API Well No: 43047513940000 Received: 11/23/2010

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 921-35M4CS
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** 720 929-6007
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217	**9. OPERATOR E-MAIL** Kathy.SchneebeckDulnoan@anadarko.com
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) UO 01194 ST / **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') / **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	464 FSL 517 FWL	SWSW	35	9.0 S	21.0 E	S
Top of Uppermost Producing Zone	55 FSL 834 FWL	SWSW	35	9.0 S	21.0 E	S
At Total Depth	55 FSL 834 FWL	SWSW	35	9.0 S	21.0 E	S

21. COUNTY UINTAH	**22. DISTANCE TO NEAREST LEASE LINE (Feet)** 55	**23. NUMBER OF ACRES IN DRILLING UNIT** 1083
	25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 547	**26. PROPOSED DEPTH** MD: 9736 TVD: 9686
27. ELEVATION - GROUND LEVEL 5090	**28. BOND NUMBER** 22013542	**29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE** Permit #43-8496

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** 11/23/2010	**EMAIL** gnbregulatory@anadarko.com
API NUMBER ASSIGNED 43047513940000	**APPROVAL**	Permit Manager

Proposed Hole, Casing, and Cement						
String	**Hole Size**	**Casing Size**	**Top (MD)**	**Bottom (MD)**		
Prod	7.875	4.5	0	9736		
Pipe	**Grade**	**Length**	**Weight**			
	Grade I-80 Buttress	9736	11.6			

Proposed Hole, Casing, and Cement						
String	**Hole Size**	**Casing Size**	**Top (MD)**	**Bottom (MD)**		
Surf	11	8.625	0	2540		
Pipe	**Grade**	**Length**	**Weight**			
	Grade J-55 LT&C	2540	28.0			

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

NBU 921-35M4CS

Surface:	464 FSL / 517 FWL	SWSW
BHL:	55 FSL / 834 FWL	SWSW

Section 35 T9S R21E

Unitah County, Utah
Mineral Lease: ST UT UO 01194 ST

ONSHORE ORDER NO. 1

DRILLING PROGRAM

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

Formation	Depth	Resource
Uinta	0 - Surface	
Green River	1420	
Birds Nest	1705	Water
Mahogany	2086	Water
Wasatch	4684	Gas
Mesaverde	7431	Gas
MVU2	8345	Gas
MVL1	8899	Gas
TVD	9686	
TD	9736	

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

Please refer to the attached Drilling Program

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

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 9,686' TVD, approximately equals 5,934 psi (calculated at 0.61 psi/foot).

Maximum anticipated surface pressure equals approximately 3,803 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. Anticipated Starting Dates:

9. Variances:

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

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

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

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

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

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

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

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

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

Variance for BOPE Requirements

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

Variance for Mud Material Requirements

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

Variance for Special Drilling Operation (surface equipment placement) Requirements

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

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

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

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie

line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Conclusion

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

10. Other Information:

Please refer to the attached Drilling Program.

'APIWellNo:43047513940000'

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	November 18, 2010
WELL NAME	**NBU 921-35M4CS**	TD	9,686' TVD 9,736' MD
FIELD	Natural Buttes	COUNTY Uintah STATE Utah	FINISHED ELEVATION 5,089'
SURFACE LOCATION	SWSW 464 FSL 517 FWL	Sec 35 T 9S R 21E	
	Latitude: 39.986442	Longitude: -109.525798	NAD 27
BTM HOLE LOCATION	SWSW 55 FSL 834 FWL	Sec 35 T 9S R 21E	
	Latitude: 39.985333	Longitude: -109.524673	NAD 27
OBJECTIVE ZONE(S)	Wasatch/Mesaverde		
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.		

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
			11"	8-5/8", 28#, IJ-55, LTC	Air mist
All water flows encountered while drilling will be reported to the appropriate agencies.					
	Green River @	**1,420'**			
	Top of Birds Nest @	**1,705'**			
	Mahogany @	**2,086'**			
	Preset f/ GL @	**2,540' MD**			
	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 @	**4,684'**			
Mud logging program TBD Cased hole logging program from TD - surf csg			7-7/8"	4-1/2" 11.6# I-80 or equivalent BTC csg	Water / Fresh Water Mud 8.3-12.0 ppg
	Mverde @	**7,431' TVD**			
	MVU2 @	**8,345' TVD**			
	MVU1 @	**8,899' TVD**			
Max anticipated Mud required 12.0 ppg	**TD @**	**9,686' TVD** **9,736' MD**			

