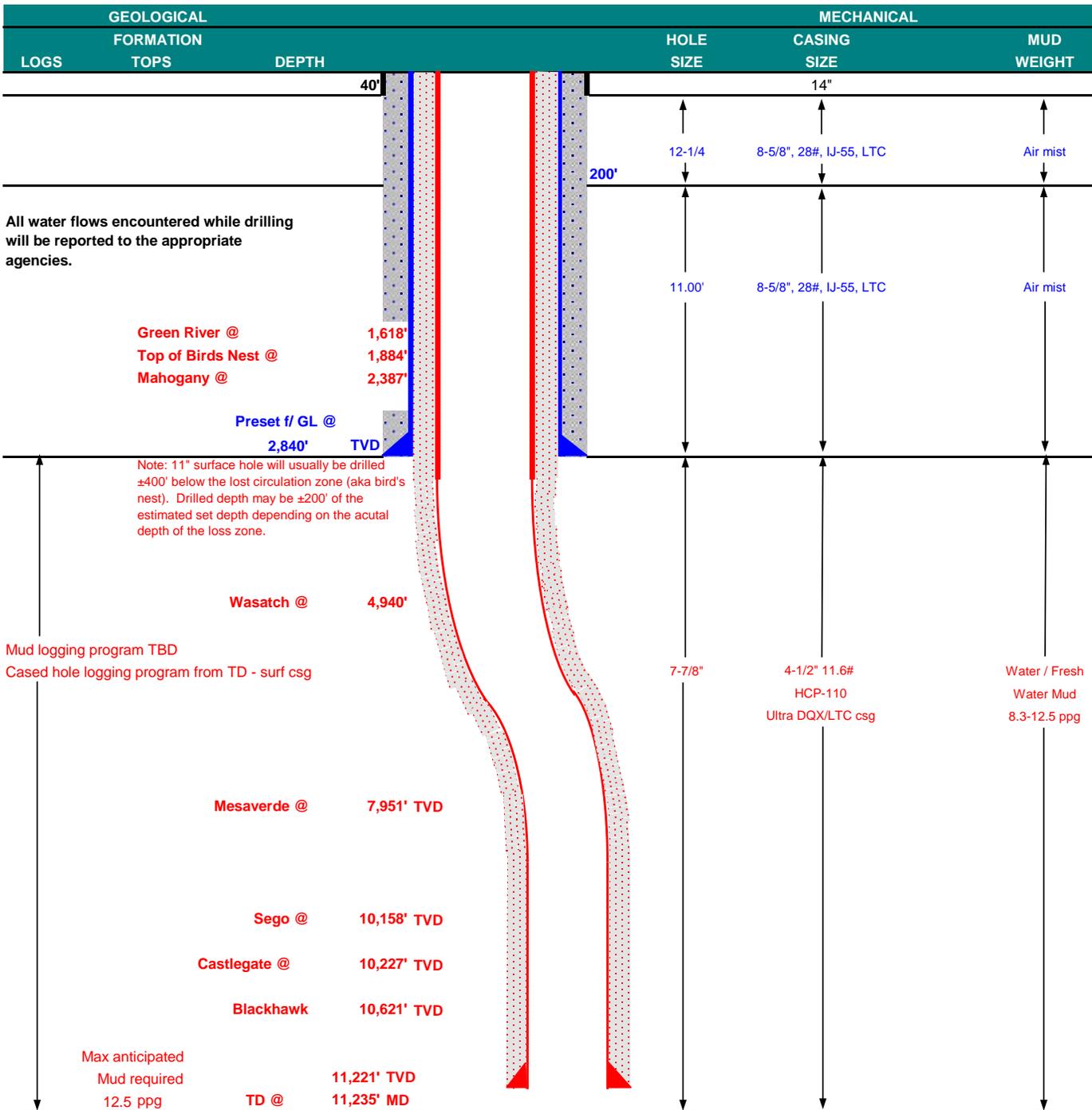
10. **Other Information:**

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



KERR-McGEE OIL & GAS ONSHORE LP
Blackhawk Drilling Program

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	July 13, 2012			
WELL NAME	NBU 921-20P4BS		TD	11,221'	TVD	11,235' MD	
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION	4,874'
SURFACE LOCATION	SESE	834 FSL	612 FEL	Sec 20	T 9S	R 21E	
	Latitude: 40.016556		Longitude: -109.568341		NAD 83		
BTM HOLE LOCATION	SESE	579 FSL	490 FEL	Sec 20	T 9S	R 21E	
	Latitude: 40.015856		Longitude: -109.567905		NAD 83		
OBJECTIVE ZONE(S)	BLACKHAWK (Part of the Mesaverde Group)						
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), Ute Indian Tribe (Surface), UDOGM Tri-County Health Dept.						





KERR-McGEE OIL & GAS ONSHORE LP
Blackhawk Drilling Program

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	LTC	DQX
								TENSION	
CONDUCTOR	14"	0-40'							
						3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,840	28.00	IJ-55	LTC	1.89	1.41	5.00	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	1.19		3.48
	4-1/2"	5,000 to 11,235'	11.60	HCP-110	LTC	1.19	1.19	4.77	

Surface casing:

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe
Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
Option 1	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
NOTE: If well will circulate water to surface, option 2 will be utilized							
SURFACE	LEAD	2,340'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	220	35%	11.00	3.82
Option 2	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,435'	Premium Lite II + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	350	35%	12.00	3.38
	TAIL	6,800'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,610	35%	14.30	1.31

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

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

FLOAT EQUIPMENT & CENTRALIZERS

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

ADDITIONAL INFORMATION

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

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

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

DRILLING ENGINEER:

Nick Spence / Danny Showers / Travis Hansell

DATE:

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

DATE:



KERR-McGEE OIL & GAS ONSHORE LP
Wasatch/Mesaverde Drilling Program

CASING PROGRAM

							DESIGN FACTORS			
	SIZE	INTERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	LTC	DQX
		TENSION								
CONDUCTOR	14"	0-40'					3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to 2,840	28.00	IJ-55	LTC	1.89	1.41	5.00	N/A
PRODUCTION	4-1/2"	0	to 5,000	11.60	I-80	DQX	1.11	1.00		267,035
	4-1/2"	5,000	to 10,172'	11.60	HCP-110	LTC	1.53	1.36	223,000	2.77

Surface Casing:

(Burst Assumptions: TD = 12.0 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*Buoyn.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.61 psi/ft = bottomhole gradient
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoyn.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
Option 1	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
NOTE: If well will circulate water to surface, option 2 will be utilized							
SURFACE	LEAD	2,340'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	220	35%	11.00	3.82
Option 2	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,432'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	350	35%	12.00	3.38
	TAIL	5,740'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,360	35%	14.30	1.31

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

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DRILLING ENGINEER:

Nick Spence / Danny Showers / Travis Hansell

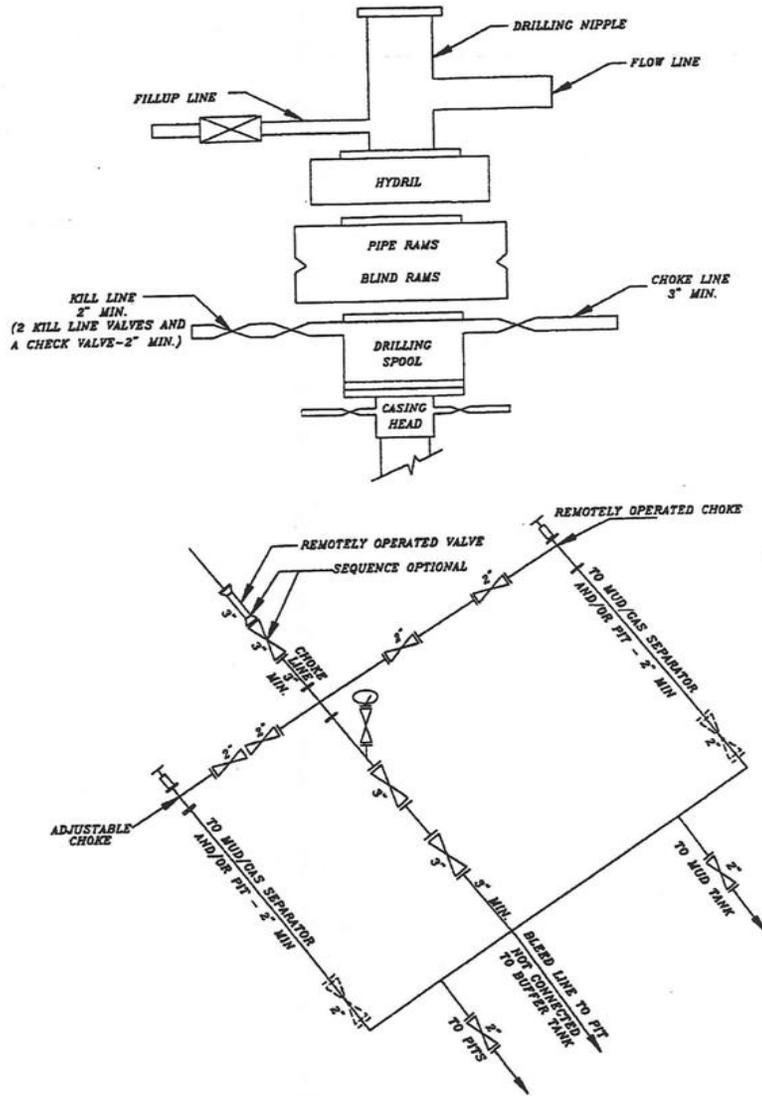
DATE:

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

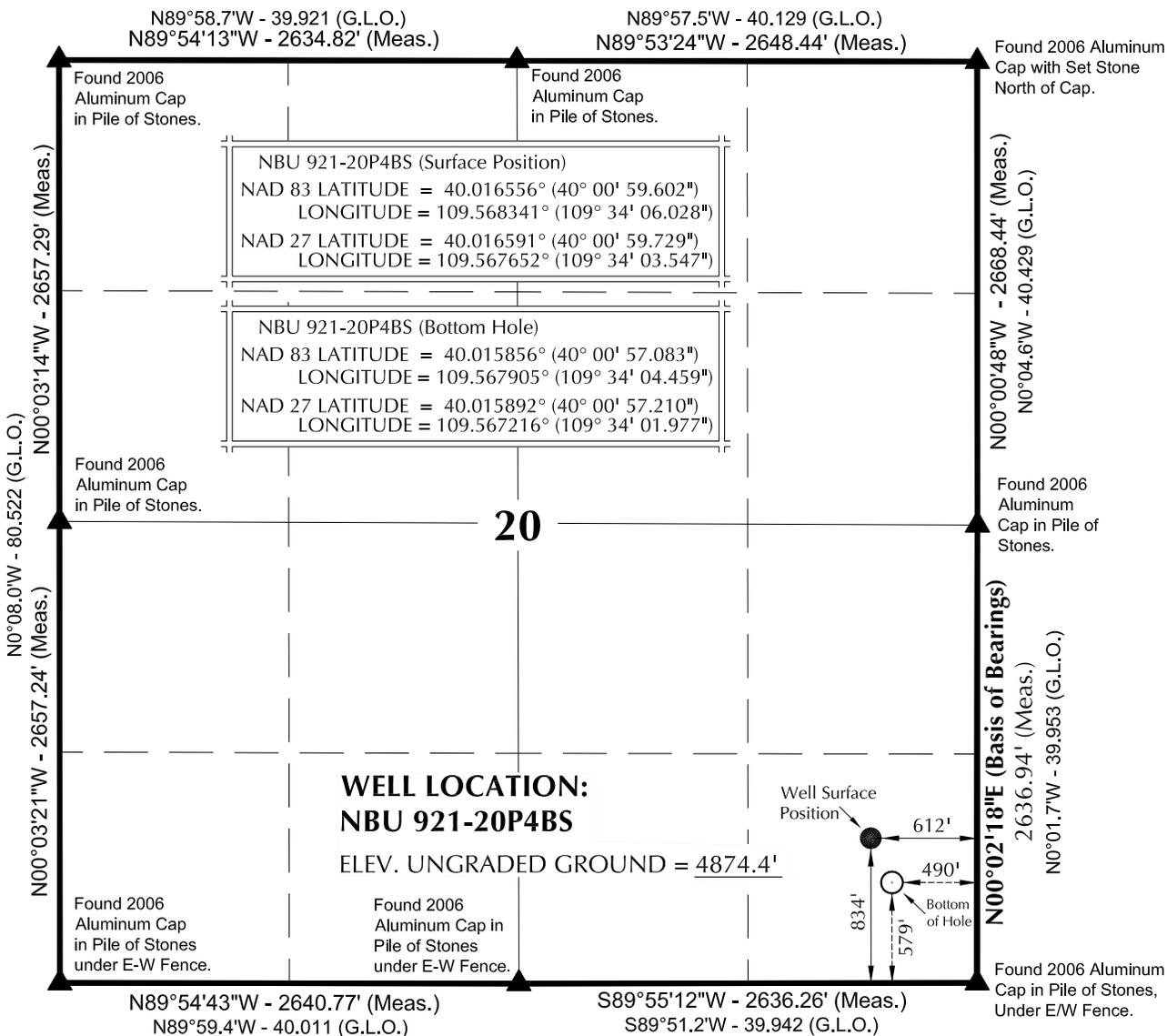
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EXHIBIT A
NBU 921-20P4BS



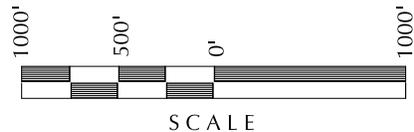
SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

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



NOTES:

- ▲ = Section Corners Located
- 1. Well footages are measured at right angles to the Section Lines.
- 2. G.L.O. distances are shown in feet or chains.
1 chain = 66 feet.
- 3. The Bottom of hole bears S25°32'09"E 282.70' from the Surface Position.
- 4. Bearings are based on Global Positioning Satellite observations.
- 5. Basis of elevation is Tri-Sta "Two Water" located in the NW ¼ of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.



SURVEYOR'S CERTIFICATE

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

John R. Laughlin
 PROFESSIONAL LAND SURVEYOR
 REGISTRATION No. 6028691
 STATE OF UTAH

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

WELL PAD: NBU 921-20P

NBU 921-20P4BS
WELL PLAT
 579' FSL, 490' FEL (Bottom Hole)
 SE ¼ SE ¼ OF SECTION 20, T9S, R21E,
 S.L.B.&M., UTAH COUNTY, UTAH.

609

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

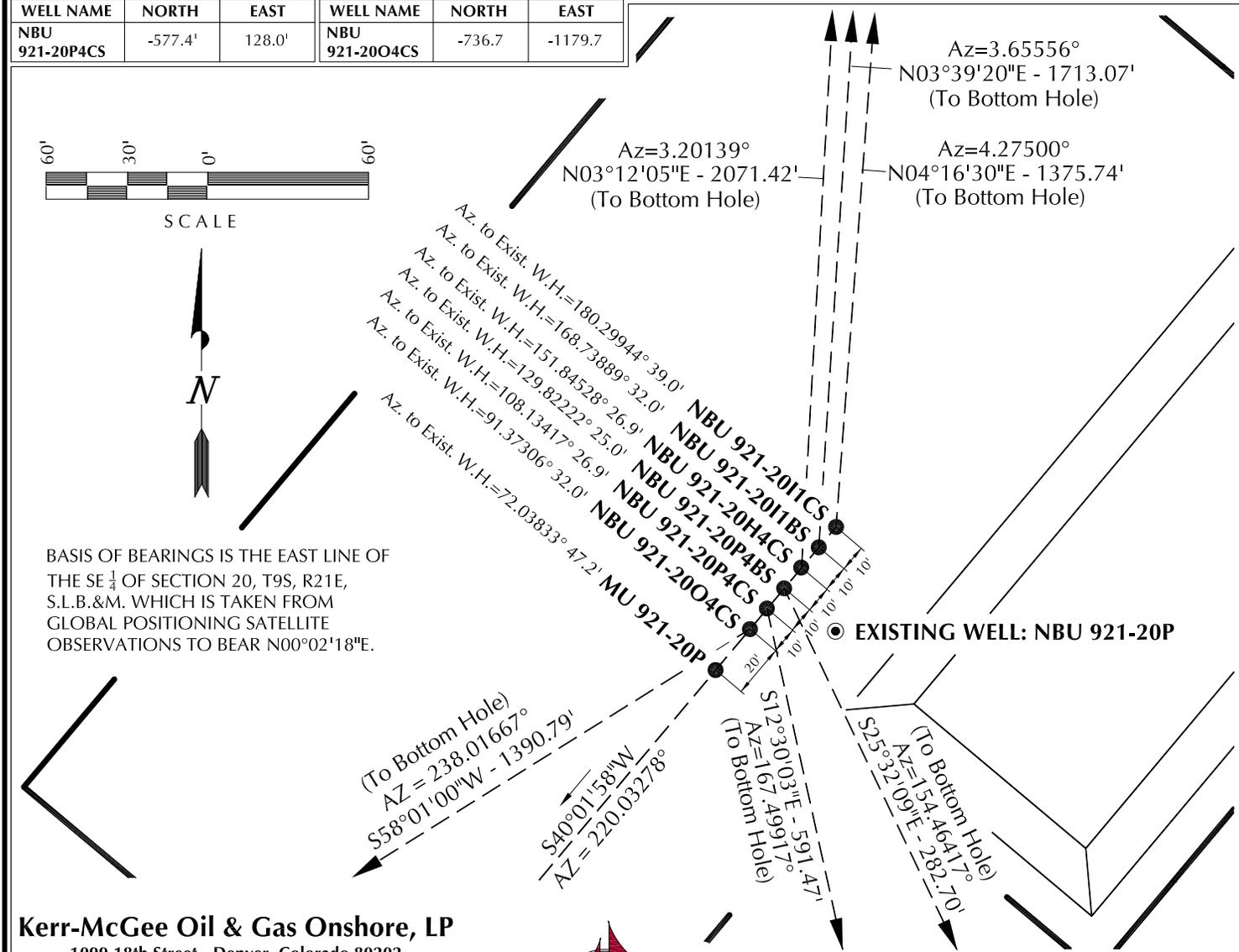
TIMBERLINE (435) 789-1365
 ENGINEERING & LAND SURVEYING, INC.
 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 3-14-12	SURVEYED BY: A.F.	SHEET NO: 4
DATE DRAWN: 3-22-12	DRAWN BY: T.J.R.	
SCALE: 1" = 1000'		4 OF 19

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 921-2011CS	40°00'59.829"	109°34'05.779"	40°00'59.956"	109°34'03.298"	857' FSL 593' FEL	40°01'13.385"	109°34'04.482"	40°01'13.512"	109°34'02.001"	2229' FSL 491' FEL
NBU 921-2011BS	40°00'59.754"	109°34'05.862"	40°00'59.881"	109°34'03.381"	850' FSL 599' FEL	40°01'16.645"	109°34'04.484"	40°01'16.772"	109°34'02.003"	2559' FSL 491' FEL
NBU 921-20H4CS	40°00'59.678"	109°34'05.945"	40°00'59.805"	109°34'03.463"	842' FSL 606' FEL	40°01'20.113"	109°34'04.490"	40°01'20.240"	109°34'02.008"	2397' FSL 491' FEL
NBU 921-20P4BS	40°00'59.602"	109°34'06.028"	40°00'59.729"	109°34'03.547"	834' FSL 612' FEL	40°00'57.083"	109°34'04.459"	40°00'57.210"	109°34'01.977"	579' FSL 490' FEL
NBU 921-20P4CS	40°00'59.526"	109°34'06.110"	40°00'59.653"	109°34'03.629"	827' FSL 618' FEL	40°00'53.823"	109°34'04.456"	40°00'53.950"	109°34'01.975"	249' FSL 490' FEL
NBU 921-20O4CS	40°00'59.451"	109°34'06.192"	40°00'59.578"	109°34'03.711"	819' FSL 625' FEL	40°00'52.159"	109°34'21.339"	40°00'52.286"	109°34'18.857"	84' FSL 1804' FEL
MU 921-20P	40°00'59.300"	109°34'06.358"	40°00'59.427"	109°34'03.876"	804' FSL 638' FEL	40°016472°	109.568433°			
NBU 921-20P	40°00'59.444"	109°34'05.781"	40°00'59.571"	109°34'03.300"	818' FSL 593' FEL					

RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 921-2011CS	1371.9'	102.6'	NBU 921-2011BS	1709.6'	109.2'	NBU 921-20H4CS	2068.2'	115.7'	NBU 921-20P4BS	-255.1'	121.9'
NBU 921-20P4CS	-577.4'	128.0'	NBU 921-20O4CS	-736.7	-1179.7						



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WELL PAD - NBU 921-20P

WELL PAD INTERFERENCE PLAT
WELLS - NBU 921-2011CS,
NBU 921-2011BS, NBU 921-20H4CS,
NBU 921-20P4BS, NBU 921-20P4CS,
NBU 921-20O4CS & MU 921-20P
LOCATED IN SECTION 20, T9S, R21E,
S.L.B.&M., Uintah County, Utah.



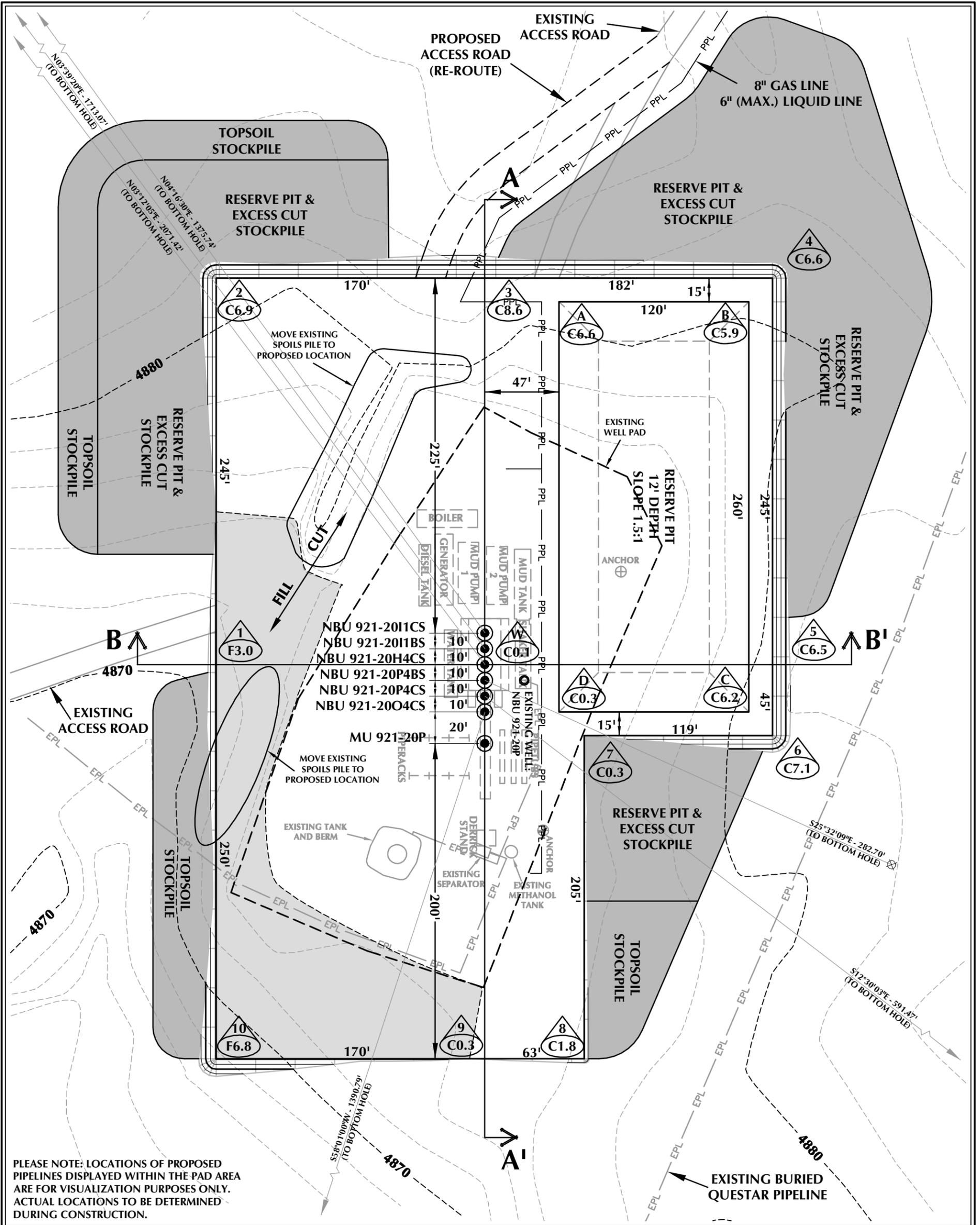
CONSULTING, LLC
2155 North Main Street
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE

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

(435) 789-1365

DATE SURVEYED: 3-14-12	SURVEYED BY: A.F.	SHEET NO: 8
DATE DRAWN: 3-22-12	DRAWN BY: T.J.R.	
SCALE: 1" = 60'		8 OF 19



WELL PAD - NBU 921-20P DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4874.5'
 FINISHED GRADE ELEVATION = 4874.4'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.70 ACRES
 TOTAL DISTURBANCE AREA = 5.92 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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WELL PAD - NBU 921-20P
 WELL PAD - LOCATION LAYOUT
 NBU 921-20I1CS,
 NBU 921-20I1BS, NBU 921-20H4CS,
 NBU 921-20P4BS, NBU 921-20P4CS,
 NBU 921-20O4CS & MU 921-20P
 LOCATED IN SECTION 20, T9S, R21E,
 S.L.B.&M., UTAH COUNTY, UTAH



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

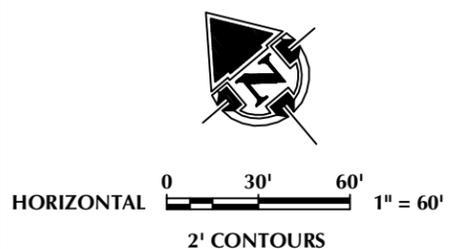
WELL PAD QUANTITIES
 TOTAL CUT FOR WELL PAD = 9,115 C.Y.
 TOTAL FILL FOR WELL PAD = 1,964 C.Y.
 TOPSOIL @ 6" DEPTH = 1,967 C.Y.
 EXCESS MATERIAL = 7,151 C.Y.

