API Well Number: 43047527160000

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 921-23B1CS

2. TYPE OF WORK
DRILL NEW WELL ■ REENTER P&A WELL ☐ DEEPEN WELL ☐

3. FIELD OR WILDCAT
NATURAL BUTTES

4. TYPE OF WELL
Gas Well Coalbed Methane Well: NO

5. UNIT or COMMUNITIZATION AGREEMENT NAME
NATURAL BUTTES

6. NAME OF OPERATOR
KERR-MCGEE OIL & GAS ONSHORE, L.P.

7. OPERATOR PHONE
720 929-6515

8. ADDRESS OF OPERATOR
P.O. Box 173779, Denver, CO, 80217

9. OPERATOR E-MAIL
julie.jacobson@anadarko.com

10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)
UTU 0149075

11. MINERAL OWNERSHIP
FEDERAL ■ INDIAN ☐ STATE ☐ FEE ☐

12. SURFACE OWNERSHIP
FEDERAL ☐ INDIAN ■ STATE ☐ FEE ☐

13. NAME OF SURFACE OWNER (if box 12 = 'fee')

14. SURFACE OWNER PHONE (if box 12 = 'fee')

15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')

16. SURFACE OWNER E-MAIL (if box 12 = 'fee')

17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')
Ute Indian Tribe

18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS
YES ■ (Submit Commingling Application) NO ☐

19. SLANT
VERTICAL ☐ DIRECTIONAL ■ HORIZONTAL ☐

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	1128 FNL 2107 FEL	NWNE	23	9.0 S	21.0 E	S
Top of Uppermost Producing Zone	577 FNL 1816 FEL	NWNE	23	9.0 S	21.0 E	S
At Total Depth	577 FNL 1816 FEL	NWNE	23	9.0 S	21.0 E	S

21. COUNTY
UINTAH

22. DISTANCE TO NEAREST LEASE LINE (Feet)
577

23. NUMBER OF ACRES IN DRILLING UNIT
640

25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)
1281

26. PROPOSED DEPTH
MD: 11086 TVD: 11025

27. ELEVATION - GROUND LEVEL
4846

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 - 2860	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 - 11086	11.6	HCP-110 LT&C	13.0	Premium Lite High Strength	350	3.38	12.0
							50/50 Poz	1570	1.31	14.3

ATTACHMENTS

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

- ✔ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
- ✔ COMPLETE DRILLING PLAN
- ☐ AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)
- ☐ FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
- ✔ DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)
- ✔ TOPOGRAPHICAL MAP

NAME Danielle Piernot | **TITLE** Regulatory Analyst | **PHONE** 720 929-6156

SIGNATURE | **DATE** 05/23/2012 | **EMAIL** danielle.piernot@anadarko.com

API NUMBER ASSIGNED
43047527160000

APPROVAL

Permit Manager

RECEIVED: August 27, 2012

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

NBU 921-23B1CS

Surface: 1128 FNL / 2107 FEL NWNE
BHL: 577 FNL / 1816 FEL NWNE

Section 23 T9S R21E

Unitah County, Utah
Mineral Lease: UTU 0149075

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:

Formation	Depth	Resource
Uinta	0 - Surface	
Green River	1,601'	
Birds Nest	1,944'	Water
Mahogany	2,413'	Water
Wasatch	4,936'	Gas
Mesaverde	7,738'	Gas
Sego	9,969'	Gas
Castlegate	10,019'	Gas
MN5	10,425'	Gas
TVD =	11,025'	
TD =	11,086'	

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

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

RECEIVED: May 18, 2012

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

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

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

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

5. **Drilling Fluids Program:**

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

6. **Evaluation Program:**

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

7. **Abnormal Conditions:**

7.a Blackhawk (Part of Mesaverde Formation) Target Formation

Maximum anticipated bottom hole pressure calculated at 11025' TVD, approximately equals 7,277 psi (0.66 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,901 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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

7.b Wasach/Mesaverde Target Formation

Maximum anticipated bottom hole pressure calculated at 9969' TVD, approximately equals 6,380 psi (0.64 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,173 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.

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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 11inch 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.

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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

RECEIVED: May 18, 2012

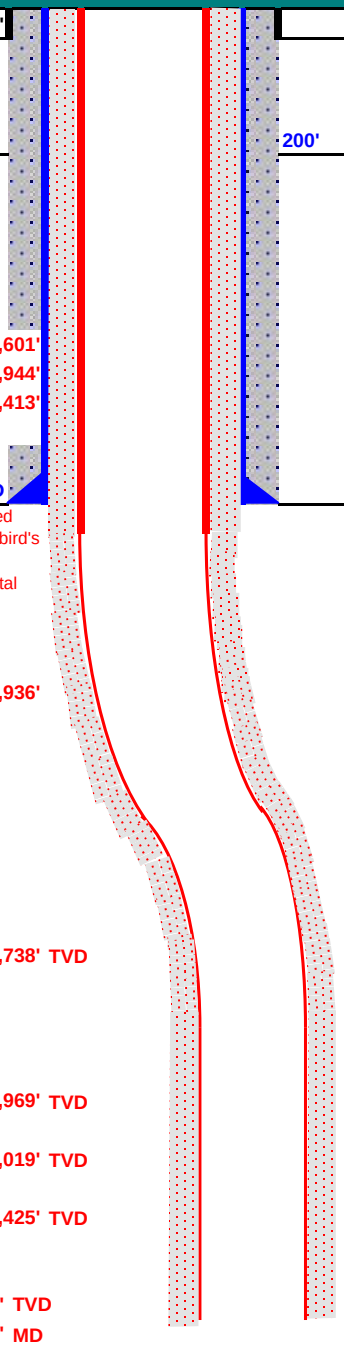
KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP

BLACKHAWK DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	December 29, 2011
WELL NAME	**NBU 921-23B1CS**	TD	11,025' TVD 11,086' MD
FIELD	Natural Buttes	COUNTY Uintah	STATE Utah
		FINISHED ELEVATION	4,846'
SURFACE LOCATION	NWNE 1128 FNL 2107 FEL	Sec 23 T 9S R 21E	
	Latitude: 40.025711	Longitude: -109.517070	NAD 83
BTM HOLE LOCATION	NWNE 577 FNL 1816 FEL	Sec 23 T 9S R 21E	
	Latitude: 40.027218	Longitude: -109.516035	NAD 83
OBJECTIVE ZONE(S)	BLACKHAWK		
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), Ute Indian Tribe (Surface), UDOGM Tri-County Health Dept.		

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
			12-1/4	8-5/8", 28#, IJ-55, LTC	Air mist
		200'			
All water flows encountered while drilling will be reported to the appropriate agencies.			11.00'	8-5/8", 28#, IJ-55, LTC	Air mist
	Green River @	**1,601'**			
	Top of Birds Nest @	**1,944'**			
	Mahogany @	**2,413'**			
	Preset f/ GL @ 2,860' TVD				
	Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.				
	Wasatch @	**4,936'**			
Mud logging program TBD Cased hole logging program from TD - surf csg			7-7/8"	4-1/2" 11.6# HCP-110 Ultra DQX/LTC csg	Water / Fresh Water Mud 8.3-13.0 ppg
	Mesaverde @	**7,738' TVD**			
	Sego @	**9,969' TVD**			
	Castlegate @	**10,019' TVD**			
	MN5 @	**10,425' TVD**			
Max anticipated Mud required 13.0 ppg	**TD @**	**11,025' TVD** **11,086' MD**			



RECEIVED: May 18, 2012

KERR-McGEE OIL & GAS ONSHORE LP

BLACKHAWK DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION LTC	TENSION DQX
CONDUCTOR	14"	0-40'									
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,860	28.00	IJ-55	LTC	1.88	1.40	4.96	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	1.16		3.56
	4-1/2"	5,000	to	11,086'	11.60	HCP-110	LTC	1.19	1.16	4.93	

Surface Casing:

(Burst Assumptions: TD = 13.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

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

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.66 psi/ft = bottomhole gradient

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

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1			+ 0.25 pps flocele					
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
			+ 2% CaCl + 0.25 pps flocele					
SURFACE		**NOTE: If well will circulate water to surface, option 2 will be utilized**						
Option 2	LEAD	2,360'	65/35 Poz + 6% Gel + 10 pps gilsonite	220	35%	11.00		3.82
			+ 0.25 pps Flocele + 3% salt BWOW					
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
			+ 0.25 pps flocele					
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	4,436'	Premium Lite II +0.25 pps	350	35%	12.00		3.38
			celloflake + 5 pps gilsonite + 10% gel					
			+ 0.5% extender					
	TAIL	6,650'	50/50 Poz/G + 10% salt + 2% gel	1,570	35%	14.30		1.31
			+ 0.1% R-3					

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

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

FLOAT EQUIPMENT & CENTRALIZERS

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

ADDITIONAL INFORMATION

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

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

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

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

DRILLING ENGINEER: _____ **DATE:** _____

Nick Spence / Danny Showers / Chad Loesel

DRILLING SUPERINTENDENT: _____ **DATE:** _____

Kenny Gathings / Lovel Young

RECEIVED: May 18, 2012

KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP
WASATCH/MESAVERDE DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	December 29, 2011
WELL NAME	**NBU 921-23B1CS**	TD	9,969' TVD 10,030' MD
FIELD	Natural Buttes	COUNTY Uintah	STATE Utah
		FINISHED ELEVATION	4,846'
SURFACE LOCATION	NWNE 1128 FNL 2107 FEL Sec 23 T 9S R 21E		
	Latitude: 40.025711 Longitude: -109.517070 NAD 83		
BTM HOLE LOCATION	NWNE 577 FNL 1816 FEL Sec 23 T 9S R 21E		
	Latitude: 40.027218 Longitude: -109.516035 NAD 83		
OBJECTIVE ZONE(S)	Wasatch/Mesaverde		
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), Ute Indian Tribe (Surface), UDOGM Tri- County Health Dept.		

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
		200'	12-1/4	8-5/8", 28#, IJ-55, LTC	Air mist
			11.00'	8-5/8", 28#, IJ-55, LTC	Air mist
			7-7/8"	4-1/2" 11.6# I-80/HCP-110 Ultra DQX/LTC csg	Water / Fresh Water Mud 8.3-12.5 ppg

All water flows encountered while drilling will be reported to the appropriate agencies.

Green River @ 1,601'
Top of Birds Nest @ 1,944'
Mahogany @ 2,413'

Preset f/ GL @ 2,860' TVD

Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.

Wasatch @ 4,936'

Mud logging program TBD
Cased hole logging program from TD - surf csg

Mesaverde @ 7,738' TVD

Sego 9,969' TVD

Max anticipated Mud required 12.5 ppg

TD @ 9,969' TVD 10,030' MD

NBU 921-23B Pad

KERR-McGEE OIL & GAS ONSHORE LP

WASATCH/MESAVERDE DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION LTC	TENSION DQX
CONDUCTOR	14"	0-40'									
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,860	28.00	IJ-55	LTC	1.88	1.40	4.96	N/A
								7,780	6,350		267,035
PRODUCTION	4-1/2"	0	to	5,000	11.60	I-80	DQX	1.11	0.98		2.84
								10,690	8,650	223,000	
	4-1/2"	5,000	to	10,030'	11.60	HCP-110	LTC	1.53	1.33	4.72	

Surface Casing:

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

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

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient

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

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1			+ 0.25 pps flocele					
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
			+ 2% CaCl + 0.25 pps flocele					
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**					
Option 2	LEAD	2,360'	65/35 Poz + 6% Gel + 10 pps gilsonite	220	35%	11.00		3.82
			+ 0.25 pps Flocele + 3% salt BWOW					
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
			+ 0.25 pps flocele					
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	4,430'	Premium Lite II +0.25 pps	350	35%	12.00		3.38
			celloflake + 5 pps gilsonite + 10% gel					
			+ 0.5% extender					
	TAIL	5,600'	50/50 Poz/G + 10% salt + 2% gel	1,320	35%	14.30		1.31
			+ 0.1% R-3					

*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

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ADDITIONAL INFORMATION

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

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

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

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

DRILLING ENGINEER: _____ **DATE:** _____

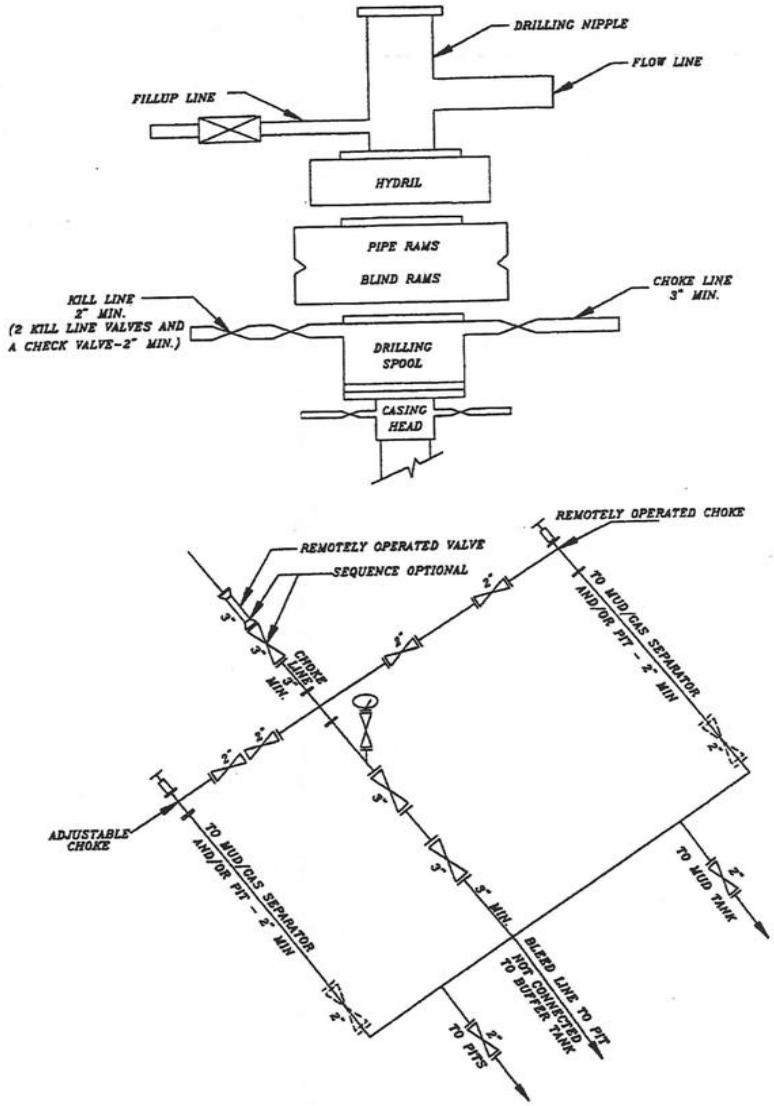
Nick Spence / Danny Showers / Chad Loesel

DRILLING SUPERINTENDENT: _____ **DATE:** _____

Kenny Gathings / Lovel Young

RECEIVED: May 18, 2012

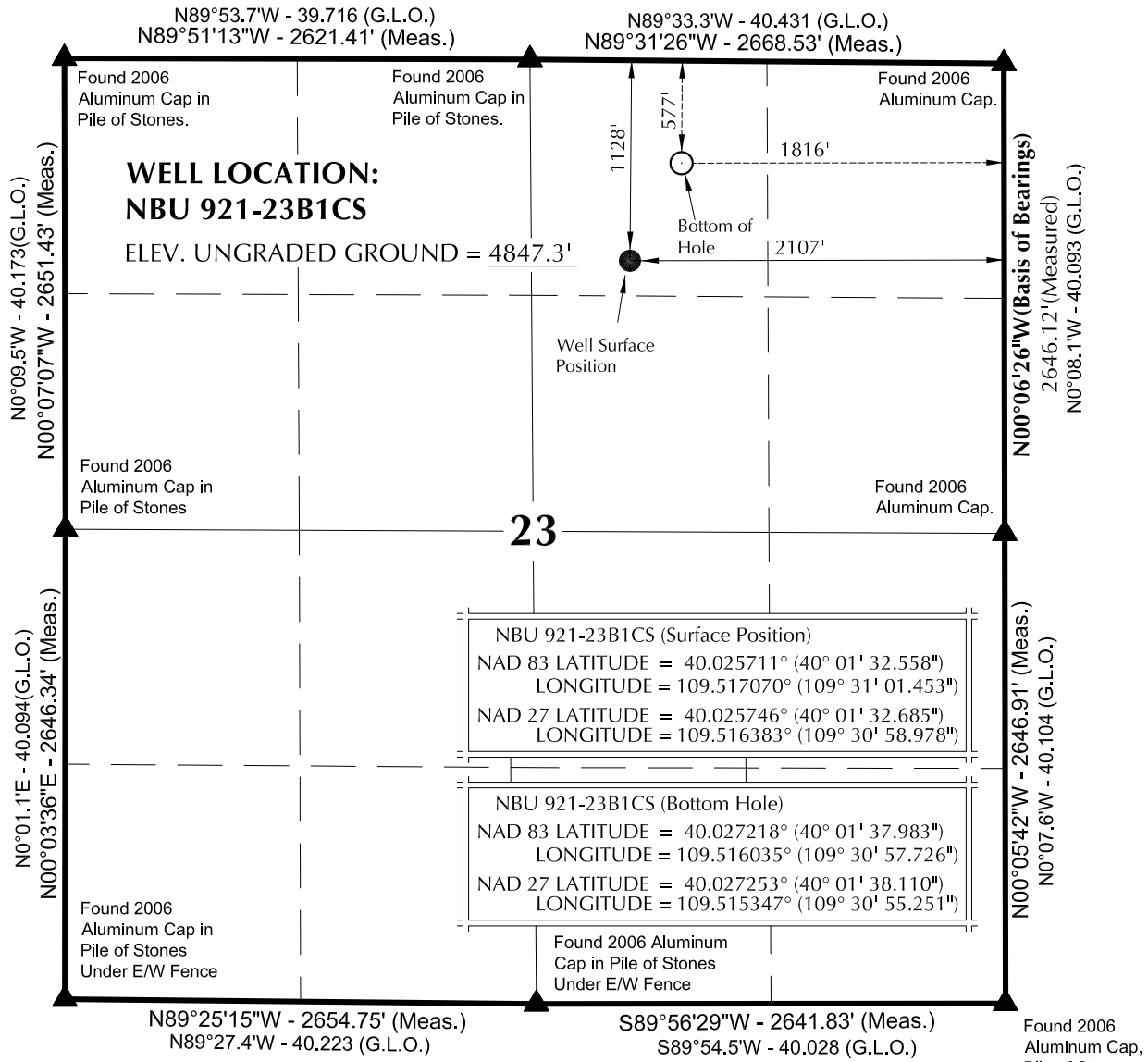
EXHIBIT A
NBU 921-23B1CS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

RECEIVED: May 18, 2012

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 N27°52'31"E - 621.02' 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 $\frac{1}{4}$ 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'.

N

1000' 500' 0' 1000'

SCALE

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.

PROFESSIONAL LAND SURVEYOR No.6028691 JOHN R SLAUGH STATE OF UTAH

8-18-11

PROFESSIONAL LAND SURVEYOR
REGISTRATION No. 6028691
STATE OF UTAH

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

WELL PAD: NBU 921-23B

NBU 921-23B1CS
WELL PLAT
577' FNL, 1816' FEL (Bottom Hole)
NW $\frac{1}{4}$ NE $\frac{1}{4}$ OF SECTION 23, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.

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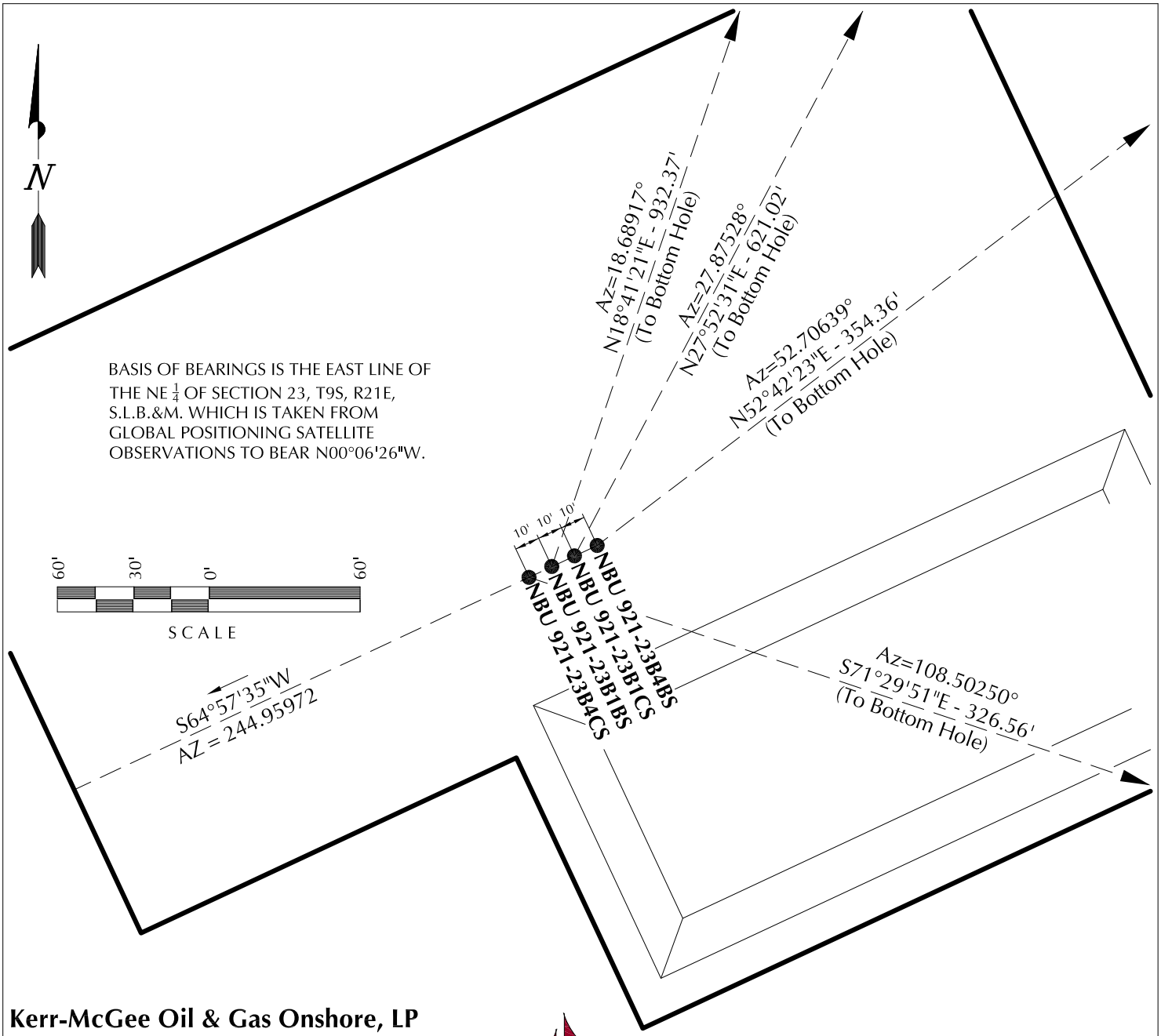
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 7-19-11	SURVEYED BY: M.S.B.	SHEET NO: 2
DATE DRAWN: 8-17-11	DRAWN BY: T.J.R.	
SCALE: 1" = 1000'	Date Last Revised:	2 OF 16

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27			NAD83		NAD27		
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES
NBU 921-23B4BS	40°01'32.600" 40.025722°	109°31'01.337" 109.517038°	40°01'32.727" 40.025757°	109°30'58.862" 109.516351°	1124' FNL 2098' FEL	40°01'34.723" 40.026312°	109°30'57.715" 109.516032°	40°01'34.850" 40.026347°	109°30'55.241" 109.515345°	907' FNL 1816' FEL
NBU 921-23B1CS	40°01'32.558" 40.025711°	109°31'01.453" 109.517070°	40°01'32.685" 40.025746°	109°30'58.978" 109.516383°	1128' FNL 2107' FEL	40°01'37.983" 40.027218°	109°30'57.726" 109.516035°	40°01'38.110" 40.027253°	109°30'55.251" 109.515347°	577' FNL 1816' FEL
NBU 921-23B1BS	40°01'32.516" 40.025699°	109°31'01.569" 109.517103°	40°01'32.643" 40.025734°	109°30'59.094" 109.516415°	1133' FNL 2116' FEL	40°01'41.244" 40.028123°	109°30'57.736" 109.516038°	40°01'41.371" 40.028159°	109°30'55.261" 109.515350°	247' FNL 1816' FEL
NBU 921-23B4CS	40°01'32.474" 40.025687°	109°31'01.686" 109.517135°	40°01'32.601" 40.025723°	109°30'59.211" 109.516447°	1137' FNL 2125' FEL	40°01'31.452" 40.025403°	109°30'57.705" 109.516029°	40°01'31.579" 40.025439°	109°30'55.230" 109.515342°	1238' FNL 1816' 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 921-23B4BS	214.7'	281.9'	NBU 921-23B1CS	549.0'	290.4'	NBU 921-23B1BS	883.2'	298.8'	NBU 921-23B4CS	-103.6'	309.7'



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WELL PAD - NBU 921-23B

WELL PAD INTERFERENCE PLAT
WELLS - NBU 921-23B4BS, NBU 921-23B1CS, NBU 921-23B1BS & NBU 921-23B4CS LOCATED IN SECTION 23, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.

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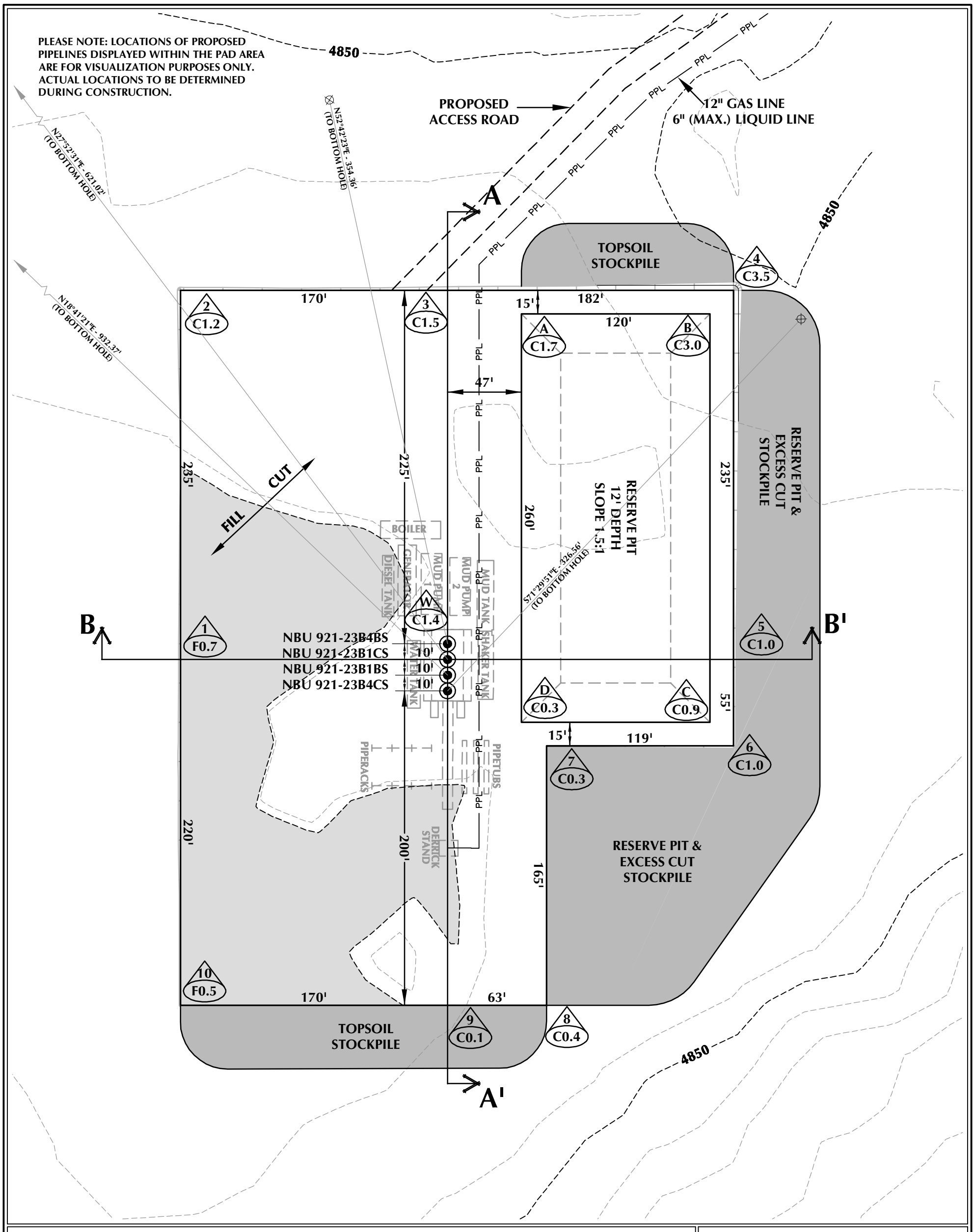
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 7-19-11	SURVEYED BY: M.S.B.	SHEET NO:
DATE DRAWN: 8-17-11	DRAWN BY: T.J.R.	5
SCALE: 1" = 60'	Date Last Revised:	5 OF 16

RECEIVED: May 18, 2012



WELL PAD - NBU 921-23B DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4847.3'
FINISHED GRADE ELEVATION = 4845.9'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.28 ACRES
TOTAL DISTURBANCE AREA = 4.46 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

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

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 2,126 C.Y.
TOTAL FILL FOR WELL PAD = 1,235 C.Y.
TOPSOIL @ 6" DEPTH = 2,646 C.Y.
EXCESS MATERIAL = 891 C.Y.