'APIWellNo:43047513940000'

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'								
								3,390	1,880	348,000
SURFACE	8-5/8"	0	to	2,540	28.00	IJ-55	LTC	0.86	1.58	4.84
								7,780	6,350	278,000
PRODUCTION	4-1/2"	0	to	9,736	11.60	I-80	BTC	1.99	1.05	2.82

*Burst on suface casing is controlled by fracture gradient as shoe with gas gradient above. D.F. = 2.12

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)
(Burst Assumptions: TD = 12.0 ppg) 0.22 psi/ft = gradient for partially evac wellbore
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MASP 3,803 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
(Burst Assumptions: TD = 12.0 ppg) 0.61 psi/ft = bottomhole gradient
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MABHP 5,934 psi

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	2,040'	65/35 Poz + 6% Gel + 10 pps gilsonite	190	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	4,176'	Premium Lite II +0.25 pps	300	10%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	5,560'	50/50 Poz/G + 10% salt + 2% gel	1,070	10%	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. No centralizers will be used.

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.

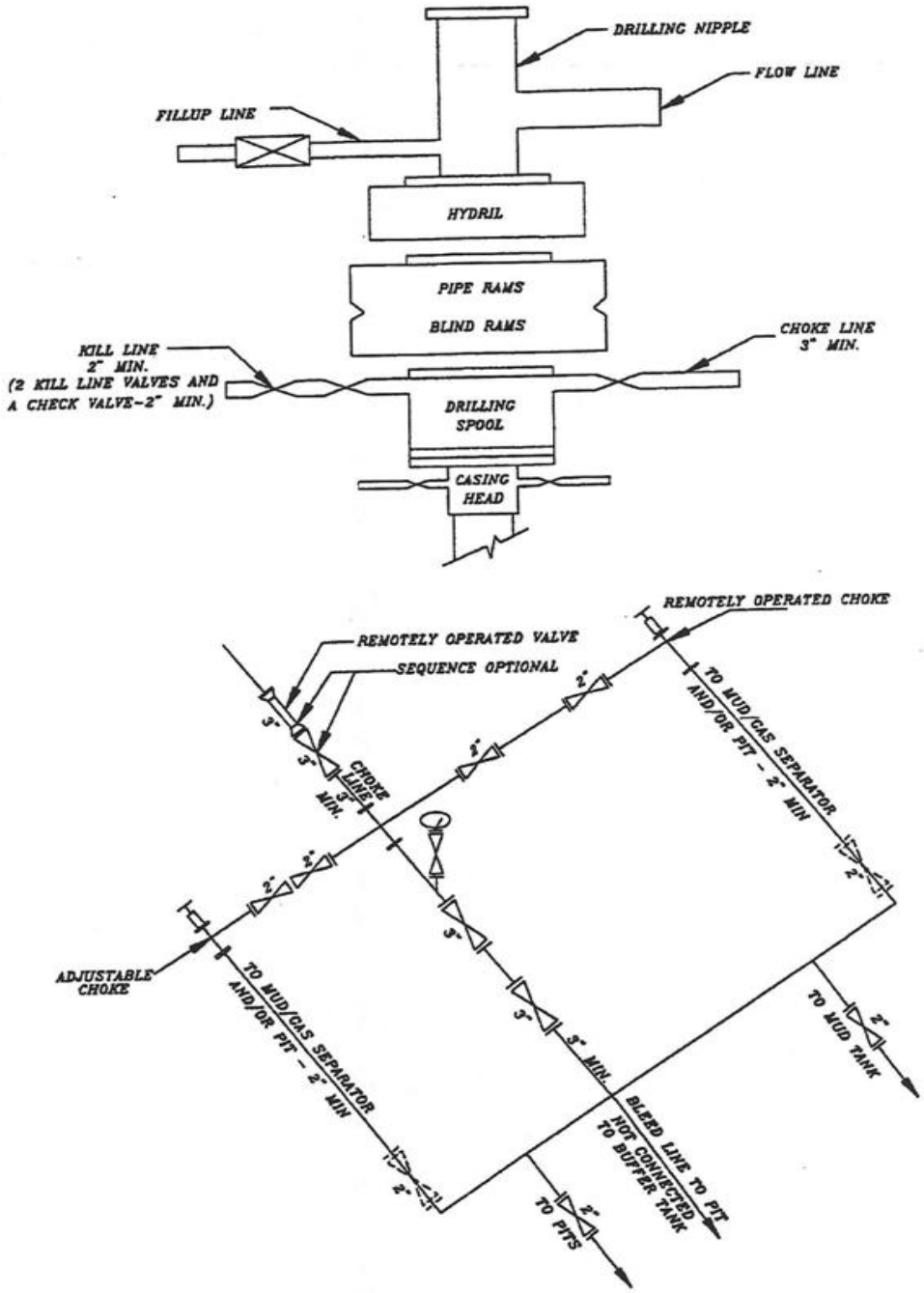
Surveys will be taken at 1,000' minimum intervals.