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

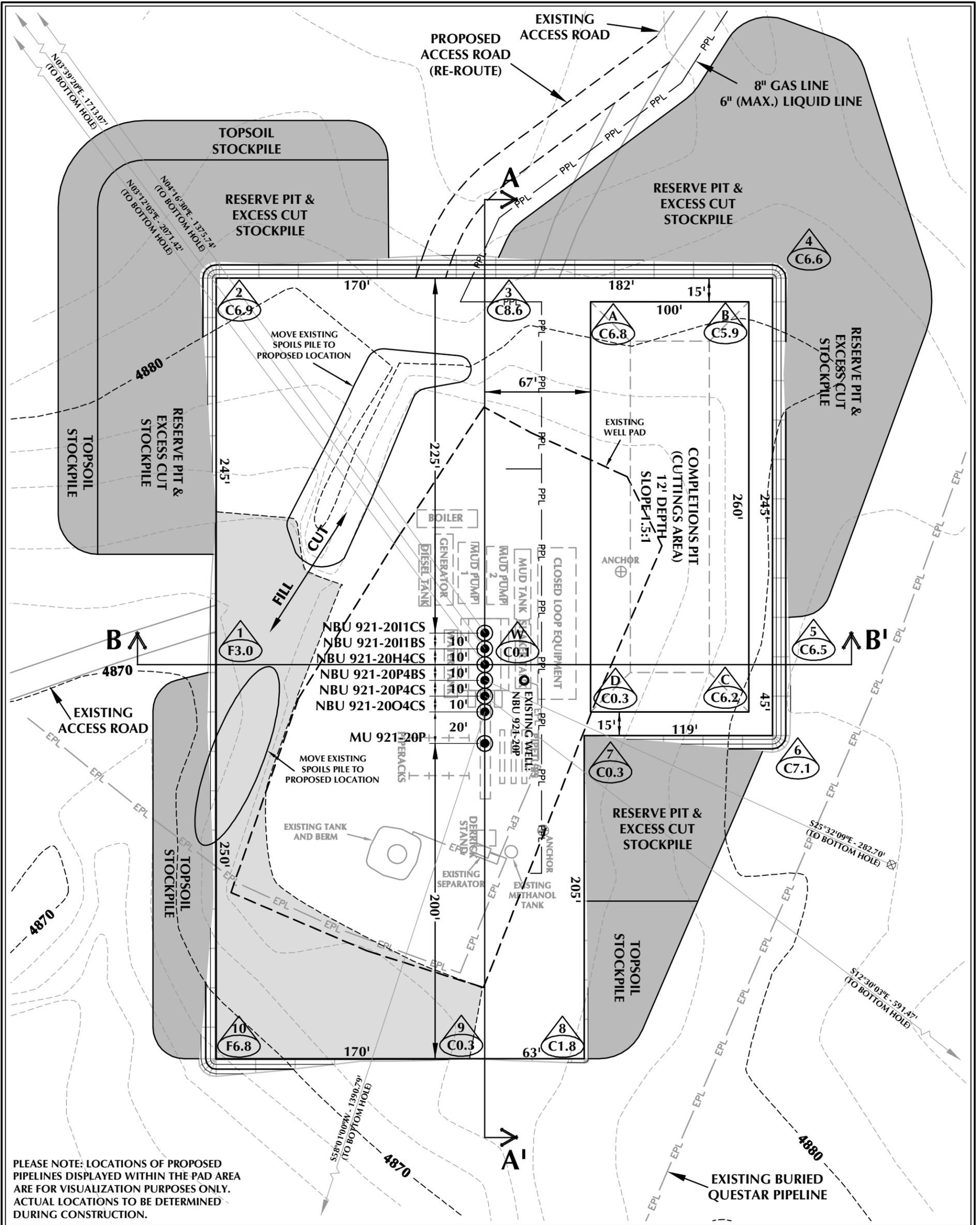
TIMBERLINE
 ENGINEERING & LAND SURVEYING, INC.
 209 NORTH 300 WEST - VERNAL, UTAH 84078
 (435) 789-1365

WELL PAD LEGEND

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



SCALE: 1"=60' DATE: 4/17/12 SHEET NO:
 REVISED: DJD 5/18/12 **9** 9 OF 19



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

WELL PAD - NBU 921-20P (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4874.5'
 FINISHED GRADE ELEVATION = 4874.4'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.70 ACRES
 TOTAL DISTURBANCE AREA = 5.92 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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 1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-20P
 WELL PAD - LOCATION LAYOUT
 NBU 921-20I1CS,
 NBU 921-20I1BS, NBU 921-20H4CS,
 NBU 921-20P4BS, NBU 921-20P4CS,
 NBU 921-20O4CS & MU 921-20P
 LOCATED IN SECTION 20, T9S, R21E,
 S.L.B.&M., UTAH COUNTY, UTAH



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

WELL PAD QUANTITIES
 TOTAL CUT FOR WELL PAD = 9,115 C.Y.
 TOTAL FILL FOR WELL PAD = 1,964 C.Y.
 TOPSOIL @ 6" DEPTH = 1,967 C.Y.
 EXCESS MATERIAL = 7,151 C.Y.

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

WELL PAD LEGEND

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

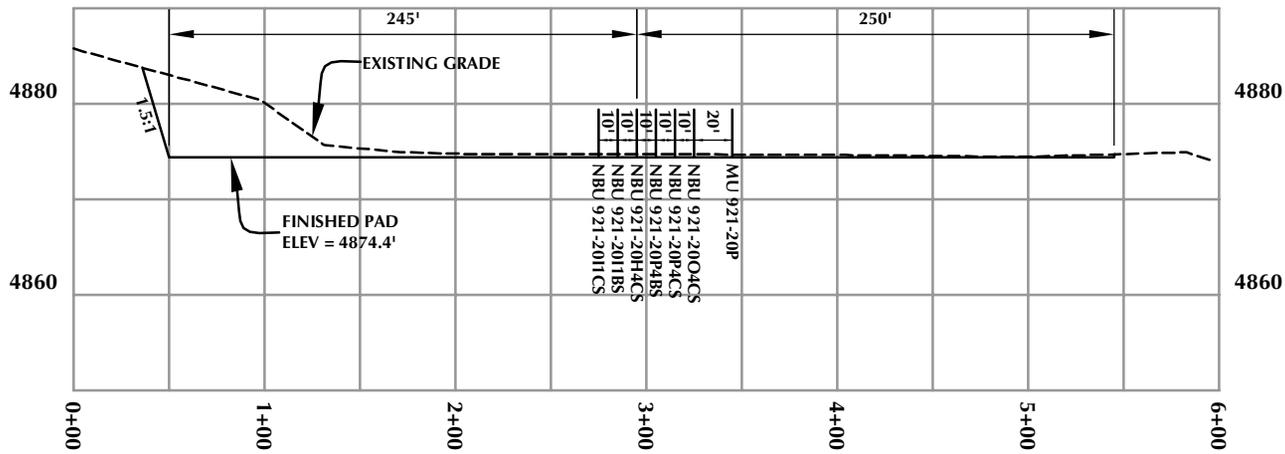
HORIZONTAL 0 30' 60' 1" = 60'

2' CONTOURS

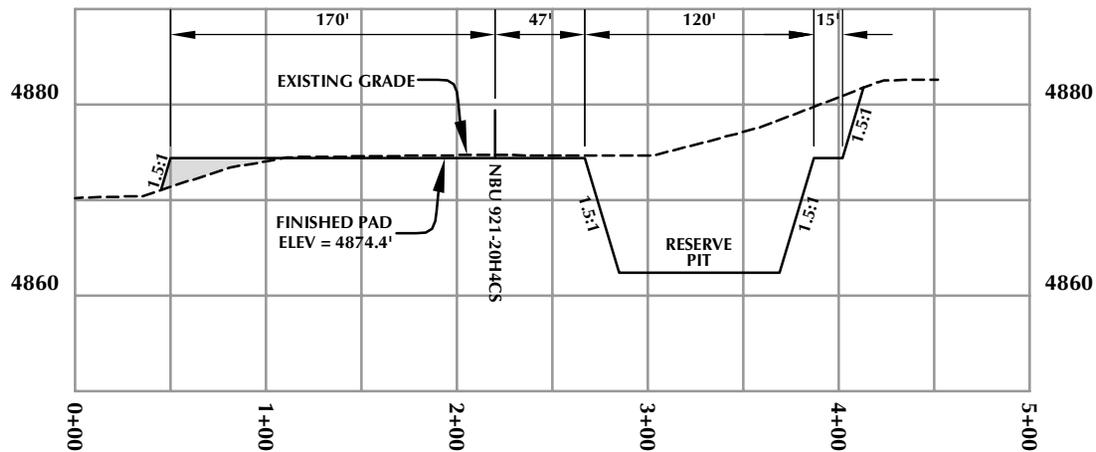
SCALE: 1"=60' DATE: 4/17/12 SHEET NO: 9B 9B OF 19

REVISED: DJD 5/18/12

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 209 NORTH 300 WEST - VERNAL, UTAH 84078



CROSS SECTION A-A'



CROSS SECTION B-B'

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WELL PAD - NBU 921-20P

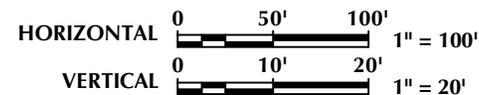
WELL PAD - CROSS SECTIONS
NBU 921-20I1CS,
NBU 921-20I1BS, NBU 921-20H4CS,
NBU 921-20P4BS, NBU 921-20P4CS,
NBU 921-20O4CS & MU 921-20P
LOCATED IN SECTION 20, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
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ENGINEERING & LAND SURVEYING, INC.
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Scale: 1"=100'

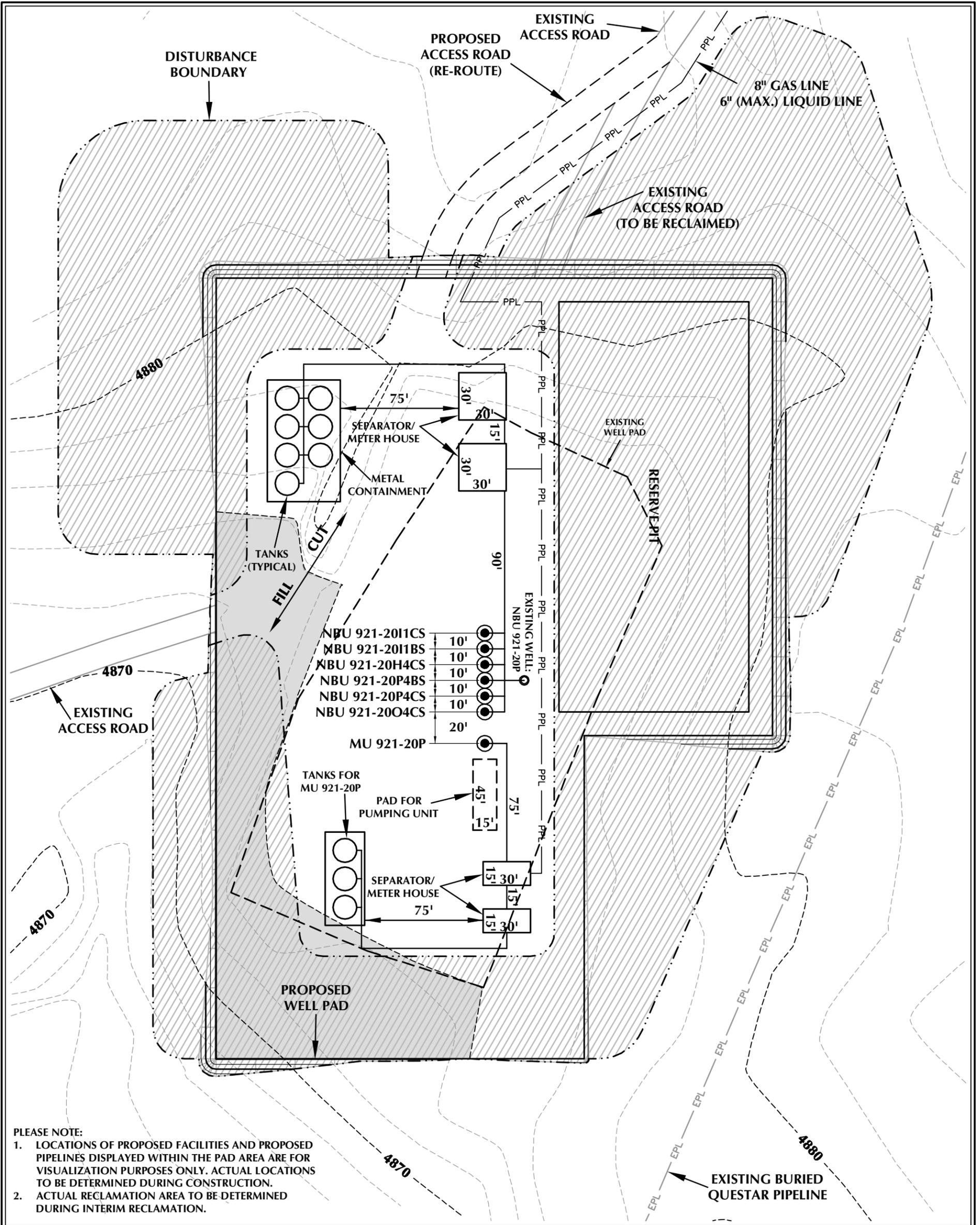
Date: 4/17/12

SHEET NO:

REVISED:

DJD
5/18/12

10 10 OF 19



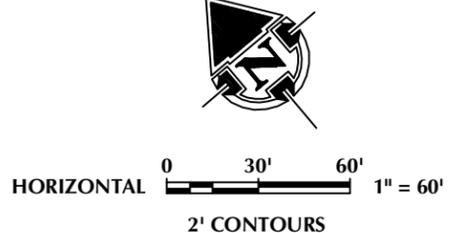
PLEASE NOTE:
 1. LOCATIONS OF PROPOSED FACILITIES AND PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.
 2. ACTUAL RECLAMATION AREA TO BE DETERMINED DURING INTERIM RECLAMATION.

WELL PAD - NBU 921-20P DESIGN SUMMARY

TOTAL DISTURBANCE AREA = 5.92 ACRES (INCLUDING EXISTING)
RECLAMATION AREA = 4.26 ACRES
TOTAL WELL PAD AREA AFTER RECLAMATION = 1.66 ACRES

WELL PAD LEGEND

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



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 1099 18th Street - Denver, Colorado 80202



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 209 NORTH 300 WEST - VERNAL, UTAH 84078

SCALE: 1"=60' **DATE: 4/17/12** **SHEET NO: 11**
REVISED: **DJD 5/18/12** **11 OF 19**

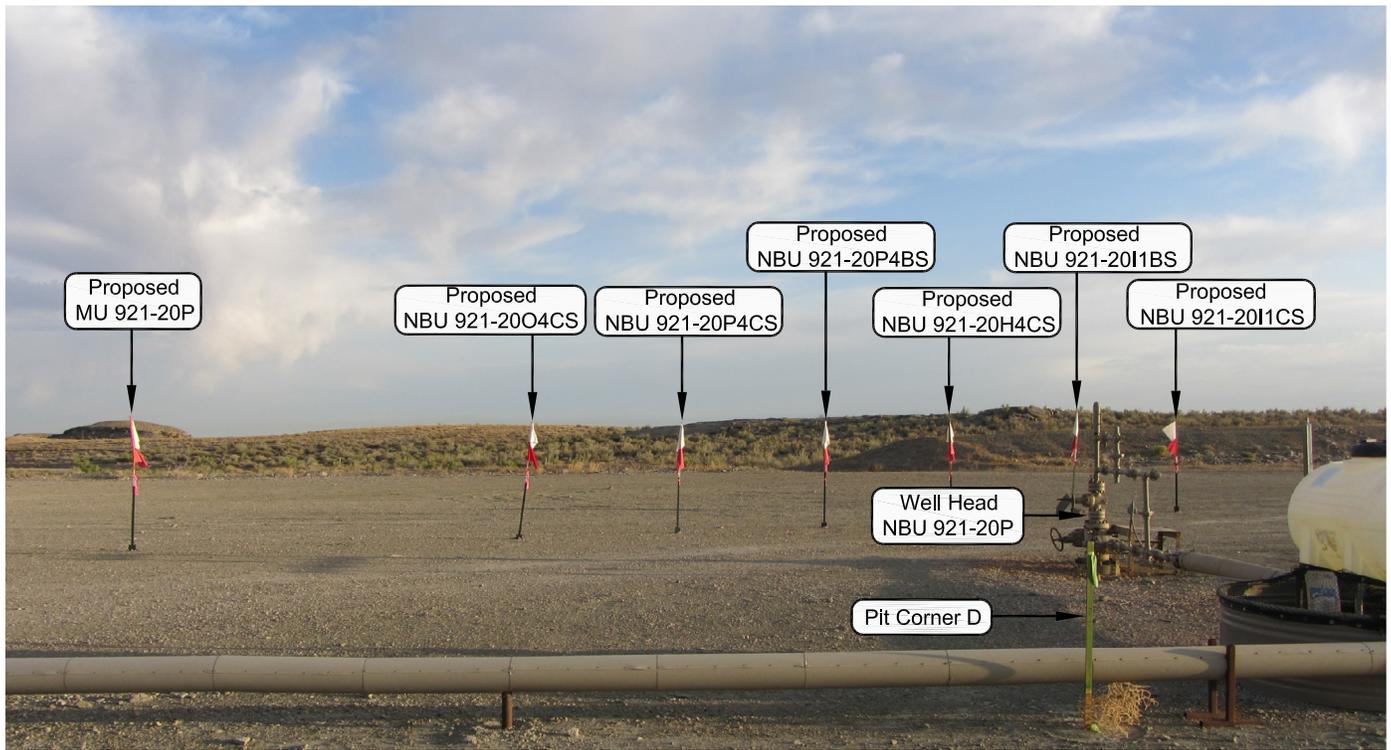


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: WESTERLY

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 1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-20P

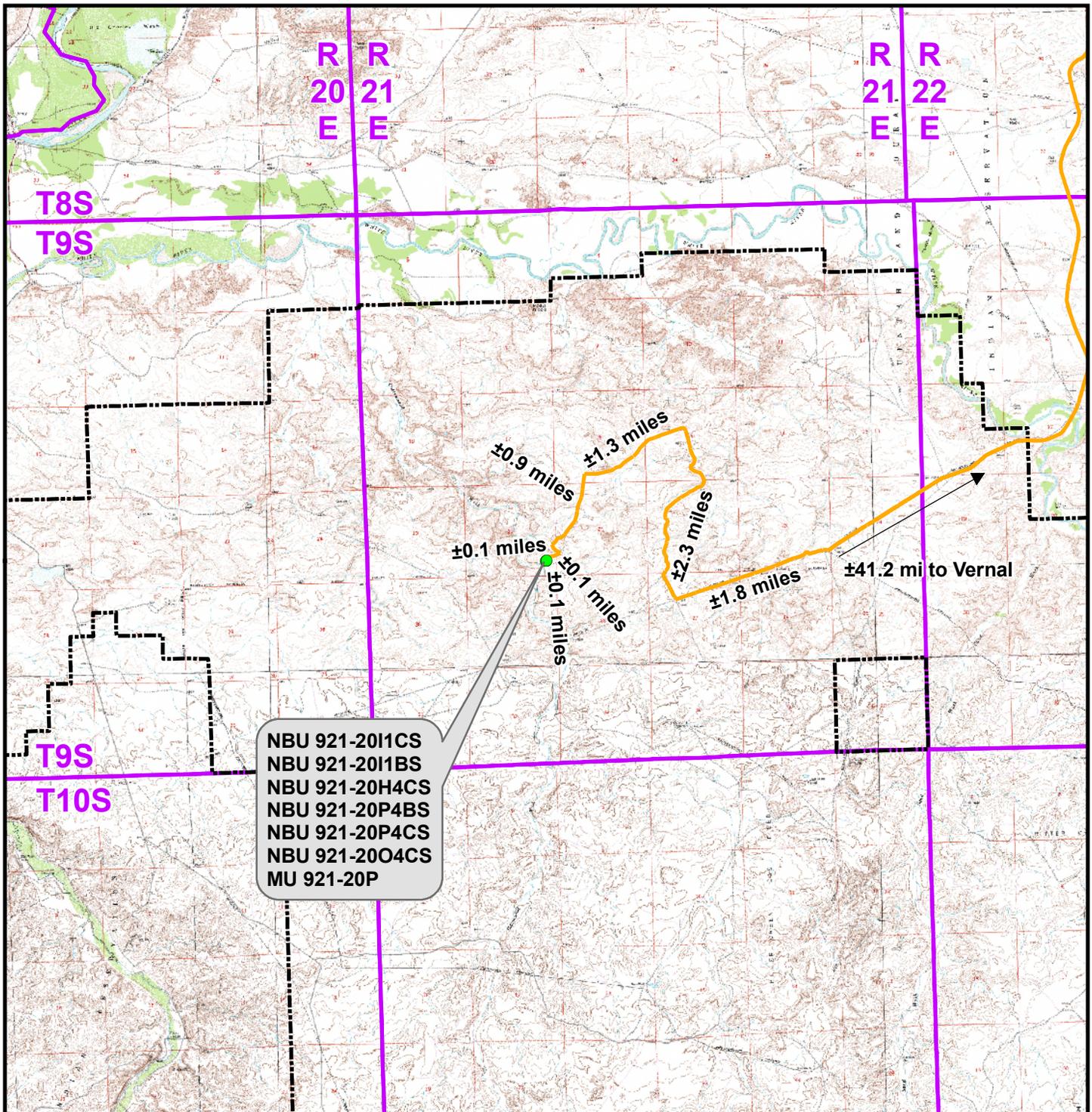
LOCATION PHOTOS
 NBU 921-20I1CS,
 NBU 921-20I1BS, NBU 921-20H4CS,
 NBU 921-20P4BS, NBU 921-20P4CS,
 NBU 921-20O4CS & MU 921-20P
 LOCATED IN SECTION 20, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH.



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 Sheridan WY 82801
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TIMBERLINE (435) 789-1365
 ENGINEERING & LAND SURVEYING, INC.
 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 3-14-12	PHOTOS TAKEN BY: A.F.	SHEET NO: 12
DATE DRAWN: 3-22-12	DRAWN BY: T.J.R.	
Date Last Revised: 5-16-12 T.J.R.		12 OF 19



NBU 921-20I1CS
 NBU 921-20I1BS
 NBU 921-20H4CS
 NBU 921-20P4BS
 NBU 921-20P4CS
 NBU 921-20O4CS
 MU 921-20P

Legend

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

Distance From Well Pad - NBU 921-20P To Unit Boundary: ±15,028ft

WELL PAD - NBU 921-20P

TOPO A
 NBU 921-20I1CS,
 NBU 921-20I1BS, NBU 921-20H4CS,
 NBU 921-20P4BS, NBU 921-20P4CS,
 NBU 921-20O4CS & MU 921-20P
 LOCATED IN SECTION 20, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

1099 18th Street
 Denver, Colorado 80202



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



SCALE: 1:100,000

NAD83 USP Central

SHEET NO:

DRAWN: TL

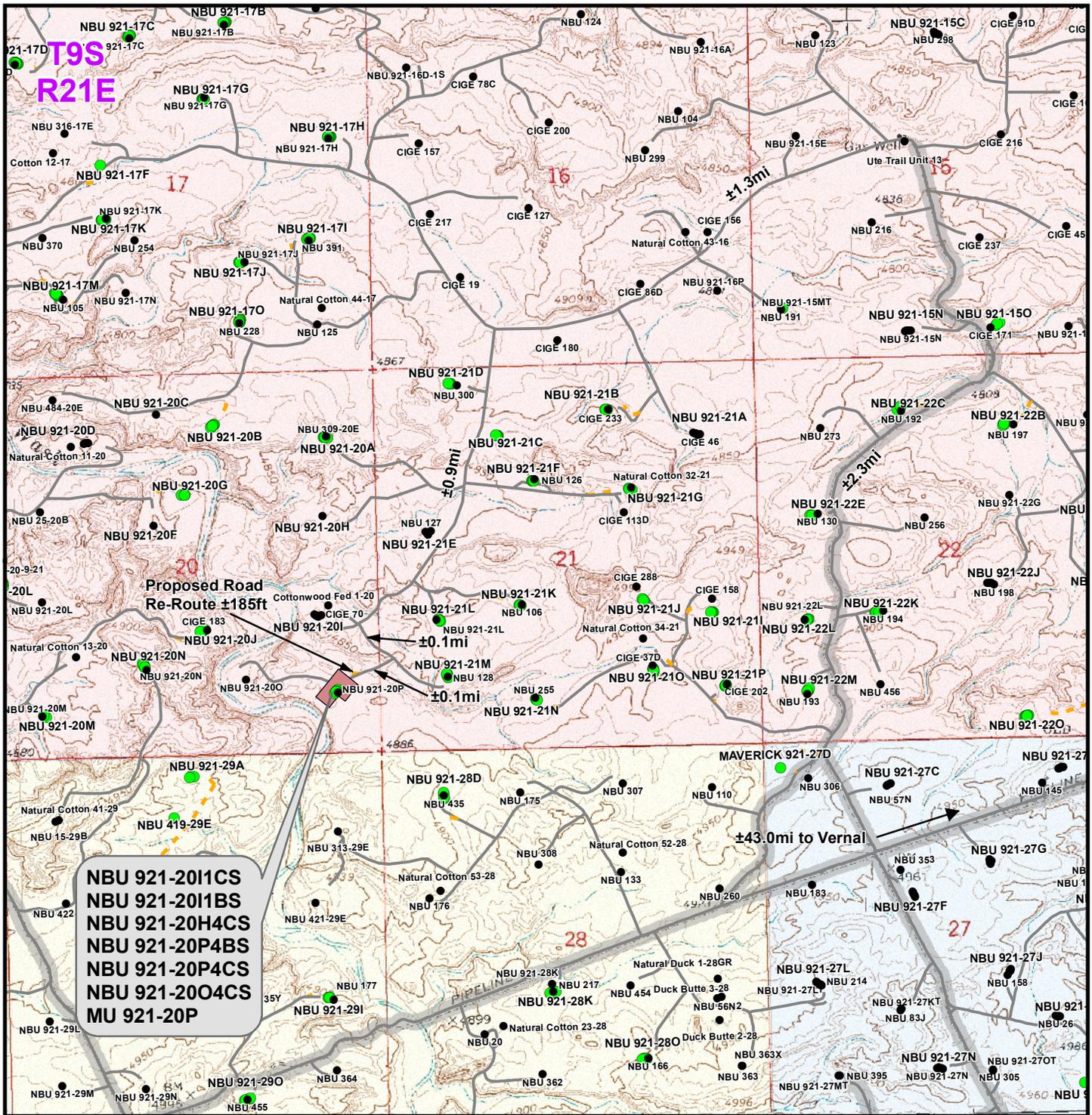
DATE: 17 Apr 2012

13

REVISED: TL

DATE: 17 May 2012

13 OF 19



NBU 921-20I1CS
NBU 921-20I1BS
NBU 921-20H4CS
NBU 921-20P4BS
NBU 921-20P4CS
NBU 921-20O4CS
MU 921-20P

Legend

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

Total Proposed Road Re-Route Length: ±185ft

WELL PAD - NBU 921-20P

TOPO B
 NBU 921-20I1CS,
 NBU 921-20I1BS, NBU 921-20H4CS,
 NBU 921-20P4BS, NBU 921-20P4CS,
 NBU 921-20O4CS & MU 921-20P
 LOCATED IN SECTION 20, T9S, R21E,
 S.L.B.&M., Uintah County, Utah