RESERVE PIT QUANTITIES

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

WELL PAD LEGEND

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

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

WELL PAD - NBU 921-23B

WELL PAD - LOCATION LAYOUT
NBU 921-23B4BS, NBU 921-23B1CS,
NBU 921-23B1BS & NBU 921-23B4CS
LOCATED IN SECTION 23, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

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209 NORTH 300 WEST - VERNAL, UTAH 84078

SCALE: 1"=60' | DATE: 9/9/11 | SHEET NO: 6
REVISED:
6 OF 16

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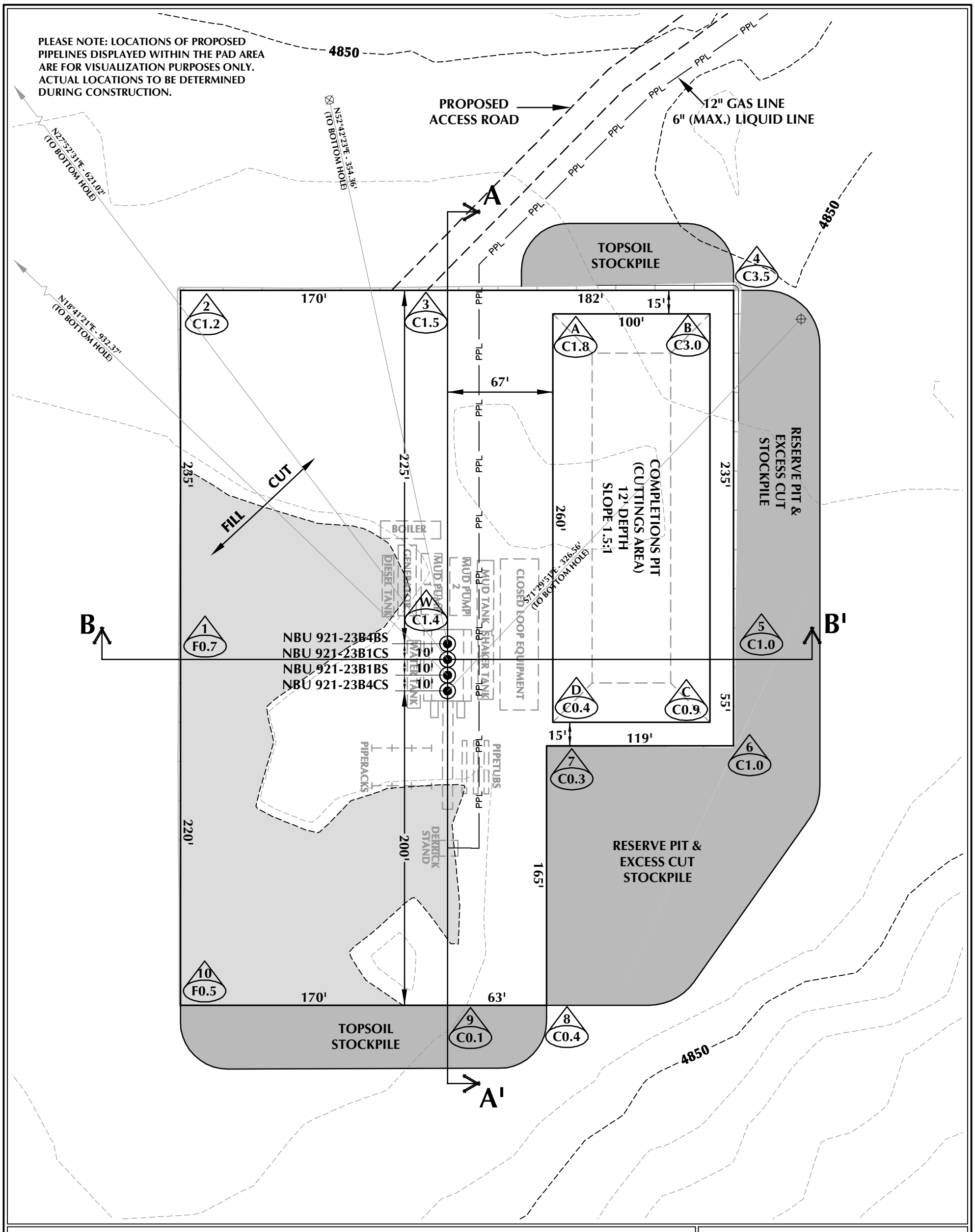
RECEIVED: May 18, 2012



WELL PAD - NBU 921-23B (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4847.3'
FINISHED GRADE ELEVATION = 4845.9'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.28 ACRES
TOTAL DISTURBANCE AREA = 4.46 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

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1099 18th Street - Denver, Colorado 80202

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 2,126 C.Y.
TOTAL FILL FOR WELL PAD = 1,235 C.Y.
TOPSOIL @ 6" DEPTH = 2,646 C.Y.
EXCESS MATERIAL = 891 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)
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE

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

WELL PAD - NBU 921-23B

WELL PAD - LOCATION LAYOUT
NBU 921-23B4BS, NBU 921-23B1CS,
NBU 921-23B1BS & NBU 921-23B4CS
LOCATED IN SECTION 23, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

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209 NORTH 300 WEST - VERNAL, UTAH 84078

SCALE: 1"=60' | DATE: 11/23/11 | SHEET NO: 6B 6B OF 16
REVISED:

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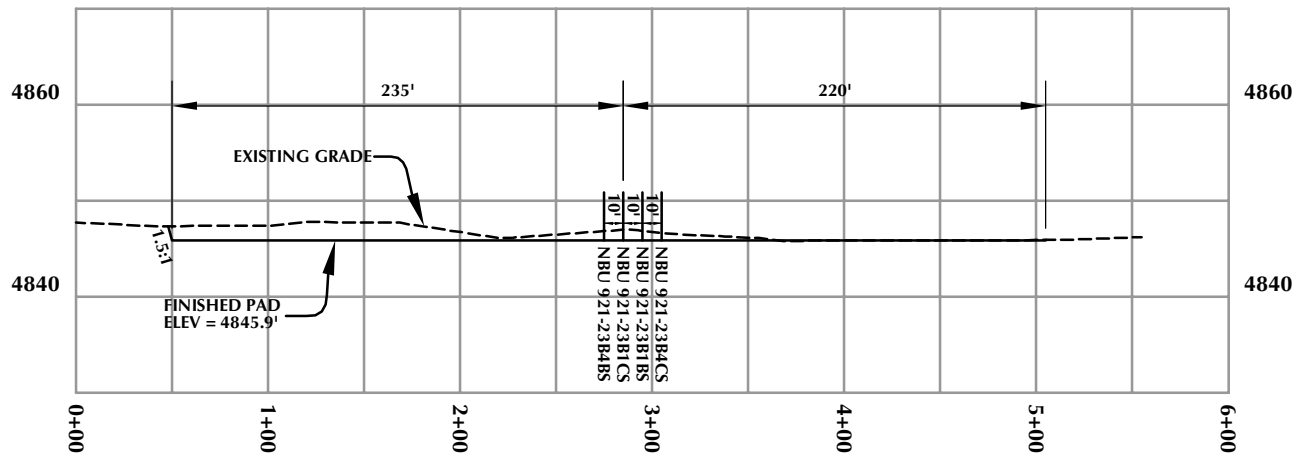
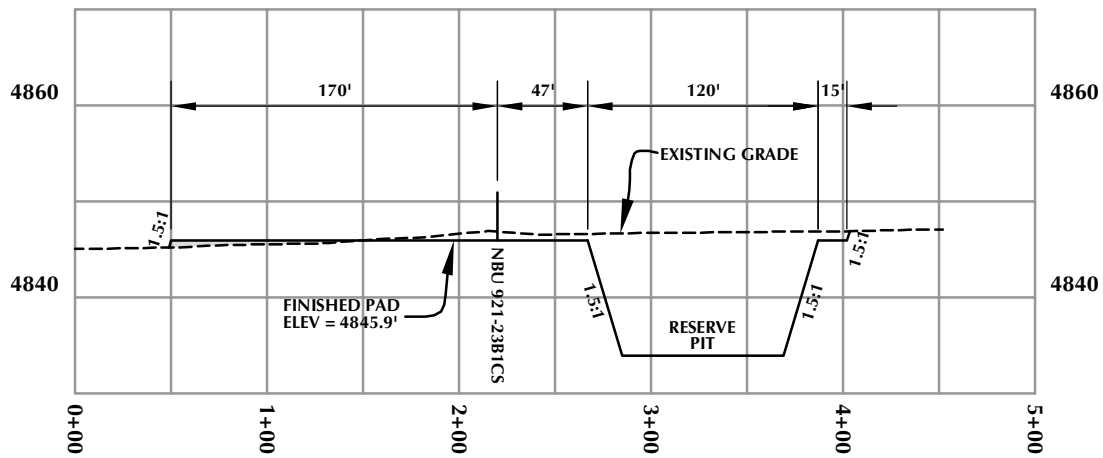


CROSS SECTION A-A'



CROSS SECTION B-B'

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

WELL PAD - NBU 921-23B

WELL PAD - CROSS SECTIONS
NBU 921-23B4BS, NBU 921-23B1CS,
NBU 921-23B1BS & NBU 921-23B4CS
LOCATED IN SECTION 23, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

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209 NORTH 300 WEST - VERNAL, UTAH 84078

HORIZONTAL 0 50' 100' 1" = 100'
VERTICAL 0 10' 20' 1" = 20'

Scale: 1"=100'	Date: 9/9/11	SHEET NO:
REVISED:		7

7 OF 16

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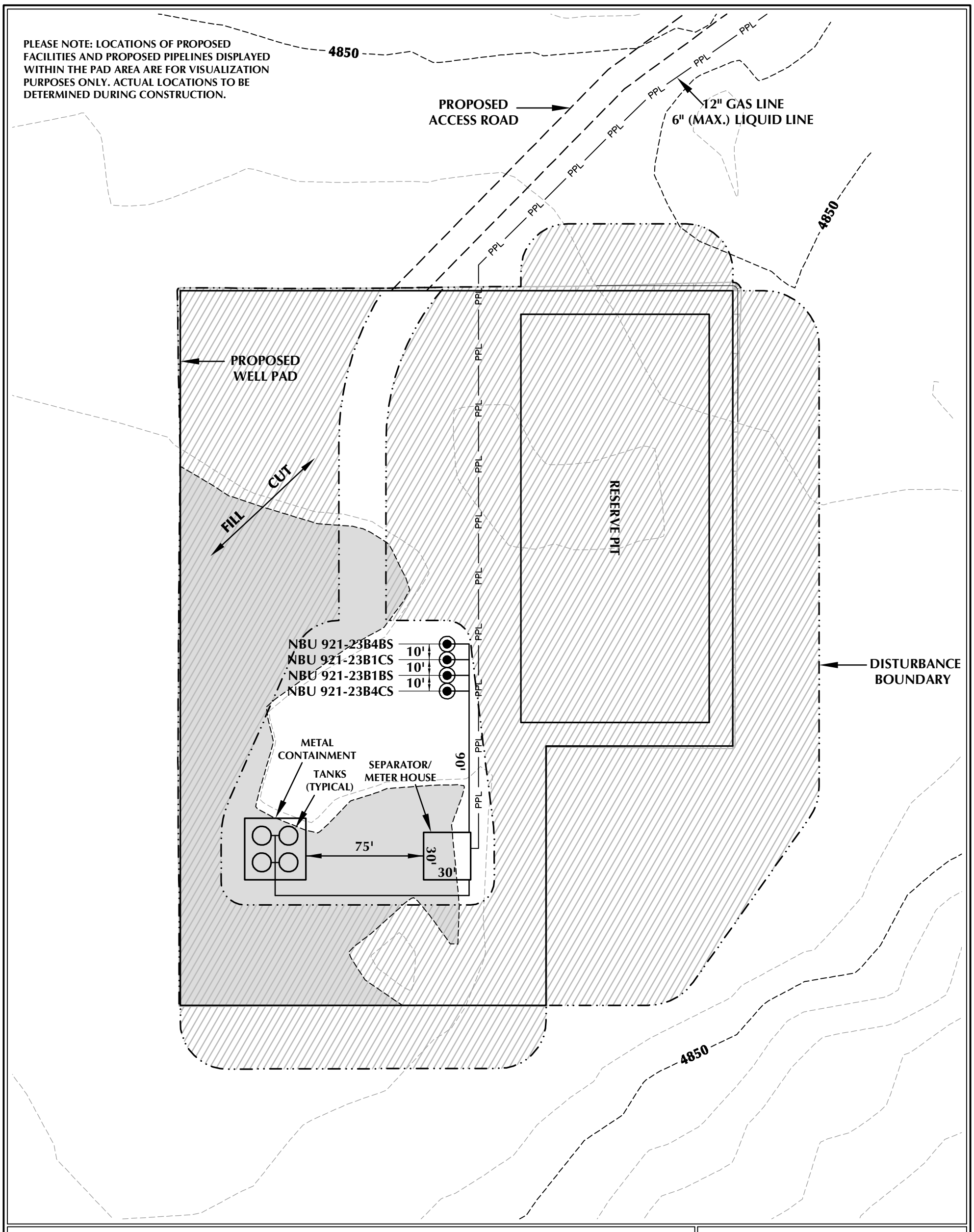
RECEIVED: May 18, 2012



WELL PAD - NBU 921-23B DESIGN SUMMARY

TOTAL DISTURBANCE AREA = 4.46 ACRES
RECLAMATION AREA = 3.70 ACRES
TOTAL WELL PAD AREA AFTER RECLAMATION = 0.76 ACRES

WELL PAD LEGEND

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

HORIZONTAL 0 30' 60' 1" = 60'

2' CONTOURS

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

WELL PAD - NBU 921-23B

WELL PAD - RECLAMATION LAYOUT
NBU 921-23B4BS, NBU 921-23B1CS,
NBU 921-23B1BS & NBU 921-23B4CS
LOCATED IN SECTION 23, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

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209 NORTH 300 WEST - VERNAL, UTAH 84078

SCALE: 1"=60' | DATE: 11/29/11 | SHEET NO: 8
REVISED:
8 OF 16

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RECEIVED: May 18, 2012

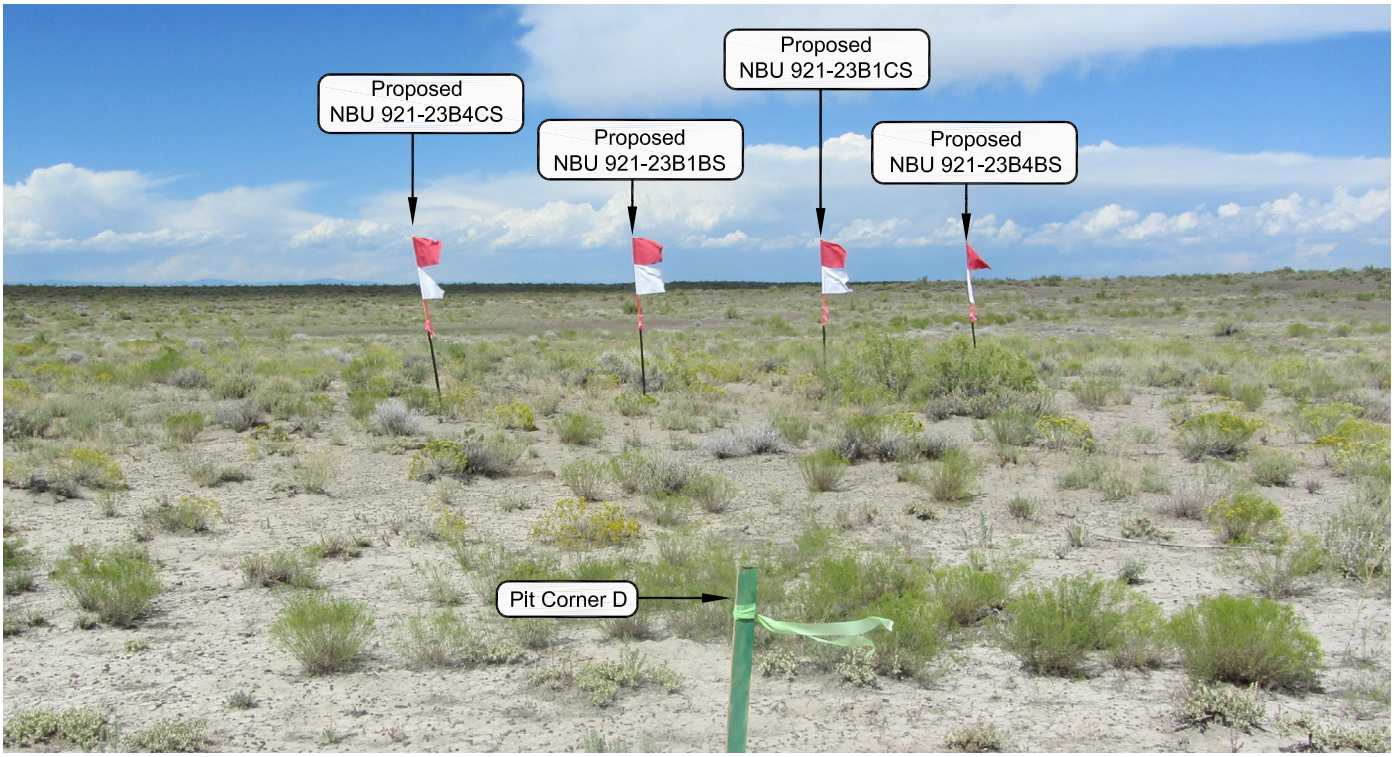

PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE — CAMERA ANGLE: NORTHERLY

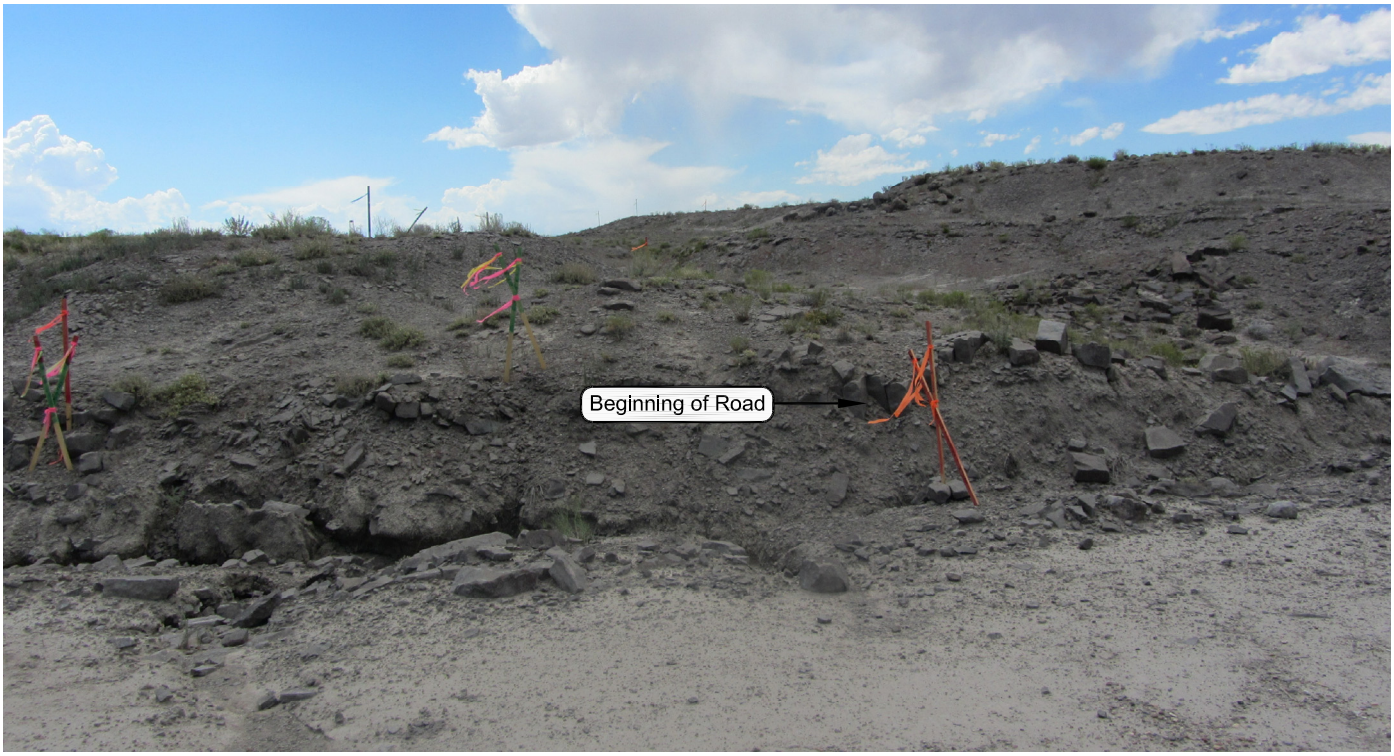

PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD — CAMERA ANGLE: NORTHERLY

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

WELL PAD - NBU 921-23B

LOCATION PHOTOS
NBU 921-23B4BS, NBU 921-23B1CS, NBU 921-23B1BS & NBU 921-23B4CS
LOCATED IN SECTION 23, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.

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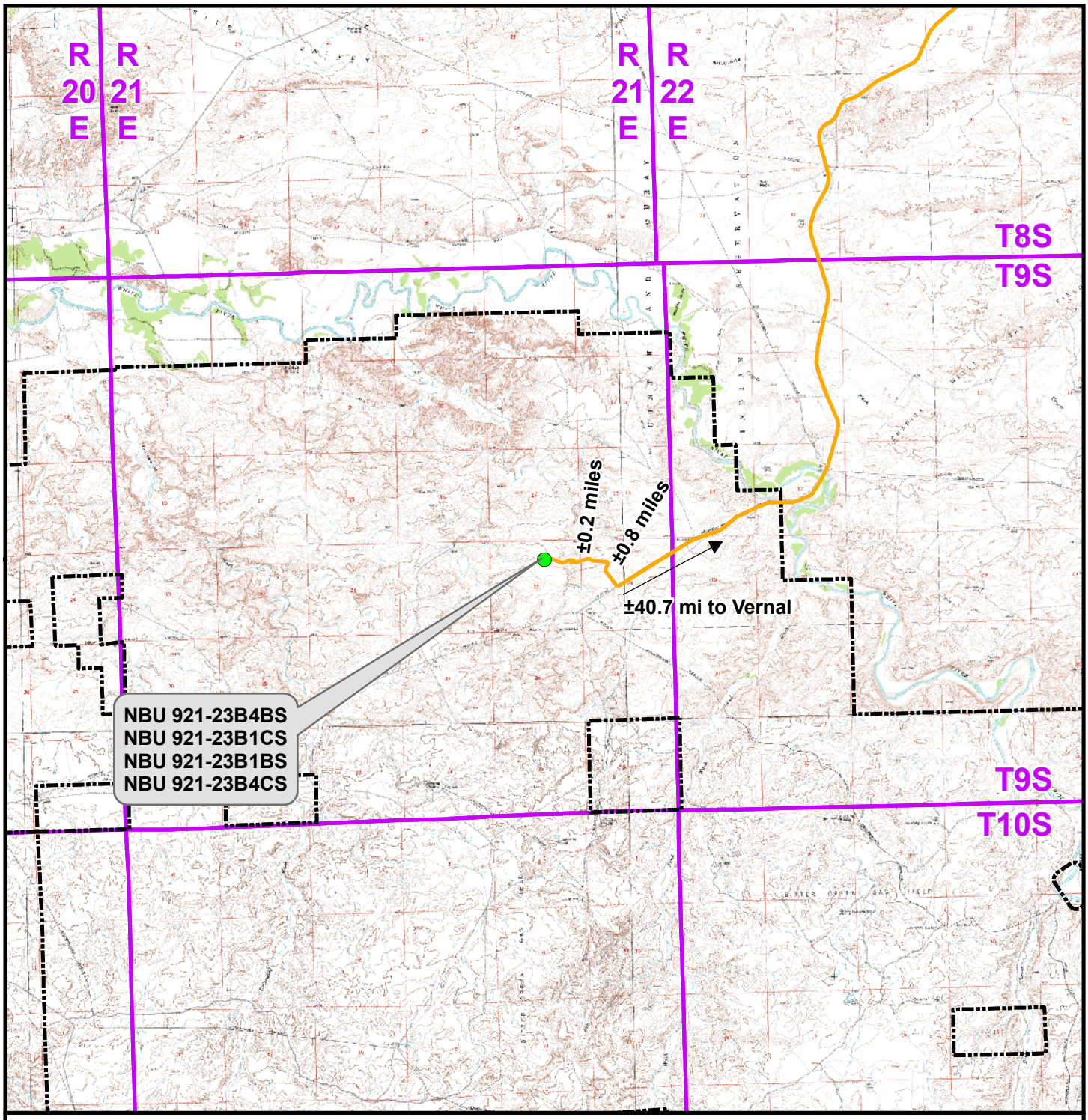
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 7-19-11	PHOTOS TAKEN BY: PARTY	SHEET NO:
DATE DRAWN: 8-17-11	DRAWN BY: T.J.R.	9
Date Last Revised:		9 OF 16

RECEIVED: May 18, 2012



Legend

Distance From Well Pad - NBU 921-23B To Unit Boundary: ±9,690ft

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

WELL PAD - NBU 921-23B

TOPO A
NBU 921-23B4BS, NBU 921-23B1CS,
NBU 921-23B1BS & NBU 921-23B4CS
LOCATED IN SECTION 23, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