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

DRILLING ENGINEER: _____ **DATE:** _____
John Huycke / Emile Goodwin

DRILLING SUPERINTENDENT: _____ **DATE:** _____
John Merkel / Lovel Young

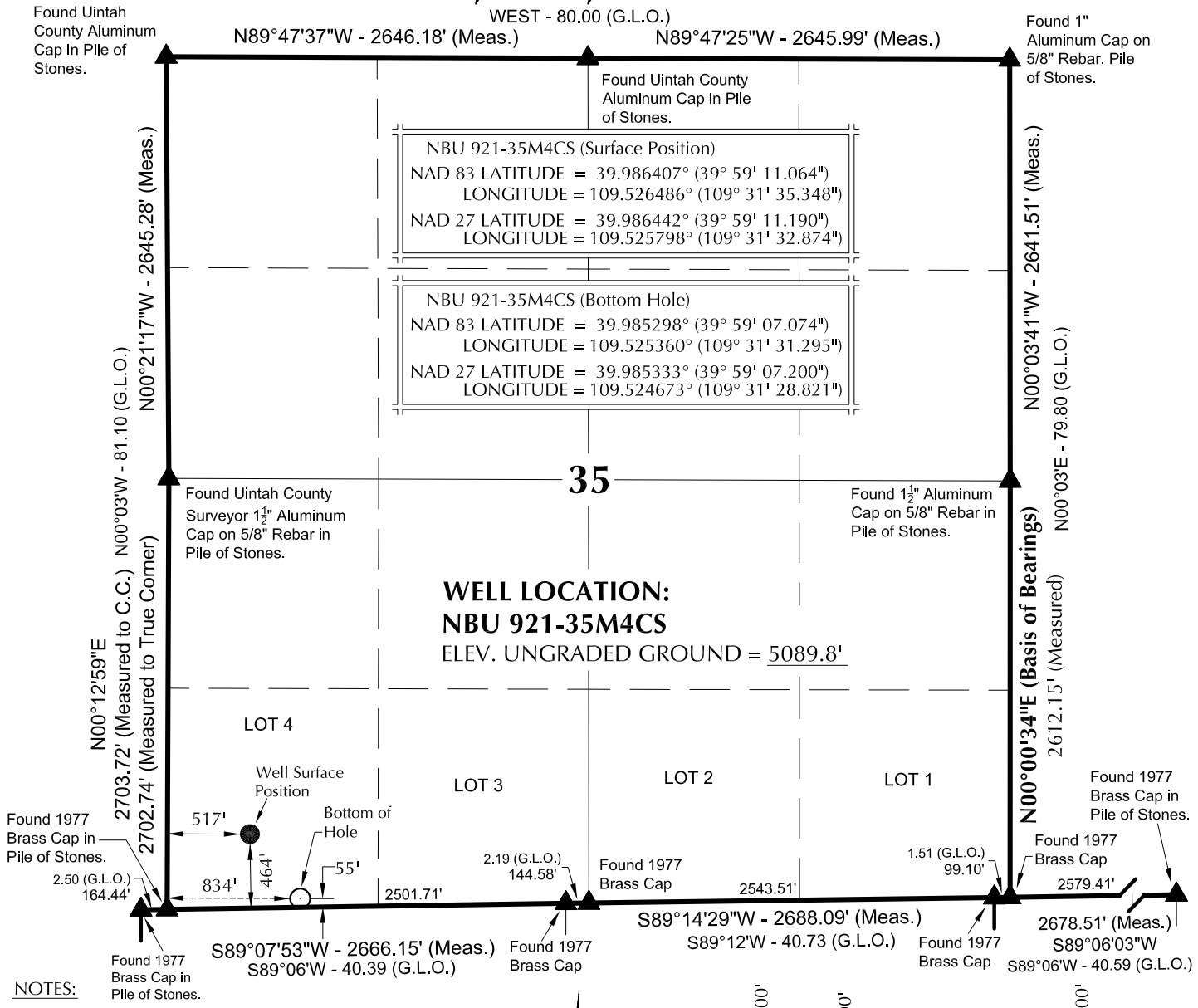
EXHIBIT A
NBU 921-35M4CS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

'APIWellNo:43047513940000'

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 S37°58'07"E 512.49' from the Surface Position.
4. Bearings are based on Global Positioning Satellite observations.
5. Basis of elevation is Tri-Sta "Two Water" located in the NW ¼ of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.