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

1099 18th Street
 Denver, Colorado 80202

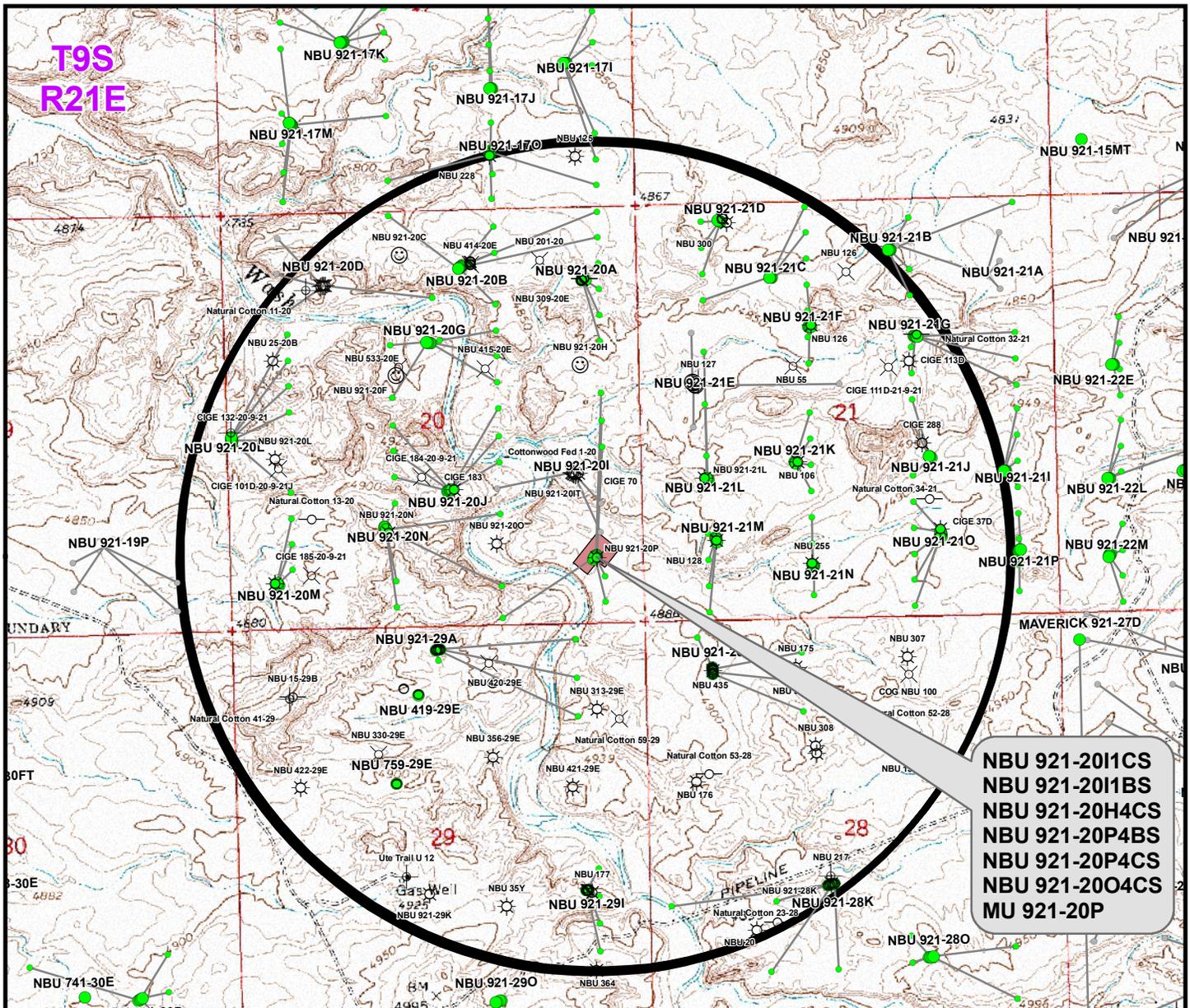


CONSULTING, LLC

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



SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO:	14
DRAWN: TL	DATE: 17 Apr 2012	14 OF 19	
REVISED: TL	DATE: 17 May 2012		



NBU 921-20I1CS
NBU 921-20I1BS
NBU 921-20H4CS
NBU 921-20P4BS
NBU 921-20P4CS
NBU 921-20O4CS
MU 921-20P

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

Proposed Well	Nearest Well Bore	Footage
NBU 921-20I1CS	Cottonwood Fed 1-20	290ft
NBU 921-20I1BS	Cottonwood Fed 1-20	573ft
NBU 921-20H4CS	NBU 921-20H	444ft
NBU 921-20P4BS	NBU 921-20P	260ft
NBU 921-20P4CS	NBU 921-20P	578ft
NBU 921-20O4CS	NBU 921-20O	942ft
MU 921-20P	NBU 921-20P	47ft

Legend

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

WELL PAD - NBU 921-20P

TOPO C
 NBU 921-20I1CS,
 NBU 921-20I1BS, NBU 921-20H4CS,
 NBU 921-20P4BS, NBU 921-20P4CS,
 NBU 921-20O4CS & MU 921-20P
 LOCATED IN SECTION 20, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

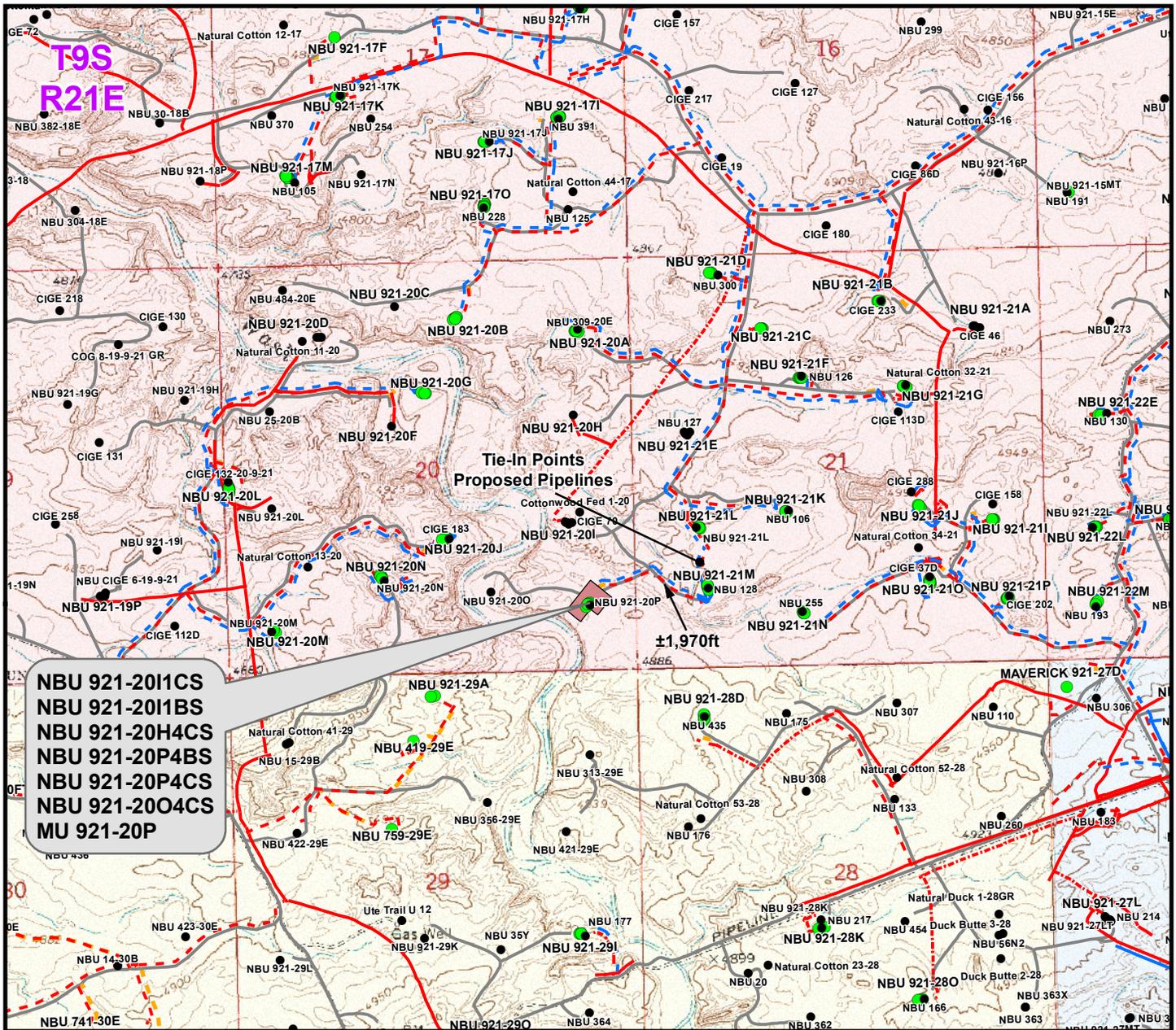
1099 18th Street
 Denver, Colorado 80202



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SCALE: 1" = 2,000ft	NAD83 USP Central	15 15 OF 19
DRAWN: TL	DATE: 17 Apr 2012	
REVISED: TL	DATE: 17 May 2012	



NBU 921-2011CS
NBU 921-2011BS
NBU 921-20H4CS
NBU 921-20P4BS
NBU 921-20P4CS
NBU 921-20O4CS
MU 921-20P

Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Buried 6" (Max.) (Meter House to 200 Intersection)	±460ft	Buried 8" (Meter House to 200 Intersection)	±460ft
Buried 6" (Max.) (200 Intersection to 921-21M Intersection)	±1,970ft	Buried 8" (200 Intersection to 921-21M Intersection)	±1,970ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±2,430ft	TOTAL PROPOSED BURIED GAS PIPELINE =	±2,430ft

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 921-20P

TOPO D
 NBU 921-2011CS,
 NBU 921-2011BS, NBU 921-20H4CS,
 NBU 921-20P4BS, NBU 921-20P4CS,
 NBU 921-20O4CS & MU 921-20P
 LOCATED IN SECTION 20, T9S, R21E,
 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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 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

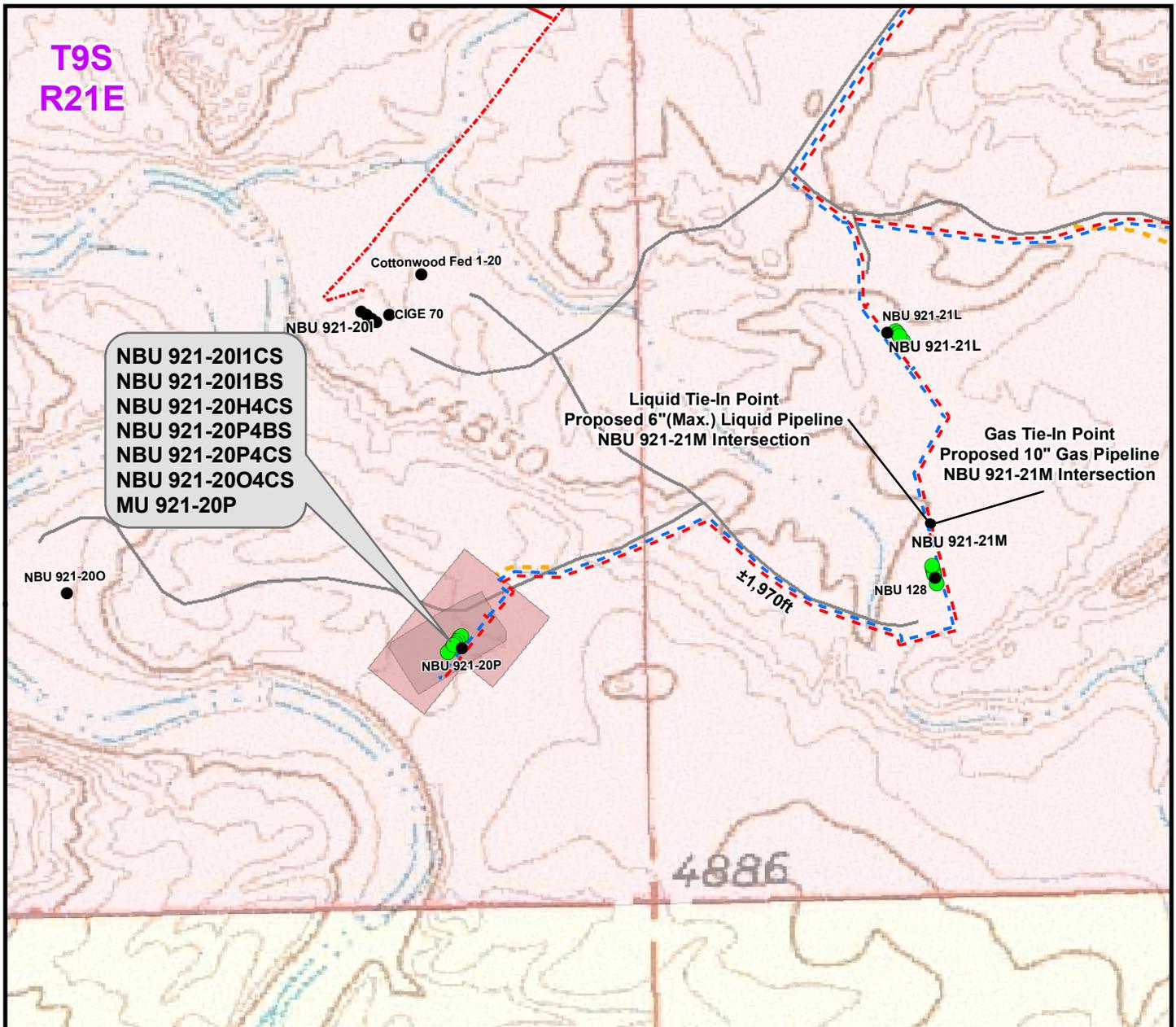
DATE: 17 Apr 2012

DATE: 17 May 2012

SHEET NO:

16

16 OF 19



Proposed Liquid Pipeline	Length
Buried 6" (Max.) (Meter House to 200 Intersection)	±460ft
Buried 6" (Max.) (200 Intersection to 921-21M Intersection)	±1,970ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±2,430ft

Proposed Gas Pipeline	Length
Buried 8" (Meter House to 200 Intersection)	±460ft
Buried 8" (200 Intersection to 921-21M Intersection)	±1,970ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±2,430ft

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 921-20P

TOPO D2 (PAD & PIPELINE DETAIL)
 NBU 921-2011CS,
 NBU 921-2011BS, NBU 921-20H4CS,
 NBU 921-20P4BS, NBU 921-20P4CS,
 NBU 921-20O4CS & MU 921-20P
 LOCATED IN SECTION 20, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
 Denver, Colorado 80202



CONSULTING, LLC
 2155 North Main Street
 Sheridan, Wyoming 82801
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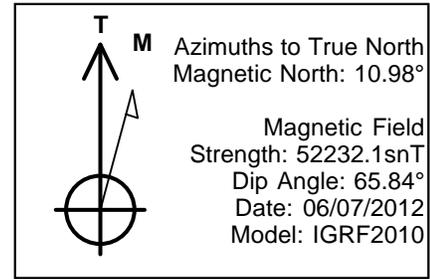


SCALE: 1" = 500ft	NAD83 USP Central	17 17 OF 19
DRAWN: TL	DATE: 17 Apr 2012	
REVISED: TL	DATE: 17 May 2012	

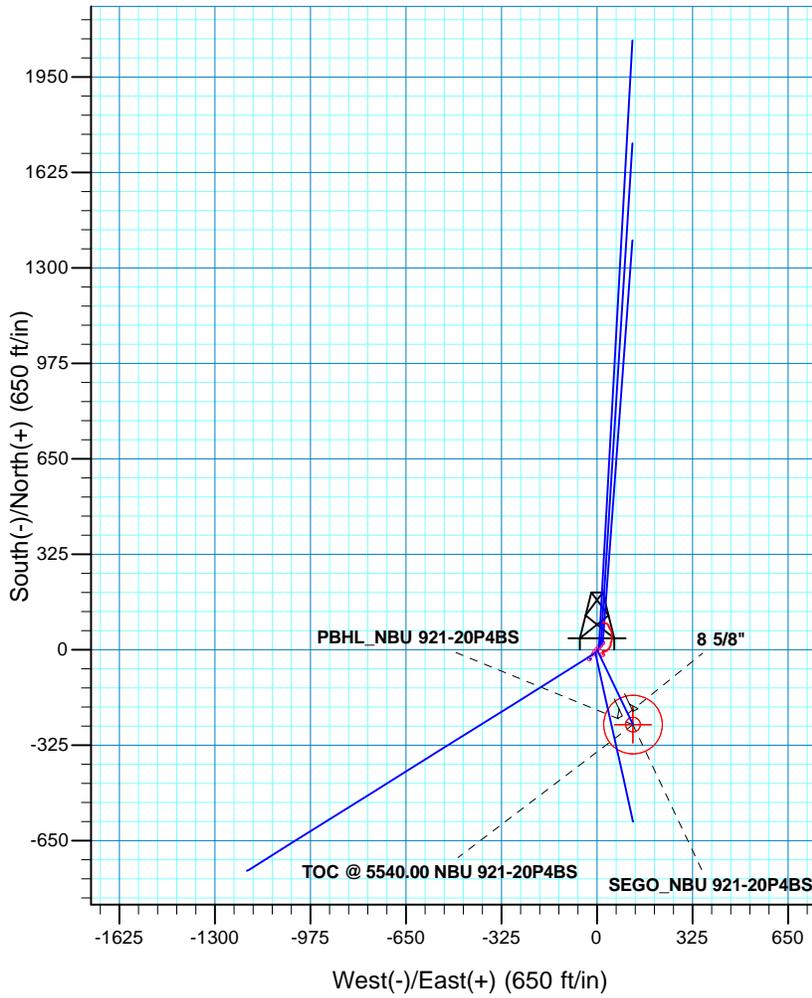
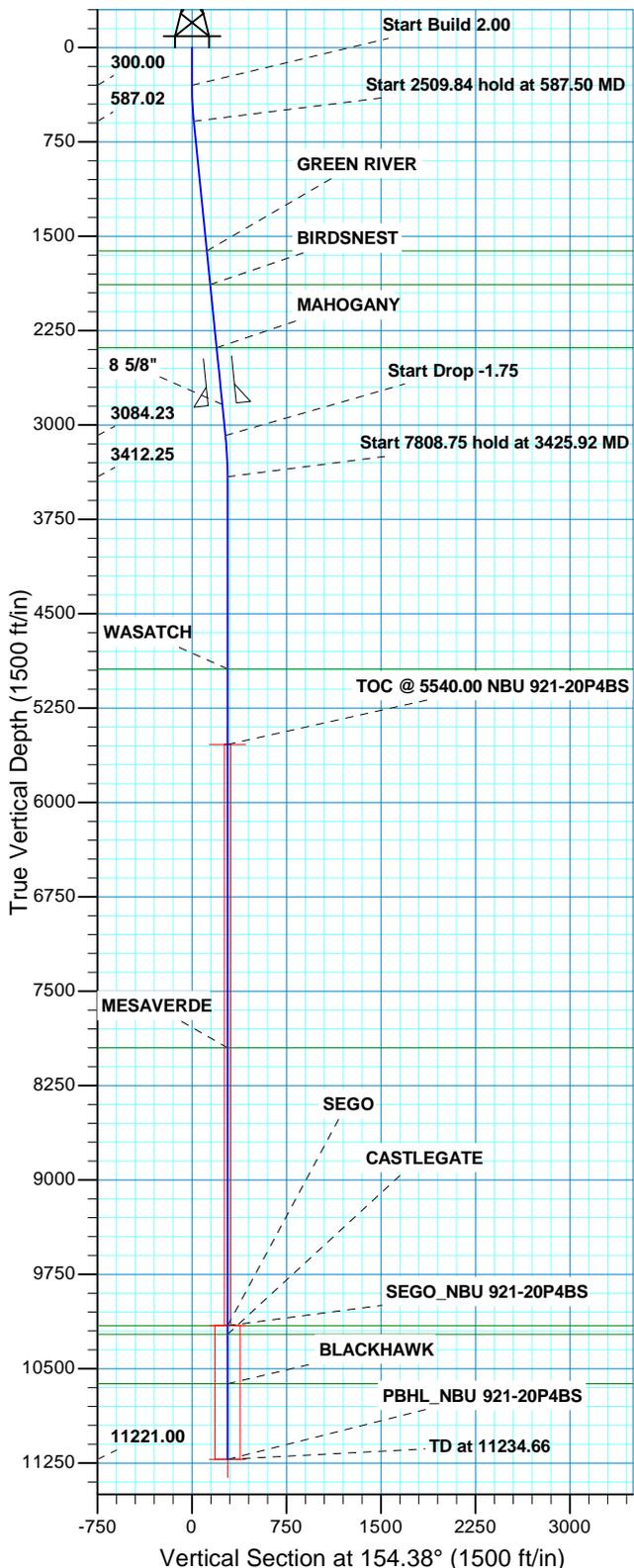
**Kerr-McGee Oil & Gas Onshore, LP
WELL PAD - NBU 921-20P
WELLS - NBU 921-20I1CS,
NBU 921-20I1BS, NBU 921-20H4CS,
NBU 921-20P4BS, NBU 921-20P4CS,
NBU 921-20O4CS & MU 921-20P
Section 20, T9S, R21E, S.L.B.&M.**

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 17.7 miles to a Class D County Road to the southwest. Exit right and proceed in a southwesterly direction along the Class D County Road approximately 1.8 miles to a second Class D County Road to the north. Exit right and proceed in a northerly direction along the second Class D County Road approximately 2.3 miles to a Tribal Road to the southwest. Continue in a southwesterly, then northwesterly direction along the Tribal Road approximately 1.3 miles to a service road to the south. Exit left and proceed in a southerly, then southwesterly direction along the service road approximately 0.9 miles to a second service road to the southeast. Exit left and proceed in a southeasterly direction along the second service road approximately 0.1 miles to a third service road the southwest. Exit right and proceed in a southwesterly direction along the third service road approximately 0.1 miles to the proposed access road to the west. Follow road flags in westerly direction approximately 185 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 47.7 miles in a southerly direction.