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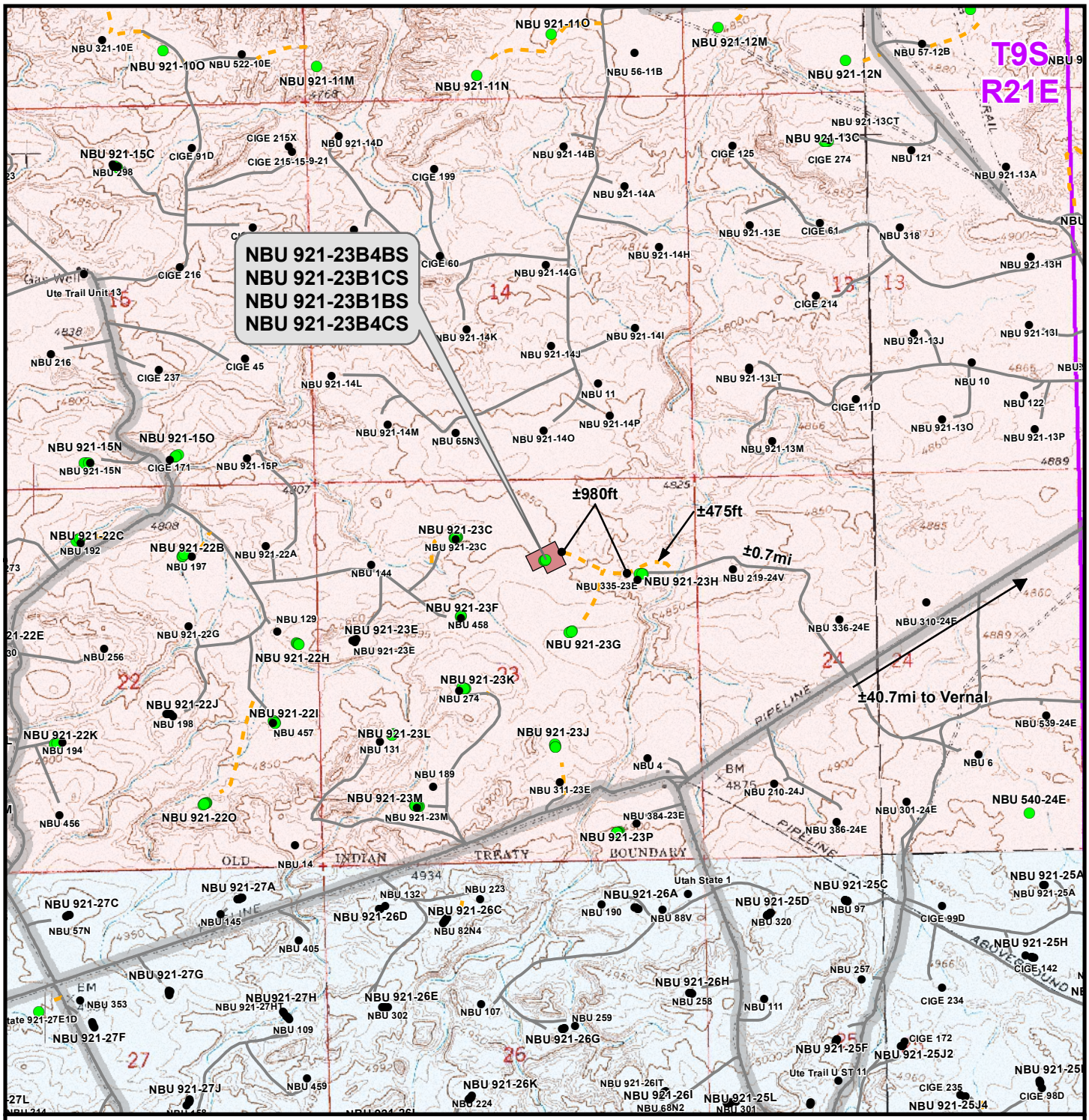
N

SCALE: 1:100,000	NAD83 USP Central	SHEET NO: 10
DRAWN: TL	DATE: 9 Sept 2011	10 OF 16
REVISED:	DATE:	

RECEIVED: May 18, 2012

API Well Number: 43047527160000



Legend

Total Proposed Road Length: ±980ft

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

WELL PAD - NBU 921-23B

TOPO B
NBU 921-23B4BS, NBU 921-23B1CS, NBU 921-23B1BS & NBU 921-23B4CS
LOCATED IN SECTION 23, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH

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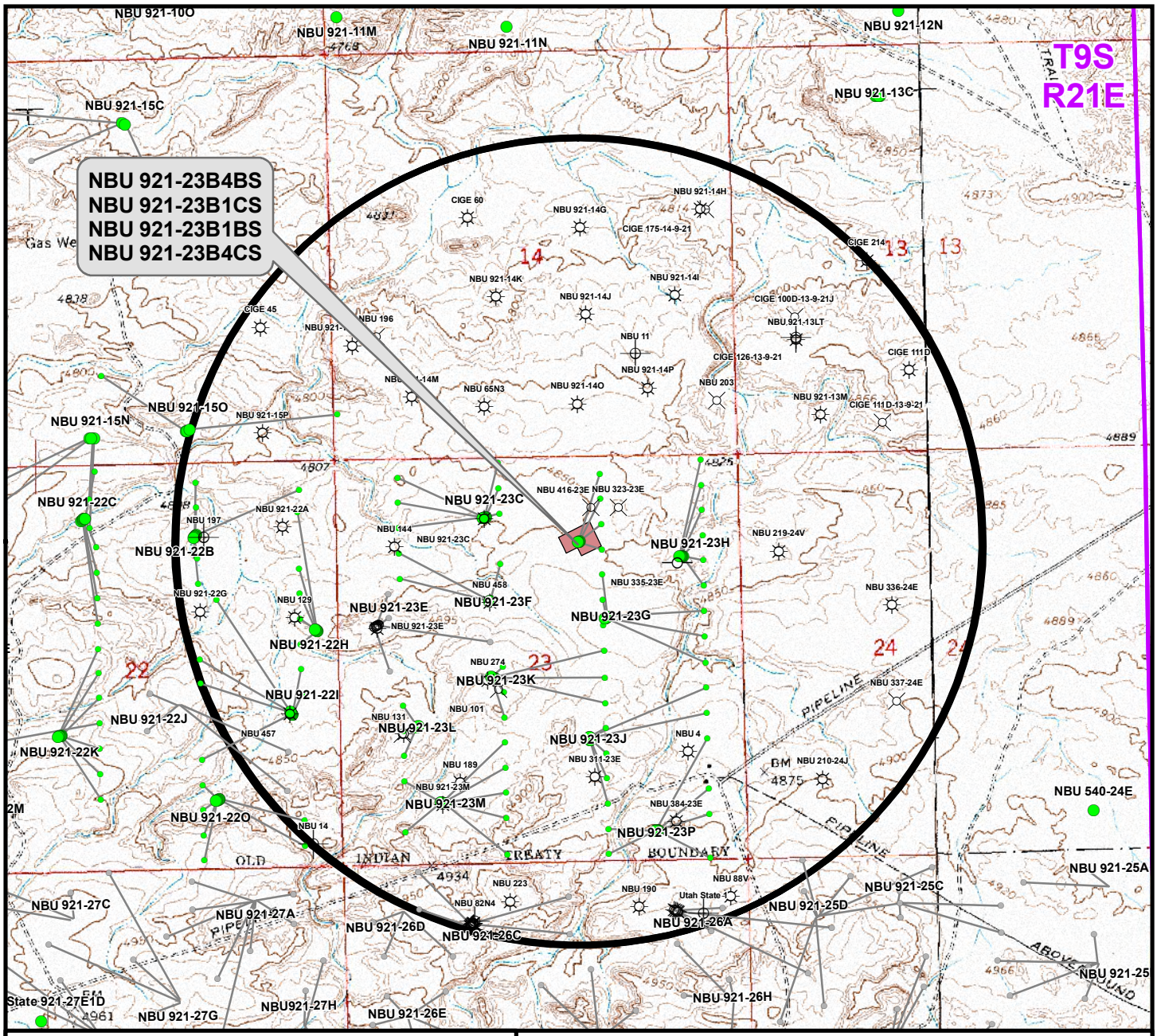
N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 11
DRAWN: TL	DATE: 9 Sept 2011	11 OF 16
REVISED:	DATE:	

RECEIVED: May 18, 2012

API Well Number: 43047527160000



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

Proposed Well	Nearest Well Bore	Footage
NBU 921-23B4BS	NBU 335-23E	1,116ft
NBU 921-23B1CS	NBU 921-14O	1,281ft
NBU 921-23B1BS	NBU 921-14O	961ft
NBU 921-23B4CS	NBU 335-23E	1,005ft

Legend

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

WELL PAD - NBU 921-23B

TOPO C
NBU 921-23B4BS, NBU 921-23B1CS, NBU 921-23B1BS & NBU 921-23B4CS
LOCATED IN SECTION 23, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH

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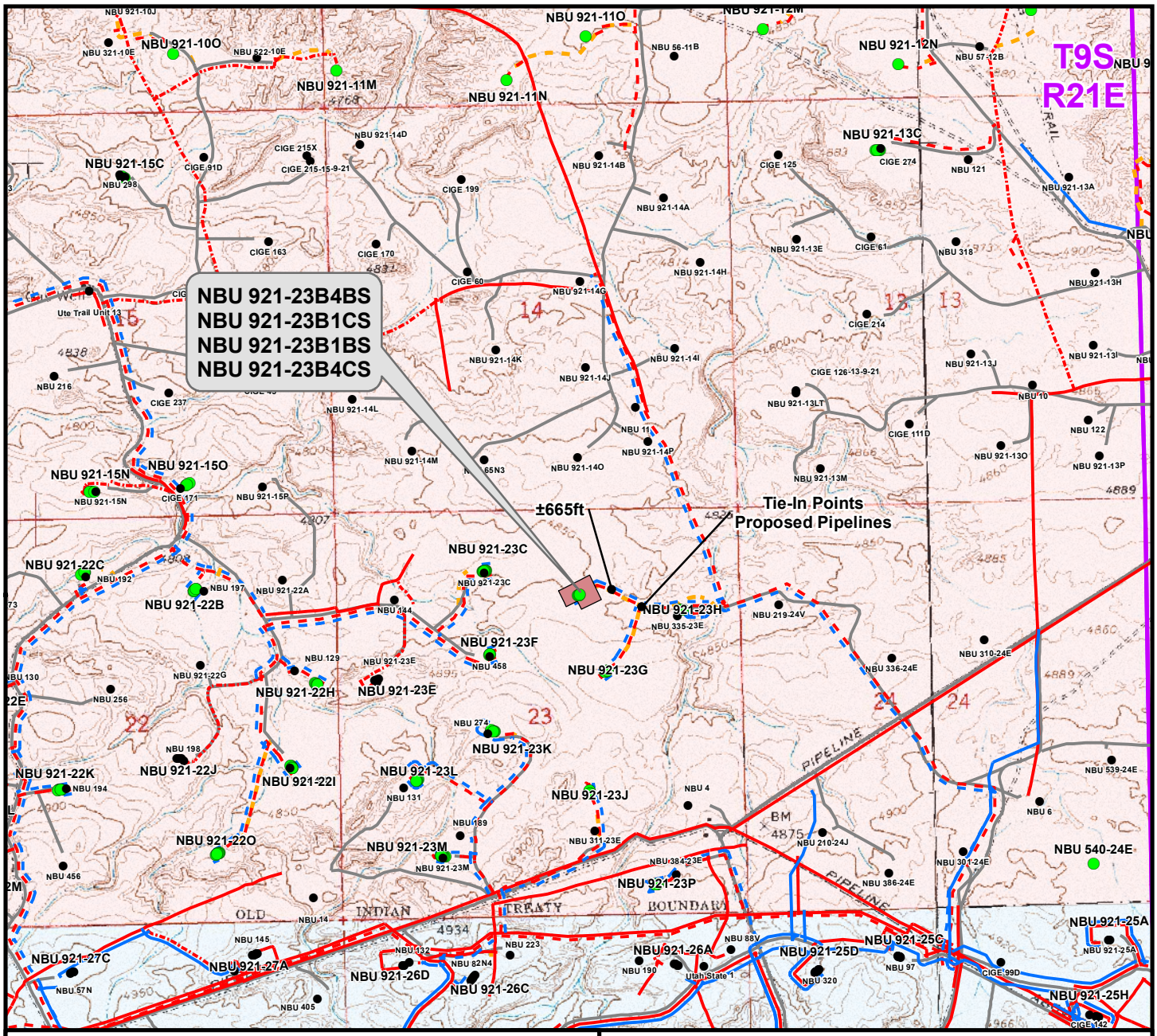
N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 12
DRAWN: TL	DATE: 9 Sept 2011	12 OF 16
REVISED:	DATE:	

RECEIVED: May 18, 2012

API Well Number: 43047527160000



Proposed Liquid Pipeline	Length
Buried 6"(Max.) (Meter House to Edge of Pad)	±360ft
Buried 6"(Max.) (Edge of Pad to 23G Intersection)	±665ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±1,025ft

Proposed Gas Pipeline	Length
Buried 12" (Meter House to Edge of Pad)	±360ft
Buried 12" (Edge of Pad to 23G Intersection)	±665ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±1,025ft

Legend

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

WELL PAD - NBU 921-23B

TOPO D
NBU 921-23B4BS, NBU 921-23B1CS, NBU 921-23B1BS & NBU 921-23B4CS
LOCATED IN SECTION 23, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH

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Denver, Colorado 80202

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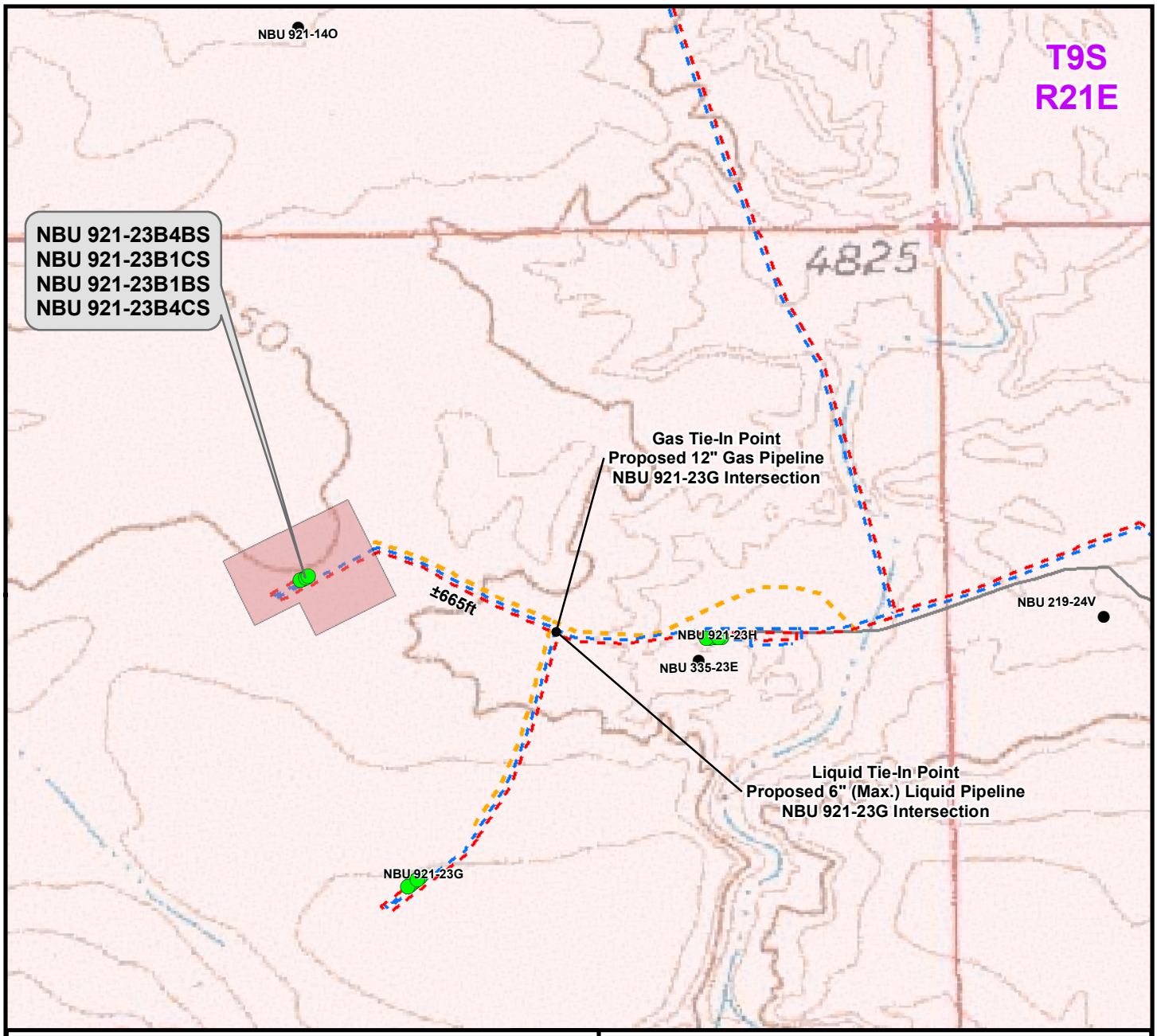
N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 13
DRAWN: TL	DATE: 9 Sept 2011	13 OF 16
REVISED:	DATE:	

RECEIVED: May 18, 2012

API Well Number: 43047527160000



Proposed Liquid Pipeline	Length
Buried 6"(Max.) (Meter House to Edge of Pad)	±360ft
Buried 6"(Max.) (Edge of Pad to 23G Intersection)	±665ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±1,025ft

Proposed Gas Pipeline	Length
Buried 12" (Meter House to Edge of Pad)	±360ft
Buried 12" (Edge of Pad to 23G Intersection)	±665ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±1,025ft

Legend

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

WELL PAD - NBU 921-23B

TOPO D2 (PAD & PIPELINE DETAIL)
NBU 921-23B4BS, NBU 921-23B1CS,
NBU 921-23B1BS & NBU 921-23B4CS
LOCATED IN SECTION 23, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

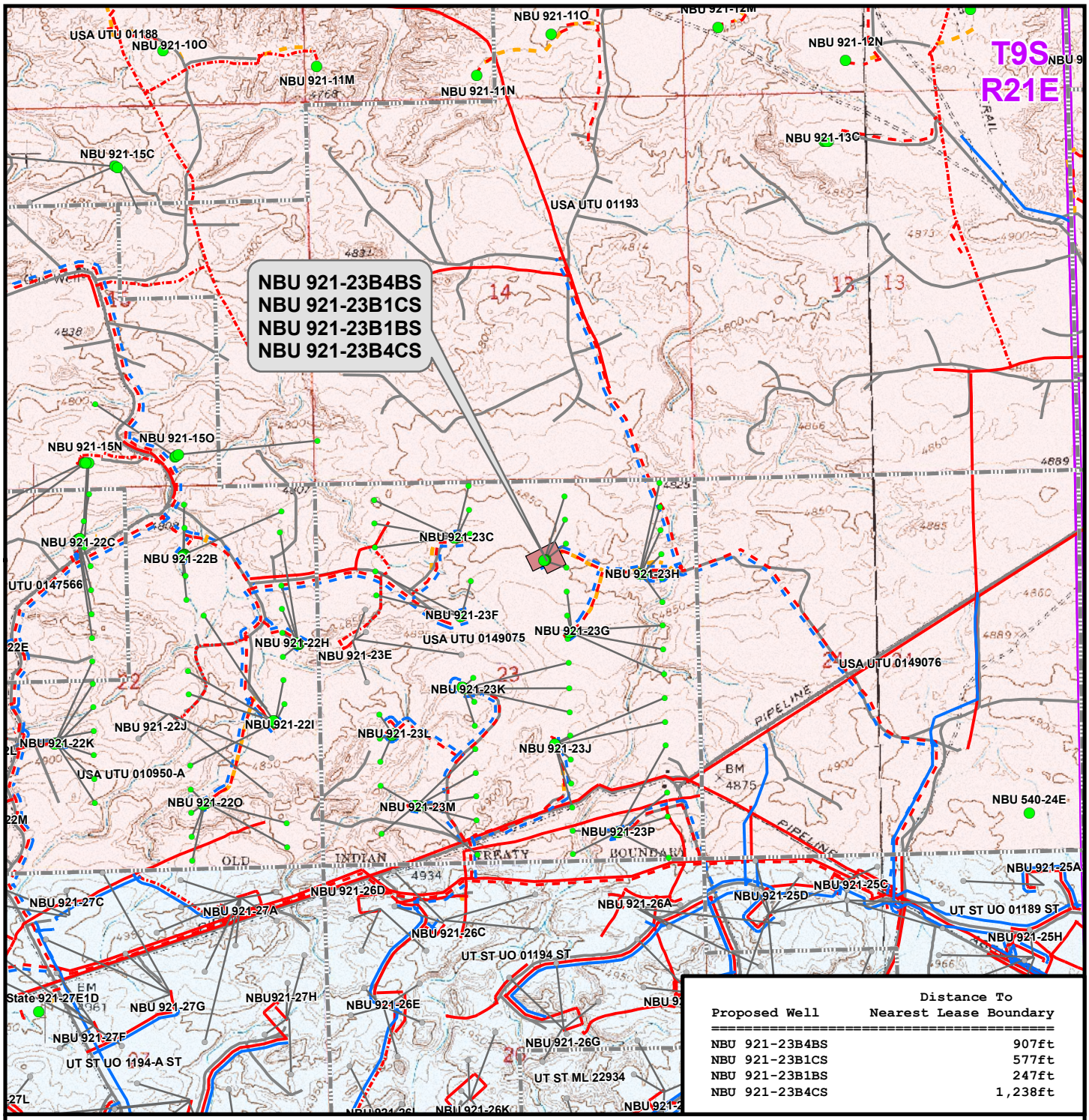
609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 500ft	NAD83 USP Central	SHEET NO: 14
DRAWN: TL	DATE: 9 Sept 2011	14 OF 16
REVISED:	DATE:	

RECEIVED: May 18, 2012

API Well Number: 43047527160000



Proposed Well	Distance To Nearest Lease Boundary
NBU 921-23B4BS	907ft
NBU 921-23B1CS	577ft
NBU 921-23B1BS	247ft
NBU 921-23B4CS	1,238ft

Legend

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

WELL PAD - NBU 921-23B

TOPO E
NBU 921-23B4BS, NBU 921-23B1CS, NBU 921-23B1BS & NBU 921-23B4CS
LOCATED IN SECTION 23, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

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

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 15
DRAWN: TL	DATE: 9 Sept 2011	15 OF 16
REVISED:	DATE:	

RECEIVED: May 18, 2012

Kerr-McGee Oil & Gas Onshore, LP
WELL PAD - NBU 921-23B
WELLS - NBU 921-23B4BS, NBU 921-23B1CS,
NBU 921-23B1BS, & NBU 921-23B4CS
Section 23, 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 17.2 miles to a service road to the northwest. Exit right and proceed in a northwesterly, then southwesterly direction along the service road approximately 0.7 miles to the proposed NBU 921-23H well pad. Continue in a westerly direction through the proposed well pad approximately 475 feet to the proposed access road. Follow road flags in a northwesterly direction approximately 980 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 41.7 miles in a southerly direction.

RECEIVED: May 18, 2012

API Well Number: 43047527160000

Scientific Drilling
Rocky Mountain Operations

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 921-23B PAD
Well: NBU 921-23B1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

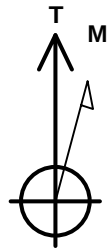
WELL DETAILS: NBU 921-23B1CS

GL 4846 & KB 4 @ 4850.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14538878.29	2055767.97	40° 1' 32.686 N	109° 30' 58.979 W

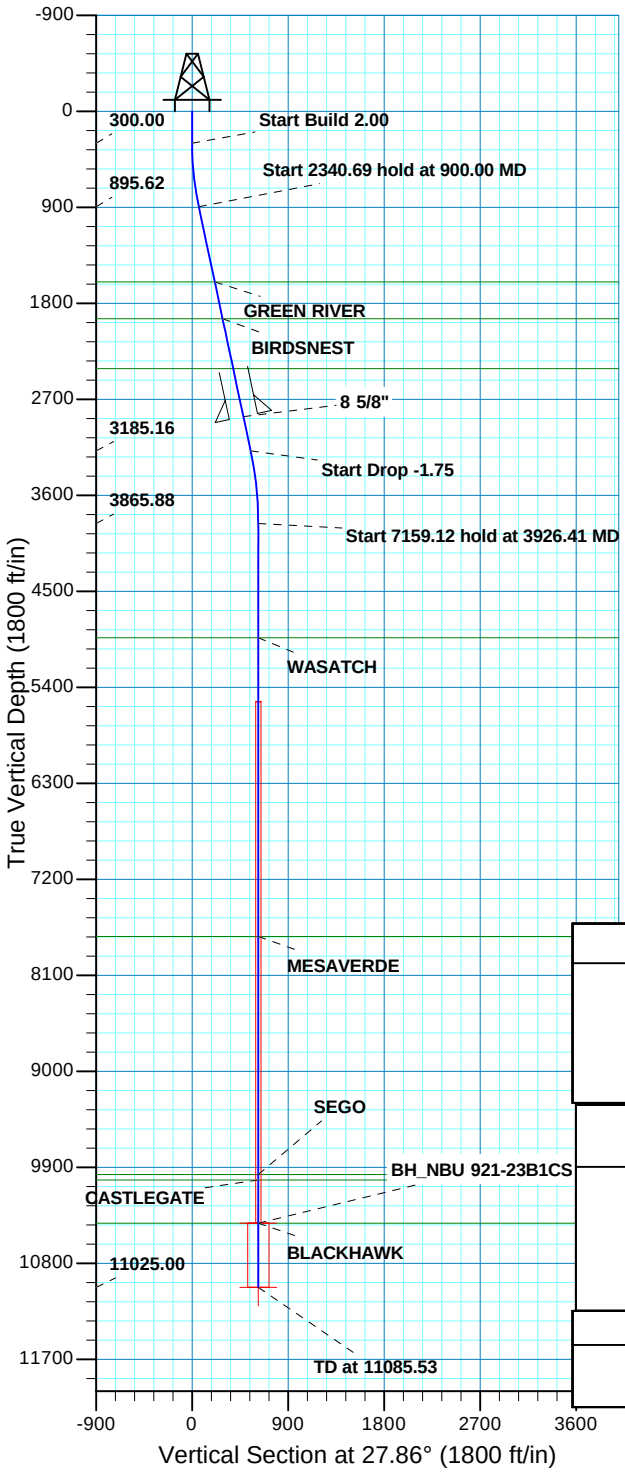
DESIGN TARGET DETAILS

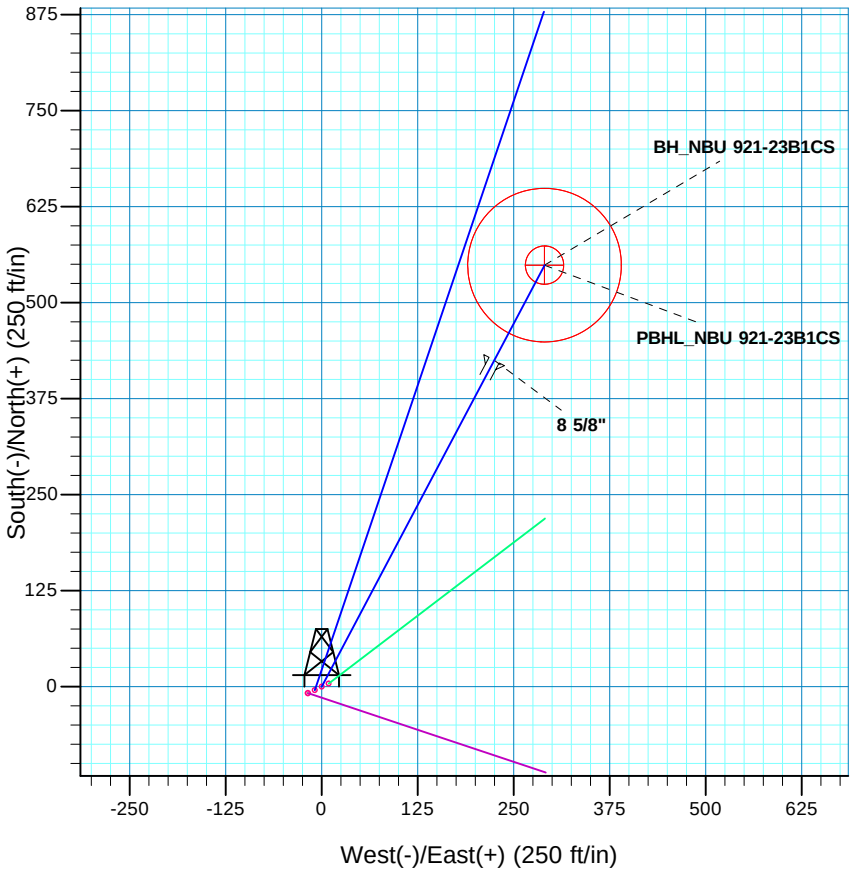
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
BH	10425.00	548.86	290.08	14539431.90	2056048.87	40° 1' 38.111 N	109° 30' 55.249 W	Circle (Radius: 25.00)
- plan hits target center								
PBHL	11025.00	548.86	290.08	14539431.90	2056048.87	40° 1' 38.111 N	109° 30' 55.249 W	Circle (Radius: 100.00)
- plan hits target center								