SURVEYOR'S CERTIFICATE

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

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

PROFESSIONAL LAND SURVEYOR
REGISTRATION No. 6028691
STATE OF UTAH

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

WELL PAD: NBU 921-35M

NBU 921-35M4CS
WELL PLAT
55' FSL, 834' FWL (Bottom Hole)
LOT 4 OF SECTION 35, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH.

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

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

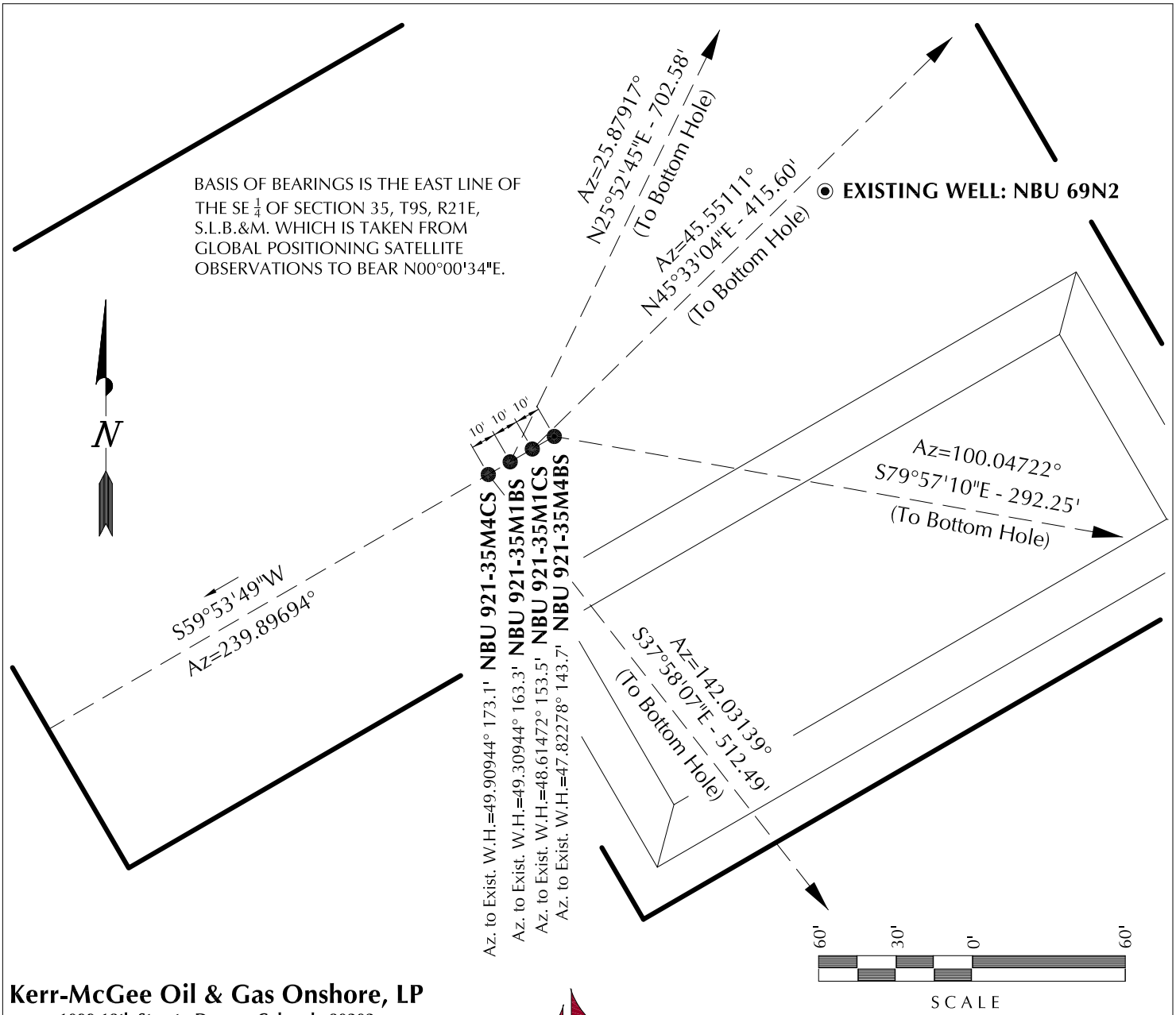
DATE SURVEYED: 09-29-10	SURVEYED BY: D.J.S.	SHEET NO: 1
DATE DRAWN: 10-05-10	DRAWN BY: E.M.S.	
SCALE: 1" = 1000'	Date Last Revised:	1 OF 16