WELL DETAILS: NBU 921-20P4BS									
GL 4874 & KB 4 @ 4878.00ft (ASSUMED)									
	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude			
	0.00	0.00	14535309.49	2041467.85	40.016591	-109.567652			
DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
TOC	5540.00	-254.58	122.10	14535056.91	2041594.02	40.015892	-109.567216	Point	
- plan hits target center									
SEGO	10158.00	-254.58	122.10	14535056.91	2041594.02	40.015892	-109.567216	Circle (Radius: 25.00)	
- plan hits target center									
PBHL	11221.00	-254.58	122.10	14535056.91	2041594.02	40.015892	-109.567216	Circle (Radius: 100.00)	
- plan hits target center									



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
587.50	5.75	154.38	587.02	-13.00	6.23	2.00	154.38	14.41	
3097.34	5.75	154.38	3084.23	-239.72	114.98	0.00	0.00	265.87	
3425.92	0.00	0.00	3412.25	-254.58	122.10	1.75	180.00	282.34	
11234.66	0.00	0.00	11221.00	-254.58	122.10	0.00	0.00	282.34	PBHL_NBU 921-20P4BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N			FORMATION TOP DETAILS		
Geodetic System: Universal Transverse Mercator (US Survey Feet)	TVDPath	MDPath	Formation		
Datum: NAD 1927 (NADCON CONUS)	1618.00	1623.70	GREEN RIVER		
Ellipsoid: Clarke 1866	1884.00	1891.04	BIRDSNEST		
Zone: Zone 12N (114 W to 108 W)	2387.00	2396.58	MAHOGANY		
Location: SECTION20 T10S R21E	4940.00	4953.66	WASATCH		
System Datum: Mean Sea Level	7951.00	7964.66	MESAVERDE		
	10158.00	10171.66	SEGO		
	10227.00	10240.66	CASTLEGATE		
	10621.00	10634.66	BLACKHAWK		

CASING DETAILS			
TVD	MD	Name	Size
2837.00	2848.86	8 5/8"	8.625

RECEIVED :



Scientific Drilling

US ROCKIES REGION PLANNING

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

NBU 921-20P PAD

NBU 921-20P4BS

OH

Plan: PLAN #1 PERMIT

Standard Planning Report

07 June, 2012





Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 921-20P4BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4874 & KB 4 @ 4878.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4874 & KB 4 @ 4878.00ft (ASSUMED)
Site:	NBU 921-20P PAD	North Reference:	True
Well:	NBU 921-20P4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PERMIT		

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

Site	NBU 921-20P PAD, SECTION 20 T10S R21E				
Site Position:	Northing:	14,535,333.11 usft	Latitude:	40.016655	
From:	Lat/Long	Easting:	2,041,486.79 usft	Longitude:	-109.567583
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.92 °

Well	NBU 921-20P4BS, 834 FSL 612 FEL					
Well Position	+N/-S	-23.31 ft	Northing:	14,535,309.49 usft	Latitude:	40.016591
	+E/-W	-19.32 ft	Easting:	2,041,467.84 usft	Longitude:	-109.567652
Position Uncertainty	0.00 ft	Wellhead Elevation:		Ground Level:	4,874.00 ft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	06/07/12	10.98	65.84	52,232

Design	PLAN #1 PERMIT			
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	154.38

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	
587.50	5.75	154.38	587.02	-13.00	6.23	2.00	2.00	0.00	154.38	
3,097.34	5.75	154.38	3,084.23	-239.72	114.98	0.00	0.00	0.00	0.00	
3,425.92	0.00	0.00	3,412.25	-254.58	122.10	1.75	-1.75	0.00	180.00	
11,234.66	0.00	0.00	11,221.00	-254.58	122.10	0.00	0.00	0.00	0.00	PBHL_NBU 921-20P4



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 921-20P4BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4874 & KB 4 @ 4878.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4874 & KB 4 @ 4878.00ft (ASSUMED)
Site:	NBU 921-20P PAD	North Reference:	True
Well:	NBU 921-20P4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PERMIT		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
Start Build 2.00										
400.00	2.00	154.38	399.98	-1.57	0.75	1.75	2.00	2.00	0.00	
500.00	4.00	154.38	499.84	-6.29	3.02	6.98	2.00	2.00	0.00	
587.50	5.75	154.38	587.02	-13.00	6.23	14.41	2.00	2.00	0.00	
Start 2509.84 hold at 587.50 MD										
600.00	5.75	154.38	599.45	-14.13	6.77	15.67	0.00	0.00	0.00	
700.00	5.75	154.38	698.95	-23.16	11.11	25.69	0.00	0.00	0.00	
800.00	5.75	154.38	798.45	-32.19	15.44	35.70	0.00	0.00	0.00	
900.00	5.75	154.38	897.95	-41.23	19.77	45.72	0.00	0.00	0.00	
1,000.00	5.75	154.38	997.44	-50.26	24.11	55.74	0.00	0.00	0.00	
1,100.00	5.75	154.38	1,096.94	-59.29	28.44	65.76	0.00	0.00	0.00	
1,200.00	5.75	154.38	1,196.44	-68.33	32.77	75.78	0.00	0.00	0.00	
1,300.00	5.75	154.38	1,295.93	-77.36	37.10	85.80	0.00	0.00	0.00	
1,400.00	5.75	154.38	1,395.43	-86.39	41.44	95.82	0.00	0.00	0.00	
1,500.00	5.75	154.38	1,494.93	-95.43	45.77	105.84	0.00	0.00	0.00	
1,600.00	5.75	154.38	1,594.42	-104.46	50.10	115.85	0.00	0.00	0.00	
1,623.70	5.75	154.38	1,618.00	-106.60	51.13	118.23	0.00	0.00	0.00	
GREEN RIVER										
1,700.00	5.75	154.38	1,693.92	-113.49	54.43	125.87	0.00	0.00	0.00	
1,800.00	5.75	154.38	1,793.42	-122.53	58.77	135.89	0.00	0.00	0.00	
1,891.04	5.75	154.38	1,884.00	-130.75	62.71	145.01	0.00	0.00	0.00	
BIRDSNEST										
1,900.00	5.75	154.38	1,892.91	-131.56	63.10	145.91	0.00	0.00	0.00	
2,000.00	5.75	154.38	1,992.41	-140.60	67.43	155.93	0.00	0.00	0.00	
2,100.00	5.75	154.38	2,091.91	-149.63	71.76	165.95	0.00	0.00	0.00	
2,200.00	5.75	154.38	2,191.40	-158.66	76.10	175.97	0.00	0.00	0.00	
2,300.00	5.75	154.38	2,290.90	-167.70	80.43	185.99	0.00	0.00	0.00	
2,396.58	5.75	154.38	2,387.00	-176.42	84.61	195.66	0.00	0.00	0.00	
MAHOGANY										
2,400.00	5.75	154.38	2,390.40	-176.73	84.76	196.00	0.00	0.00	0.00	
2,500.00	5.75	154.38	2,489.90	-185.76	89.09	206.02	0.00	0.00	0.00	
2,600.00	5.75	154.38	2,589.39	-194.80	93.43	216.04	0.00	0.00	0.00	
2,700.00	5.75	154.38	2,688.89	-203.83	97.76	226.06	0.00	0.00	0.00	
2,800.00	5.75	154.38	2,788.39	-212.86	102.09	236.08	0.00	0.00	0.00	
2,848.86	5.75	154.38	2,837.00	-217.28	104.21	240.98	0.00	0.00	0.00	
8 5/8"										
2,900.00	5.75	154.38	2,887.88	-221.90	106.43	246.10	0.00	0.00	0.00	
3,000.00	5.75	154.38	2,987.38	-230.93	110.76	256.12	0.00	0.00	0.00	
3,097.34	5.75	154.38	3,084.23	-239.72	114.98	265.87	0.00	0.00	0.00	
Start Drop -1.75										
3,100.00	5.70	154.38	3,086.88	-239.96	115.09	266.14	1.75	-1.75	0.00	
3,200.00	3.95	154.38	3,186.52	-247.55	118.73	274.55	1.75	-1.75	0.00	
3,300.00	2.20	154.38	3,286.37	-252.39	121.05	279.92	1.75	-1.75	0.00	
3,400.00	0.45	154.38	3,386.34	-254.49	122.06	282.24	1.75	-1.75	0.00	
3,425.92	0.00	0.00	3,412.25	-254.58	122.10	282.34	1.75	-1.75	0.00	
Start 7808.75 hold at 3425.92 MD										
3,500.00	0.00	0.00	3,486.34	-254.58	122.10	282.34	0.00	0.00	0.00	
3,600.00	0.00	0.00	3,586.34	-254.58	122.10	282.34	0.00	0.00	0.00	
3,700.00	0.00	0.00	3,686.34	-254.58	122.10	282.34	0.00	0.00	0.00	



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 921-20P4BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4874 & KB 4 @ 4878.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4874 & KB 4 @ 4878.00ft (ASSUMED)
Site:	NBU 921-20P PAD	North Reference:	True
Well:	NBU 921-20P4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PERMIT		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,800.00	0.00	0.00	3,786.34	-254.58	122.10	282.34	0.00	0.00	0.00
3,900.00	0.00	0.00	3,886.34	-254.58	122.10	282.34	0.00	0.00	0.00
4,000.00	0.00	0.00	3,986.34	-254.58	122.10	282.34	0.00	0.00	0.00
4,100.00	0.00	0.00	4,086.34	-254.58	122.10	282.34	0.00	0.00	0.00
4,200.00	0.00	0.00	4,186.34	-254.58	122.10	282.34	0.00	0.00	0.00
4,300.00	0.00	0.00	4,286.34	-254.58	122.10	282.34	0.00	0.00	0.00
4,400.00	0.00	0.00	4,386.34	-254.58	122.10	282.34	0.00	0.00	0.00
4,500.00	0.00	0.00	4,486.34	-254.58	122.10	282.34	0.00	0.00	0.00
4,600.00	0.00	0.00	4,586.34	-254.58	122.10	282.34	0.00	0.00	0.00
4,700.00	0.00	0.00	4,686.34	-254.58	122.10	282.34	0.00	0.00	0.00
4,800.00	0.00	0.00	4,786.34	-254.58	122.10	282.34	0.00	0.00	0.00
4,900.00	0.00	0.00	4,886.34	-254.58	122.10	282.34	0.00	0.00	0.00
4,953.66	0.00	0.00	4,940.00	-254.58	122.10	282.34	0.00	0.00	0.00
WASATCH									
5,000.00	0.00	0.00	4,986.34	-254.58	122.10	282.34	0.00	0.00	0.00
5,100.00	0.00	0.00	5,086.34	-254.58	122.10	282.34	0.00	0.00	0.00
5,200.00	0.00	0.00	5,186.34	-254.58	122.10	282.34	0.00	0.00	0.00
5,300.00	0.00	0.00	5,286.34	-254.58	122.10	282.34	0.00	0.00	0.00
5,400.00	0.00	0.00	5,386.34	-254.58	122.10	282.34	0.00	0.00	0.00
5,500.00	0.00	0.00	5,486.34	-254.58	122.10	282.34	0.00	0.00	0.00
5,553.66	0.00	0.00	5,540.00	-254.58	122.10	282.34	0.00	0.00	0.00
TOC @ 5540.00 NBU 921-20P4BS									
5,600.00	0.00	0.00	5,586.34	-254.58	122.10	282.34	0.00	0.00	0.00
5,700.00	0.00	0.00	5,686.34	-254.58	122.10	282.34	0.00	0.00	0.00
5,800.00	0.00	0.00	5,786.34	-254.58	122.10	282.34	0.00	0.00	0.00
5,900.00	0.00	0.00	5,886.34	-254.58	122.10	282.34	0.00	0.00	0.00
6,000.00	0.00	0.00	5,986.34	-254.58	122.10	282.34	0.00	0.00	0.00
6,100.00	0.00	0.00	6,086.34	-254.58	122.10	282.34	0.00	0.00	0.00
6,200.00	0.00	0.00	6,186.34	-254.58	122.10	282.34	0.00	0.00	0.00
6,300.00	0.00	0.00	6,286.34	-254.58	122.10	282.34	0.00	0.00	0.00
6,400.00	0.00	0.00	6,386.34	-254.58	122.10	282.34	0.00	0.00	0.00
6,500.00	0.00	0.00	6,486.34	-254.58	122.10	282.34	0.00	0.00	0.00
6,600.00	0.00	0.00	6,586.34	-254.58	122.10	282.34	0.00	0.00	0.00
6,700.00	0.00	0.00	6,686.34	-254.58	122.10	282.34	0.00	0.00	0.00
6,800.00	0.00	0.00	6,786.34	-254.58	122.10	282.34	0.00	0.00	0.00
6,900.00	0.00	0.00	6,886.34	-254.58	122.10	282.34	0.00	0.00	0.00
7,000.00	0.00	0.00	6,986.34	-254.58	122.10	282.34	0.00	0.00	0.00
7,100.00	0.00	0.00	7,086.34	-254.58	122.10	282.34	0.00	0.00	0.00
7,200.00	0.00	0.00	7,186.34	-254.58	122.10	282.34	0.00	0.00	0.00
7,300.00	0.00	0.00	7,286.34	-254.58	122.10	282.34	0.00	0.00	0.00
7,400.00	0.00	0.00	7,386.34	-254.58	122.10	282.34	0.00	0.00	0.00
7,500.00	0.00	0.00	7,486.34	-254.58	122.10	282.34	0.00	0.00	0.00
7,600.00	0.00	0.00	7,586.34	-254.58	122.10	282.34	0.00	0.00	0.00
7,700.00	0.00	0.00	7,686.34	-254.58	122.10	282.34	0.00	0.00	0.00
7,800.00	0.00	0.00	7,786.34	-254.58	122.10	282.34	0.00	0.00	0.00
7,900.00	0.00	0.00	7,886.34	-254.58	122.10	282.34	0.00	0.00	0.00
7,964.66	0.00	0.00	7,951.00	-254.58	122.10	282.34	0.00	0.00	0.00
MESAVERDE									
8,000.00	0.00	0.00	7,986.34	-254.58	122.10	282.34	0.00	0.00	0.00
8,100.00	0.00	0.00	8,086.34	-254.58	122.10	282.34	0.00	0.00	0.00
8,200.00	0.00	0.00	8,186.34	-254.58	122.10	282.34	0.00	0.00	0.00
8,300.00	0.00	0.00	8,286.34	-254.58	122.10	282.34	0.00	0.00	0.00
8,400.00	0.00	0.00	8,386.34	-254.58	122.10	282.34	0.00	0.00	0.00



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 921-20P4BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4874 & KB 4 @ 4878.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4874 & KB 4 @ 4878.00ft (ASSUMED)
Site:	NBU 921-20P PAD	North Reference:	True
Well:	NBU 921-20P4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PERMIT		

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)	
8,500.00	0.00	0.00	8,486.34	-254.58	122.10	282.34	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,586.34	-254.58	122.10	282.34	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,686.34	-254.58	122.10	282.34	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,786.34	-254.58	122.10	282.34	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,886.34	-254.58	122.10	282.34	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,986.34	-254.58	122.10	282.34	0.00	0.00	0.00	
9,100.00	0.00	0.00	9,086.34	-254.58	122.10	282.34	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,186.34	-254.58	122.10	282.34	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,286.34	-254.58	122.10	282.34	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,386.34	-254.58	122.10	282.34	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,486.34	-254.58	122.10	282.34	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,586.34	-254.58	122.10	282.34	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,686.34	-254.58	122.10	282.34	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,786.34	-254.58	122.10	282.34	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,886.34	-254.58	122.10	282.34	0.00	0.00	0.00	
10,000.00	0.00	0.00	9,986.34	-254.58	122.10	282.34	0.00	0.00	0.00	
10,100.00	0.00	0.00	10,086.34	-254.58	122.10	282.34	0.00	0.00	0.00	
10,171.66	0.00	0.00	10,158.00	-254.58	122.10	282.34	0.00	0.00	0.00	
SEGO - SEGO_NBU 921-20P4BS										
10,200.00	0.00	0.00	10,186.34	-254.58	122.10	282.34	0.00	0.00	0.00	
10,240.66	0.00	0.00	10,227.00	-254.58	122.10	282.34	0.00	0.00	0.00	
CASTLEGATE										
10,300.00	0.00	0.00	10,286.34	-254.58	122.10	282.34	0.00	0.00	0.00	
10,400.00	0.00	0.00	10,386.34	-254.58	122.10	282.34	0.00	0.00	0.00	
10,500.00	0.00	0.00	10,486.34	-254.58	122.10	282.34	0.00	0.00	0.00	
10,600.00	0.00	0.00	10,586.34	-254.58	122.10	282.34	0.00	0.00	0.00	
10,634.66	0.00	0.00	10,621.00	-254.58	122.10	282.34	0.00	0.00	0.00	
BLACKHAWK										
10,700.00	0.00	0.00	10,686.34	-254.58	122.10	282.34	0.00	0.00	0.00	
10,800.00	0.00	0.00	10,786.34	-254.58	122.10	282.34	0.00	0.00	0.00	
10,900.00	0.00	0.00	10,886.34	-254.58	122.10	282.34	0.00	0.00	0.00	
11,000.00	0.00	0.00	10,986.34	-254.58	122.10	282.34	0.00	0.00	0.00	
11,100.00	0.00	0.00	11,086.34	-254.58	122.10	282.34	0.00	0.00	0.00	
11,200.00	0.00	0.00	11,186.34	-254.58	122.10	282.34	0.00	0.00	0.00	
11,234.66	0.00	0.00	11,221.00	-254.58	122.10	282.34	0.00	0.00	0.00	
PBHL_NBU 921-20P4BS										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
TOC @ 5540.00 NBU 921-20P4BS - plan hits target center - Point	0.00	0.00	5,540.00	-254.58	122.10	14,535,056.91	2,041,594.02	40.015892	-109.567216	
SEGO_NBU 921-20P4BS - plan hits target center - Circle (radius 25.00)	0.00	0.00	10,158.00	-254.58	122.10	14,535,056.91	2,041,594.02	40.015892	-109.567216	
PBHL_NBU 921-20P4BS - plan hits target center - Circle (radius 100.00)	0.00	0.00	11,221.00	-254.58	122.10	14,535,056.91	2,041,594.02	40.015892	-109.567216	



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 921-20P4BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4874 & KB 4 @ 4878.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4874 & KB 4 @ 4878.00ft (ASSUMED)
Site:	NBU 921-20P PAD	North Reference:	True
Well:	NBU 921-20P4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PERMIT		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,848.86	2,837.00	8 5/8"	8.625	11.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,623.70	1,618.00	GREEN RIVER			
1,891.04	1,884.00	BIRDSNEST			
2,396.58	2,387.00	MAHOGANY			
4,953.66	4,940.00	WASATCH			
7,964.66	7,951.00	MESAVERDE			
10,171.66	10,158.00	SEGO			
10,240.66	10,227.00	CASTLEGATE			
10,634.66	10,621.00	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	
587.50	587.02	-13.00	6.23	Start 2509.84 hold at 587.50 MD	
3,097.34	3,084.23	-239.72	114.98	Start Drop -1.75	
3,425.92	3,412.25	-254.58	122.10	Start 7808.75 hold at 3425.92 MD	
11,234.66	11,221.00	-254.58	122.10	TD at 11234.66	

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

NBU 921-20P Pad

<u>API #</u>	<u>MU 921-20P</u>		
	Surface:	804 FSL / 638 FEL	SESE Lot
	BHL:	804 FSL / 638 FEL	SESE Lot
<u>API #</u>	<u>NBU 921-20H4CS</u>		
	Surface:	842 FSL / 606 FEL	SESE Lot
	BHL:	2397 FNL / 491 FEL	SENE Lot
<u>API #</u>	<u>NBU 921-20I1BS</u>		
	Surface:	850 FSL / 599 FEL	SESE Lot
	BHL:	2559 FSL / 491 FEL	NESE Lot
<u>API #</u>	<u>NBU 921-20I1CS</u>		
	Surface:	857 FSL / 593 FEL	SESE Lot
	BHL:	2229 FSL / 491 FEL	NESE Lot
<u>API #</u>	<u>NBU 921-20O4CS</u>		
	Surface:	819 FSL / 625 FEL	SESE Lot
	BHL:	84 FSL / 1804 FEL	SWSE Lot
<u>API #</u>	<u>NBU 921-20P4BS</u>		
	Surface:	834 FSL / 612 FEL	SESE Lot
	BHL:	579 FSL / 490 FEL	SESE Lot
<u>API #</u>	<u>NBU 921-20P4CS</u>		
	Surface:	827 FSL / 618 FEL	SESE Lot
	BHL:	249 FSL / 490 FEL	SESE Lot

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

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

An on-site meeting was held on May 8, 2012. Present were:

- David Gordon, Melissa Wardle, Tyler Cox - BLM;
- Bucky Secakuku - BIA;
- Brad Pinecoose - Ute Indian Tribe;
- Amy Ackman - Montgomery Archeological Consultants Inc.;
- Scott Carson - Smiling Lake Consulting;
- John Slaugh, Mitch Batty - Timberline Engineering & Land Surveying, Inc.;
- Danielle Piernot, Raleen White, Doyle Holmes, Rod Anderson, Charles Chase - Kerr-McGee
- Tim Horgan-Kobelski - Grasslands Consulting, Inc.
- Justin Strauss - SWCA Environmental Consultants

A. Existing Roads:

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

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

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

Please refer to Topo B, for existing roads.

B. New or Reconstructed Access Roads:

All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BIA.

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

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

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

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

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

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

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

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

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

±185' (0.04 miles) – Section 20 (SE/4 SE/4) T9S R21E – On lease UTU0575 Ute Indian Tribe surface, road re-route from the edge of the pad to the existing road to the north. Please refer to Topo B.

C. Location of Existing Wells:

A) Refer to Topo Map C.

D. Location of Existing and/or Proposed Facilities:

This pad will expand the existing pad for the NBU 921-20P, which is a producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records on June 28, 2012. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad. A berm will be constructed completely around production components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will generally be constructed of compacted subsoil or corrugated metal, and will hold the capacity of the largest tank and have sufficient freeboard to accommodate a 25 year rainfall event. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer, will be painted a flat, non-reflective, earth-tone color chosen at the onsite (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 ±2,430' and the individual segments are broken up as follows:

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

±2,430' (0.5 miles) – Section 20 and Section 21 T9S R21E– On-lease UTU0575 and UTU0576 Ute Indian Tribe Surface, New 8" buried gas gathering pipeline from the meter to the NBU 921-21M Pad intersection. Please refer to Topo D2 - Pad and Pipeline Detail.

LIQUID GATHERING

Please refer to Topo D2- Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is ±2,430' and the individual segments are broken up as follows:

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

±2,430' (0.5 miles) – Section 20 and Section 21 T9S R21E– On-lease UTU0575 and UTU0576 Ute Indian Tribe Surface. New 6" buried liquid gathering pipeline from the separator to the NBU 921-21M Pad intersection. Please refer to Topo D2 - Pad and Pipeline Detail.

Pipeline Gathering Construction

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

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

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

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

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

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

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

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

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

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

The Anadarko Completions Transportation System (ACTS) information:

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

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

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

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

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

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

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

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

E. Location and Types of Water Supply:

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

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

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

No water well is to be drilled on this lease.

F. Construction Materials:

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

G. Methods for Handling Waste:

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

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

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

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

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

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

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

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

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

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

Materials Management

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

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

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

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

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

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

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

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

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

H. Ancillary Facilities:

ancillary facilities are

I. Well Site Layout:

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

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

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

J. Plans for Surface Reclamation:

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

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

Interim Reclamation

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

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

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

Final Reclamation

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

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

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

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

Measures Common to Interim and Final Reclamation

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

Seeding will occur year-round as conditions allow and will typically be accomplished through the use of a no-till rangeland style seed drill with a "picker box" in order to seed "fluffy" seed. Where drill seeding is not the preferred method, seed will be broadcast and then raked into the ground at double the rate of drill seeding. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for

re-vegetation. The seed mixes will be selected from a list provided by or approved by the BIA/Tribe or a specific seed mix will be proposed by Kerr-McGee to the BIA/Tribe and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be maintained by Kerr-McGee. Every effort will be made to obtain "cheat grass free seed".

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

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

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. Slopes will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to: erosion control blankets, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Weed Control

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

K. Surface/Mineral Ownership:

Ute Indian Tribe	United States of America
P.O. Box 70	Bureau of Land Management
988 South 7500 East Annex Building	170 South 500 East
Fort Duchesne, UT 84026	Vernal, UT 84078
(435) 722-4307	(435)781-4400

L. Other Information:

Onsite Specifics:

- No changes

Cultural and Paleontological Resources

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

Resource Reports:

A Class I literature survey report was completed on May 21, 2012 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 12-152.

A paleontological reconnaissance survey was completed on April 10-16, 2012 by SWCA Environmental Consultants. For additional details please refer to report UT12-14314-105 and UT12-14314-122.

Biological field survey was completed on April 10-13, 2012 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-775 and GCI-776.

Proposed Action Annual Emissions Tables:

Table 1: Proposed Action Annual Emissions (tons/year)¹			
Pollutant	Development	Production	Total
NOx	3.8	0.12	3.92
CO	2.2	0.11	2.31
VOC	0.1	4.9	5
SO ₂	0.005	0.0043	0.0093
PM ₁₀	1.7	0.11	1.81
PM _{2.5}	0.4	0.025	0.425
Benzene	2.2E-03	0.044	0.046
Toluene	1.6E-03	0.103	0.105
Ethylbenzene	3.4E-04	0.005	0.005
Xylene	1.1E-03	0.076	0.077
n-Hexane	1.7E-04	0.145	0.145
Formaldehyde	1.3E-02	8.64E-05	1.31E-02

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

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison			
Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory^a (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	27.44	16,547	0.17%
VOC	35	127,495	0.03%

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

Uintah Basin Data

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

Danielle Piernot
Regulatory Analyst II
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6156

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.