Azimuths to True North
Magnetic North: 11.03°

Magnetic Field
Strength: 52302.0snT
Dip Angle: 65.88°
Date: 2011/11/08
Model: IGRF2010





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	
900.00	12.00	27.86	895.62	55.35	29.25	2.00	27.86	62.60	
3240.69	12.00	27.86	3185.16	485.61	256.65	0.00	0.00	549.26	
3926.41	0.00	0.00	3865.88	548.86	290.08	1.75	180.00	620.81	
11085.53	0.00	0.00	11025.00	548.86	290.08	0.00	0.00	620.81	PBHL_NBU 921-23B1CS

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

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 23 T9S R21E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1601.00	1621.14	GREEN RIVER
1944.00	1971.80	BIRDSNEST
2413.00	2451.28	MAHOGANY
4936.00	4996.53	WASATCH
7738.00	7798.53	MESAVERDE
9969.00	10029.53	SEGO
10019.00	10079.53	CASTLEGATE
10425.00	10485.53	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2863.00	2911.33	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 921-23B1CS/OH)

Created By: RobertScott Date: 12:30, November 08 2011

RECEI

API Well Number: 43047527160000

Scientific Drilling
Rocky Mountain Operations

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N
NBU 921-23B PAD
NBU 921-23B1CS

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

08 November, 2011

Anadarko
Petroleum Corporation

RECEIVED: May 18, 2012

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 921-23B1CS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 4846 & KB 4 @ 4850.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 4846 & KB 4 @ 4850.00ft (ASSUMED)
Site:	NBU 921-23B PAD	**North Reference:**	True
Well:	NBU 921-23B1CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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

Map System:	Universal Transverse Mercator (US Survey Feet)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site NBU 921-23B PAD, SECTION 23 T9S R21E

Site Position:		**Northing:**	14,538,869.62 usft	**Latitude:**	40° 1' 32.603 N
From:	Lat/Long	**Easting:**	2,055,750.19 usft	**Longitude:**	109° 30' 59.209 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.95 °

Well NBU 921-23B1CS, 1128 FNL 2107 FEL

Well Position	**+N/-S**	8.38 ft	**Northing:**	14,538,878.29 usft	**Latitude:**	40° 1' 32.686 N
	+E/-W	17.92 ft	**Easting:**	2,055,767.96 usft	**Longitude:**	109° 30' 58.979 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**		**Ground Level:**	4,846.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/11/08	11.03	65.88	52,302

Design PLAN #1 PRELIMINARY

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	27.86

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	
900.00	12.00	27.86	895.62	55.35	29.25	2.00	2.00	0.00	27.86	
3,240.69	12.00	27.86	3,185.17	485.61	256.65	0.00	0.00	0.00	0.00	
3,926.41	0.00	0.00	3,865.88	548.86	290.08	1.75	-1.75	0.00	180.00	
11,085.53	0.00	0.00	11,025.00	548.86	290.08	0.00	0.00	0.00	0.00	PBHL_NBU 921-23B´

RECEIVED: May 18, 2012

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 921-23B1CS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 4846 & KB 4 @ 4850.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 4846 & KB 4 @ 4850.00ft (ASSUMED)
Site:	NBU 921-23B PAD	**North Reference:**	True
Well:	NBU 921-23B1CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	27.86	399.98	1.54	0.82	1.75	2.00	2.00	0.00
500.00	4.00	27.86	499.84	6.17	3.26	6.98	2.00	2.00	0.00
600.00	6.00	27.86	599.45	13.87	7.33	15.69	2.00	2.00	0.00
700.00	8.00	27.86	698.70	24.65	13.03	27.88	2.00	2.00	0.00
800.00	10.00	27.86	797.47	38.48	20.34	43.52	2.00	2.00	0.00
900.00	12.00	27.86	895.62	55.35	29.25	62.60	2.00	2.00	0.00
Start 2340.69 hold at 900.00 MD									
1,000.00	12.00	27.86	993.44	73.73	38.97	83.39	0.00	0.00	0.00
1,100.00	12.00	27.86	1,091.25	92.11	48.68	104.18	0.00	0.00	0.00
1,200.00	12.00	27.86	1,189.07	110.49	58.40	124.98	0.00	0.00	0.00
1,300.00	12.00	27.86	1,286.88	128.87	68.11	145.77	0.00	0.00	0.00
1,400.00	12.00	27.86	1,384.70	147.26	77.83	166.56	0.00	0.00	0.00
1,500.00	12.00	27.86	1,482.51	165.64	87.54	187.35	0.00	0.00	0.00
1,600.00	12.00	27.86	1,580.33	184.02	97.26	208.14	0.00	0.00	0.00
1,621.14	12.00	27.86	1,601.00	187.91	99.31	212.54	0.00	0.00	0.00
GREEN RIVER									
1,700.00	12.00	27.86	1,678.14	202.40	106.97	228.93	0.00	0.00	0.00
1,800.00	12.00	27.86	1,775.96	220.78	116.69	249.72	0.00	0.00	0.00
1,900.00	12.00	27.86	1,873.77	239.17	126.40	270.51	0.00	0.00	0.00
1,971.80	12.00	27.86	1,944.00	252.36	133.38	285.44	0.00	0.00	0.00
BIRDSNEST									
2,000.00	12.00	27.86	1,971.59	257.55	136.12	291.31	0.00	0.00	0.00
2,100.00	12.00	27.86	2,069.40	275.93	145.83	312.10	0.00	0.00	0.00
2,200.00	12.00	27.86	2,167.22	294.31	155.55	332.89	0.00	0.00	0.00
2,300.00	12.00	27.86	2,265.03	312.69	165.26	353.68	0.00	0.00	0.00
2,400.00	12.00	27.86	2,362.84	331.07	174.98	374.47	0.00	0.00	0.00
2,451.28	12.00	27.86	2,413.00	340.50	179.96	385.13	0.00	0.00	0.00
MAHOGANY									
2,500.00	12.00	27.86	2,460.66	349.46	184.69	395.26	0.00	0.00	0.00
2,600.00	12.00	27.86	2,558.47	367.84	194.41	416.05	0.00	0.00	0.00
2,700.00	12.00	27.86	2,656.29	386.22	204.12	436.84	0.00	0.00	0.00
2,800.00	12.00	27.86	2,754.10	404.60	213.84	457.63	0.00	0.00	0.00
2,900.00	12.00	27.86	2,851.92	422.98	223.55	478.43	0.00	0.00	0.00
2,911.33	12.00	27.86	2,863.00	425.07	224.65	480.78	0.00	0.00	0.00
8 5/8"									
3,000.00	12.00	27.86	2,949.73	441.37	233.27	499.22	0.00	0.00	0.00
3,100.00	12.00	27.86	3,047.55	459.75	242.98	520.01	0.00	0.00	0.00
3,200.00	12.00	27.86	3,145.36	478.13	252.70	540.80	0.00	0.00	0.00
3,240.69	12.00	27.86	3,185.17	485.61	256.65	549.26	0.00	0.00	0.00
Start Drop -1.75									
3,300.00	10.96	27.86	3,243.29	496.05	262.17	561.06	1.75	-1.75	0.00
3,400.00	9.21	27.86	3,341.74	511.53	270.35	578.58	1.75	-1.75	0.00
3,500.00	7.46	27.86	3,440.68	524.35	277.13	593.08	1.75	-1.75	0.00
3,600.00	5.71	27.86	3,540.01	534.49	282.49	604.55	1.75	-1.75	0.00
3,700.00	3.96	27.86	3,639.65	541.95	286.43	612.98	1.75	-1.75	0.00
3,800.00	2.21	27.86	3,739.50	546.71	288.94	618.37	1.75	-1.75	0.00
3,900.00	0.46	27.86	3,839.47	548.77	290.03	620.70	1.75	-1.75	0.00
3,926.41	0.00	0.00	3,865.88	548.86	290.08	620.81	1.75	-1.75	0.00

RECEIVED: May 18, 2012

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 921-23B1CS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 4846 & KB 4 @ 4850.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 4846 & KB 4 @ 4850.00ft (ASSUMED)
Site:	NBU 921-23B PAD	**North Reference:**	True
Well:	NBU 921-23B1CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Start 7159.12 hold at 3926.41 MD									
4,000.00	0.00	0.00	3,939.47	548.86	290.08	620.81	0.00	0.00	0.00
4,100.00	0.00	0.00	4,039.47	548.86	290.08	620.81	0.00	0.00	0.00
4,200.00	0.00	0.00	4,139.47	548.86	290.08	620.81	0.00	0.00	0.00
4,300.00	0.00	0.00	4,239.47	548.86	290.08	620.81	0.00	0.00	0.00
4,400.00	0.00	0.00	4,339.47	548.86	290.08	620.81	0.00	0.00	0.00
4,500.00	0.00	0.00	4,439.47	548.86	290.08	620.81	0.00	0.00	0.00
4,600.00	0.00	0.00	4,539.47	548.86	290.08	620.81	0.00	0.00	0.00
4,700.00	0.00	0.00	4,639.47	548.86	290.08	620.81	0.00	0.00	0.00
4,800.00	0.00	0.00	4,739.47	548.86	290.08	620.81	0.00	0.00	0.00
4,900.00	0.00	0.00	4,839.47	548.86	290.08	620.81	0.00	0.00	0.00
4,996.53	0.00	0.00	4,936.00	548.86	290.08	620.81	0.00	0.00	0.00
WASATCH									
5,000.00	0.00	0.00	4,939.47	548.86	290.08	620.81	0.00	0.00	0.00
5,100.00	0.00	0.00	5,039.47	548.86	290.08	620.81	0.00	0.00	0.00
5,200.00	0.00	0.00	5,139.47	548.86	290.08	620.81	0.00	0.00	0.00
5,300.00	0.00	0.00	5,239.47	548.86	290.08	620.81	0.00	0.00	0.00
5,400.00	0.00	0.00	5,339.47	548.86	290.08	620.81	0.00	0.00	0.00
5,500.00	0.00	0.00	5,439.47	548.86	290.08	620.81	0.00	0.00	0.00
5,600.00	0.00	0.00	5,539.47	548.86	290.08	620.81	0.00	0.00	0.00
5,700.00	0.00	0.00	5,639.47	548.86	290.08	620.81	0.00	0.00	0.00
5,800.00	0.00	0.00	5,739.47	548.86	290.08	620.81	0.00	0.00	0.00
5,900.00	0.00	0.00	5,839.47	548.86	290.08	620.81	0.00	0.00	0.00
6,000.00	0.00	0.00	5,939.47	548.86	290.08	620.81	0.00	0.00	0.00
6,100.00	0.00	0.00	6,039.47	548.86	290.08	620.81	0.00	0.00	0.00
6,200.00	0.00	0.00	6,139.47	548.86	290.08	620.81	0.00	0.00	0.00
6,300.00	0.00	0.00	6,239.47	548.86	290.08	620.81	0.00	0.00	0.00
6,400.00	0.00	0.00	6,339.47	548.86	290.08	620.81	0.00	0.00	0.00
6,500.00	0.00	0.00	6,439.47	548.86	290.08	620.81	0.00	0.00	0.00
6,600.00	0.00	0.00	6,539.47	548.86	290.08	620.81	0.00	0.00	0.00
6,700.00	0.00	0.00	6,639.47	548.86	290.08	620.81	0.00	0.00	0.00
6,800.00	0.00	0.00	6,739.47	548.86	290.08	620.81	0.00	0.00	0.00
6,900.00	0.00	0.00	6,839.47	548.86	290.08	620.81	0.00	0.00	0.00
7,000.00	0.00	0.00	6,939.47	548.86	290.08	620.81	0.00	0.00	0.00
7,100.00	0.00	0.00	7,039.47	548.86	290.08	620.81	0.00	0.00	0.00
7,200.00	0.00	0.00	7,139.47	548.86	290.08	620.81	0.00	0.00	0.00
7,300.00	0.00	0.00	7,239.47	548.86	290.08	620.81	0.00	0.00	0.00
7,400.00	0.00	0.00	7,339.47	548.86	290.08	620.81	0.00	0.00	0.00
7,500.00	0.00	0.00	7,439.47	548.86	290.08	620.81	0.00	0.00	0.00
7,600.00	0.00	0.00	7,539.47	548.86	290.08	620.81	0.00	0.00	0.00
7,700.00	0.00	0.00	7,639.47	548.86	290.08	620.81	0.00	0.00	0.00
7,798.53	0.00	0.00	7,738.00	548.86	290.08	620.81	0.00	0.00	0.00
MESAVERDE									
7,800.00	0.00	0.00	7,739.47	548.86	290.08	620.81	0.00	0.00	0.00
7,900.00	0.00	0.00	7,839.47	548.86	290.08	620.81	0.00	0.00	0.00
8,000.00	0.00	0.00	7,939.47	548.86	290.08	620.81	0.00	0.00	0.00
8,100.00	0.00	0.00	8,039.47	548.86	290.08	620.81	0.00	0.00	0.00
8,200.00	0.00	0.00	8,139.47	548.86	290.08	620.81	0.00	0.00	0.00
8,300.00	0.00	0.00	8,239.47	548.86	290.08	620.81	0.00	0.00	0.00
8,400.00	0.00	0.00	8,339.47	548.86	290.08	620.81	0.00	0.00	0.00
8,500.00	0.00	0.00	8,439.47	548.86	290.08	620.81	0.00	0.00	0.00
8,600.00	0.00	0.00	8,539.47	548.86	290.08	620.81	0.00	0.00	0.00
8,700.00	0.00	0.00	8,639.47	548.86	290.08	620.81	0.00	0.00	0.00

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Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 921-23B1CS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 4846 & KB 4 @ 4850.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 4846 & KB 4 @ 4850.00ft (ASSUMED)
Site:	NBU 921-23B PAD	**North Reference:**	True
Well:	NBU 921-23B1CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,800.00	0.00	0.00	8,739.47	548.86	290.08	620.81	0.00	0.00	0.00
8,900.00	0.00	0.00	8,839.47	548.86	290.08	620.81	0.00	0.00	0.00
9,000.00	0.00	0.00	8,939.47	548.86	290.08	620.81	0.00	0.00	0.00
9,100.00	0.00	0.00	9,039.47	548.86	290.08	620.81	0.00	0.00	0.00
9,200.00	0.00	0.00	9,139.47	548.86	290.08	620.81	0.00	0.00	0.00
9,300.00	0.00	0.00	9,239.47	548.86	290.08	620.81	0.00	0.00	0.00
9,400.00	0.00	0.00	9,339.47	548.86	290.08	620.81	0.00	0.00	0.00
9,500.00	0.00	0.00	9,439.47	548.86	290.08	620.81	0.00	0.00	0.00
9,600.00	0.00	0.00	9,539.47	548.86	290.08	620.81	0.00	0.00	0.00
9,700.00	0.00	0.00	9,639.47	548.86	290.08	620.81	0.00	0.00	0.00
9,800.00	0.00	0.00	9,739.47	548.86	290.08	620.81	0.00	0.00	0.00
9,900.00	0.00	0.00	9,839.47	548.86	290.08	620.81	0.00	0.00	0.00
10,000.00	0.00	0.00	9,939.47	548.86	290.08	620.81	0.00	0.00	0.00
10,029.53	0.00	0.00	9,969.00	548.86	290.08	620.81	0.00	0.00	0.00
SEGO									
10,079.53	0.00	0.00	10,019.00	548.86	290.08	620.81	0.00	0.00	0.00
CASTLEGATE									
10,100.00	0.00	0.00	10,039.47	548.86	290.08	620.81	0.00	0.00	0.00
10,200.00	0.00	0.00	10,139.47	548.86	290.08	620.81	0.00	0.00	0.00
10,300.00	0.00	0.00	10,239.47	548.86	290.08	620.81	0.00	0.00	0.00
10,400.00	0.00	0.00	10,339.47	548.86	290.08	620.81	0.00	0.00	0.00
10,485.53	0.00	0.00	10,425.00	548.86	290.08	620.81	0.00	0.00	0.00
BLACKHAWK - BH_NBU 921-23B1CS									
10,500.00	0.00	0.00	10,439.47	548.86	290.08	620.81	0.00	0.00	0.00
10,600.00	0.00	0.00	10,539.47	548.86	290.08	620.81	0.00	0.00	0.00
10,700.00	0.00	0.00	10,639.47	548.86	290.08	620.81	0.00	0.00	0.00
10,800.00	0.00	0.00	10,739.47	548.86	290.08	620.81	0.00	0.00	0.00
10,900.00	0.00	0.00	10,839.47	548.86	290.08	620.81	0.00	0.00	0.00
11,000.00	0.00	0.00	10,939.47	548.86	290.08	620.81	0.00	0.00	0.00
11,085.53	0.00	0.00	11,025.00	548.86	290.08	620.81	0.00	0.00	0.00
PBHL_NBU 921-23B1CS									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BH_NBU 921-23B1CS - plan hits target center - Circle (radius 25.00)	0.00	0.00	10,425.00	548.86	290.08	14,539,431.91	2,056,048.86	40° 1' 38.111 N	109° 30' 55.249 W
PBHL_NBU 921-23B1C - plan hits target center - Circle (radius 100.00)	0.00	0.00	11,025.00	548.86	290.08	14,539,431.91	2,056,048.86	40° 1' 38.111 N	109° 30' 55.249 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,911.33	2,863.00	8 5/8"	8.625	11.000

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Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 921-23B1CS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 4846 & KB 4 @ 4850.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 4846 & KB 4 @ 4850.00ft (ASSUMED)
Site:	NBU 921-23B PAD	**North Reference:**	True
Well:	NBU 921-23B1CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,621.14	1,601.00	GREEN RIVER			
1,971.80	1,944.00	BIRDSNEST			
2,451.28	2,413.00	MAHOGANY			
4,996.53	4,936.00	WASATCH			
7,798.53	7,738.00	MESAVERDE			
10,029.53	9,969.00	SEGO			
10,079.53	10,019.00	CASTLEGATE			
10,485.53	10,425.00	BLACKHAWK			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
900.00	895.62	55.35	29.25	Start 2340.69 hold at 900.00 MD
3,240.69	3,185.17	485.61	256.65	Start Drop -1.75
3,926.41	3,865.88	548.86	290.08	Start 7159.12 hold at 3926.41 MD
11,085.53	11,025.00	548.86	290.08	TD at 11085.53

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

NBU 921-23B Pad

API #	NBU 921-23B1BS		
Surface:	1133 FNL / 2116 FEL	NWNE	Lot
BHL:	247 FNL / 1816 FEL	NWNE	Lot

API #	NBU 921-23B1CS		
Surface:	1128 FNL / 2107 FEL	NWNE	Lot
BHL:	577 FNL / 1816 FEL	NWNE	Lot

API #	NBU 921-23B4BS		
Surface:	1124 FNL / 2098 FEL	NWNE	Lot
BHL:	907 FNL / 1816 FEL	NWNE	Lot

API #	NBU 921-23B4CS		
Surface:	1137 FNL / 2125 FEL	NWNE	Lot
BHL:	1238 FNL / 1816 FEL	NWNE	Lot

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

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

An on-site meeting was held on October 3-4, 2011. Present were:

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

A. Existing Roads:

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

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

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

Please refer to Topo B, for existing roads.

B. New or Reconstructed Access Roads:

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

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

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

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

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

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

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

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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.

±980' (0.18 miles) – Section 23 T9S R21E (NE/4) – On-lease UTU0149075, Ute Indian Tribe Surface, from the edge of the pad to the NBU 921-24H Pad intersection. 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 is a new pad; therefore does not have any existing facilities. 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 accomodate a 25 year rainfall event. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with the BLM (typically Shadow Gray). A production facility layout is provided as part of a project-specific APD, ROW or NOS submission.

GAS GATHERING

Please refer to Topo D2 - Pad and Pipeline Detail.

The gas gathering pipeline material: Steel line pipe. Surface = Bare pipe. Buried = Coated with fusion bonded epoxy coating (or equivalent). The total gas gathering pipeline distance from the meter to the tie in point is ±1,025' 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.

±1,025' (0.19 miles) – Section 23 T9S R21E (NE/4) – On-lease UTU0149075, Ute Indian Tribe surface, New 12" buried gas gathering pipeline from the meter to the NBU 921-23G 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 ±1,025' and the individual segments are broken up as follows:

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

±1,025' (0.19 miles) – Section 23 T9S R21E (NE/4) – On-lease UTU0149075, Ute Indian Tribe surface, New 6" buried liquid gathering pipeline from the meter to the NBU 921-23G 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' distrubance width that will be maintained for the portion adjacent to the road. The need for the 30' permanent distrubance width is for maintenance and repairs. Cross country permanent distrubance 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.

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If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, Kerr-McGee will apply all applicable Army Corps mandates as well as the BLM's Hydraulic Considerations for Pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface.
Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations for production integrity and safety purposes.

Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation.
When no longer deemed necessary by the operator, Kerr-McGee or it's successor will consult with the BLM, Vernal Field Office before terminating of the use of the pipeline(s).

The Anadarko Completions Transportation System (ACTS) information:

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 disussed 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 .

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

E. Location and Types of Water Supply:

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

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

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

No water well is to be drilled on this lease.

F. Construction Materials:

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

G. Methods for Handling Waste:

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

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

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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 BLM. Should timely removal not be feasible, the pit will be netted as soon as practical. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

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

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

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

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

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

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

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

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Materials Management

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

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

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

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

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

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

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

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

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

H. Ancillary Facilities:

No additional ancillary facilities are planned for this location.

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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 distrubance will not exceed the maximum disturbance outlined in the attached exhibits.

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

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

J. Plans for Surface Reclamation:

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

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

Interim Reclamation

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

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

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

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Final Reclamation

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

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

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

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

Measures Common to Interim and Final Reclamation

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

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

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

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

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

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

Weed Control

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

Monitoring

Monitoring of reclaimed project areas will be completed annually during the growing season and actions to ensure reclamation success will be taken as needed. During the first two growing seasons an ocular methodology will be used to determine the success of the reclamation activities. During the 3rd growing season a 200 point line intercept (quantitative) methodology will be used to obtain basal cover. The goal is to have the reclaimed area reach 30% basal cover when

compared to the reference site. If after three growing seasons the area has not reached 30% basal cover, additional reclamation activities may be necessary. Monitoring will continue until the reclaimed area reaches 75% basal cover of desirable vegetation when compared to the reference site. (Green River District Reclamation Guidelines)

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

K. Surface/Mineral Ownership:

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

L. Other Information:

Onsite Specifics:

- Arch monitor during construction
- Paleo monitor during construction

Cultural and Paleontological Resources

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

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Resource Reports:

A Class I literature survey was completed on September 16, 2011 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 11-261.

A paleontological reconnaissance survey was completed on September 12, 2011 by SWCA Environmental Consultants. For additional details please refer to report UT11-14314-125.

Biological field survey was completed on August 24, 2011 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-275.

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)	2012 Uintah Basin Emission Inventory[a] (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	15.68	16,547	0.09%
VOC	20	127,495	0.02%

[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html Uintah Basin Data

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

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

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

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

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

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

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

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

Laura Abrams

December 28, 2011
Date

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

October 10, 2011

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

Re: Directional Drilling R649-3-11
NBU 921-23B1CS
T9S-R21E
Section 23 NWNE (Surface and Bottom Hole)
Surface: 1128' FNL, 2107' FEL
Bottom Hole: 577' FNL, 1816' FEL
Uintah County, Utah

Dear Ms. Mason:

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

- Kerr-McGee's NBU 921-23B1CS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing roads and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

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

Sincerely,

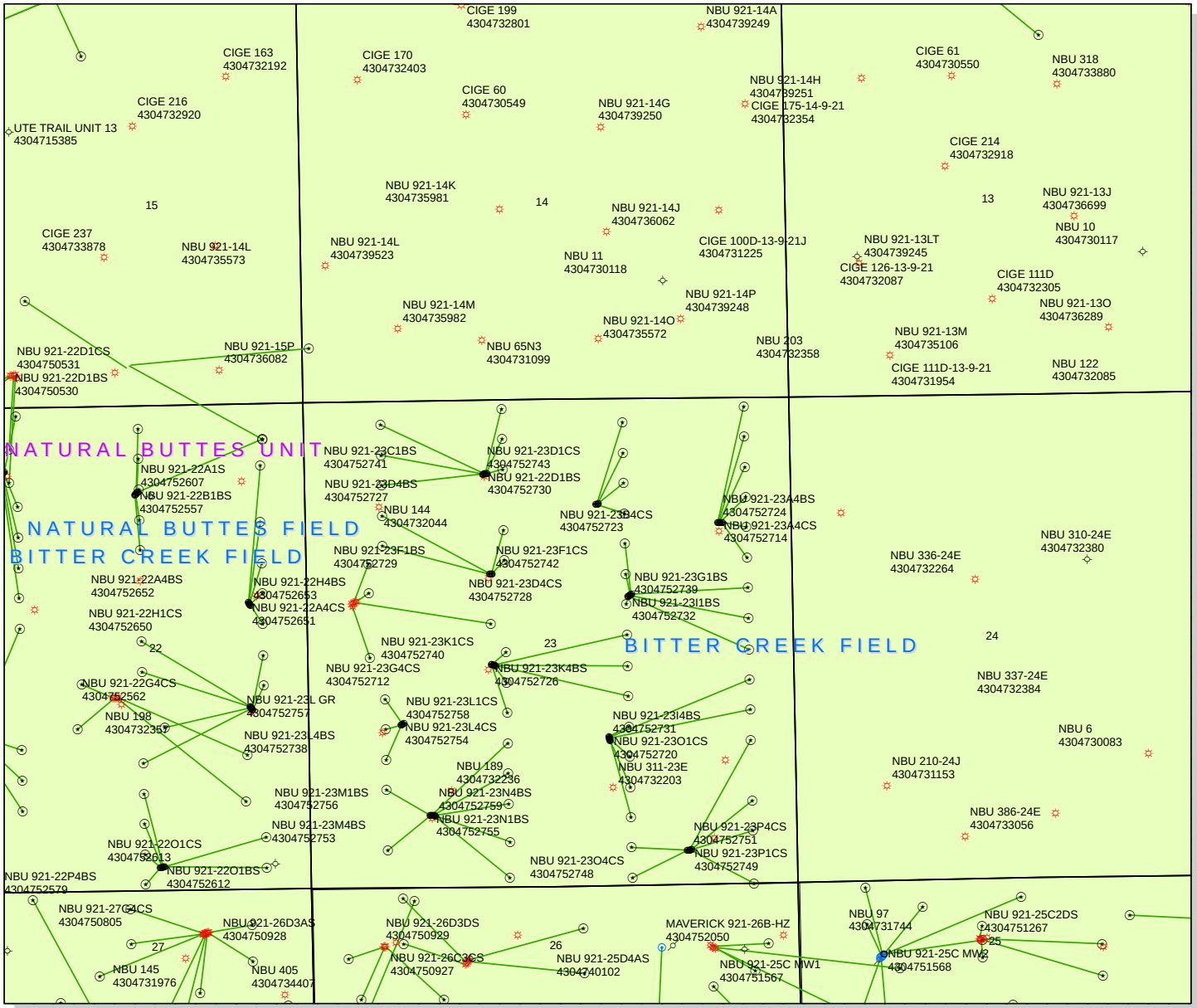
KERR-MCGEE OIL & GAS ONSHORE LP

Joe Matney

Joe Matney
Sr. Staff Landman

RECEIVED: May 18, 2012

API Well Number: 43047527160000



API Number: 4304752716

Well Name: NBU 921-23B1CS

Township T0.9 . Range R2.1 . Section 23

Meridian: SLBM

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

Map Prepared:
Map Produced by Diana Mason

Units
STATUS
ACTIVE
EXPLORATORY
GAS STORAGE
NF PP OIL
NF SECONDARY
PI OIL
PP GAS
PP GEOTHERML
PP OIL
SECONDARY
TERMINATED