'APIWellNo:43047513940000'

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27			NAD83		NAD27		
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES
NBU 921-35M4CS	39°59'11.064" 39.986407°	109°31'35.348" 109.526486°	39°59'11.190" 39.986442°	109°31'32.874" 109.525798°	464' FSL 517' FWL	39°59'07.074" 39.985298°	109°31'31.295" 109.525360°	39°59'07.200" 39.985333°	109°31'28.821" 109.524673°	55' FSL 834' FWL
NBU 921-35M1BS	39°59'11.113" 39.986420°	109°31'35.238" 109.526455°	39°59'11.239" 39.986455°	109°31'32.764" 109.525768°	469' FSL 526' FWL	39°59'17.360" 39.988156°	109°31'31.305" 109.525363°	39°59'17.486" 39.988191°	109°31'28.831" 109.524675°	1096' FSL 830' FWL
NBU 921-35M1CS	39°59'11.163" 39.986434°	109°31'35.127" 109.526424°	39°59'11.289" 39.986469°	109°31'32.652" 109.525737°	474' FSL 534' FWL	39°59'14.040" 39.987233°	109°31'31.319" 109.525366°	39°59'14.166" 39.987268°	109°31'28.845" 109.524679°	760' FSL 830' FWL
NBU 921-35M4BS	39°59'11.212" 39.986448°	109°31'35.015" 109.526393°	39°59'11.338" 39.986483°	109°31'32.541" 109.525706°	478' FSL 543' FWL	39°59'10.710" 39.986308°	109°31'31.319" 109.525366°	39°59'10.836" 39.986343°	109°31'28.845" 109.524679°	423' FSL 831' FWL
NBU 69N2	39°59'12.166" 39.986713°	109°31'33.649" 109.526014°	39°59'12.292" 39.986748°	109°31'31.175" 109.525326°	573' FSL 649' FWL					

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 921-35M4CS	-404.0'	315.3'	NBU 921-35M1BS	632.1'	306.7'	NBU 921-35M1CS	291.0'	296.7	NBU 921-35M4BS	-51.0'	287.8'



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

WELL PAD - NBU 921-35M

WELL PAD INTERFERENCE PLAT

WELLS - NBU 921-35M4CS, NBU 921-35M1BS, NBU 921-35M1CS & NBU 921-35M4BS LOCATED IN SECTION 35, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.

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

TIMBERLINE (435) 789-1365
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209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 09-29-10	SURVEYED BY: D.J.S.	SHEET NO:
DATE DRAWN: 10-05-10	DRAWN BY: E.M.S.	5
SCALE: 1" = 60'	Date Last Revised:	5 OF 16

'APIWellNo:43047513940000'

EXISTING ACCESS ROAD

6" GAS LINE
6" (MAX.) LIQUID LINE

N25°52'45"E - 702.58' (TO BOTTOM HOLE)

N45°33'04"E - 415.60' (TO BOTTOM HOLE)

S79°57'10"E - 292.25' (TO BOTTOM HOLE)

S37°58'07"E - 512.49' (TO BOTTOM HOLE)

TOPSOIL STOCKPILE

EXISTING WELL: NBU 69N2

EXISTING WELL PAD

EXISTING METHANOL TANK

EXISTING SEPARATOR

EXISTING METER

EXISTING TANK AND BERM

NBU 921-35M4BS
NBU 921-35M1CS
NBU 921-35M1BS
NBU 921-35M4CS

RESERVE PIT
12' DEPTH
SLOPE 1.5:1

RESERVE PIT & EXCESS CUT STOCKPILE

FILL CUT

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

WELL PAD - NBU 921-35M DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5089.7'
FINISHED GRADE ELEVATION = 5088.9'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.60 ACRES
TOTAL DAMAGE AREA = 6.28 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 21,038 C.Y.
TOTAL FILL FOR WELL PAD = 3,161 C.Y.
TOPSOIL @ 6" DEPTH = 1,989 C.Y.
EXCESS MATERIAL = 17,877 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT
+/- 11,020 CY
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