Danielle Piernot

July 12, 2012

Date

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)

December 6, 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)		
NBU 921-20A PAD		
43-047-53330	NBU 921-20A4BS	Sec 20 T09S R21E 0947 FNL 0708 FEL BHL Sec 20 T09S R21E 0744 FNL 0491 FEL
43-047-53331	NBU 921-20A4CS	Sec 20 T09S R21E 0951 FNL 0678 FEL BHL Sec 20 T09S R21E 1075 FNL 0491 FEL
43-047-53334	NBU 921-20H1BS	Sec 20 T09S R21E 0950 FNL 0688 FEL BHL Sec 20 T09S R21E 1405 FNL 0491 FEL
43-047-53335	NBU 921-20H1CS	Sec 20 T09S R21E 0948 FNL 0698 FEL BHL Sec 20 T09S R21E 1736 FNL 0491 FEL
NBU 921-20L PAD		
43-047-53333	NBU 921-20E1BS	Sec 20 T09S R21E 2450 FSL 0075 FWL BHL Sec 20 T09S R21E 1571 FNL 0819 FWL
43-047-53336	NBU 921-20E1CS	Sec 20 T09S R21E 2440 FSL 0076 FWL BHL Sec 20 T09S R21E 1902 FNL 0819 FWL
43-047-53339	NBU 921-20E4BS	Sec 20 T09S R21E 2430 FSL 0077 FWL BHL Sec 20 T09S R21E 2233 FNL 0819 FWL
43-047-53342	NBU 921-20E4CS	Sec 20 T09S R21E 2420 FSL 0078 FWL BHL Sec 20 T09S R21E 2564 FNL 0819 FWL
43-047-53345	NBU 921-20L1BS	Sec 20 T09S R21E 2410 FSL 0079 FWL BHL Sec 20 T09S R21E 2396 FSL 0819 FWL
43-047-53350	NBU 921-20L4BS	Sec 20 T09S R21E 2401 FSL 0080 FWL BHL Sec 20 T09S R21E 1736 FSL 0818 FWL

RECEIVED: December 06, 2012

API #	WELL NAME	LOCATION						
(Proposed PZ WASATCH-MESA VERDE)								
NBU 921-20B PAD								
43-047-53337	NBU 921-20C1BS	Sec 20	T09S	R21E	0777	FNL	2269	FEL
	BHL	Sec 20	T09S	R21E	0083	FNL	2136	FWL
43-047-53338	NBU 921-20A1BS	Sec 20	T09S	R21E	0745	FNL	2231	FEL
	BHL	Sec 20	T09S	R21E	0083	FNL	0491	FEL
43-047-53340	NBU 921-20A1CS	Sec 20	T09S	R21E	0764	FNL	2253	FEL
	BHL	Sec 20	T09S	R21E	0413	FNL	0491	FEL
43-047-53341	NBU 921-20B1BS	Sec 20	T09S	R21E	0751	FNL	2238	FEL
	BHL	Sec 20	T09S	R21E	0248	FNL	1808	FEL
43-047-53343	NBU 921-20B1CS	Sec 20	T09S	R21E	0738	FNL	2223	FEL
	BHL	Sec 20	T09S	R21E	0578	FNL	1808	FEL
43-047-53344	NBU 921-20B4CS	Sec 20	T09S	R21E	0771	FNL	2261	FEL
	BHL	Sec 20	T09S	R21E	1240	FNL	1807	FEL
NBU 921-20G PAD								
43-047-53346	NBU 921-20G1BS	Sec 20	T09S	R21E	1706	FNL	2606	FWL
	BHL	Sec 20	T09S	R21E	1570	FNL	1807	FEL
43-047-53348	NBU 921-20G1CS	Sec 20	T09S	R21E	1712	FNL	2636	FWL
	BHL	Sec 20	T09S	R21E	1901	FNL	1807	FEL
43-047-53352	NBU 921-20F1BS	Sec 20	T09S	R21E	1702	FNL	2587	FWL
	BHL	Sec 20	T09S	R21E	1732	FNL	2126	FWL
43-047-53354	NBU 921-20F4CS	Sec 20	T09S	R21E	1704	FNL	2597	FWL
	BHL	Sec 20	T09S	R21E	2399	FNL	2134	FWL
43-047-53356	NBU 921-20G4BS	Sec 20	T09S	R21E	1710	FNL	2626	FWL
	BHL	Sec 20	T09S	R21E	2232	FNL	1806	FEL
NBU 921-20M PAD								
43-047-53347	NBU 921-20M1CS	Sec 20	T09S	R21E	0575	FSL	0625	FWL
	BHL	Sec 20	T09S	R21E	0746	FSL	0818	FWL
43-047-53349	NBU 921-20M1BS	Sec 20	T09S	R21E	0581	FSL	0617	FWL
	BHL	Sec 20	T09S	R21E	1076	FSL	0818	FWL
43-047-53355	NBU 921-20L4CS	Sec 20	T09S	R21E	0587	FSL	0609	FWL
	BHL	Sec 20	T09S	R21E	1406	FSL	0818	FWL
NBU 921-20N PAD								
43-047-53351	NBU 921-20N4CS	Sec 20	T09S	R21E	1256	FSL	2008	FWL
	BHL	Sec 20	T09S	R21E	0249	FSL	2132	FWL
43-047-53358	NBU 921-20J4CS	Sec 20	T09S	R21E	1239	FSL	2019	FWL
	BHL	Sec 20	T09S	R21E	1407	FSL	1805	FEL
43-047-53359	NBU 921-20K4CS	Sec 20	T09S	R21E	1265	FSL	2003	FWL
	BHL	Sec 20	T09S	R21E	1572	FSL	2133	FWL
43-047-53360	NBU 921-20N4BS	Sec 20	T09S	R21E	1248	FSL	2014	FWL
	BHL	Sec 20	T09S	R21E	0579	FSL	2132	FWL
43-047-53361	NBU 921-20O4BS	Sec 20	T09S	R21E	1231	FSL	2024	FWL
	BHL	Sec 20	T09S	R21E	0492	FSL	1810	FEL

API #	WELL NAME			LOCATION						
(Proposed PZ WASATCH-MESA VERDE)										
NBU 921-20P PAD										
43-047-53362	NBU 921-20H4CS	Sec	20	T09S	R21E	0842	FSL	0606	FEL	
		BHL	Sec	20	T09S	R21E	2397	FNL	0491	FEL
43-047-53363	NBU 921-20I1BS	Sec	20	T09S	R21E	0850	FSL	0599	FEL	
		BHL	Sec	20	T09S	R21E	2559	FSL	0491	FEL
43-047-53364	NBU 921-20I1CS	Sec	20	T09S	R21E	0857	FSL	0593	FEL	
		BHL	Sec	20	T09S	R21E	2229	FSL	0491	FEL
43-047-53366	NBU 921-20O4CS	Sec	20	T09S	R21E	0819	FSL	0625	FEL	
		BHL	Sec	20	T09S	R21E	0084	FSL	1804	FEL
43-047-53367	NBU 921-20P4CS	Sec	20	T09S	R21E	0827	FSL	0618	FEL	
		BHL	Sec	20	T09S	R21E	0249	FSL	0490	FEL
43-047-53368	NBU 921-20P4BS	Sec	20	T09S	R21E	0834	FSL	0612	FEL	
		BHL	Sec	20	T09S	R21E	0579	FSL	0490	FEL
NBU 921-20J PAD										
43-047-53365	NBU 921-20G4CS	Sec	20	T09S	R21E	1726	FSL	2431	FEL	
		BHL	Sec	20	T09S	R21E	2563	FNL	1806	FEL

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: 2012.12.06 09:34:53 -0700

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

MCoulthard:mc:12-6-12

API Number	Well Name	Surface Location		
		Sec 20	T09S R21E	
43-047-53330	NBU 921-20A4BS	Sec 20	T09S R21E	0947 FNL 0708 FEL
43-047-53331	NBU 921-20A4CS	Sec 20	T09S R21E	0951 FNL 0678 FEL
43-047-53333	NBU 921-20E1BS	Sec 20	T09S R21E	2450 FSL 0075 FWL
43-047-53334	NBU 921-20H1BS	Sec 20	T09S R21E	0950 FNL 0688 FEL
43-047-53335	NBU 921-20H1CS	Sec 20	T09S R21E	0948 FNL 0698 FEL
43-047-53336	NBU 921-20E1CS	Sec 20	T09S R21E	2440 FSL 0076 FWL
43-047-53337	NBU 921-20C1BS	Sec 20	T09S R21E	0777 FNL 2269 FEL
43-047-53338	NBU 921-20A1BS	Sec 20	T09S R21E	0745 FNL 2231 FEL
43-047-53339	NBU 921-20E4BS	Sec 20	T09S R21E	2430 FSL 0077 FWL
43-047-53340	NBU 921-20A1CS	Sec 20	T09S R21E	0764 FNL 2253 FEL
43-047-53341	NBU 921-20B1BS	Sec 20	T09S R21E	0751 FNL 2238 FEL
43-047-53342	NBU 921-20E4CS	Sec 20	T09S R21E	2420 FSL 0078 FWL
43-047-53343	NBU 921-20B1CS	Sec 20	T09S R21E	0738 FNL 2223 FEL
43-047-53344	NBU 921-20B4CS	Sec 20	T09S R21E	0771 FNL 2261 FEL
43-047-53345	NBU 921-20L1BS	Sec 20	T09S R21E	2410 FSL 0079 FWL
43-047-53346	NBU 921-20G1BS	Sec 20	T09S R21E	1706 FNL 2606 FWL
43-047-53347	NBU 921-20M1CS	Sec 20	T09S R21E	0575 FSL 0625 FWL
43-047-53348	NBU 921-20G1CS	Sec 20	T09S R21E	1712 FNL 2636 FWL
43-047-53349	NBU 921-20M1BS	Sec 20	T09S R21E	0581 FSL 0617 FWL
43-047-53350	NBU 921-20L4BS	Sec 20	T09S R21E	2401 FSL 0080 FWL
43-047-53351	NBU 921-20N4CS	Sec 20	T09S R21E	1256 FSL 2008 FWL
43-047-53352	NBU 921-20F1BS	Sec 20	T09S R21E	1702 FNL 2587 FWL
43-047-53354	NBU 921-20F4CS	Sec 20	T09S R21E	1704 FNL 2597 FWL
43-047-53355	NBU 921-20L4CS	Sec 20	T09S R21E	0587 FSL 0609 FWL
43-047-53356	NBU 921-20G4BS	Sec 20	T09S R21E	1710 FNL 2626 FWL
43-047-53358	NBU 921-20J4CS	Sec 20	T09S R21E	1239 FSL 2019 FWL
43-047-53359	NBU 921-20K4CS	Sec 20	T09S R21E	1265 FSL 2003 FWL
43-047-53360	NBU 921-20N4BS	Sec 20	T09S R21E	1248 FSL 2014 FWL
43-047-53361	NBU 921-20O4BS	Sec 20	T09S R21E	1231 FSL 2024 FWL
43-047-53362	NBU 921-20H4CS	Sec 20	T09S R21E	0842 FSL 0606 FEL
43-047-53363	NBU 921-20I1BS	Sec 20	T09S R21E	0850 FSL 0599 FEL
43-047-53364	NBU 921-20I1CS	Sec 20	T09S R21E	0857 FSL 0593 FEL
43-047-53365	NBU 921-20G4CS	Sec 20	T09S R21E	1726 FSL 2431 FEL
43-047-53366	NBU 921-20O4CS	Sec 20	T09S R21E	0819 FSL 0625 FEL
43-047-53367	NBU 921-20P4CS	Sec 20	T09S R21E	0827 FSL 0618 FEL
43-047-53368	NBU 921-20P4BS	Sec 20	T09S R21E	0834 FSL 0612 FEL

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/27/2012

API NO. ASSIGNED: 43047533680000

WELL NAME: NBU 921-20P4BS

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

PHONE NUMBER: 720 929-6029

CONTACT: Cara Mahler

PROPOSED LOCATION: SESE 20 090S 210E

Permit Tech Review:

SURFACE: 0834 FSL 0612 FEL

Engineering Review:

BOTTOM: 0579 FSL 0490 FEL

Geology Review:

COUNTY: UINTAH

LATITUDE: 40.01651

LONGITUDE: -109.56831

UTM SURF EASTINGS: 622181.00

NORTHINGS: 4430572.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU0575

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

SURFACE OWNER: 2 - Indian

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

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

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
 4 - Federal Approval - dmason
 15 - Directional - dmason
 17 - Oil Shale 190-5(b) - dmason



GARY R. HERBERT
Governor

GREGORY S. BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: NBU 921-20P4BS
API Well Number: 43047533680000
Lease Number: UTU0575
Surface Owner: INDIAN
Approval Date: 12/10/2012

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:

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

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

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

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

Notification Requirements:

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

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

(please leave a voicemail message if not available)

OR

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

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

Reporting Requirements:

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

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

Approved By:



For John Rogers
Associate Director, Oil & Gas

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

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

AUG 23 2012

APPLICATION FOR PERMIT TO DRILL OR REENTER

BLM VERNAL UT

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU0575
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator KERR MCGEE OIL&GAS ONSHORE, LP Contact: DANIELLE PIERNOT Danielle.Piernot@anadarko.com		7. If Unit or CA Agreement, Name and No. UTU63047A
3a. Address PO BOX 173779 DENVER, CO 80202-3779		8. Lease Name and Well No. NBU 921-20P4BS
3b. Phone No. (include area code) Ph: 720-929-6156 Fx: 720-929-7156		9. API Well No. 4304753368 4304763308
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface SESE 834FSL 612FEL 40.016556 N Lat, 109.568341 W Lon At proposed prod. zone SESE 579FSL 490FEL 40.015856 N Lat, 109.567905 W Lon		10. Field and Pool, or Exploratory NATURAL BUTTES
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 48 MILES SOUTH OF VERNAL, UT		11. Sec., T., R., M., or Blk. and Survey or Area Sec 20 T9S R21E Mer SLB
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 490'	16. No. of Acres in Lease 1600.00	12. County or Parish UINTAH COUNTY
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 260'	19. Proposed Depth 11235 MD 11221 TVD	13. State UT
21. Elevations (Show whether DF, KB, RT, GL, etc.) 4874 GL	22. Approximate date work will start 02/01/2013	17. Spacing Unit dedicated to this well
		20. BLM/BIA Bond No. on file WYB000291
		23. Estimated duration 60-90 DAYS

24. Attachments

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

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

25. Signature (Electronic Submission)	Name (Printed/Typed) DANIELLE PIERNOT Ph: 720-929-6156	Date 07/13/2012
Title REGULATORY ANALYST II		
Approved by (Signature) 	Name (Printed/Typed) Jerry Kenczka	Date JUN 19 2013
Title Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

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

CONDITIONS OF APPROVAL ATTACHED

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

RECEIVED

Additional Operator Remarks (see next page)

Electronic Submission #142913 verified by the BLM Well Information System
For KERR MCGEE OIL&GAS ONSHORE, LP, sent to the Vernal

JUN 25 2013

DIV. OF OIL, GAS & MINING

UDOGM

NOTICE OF APPROVAL

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



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

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: KERR MCGEE OIL & GAS ON SHORE Location: SESE, Sec. 20, T9S, R21E
Well No: NBU 921-20P4BS Lease No: UTU-0575
API No: 43-047-53368 Agreement:

OFFICE NUMBER: (435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

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

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

NOTIFICATION REQUIREMENTS

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

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

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO_x per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO_x per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.

NBU 921-20P Well Pad

- 1. Paint facilities "Shadow Gray."
- 2. Conduct a raptor survey prior to construction operations if such activities would take place during raptor nesting season (January 1 through September 30). If active raptor nests are identified during the survey, operations should be conducted according to the seasonal restrictions detailed in the Uinta Basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Guidelines.
- 3. If construction operations are not initiated prior to April 11, 2013, an additional biological survey for Uinta Basin hookless cactus should be conducted prior to construction according to current USFWS protocol.
- 4. Monitor construction with a permitted archaeologist.
- 5. Monitor access road, well pad, and pipeline construction with a permitted paleontologist.
- 6. Contact Questar Pipeline to maintain required separation between existing pipeline and NBU 921-20P pipeline.

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

SITE SPECIFIC DOWNHOLE COAs:

- Gamma Ray Log shall be run from Total Depth to Surface.
- CBL will be run from TD to TOC.
- Cement for the surface casing will be circulated to the surface.

Variances Granted

All variances approved as written in APD.

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

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.

- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well by CD (compact disc). This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

OPERATING REQUIREMENT REMINDERS:

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

and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

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

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: UTU0575
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: THE UT
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0834 FSL 0612 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 20 Township: 09.0S Range: 21.0E Meridian: S	8. WELL NAME and NUMBER: NBU 921-20P4BS
PHONE NUMBER: 720 929-6511	9. API NUMBER: 43047533680000
9. FIELD and POOL or WILDCAT: NATURAL BUTTES	COUNTY: UINTAH
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 12/10/2013	<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 type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input checked="" type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

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

Approved by the Utah Division of Oil, Gas and Mining

Date: October 17, 2013

By:

NAME (PLEASE PRINT) Kay E. Kelly	PHONE NUMBER 720 929 6582	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 10/16/2013	



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047533680000

API: 43047533680000

Well Name: NBU 921-20P4BS

Location: 0834 FSL 0612 FEL QTR SESE SEC 20 TWNP 090S RNG 210E MER S

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

Date Original Permit Issued: 12/10/2012

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

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

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

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

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

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

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

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

Signature: Kay E. Kelly

Date: 10/16/2013

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU0575
SUNDRY NOTICES AND REPORTS ON WELLS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: THE UT
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 921-20P4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		9. API NUMBER: 43047533680000
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: 0834 FSL 0612 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 20 Township: 09.0S Range: 21.0E Meridian: S		COUNTY: UINTAH STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 10/14/2013 <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> OTHER OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
Spud well 10/14/2013 @ 10:00. Drill 24" conductor hole to 40', run 14" X .250 wall conductor pipe, cement with 81 sacks ready mix. Anticipated surface spud date and surface casing cement 11/12/2013.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY October 17, 2013		
NAME (PLEASE PRINT) Doreen Green	PHONE NUMBER 435 781-9758	TITLE Regulatory Analyst II
SIGNATURE N/A		DATE 10/16/2013

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5.LEASE DESIGNATION AND SERIAL NUMBER: UTU0575
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE 7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-20P4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047533680000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6111 9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0834 FSL 0612 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 20 Township: 09.0S Range: 21.0E Meridian: S	COUNTY: Uintah STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 4/1/2014	<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 2,935 ft. in Quarter 1 of 2014.

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

NAME (PLEASE PRINT) Teena Paulo	PHONE NUMBER 720 929-6236	TITLE Staff Regulatory Specialist
SIGNATURE N/A	DATE 4/1/2014	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5.LEASE DESIGNATION AND SERIAL NUMBER: UTU0575
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE 7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-20P4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047533680000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6111 9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0834 FSL 0612 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 20 Township: 09.0S Range: 21.0E Meridian: S	COUNTY: Uintah STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 6/24/2014	<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 10,070 ft. in Quarter 2 of 2014.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 June 25, 2014

NAME (PLEASE PRINT) Ila Beale	PHONE NUMBER 720 929-6408	TITLE Staff Reg. Specialist
SIGNATURE N/A	DATE 6/24/2014	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: UTU0575
1. TYPE OF WELL Gas Well	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
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 921-20P4BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0834 FSL 0612 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 20 Township: 09.0S Range: 21.0E Meridian: S	9. API NUMBER: 43047533680000
PHONE NUMBER: 720 929-6111	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: 9/12/2014	<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.

Started completing the well. Well TD at 10,070 ft. Thank you.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 September 15, 2014**

NAME (PLEASE PRINT) Kay E. Kelly	PHONE NUMBER 720 929 6582	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 9/12/2014	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU0575
SUNDRY NOTICES AND REPORTS ON WELLS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
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 921-20P4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		9. API NUMBER: 43047533680000
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: 0834 FSL 0612 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 20 Township: 09.0S Range: 21.0E Meridian: S		COUNTY: UINTAH
		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 1/12/2015 <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"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input checked="" type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> OTHER <input type="checkbox"/> APD EXTENSION	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. The NBU 921-20P4BS was placed on production 01/12/2015 after a new well completion. Producing from the MESAVERDE.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 13, 2015		
NAME (PLEASE PRINT) Doreen Green	PHONE NUMBER 435 781-9758	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 1/13/2015	

Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
UTU0575

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

2. Name of Operator: KERR-MCGEE OIL AND GAS ONSHORE
 Contact: DOREEN GREEN
 Email: Doreen.Green@anadarko.com

3. Address: P.O. BOX 173779
 DENVER, CO 82017
 3a. Phone No. (include area code)
 Ph: 435-781-9758

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
 At surface SESE 834FSL 612FEL 40.016556 N Lat, 109.568341 W Lon
 At top prod interval reported below SESE 581FSL 504FEL
 At total depth SESE 573FSL 492FEL 40.015840 N Lat, 109.567912 W Lon

6. If Indian, Allottee or Tribe Name
 7. Unit or CA Agreement Name and No.
 UTU63047A

8. Lease Name and Well No.
 NBU 921-20P4BS

9. API Well No.
 43-047-53368

10. Field and Pool, or Exploratory
 NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey
 or Area Sec 20 T9S R21E Mer SLB

12. County or Parish
 Uintah

13. State
 UT

14. Date Spudded
 10/14/2013

15. Date T.D. Reached
 05/30/2014

16. Date Completed
 D & A Ready to Prod.
 01/12/2015

17. Elevations (DF, KB, RT, GL)*
 4898 KB

18. Total Depth: MD 10070 TVD 10058
 19. Plug Back T.D.: MD 10009 TVD 9998
 20. Depth Bridge Plug Set: MD TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
 RADIAL CEMENT BOND GAMMA RAY CCL TEMP

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

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

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
24.000	14.000 STL	36.7	0	40		81			
11.000	8.625 J55	28.0	24	2927		725		0	
7.875	4.500 I-80	11.6	24	5028		2093		0	
7.875	4.500 P 110	11.6	5028	10056					

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	9447							

25. Producing Intervals

26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) MESA VERDE	7846	10700	7855 TO 9928	0.410	192	OPEN
B)						
C)						
D)						

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

Depth Interval	Amount and Type of Material
7855 TO 9928	PUMP 8,727 BBLS SLICKWATER, 48 BBLS HCL ACID (12.5%-18%), 168,623 LBS 30/50 MESH SAND

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
01/12/2015	01/28/2015	24	→	12.0	726.0	492.0			
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
20/64	SI 205	778.0	→	12	726	492			

28a. Production - Interval B

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

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

ELECTRONIC SUBMISSION #289947 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

28b. Production - Interval C

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

28c. Production - Interval D

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

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

30. Summary of Porous Zones (Include Aquifers):

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

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
				GREEN RIVER	1676
				BIRD'S NEST	1969
				MAHOGANY	2419
				WASATCH	4990
				MESA VERDE	7846

32. Additional remarks (include plugging procedure):

33. Circle enclosed attachments:

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

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

**Electronic Submission #289947 Verified by the BLM Well Information System.
For KERR-MCGEE OIL AND GAS ONSHORE, sent to the Vernal**

Name (please print) DOREEN GREEN Title REGULATORY ANALYST II

Signature _____ (Electronic Submission) Date 01/29/2015

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

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

RECEIVED: Jan. 29, 2015

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]

Spud date: 2/18/2014

Project: UTAH-UINTAH

Site: NBU 921-20P PAD

Rig name no.: PROPETRO 12/12, SST 8/8

Event: DRILLING

Start date: 2/18/2014

End date: 5/31/2014

Active datum: RKB @4,898.00usft (above Mean Sea Level)

UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
2/18/2014	0:00 - 1:00	1.00	MIRU	01	C	P	64	PRE JOB SAFETY MEETING. SKID RIG 20'. RIG UP SET MATTING BOARD, SET RIG IN PLACE, CATWALK, PIPE RACKS, PLACE BOTTOM HOLE ASSEMBLY.
	1:00 - 2:00	1.00	MIRU	01	C	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. FINISH PICKING UP BHA.
	2:00 - 3:30	1.50	DRLSUR	02	B	P	64	PICK UP NOV 1.83 DEGREE BENT MOTOR (RUN # 2) .17 REV/GAL PICK UP 12 1/4" DRILL BIT. SPUD @ 02/18/2014 02:00. DRILL 12.25" HOLE 44' TO 210' (166' @ 111 FPH). 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 25/25/25 K. DRAG 0 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 1 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS.
	3:30 - 5:30	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 BAKER HUGHES 11" BIT. PICK UP 8" DIRECTIONAL ASSEMBLY SCIBE MOTOR. INSTALL EM TOOL, TRIP IN HOLE.
	5:30 - 6:00	0.50	DRLSUR	23		P	230	CONDUCT PRE TOUR SAFETY MEETING. TOPIC: MAKING UP BHA, MAKING CONNECTIONS.

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]

Spud date: 2/18/2014

Project: UTAH-UINTAH

Site: NBU 921-20P PAD

Rig name no.: PROPETRO 12/12, SST 8/8

Event: DRILLING

Start date: 2/18/2014

End date: 5/31/2014

Active datum: RKB @4,898.00usft (above Mean Sea Level)

UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:00 - 17:30	11.50	DRLSUR	02	B	P	230	DRILL 11" SURFACE HOLE FROM 210' TO 1810' (1600' @ 139 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1,200/1,000. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 78/60/68 K. DRAG 10 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 3.2' HIGH & 1.2' LEFT OF THE LINE WITH 67' OF SLIDE @ 8.48%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	17:30 - 18:00	0.50	DRLSUR	23		P	1830	CONDUCT PRE TOUR SAFETY MEETING. TOPIC: MAKING CONNECTIONS
	18:00 - 0:00	6.00	DRLSUR	02	B	P	1830	DRILL 11" SURFACE HOLE FROM 1810' TO 2440' (630' @ 105 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1,380/1,180. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 80/69/73 K. DRAG 7 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 9.5' HIGH & 2.5' LEFT OF THE LINE WITH 0' OF SLIDE @ 0%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
2/19/2014	0:00 - 5:30	5.50	DRLSUR	02	B	P	2460	DRILL 11" SURFACE HOLE FROM 2440' TO 2935' (495' @ 90 FPH). TD WELL AT 2935'. WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1,550/1,350. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 89/75/80 K. DRAG 9 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 7.0' HIGH & 1.5' LEFT OF THE LINE WITH 10' OF SLIDE @ 2%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	5:30 - 6:00	0.50	DRLSUR	23		P	2955	CONDUCT PRE TOUR SAFETY MEETING. TOPIC: TRIPPING OUT.

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]

Spud date: 2/18/2014

Project: UTAH-UINTAH

Site: NBU 921-20P PAD

Rig name no.: PROPETRO 12/12, SST 8/8

Event: DRILLING

Start date: 2/18/2014

End date: 5/31/2014

Active datum: RKB @4,898.00usft (above Mean Sea Level)

UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:00 - 8:00	2.00	DRLSUR	05	C	P	2955	CIRCULATE AND CONDITION HOLE, VOLUME IS CLEAN COMING OVER SHAKERS, 4-400 BBL UPRIGHT'S FULL AND 2-400 BBL UPRIGHTS EMPTY, 1,000 BBLs OF FRESH WATER ON LOCATION FOR CEMENT JOB.
	8:00 - 12:00	4.00	DRLSUR	06	A	P	2955	PRE JOB SAFETY MEETING, TRIP OUT OF HOLE, LAY DOWN DRILL STRING, BOTTOM HOLE ASSEMBLY, LAY DOWN DIRECTIONAL TOOLS, MOTOR, AND, BIT. CLEAR TOOL AREA. SPOT SURFACE CASING FOR 8 5/8" CASING RUN.
	12:00 - 15:00	3.00	CSGSUR	12	C	P	2955	RUN 66 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 CASING TO BOTTOM WITH NO PROBLEMS. SET FLOAT SHOE @ 2,906' KB. SET TOP OF BAFFLE PLATE @ 2,860'.