Fields
STATUS
Unknown
ABANDONED
ACTIVE
COMBINED
INACTIVE
STORAGE
TERMINATED

Wells Query
Status
APD - Aproved Permit
DRL - Spuded (Drilling Commenced)
GIW - Gas Injection
GS - Gas Storage
LOC - New Location
OPS - Operation Suspended
PA - Plugged Abandoned
PGW - Producing Gas Well
POW - Producing Oil Well
SGW - Shut-in Gas Well
SOW - Shut-in Oil Well
TA - Temp. Abandoned
TW - Test Well
WDW - Water Disposal
WIW - Water Injection Well
WSW - Water Supply Well

1,400 700 0 1,400 Feet

1:13,471

RECEIVED: May 29, 2012

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:
3160
(UT-922)

May 30, 2012

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2012 Plan of Development Natural Buttes Unit
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2012 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
WELL PAD - NBU 922-32D1		
43-047-52691	NBU 922-30P1BS	Sec 32 T09S R22E 0243 FNL 0813 FWL
		BHL Sec 30 T09S R22E 1246 FSL 0525 FEL
43-047-52693	NBU 922-30P4BS	Sec 32 T09S R22E 0255 FNL 0797 FWL
		BHL Sec 30 T09S R22E 0576 FSL 0601 FEL
43-047-52694	NBU 922-30P1CS	Sec 32 T09S R22E 0249 FNL 0805 FWL
		BHL Sec 30 T09S R22E 0908 FSL 0574 FEL
43-047-52695	NBU 922-30P3DS	Sec 32 T09S R22E 0261 FNL 0789 FWL
		BHL Sec 30 T09S R22E 0229 FSL 0778 FEL
WELL PAD - NBU 921-23B		
43-047-52696	NBU 921-23B1BS	Sec 23 T09S R21E 1133 FNL 2116 FEL
		BHL Sec 23 T09S R21E 0247 FNL 1816 FEL
43-047-52706	NBU 921-23B4BS	Sec 23 T09S R21E 1124 FNL 2098 FEL
		BHL Sec 23 T09S R21E 0907 FNL 1816 FEL
43-047-52716	NBU 921-23B1CS	Sec 23 T09S R21E 1128 FNL 2107 FEL
		BHL Sec 23 T09S R21E 0577 FNL 1816 FEL
43-047-52723	NBU 921-23B4CS	Sec 23 T09S R21E 1137 FNL 2125 FEL
		BHL Sec 23 T09S R21E 1238 FNL 1816 FEL
WELL PAD - NBU 921-23G		
43-047-52700	NBU 921-23G1CS	Sec 23 T09S R21E 2126 FNL 1774 FEL
		BHL Sec 23 T09S R21E 1898 FNL 1817 FEL
43-047-52701	NBU 921-23G4BS	Sec 23 T09S R21E 2144 FNL 1799 FEL
		BHL Sec 23 T09S R21E 2228 FNL 1817 FEL

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API #	WELL NAME	LOCATION

(Proposed PZ WASATCH-MESA VERDE)

43-047-52702 NBU 921-23H4BS Sec 23 T09S R21E 2115 FNL 1758 FEL
BHL Sec 23 T09S R21E 2061 FNL 0493 FEL

43-047-52703 NBU 921-23H4CS Sec 23 T09S R21E 2132 FNL 1782 FEL
BHL Sec 23 T09S R21E 2391 FNL 0493 FEL

43-047-52732 NBU 921-23I1BS Sec 23 T09S R21E 2138 FNL 1790 FEL
BHL Sec 23 T09S R21E 2556 FSL 0494 FEL

43-047-52739 NBU 921-23G1BS Sec 23 T09S R21E 2120 FNL 1766 FEL
BHL Sec 23 T09S R21E 1568 FNL 1816 FEL

WELL PAD - NBU 921-23H

43-047-52704 NBU 921-23H1CS Sec 23 T09S R21E 1343 FNL 0762 FEL
BHL Sec 23 T09S R21E 1731 FNL 0493 FEL

43-047-52705 NBU 921-23A1BS Sec 23 T09S R21E 1344 FNL 0802 FEL
BHL Sec 23 T09S R21E 0082 FNL 0493 FEL

43-047-52711 NBU 921-23H1BS Sec 23 T09S R21E 1343 FNL 0752 FEL
BHL Sec 23 T09S R21E 1401 FNL 0493 FEL

43-047-52714 NBU 921-23A4CS Sec 23 T09S R21E 1343 FNL 0772 FEL
BHL Sec 23 T09S R21E 1071 FNL 0493 FEL

43-047-52722 NBU 921-23A1CS Sec 23 T09S R21E 1343 FNL 0792 FEL
BHL Sec 23 T09S R21E 0412 FNL 0493 FEL

43-047-52724 NBU 921-23A4BS Sec 23 T09S R21E 1343 FNL 0782 FEL
BHL Sec 23 T09S R21E 0741 FNL 0493 FEL

WELL PAD - NBU 921-23J

43-047-52707 NBU 921-23J4BS Sec 23 T09S R21E 1628 FSL 2036 FEL
BHL Sec 23 T09S R21E 1734 FSL 1817 FEL

43-047-52713 NBU 921-23I1CS Sec 23 T09S R21E 1618 FSL 2034 FEL
BHL Sec 23 T09S R21E 2227 FSL 0494 FEL

43-047-52717 NBU 921-23O1BS Sec 23 T09S R21E 1589 FSL 2029 FEL
BHL Sec 23 T09S R21E 1074 FSL 1818 FEL

43-047-52719 NBU 921-23J4CS Sec 23 T09S R21E 1599 FSL 2031 FEL
BHL Sec 23 T09S R21E 1404 FSL 1818 FEL

43-047-52720 NBU 921-23O1CS Sec 23 T09S R21E 1579 FSL 2028 FEL
BHL Sec 23 T09S R21E 0743 FSL 1818 FEL

43-047-52731 NBU 921-23I4BS Sec 23 T09S R21E 1608 FSL 2032 FEL
BHL Sec 23 T09S R21E 1897 FSL 0494 FEL

WELL PAD - NBU 921-23K

43-047-52708 NBU 921-23K1BS Sec 23 T09S R21E 2431 FSL 1995 FWL
BHL Sec 23 T09S R21E 2563 FSL 2147 FWL

43-047-52709 NBU 921-23J1BS Sec 23 T09S R21E 2419 FSL 2022 FWL
BHL Sec 23 T09S R21E 2395 FSL 1817 FEL

RECEIVED: May 30, 2012

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

43-047-52710 NBU 921-23J1CS Sec 23 T09S R21E 2415 FSL 2032 FWL
BHL Sec 23 T09S R21E 2064 FSL 1817 FEL

43-047-52712 NBU 921-23G4CS Sec 23 T09S R21E 2423 FSL 2013 FWL
BHL Sec 23 T09S R21E 2559 FNL 1817 FEL

43-047-52726 NBU 921-23K4BS Sec 23 T09S R21E 2435 FSL 1986 FWL
BHL Sec 23 T09S R21E 1901 FSL 2148 FWL

43-047-52740 NBU 921-23K1CS Sec 23 T09S R21E 2427 FSL 2004 FWL
BHL Sec 23 T09S R21E 2232 FSL 2147 FWL

WELL PAD - NBU 921-23C

43-047-52715 NBU 921-23C1CS Sec 23 T09S R21E 0790 FNL 1963 FWL
BHL Sec 23 T09S R21E 0413 FNL 2145 FWL

43-047-52725 NBU 921-23C4BS Sec 23 T09S R21E 0789 FNL 1973 FWL
BHL Sec 23 T09S R21E 0743 FNL 2145 FWL

43-047-52727 NBU 921-23D4BS Sec 23 T09S R21E 0794 FNL 1924 FWL
BHL Sec 23 T09S R21E 0910 FNL 0823 FWL

43-047-52730 NBU 921-23D1BS Sec 23 T09S R21E 0792 FNL 1944 FWL
BHL Sec 23 T09S R21E 0249 FNL 0823 FWL

43-047-52741 NBU 921-23C1BS Sec 23 T09S R21E 0791 FNL 1954 FWL
BHL Sec 23 T09S R21E 0083 FNL 2145 FWL

43-047-52743 NBU 921-23D1CS Sec 23 T09S R21E 0793 FNL 1934 FWL
BHL Sec 23 T09S R21E 0579 FNL 0823 FWL

WELL PAD - NBU 921-23F

43-047-52721 NBU 921-23E1BS Sec 23 T09S R21E 1888 FNL 1982 FWL
BHL Sec 23 T09S R21E 1572 FNL 0823 FWL

43-047-52728 NBU 921-23D4CS Sec 23 T09S R21E 1885 FNL 1992 FWL
BHL Sec 23 T09S R21E 1241 FNL 0823 FWL

43-047-52729 NBU 921-23F1BS Sec 23 T09S R21E 1882 FNL 2002 FWL
BHL Sec 23 T09S R21E 1405 FNL 2146 FWL

43-047-52742 NBU 921-23F1CS Sec 23 T09S R21E 1879 FNL 2011 FWL
BHL Sec 23 T09S R21E 1735 FNL 2146 FWL

WELL PAD - NBU 921-23L

43-047-52738 NBU 921-23L4BS Sec 23 T09S R21E 1782 FSL 0991 FWL
BHL Sec 23 T09S R21E 1739 FSL 0824 FWL

43-047-52754 NBU 921-23L4CS Sec 23 T09S R21E 1788 FSL 0999 FWL
BHL Sec 23 T09S R21E 1408 FSL 0824 FWL

43-047-52758 NBU 921-23L1CS Sec 23 T09S R21E 1794 FSL 1007 FWL
BHL Sec 23 T09S R21E 2070 FSL 0824 FWL

RECEIVED: May 30, 2012

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

WELL PAD - NBU 921-23P

43-047-52744 NBU 921-23P4BS Sec 23 T09S R21E 0383 FSL 1166 FEL
BHL Sec 23 T09S R21E 0578 FSL 0494 FEL

43-047-52746 NBU 921-23O4BS Sec 23 T09S R21E 0375 FSL 1205 FEL
BHL Sec 23 T09S R21E 0414 FSL 1818 FEL

43-047-52747 NBU 921-23I4CS Sec 23 T09S R21E 0377 FSL 1195 FEL
BHL Sec 23 T09S R21E 1567 FSL 0494 FEL

43-047-52748 NBU 921-23O4CS Sec 23 T09S R21E 0373 FSL 1215 FEL
BHL Sec 23 T09S R21E 0084 FSL 1818 FEL

43-047-52749 NBU 921-23P1CS Sec 23 T09S R21E 0381 FSL 1175 FEL
BHL Sec 23 T09S R21E 0907 FSL 0494 FEL

43-047-52751 NBU 921-23P4CS Sec 23 T09S R21E 0379 FSL 1185 FEL
BHL Sec 23 T09S R21E 0005 FSL 0494 FEL

WELL PAD - NBU 921-23M

43-047-52745 NBU 921-23N4CS Sec 23 T09S R21E 0791 FSL 1329 FWL
BHL Sec 23 T09S R21E 0105 FSL 2149 FWL

43-047-52750 NBU 921-23N1CS Sec 23 T09S R21E 0790 FSL 1339 FWL
BHL Sec 23 T09S R21E 0910 FSL 2148 FWL

43-047-52752 NBU 921-23K4CS Sec 23 T09S R21E 0794 FSL 1310 FWL
BHL Sec 23 T09S R21E 1571 FSL 2148 FWL

43-047-52753 NBU 921-23M4BS Sec 23 T09S R21E 0795 FSL 1300 FWL
BHL Sec 23 T09S R21E 0415 FSL 0824 FWL

43-047-52755 NBU 921-23N1BS Sec 23 T09S R21E 0792 FSL 1319 FWL
BHL Sec 23 T09S R21E 1240 FSL 2148 FWL

43-047-52756 NBU 921-23M1BS Sec 23 T09S R21E 0796 FSL 1290 FWL
BHL Sec 23 T09S R21E 1077 FSL 0824 FWL

43-047-52759 NBU 921-23N4BS Sec 23 T09S R21E 0788 FSL 1349 FWL
BHL Sec 23 T09S R21E 0495 FSL 2158 FWL

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

Michael L. Coulthard

Digitally signed by Michael L. Coulthard
DN: cn=Michael L. Coulthard, o=Bureau of Land Management, ou=Branch of Minerals, email=Michael_Coulthard@blm.gov, c=US
Date: 2012.05.30 10:20:35 -06'00'

RECEIVED: May 30, 2012

API Well Number: 43047527160000

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

MCoulthard:mc:5-30-12

RECEIVED: May 30, 2012

API	Well Name	Surface Location
43-047-52691	NBU 922-30P1BS	Sec 32 T09S R22E 0243 FNL 0813 FWL
43-047-52693	NBU 922-30P4BS	Sec 32 T09S R22E 0255 FNL 0797 FWL
43-047-52694	NBU 922-30P1CS	Sec 32 T09S R22E 0249 FNL 0805 FWL
43-047-52695	NBU 922-30P3DS	Sec 32 T09S R22E 0261 FNL 0789 FWL
43-047-52696	NBU 921-23B1BS	Sec 23 T09S R21E 1133 FNL 2116 FEL
43-047-52700	NBU 921-23G1CS	Sec 23 T09S R21E 2126 FNL 1774 FEL
43-047-52701	NBU 921-23G4BS	Sec 23 T09S R21E 2144 FNL 1799 FEL
43-047-52702	NBU 921-23H4BS	Sec 23 T09S R21E 2115 FNL 1758 FEL
43-047-52703	NBU 921-23H4CS	Sec 23 T09S R21E 2132 FNL 1782 FEL
43-047-52704	NBU 921-23H1CS	Sec 23 T09S R21E 1343 FNL 0762 FEL
43-047-52705	NBU 921-23A1BS	Sec 23 T09S R21E 1344 FNL 0802 FEL
43-047-52706	NBU 921-23B4BS	Sec 23 T09S R21E 1124 FNL 2098 FEL
43-047-52707	NBU 921-23J4BS	Sec 23 T09S R21E 1628 FSL 2036 FEL
43-047-52708	NBU 921-23K1BS	Sec 23 T09S R21E 2431 FSL 1995 FWL
43-047-52709	NBU 921-23J1BS	Sec 23 T09S R21E 2419 FSL 2022 FWL
43-047-52710	NBU 921-23J1CS	Sec 23 T09S R21E 2415 FSL 2032 FWL
43-047-52711	NBU 921-23H1BS	Sec 23 T09S R21E 1343 FNL 0752 FEL
43-047-52712	NBU 921-23G4CS	Sec 23 T09S R21E 2423 FSL 2013 FWL
43-047-52713	NBU 921-23I1CS	Sec 23 T09S R21E 1618 FSL 2034 FEL
43-047-52714	NBU 921-23A4CS	Sec 23 T09S R21E 1343 FNL 0772 FEL
43-047-52715	NBU 921-23C1CS	Sec 23 T09S R21E 0790 FNL 1963 FWL
43-047-52716	NBU 921-23B1CS	Sec 23 T09S R21E 1128 FNL 2107 FEL
43-047-52717	NBU 921-23O1BS	Sec 23 T09S R21E 1589 FSL 2029 FEL
43-047-52719	NBU 921-23J4CS	Sec 23 T09S R21E 1599 FSL 2031 FEL
43-047-52720	NBU 921-23O1CS	Sec 23 T09S R21E 1579 FSL 2028 FEL
43-047-52721	NBU 921-23E1BS	Sec 23 T09S R21E 1888 FNL 1982 FWL
43-047-52722	NBU 921-23A1CS	Sec 23 T09S R21E 1343 FNL 0792 FEL
43-047-52723	NBU 921-23B4CS	Sec 23 T09S R21E 1137 FNL 2125 FEL
43-047-52724	NBU 921-23A4BS	Sec 23 T09S R21E 1343 FNL 0782 FEL
43-047-52725	NBU 921-23C4BS	Sec 23 T09S R21E 0789 FNL 1973 FWL
43-047-52726	NBU 921-23K4BS	Sec 23 T09S R21E 2435 FSL 1986 FWL
43-047-52727	NBU 921-23D4BS	Sec 23 T09S R21E 0794 FNL 1924 FWL
43-047-52728	NBU 921-23D4CS	Sec 23 T09S R21E 1885 FNL 1992 FWL
43-047-52729	NBU 921-23F1BS	Sec 23 T09S R21E 1882 FNL 2002 FWL
43-047-52730	NBU 921-23D1BS	Sec 23 T09S R21E 0792 FNL 1944 FWL
43-047-52731	NBU 921-23I4BS	Sec 23 T09S R21E 1608 FSL 2032 FEL
43-047-52732	NBU 921-23I1BS	Sec 23 T09S R21E 2138 FNL 1790 FEL
43-047-52738	NBU 921-23L4BS	Sec 23 T09S R21E 1782 FSL 0991 FWL
43-047-52739	NBU 921-23G1BS	Sec 23 T09S R21E 2120 FNL 1766 FEL
43-047-52740	NBU 921-23K1CS	Sec 23 T09S R21E 2427 FSL 2004 FWL
43-047-52741	NBU 921-23C1BS	Sec 23 T09S R21E 0791 FNL 1954 FWL
43-047-52742	NBU 921-23F1CS	Sec 23 T09S R21E 1879 FNL 2011 FWL
43-047-52743	NBU 921-23D1CS	Sec 23 T09S R21E 0793 FNL 1934 FWL
43-047-52744	NBU 921-23P4BS	Sec 23 T09S R21E 0383 FSL 1166 FEL
43-047-52745	NBU 921-23N4CS	Sec 23 T09S R21E 0791 FSL 1329 FWL
43-047-52746	NBU 921-23O4BS	Sec 23 T09S R21E 0375 FSL 1205 FEL

RECEIVED: May 30, 2012

API	Well Name	Surface Location
43-047-52747	NBU 921-23I4CS	Sec 23 T09S R21E 0377 FSL 1195 FEL
43-047-52748	NBU 921-23O4CS	Sec 23 T09S R21E 0373 FSL 1215 FEL
43-047-52749	NBU 921-23P1CS	Sec 23 T09S R21E 0381 FSL 1175 FEL
43-047-52750	NBU 921-23N1CS	Sec 23 T09S R21E 0790 FSL 1339 FWL
43-047-52751	NBU 921-23P4CS	Sec 23 T09S R21E 0379 FSL 1185 FEL
43-047-52752	NBU 921-23K4CS	Sec 23 T09S R21E 0794 FSL 1310 FWL
43-047-52753	NBU 921-23M4BS	Sec 23 T09S R21E 0795 FSL 1300 FWL
43-047-52754	NBU 921-23L4CS	Sec 23 T09S R21E 1788 FSL 0999 FWL
43-047-52755	NBU 921-23N1BS	Sec 23 T09S R21E 0792 FSL 1319 FWL
43-047-52756	NBU 921-23M1BS	Sec 23 T09S R21E 0796 FSL 1290 FWL
43-047-52758	NBU 921-23L1CS	Sec 23 T09S R21E 1794 FSL 1007 FWL
43-047-52759	NBU 921-23N4BS	Sec 23 T09S R21E 0788 FSL 1349 FWL

RECEIVED: May 30, 2012

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 5/23/2012
API NO. ASSIGNED: 43047527160000
WELL NAME: NBU 921-23B1CS
OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)
PHONE NUMBER: 720 929-6156
CONTACT: Danielle Piernot

PROPOSED LOCATION: NWNE 23 090S 210E
Permit Tech Review: ✔

SURFACE: 1128 FNL 2107 FEL
Engineering Review: ✔

BOTTOM: 0577 FNL 1816 FEL
Geology Review: ✔

COUNTY: UINTAH
LATITUDE: 40.02567
LONGITUDE: -109.51705
UTM SURF EASTINGS: 626539.00
NORTHINGS: 4431659.00
FIELD NAME: NATURAL BUTTES
LEASE TYPE: 1 - Federal
LEASE NUMBER: UTU 0149075
PROPOSED PRODUCING FORMATION(S): BLACKHAWK
SURFACE OWNER: 2 - Indian
COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

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

Commingling Approved

LOCATION AND SITING:

- ☐ **R649-2-3.**

Unit: NATURAL BUTTES

- ☐ **R649-3-2. General**
- ☐ **R649-3-3. Exception**
- ✔ **Drilling Unit**

Board Cause No: Cause 173-14
Effective Date: 12/2/1999
Siting: Suspends General Siting

- ✔ **R649-3-11. Directional Drill**

Comments: Presite Completed

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

RECEIVED: August 27, 2012

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 921-23B1CS
API Well Number: 43047527160000
Lease Number: UTU 0149075
Surface Owner: INDIAN
Approval Date: 8/27/2012

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

Authority:
Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the BLACKHAWK Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

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

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

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

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

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

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

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

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

- Within 24 hours following the spudding of the well - contact Carol Daniels at 801-538-5284
  (please leave a voicemail message if not available)
  OR
  submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website
  at http://oilgas.ogm.utah.gov

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

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

Approved By:

For John Rogers
Associate Director, Oil & Gas

rm 3160-3
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED JAN 10 2012 BLM Vernal Utah

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER	5. Lease Serial No. UTU0149075
	6. If Indian, Allottee or Tribe Name
	7. If Unit or CA Agreement, Name and No. UTU63047A
1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone	8. Lease Name and Well No. NBU 921-23B1CS
2. Name of Operator KERR MCGEE OIL&GAS ONSHORE LP Contact: LAURA ABRAMS E-Mail: Laura.Abrams@anadarko.com	9. API Well No. 43-047-52716
3a. Address PO BOX 173779 DENVER, CO 80202-3779 / 3b. Phone No. (include area code) Ph: 720-929-6356 Fx: 720-929-7356	10. Field and Pool, or Exploratory NATURAL BUTTES
4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface NWNE 1128FNL 2107FEL 40.025711 N Lat, 109.517070 W Lon At proposed prod. zone NWNE 577FNL 1816FEL 40.027218 N Lat, 109.516035 W Lon	11. Sec., T., R., M., or Blk. and Survey or Area Sec 23 T9S R21E Mer SLB
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 41.7 MILES SOUTH OF VERNAL, UT	12. County or Parish UINTAH / 13. State UT
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 577' / 16. No. of Acres in Lease 640.00	17. Spacing Unit dedicated to this well
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 1281' / 19. Proposed Depth 11086 MD 11025 TVD	20. BLM/BIA Bond No. on file WYB000291
21. Elevations (Show whether DF, KB, RT, GL, etc. 4847 GL / 22. Approximate date work will start 06/30/2012	23. Estimated duration 60-90 DAYS

24. Attachments

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

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature (Electronic Submission)	Name (Printed/Typed) LAURA ABRAMS Ph: 720-929-6356	Date 12/29/2011
Title REGULATORY ANALYST II		
Approved by (Signature)	Name (Printed/Typed) Jerry Kenczka	Date OCT 12 20
Title Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

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

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

Additional Operator Remarks (see next page)

RECEIVED OCT 19 2012 DIV. OF OIL, GAS & MINING

Electronic Submission #126959 verified by the BLM Well Information System
For KERR MCGEE OIL&GAS ONSHORE, LP, sent to the Vernal

NOTICE OF APPROVAL

UDOGM

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

121BR0190AS APD Dated 1/18/12 NO NOS-

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE
170 South 500 East VERNAL, UT 84078 (435) 781-4400

CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:	**Kerr McGee Oil & Gas Onshore, LP**	**Location:**	**NWNE, Sec. 23, T9S, R21E**
Well No:	**NBU 921-23B1CS**	**Lease No:**	**UTU-0149075**
API No:	**43-047-52716**	**Agreement:**	**Natural Buttes**

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.

- Paint facilities "Shadow Gray"

- 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 shall 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.

- If constructed and/or drilling operations have not been initiated prior to August 24, 2012, conduct a biological survey to determine the presence of Uintah Basin hookless cactus in accordance with the guidelines specified in the USFWS Rare Plant Conservation Measures and the BLM RMP ROD. KMG will implement commitments contained in the GNB BO.

- Monitor construction operations with a permitted archeologist.

- Monitor construction operations with a permitted paleontologist.

- Rip and make impassible the section of access road to be abandoned.

- Round well pad corners #8 and #10.

- Construct diversion ditch on south side of pad from corners #4 to #10.

DOWNHOLE PROGRAM
CONDITIONS OF APPROVAL (COAs)

SITE SPECIFIC DOWNHOLE COAs:

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

Variances Granted:

Air Drilling

1. Properly lubricated and maintained rotating head. Variance granted to use a properly maintained and lubricated diverter bowl in place of a rotating head.

2. Blooie line discharge 100' from the well bore. Variance granted for blooie line discharge to be 45' from the well bore.

3. Compressors located in the opposite direction from the blooie line a minimum of 100' from the well bore. Variance granted for truck/trailer mounted air compressors located 40'from the well bore.

4. In lieu of mud products on location, Kerr McGee will fill the reserve pit with water for the kill medium and will utilize a skid pump near the reserve pit to supply the water to the well bore if necessary.

5. Automatic igniter. Variance granted for igniter due to there being no productive formations encountered while air drilling.

6. FIT Test. Variance granted due to well-known geology and the problems that can occur with the FIT test.

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

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a

test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.

- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.

- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.

- No aggressive/fresh hard-banded drill pipe shall be used within casing.

- **Cement baskets shall not be run on surface casing.**

- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.

- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.

- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.

- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.

- **Please submit an electronic copy of all other logs run on this well in LAS format to BLM_UT_VN_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**

- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.

- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:

    - Operator name, address, and telephone number.

    - Well name and number.

    - Well location (¼¼, Sec., Twn, Rng, and P.M.).

    - Date well was placed in a producing status (date of first production for which royalty will be paid).

    - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).

    - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.

    - Unit agreement and/or participating area name and number, if applicable.

    - Communitization agreement number, if applicable.

- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.

- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.

- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs,

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

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.

- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.

- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.

- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.

- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.

- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.

- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0149075

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 921-23B1CS

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

9. API NUMBER: 43047527160000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779
PHONE NUMBER: 720 929-6515 EXT

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1128 FNL 2107 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 23 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		
✓ NOTICE OF INTENT Approximate date work will start: 8/27/2013	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

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

Approved by the Utah Division of Oil, Gas and Mining

Date: August 12, 2013

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Teena Paulo	720 929-6236	Staff Regulatory Specialist

SIGNATURE	DATE
N/A	8/9/2013

RECEIVED: Aug. 09, 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 43047527160000

API: 43047527160000
Well Name: NBU 921-23B1CS
Location: 1128 FNL 2107 FEL QTR NWNE SEC 23 TWNP 090S RNG 210E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 8/27/2012

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: Teena Paulo **Date:** 8/9/2013
Title: Staff Regulatory Specialist **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED: Aug. 09, 2013

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0149075

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 921-23B1CS

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

9. API NUMBER: 43047527160000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6515 EXT

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1128 FNL 2107 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 23 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

- ☐ NOTICE OF INTENT — Approximate date work will start:
- ☐ SUBSEQUENT REPORT — Date of Work Completion:
- ✓ SPUD REPORT — Date of Spud: 11/1/2013
- ☐ DRILLING REPORT — Report Date:

TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

Spud well 11/01/2013 @ 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 01/22/2014.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
November 06, 2013

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Doreen Green	435 781-9758	Regulatory Analyst II

SIGNATURE	DATE
N/A	11/6/2013

RECEIVED: Nov. 06, 2013

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0149075

SUNDRY NOTICES AND REPORTS ON WELLS

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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 921-23B1CS

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

9. API NUMBER: 43047527160000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6100 EXT

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1128 FNL 2107 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 23 Township: 09.0S Range: 21.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
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	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 4/1/2014	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

Drilled to 2,965 ft. in Quarter 1 of 2014.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
April 01, 2014

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Teena Paulo	720 929-6236	Staff Regulatory Specialist

SIGNATURE	DATE
N/A	4/1/2014

RECEIVED: Apr. 01, 2014

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0149075

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 921-23B1CS

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

9. API NUMBER: 43047527160000

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: 1128 FNL 2107 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 23 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		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
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	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 6/24/2014	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No actitivy for Quarter 2 of 2014. Well Drilled to 2,965 ft.