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

WELL PAD - NBU 921-35M

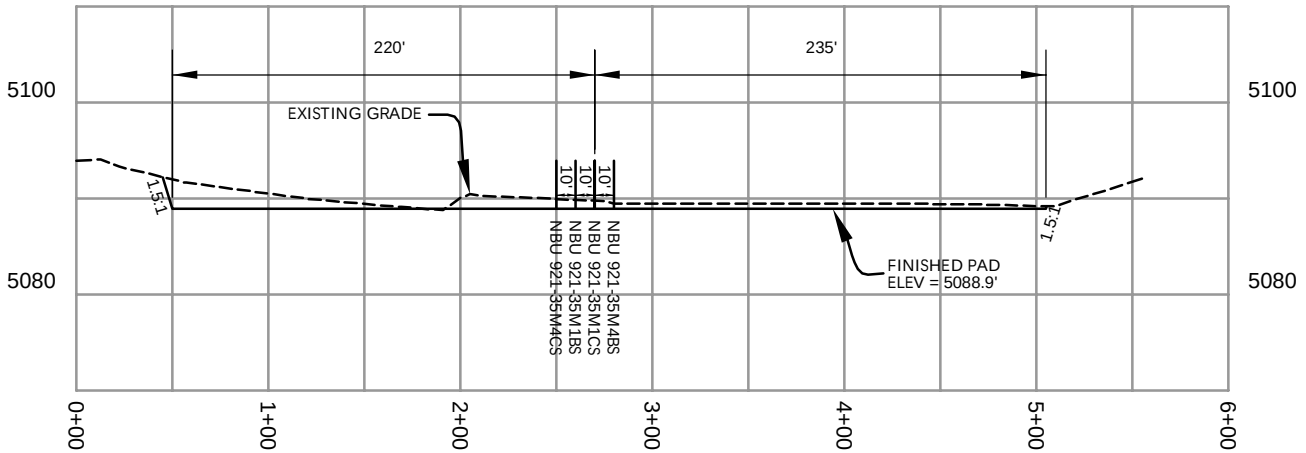
WELL PAD - LOCATION LAYOUT
NBU 921-35M4CS, NBU 921-35M1BS,
NBU 921-35M1CS & NBU 921-35M4BS
LOCATED IN SECTION 35, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

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

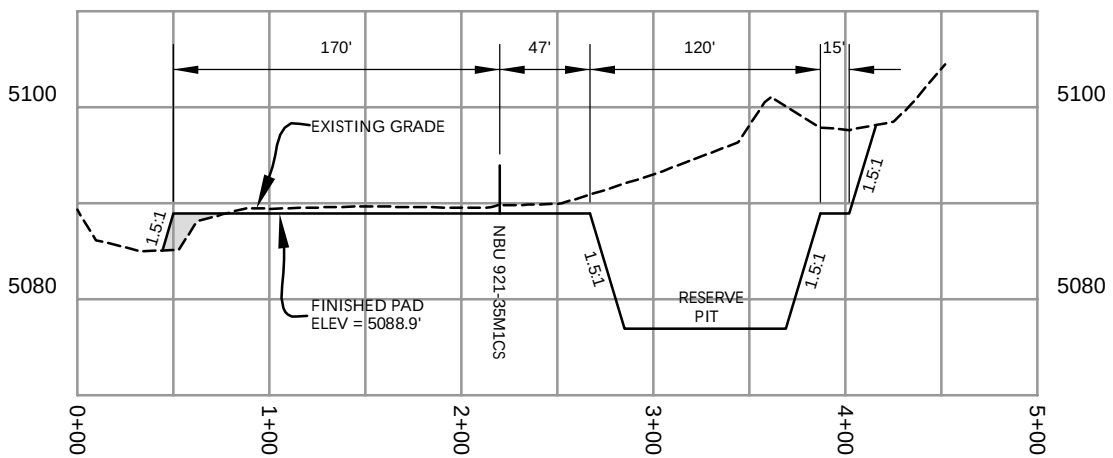
TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

Scale: 1"=60' | Date: 10/19/10 | SHEET NO: 6
REVISED:

K:\ANADARKO\2010_53_NBU_FOCUS_SEC_921-35\DWG\NBU 921-35M\NBU_921-35M_20101004.dwg, 10/18/2010 3:33:36 PM



CROSS SECTION A-A'



CROSS SECTION B-B'