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]		Spud date: 2/18/2014	
Project: UTAH-UINTAH		Site: NBU 921-20P PAD	Rig name no.: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start date: 2/18/2014	End date: 5/31/2014
Active datum: RKB @4,898.00usft (above Mean Sea Level)		UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	15:00 - 17:00	2.00	CSGSUR	12	E	P	2955	<p>PRE JOB SAFETY MEETING WITH PRO PETRO CEMENTERS.</p> <p>RAN 200' OF 1". PIPE DOWN BACK-SIDE OF CASING.</p> <p>PRESSURE TEST LINES TO 2000 PSI.</p> <p>PUMP 170 BBLS OF FRESH WATER CLEARING SHOE.</p> <p>MIX AND PUMP 20 BBLS OF GEL WATER FLUSH AHEAD OF CEMENT.</p> <p>MIX AND PUMP 300 SX OF PREMIUM LEAD CEMENT WITH 10 LB/SX OF GILSONITE, 2 LB/SX OF GR-3, 3% SALT BWOC, 16% GEL, & 0.25 LB/SX FLOCELE. 173 BBLS OF SLURRY MIXED @ 12.0 PPG WITH YIELD OF 2.86 CF/SX.</p> <p>MIX AND PUMP 175 SX OF PREMIUM TAIL CEMENT WITH 2% CACL2 & 0.25 LB/SX FLOCELE. 35.8 BBLS OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX.</p> <p>DROP PLUG ON FLY.</p> <p>DISPLACE WITH 178.5 BBLS OF FRESH WATER. GOOD RETURNS THROUGH JOB. FINAL LIFT OF 900 PSI AT 3 BBL/MINUTE. RETURNED 25 BBL CEMENT TO SURFACE.</p> <p>BUMPED PLUG AT 1415. HELD FOR 5 MINUTES. TESTED FLOAT AND FLOAT HELD.</p> <p>RELEASE RIG 02/19/2014 AT 1700.</p> <p>TOP JOB # 1: PUMP CEMENT DOWN ONE INCH PIPE WITH 150 SX PREMIUM CEMENT WITH 4% CACL2, & .25 LB/SX FLOCELE, 30.7 BBLS OF SLURRY MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. CEMENT RETURNS TO SURFACE. CEMENT DROPPED 50'.</p> <p>TOP JOB # 2: PUMP CEMENT DOWN ONE INCH PIPE WITH 100 SX 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. CEMENT STAYED AT SURFACE. RIG DOWN PRO PETRO CEMENTERS.</p> <p>CEMENT JOB FINISHED @ 02/10/2014 1900.</p>
5/25/2014	3:00 - 4:00	1.00	MIRU3	01	C	P	2955	SKID RIG
	4:00 - 5:00	1.00	MIRU3	01	B	P	2955	RIG UP ROTARY TOOLS
	5:00 - 6:30	1.50	PRPSPD	14	A	P	2955	NIPPLE UP BOPS
	6:30 - 7:00	0.50	PRPSPD	15	A	P	2955	RIG UP TESTER HELD SAFETY MEETING
	7:00 - 10:30	3.50	PRPSPD	15	A	P	2955	TEST BOPS LOW 250 5 MINS. ,HIGH 5,000 10 MINS IBOP, PIPE RAMS, BLINDS, HCR, WING VALVES, CHOKEMANFOLD, CHECK VALVE FLOOR VALVES HY-DRILL 250 LOW 2500 PSI HIGH, 8 5/8 CASING 1500 PSI FOR 30 MINS (HAD TO TIHGT UP
	10:30 - 11:00	0.50	PRPSPD	15	A	P	2955	INSTALL WEAR BUSHING

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]		Spud date: 2/18/2014	
Project: UTAH-UINTAH		Site: NBU 921-20P PAD	Rig name no.: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start date: 2/18/2014	End date: 5/31/2014
Active datum: RKB @4,898.00usft (above Mean Sea Level)		UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	11:00 - 14:30	3.50	PRSPD	06	A	P	2955	PICK UP MUD MOTOR, BIT, MWD TOOLS SCRIBE IN HOLE SURFACE TEST MWD TOOLS TAGED TOP CMT @ 2860
	14:30 - 16:00	1.50	DRLPRC	02	F	P	2955	DRILL SHOE TRACK , BAFFLE @ 2803, SHOE @ 2906
	16:00 - 0:00	8.00	DRLPRC	02	D	P	2955	DRILL F/ 2955 T/ 3957' (1002' @ 125.25 FT/ HR) WEIGHT ON BIT 14 - 19 K. ROTARY RPM 55 MUD MOTOR RPM 109 STROKES PER MINUTE 65/65 GALLONS PER MINUTE 544 SPP ON/OFF 1850 / 1450 DIFFERENTIAL 300 TORQUE HIGH/LOW 8000 / 4000 OFF BOTTOM TORQUE 4000 STRING WEIGHT UP/DOWN/ROT 115 / 90 / 110 BOS RUNNING CONVENTIONAL WT 9.2 VIS 30 PUMP LCM SWEEPS TO HELP WITH LOSSES. BARRELS LOSSES 0 @ 0 BBL/HR NO FLARE BIT POSITION : Total Footage Drilled From 2955' To 3957' 1002' Percent BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Rotating 970.00 of Footage Rotated 97% Total Footage Drilled Sliding 32.00 Percent of Footage Sliding 3% Hours Total Time Rotate Drilling 6.50 Percent of Time Rotated 91% Total Time Slide Drilling 0.67 Percent of Time Sliding 9% Connection / Ream / Rig Time / Circulating / Tripping 0.83 Percent Non-Drilling Time 10% Last Survey Survey 3817 Inc 2.2 Azimuth 183.9 TVD 3805.82 Projection to Bit from Last Survey MD: 3957' South 0.54' West 9.46' / REF PBHL

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]		Spud date: 2/18/2014	
Project: UTAH-UINTAH		Site: NBU 921-20P PAD	Rig name no.: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start date: 2/18/2014	End date: 5/31/2014
Active datum: RKB @4,898.00usft (above Mean Sea Level)		UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
5/26/2014	0:00 - 6:00	6.00	DRLPRV	02	B	P	3957	DRILL F/ 3957 T/ 4718' (761' @ 126.8 FT/ HR) WEIGHT ON BIT 14 - 19 K. ROTARY RPM 55 MUD MOTOR RPM 109 STROKES PER MINUTE 65/65 GALLONS PER MINUTE 544 SPP ON/OFF 1850 / 1450 DIFFERENTIAL 300 TORQUE HIGH/LOW 8000 / 4000 OFF BOTTOM TORQUE 4000 STRING WEIGHT UP/DOWN/ROT 115 / 90 / 110 BOS RUNNING CONVENTIONAL WT 9.2 VIS 30 PUMP LCM SWEEPS TO HELP WITH LOSSES. BARRELS LOSSES 0 @ 0 BBL/HR NO FLARE BIT POSITION : Total Footage Drilled From 3957' To 4718' 761' Total Footage Drilled Rotating 726.00 Percent of Footage Rotated 95% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 35.00 Percent of Footage Sliding 5% Hours Total Time Rotate Drilling 4.50 Percent of Time Rotated 84% Total Time Slide Drilling 0.83 Percent of Time Sliding 16% Connection / Ream / Rig Time / Circulating / Tripping 0.67 Percent Non-Drilling Time 11% Last Survey Survey 4578 Inc .4 Azimuth 220.7 TVD 4566.66 MD: 4718' South 1.06' West 17.77' / REF PBHL

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]		Spud date: 2/18/2014	
Project: UTAH-UINTAH		Site: NBU 921-20P PAD	Rig name no.: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start date: 2/18/2014	End date: 5/31/2014
Active datum: RKB @4,898.00usft (above Mean Sea Level)		UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:00 - 15:00	9.00	DRLPRV	02	B	P	4718	DRILL F/ 4718 T/ 5575' (857' @ 95.22 FT/ HR) WEIGHT ON BIT 14 - 19 K. ROTARY RPM 55 MUD MOTOR RPM 109 STROKES PER MINUTE 65/65 GALLONS PER MINUTE 544 SPP ON/OFF 1850 / 1450 DIFFERENTIAL 300 TORQUE HIGH/LOW 8000 / 4000 OFF BOTTOM TORQUE 4000 STRING WEIGHT UP/DOWN/ROT 115 / 90 / 110 BOS RUNNING CONVENTIONAL WT 9.2 VIS 30 PUMP LCM SWEEPS TO HELP WITH LOSSES. BARRELS LOSSES 0 @ 0 BBL/HR NO FLARE BIT POSITION : Total Footage Drilled From 4718' To 5574' 856' Total Footage Drilled Rotating 826.00 Percent of Footage Rotated 96% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 30.00 Percent of Footage Sliding 4% Hours Total Time Rotate Drilling 7.33 Percent of Time Rotated 90% Total Time Slide Drilling 0.84 Percent of Time Sliding 10% Connection / Ream / Rig Time / Circulating / Tripping 1.33 Percent Non-Drilling Time 14% Last Survey Survey 5574 Inc .4 Azimuth 115.5 TVD 5517.61 Projection to Bit from Last Survey MD: 5574' North 3.7' West 12.98' / REF PBHL RIG SER.
	15:00 - 15:30	0.50	DRLPRV	07	A	P	5575	

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-20P4BS [GREEN]		Spud date: 2/18/2014	
Project: UTAH-UINTAH		Site: NBU 921-20P PAD	Rig name no.: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start date: 2/18/2014	End date: 5/31/2014
Active datum: RKB @4,898.00usft (above Mean Sea Level)		UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	15:30 - 0:00	8.50	DRLPRV	02	B	P	5575	DRILL F/ 5575 T/ 6286' (711 ' @ 83.64 FT/ HR) WEIGHT ON BIT 14 - 19 K. ROTARY RPM 55 MUD MOTOR RPM 109 STROKES PER MINUTE 65/65 GALLONS PER MINUTE 544 SPP ON/OFF 2163 / 1723 DIFFERENTIAL 300 TORQUE HIGH/LOW 8000 / 4000 OFF BOTTOM TORQUE 4000 STRING WEIGHT UP/DOWN/ROT 135 / 115 / 129 BOS RUNNING CONVENTIONAL WT 9.2 VIS 30 PUMP LCM SWEEPS TO HELP WITH LOSSES. BARRELS LOSSES 0 @ 0 BBL/HR NO FLARE BIT POSITION : Total Footage Drilled From 5574' To 6280' 706' Total Footage Drilled Rotating 688.00 Percent of Footage Rotated 97% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 18.00 Percent of Footage Sliding 3% Hours Total Time Rotate Drilling 7.25 Percent of Time Rotated 93% Total Time Slide Drilling 0.58 Percent of Time Sliding 7% Connection / Ream / Rig Time / Circulating / Tripping 0.67 Percent Non-Drilling Time 8% Last Survey Survey 6195 Inc 1.1 Azimuth 271.1 TVD 6183.59 Projection to Bit from Last Survey MD: 6280' North 1.62' West 12.59' / REF PBHL

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]		Spud date: 2/18/2014	
Project: UTAH-UINTAH		Site: NBU 921-20P PAD	Rig name no.: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start date: 2/18/2014	End date: 5/31/2014
Active datum: RKB @4,898.00usft (above Mean Sea Level)		UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
5/27/2014	0:00 - 6:00	6.00	DRLPRV	02	B	P	6286	DRILL F/6286 T/ 6782' (496 ' @ FT/ HR) WEIGHT ON BIT 14 - 19 K. ROTARY RPM 55 MUD MOTOR RPM 109 STROKES PER MINUTE 65/65 GALLONS PER MINUTE 544 SPP ON/OFF 2163 / 1723 DIFFERENTIAL 300 TORQUE HIGH/LOW 8000 / 4000 OFF BOTTOM TORQUE 4000 STRING WEIGHT UP/DOWN/ROT 135 / 115 / 129 BOS DEWATERING WT 9.3 VIS 30 PUMP LCM SWEEPS TO HELP WITH LOSSES. BARRELS LOSSES 0 @ 0 BBL/HR NO FLARE BIT POSITION : Total Footage Drilled From 6280' To 6782' 502' Total Footage Drilled Rotating 487.00 Percent of Footage Rotated 97% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 15.00 Percent of Footage Sliding 3% Hours Total Time Rotate Drilling 5.08 Percent of Time Rotated 91% Total Time Slide Drilling 0.50 Percent of Time Sliding 9% Connection / Ream / Rig Time / Circulating / Tripping 0.42 Percent Non-Drilling Time 7% Last Survey Survey 6671 Inc 0.7 Azimuth 275.0 TVD 6659.50 Projection to Bit from Last Survey MD: 6782' North 0.08' West 19.78' / REF PBHL

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-20P4BS [GREEN]		Spud date: 2/18/2014	
Project: UTAH-UINTAH		Site: NBU 921-20P PAD	Rig name no.: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start date: 2/18/2014	End date: 5/31/2014
Active datum: RKB @4,898.00usft (above Mean Sea Level)		UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:00 - 15:30	9.50	DRLPRV	02	B	P	6782	DRILL F/6782 T/ 7478' (696' @ 73.26 FT/ HR) WEIGHT ON BIT 18- 20 K. ROTARY RPM 50 MUD MOTOR RPM 109 STROKES PER MINUTE 65/65 GALLONS PER MINUTE 544 SPP ON/OFF 2135 / 1835 DIFFERENTIAL 300 TORQUE HIGH/LOW 10,000 / 8,000 OFF BOTTOM TORQUE 8,000 STRING WEIGHT UP/DOWN/ROT 160 / 135 / 1151 BOS DEWATERING AS NEED WT 9.3 VIS 30 PUMP LCM SWEEPS TO HELP WITH LOSSES. BARRELS LOSSES 0 @ 0 BBL/HR NO FLARE BIT POSITION : Total Footage Drilled From 6782' To 7478' 696' Total Footage Drilled Rotating 681.00 Percent of Footage Rotated 98% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 15.00 Percent of Footage Sliding 2% Hours Total Time Rotate Drilling 8.09 Percent of Time Rotated 91% Total Time Slide Drilling 0.83 Percent of Time Sliding 9% Connection / Ream / Rig Time / Circulating / Tripping 1.08 Percent Non-Drilling Time 11% Last Survey Survey 7433 Inc 0.4 Azimuth 109.3 TVD 7421.48 Projection to Bit from Last Survey MD: 7478' North 2.42' West 16.9' / REF PBHL RIG SER.
	15:30 - 16:00	0.50	DRLPRV	07	A	P	7478	

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-20P4BS [GREEN]		Spud date: 2/18/2014	
Project: UTAH-UINTAH		Site: NBU 921-20P PAD	Rig name no.: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start date: 2/18/2014	End date: 5/31/2014
Active datum: RKB @4,898.00usft (above Mean Sea Level)		UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0	

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	7478	DRILL F/ 7478 T/ 7975' (497' @ 62.13 FT/ HR) WEIGHT ON BIT 18- 22 K. ROTARY RPM 50 MUD MOTOR RPM 109 STROKES PER MINUTE 65/65 GALLONS PER MINUTE 544 SPP ON/OFF 2190 / 1970 DIFFERENTIAL 300 TORQUE HIGH/LOW 9,000 / 7,000 OFF BOTTOM TORQUE 7,000 STRING WEIGHT UP/DOWN/ROT 180 / 145 / 159 BOS DEWATERING AS NEED WT 9.3 VIS 30 PUMP LCM SWEEPS TO HELP WITH LOSSES. BARRELS LOSSES 0 @ 0 BBL/HR NO FLARE BIT POSITION : Total Footage Drilled From 7478' To 7975' 497' Total Footage Drilled Rotating 485.00 Percent of Footage Rotated 98% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 12.00 Percent of Footage Sliding 2% Hours Total Time Rotate Drilling 6.75 Percent of Time Rotated 90% Total Time Slide Drilling 0.75 Percent of Time Sliding 10% Connection / Ream / Rig Time / Circulating / Tripping 0.50 Percent Non-Drilling Time 6% Last Survey Survey 7909 Inc 0.7 Azimuth 243.9 TVD 7897.07 MD: 7975' North 0.86' West 15.85' / REF PBHL

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]		Spud date: 2/18/2014	
Project: UTAH-UINTAH		Site: NBU 921-20P PAD	Rig name no.: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start date: 2/18/2014	End date: 5/31/2014
Active datum: RKB @4,898.00usft (above Mean Sea Level)		UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
5/28/2014	0:00 - 6:00	6.00	DRLPRV	02	B	P	7975	DRILL F/ 7975 T/ 8273 (298 ' @ 49.66 FT/ HR) WEIGHT ON BIT 18- 22 K. ROTARY RPM 50 MUD MOTOR RPM 109 STROKES PER MINUTE 65/65 GALLONS PER MINUTE 544 SPP ON/OFF 2190 / 1970 DIFFERENTIAL 300 TORQUE HIGH/LOW 9,000 / 7,000 OFF BOTTOM TORQUE 7,000 STRING WEIGHT UP/DOWN/ROT 180 / 145 / 159 BOS DEWATERING AS NEED WT 9.4 VIS 30 PUMP LCM SWEEPS TO HELP WITH LOSSES. BARRELS LOSSES 0 @ 0 BBL/HR NO FLARE BIT POSITION : Total Footage Drilled From 7975' To 8273' 298' Total Footage Drilled Rotating 270.00 Percent of Footage Rotated 91% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 28.00 Percent of Footage Sliding 9% Hours Total Time Rotate Drilling 4.33 Percent of Time Rotated 75% Total Time Slide Drilling 1.42 Percent of Time Sliding 25% Connection / Ream / Rig Time / Circulating / Tripping 0.25 Percent Non-Drilling Time 4% Last Survey Survey 7909 Inc 0.7 Azimuth 243.9 TVD 7897.07 Projection to Bit from Last Survey MD: 8273' South 0.86' West 15.39' / REF PBHL

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]		Spud date: 2/18/2014	
Project: UTAH-UINTAH		Site: NBU 921-20P PAD	Rig name no.: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start date: 2/18/2014	End date: 5/31/2014
Active datum: RKB @4,898.00usft (above Mean Sea Level)		UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:00 - 15:00	9.00	DRLPRV	02	B	P	8273	DRILL F/ 8273 T/ 8716' (443' @ 49.22 FT/ HR) WEIGHT ON BIT 18- 22 K. ROTARY RPM 50 MUD MOTOR RPM 109 STROKES PER MINUTE 65/65 GALLONS PER MINUTE 544 SPP ON/OFF 2190 / 1970 DIFFERENTIAL 300 TORQUE HIGH/LOW 9,000 / 7,000 OFF BOTTOM TORQUE 7,000 STRING WEIGHT UP/DOWN/ROT 180 / 145 / 159 BOS DEWATERING AS NEED WT 9.4 VIS 30 PUMP LCM SWEEPS TO HELP WITH LOSSES. BARRELS LOSSES 0 @ 0 BBL/HR NO FLARE BIT POSITION : Total Footage Drilled From 8273' To 8716' 443' Total Footage Drilled Rotating 414.00 Percent of Footage Rotated 93% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 29.00 Percent of Footage Sliding 7% Hours Total Time Rotate Drilling 6.84 Percent of Time Rotated 79% Total Time Slide Drilling 1.83 Percent of Time Sliding 21% Connection / Ream / Rig Time / Circulating / Tripping 0.33 Percent Non-Drilling Time 4% Last Survey Survey 8671 Inc 0.7 Azimuth 73.9 TVD 8659.37 Projection to Bit from Last Survey MD: 8716' South 4.64' West 9.27' / REF PBHL RIG SER.
	15:00 - 15:30	0.50	DRLPRV	07	A	P	8716	

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]

Spud date: 2/18/2014

Project: UTAH-UINTAH

Site: NBU 921-20P PAD

Rig name no.: PROPETRO 12/12, SST 8/8

Event: DRILLING

Start date: 2/18/2014

End date: 5/31/2014

Active datum: RKB @4,898.00usft (above Mean Sea Level)

UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	15:30 - 0:00	8.50	DRLPRV	02	B	P	8716	DRILL F/ 8716 T/ 9112' (396' @ 46.58 FT/ HR) WEIGHT ON BIT 18- 22 K. ROTARY RPM 50 MUD MOTOR RPM 109 STROKES PER MINUTE 65/65 GALLONS PER MINUTE 544 SPP ON/OFF 2600 / 2300 DIFFERENTIAL 300 TORQUE HIGH/LOW 14,000 / 9,000 OFF BOTTOM TORQUE 9,000 STRING WEIGHT UP/DOWN/ROT 190 / 135 / 170 BOS DEWATERING AS NEED WT 9.5 VIS 31 PUMP LCM SWEEPS TO HELP WITH LOSSES. BARRELS LOSSES 0 @ 0 BBL/HR NO FLARE BIT POSITION : Total Footage Drilled From 8716' To 9110' 394' Total Footage Drilled Rotating 383.00 Percent of Footage Rotated 97% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 11.00 Percent of Footage Sliding 3% Hours Total Time Rotate Drilling 7.08 Percent of Time Rotated 88% Total Time Slide Drilling 1.00 Percent of Time Sliding 12% Connection / Ream / Rig Time / Circulating / Tripping 0.92 Percent Non-Drilling Time 10% Last Survey Survey 9052 Inc 0.3 Azimuth 299.1 TVD 9040.35 Projection to Bit from Last Survey MD: 9110' South 3.41' West 6.03' / REF PBHL

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 921-20P4BS [GREEN]		Spud date: 2/18/2014	
Project: UTAH-UINTAH		Site: NBU 921-20P PAD	Rig name no.: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start date: 2/18/2014	End date: 5/31/2014
Active datum: RKB @4,898.00usft (above Mean Sea Level)		UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
5/29/2014	0:00 - 6:00	6.00	DRLPRV	02	B	P	9112	DRILL F/ 9112 T/ 9405' (293' @ 48.83 FT/ HR) WEIGHT ON BIT 18- 22 K. ROTARY RPM 50 MUD MOTOR RPM 109 STROKES PER MINUTE 65/65 GALLONS PER MINUTE 544 SPP ON/OFF 2600 / 2300 DIFFERENTIAL 300 TORQUE HIGH/LOW 14,000 / 9,000 OFF BOTTOM TORQUE 9,000 STRING WEIGHT UP/DOWN/ROT 190 / 135 / 170 BOS DEWATERING AS NEED WT 9.5 VIS 31 PUMP LCM SWEEPS TO HELP WITH LOSSES. BARRELS LOSSES 0 @ 0 BBL/HR NO FLARE BIT POSITION : Total Footage Drilled From 9110' To 9405' 295' Total Footage Drilled Rotating 295.00 Percent of Footage Rotated 100% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 0.00 Percent of Footage Sliding 0% Hours Total Time Rotate Drilling 5.75 Percent of Time Rotated 100% Total Time Slide Drilling 0.00 Percent of Time Sliding 0% Connection / Ream / Rig Time / Circulating / Tripping 0.25 Percent Non-Drilling Time 4% Last Survey Survey 9337 Inc 0.4 Azimuth 47.1 TVD 9325.34 Projection to Bit from Last Survey MD: 9405' South 1.88' West 6.20' / REF PBHL

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]		Spud date: 2/18/2014	
Project: UTAH-UINTAH		Site: NBU 921-20P PAD	Rig name no.: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start date: 2/18/2014	End date: 5/31/2014
Active datum: RKB @4,898.00usft (above Mean Sea Level)		UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:00 - 10:30	4.50	DRLPRV	02	B	P	9405	DRILL F/ 9405 T/ 9594' (189' @ 42.0 FT/ HR) WEIGHT ON BIT 18- 22 K. ROTARY RPM 50 MUD MOTOR RPM 109 STROKES PER MINUTE 65/65 GALLONS PER MINUTE 544 SPP ON/OFF 2600 / 2300 DIFFERENTIAL 300 TORQUE HIGH/LOW 14,000 / 9,000 OFF BOTTOM TORQUE 9,000 STRING WEIGHT UP/DOWN/ROT 205 / 150 / 170 BOS DEWATERING AS NEED WT 9.6 VIS 31 PUMP LCM SWEEPS TO HELP WITH LOSSES. BARRELS LOSSES 0 @ 0 BBL/HR NO FLARE BIT POSITION : Total Footage Drilled From 9405' To 9594' 189' Total Footage Drilled Rotating 189.00 Percent of Footage Rotated 100% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 0.00 Percent of Footage Sliding 0% Hours Total Time Rotate Drilling 4.33 Percent of Time Rotated 100% Total Time Slide Drilling 0.00 Percent of Time Sliding 0% Connection / Ream / Rig Time / Circulating / Tripping 0.17 Percent Non-Drilling Time 4% Last Survey Survey 9528 Inc 0.2 Azimuth 54.5 TVD 9516.34 Projection to Bit from Last Survey MD: 9594' South 1.37' West 5.69' / REF PBHL
	10:30 - 11:30	1.00	DRLPRV	05	G	P	9594	DISPLACED HOLE WITH 12.0 MUD

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]		Spud date: 2/18/2014	
Project: UTAH-UINTAH		Site: NBU 921-20P PAD	Rig name no.: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start date: 2/18/2014	End date: 5/31/2014
Active datum: RKB @4,898.00usft (above Mean Sea Level)		UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	11:30 - 13:30	2.00	DRLPRV	02	B	P	9594	DRILL F/ 9594 T/ 9638' (44 ' @ 22.0 FT/ HR) WEIGHT ON BIT 18- 22 K. ROTARY RPM 50 MUD MOTOR RPM 109 STROKES PER MINUTE 65/65 GALLONS PER MINUTE 544 SPP ON/OFF 2600 / 2300 DIFFERENTIAL 300 TORQUE HIGH/LOW 14,000 / 9,000 OFF BOTTOM TORQUE 9,000 STRING WEIGHT UP/DOWN/ROT 205 / 150 / 170 BOS OFF LINE WT 11.8 VIS 31 PUMP LCM SWEEPS TO HELP WITH LOSSES. BARRELS LOSSES 0 @ 0 BBL/HR NO FLARE BIT POSITION : Total Footage Drilled From 9594' To 9638' 44' Total Footage Drilled Rotating 44.00 Percent of Footage Rotated 100% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 0.00 Percent of Footage Sliding 0% Hours Total Time Rotate Drilling 1.50 Percent of Time Rotated 100% Total Time Slide Drilling 0.00 Percent of Time Sliding 0% Connection / Ream / Rig Time / Circulating / Tripping 1.50 Percent Non-Drilling Time 50% Last Survey Survey 9528 Inc 0.2 Azimuth 54.5 TVD 9516.34 Projection to Bit from Last Survey MD: 9638' South 1.37' West 5.69' / REF PBHL
	13:30 - 18:30	5.00	DRLPRV	06	A	P	9638	TRIP OUT HOLE FOR BIT, MUD MOTOR
	18:30 - 21:00	2.50	DRLPRV	06	A	P	9638	DRAIN MUD MOTOR A LITTLE, LAY DOWN MOTOR, BIT , PICK UP SAME PICK UP MWD TOOLS, LAY DOWN TOP MONEL DC FOR HARD BAND GONE PICK UP SAME, PROGRAME TOOLS, SCRIBE IN HOLE ((CLOSED BLIND RAMS ,REOPENED BLINDS, SHUT PIPE RAMS, REOPEN PIPE RAMS))
	21:00 - 0:00	3.00	DRLPRV	06	A	P	9638	TRIP IN HOLE WITH BIT # 4 SS # JH6596 SMITH MDSI616UPX FILL PIPE @ SHOE, & @ 8,000 ' TRIP IN HOLE
5/30/2014	0:00 - 1:30	1.50	DRLPRV	06	A	P	9638	FINISH TRIP IN HOLE, WASHED 100' TO BOTTOM SAFTY