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

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Doreen Green	435 781-9758	Regulatory Analyst II

SIGNATURE	DATE
N/A	6/24/2014

RECEIVED: Jun. 24, 2014

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0149075

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 921-23B1CS

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

9. API NUMBER: 43047527160000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6100 EXT

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1128 FNL 2107 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 23 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		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
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	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 9/11/2014	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No actitivy for Quarter 3 of 2014. Well TD at Drilled to 2,965 ft. Thank you.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
September 12, 2014

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Kay E. Kelly	720 929 6582	Regulatory Analyst
SIGNATURE N/A		**DATE** 9/11/2014

RECEIVED: Sep. 11, 2014

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0149075

SUNDRY NOTICES AND REPORTS ON WELLS

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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 921-23B1CS

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

9. API NUMBER: 43047527160000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6100 EXT

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1128 FNL 2107 FEL
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COUNTY: UINTAH

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 12/16/2014	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

THE SURFACE TD IS AT 2,965'. WAITING ON PRODUCTION RIG. THANK YOU.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
December 17, 2014

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Kay E. Kelly	720 929 6582	Regulatory Analyst
SIGNATURE N/A		**DATE** 12/16/2014

RECEIVED: Dec. 16, 2014

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0149075

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 921-23B1CS

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

9. API NUMBER: 43047527160000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779
PHONE NUMBER: 720 929-6100 EXT

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1128 FNL 2107 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 23 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		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 3/30/2015	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No activity for Quarter 1 of 2015. Well drilled to TD at 2,965 ft.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
March 30, 2015

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jennifer Thomas	720 929-6808	Regulatory Specialist

SIGNATURE	DATE
N/A	3/30/2015

RECEIVED: Mar. 30, 2015

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0149075

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 921-23B1CS

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

9. API NUMBER: 43047527160000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6100 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1128 FNL 2107 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 23 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		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 6/30/2015	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No activity for Quarter 2 of 2015. Well drilled to 2,965 ft. Thank you.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
July 06, 2015

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jennifer Thomas	720 929-6808	Regulatory Specialist

SIGNATURE	DATE
N/A	6/30/2015

RECEIVED: Jun. 30, 2015

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0149075

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 921-23B1CS

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

9. API NUMBER: 43047527160000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6100 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1128 FNL 2107 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 23 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		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 9/29/2015	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No activity for Quarter 3 of 2015. Well TD at 2,965 ft. Thank you.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
September 30, 2015

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jennifer Thomas	720 929-6808	Regulatory Specialist

SIGNATURE	DATE
N/A	9/29/2015

RECEIVED: Sep. 29, 2015

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0149075

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 921-23B1CS

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

9. API NUMBER: 43047527160000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779
PHONE NUMBER: 720 929-6507

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1128 FNL 2107 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 23 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		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
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	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 10/29/2015	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

10/28/2015, drilling operations have resumed on the NBU 921-23B PAD. The following wells on this pad will be drilled to TD: NBU 921-23B4BS NBU 921-23B1CS NBU 921-23B1BS NBU 921-23B4CS

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
October 29, 2015

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Doreen Green	435 781-9758	Regulatory Analyst II
SIGNATURE N/A		**DATE** 10/29/2015

RECEIVED: Oct. 29, 2015

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0149075

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 921-23B1CS

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

9. API NUMBER: 43047527160000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 **PHONE NUMBER:** 720 929-6507 EXT

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1128 FNL 2107 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 23 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

- ☐ NOTICE OF INTENT — Approximate date work will start:
- ✓ SUBSEQUENT REPORT — Date of Work Completion: 1/12/2016
- ☐ SPUD REPORT — Date of Spud:
- ☐ DRILLING REPORT — Report Date:

TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
✓ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

The NBU 921-23B1CS well was placed on production on 1/12/2016 after a new well completion. Producing from the Mesaverde. Thank you.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
January 19, 2016

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jennifer Thomas	720 929-6808	Regulatory Specialist

SIGNATURE	DATE
N/A	1/18/2016

RECEIVED: Jan. 18, 2016

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. UTU0149075

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

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No. UTU63047A

2. Name of Operator KERR-MCGEE OIL AND GAS ONSHORE LP
Contact: JENNIFER THOMAS
E-Mail: Jennifer.Thomas@anadarko.com

8. Lease Name and Well No. NBU 921-23B1CS

3. Address P.O. BOX 173779
DENVER, CO 80217

3a. Phone No. (include area code) Ph: 720-929-6808

9. API Well No. 43-047-52716

4. Location of Well (Report location clearly and in accordance with Federal requirements)*

At surface NWNE 1128FNL 2107FEL 40.025711 N Lat, 109.517070 W Lon

At top prod interval reported below NWNE 556FNL 1836FEL

At total depth NWNE 595FNL 1824FEL 40.027218 N Lat, 109.516035 W Lon

10. Field and Pool, or Exploratory NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey or Area Sec 23 T9S R21E Mer SLB

12. County or Parish UINTAH

13. State UT

14. Date Spudded 11/01/2013

15. Date T.D. Reached 11/08/2015

16. Date Completed ☐ D & A ☒ Ready to Prod. 01/12/2016

17. Elevations (DF, KB, RT, GL)* 4859 KB

18. Total Depth: MD 10030 TVD 9963

19. Plug Back T.D.: MD 9959 TVD 9892

20. Depth Bridge Plug Set: MD TVD

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

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			
12.250	8.625 J-55	28.0	13	2937		650		0	
7.875	4.500 I-80	11.6	13	10006		1940		2295	

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	9372							

25. Producing Intervals

Formation	Top	Bottom
A) MESAVERDE	7931	10030
B)		
C)		
D)		

26. Perforation Record

Perforated Interval	Size	No. Holes	Perf. Status
7846 TO 9902	0.410	192	OPEN

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

Depth Interval	Amount and Type of Material
7846 TO 9902	PUMP 74651 BBLS SLICKWATER, 48 BBLS 15% HCL ACID, 306783 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
01/12/2016	02/01/2016	24	→	45.0	1879.0	863.0			FLOWS FROM WELL

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
32/64	1822	2611.0	→	45	1879	863		PGW

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
			→					

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

ELECTRONIC SUBMISSION #331095 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

RECEIVED: Feb. 09, 2016

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	1593
				BIRDS NEST	1921
				MAHOGANY MARKER	2459
				WASATCH	5014
				MESAVERDE	7931

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 #331095 Verified by the BLM Well Information System.
For KERR-MCGEE OIL AND GAS ONSHORE, sent to the Vernal

Name *(please print)* JENNIFER THOMAS Title REGULATORY SPECIALIST III

Signature (Electronic Submission) Date 02/09/2016

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 fradulent statements or representations as to any matter within its jurisdiction.

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

RECEIVED: Feb. 09, 2016

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-23B1CS BLUE	Spud date: 3/15/2014	
Project: UTAH-UINTAH	Site: NBU 921-23B PAD	Rig name no.: ENSIGN 145/145, CAPSTAR 310/310
Event: DRILLING	Start date: 3/15/2014	End date: 11/10/2015
Active datum: RKB @4,859.00usft (above Mean Sea Level)	UWI: NW/NE/0/9/S/21/E/23/0/0/26/PM/N/1128/E/0/2107/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
3/15/2014	16:30 - 18:00	1.50	MIRU	01	E	P	53	CUT OFF ROTATING HEAD
	18:00 - 20:00	2.00	MIRU	01	C	P	53	CONDUCT JSA WITH TRUCKS TO SKID RIG / SKID RIG FROM NBU 921-23B1BS TO THE NBU 921-23B1CS, WELL 3 OF 4. HOWCROFT FIELD SERVICES HAD 2 TRUCKS 1 SWAMPER 1 PUSHER/SAFETY MAN
	20:00 - 22:00	2.00	MIRU	01	B	P	53	WELD ON ROTATING HEAD / RIG UP FLOW OINE / INSTALL CELLAR PUMP
	22:00 - 23:00	1.00	MIRU	01	B	P	53	SET UP PIPE RACKS / LOAD BHA / PICK UP BHA / AIR OUT PUMPS / TRIP IN & TAG @ 49'
	23:00 - 23:30	0.50	MIRU	23	B	P	53	PRE SPUD SAFETY MEETING
	23:30 - 0:00	0.50	DRLSUR	02	B	P	53	DRILL 12 1/4 SURFACE HOLE F/ 49' TO 138' , 151' @ 151' FPH WOB = 8 TO 12K ROTORY RPM = 65 MUD MOTOR RPM = 111 TOTAL = 166 PUMPING 650 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 800/600 TORQUE ON/OFF = 2000/740 PU = 32 / SO = 28 / ROT = 30 PEAK ON LINE ARCHER OFF LINE
3/16/2014	0:00 - 0:30	0.50	DRLSUR	02	B	P	142	DRILL 12 1/4 SURFACE HOLE F/ 138' TO 200' , 151' @ 151' FPH WOB = 8 TO 12K ROTORY RPM = 65 MUD MOTOR RPM = 111 TOTAL = 166 PUMPING 650 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 800/600 TORQUE ON/OFF = 2000/740 PU = 38 / SO = 34 / ROT = 36 PEAK ON LINE ARCHER OFF LINE
	0:30 - 2:30	2.00	DRLSUR	06	A	P	204	PRE JOB SAFETY MEETING REVIEW JSA WITH RIG CREW INSPECT DIES (TONG AND BOOM) TRIP OUT / CHANGE BIT / PICK UP DIRECTIONAL TOOLS / TRIP IN HOLE

RECEIVED: Feb. 09, 2016

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-23B1CS BLUE	Spud date: 3/15/2014	
Project: UTAH-UINTAH	Site: NBU 921-23B PAD	Rig name no.: ENSIGN 145/145, CAPSTAR 310/310
Event: DRILLING	Start date: 3/15/2014	End date: 11/10/2015
Active datum: RKB @4,859.00usft (above Mean Sea Level)	UWI: NW/NE/0/9/S/21/E/23/0/0/26/PM/N/1128/E/0/2107/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	2:30 - 4:00	1.50	DRLSUR	02	B	P	204	DRILL 11" SURFACE HOLE F/ 200' TO 390', 190' @ 126.7 FPH WOB = 15 TO 20K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 650 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,530/450 PU = 44 / SO = 40 / ROT = 42 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 280' = 12.79% 1.5' ABOVE & .9' RIGHT OF THE LINE NO HOLE ISSUES
	4:00 - 4:30	0.50	DRLSUR	07	C	P	394	CHANGE ROTATING HEAD RUBBER
	4:30 - 6:00	1.50	DRLSUR	02	B	P	394	DRILL 11" SURFACE HOLE F/ 390' TO 570', 180' @ 120 FPH WOB = 15 TO 20K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 650 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,530/450 PU = 65 / SO = 55 / ROT = 60 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 12' = 3.17% 3.11' ABOVE & .16' LEFT OF THE LINE NO HOLE ISSUES
	6:00 - 12:00	6.00	DRLSUR	02	B	P	574	DRILL 11" SURFACE HOLE F/ 570' TO 1141', 570' @ 95.2 FPH WOB = 15 TO 20K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 650 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,530/450 PU = 68 / SO = 58 / ROT = 62 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 168' = 29.79% 4.90' ABOVE & .16' LEFT OF THE LINE NO HOLE ISSUES

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Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	12:00 - 15:30	3.50	DRLSUR	02	B	P	1145	DRILL 11" SURFACE HOLE F/ 1,141' TO 1,425', 284' @ 81.2 FPH WOB = 15 TO 20K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 650 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,530/450 PU = 72 / SO = 58 / ROT = 65 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 168' = 29.79% 4.90' ABOVE & .16' LEFT OF THE LINE NO HOLE ISSUES
	15:30 - 16:00	0.50	DRLSUR	07	A	P	1429	RIG SERVICE
	16:00 - 18:00	2.00	DRLSUR	02	B	P	1429	DRILL 11" SURFACE HOLE F/ 1,425' TO 1,544', 119' @ 59.5 FPH WOB = 15 TO 20K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 650 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,530/450 PU = 72 / SO = 58 / ROT = 65 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 54' = 13.04% 5.05' ABOVE & 2.40' LEFT OF THE LINE NO HOLE ISSUES
	18:00 - 0:00	6.00	DRLSUR	02	B	P	1548	DRILL 11" SURFACE HOLE F/ 1,544' TO 1,975', 431' @ 71.8 FPH WOB = 15 TO 20K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 650 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,530/450 PU = 74 / SO = 60 / ROT = 65 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 40' = 9.32% 10.05' ABOVE & 2.66' LEFT OF THE LINE NO HOLE ISSUES

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Event: DRILLING	Start date: 3/15/2014	End date: 11/10/2015
Active datum: RKB @4,859.00usft (above Mean Sea Level)	UWI: NW/NE/0/9/S/21/E/23/0/0/26/PM/N/1128/E/0/2107/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
3/17/2014	0:00 - 6:00	6.00	DRLSUR	02	B	P	1979	DRILL 11" SURFACE HOLE F/ 1,975' TO 2,350', 375' @ 62.5 FPH WOB = 15 TO 20K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 650 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,530/450 PU = 82 / SO = 65 / ROT = 70 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 41' = 10.93% 12.44' ABOVE & 1.33' RIGHT OF THE LINE NO HOLE ISSUES
	6:00 - 12:00	6.00	DRLSUR	02	B	P	2354	DRILL 11" SURFACE HOLE F/ 2,350' TO 2,723', 373' @ 62.5 FPH WOB = 15 TO 20K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 650 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,530/450 PU = 84 / SO = 67 / ROT = 74 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 122' = 33.61% 7.16' ABOVE & 2.43' RIGHT OF THE LINE NO HOLE ISSUES
	12:00 - 16:00	4.00	DRLSUR	02	B	P	2727	DRILL 11" SURFACE HOLE F/ 2,723' TO 2,965', 242' @ 60.5 FPH WOB = 15 TO 20K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 650 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,530/450 PU = 84 / SO = 67 / ROT = 74 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 110' = 45.45% 4.05' ABOVE & 1.08' RIGHT OF THE LINE NO HOLE ISSUES
	16:00 - 17:00	1.00	CSGSUR	05	A	P	2969	CIRCULATE AND CONDITION HOLE / SURVEY / PUMP HEAVY MUD FROM MUD PLANT (SAVED 4 HRS)
	17:00 - 21:30	4.50	CSGSUR	06	D	P	2969	LAY DOWN DRILL PIPE / BHA / DIRECTIONAL TOOLS (WIND HAZZARD BLOWING HOSES IN TO DERRICK)

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Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	21:30 - 0:00	2.50	CSGSUR	12	C	P	2969	ADJUST RIG / RIG DOWN CUSHION SUB / RIG UP CASING SPEAR / PREJOB SAFETY WITH RIG CREW. RAN 66 JTS OF 8 5/8", 28#, J-55, LT&C CASING WITH CTE FLOAT GUIDE SHOE AND BAFFLE PLATE LOCATED 1 JOINT ABOVE THE SHOE. 5 CENTRALIZERS SPACED 10' ABOVE THE SHOE, 2ND & 3RD COLLARS, AND EVERY THIRD COLLAR TO 2,532'. LANDED CASING SHOE AT 2,933'. BAFFLE PLATE @ 2,886'
3/18/2014	0:00 - 1:00	1.00	CSGSUR	12	C	P	2969	FINISH RUNNING CASING
	1:00 - 4:00	3.00	CSGSUR	12	E	P	2969	PREJOB SAFETY MEETING WITH PRO PETRO CEMENTERS & RIG CREW. RAN 200' OF 1" PIPE DOWN BACKSIDE OF CASING TESTED LINES TO 2000 PSI PUMPED 80 BBLS FRESH WATER CLEARING SHOE RETURNS TO SURFACE MIXED AND PUMPED 20 BBL GELLED WATER FLUSH AHEAD OF CEMENT MIXED AND PUMPED 300 SX OF PREMIUM CEMENT LEAD WITH 2% CACL2 & 1/4 LB/SX FLOCELE. 61.4 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. MIXED AND PUMPED 175 SX OF PREMIUM CEMENT TAIL WITH 2% CACL2 & 1/4 LB/SX FLOCELE. 35.8 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX DROP PLUG ON FLY. DISPLACE CEMENT WIITH 179.5 BBL FRESH WATER. FULL RETURNS THROUGH OUT DISPLACEMENT. 20 BBLS CEMENT TO SURFACE, FINAL LIFT OF 870 PSI @ 4.5 BBL/MINUTE. BUMP PLUG WITH 890 PSI. HELD 1120 PSI FOR 5 MINUTES. CHECK FLOAT. FLOAT HELD. TOP JOB # 1: PUMP CEMENT DOWN 1" PIPE WITH 175 SX PREMIUM CEMENT WITH 4% CACL2, 2% GR-3, & 1/4 LB/SX FLOCELE. 12.8 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. . CEMENT TO SURFACE STOOD FULL RELEASE RIG @ 04:00 3/18/2014 RELEASE CEMENTERS @ 05:00 3/18/2014
11/3/2015	10:30 - 12:00	1.50	MIRU3	01	C	P	2969	SKID RIG TO THE NBU 921-23B1CS WELL 2 OF 4
	12:00 - 12:30	0.50	PRPSPD	23		P	2969	PRE SPUD SAFETY CHECKLIST,AND RIG INSPECTION.
	12:30 - 14:00	1.50	PRPSPD	09	A	P	2969	CLEAN AND INSPECT WELL HEAD,NIPPLE UP B.O.P'S & RIG UP ROTARY TOOLS,CATWALK, FLOWLINE AND FLARE LINE,ECT

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	14:00 - 18:30	4.50	CSGSUR	15	A	P	2969	SAFETY MEETING WITH CREW, TEST BOP WITH B&C TESTERS TEST ANNULAR TO 250 PSI LOW/ 5 MIN 2500 PSI HIGH 10 MIN, PIPE & BLIND RAMS, FLOOR VALVES, IBOP, HCR VALVE, KILL LINE VALVES, TEST BOPS, CHOKE MANIFOLD TO 250 PSI LOW / 5 MIN - 5000 PSI HIGH / 10 MIN, HOLD ACCUMULATOR FUNCTION TEST, & TEST SURFACE CASING 1500 PSI FOR 30 MINS. RIG DOWN TESTER.
	18:30 - 20:00	1.50	CSGSUR	14	B	P	2969	SET WEAR BUSHING AND CHANGE OUT SAVER SUB
	20:00 - 20:30	0.50	CSGSUR	07	A	P	2969	RIG SERVICE
	20:30 - 22:00	1.50	CSGSUR	14	A	P	2969	SLIP CUT DRILL LINE
	22:00 - 0:00	2.00	CSGSUR	06	A	P	2969	PICK UP BHA & TRIP IN THE HOLE TO TOP OF CEMENT.
11/4/2015	0:00 - 1:00	1.00	CSGSUR	06	A	P	2969	PICK UP BHA, TESTED MOTOR, TRIP IN THE HOLE TO TOP OF CEMENT.
	1:00 - 2:00	1.00	DRLPRC	02	F	P	2969	DRILLED THE SHOE TRACK, FLOAT 2,892', SHOE 2,932' WOB- 5/8 SPM - 80 ROTARY - 20
	2:00 - 11:30	9.50	DRLPRC	02	D	P	2969	DIRECTIONAL DRILL F/ 2,969' - 4463 ' (1494' / 9.5 HRS @ 157.2'/FPH) BIT HRS. 7.5 TOTAL BIT HRS 7.5 WEIGHT ON BIT = 25/35 K STROKES PER MINUTE - 155 GALLONS PER MINUTE = 595.2 MUD MOTOR RPM =89.28 TOP DRIVE RPM = 65 TOTAL RPM = 155 FT/LBS TORQUE = 8.5 - 10.1K STPP = 2100 OFF BOTTOM = 1800 STRING WEIGHT UP/DOWN/ROTATING = 142/107/118 BIT POSISTION: 6.49' South / 15.82' West Slide 21' @ 7.88% Depth/ 3.18% Time = .26 Hrs. – Rot 640' @ 96.82% Depth/ 92.12% Time = 3.11Hrs. / Bit Hrs = 7.5 / D&C Hrs = 10.4 MUD WEIGHT = 9.1 PPG VISCOSITY = 28 SECONDS HOLE IN GOOD CONDITION ZECO - DEWATERING CENTRIFUGE - RUNNING DE-SANDER - RUNNING DRILLING WITH GYPSUM SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	11:30 - 12:00	0.50	DRLPRC	07	A	P	4463	SERVICE RIG

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	12:00 - 0:00	12.00	DRLPRO	02	D	P	4463	DIRECTIONAL DRILL F/ 4463' TO 6300'(1837' / 12 HRS @ 153.8 / FPH) WEIGHT ON BIT = 25/35 K STROKES PER MINUTE - 155 GALLONS PER MINUTE = 595.2 MUD MOTOR RPM =89.28 TOP DRIVE RPM = 65 TOTAL RPM = 155 FT/LBS TORQUE = 8.5 - 14.5K STPP = 2700 OFF BOTTOM = 2250 STRING WEIGHT UP/DOWN/ROTATING = 177/122/133 BIT POSISTION: 1.0' North / 9.12' West Slide 96' @ 5% Depth/ 13% Time = 1.32 Hrs. – Rot 1741' @ 95% Depth/ 87% Time = 8.55Hrs. / Bit Hrs = 17.0 / D&C Hrs = 21.7 MUD WEIGHT = 9 PPG VISCOSITY = 28 SECONDS HOLE IN GOOD CONDITION ZECO - DEWATERING CENTRIFUGE - RUNNING DE-SANDER - RUNNING DRILLING WITH GYPSUM SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
11/5/2015	0:00 - 14:00	14.00	DRLPRO	02	D	P	6300	DIRECTIONAL DRILL F/ 6300' TO 7677'(1377' / 14 HRS @ 98.3 / FPH) WEIGHT ON BIT = 25/35 K STROKES PER MINUTE - 155 GALLONS PER MINUTE = 595.2 MUD MOTOR RPM =89.28 TOP DRIVE RPM = 65 TOTAL RPM = 155 FT/LBS TORQUE = 8.5 - 14.5K STPP =2480 OFF BOTTOM = 2220 STRING WEIGHT UP/DOWN/ROTATING = 205/107/154 BIT POSISTION: 2.55' North / 7.72' West Slide 106' @ 7.69% Depth/ 20.14% Time = 2.41 Hrs. – Rot 1273' @ 92.31% Depth/ 79.86% Time = 9.58Hrs. / Bit Hrs = 28.5 / D&C Hrs = 34.8 MUD WEIGHT = 9.1 PPG VISCOSITY = 31 SECONDS HOLE IN GOOD CONDITION ZECO - DEWATERING CENTRIFUGE - RUNNING DE-SANDER - RUNNING DRILLING WITH GYPSUM SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	14:00 - 14:30	0.50	DRLPRO	07	A	P	7677	SERVICE RIG

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	14:30 - 0:00	9.50	DRLPRO	02	D	P	7677	DIRECTIONAL DRILL F/ 7677' TO 8514'(837' / 9.5 HRS @ 88.10 / FPH) WEIGHT ON BIT = 25/35 K STROKES PER MINUTE - 155 GALLONS PER MINUTE = 595.2 MUD MOTOR RPM =89.28 TOP DRIVE RPM = 65 TOTAL RPM = 155 FT/LBS TORQUE = 10.5 - 14.5K STPP =2720 OFF BOTTOM = 2220 STRING WEIGHT UP/DOWN/ROTATING = 218 / 138 / 161 BIT POSISTION: 12.78' North / 5.2' West Slide 0' @ 0% Depth/ 0% Time = 0.0 Hrs. – Rot 835' @ 100% Depth/ 100% Time = 8.45Hrs. / Bit Hrs = 36.9 / D&C Hrs = 44.4 MUD WEIGHT = 9.1 PPG VISCOSITY = 32 SECONDS HOLE IN GOOD CONDITION ZECO - DEWATERING CENTRIFUGE - RUNNING DE-SANDER - RUNNING DRILLING WITH GYPSUM SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
11/6/2015	0:00 - 3:30	3.50	DRLPRO	02	B	P	8514	DIRECTIONAL DRILL F/ 8514' TO 8800' (286' / 3.5 HRS @ 81.7 / FPH) WEIGHT ON BIT = 25/35 K STROKES PER MINUTE - 155 GALLONS PER MINUTE = 595.2 MUD MOTOR RPM =89.28 TOP DRIVE RPM = 65 TOTAL RPM = 155 FT/LBS TORQUE = 10.5 - 14.5K STPP =2720 OFF BOTTOM = 2220 STRING WEIGHT UP/DOWN/ROTATING = 218 / 138 / 161 BIT POSISTION: 10.32' North / 4.45' West Slide 0' @ 0% Depth/ 0% Time = 0.0 Hrs. – Rot 234' @ 100% Depth/ 100% Time = 3.08Hrs. / Bit Hrs = 39.8 / D&C Hrs = 47.7 MUD WEIGHT = 9.2 PPG VISCOSITY = 32 SECONDS HOLE IN GOOD CONDITION ZECO - DEWATERING CENTRIFUGE - RUNNING DE-SANDER - RUNNING DRILLING WITH GYPSUM SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	3:30 - 8:00	4.50	DRLPRO	22	N	X	8800	DIRECTIONAL DRILL TO 8,800' STOP SHUT IN WELL DO TO PIT GAIN,SPACE OUT SHUT IN SIDPP@170 SICP @ 381 MUD WT PREVIOUS TO PIT GAIN 9.2 CALCULATED KWM OF 9.99 PPG CURRENT OPERATION CIRC BOTTOMS UP TO 4360 STKS AND PREFORM MUD UP WITH THE ANN CLOSED,CIRC HEAVEY MUD IN AND DISPLACE OUT 9.2 PPB MUD OPEN ANN,FLOW CHECK (NO FLOW) LOST 200 BBLS ON MUD UP
	8:00 - 9:30	1.50	DRLPRO	05	G	P	8800	CIRC AND BUILD VOL. @ 80 STKS 305 GPM 1125 PSI