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

WELL PAD - NBU 921-35M

WELL PAD - CROSS SECTIONS
NBU 921-35M4CS, NBU 921-35M1BS,
NBU 921-35M1CS & NBU 921-35M4BS
LOCATED IN SECTION 35, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

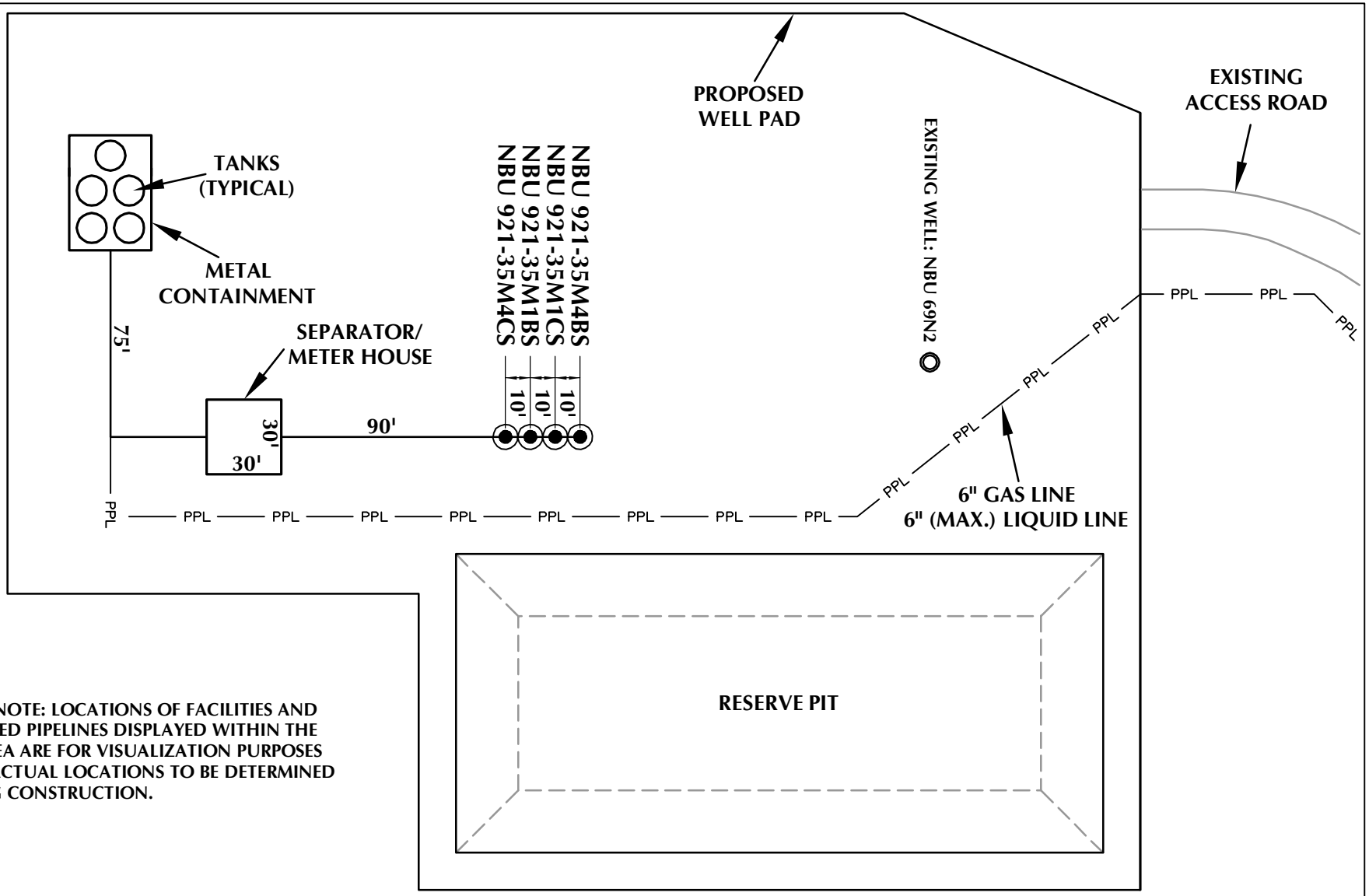
609
CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

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

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

Scale: 1"=100' | Date: 10/15/10 | SHEET NO: 7
REVISED:

'API Well No: 43047513940000'
K:\AAADARKO\2010_53_NBU_FOCUS_SEC_921-35\DWG\NBU 921-35M\NBU_921-35M_20101004.dwg, 10/6/2010 8:49:40 PM