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]

Spud date: 2/18/2014

Project: UTAH-UINTAH

Site: NBU 921-20P PAD

Rig name no.: PROPETRO 12/12, SST 8/8

Event: DRILLING

Start date: 2/18/2014

End date: 5/31/2014

Active datum: RKB @4,898.00usft (above Mean Sea Level)

UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	1:30 - 6:00	4.50	DRLPRV	02	B	P	9638	DRILL F/ 9638 T/ 9865' (227' @ 50.44 FT/ HR) WEIGHT ON BIT 18- 22 K. ROTARY RPM 50 MUD MOTOR RPM 109 STROKES PER MINUTE 65/65 GALLONS PER MINUTE 544 SPP ON/OFF 2600 / 2300 DIFFERENTIAL 300 TORQUE HIGH/LOW 14,000 / 9,000 OFF BOTTOM TORQUE 9,000 STRING WEIGHT UP/DOWN/ROT 205 / 150 / 170 BOS OFF LINE WT 11.8 VIS 31 PUMP LCM SWEEPS TO HELP WITH LOSSES. BARRELS LOSSES 0 @ 0 BBL/HR NO FLARE BIT POSITION : Total Footage Drilled From 9638' To 9865' 227' Total Footage Drilled Rotating 227.00 Percent of Footage Rotated 100% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 0.00 Percent of Footage Sliding 0% Hours Total Time Rotate Drilling 4.17 Percent of Time Rotated 100% Total Time Slide Drilling 0.00 Percent of Time Sliding 0% Connection / Ream / Rig Time / Circulating / Tripping 0.33 Percent Non-Drilling Time 7% Last Survey Survey 9814 Inc 0.9 Azimuth 136.9 TVD 9802.33 Projection to Bit from Last Survey MD: 9865' South 2.82' West 3.76' / REF PBHL

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]

Spud date: 2/18/2014

Project: UTAH-UINTAH

Site: NBU 921-20P PAD

Rig name no.: PROPETRO 12/12, SST 8/8

Event: DRILLING

Start date: 2/18/2014

End date: 5/31/2014

Active datum: RKB @4,898.00usft (above Mean Sea Level)

UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:00 - 9:00	3.00	DRLPRV	02	B	P	9865	DRILL F/ 9865 T/ 10049' (184 ' @ 61.33 FT/ HR) WEIGHT ON BIT 18- 22 K. ROTARY RPM 50 MUD MOTOR RPM 109 STROKES PER MINUTE 65/65 GALLONS PER MINUTE 544 SPP ON/OFF 2600 / 2300 DIFFERENTIAL 300 TORQUE HIGH/LOW 14,000 / 9,000 OFF BOTTOM TORQUE 9,000 STRING WEIGHT UP/DOWN/ROT 205 / 150 / 170 BOS OFF LINE WT 11.8 VIS 31 PUMP LCM SWEEPS TO HELP WITH LOSSES. BARRELS LOSSES 0 @ 0 BBL/HR NO FLARE BIT POSITION : Total Footage Drilled From 9865' To 10070' 205' Total Footage Drilled Rotating 205.00 Percent of Footage Rotated 100% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 0.00 Percent of Footage Sliding 0% Hours Total Time Rotate Drilling 3.83 Percent of Time Rotated 100% Total Time Slide Drilling 0.00 Percent of Time Sliding 0% Connection / Ream / Rig Time / Circulating / Tripping 0.17 Percent Non-Drilling Time 4% Last Survey Survey 10025 Inc 1.5 Azimuth 148.9 TVD 10013.30 Projection to Bit from Last Survey MD: 10070' South 6.38' West 1.84' / REF PBHL RIG SER / FIXED STAND PIPE GASKET IN UNION
	9:00 - 9:30	0.50	DRLPRV	07	A	P	10,049	

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]		Spud date: 2/18/2014	
Project: UTAH-UINTAH		Site: NBU 921-20P PAD	Rig name no.: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start date: 2/18/2014	End date: 5/31/2014
Active datum: RKB @4,898.00usft (above Mean Sea Level)		UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	9:30 - 10:00	0.50	DRLPRV	02	B	P	10,049	DRILL F/ 10,049 T/ 10,070' (21 ' @ 42.0 FT/ HR) WEIGHT ON BIT 18- 22 K. ROTARY RPM 50 MUD MOTOR RPM 109 STROKES PER MINUTE 65/65 GALLONS PER MINUTE 544 SPP ON/OFF 2600 / 2300 DIFFERENTIAL 300 TORQUE HIGH/LOW 14,000 / 9,000 OFF BOTTOM TORQUE 9,000 STRING WEIGHT UP/DOWN/ROT 205 / 150 / 170 BOS OFF LINE WT 11.8 VIS 31 PUMP LCM SWEEPS TO HELP WITH LOSSES. BARRELS LOSSES 0 @ 0 BBL/HR NO FLARE BIT POSITION : Total Footage Drilled From 9865' To 10070' 205' Total Footage Drilled Rotating 205.00 Percent of Footage Rotated 100% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 0.00 Percent of Footage Sliding 0% Hours Total Time Rotate Drilling 3.83 Percent of Time Rotated 100% Total Time Slide Drilling 0.00 Percent of Time Sliding 0% Connection / Ream / Rig Time / Circulating / Tripping 0.17 Percent Non-Drilling Time 4% Last Survey Survey 10025 Inc 1.5 Azimuth 148.9 TVD 10013.30 Projection to Bit from Last Survey MD: 10070' South 6.38' West 1.84' / REF PBHL
	10:00 - 12:00	2.00	DRLPRV	05	C	P	10,070	CIRCULATE FOR TRIP OUT TO RUN 4.5 CASING
	12:00 - 17:30	5.50	DRLPRV	06	A	P	10,070	PULLED 10 STAND WET, FLOW CHECKED, PUMP PILL TRIP OUT HOLE LAY DOWN MUD MOTOR, BIT MWD TOOLS
	17:30 - 18:00	0.50	DRLPRV	06	A	P	10,070	PULLED WEAR BUSHING
	18:00 - 19:00	1.00	CSGPRO	12	A	P	10,070	RIG UP WYO. CASING CREW , HELD SAFETY MEETING RUN 4.5 CASING SHOE @ 10056, FLOAT COLLAR @ 10,010 MESAVERDE MARKER @ 7,973 , DV TOOL @ 5,164 , CROSS OVER @ 5,028 (THREADS TECHNICAN INSPECTED I-80 DQX PIPE ON RACK BEFORE WE PICKED IT UP & LOOKED @ 13 JOINTS WE LAYED DOWN ON LAST JOB
	19:00 - 23:30	4.50	CSGPRO	12	C	P	10,070	RUN 113 JOINTS 4.5 P110 LT&C DV TOOL,
	23:30 - 0:00	0.50	CSGPRO	12	C	Z	10,070	WORKING WITH DQ X SHOULDER UP HIGH BACKED OUT REDOPED PIN , TRIED MAKING UP SECOND TIME CALLED KENNY MORRIS, TRIED TO CALL JOHN STRAHAN RAISED TORQUE UP TO MIN. 4300 / OPT 5100 AX 5600/ YIELD TORQUE 6800 STILL NOT MAKING UP RIGHT ALL HIGH SHOULDER

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]

Spud date: 2/18/2014

Project: UTAH-UINTAH

Site: NBU 921-20P PAD

Rig name no.: PROPETRO 12/12, SST 8/8

Event: DRILLING

Start date: 2/18/2014

End date: 5/31/2014

Active datum: RKB @4,898.00usft (above Mean Sea Level)

UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
5/31/2014	0:00 - 7:30	7.50	CSGPRO	12	C	P	10,070	TRIED CHANGING UP TORQUE ON CASING 6000 FTP AS TMK HAND WANTED TO TRY STILL NOT WORKING HAVE TO BREAK & LAY DOWN JOINTS THAT WILL NOT SHOULDER UP TALKED TO KENNY MORRIS ABOUT TORQUE MATT WITH TMK IPASCO CALLED HIS BOSS UP THEY SAID TO TORQUE D QX UP TO 6,000 & IT DID NOT MATTER WHERE IT SHOULDER UP AT DELTA TORQUE ON THE SEAL WOULD HOLD FINE
	7:30 - 9:00	1.50	CSGPRO	05	A	P	10,070	CIRULATE 4.5 CASING ON BOTTOM
	9:00 - 11:30	2.50	CSGPRO	12	B	P	10,070	RIG UP CEMENT CREW HELD SAFETY MEETING WITH BJ CEMENT CEMENT TEST LINES TO 5,000 PSI PUMPED 25 BARRELS FRESH WATER AHEAD, PUMPED 14.30 YIELD 1.35 1345 SACKS (50:50) POZ (FLY ASH) CLASS G CEMENT +0.05 %BWOC STACIC 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-6L +0.7 % BWOC SODIUM METASILICATE + 2% BWOC BENTONITE II +5 BLBS/ SACK KOL-SEAL 50 LB BAG DISPLACE WITH 90 BARRELS FRESH WATER & 65 BARRELS 11.7 MUD LIFT PRESSURE 2226 BUMPED PLUG @ 11 :57 WITH 2870 PSI (TOP CEMENT @ 5164)
	11:30 - 12:00	0.50	CSGPRO	12	E	P	10,070	DROPPED BOMB LET FREE FALL FOR 30 MINS BLED BACK 3/4 BARRELS TO TRUCK OPEN TOOL WITH 670 PSI LIFT
	12:00 - 15:30	3.50	CSGPRO	05	A	P	10,070	CIRCULATE BETWEEN STAGES HAD 100 CEMENT TO SURFACE
	15:30 - 17:00	1.50	CSGPRO	12	E	P	10,070	PUMPED 25 BARRELS FRESH WATER AHEAD LEAD CEMENT 12.5 YIELD 1.98 688 SACK PREMIUM LITE CEMENT +0.5 % BWOC STATIC FREE +0.25 LB/SACK CELLO FLAKE + 0.2 %BWOC CD-32 + 6 % BWOC BENTONITE II + 5 LBS/ SACK KOL-SEAL 50 LB BAG +0.5 % BWOC FL-57 50 LB BAG TAIL 15.8 YIELD 1.16 60 SACKS CLASS G CEMENT + 1% BWOC CALCIUM CHLORIDE + 0.4 % BWOC SODIUM METASILICATE + DROPPED PLUG LIFT PRESSURE 1310 BUMP PRESSURE 3075 HAD 5 BARRELS CEMENT TO SURFACE (TOP CEMENT @ 24')
	17:00 - 17:30	0.50	CSGPRO	12	E	P	10,070	BACK FLUSH BOPS, FLOW LINE , / RIG DOWN CEMENT CREWS
	17:30 - 18:00	0.50	CSGPRO	12	B	P	10,070	SET PACK OFF , NIPPLE DOWN , CLEAN MUD TANKS (RIG RELEASED @ 18:00 5/31/2014 }

Anadarko Petroleum Corporation



Project: Uintah Co., UT (UTM)
Site: Sec 20-T9S-R21E
Well: NBU 921-20P4BS
Wellbore: Original Hole
Final Surveys
Rig: SST 8

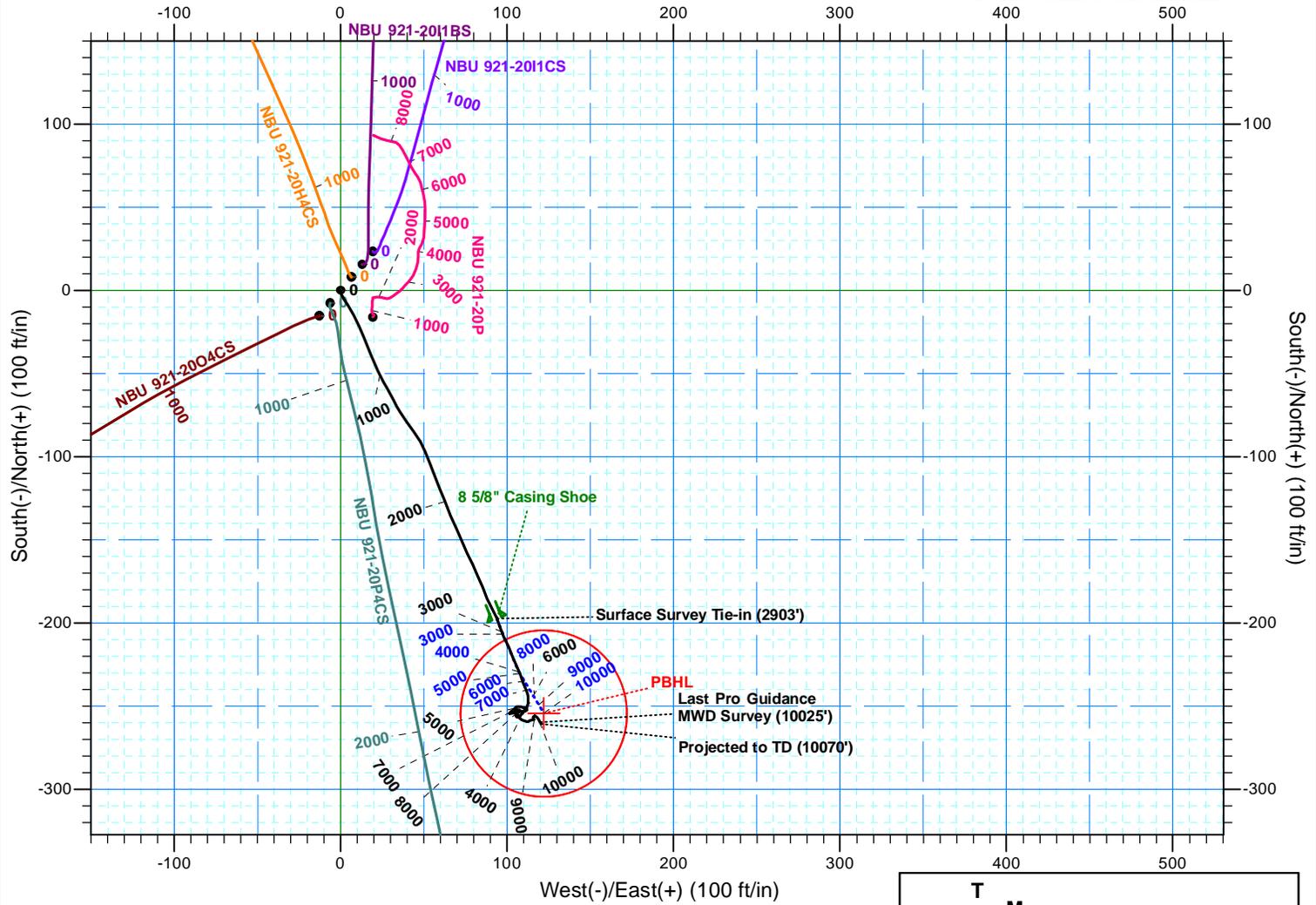
Surface Location:
 SHL 834' FSL & 612' FEL Sec 20-T9S-R21E
 Universal Transverse Mercator (US Survey Feet)
 NAD 1927 (NADCON CONUS)
 Zone 12N (114 W to 108 W)
Elevation: 4874' GL + 24' KB @ 4898.00ft (SST 8)
Northing 14535309.49 **Easting** 2041467.85 **Latitude** 40.016591 **Longitude** -109.567652

SECTION DETAILS
 Plan 1

MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSect	Annotation
2883.00	4.57	158.16	2873.58	-197.45	93.71	0.00	0.00	218.56	Surface Survey Tie-In/Begin Turn at 2883' MD, 2874' TVD
2889.29	4.57	157.37	2879.85	-197.91	93.90	1.00	-90.39	219.06	Begin Hold at 2889' MD, 2880' TVD
3091.19	4.57	157.37	3081.10	-212.76	100.09	0.00	0.00	235.12	Begin Drop at 3091' MD, 3081' TVD
3548.19	0.00	0.00	3537.62	-229.58	107.10	1.00	180.00	253.31	Begin Hold at 3548' MD, 3538' TVD
4798.19	0.00	0.00	4787.62	-229.58	107.10	0.00	0.00	253.31	Begin Build at 4798' MD, 4788' TVD
4904.85	0.32	149.03	4894.29	-229.83	107.25	0.30	149.03	253.61	Begin Hold at 4905' MD, 4894' TVD
10068.65	0.32	149.03	10058.00	-254.58	122.10	0.00	0.00	282.34	PBHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N-S	+E-W	Latitude	Longitude
PBHL	10058.00	-254.58	122.10	40.015892	-109.567216



Azimuth Corrections

To convert a Magnetic Direction to a True Direction, Add 10.73° East
 To convert a True Direction to a Grid Direction, Subtract 0.92°
 To convert a Magnetic Direction to a Grid Direction, Add 9.81°

Created By: Bob Hays Date: 11:01, May 30 2014

Azimuths to True North
 Magnetic North: 10.73°

Magnetic Field
 Strength: 52038.4snT
 Dip Angle: 65.79°
 Date: 05/20/2014
 Model: IGRF2010

Anadarko Petroleum Corporation



Project: Uintah Co., UT (UTM)
Site: Sec 20-T9S-R21E
Well: NBU 921-20P4BS
Wellbore: Original Hole
Final Surveys
Rig: SST 8

Surface Location:
 SHL 834' FSL & 612' FEL Sec 20-T9S-R21E

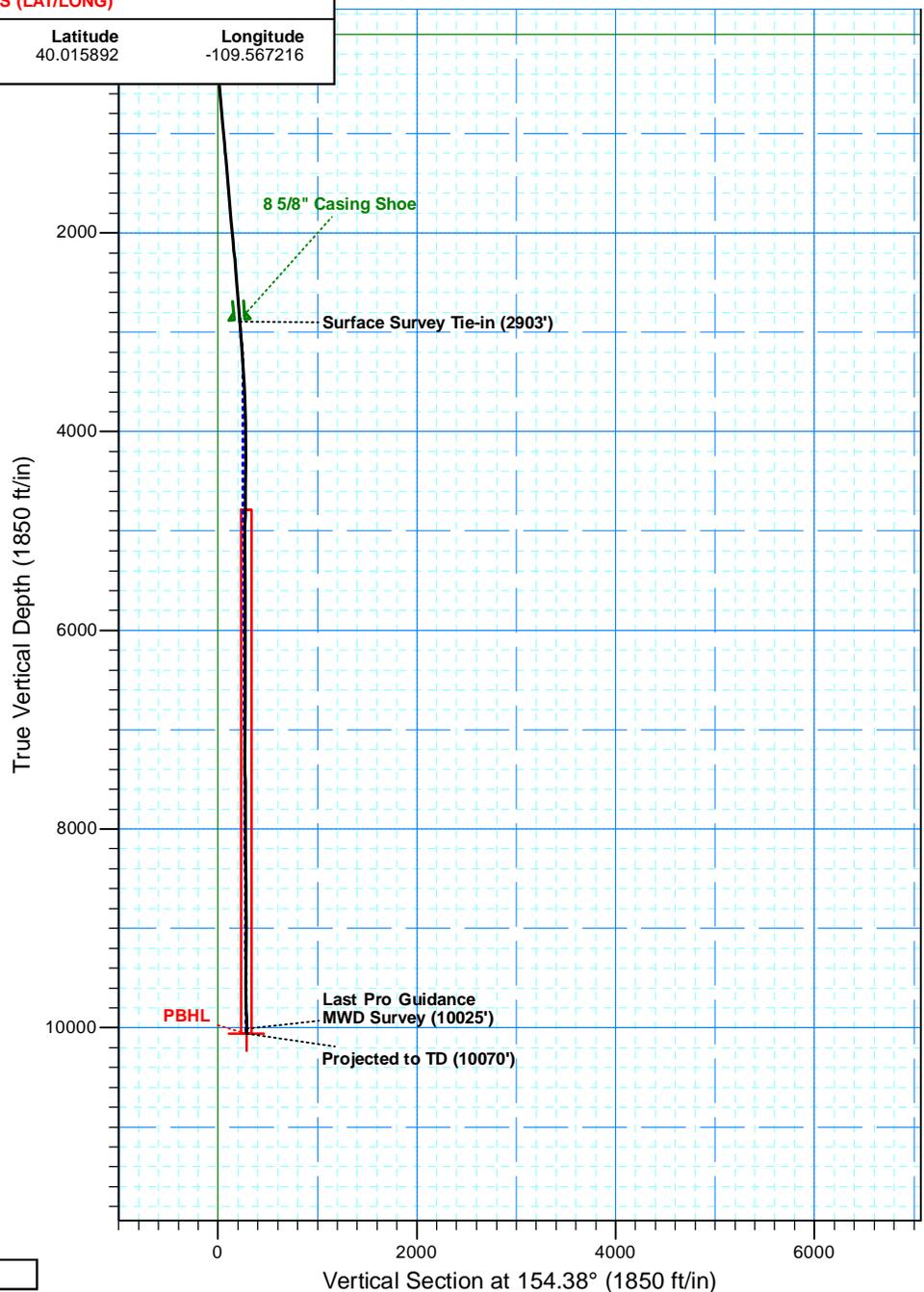
Universal Transverse Mercator (US Survey Feet)
 NAD 1927 (NADCON CONUS)
 Zone 12N (114 W to 108 W)
Elevation: 4874' GL + 24' KB @ 4898.00ft (SST 8)
Northing 14535309.49 **Easting** 2041467.85 **Latitude** 40.016591 **Longitude** -109.567652

SECTION DETAILS
 Plan 1

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
2883.00	4.57	158.16	2873.58	-197.45	93.71	0.00	0.00	218.56	Surface Survey Tie-In/Begin Turn at 2883' MD, 2874' TVD
2889.29	4.57	157.37	2879.85	-197.91	93.90	1.00	-90.39	219.06	Begin Hold at 2889' MD, 2880' TVD
3091.19	4.57	157.37	3081.10	-212.76	100.09	0.00	0.00	235.12	Begin Drop at 3091' MD, 3081' TVD
3548.19	0.00	0.00	3537.62	-229.58	107.10	1.00	180.00	253.31	Begin Hold at 3548' MD, 3538' TVD
4798.19	0.00	0.00	4787.62	-229.58	107.10	0.00	0.00	253.31	Begin Build at 4798' MD, 4788' TVD
4904.85	0.32	149.03	4894.29	-229.83	107.25	0.30	149.03	253.61	Begin Hold at 4905' MD, 4894' TVD
10068.65	0.32	149.03	10058.00	-254.58	122.10	0.00	0.00	282.34	PBHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
PBHL	10058.00	-254.58	122.10	40.015892	-109.567216





Anadarko Petroleum Corporation

Uintah Co., UT (UTM)

Sec 20-T9S-R21E

NBU 921-20P4BS

Original Hole

Design: Final Surveys

Standard Survey Report

30 May, 2014





Professional Directional LTD

Survey Report



Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well NBU 921-20P4BS
Project:	Uintah Co., UT (UTM)	TVD Reference:	4874' GL + 24' KB @ 4898.00ft (SST 8)
Site:	Sec 20-T9S-R21E	MD Reference:	4874' GL + 24' KB @ 4898.00ft (SST 8)
Well:	NBU 921-20P4BS	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Final Surveys	Database:	EDM 5000.1 Single User Db

Project	Uintah Co., UT (UTM)		
Map System:	Universal Transverse Mercator (US Survey Fee	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	Sec 20-T9S-R21E		
Site Position:		Northing:	14,536,796.93 usft
From:	Lat/Long	Easting:	2,036,855.98 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in
		Latitude:	40.020877
		Longitude:	-109.584034
		Grid Convergence:	0.91 °

Well	NBU 921-20P4BS		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	14,535,309.49 usft
			Latitude:
			40.016591
			Longitude:
			-109.567652
Position Uncertainty		0.00 ft	Wellhead Elevation:
			0.00 ft
			Ground Level:
			4,874.00 ft

Wellbore	Original Hole		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	05/20/14	10.73	65.79	52,038

Survey Program		Date	05/30/14		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
20.00	2,903.00	Surface Surveys (Original Hole)	MWD	MWD	
2,959.00	10,025.00	Pro Guidance MWD Surveys (Original Hol	MWD	MWD	
10,070.00	10,070.00	Projected to TD (Original Hole)	MWD	MWD	

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
	20.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00
Surveys Adjusted to 24' KB										
	217.00	0.44	261.08	217.00	-0.12	-0.75	-0.22	0.22	0.22	0.00
	301.00	1.27	148.59	300.99	-0.96	-0.58	0.62	1.78	0.99	-133.92
	383.00	2.57	149.06	382.94	-3.31	0.84	3.35	1.59	1.59	0.57
	473.00	4.31	147.17	472.78	-7.89	3.71	8.72	1.94	1.93	-2.10
	563.00	4.61	153.12	562.51	-13.95	7.18	15.69	0.61	0.33	6.61
	653.00	5.01	151.56	652.19	-20.64	10.68	23.23	0.47	0.44	-1.73
	743.00	5.19	160.70	741.83	-27.93	13.90	31.20	0.92	0.20	10.16
	833.00	5.45	159.74	831.45	-35.79	16.73	39.50	0.31	0.29	-1.07
	923.00	5.80	154.20	921.01	-43.89	20.19	48.30	0.72	0.39	-6.16
	1,013.00	4.92	154.20	1,010.62	-51.46	23.85	56.71	0.98	-0.98	0.00
	1,103.00	5.10	150.33	1,100.28	-58.41	27.51	64.56	0.43	0.20	-4.30
	1,193.00	5.72	153.23	1,189.87	-65.89	31.51	73.03	0.75	0.69	3.22
	1,283.00	4.66	148.22	1,279.50	-73.00	35.45	81.15	1.28	-1.18	-5.57