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	9:30 - 16:00	6.50	DRLPRO	02	B	P	8800	DIRECTIONAL DRILL F/ 8800' TO 9070 (270' / 6.5 HRS @ 41.5 / FPH) WEIGHT ON BIT = 25/35 K STROKES PER MINUTE - 130 GALLONS PER MINUTE = 500 MUD MOTOR RPM = 75 TOP DRIVE RPM = 65 TOTAL RPM = 140 FT/LBS TORQUE = 10.5 - 14.5K STPP =2625 OFF BOTTOM = 2350 STRING WEIGHT UP/DOWN/ROTATING = 235/117/169 BIT PLACEMENT 8.37' North / 3.26' West Slide 0' @ 0% Depth/ 0% Time = 0.0 Hrs. – Rot 269' @ 100% Depth/ 100% Time = 6.17Hrs. / Bit Hrs = 46.0 / D&C Hrs = 59.6 MUD WEIGHT = 11.4 PPG VISCOSITY = 37 SECONDS LCM % 6 HOLE IN GOOD CONDITION LCM 4%
	16:00 - 16:30	0.50	DRLPRO	07	A	P	9070	SERVICE RIG
	16:30 - 0:00	7.50	DRLPRO	02	B	P	9070	DIRECTIONAL DRILL F/ 9,070' TO 9,266' (196' / 7.5 HRS @ 26.1 / FPH) WEIGHT ON BIT = 25/36 K STROKES PER MINUTE - 144 GALLONS PER MINUTE = 548 MUD MOTOR RPM = 82 TOP DRIVE RPM = 65 TOTAL RPM = 147 FT/LBS TORQUE = 10.5 - 14.5K STPP =2800 OFF BOTTOM = 2500 STRING WEIGHT UP/DOWN/ROTATING = 222/150/169 BIT PLACEMENT 2.7' North / 1.88' West Slide 0' @ 0% Depth/ 0% Time = 0.0 Hrs. – Rot 190' @ 100% Depth/ 100% Time = 7 Hrs. / Bit Hrs = 52.6.0 / D&C Hrs = 67.4 MUD WEIGHT = 11.5 PPG VISCOSITY = 40 SECONDS LCM % 6 HOLE IN GOOD CONDITION (LCM 4% BYPASS SHAKERS)
11/7/2015	0:00 - 1:00	1.00	DRLPRO	05	C	P	9266	MAKE CALLS DO TO ROP,CIRC HOLE CLEAN,HPJSM FOR TRIP PREP RIG FLOOR FOR TRIP
	1:00 - 8:00	7.00	DRLPRO	06	A	P	9266	TRIP OUT OF THE HOLE DO TO ROP,RACK BACK DIR TOOLS XO-M.M & BIT. HOLE TAKING PROPER FILL,FLOW CHECKS / NO FLOW.TIGHT SPOTS @4,973',4,891',4,185' CONT T.O.H. L/D MOTOR & BIT
	8:00 - 14:00	6.00	DRLPRO	06	A	P	9266	PICK UP NEW WENZEL .15 RPG 3 STAGE 7/8 LOBE MOTOR & SEC BIT MM65D & T.I.H BREAK CIRC @ SHOE & @ 6,000'
	14:00 - 14:30	0.50	DRLPRO	02	B	P	9266	WASH TO BTM & CLEAN UP BTM DRILL F/ 9,266 TO 9,272 DRILL FIRST TWO FT @ 2K WOB & TWO FT @ 5K WOB - TWO FT @ 10K WOB - TWO FT @ 15 K WOB. WITH 105 SPM @ 400 GPM & TOP DRIVE @ 35 RPM & 11.5K TO 12K TORQUE & DIDNT SEE ANY JUNK UNDER BIT WHILE CLEANING BTM HOLE OUT.(LCM 6%)

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Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	14:30 - 0:00	9.50	DRLPRO	02	B	P	9272	DIRECTIONAL DRILL F/ 9,272' TO 9,850'(578' / 9.5 HRS @60.8 / FPH) WEIGHT ON BIT = 25/36 K STROKES PER MINUTE - 130 GALLONS PER MINUTE = 500 MUD MOTOR RPM = 75 TOP DRIVE RPM = 65 TOTAL RPM = 140 FT/LBS TORQUE = 10.5 - 14.5K STPP =2850 OFF BOTTOM = 2620 STRING WEIGHT UP/DOWN/ROTATING = 250/170/197 BIT PLACEMENT: 18' South / 2.61' East Slide 0' @ 0% Depth/ 0% Time = 0.0 Hrs. – Rot 588' @ 100% Depth/ 100% Time = 9.4Hrs. / Bit Hrs = 8.8 / D&C Hrs = 79.7 MUD WEIGHT = 12.0 PPG VISCOSITY = 40 SECONDS HOLE IN GOOD CONDITION (LCM 6% BYPASS SHAKERS)
11/8/2015	0:00 - 4:30	4.50	DRLPRO	02	B	P	9850	DIRECTIONAL DRILL F/ 9,850' TO 10,030'(180' / 4.5 HRS @40 / FPH) WEIGHT ON BIT = 25/36 K STROKES PER MINUTE - 130 GALLONS PER MINUTE = 500 MUD MOTOR RPM = 75 TOP DRIVE RPM = 65 TOTAL RPM = 140 FT/LBS TORQUE = 10.5 - 14.5K STPP =2750 OFF BOTTOM = 2369 STRING WEIGHT UP/DOWN/ROTATING = 250/170/197 BIT PLACEMENT: 30' South / 4.56' East Slide 0' @ 0% Depth/ 0% Time = 0.0 Hrs. – Rot 180' @ 100% Depth/ 100% Time = 3.68Hrs. / Bit Hrs = 12.48 / D&C Hrs = 83.38 MUD WEIGHT = 12.2 PPG VISCOSITY = 41 SECONDS HOLE IN GOOD CONDITION (LCM 6% BYPASS SHAKERS)
	4:30 - 6:00	1.50	EVALPR	05	A	P	10,030	CIRC & COND CIRC TWO BOTTOM UP @120 STKS 460 GPM 2311 PSI
	6:00 - 10:00	4.00	EVALPR	06	B	P	10,030	T.O.H FOR WEATHERFORD SHUTTLE LOGS
	10:00 - 10:30	0.50	EVALPR	07	A	P	10,030	RIG SERVICE,TOP DRIVE,DRAW TOOL,CAT WALK,ST-80
	10:30 - 12:30	2.00	EVALPR	06	B	P	10,030	FINISH T.O.H FOR WEATHERFORD SHUTTLE LOGS
	12:30 - 13:30	1.00	EVALPR	06	B	P	10,030	HPJSM LAY DOWN MWD TOOLS & DRAIN/LD MUD MOTOR-BIT.
	13:30 - 16:00	2.50	EVALPR	23	J	P	10,030	XO-ELEVATORS,CLEAN OFF FLOOR & PREP FOR LOGGING RUN & HELD SAFETY WITH WEATHERFORD LOGGING CREW.RIG UP SAME.
	16:00 - 22:30	6.50	EVALPR	11	E	P	10,030	PICK UP WEATHERFORD LOGGING TOOLS,TRIP IN THE HOLE @ 120' / MIN BREAK CIRC EVERY 2000' ON TRIP IN & TAG BTM @ 10,030'

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US ROCKIES REGION

Operation Summary Report

Well: NBU 921-23B1CS BLUE	Spud date: 3/15/2014	
Project: UTAH-UINTAH	Site: NBU 921-23B PAD	Rig name no.: ENSIGN 145/145, CAPSTAR 310/310
Event: DRILLING	Start date: 3/15/2014	End date: 11/10/2015
Active datum: RKB @4,859.00usft (above Mean Sea Level)	UWI: NW/NE/0/9/S/21/E/23/0/0/26/PM/N/1128/E/0/2107/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	22:30 - 0:00	1.50	EVALPR	05	A	P	10,030	FILL PIPE & CIRC WITH 59 SPM @ 2150 PSI & SPACED OUT D.P & DROP DART TO DEPLOY TOOLS CIRC WHILE PUMPING DART @ 60 SPM 1450 PSI FOR 950 STKS AND SLOWED DOWN PUMPS TO 16 SPM @ 200 PSI AT 1500 STKS,DEPLOY TOOLS. & CONT TO CIRC BTM UP.
11/9/2015	0:00 - 11:00	11.00	EVALPR	11	E	P	10,030	T.O.H WITH WEATHERFORD SHUTTLE LOGS F/ 10,030' TO CASING @ 30'/MIN THEN TRIP TO SURFACE.HPJSM,RIG DOWN SAME.
	11:00 - 11:30	0.50	CSGPRO	14	B	P	10,030	PULL THE WEAR BUSHING,PREP RIG FLOOR FOR CASING RUN.
	11:30 - 12:30	1.00	CSGPRO	12	A	P	10,030	SAFETY MEETING WITH FRANKS WESTATE AND RIG UP THE CASING CREW.
	12:30 - 23:30	11.00	CSGPRO	12	C	P	10,030	RUN 4.5 CASING RUN THE SHOE TRACK- TEST FLOAT (PUMPED THROUGH TEST GOOD) RAN A TOTAL OF 114 JTS OF LTC 11.6 PPF P-110 CASING.AND 114 JNTS OF DQX 11.6 PPF I-80 CASING 1-MV / MARKER @7,790' RIG DOWN FRANKS FROM GL: SHOE @ 9992.6 / FC @ 9947.1 FROM KB: SHOE @ 10005.6 / FC @ 9960.1 (HAD TO BACK OUT A TOTAL OF 10 JONITS 195,199,200,201,202,203,205,210,211BACKED OUT TWICE,212)
	23:30 - 0:00	0.50	CSGPRO	05	A	P	10,030	CIRC BTM UP
11/10/2015	0:00 - 0:30	0.50	CSGPRO	05	A	P	10,030	FINISH CIRC BTM UP FOR CEMENT JOB.
	0:30 - 1:00	0.50	CSGPRO	01	B	P	10,030	HPJSM WITH SCHLUMBERGER,RIG UP SAME.
	1:00 - 2:00	1.00	CSGPRO	12	E	P	10,030	LOAD & TEST LINES MIX AND PUMPED 30/BBLS CHEMWASH AND 47 BBLS 12.5 PPG LEAD CEMENT PUMPED,WHEN THE PUMP TRUCK LOST THE MAIN FAN BELT WE SWAPPED TO # 2 MOTOR AND PUMP WOULD NOT PUMP WITHOUT CAVITATING BAD CALLS MADE AND DECISIIONS MADE TO WAIT ON PUMP TRUCK & BULK TRUCK AND CEMENT VOL.
	2:00 - 10:00	8.00	CSGPRO	13	A	Z	10,030	DISPLACE CEMENT OUT OF HOLE 64 STKS 590 PSI / ALL CHEMWASH & CEMENT BACK TO SURFACE, CIRC HOLE @64 STKS 572 PSI AND WAIT ON SCHLUMBERGER PUMP TRUCK & BULK TRUCK AND CEMENT VOL TO ARRIVE ON LOC.

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US ROCKIES REGION

Operation Summary Report

Well: NBU 921-23B1CS BLUE	Spud date: 3/15/2014	
Project: UTAH-UINTAH	Site: NBU 921-23B PAD	Rig name no.: ENSIGN 145/145, CAPSTAR 310/310
Event: DRILLING	Start date: 3/15/2014	End date: 11/10/2015
Active datum: RKB @4,859.00usft (above Mean Sea Level)	UWI: NW/NE/0/9/S/21/E/23/0/0/26/PM/N/1128/E/0/2107/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	10:00 - 14:00	4.00	CSGPRO	12	E	P	10,030	WE HELD A SAFETY MEETING WITH SCHLUMBERGER PRESSURE TEST TO 5000 PSI. PUMP 30 BBL. CHEMICAL WASH, . DROPPED THE BOTTOM PLUG AND PUMPED 219.51 BBLS (850 SX) OF CLASS G LEAD CEMENT, 12.5 PPG 1.45 YLD, 53.01 #/SK D035 + 0.10% BWOC D208 + 0.2% BWOC D065 +.20 % BWOC D046 + .25 #/SK D029 + 0.50% BWOC D079 + 0.54 % BWOC D800 , 6.296 GL./SK FRESH WATER . FOLLOWED BY 260.13 BBLS (1090 SX) OF 14.5#, 1.34 YLD. CLASS G POZ TAIL CEMENT + 35.01#/SK D035 + 20.10% BWOC D066 +0.05% BWOC D208 + 0.22 % BWOC D800 + 0.20 % BWOC D046 + 0.30 % BWOC B477 + 5.585 GL/SK FRESH WATER . SHUT DOWN AND DROP PLUG AND DISPLACE W/ 154.78 BBLS OF FRESH WATER. FULL RETURNS WITH 134 BBLS OF CEMENT RETURNED TO SURFACE. LIFT PSI OF 2893 BUMP PLUG 500 OVER LIFT PSI. . PRESSURE HELD 5 MINS. FLOAT HELD. FLOW BACK 1.5 BBLS. EST. TOC FOR LEAD SURFACE, EST TOC OF TAIL CEMENT 3600' GOT CEMENT RETURN 20 BBLS INTO DISPLACEMENT @ 70 BBLS HAD HALF RETURNS @ 6.5 BBLS MIN & SLOW DOWN BBLS MIN TO 4 BBLS @ 90 BBLS INTO DISPLACEMENT HAD 1/4 RETURNS TILL BUMP PLUG @ 154.5 BBLS TOTAL CEMENT TO SURFACE 134.5 BBLS LEAD @ 12.5 PPG. (RIG DOWN CEMENTERS.
	14:00 - 15:00	1.00	CSGPRO	05	A	P	10,030	WASH OUT B.O.P'S STACK & TRANSFER OUT FIULD TO TANKS FARM
	15:00 - 16:00	1.00	RDMO	01	C	P	10,030	SET CAMERON PACK OFF & RELEASED RIG ON 11/10/2015 @ 16:00 HRS

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ANADARKO PETROLEUM CORP

UINTAH COUNTY, UTAH (NAD 27)
SEC. 23 T9S R21E (NBU 921-23B PAD)
NBU 921-23B1CS
PRODUCTION - JOB #2015-135-145

08 November, 2015

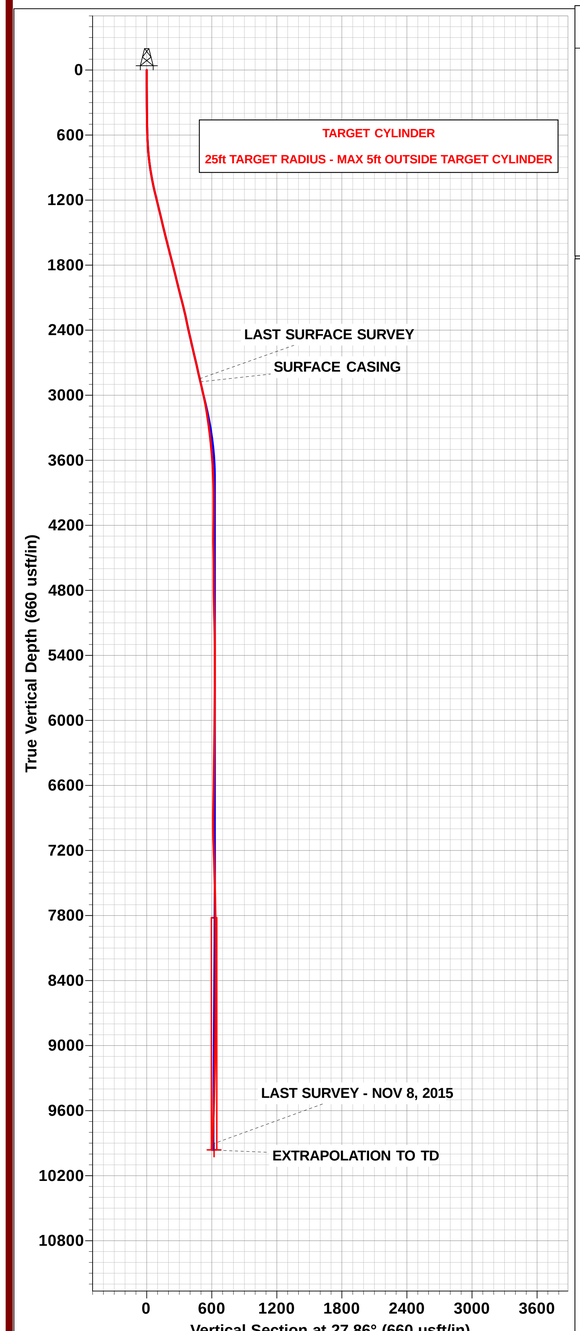
Survey: FINAL SURVEYS - PRODUCTION

RECEIVED: Feb. 09, 2016

Project: UINTAH COUNTY, UTAH (NAD 27)
Site: SEC. 23 T9S R21E (NBU 921-23B PAD)
Well: NBU 921-23B1CS
Wellbore: PRODUCTION - JOB #2015-135-145
Design: FINAL SURVEYS - PRODUCTION

total

Anadarko Petroleum Corporation



PROJECT DETAILS: UINTAH COUNTY, UTAH (NAD 27)

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Padsite: SEC. 23 T9S R21E (NBU 921-23B PAD)

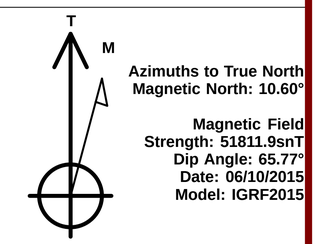
WELL DETAILS: NBU 921-23B1CS

Ground Level: 4845.9

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	14538878.29	2055767.97	40.025746	-109.516383

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL - NBU 921-23B1CS (P2)	9962.0	549.0	290.1	14539431.90	2056048.87	40.027253	-109.515347

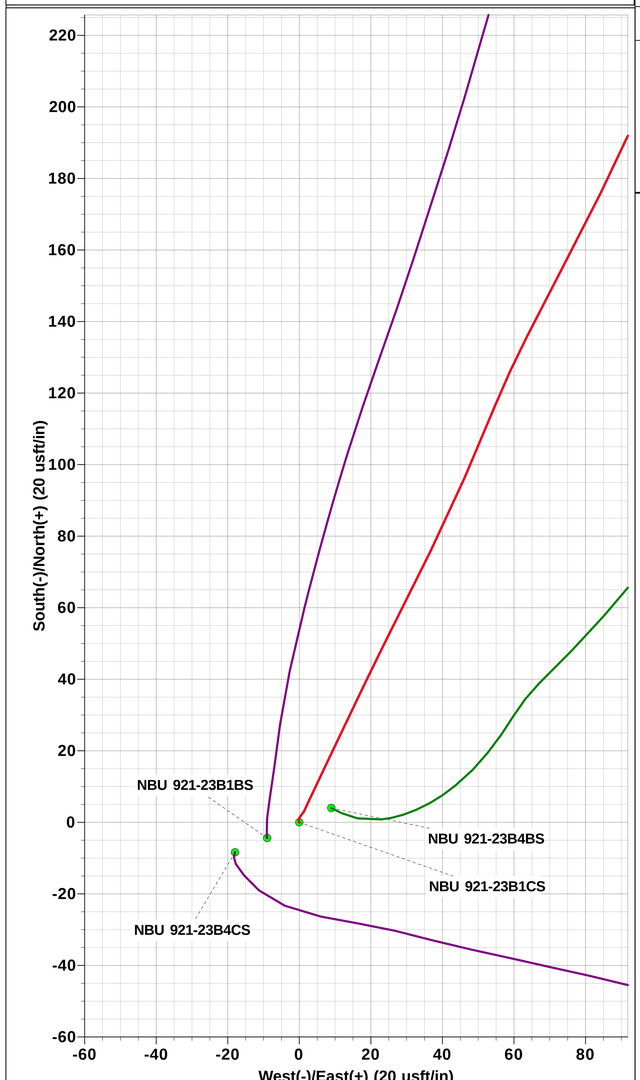


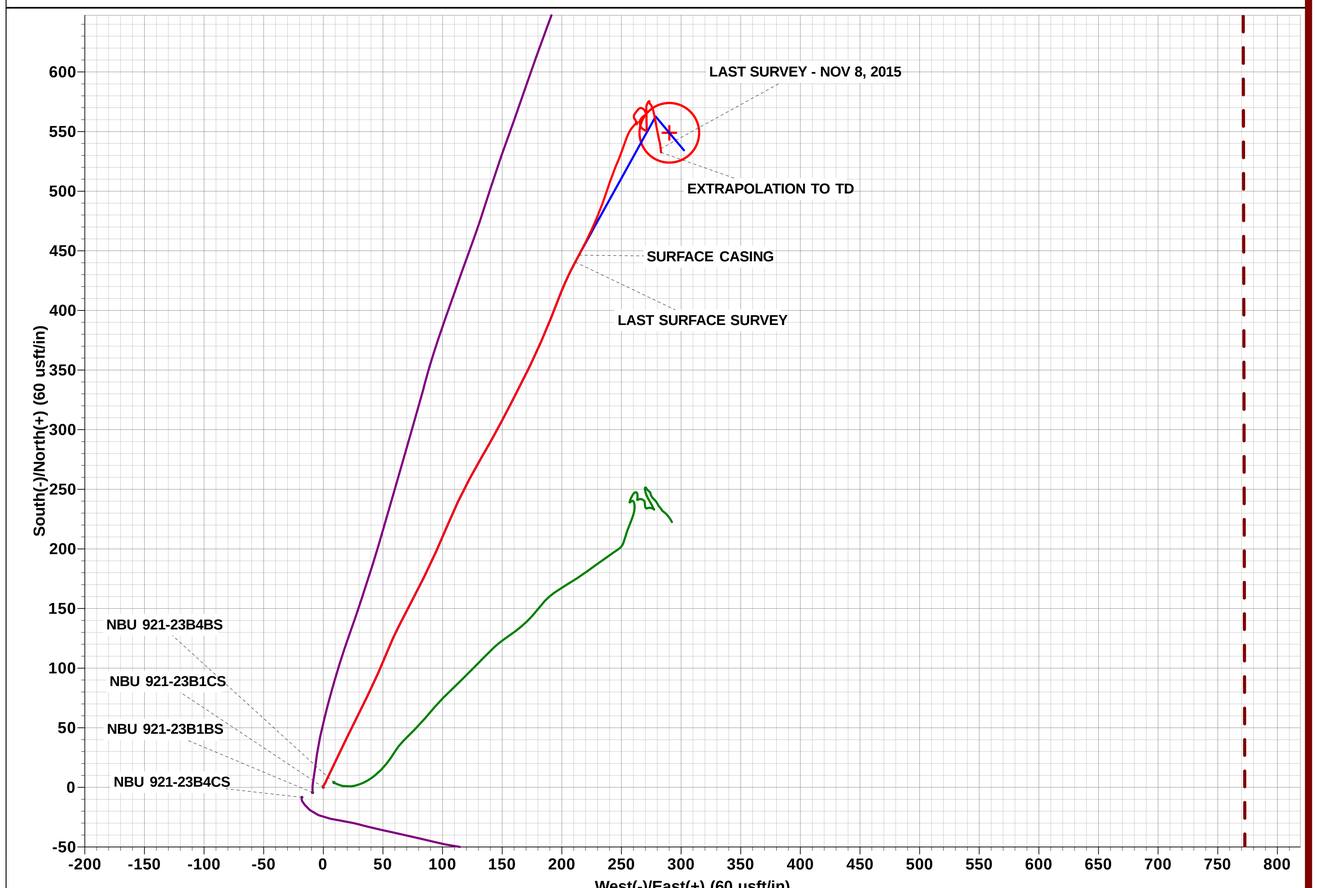
Azimuths to True North
Magnetic North: 10.60°

Magnetic Field
Strength: 51811.9snT
Dip Angle: 65.77°
Date: 06/10/2015
Model: IGRF2015

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
2848.1	2902.9	13.12	28.56	440.5	211.3	488.2	489.3	LAST SURFACE SURVEY
2876.4	2932.0	13.20	27.84	446.4	214.4	494.8	495.9	SURFACE CASING
9908.4	9975.0	3.25	173.37	535.6	282.9	605.7	732.7	LAST SURVEY - NOV 8, 2015
9963.3	10030.0	3.25	173.37	532.5	283.2	603.2	735.8	EXTRAPOLATION TO TD





Anadarko Petroleum Corporation

Survey Report

total

Company:	ANADARKO PETROLEUM CORP	**Local Co-ordinate Reference:**	Well NBU 921-23B1CS
Project:	UINTAH COUNTY, UTAH (NAD 27)	**TVD Reference:**	KB @ 4858.9usft (ENS 145)
Site:	SEC. 23 T9S R21E (NBU 921-23B PAD)	**MD Reference:**	KB @ 4858.9usft (ENS 145)
Well:	NBU 921-23B1CS	**North Reference:**	True
Wellbore:	PRODUCTION - JOB #2015-135-145	**Survey Calculation Method:**	Minimum Curvature
Design:	FINAL SURVEYS - PRODUCTION	**Database:**	EDM 5000.1 Single User Db

Project UINTAH COUNTY, UTAH (NAD 27)

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)		Using geodetic scale factor

Site SEC. 23 T9S R21E (NBU 921-23B PAD)

Site Position:		**Northing:**	14,538,882.44 usft	**Latitude:**	40.025757
From:	Lat/Long	**Easting:**	2,055,776.86 usft	**Longitude:**	-109.516351
Position Uncertainty:	0.0 usft	**Slot Radius:**	1.10000 ft	**Grid Convergence:**	0.95 °

Well NBU 921-23B1CS

Well Position	**+N/-S**	0.0 usft	**Northing:**	14,538,878.29 usft	**Latitude:**	40.025746
	+E/-W	0.0 usft	**Easting:**	2,055,767.97 usft	**Longitude:**	-109.516383
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	4,845.9 usft

Wellbore PRODUCTION - JOB #2015-135-145

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	06/10/2015	10.60	65.77	51,812

Design FINAL SURVEYS - PRODUCTION

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	27.86

Survey Program **Date** 08/11/2015

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
139.9	10,030.0	FINAL SURVEYS - PRODUCTION (PROD	MWD	MWD - Standard

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	-4,858.9	0.0	0.0	0.0	0.00	0.00	0.00
139.9	0.18	327.84	139.9	-4,719.0	0.2	-0.1	0.1	0.13	0.13	0.00
235.9	0.38	13.44	235.9	-4,623.0	0.6	-0.1	0.5	0.30	0.21	47.50
328.9	0.55	14.96	328.9	-4,530.0	1.4	0.1	1.2	0.18	0.18	1.63
421.9	0.63	52.69	421.9	-4,437.0	2.1	0.6	2.1	0.42	0.09	40.57
515.9	0.88	26.12	515.9	-4,343.0	3.1	1.3	3.3	0.45	0.27	-28.27
608.9	1.85	24.62	608.9	-4,250.0	5.1	2.3	5.5	1.04	1.04	-1.61
704.9	3.91	25.18	704.7	-4,154.2	9.4	4.3	10.3	2.15	2.15	0.58
799.9	5.89	25.76	799.4	-4,059.5	16.8	7.8	18.5	2.08	2.08	0.61
892.9	8.09	25.24	891.7	-3,967.2	27.0	12.7	29.8	2.37	2.37	-0.56
987.9	10.20	25.94	985.5	-3,873.4	40.6	19.2	44.8	2.22	2.22	0.74
1,079.9	12.45	26.55	1,075.7	-3,783.2	56.8	27.2	62.9	2.45	2.45	0.66
1,173.9	13.89	26.56	1,167.2	-3,691.7	75.9	36.8	84.3	1.53	1.53	0.01

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Anadarko Petroleum Corporation