Professional Directional LTD

Survey Report



Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well NBU 921-20P4BS
Project:	Uintah Co., UT (UTM)	TVD Reference:	4874' GL + 24' KB @ 4898.00ft (SST 8)
Site:	Sec 20-T9S-R21E	MD Reference:	4874' GL + 24' KB @ 4898.00ft (SST 8)
Well:	NBU 921-20P4BS	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Final Surveys	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,373.00	4.82	144.00	1,369.20	-79.17	39.60	88.51	0.43	0.18	-4.69
1,463.00	4.48	141.81	1,458.90	-84.99	43.99	95.66	0.43	-0.38	-2.43
1,553.00	4.66	150.25	1,548.62	-90.93	47.98	102.73	0.77	0.20	9.38
1,643.00	4.57	159.83	1,638.32	-97.47	51.03	109.95	0.86	-0.10	10.64
1,733.00	4.57	159.12	1,728.04	-104.18	53.55	117.09	0.06	0.00	-0.79
1,823.00	5.10	156.84	1,817.72	-111.21	56.40	124.66	0.63	0.59	-2.53
1,913.00	5.19	160.35	1,907.36	-118.72	59.34	132.71	0.36	0.10	3.90
2,003.00	5.80	157.54	1,996.94	-126.76	62.45	141.30	0.74	0.68	-3.12
2,093.00	5.98	156.40	2,086.47	-135.26	66.06	150.52	0.24	0.20	-1.27
2,183.00	5.36	157.45	2,176.03	-143.43	69.55	159.41	0.70	-0.69	1.17
2,273.00	5.10	155.43	2,265.65	-150.96	72.83	167.60	0.35	-0.29	-2.24
2,363.00	4.75	154.99	2,355.32	-157.97	76.06	175.33	0.39	-0.39	-0.49
2,453.00	4.89	156.53	2,445.00	-164.87	79.17	182.89	0.21	0.16	1.71
2,543.00	4.66	154.82	2,534.69	-171.69	82.25	190.38	0.30	-0.26	-1.90
2,633.00	4.84	158.51	2,624.38	-178.53	85.20	197.82	0.39	0.20	4.10
2,723.00	4.57	156.31	2,714.08	-185.35	88.03	205.19	0.36	-0.30	-2.44
2,813.00	3.96	152.09	2,803.83	-191.38	90.92	211.88	0.76	-0.68	-4.69
2,903.00	4.57	158.16	2,893.58	-197.45	93.71	218.56	0.84	0.68	6.74
Surface Survey Tie-in (2903')									
2,959.00	4.50	159.00	2,949.40	-201.58	95.33	222.98	0.17	-0.13	1.50
3,054.00	4.20	156.50	3,044.13	-208.25	98.05	230.17	0.37	-0.32	-2.63
3,150.00	4.00	157.20	3,139.88	-214.56	100.75	237.03	0.21	-0.21	0.73
3,245.00	3.70	157.60	3,234.67	-220.44	103.20	243.40	0.32	-0.32	0.42
3,340.00	3.40	155.50	3,329.49	-225.84	105.54	249.27	0.34	-0.32	-2.21
3,436.00	3.30	158.00	3,425.32	-230.99	107.76	254.88	0.18	-0.10	2.60
3,531.00	3.20	160.10	3,520.17	-236.02	109.68	260.24	0.16	-0.11	2.21
3,626.00	2.80	155.10	3,615.04	-240.62	111.56	265.20	0.50	-0.42	-5.26
3,721.00	2.20	178.00	3,709.95	-244.55	112.60	269.19	1.21	-0.63	24.11
3,817.00	2.20	183.90	3,805.88	-248.23	112.54	272.49	0.24	0.00	6.15
3,912.00	2.20	217.20	3,900.81	-251.50	111.31	274.90	1.33	0.00	35.05
4,007.00	2.10	212.50	3,995.75	-254.42	109.28	276.66	0.21	-0.11	-4.95
4,102.00	1.30	260.60	4,090.71	-256.06	107.28	277.27	1.65	-0.84	50.63
4,197.00	0.80	224.90	4,185.69	-256.71	105.75	277.19	0.84	-0.53	-37.58
4,293.00	1.20	358.60	4,281.69	-256.18	105.25	276.50	1.92	0.42	139.27
4,388.00	0.90	350.90	4,376.67	-254.45	105.11	274.88	0.35	-0.32	-8.11
4,483.00	0.50	327.80	4,471.66	-253.36	104.77	273.75	0.51	-0.42	-24.32
4,578.00	0.40	220.70	4,566.66	-253.26	104.33	273.47	0.76	-0.11	-112.74
4,673.00	0.70	223.70	4,661.66	-253.93	103.71	273.81	0.32	0.32	3.16
4,768.00	0.20	349.20	4,756.65	-254.19	103.28	273.86	0.88	-0.53	132.11
4,863.00	0.90	13.80	4,851.65	-253.30	103.43	273.12	0.76	0.74	25.89
4,958.00	0.80	33.10	4,946.64	-252.02	103.97	272.20	0.32	-0.11	20.32
5,053.00	0.70	43.30	5,041.63	-251.04	104.73	271.65	0.18	-0.11	10.74
5,148.00	0.70	77.00	5,136.62	-250.49	105.69	271.56	0.43	0.00	35.47



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Survey Report



Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well NBU 921-20P4BS
Project:	Uintah Co., UT (UTM)	TVD Reference:	4874' GL + 24' KB @ 4898.00ft (SST 8)
Site:	Sec 20-T9S-R21E	MD Reference:	4874' GL + 24' KB @ 4898.00ft (SST 8)
Well:	NBU 921-20P4BS	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Final Surveys	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,243.00	0.50	100.70	5,231.62	-250.44	106.67	271.94	0.33	-0.21	24.95
5,339.00	0.50	83.30	5,327.62	-250.47	107.49	272.32	0.16	0.00	-18.13
5,434.00	0.40	104.90	5,422.61	-250.50	108.23	272.67	0.21	-0.11	22.74
5,529.00	0.40	115.50	5,517.61	-250.73	108.84	273.14	0.08	0.00	11.16
5,625.00	0.70	94.70	5,613.61	-250.92	109.73	273.70	0.37	0.31	-21.67
5,720.00	0.40	100.70	5,708.60	-251.03	110.64	274.19	0.32	-0.32	6.32
5,815.00	0.20	100.70	5,803.60	-251.12	111.12	274.48	0.21	-0.21	0.00
5,910.00	0.10	135.50	5,898.60	-251.21	111.35	274.66	0.14	-0.11	36.63
6,004.00	0.30	152.20	5,992.60	-251.49	111.52	274.98	0.22	0.21	17.77
6,099.00	0.80	164.60	6,087.60	-252.35	111.81	275.89	0.54	0.53	13.05
6,195.00	1.10	271.10	6,183.59	-252.98	111.07	276.13	1.60	0.31	110.94
6,290.00	1.00	263.70	6,278.57	-253.05	109.33	275.45	0.18	-0.11	-7.79
6,385.00	1.20	255.10	6,373.55	-253.40	107.55	274.99	0.27	0.21	-9.05
6,481.00	1.10	260.60	6,469.53	-253.81	105.67	274.54	0.16	-0.10	5.73
6,576.00	1.20	250.20	6,564.52	-254.29	103.83	274.19	0.24	0.11	-10.95
6,671.00	0.70	275.00	6,659.50	-254.58	102.32	273.79	0.67	-0.53	26.11
6,767.00	0.40	254.50	6,755.50	-254.62	101.41	273.43	0.37	-0.31	-21.35
6,862.00	0.60	29.50	6,850.50	-254.27	101.33	273.09	0.98	0.21	142.11
6,957.00	0.60	52.10	6,945.49	-253.54	101.97	272.70	0.25	0.00	23.79
7,052.00	0.50	56.30	7,040.49	-253.00	102.71	272.54	0.11	-0.11	4.42
7,147.00	0.30	34.10	7,135.48	-252.56	103.19	272.35	0.26	-0.21	-23.37
7,242.00	0.60	66.60	7,230.48	-252.16	103.79	272.25	0.40	0.32	34.21
7,337.00	0.20	77.90	7,325.48	-251.93	104.41	272.30	0.43	-0.42	11.89
7,433.00	0.40	109.30	7,421.48	-252.00	104.89	272.58	0.26	0.21	32.71
7,528.00	0.40	100.70	7,516.48	-252.18	105.53	273.01	0.06	0.00	-9.05
7,623.00	0.60	90.30	7,611.47	-252.24	106.35	273.42	0.23	0.21	-10.95
7,718.00	0.90	110.10	7,706.46	-252.50	107.55	274.18	0.41	0.32	20.84
7,814.00	0.50	245.90	7,802.46	-252.93	107.87	274.71	1.36	-0.42	141.46
7,909.00	0.70	243.90	7,897.46	-253.35	106.97	274.70	0.21	0.21	-2.11
8,005.00	0.40	232.30	7,993.45	-253.82	106.18	274.77	0.33	-0.31	-12.08
8,100.00	0.40	155.80	8,088.45	-254.32	106.06	275.17	0.52	0.00	-80.53
8,195.00	0.90	163.70	8,183.44	-255.34	106.40	276.24	0.53	0.53	8.32
8,290.00	0.70	140.40	8,278.43	-256.50	106.98	277.54	0.40	-0.21	-24.53
8,386.00	0.70	152.90	8,374.43	-257.48	107.62	278.70	0.16	0.00	13.02
8,481.00	1.10	107.20	8,469.42	-258.26	108.76	279.90	0.83	0.42	-48.11
8,576.00	1.50	113.70	8,564.39	-259.03	110.77	281.46	0.45	0.42	6.84
8,671.00	0.70	73.90	8,659.37	-259.37	112.46	282.50	1.12	-0.84	-41.89
8,766.00	0.80	59.70	8,754.37	-258.88	113.59	282.54	0.22	0.11	-14.95
8,861.00	0.80	68.20	8,849.36	-258.30	114.78	282.53	0.12	0.00	8.95
8,957.00	0.70	100.70	8,945.35	-258.16	115.98	282.92	0.45	-0.10	33.85
9,052.00	0.30	299.10	9,040.35	-258.14	116.33	283.06	1.04	-0.42	-170.11
9,147.00	0.40	306.20	9,135.35	-257.83	115.85	282.57	0.11	0.11	7.47
9,242.00	0.50	335.50	9,230.34	-257.25	115.41	281.86	0.26	0.11	30.84



Professional Directional LTD

Survey Report



Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well NBU 921-20P4BS
Project:	Uintah Co., UT (UTM)	TVD Reference:	4874' GL + 24' KB @ 4898.00ft (SST 8)
Site:	Sec 20-T9S-R21E	MD Reference:	4874' GL + 24' KB @ 4898.00ft (SST 8)
Well:	NBU 921-20P4BS	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Final Surveys	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,337.00	0.40	47.10	9,325.34	-256.65	115.48	281.35	0.56	-0.11	75.37
9,433.00	0.40	56.20	9,421.34	-256.23	116.00	281.20	0.07	0.00	9.48
9,528.00	0.20	54.50	9,516.34	-255.95	116.41	281.13	0.21	-0.21	-1.79
9,623.00	0.20	39.50	9,611.34	-255.73	116.65	281.03	0.05	0.00	-15.79
9,714.00	0.50	143.20	9,702.33	-255.93	116.99	281.35	0.64	0.33	113.96
9,814.00	0.90	136.90	9,802.33	-256.85	117.79	282.53	0.41	0.40	-6.30
9,909.00	0.90	147.60	9,897.32	-258.02	118.70	283.98	0.18	0.00	11.26
10,004.00	1.10	152.60	9,992.30	-259.46	119.52	285.63	0.23	0.21	5.26
10,025.00	1.30	148.90	10,013.30	-259.85	119.74	286.07	1.02	0.95	-17.62
Last Pro Guidance MWD Survey (10025')									
10,070.00	1.30	148.90	10,058.28	-260.72	120.26	287.09	0.00	0.00	0.00
Projected to TD (10070')									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
20.00	20.00	0.00	0.00	Surveys Adjusted to 24' KB
2,903.00	2,893.58	-197.45	93.71	Surface Survey Tie-in (2903')
10,025.00	10,013.30	-259.85	119.74	Last Pro Guidance MWD Survey (10025')
10,070.00	10,058.28	-260.72	120.26	Projected to TD (10070')

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]

Spud date: 2/18/2014

Project: UTAH-UINTAH

Site: NBU 921-20P PAD

Rig name no.: GWS 1/1, MILES 3/3

Event: COMPLETION

Start date: 7/10/2014

End date: 1/12/2015

Active datum: RKB @4,898.00usft (above Mean Sea Level)

UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
7/10/2014	12:00 - 17:00	5.00	DRLOUT	31	I	P		MIRU, NDWH, NU BOP'S, TEST BOP'S, PU BIT, STRING MILL, TBG, TIH TO 5161', TAG DV TOOL, 110' HIGH, RU PWR SWIVEL, SWIFN
7/11/2014	7:00 - 7:30	0.50	DRLOUT	48		P		MILLING CEMENT
	7:30 - 17:00	9.50	DRLOUT	44	D	P		MILL 101' CEMENT, TAG DV TOOL, MILL DV TOOL, POLISH DV TOOL, TIH TO 10,009', MILL 20' SOFT CEMENT, BREAK CIRC TO CLEAN WELL BORE, PRESSURE TEST CSG TO 1000#, POOH LAY DWN 315 JTS TBG ON TLR. ND BOP'S, NUWH, RDMO, SDFWE
7/21/2014	-							
7/24/2014	-							FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -58 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. PRESSURE TEST 8 5/8 X 4 1/2 TO 500 PSI HELD FOR 5 MIN LOST -371 PSI, BLED PSI OFF, REINSTALLED POP OFF SWIFN NO PRESSURE ON SURFACE CASING PULL 10' FLUID FROM 4 1/2" CSG TO STOP FREEZING
12/4/2014	14:00 - 17:00	3.00	SUBSPR	30	A	P		MIRU, N/D WELL HEAD, N/U BOPS, R/U TBG EQUIP, P/U 3-7/8 BIT, P/U RUN IN HOLE W/ 45 JNTS 2-3/8 P-110 TBG, EOT @=1,440'. SWIFN.
12/5/2014	7:00 - 7:15	0.25	SUBSPR	48		P		HSM, L/D TBG
	7:15 - 10:00	2.75	SUBSPR	31	I	P		SITP=0#, SICP=0#, OPEN WELL CONT. TO P/U 2-3/8 P-110 TBG TO 5,010', 158 JNTS.
	10:00 - 11:00	1.00	SUBSPR	31	H	P		CIRC WELL W/ T-MAC W/ 3 GALS BIOCIDES.
	11:00 - 17:00	6.00	SUBSPR	31	I	P		POOH L/D TBG W/ BHA. RDMO
12/11/2014	9:00 - 10:00	1.00	SUBSPR	52	B	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -47 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. PRESSURE TEST 8 5/8 X 4 1/2 TO 512 PSI HELD FOR 5 MIN LOST -165 PSI, BLED PSI OFF, REINSTALLED POP OFF SWIFN NO PRESSURE ON SURFACE CASING FILLED SURFACE WITH 1/2 BBL H2O

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]		Spud date: 2/18/2014	
Project: UTAH-UINTAH		Site: NBU 921-20P PAD	Rig name no.: GWS 1/1, MILES 3/3
Event: COMPLETION		Start date: 7/10/2014	End date: 1/12/2015
Active datum: RKB @4,898.00usft (above Mean Sea Level)		UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	13:00 - 14:00	1.00	SUBSPR	37	E	P		PERF STG 1)PU 3 1/8 EXP GUN, 19 GM, .40 HOLE SIZE. RIH PERFWELL, AS PER PERF DESIGN. POOH. SWIFW
12/18/2014	7:00 - 17:00	10.00	FRAC	36	1			MIRU NABORS FRAC CREW. SDFN.
12/20/2014	12:00 - 17:00	5.00	FRAC	36	E	P		FRAC STG 1)WHP 996 PSI, BRK 3260 PSI @ 5.9 BPM. ISIP 2425 PSI, FG. 69 ISIP 3182 PSI, FG. 0.76, NPI 757 PSI. SWI. XO FOR WL.
12/21/2014	-		FRAC	36	E	P		PERF STG 2)RIH SET CBP & PERF AS DESIGN. POOH, SWIFN. FRAC STG 2)WHP 1128 PSI, BRK 3919 PSI @ 4.3 BPM. ISIP 2447 PSI, FG. 0.69 ISIP 3117 PSI, FG. 0.76, NPI 670 PSI. SWI, XO T/ WL. PERF STG 3)RIH SET CBP & PERF AS DESIGN. POOH, XO T/ FRAC. FRAC STG 3)WHP 1304 PSI, BRK 3582 PSI @ 4.3 BPM. ISIP 2806 PSI, FG. 0.74 ISIP 3064 PSI, FG. 0.77, NPI 258 PSI. SWI, XO T/ WL. PERF STG 4)RIH SET CBP & PERF AS DESIGN. POOH. SWIFN.
12/22/2014	7:30 - 7:45	0.25	FRAC	48		P		HSM, JSA
	8:00 - 18:00	10.00	FRAC	36	E	P		FRAC STAGE 4) WHP 469 PSI, BRK 3281 PSI @ 4.4 BPM. ISIP 2432 PSI, FG. 0.71 ISIP 3122 PSI, FG. 0.78, NPI 690 PSI. X/O WL PERF STAGE 5) RIH SET CBP & PERF AS PER DESIGN. POOH, X/O T/FRAC FRAC SATGE 5)WHP 1758 PSI, BRK 3611 PSI @ 4.3 BPM. ISIP 2637 PSI, FG. 0.74 ISIP 3068 PSI, FG. 0.79, NPI 431 PSI. X/O WL. PERFORATE STAGE 6) RIH SET CBP & PERF AS PER DESIGN. POOH. SWIFN W/O FRAC
12/23/2014	6:15 - 6:30	0.25	FRAC	48		P		HSM,JSA

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-20P4BS [GREEN]		Spud date: 2/18/2014	
Project: UTAH-UINTAH		Site: NBU 921-20P PAD	Rig name no.: GWS 1/1, MILES 3/3
Event: COMPLETION		Start date: 7/10/2014	End date: 1/12/2015
Active datum: RKB @4,898.00usft (above Mean Sea Level)		UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:30 - 18:00	11.50	FRAC	36	E	P		FRAC STAGE 6)WHP 2190 PSI, BRK 4516 PSI @ 4.2 BPM. ISIP 2615 PSI, FG. 0.75 ISIP 2889 PSI, FG. 0.78, NPI 274 PSI. X/O WL PERORATE STAGE 7) RIH SET CBP & PERF AS PER DESIGN. POOH, W/O T/FRAC. FRAC STAGE 7)WHP 1707 PSI, BRK 3296 PSI @ 4.3 BPM. ISIP 2681 PSI, FG. 0.76 ISIP 2844 PSI, FG. 0.78, NPI 163 PSI. W/O WL. PERORATE STAGE 8) RIH SET CBP & PERF AS PER DESIGN. POOH, W/O T/FRAC. FRAC STAGE 8)WHP 1410 PSI, BRK 2230 PSI @ 4.4 BPM. ISIP 1850 PSI, FG. 0.67 ISIP 2747 PSI, FG. 0.78, NPI 897 PSI. X/O WL.
1/9/2015	6:45 - 7:00	0.25	DRLOUT	48		P		SET TOP KILL PLUG HSM. PINCH POINTS.
	7:00 - 17:00	10.00	DRLOUT	31	I	P		RU RIG. OPEN WELL 0 PSI. ND WH. NU 10K BOP.RU RIG FLOOR & TBG EQUIP. RU PIPE WRANGLER, PREP & TALLY NEW 23/8 P-110 TBG. PU 37/8 BIT, X-DART, POBS, XN- NIP. RIH W/ 243 JTS 23/8 P-110 TBG, TAG SAND @ 7751'. RU DRL EQUIP. SDFWE.
1/12/2015	6:45 - 7:00	0.25	DRLOUT	48		P		HSM. DO NOT HOLD HEAD OVER DRL RUBBER.

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-20P4BS [GREEN]

Spud date: 2/18/2014

Project: UTAH-UINTAH

Site: NBU 921-20P PAD

Rig name no.: GWS 1/1, MILES 3/3

Event: COMPLETION

Start date: 7/10/2014

End date: 1/12/2015

Active datum: RKB @4,898.00usft (above Mean Sea Level)

UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/834/E/0/612/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	7:00 - 17:00	10.00	DRLOUT	44	C	P		<p>OPEN WELL 0 PSI. FILL TBG & PSI TEST BOP'S T/ 3300 PSI. GOOD TEST. BLEED OFF PSI. BRK CONV CIRC. BEG DRL OUT. 1st CBP)TAG SAND @ 7780' = 25' SAND. DRL OUT CBP @ 7805' IN 8 MIN, 500 PSI INCR. CONT RIH. 2nd CBP)TAG SAND @ 8051' = 40' SAND. DRL OUT CBP @ 8091' IN 8 MIN, 650 PSI INCR. CONT RIH. 3rd CBP)TAG SAND @ 8352' = 15' SAND. DRL OUT CBP @ 8367' IN 8 MIN, 1000 PSI INCR. CONT RIH. 4th CBP)TAG SAND @ 8594' = 30' SAND. DRL OUT CBP @ 8624' IN 8 MIN, 1000 PSI INCR. CONT RIH. 5th CBP)TAG SAND @ 8570' = 60' SAND. DRL OUT CBP @ 8930' IN 8 MIN, 150 PSI INCR. CONT RIH. 6th CBP)TAG SAND @ 9143' = 50' SAND. DRL OUT CBP @ 9193' IN 8 MIN, 300 PSI INCR. CONT RIH. 7th CBP)TAG SAND @ 9432' = 30' SAND. DRL OUT CBP @ 9462' IN 8 MIN, 0 PSI INCR. CONT RIH. 8th CBP)TAG SAND @ 9636' = 35' SAND. DRL OUT CBP @ 9671' IN 8 MIN, 750 PSI INCR. CONT RIH. C/O 15' SAND TO PBTD @ 10,009" W/ TOTAL OF 314 JTS 23/8 P-110 TBG. CIRC WELL. RD DRL EQUIP. L/D 17 JTS TBG EXESS TBG. PU 41/16 CMRN TBG HNGR. LAND TBNG ON HANGER W/ 297 JTS 23/8 P-110 TBG & 1.875 XN W/ 1/2 POBS. EOT @ 9447'. RD TBG EQUIP & RIG FLOOR. ND BOP. NU WH. DROP BALL. PSI TEST FLOW LINES T/ 3000 PSI. GOOD TEST. BLEED OFF PSI. WAIT 30 MIN FOR BALL T/ DROP. PUMP BIT OFF W/ 2200 PSI. OPEN WELL T/ PIT. UNLOAD TBG. TURN WELL OVER T/ FBC. SICP 1500 PSI. RD RIG. SLIDE RIG T/ 20P4CS.</p> <p>TOTAL FRAC LOAD = 8776 BBLS. RIG RECAVERD = 963 BBLS. LEFT T/ RECOVER = 7813 BBLS.</p> <p>TOTAL GAS SOLD ON D/O = 137 mmcf.</p>

US ROCKIES REGION

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 921-20P4BS [GREEN]	Wellbore No.	00
Well Name	NBU 921-20P4BS	Wellbore Name	NBU 921-20P4BS
Report no.	1	Report date	12/15/2014
Project	UTAH-JUNTAH	Site	NBU 921-20P PAD
Rig Name/No.		Event	COMPLETION
Start date	7/10/2014	End date	1/12/2015
Spud date	2/18/2014	Active datum	RKB @4,898.00usft (above Mean Sea Level)
UWI	SE/SE/O/S/21/E/20/O/0/26/PM/S/834/E/O/612/O/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	7,855.0 (usft)-9,928.0 (usft)	Start Date/Time	12/15/2014 12:00AM
No. of intervals	60	End Date/Time	12/15/2014 12:00AM
Total shots	192	Net perforation interval	64.00 (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-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc./Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
12/15/2014	M E S A VERDE/			7,855.0	7,856.0	3.00		0.410 EXP/		3.125	120.00		19.00	PRODUCTION		

US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
12/15/201 4	M E S A VERDE/			7,919.0	7,920.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			7,965.0	7,966.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			7,993.0	7,994.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,001.0	8,002.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,018.0	8,019.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,050.0	8,051.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,060.0	8,061.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,144.0	8,145.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,201.0	8,202.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,216.0	8,217.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,249.0	8,250.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,262.0	8,263.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,332.0	8,333.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,340.0	8,341.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,346.0	8,347.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		

US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
12/15/201 4	M E S A VERDE/			8,390.0	8,391.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,407.0	8,408.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,471.0	8,472.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,494.0	8,495.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,501.0	8,502.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,576.0	8,577.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,599.0	8,601.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,644.0	8,645.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,686.0	8,687.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,726.0	8,728.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,753.0	8,754.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,814.0	8,815.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,901.0	8,903.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			8,948.0	8,949.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,075.0	9,076.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		

US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
12/15/201 4	M E S A VERDE/			9,096.0	9,097.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,115.0	9,116.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,125.0	9,126.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,138.0	9,139.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,150.0	9,151.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,176.0	9,177.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,203.0	9,204.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,218.0	9,219.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,236.0	9,237.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,376.0	9,377.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,395.0	9,396.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,409.0	9,410.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,418.0	9,419.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,434.0	9,435.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,482.0	9,483.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/															

US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
12/15/201 4	M E S A VERDE/			9,498.0	9,499.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,536.0	9,537.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,568.0	9,569.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,615.0	9,616.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,622.0	9,623.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,636.0	9,637.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,654.0	9,655.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,688.0	9,689.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,708.0	9,709.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,724.0	9,725.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,742.0	9,743.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,763.0	9,764.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,829.0	9,830.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/15/201 4	M E S A VERDE/			9,926.0	9,928.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		

3 Plots