Survey Report

total

Company:	ANADARKO PETROLEUM CORP	**Local Co-ordinate Reference:**	Well NBU 921-23B1CS
Project:	UINTAH COUNTY, UTAH (NAD 27)	**TVD Reference:**	KB @ 4858.9usft (ENS 145)
Site:	SEC. 23 T9S R21E (NBU 921-23B PAD)	**MD Reference:**	KB @ 4858.9usft (ENS 145)
Well:	NBU 921-23B1CS	**North Reference:**	True
Wellbore:	PRODUCTION - JOB #2015-135-145	**Survey Calculation Method:**	Minimum Curvature
Design:	FINAL SURVEYS - PRODUCTION	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,267.9	13.66	23.16	1,258.5	-3,600.4	96.2	46.2	106.7	0.90	-0.24	-3.62
1,360.9	13.45	22.62	1,348.9	-3,510.0	116.3	54.6	128.4	0.26	-0.23	-0.58
1,452.9	13.40	26.93	1,438.4	-3,420.5	135.7	63.6	149.7	1.09	-0.05	4.68
1,546.9	14.08	27.55	1,529.7	-3,329.2	155.5	73.8	172.0	0.74	0.72	0.66
1,640.9	14.28	26.59	1,620.8	-3,238.1	176.1	84.3	195.0	0.33	0.21	-1.02
1,736.9	14.77	24.18	1,713.8	-3,145.1	197.8	94.6	219.1	0.81	0.51	-2.51
1,828.9	14.21	22.61	1,802.8	-3,056.1	218.9	103.7	242.0	0.74	-0.61	-1.71
1,922.9	13.56	25.51	1,894.1	-2,964.8	239.5	112.9	264.5	1.01	-0.69	3.09
2,013.9	13.57	28.06	1,982.6	-2,876.3	258.6	122.5	285.9	0.66	0.01	2.80
2,107.9	14.33	30.25	2,073.8	-2,785.1	278.4	133.6	308.5	0.98	0.81	2.33
2,202.9	14.98	28.51	2,165.7	-2,693.2	299.3	145.4	332.5	0.83	0.68	-1.83
2,297.9	12.04	26.98	2,258.1	-2,600.8	318.9	155.7	354.7	3.12	-3.09	-1.61
2,390.9	11.91	27.40	2,349.0	-2,509.9	336.1	164.5	374.0	0.17	-0.14	0.45
2,485.9	12.93	25.85	2,441.8	-2,417.1	354.4	173.7	394.5	1.13	1.07	-1.63
2,578.9	13.28	23.83	2,532.4	-2,326.5	373.5	182.5	415.5	0.62	0.38	-2.17
2,672.9	13.37	21.32	2,623.9	-2,235.0	393.5	190.9	437.1	0.62	0.10	-2.67
2,767.9	12.84	21.37	2,716.4	-2,142.5	413.6	198.7	458.5	0.56	-0.56	0.05
2,862.9	12.57	26.47	2,809.1	-2,049.8	432.6	207.2	479.3	1.21	-0.28	5.37
LAST SURFACE SURVEY										
2,902.9	***13.12***	***28.56***	***2,848.1***	***-2,010.8***	***440.5***	***211.3***	***488.2***	***1.80***	***1.37***	***5.22***
SURFACE CASING										
2,932.0	***13.20***	***27.84***	***2,876.4***	***-1,982.5***	***446.4***	***214.4***	***494.8***	***0.62***	***0.27***	***-2.46***
2,991.0	13.36	26.42	2,933.8	-1,925.1	458.4	220.6	508.4	0.62	0.28	-2.41
3,085.0	11.82	22.47	3,025.6	-1,833.3	477.0	229.1	528.8	1.88	-1.64	-4.20
3,180.0	9.84	19.39	3,118.9	-1,740.0	493.7	235.5	546.5	2.17	-2.08	-3.24
3,274.0	8.22	17.81	3,211.7	-1,647.2	507.7	240.2	561.1	1.74	-1.72	-1.68
3,369.0	7.69	23.70	3,305.8	-1,553.1	520.0	244.9	574.1	1.02	-0.56	6.20
3,464.0	6.37	20.36	3,400.1	-1,458.8	530.7	249.2	585.7	1.45	-1.39	-3.52
3,558.0	5.49	19.04	3,493.6	-1,365.3	539.9	252.5	595.3	0.95	-0.94	-1.40
3,653.0	4.26	23.78	3,588.2	-1,270.7	547.4	255.4	603.3	1.36	-1.29	4.99
3,747.0	2.94	37.49	3,682.0	-1,176.9	552.5	258.3	609.2	1.67	-1.40	14.59
3,842.0	2.02	43.91	3,776.9	-1,082.0	555.6	261.0	613.2	1.01	-0.97	6.76
3,936.0	1.01	54.46	3,870.9	-988.0	557.3	262.8	615.5	1.11	-1.07	11.22
4,031.0	0.13	38.02	3,965.9	-893.0	557.9	263.5	616.4	0.93	-0.93	-17.31
4,125.0	0.22	246.32	4,059.9	-799.0	557.9	263.4	616.3	0.36	0.10	-161.38
4,220.0	0.44	202.55	4,154.9	-704.0	557.5	263.1	615.8	0.34	0.23	-46.07
4,314.0	0.62	193.50	4,248.9	-610.0	556.6	262.9	615.0	0.21	0.19	-9.63
4,409.0	0.13	100.60	4,343.9	-515.0	556.1	262.8	614.5	0.67	-0.52	-97.79
4,504.0	1.67	343.62	4,438.9	-420.0	557.4	262.6	615.5	1.82	1.62	-123.14
4,598.0	0.97	331.23	4,532.9	-326.0	559.4	261.8	616.9	0.80	-0.74	-13.18
4,693.0	0.57	328.50	4,627.8	-231.1	560.6	261.2	617.6	0.42	-0.42	-2.87
4,787.0	0.31	290.36	4,721.8	-137.1	561.0	260.7	617.8	0.40	-0.28	-40.57
4,882.0	1.19	354.25	4,816.8	-42.1	562.1	260.3	618.6	1.15	0.93	67.25
4,976.0	0.62	22.64	4,910.8	51.9	563.6	260.4	619.9	0.75	-0.61	30.20
5,071.0	1.76	34.33	5,005.8	146.9	565.2	261.5	621.9	1.22	1.20	12.31
5,165.0	1.49	37.85	5,099.8	240.9	567.4	263.0	624.5	0.31	-0.29	3.74
5,260.0	1.05	44.44	5,194.7	335.8	569.0	264.4	626.6	0.49	-0.46	6.94
5,354.0	0.70	79.07	5,288.7	429.8	569.7	265.6	627.8	0.66	-0.37	36.84
5,449.0	0.57	92.69	5,383.7	524.8	569.8	266.6	628.3	0.21	-0.14	14.34
5,544.0	0.62	124.59	5,478.7	619.8	569.5	267.5	628.5	0.35	0.05	33.58
5,638.0	0.70	126.35	5,572.7	713.8	568.9	268.4	628.3	0.09	0.09	1.87
5,733.0	0.70	145.07	5,667.7	808.8	568.0	269.2	628.0	0.24	0.00	19.71
5,827.0	0.92	153.95	5,761.7	902.8	566.9	269.8	627.3	0.27	0.23	9.45

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Anadarko Petroleum Corporation

Survey Report

total

Company:	ANADARKO PETROLEUM CORP	**Local Co-ordinate Reference:**	Well NBU 921-23B1CS
Project:	UINTAH COUNTY, UTAH (NAD 27)	**TVD Reference:**	KB @ 4858.9usft (ENS 145)
Site:	SEC. 23 T9S R21E (NBU 921-23B PAD)	**MD Reference:**	KB @ 4858.9usft (ENS 145)
Well:	NBU 921-23B1CS	**North Reference:**	True
Wellbore:	PRODUCTION - JOB #2015-135-145	**Survey Calculation Method:**	Minimum Curvature
Design:	FINAL SURVEYS - PRODUCTION	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,922.0	0.97	161.42	5,856.7	997.8	565.4	270.4	626.3	0.14	0.05	7.86
6,016.0	0.48	188.49	5,950.7	1,091.8	564.3	270.6	625.4	0.62	-0.52	28.80
6,111.0	0.40	261.44	6,045.7	1,186.8	563.9	270.2	624.8	0.55	-0.08	76.79
6,206.0	0.48	242.72	6,140.7	1,281.8	563.6	269.5	624.3	0.17	0.08	-19.71
6,300.0	0.92	234.46	6,234.7	1,375.8	563.0	268.6	623.3	0.48	0.47	-8.79
6,395.0	1.14	224.61	6,329.6	1,470.7	561.9	267.3	621.7	0.30	0.23	-10.37
6,489.0	1.32	211.78	6,423.6	1,564.7	560.3	266.1	619.7	0.35	0.19	-13.65
6,584.0	0.57	193.76	6,518.6	1,659.7	558.9	265.4	618.1	0.84	-0.79	-18.97
6,678.0	0.92	176.63	6,612.6	1,753.7	557.7	265.3	617.0	0.44	0.37	-18.22
6,773.0	1.10	167.84	6,707.6	1,848.7	556.1	265.6	615.7	0.25	0.19	-9.25
6,868.0	1.41	161.77	6,802.6	1,943.7	554.1	266.1	614.2	0.35	0.33	-6.39
6,962.0	1.98	123.28	6,896.5	2,037.6	552.1	267.8	613.2	1.32	0.61	-40.95
7,057.0	1.14	112.90	6,991.5	2,132.6	550.8	270.1	613.2	0.93	-0.88	-10.93
7,151.0	1.27	9.28	7,085.5	2,226.6	551.5	271.1	614.2	2.02	0.14	-110.23
7,246.0	2.50	357.33	7,180.4	2,321.5	554.6	271.2	617.0	1.35	1.29	-12.58
7,340.0	2.29	359.17	7,274.3	2,415.4	558.5	271.1	620.4	0.24	-0.22	1.96
7,435.0	1.98	0.40	7,369.3	2,510.4	562.0	271.0	623.5	0.33	-0.33	1.29
7,529.0	1.85	356.27	7,463.2	2,604.3	565.2	270.9	626.3	0.20	-0.14	-4.39
7,624.0	1.41	359.61	7,558.2	2,699.3	567.9	270.8	628.6	0.47	-0.46	3.52
7,718.0	1.19	357.10	7,652.2	2,793.3	570.0	270.8	630.5	0.24	-0.23	-2.67
7,813.0	1.01	21.76	7,747.1	2,888.2	571.8	271.0	632.2	0.53	-0.19	25.96
7,908.0	0.83	20.09	7,842.1	2,983.2	573.2	271.6	633.7	0.19	-0.19	-1.76
8,002.0	0.52	32.22	7,936.1	3,077.2	574.2	272.1	634.8	0.36	-0.33	12.90
8,097.0	0.44	30.29	8,031.1	3,172.2	574.9	272.5	635.6	0.09	-0.08	-2.03
8,191.0	0.44	57.71	8,125.1	3,266.2	575.4	273.0	636.2	0.22	0.00	29.17
8,286.0	0.13	67.03	8,220.1	3,361.2	575.6	273.4	636.6	0.33	-0.33	9.81
8,380.0	0.31	191.04	8,314.1	3,455.2	575.4	273.4	636.5	0.42	0.19	131.93
8,475.0	0.35	176.98	8,409.1	3,550.2	574.9	273.4	636.0	0.09	0.04	-14.80
8,570.0	0.53	165.64	8,504.1	3,645.2	574.1	273.5	635.4	0.21	0.19	-11.94
8,659.0	0.35	152.10	8,593.1	3,734.2	573.5	273.7	634.9	0.23	-0.20	-15.21
8,748.0	0.62	131.63	8,682.1	3,823.2	572.9	274.2	634.7	0.36	0.30	-23.00
8,838.0	0.66	146.13	8,772.1	3,913.2	572.2	274.9	634.3	0.18	0.04	16.11
8,927.0	1.05	161.95	8,861.1	4,002.2	571.0	275.4	633.5	0.51	0.44	17.78
9,017.0	1.10	152.98	8,951.1	4,092.2	569.4	276.1	632.4	0.19	0.06	-9.97
9,106.0	1.23	169.07	9,040.1	4,181.2	567.7	276.6	631.2	0.39	0.15	18.08
9,195.0	1.70	165.90	9,129.0	4,270.1	565.5	277.1	629.5	0.54	0.53	-3.56
9,259.0	1.80	168.45	9,193.0	4,334.1	563.6	277.6	628.0	0.20	0.16	3.98
9,349.0	1.85	169.07	9,283.0	4,424.1	560.8	278.1	625.8	0.06	0.06	0.69
9,438.0	1.93	169.68	9,371.9	4,513.0	557.9	278.7	623.5	0.09	0.09	0.69
9,527.0	2.15	170.03	9,460.9	4,602.0	554.8	279.2	621.0	0.25	0.25	0.39
9,617.0	2.20	170.58	9,550.8	4,691.9	551.4	279.8	618.3	0.06	0.06	0.61
9,706.0	2.50	166.52	9,639.7	4,780.8	547.9	280.5	615.4	0.39	0.34	-4.56
9,795.0	2.55	165.55	9,728.6	4,869.7	544.1	281.5	612.5	0.07	0.06	-1.09
9,884.0	2.54	171.26	9,817.5	4,958.6	540.2	282.3	609.5	0.28	-0.01	6.42
LAST SURVEY - NOV 8, 2015										
9,975.0	***3.25***	***173.37***	***9,908.4***	***5,049.5***	***535.6***	***282.9***	***605.7***	***0.79***	***0.78***	***2.32***
EXTRAPOLATION TO TD										
10,030.0	***3.25***	***173.37***	***9,963.3***	***5,104.4***	***532.5***	***283.2***	***603.2***	***0.00***	***0.00***	***0.00***

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Anadarko Petroleum Corporation

Survey Report

total

Company:	ANADARKO PETROLEUM CORP	**Local Co-ordinate Reference:**	Well NBU 921-23B1CS
Project:	UINTAH COUNTY, UTAH (NAD 27)	**TVD Reference:**	KB @ 4858.9usft (ENS 145)
Site:	SEC. 23 T9S R21E (NBU 921-23B PAD)	**MD Reference:**	KB @ 4858.9usft (ENS 145)
Well:	NBU 921-23B1CS	**North Reference:**	True
Wellbore:	PRODUCTION - JOB #2015-135-145	**Survey Calculation Method:**	Minimum Curvature
Design:	FINAL SURVEYS - PRODUCTION	**Database:**	EDM 5000.1 Single User Db

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BHL - NBU 921-23B1CS	0.00	0.00	11,025.0	549.0	290.1	14,539,431.90	2,056,048.87	40.027253	-109.515347
- survey misses target center by 1061.8usft at 10030.0usft MD (9963.3 TVD, 532.5 N, 283.2 E)									
- Circle (radius 50.0)									
BHL - NBU 921-23B1CS	0.00	0.00	9,962.0	549.0	290.1	14,539,431.90	2,056,048.87	40.027253	-109.515347
- survey misses target center by 17.7usft at 10027.8usft MD (9961.1 TVD, 532.7 N, 283.2 E)									
- Circle (radius 25.0)									
BTV - NBU 921-23B1CS	0.00	0.00	10,425.0	554.7	285.3	14,539,437.55	2,056,043.93	40.027269	-109.515364
- survey misses target center by 462.2usft at 10030.0usft MD (9963.3 TVD, 532.5 N, 283.2 E)									
- Point									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,902.9	2,848.1	440.5	211.3	LAST SURFACE SURVEY
2,932.0	2,876.4	446.4	214.4	SURFACE CASING
9,975.0	9,908.4	535.6	282.9	LAST SURVEY - NOV 8, 2015
10,030.0	9,963.3	532.5	283.2	EXTRAPOLATION TO TD

Checked By: _____ Approved By: _____ Date: _____

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US ROCKIES REGION

Operation Summary Report

Well: NBU 921-23B1CS BLUE	Spud date: 3/15/2014	
Project: UTAH-UINTAH	Site: NBU 921-23B PAD	Rig name no.: MILES 2/2
Event: COMPLETION	Start date: 12/2/2015	End date: 1/12/2016
Active datum: RKB @4,859.00usft (above Mean Sea Level)	UWI: NW/NE/0/9/S/21/E/23/0/0/26/PM/N/1128/E/0/2107/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
11/28/2015	-							
12/2/2015	11:00 - 13:00	2.00	FRAC	52	I	P		SURFACE CASING HAD 300 PSI WELL FROZEN THAW SURFACE BLED WELL DOWN SLIGHT MIGRATION, FILLED WITH 1 BBLS H20, PRESSURED TP 1200 PSI HELD FOR 5 MIN, GOOD BLEDPSI OFF WELL HOOKED UP WELL TO TRASH TANK TO MONITOR FOE 24 HRS
12/11/2015	8:30 - 9:30	1.00	FRAC	52	B	P		FILL SURFACE TEST CSG & FRAC VALVES 1ST PSI TEST TO 7000 PSI FOR 15 MIN LOST -34 PSI, NO MIGRATION OR COMMUNICATION WITH SURFACE CSG. TEST 8 5/8 X 4 1/2 SURFACE CASING TO 500 PSI FOR 5 MIN LOST -400 PSI. SURFACE HAD 150 PSI , BLED DOWN IN 1 MIN FILLED WITH 1 BBL WATER
	9:30 - 10:30	1.00	FRAC	37	E	P		RU WIRE LINE PERF 1ST STG AS DESIGNED POOH, SWIFW
12/14/2015	0:00 - 0:00	24.00	FRAC	36	H	P		FRAC STAGE # 1) WHP 1764 PSI, BRK 4367 PSI @ 4.6 BPM. ISIP 3338 PSI, FG. 0.77 ISIP 3614 PSI, FG. 0.81, NPI 276 PSI.
12/15/2015	0:00 - 0:00	24.00	FRAC	36	H	P		SET HAL 8K CBP & PERF STG# 2) AS DESIGNED FRAC STG # 2) WHP 2220 PSI, BRK 3691 PSI @ 3.5 BPM. ISIP 2980 PSI, FG. 0.75 ISIP 3360 PSI, FG. 0.79, NPI 380 PSI.
12/16/2015	0:00 - 1:30	1.50	FRAC	37	E	P		SET HAL 8K CBP & PERF STG# 3) AS DESIGNED
	1:30 - 3:30	2.00	FRAC	46	E	P		REPACK PUMPS
	3:30 - 0:00	20.50	FRAC	36	H			FRAC STAGE # 3)WHP 2051 PSI, BRK 3729 PSI @ 3.5 BPM. ISIP 3210 PSI, FG. 0.78 ISIP 2915 PSI, FG. 0.75, NPI -295 PSI.
12/17/2015	0:00 - 0:00	24.00	FRAC	36	H	P		SET HAL 8K CBP & PERF STG# 4) AS DESIGNED FRAC STG # 4) WHP 2640 PSI, BRK 2895 PSI @ 3.7 BPM. ISIP 2685 PSI, FG. 0.74 ISIP 2987 PSI, FG. 0.77, NPI 302 PSI.
12/18/2015	0:00 - 0:00	24.00	FRAC	36	H	P		SET HAL 8K CBP & PERF STG# 5) AS DESIGNED FRAC STAGE #5) WHP 2779 PSI, BRK 3126 PSI @ 3.2 BPM. ISIP 2855 PSI, FG. 0.77 ISIP 3027 PSI, FG. 0.78, NPI 172 PSI.
12/19/2015	0:00 - 0:00	24.00	FRAC	36	H	P		SET HAL 8K CBP & PERF STG# 6) AS DESIGNED FRAC STAGE #6) WHP 2650 PSI, BRK 3801 PSI @ 2.3 BPM. ISIP 2615 PSI, FG. 0.77 ISIP 3000 PSI, FG. 0.79, NPI 385 PSI.
12/20/2015	0:00 - 6:30	6.50	FRAC	37	E	P		SET HAL 8K CBP & PERF STG# 7) AS DESIGNED: WHILE POOH WIRE LINE HIGH STRANDED @ 1300' . STRIPPED OUT REMAINING WIRELINE & GUNS.

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US ROCKIES REGION

Operation Summary Report

Well: NBU 921-23B1CS BLUE	Spud date: 3/15/2014	
Project: UTAH-UINTAH	Site: NBU 921-23B PAD	Rig name no.: MILES 2/2
Event: COMPLETION	Start date: 12/2/2015	End date: 1/12/2016
Active datum: RKB @4,859.00usft (above Mean Sea Level)	UWI: NW/NE/0/9/S/21/E/23/0/0/26/PM/N/1128/E/0/2107/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:30 - 0:00	17.50	FRAC	36	H	P		FRAC STAGE # 7)WHP 2400 PSI, BRK 2655 PSI @ 3 BPM. ISIP 2500 PSI, FG. 0.74 ISIP 2690 PSI, FG. 0.8, NPI 190 PSI. SET HAL 8K CBP & PERF STG# 8) AS DESIGNED
12/21/2015	0:00 - 0:00	24.00	FRAC	36	H	P		FRAC STG # 8) WHP 2000 PSI, BRK 2329 PSI @ 3.2 BPM. ISIP 2130 PSI, FG. 0.71 ISIP 2915 PSI, FG. 0.81, NPI 785 PSI. SET HAL 8K KILL PLUG AS DESIGN WATER: 74,699 BBLS SAND: 306,783#
1/11/2016	7:00 - 7:30	0.50	DRLOUT	48		P		HSM, WATCHING PINCH POINTS WHILE PICKING UP TBG W/ PIPE WRANGLER.
	7:30 - 15:00	7.50	DRLOUT	31	I	P		3 OF 4, TALLY & PU 37/8 BIT, POBS, 246 JTS 23/8 P-110, TAG UP @ 7764', RU DRLG EQUIP PREP TO D/O IN AM SWI SDFN.
1/12/2016	7:00 - 7:30	0.50	DRLOUT	48		P		HSM, DRILLING PLUGS W/ POWER SWIVEL.

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US ROCKIES REGION

Operation Summary Report

Well: NBU 921-23B1CS BLUE	Spud date: 3/15/2014	
Project: UTAH-UINTAH	Site: NBU 921-23B PAD	Rig name no.: MILES 2/2
Event: COMPLETION	Start date: 12/2/2015	End date: 1/12/2016
Active datum: RKB @4,859.00usft (above Mean Sea Level)	UWI: NW/NE/0/9/S/21/E/23/0/0/26/PM/N/1128/E/0/2107/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	7:30 - 16:00	8.50	DRLOUT	44	D	P		BROKE CIRC CONV, TEST BOPS TO 3,000 PSI, RIH. C/O 15' SAND TAG 1ST PLUG @ 7796' DRL PLG IN 5 MIN, 800 PSI INCREASE RIH. C/O 20' SAND TAG 2ND PLUG @ 8089' DRL PLG IN 5 MIN, 700 PSI INCREASE RIH. C/O 10' SAND TAG 3RD PLUG @ 8260' DRL PLG IN 5 MIN, 300 PSI INCREASE RIH. C/O 10' SAND TAG 4TH PLUG @ 8570' DRL PLG IN 5 MIN, 300 PSI INCREASE RIH. C/O 20' SAND TAG 5TH PLUG @ 8878' DRL PLG IN 5 MIN, 200 PSI INCREASE RIH. C/O 40' SAND TAG 6TH PLUG @ 9091' DRL PLG IN 5 MIN, 200 PSI INCREASE RIH. C/O 20' SAND TAG 7TH PLUG @ 9378' DRL PLG IN 5 MIN, 300 PSI INCREASE RIH. C/O 30' SAND TAG 8TH PLUG @ 9670' DRL PLG IN 5 MIN, 200 PSI INCREASE RIH. C/O TO FILL 9963', CIRC CLN, RD SWIVEL, L/D 19 JTS, LAND TBG, ND BOPS NU WH, TEST FL, PUMPED OFF BIT, TURN WELL TO FB CREW.RIG DWN MOVED OVER & RU ON 4 OF 4, YELLOW WELL ND WH NU BOPS SWI SDFN. KB = 13' 41/16 HANGER = .83' 296 JTS 23/8 P-110 = 9355.49' POBS W/ 1.875 X/N = 2.20' EOT @ 9371.52' TWTR 74,699 BBLS TWR 3500 BBLS TWLTR 71,199 BBLS 316 JT HAULED OUT, P-110. 296 LANDED 20 TO RETURN

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1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 921-23B1CS BLUE	**Wellbore No.**	00
Well Name	NBU 921-23B1CS	**Wellbore Name**	NBU 921-23B1CS
Report no.	1	**Report date**	12/14/2015
Project	UTAH-UINTAH	**Site**	NBU 921-23B PAD
Rig Name/No.	MILES 2/2	**Event**	COMPLETION
Start date	12/2/2015	**End date**	1/12/2016
Spud date	3/15/2014	**Active datum**	RKB @4,859.00usft (above Mean Sea Level)
UWI	NW/NE/0/9/S/21/E/23/0/0/26/PM/N/1128/E/0/2107/0/0		

1.3 General

Contractor		**Job method**		**Supervisor**	
Perforated Assembly		**Conveyed method**			

1.4 Initial Conditions

Fluid type		**Fluid density**	
Surface press.		**Estimate res press**	
TVD fluid top		**Fluid head**	
Hydrostatic press.		**Press. difference**	
Balance Cond	NEUTRAL		

1.5 Summary

Gross Interval	7,846.0 (usft)-9,902.0 (usft	**Start Date/Time**	12/14/2015 12:00AM
No. of intervals	55	**End Date/Time**	12/14/2015 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
12/14/2015 12:00AM	M E S A V E RDE/			7,846.0	7,847.0	3.00		0.410	EXP/8	3.125	120.00		19.00	PRODUCTION		

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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
12/14/2015 12:00AM	M E S A V E RDE/			7,863.0	7,864.0	3.00		0.410	EXP/8	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			7,888.0	7,889.0	3.00		0.410	EXP/8	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			7,905.0	7,906.0	3.00		0.410	EXP/8	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			7,933.0	7,934.0	3.00		0.410	EXP/8	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			7,974.0	7,975.0	3.00		0.410	EXP/8	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,035.0	8,036.0	3.00		0.410	EXP/8	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,068.0	8,069.0	3.00		0.410	EXP/8	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,110.0	8,112.0	3.00		0.410	EXP/7	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,163.0	8,165.0	3.00		0.410	EXP/7	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,194.0	8,196.0	3.00		0.410	EXP/7	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,238.0	8,240.0	3.00		0.410	EXP/7	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,293.0	8,294.0	3.00		0.410	EXP/6	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,318.0	8,319.0	3.00		0.410	EXP/6	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,373.0	8,374.0	3.00		0.410	EXP/6	3.125	120.00		19.00	PRODUCTION		

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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
12/14/2015 12:00AM	M E S A V E RDE/			8,398.0	8,399.0	3.00		0.410	EXP/6	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,470.0	8,471.0	3.00		0.410	EXP/6	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,500.0	8,501.0	3.00		0.410	EXP/6	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,530.0	8,531.0	3.00		0.410	EXP/6	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,554.0	8,555.0	3.00		0.410	EXP/6	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,625.0	8,626.0	3.00		0.410	EXP/5	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,665.0	8,666.0	3.00		0.410	EXP/5	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,712.0	8,713.0	3.00		0.410	EXP/5	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,774.0	8,775.0	3.00		0.410	EXP/5	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,805.0	8,806.0	3.00		0.410	EXP/5	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,820.0	8,821.0	3.00		0.410	EXP/5	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,861.0	8,863.0	3.00		0.410	EXP/5	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,913.0	8,914.0	3.00		0.410	EXP/4	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,941.0	8,942.0	3.00		0.410	EXP/4	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			8,968.0	8,969.0	3.00		0.410	EXP/4	3.125	120.00		19.00	PRODUCTION		

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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
12/14/2015 12:00AM	M E S A V E RDE/			9,003.0	9,004.0	3.00		0.410	EXP/4	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,020.0	9,021.0	3.00		0.410	EXP/4	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,051.0	9,052.0	3.00		0.410	EXP/4	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,064.0	9,066.0	3.00		0.410	EXP/4	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,103.0	9,104.0	3.00		0.410	EXP/3	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,141.0	9,143.0	3.00		0.410	EXP/3	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,170.0	9,171.0	3.00		0.410	EXP/3	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,232.0	9,233.0	3.00		0.410	EXP/3	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,281.0	9,282.0	3.00		0.410	EXP/3	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,320.0	9,321.0	3.00		0.410	EXP/3	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,357.0	9,358.0	3.00		0.410	EXP/3	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,410.0	9,411.0	3.00		0.410	EXP/2	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,435.0	9,436.0	3.00		0.410	EXP/2	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,466.0	9,467.0	3.00		0.410	EXP/2	3.125	120.00		19.00	PRODUCTION		

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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
12/14/2015 12:00AM	M E S A V E RDE/			9,520.0	9,521.0	3.00		0.410	EXP/2	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,563.0	9,564.0	3.00		0.410	EXP/2	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,578.0	9,579.0	3.00		0.410	EXP/2	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,600.0	9,601.0	3.00		0.410	EXP/2	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,635.0	9,636.0	3.00		0.410	EXP/2	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,757.0	9,758.0	3.00		0.410	EXP/1	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,777.0	9,778.0	3.00		0.410	EXP/1	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,811.0	9,812.0	3.00		0.410	EXP/1	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,825.0	9,826.0	3.00		0.410	EXP/1	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,842.0	9,844.0	3.00		0.410	EXP/1	3.125	120.00		19.00	PRODUCTION		
12/14/2015 12:00AM	M E S A V E RDE/			9,900.0	9,902.0	3.00		0.410	EXP/1	3.125	120.00		19.00	PRODUCTION		

3 Plots

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