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

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

WELL PAD - NBU 921-35M

WELL PAD - FACILITIES DIAGRAM
NBU 921-35M4CS, NBU 921-35M1BS, NBU 921-35M1CS & NBU 921-35M4BS
LOCATED IN SECTION 35, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH

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

WELL PAD LEGEND

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

HORIZONTAL 0 30' 60' 1" = 60'

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

Scale: 1"=60' | Date: 10/15/10 | SHEET NO: 8

REVISED:

API Well No: 43047513940000

'APIWellNo:43047513940000'

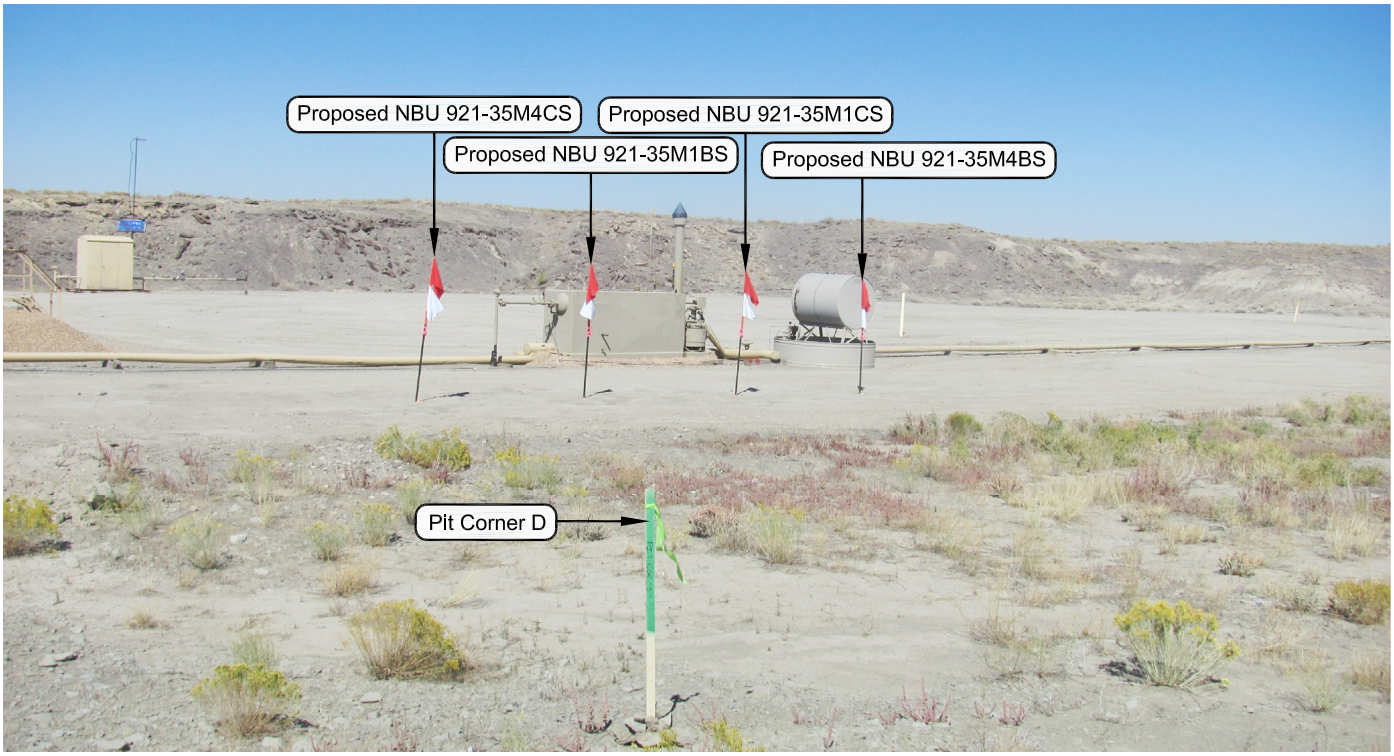


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE **CAMERA ANGLE: NORTHEASTERLY**

PHOTO VIEW: FROM EXISTING ACCESS ROAD **CAMERA ANGLE: WESTERLY**

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

WELL PAD - NBU 921-35M

LOCATION PHOTOS
NBU 921-35M4CS, NBU 921-35M1BS, NBU 921-35M1CS & NBU 921-35M4BS LOCATED IN SECTION 35, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.

609
CONSULTING, LLC
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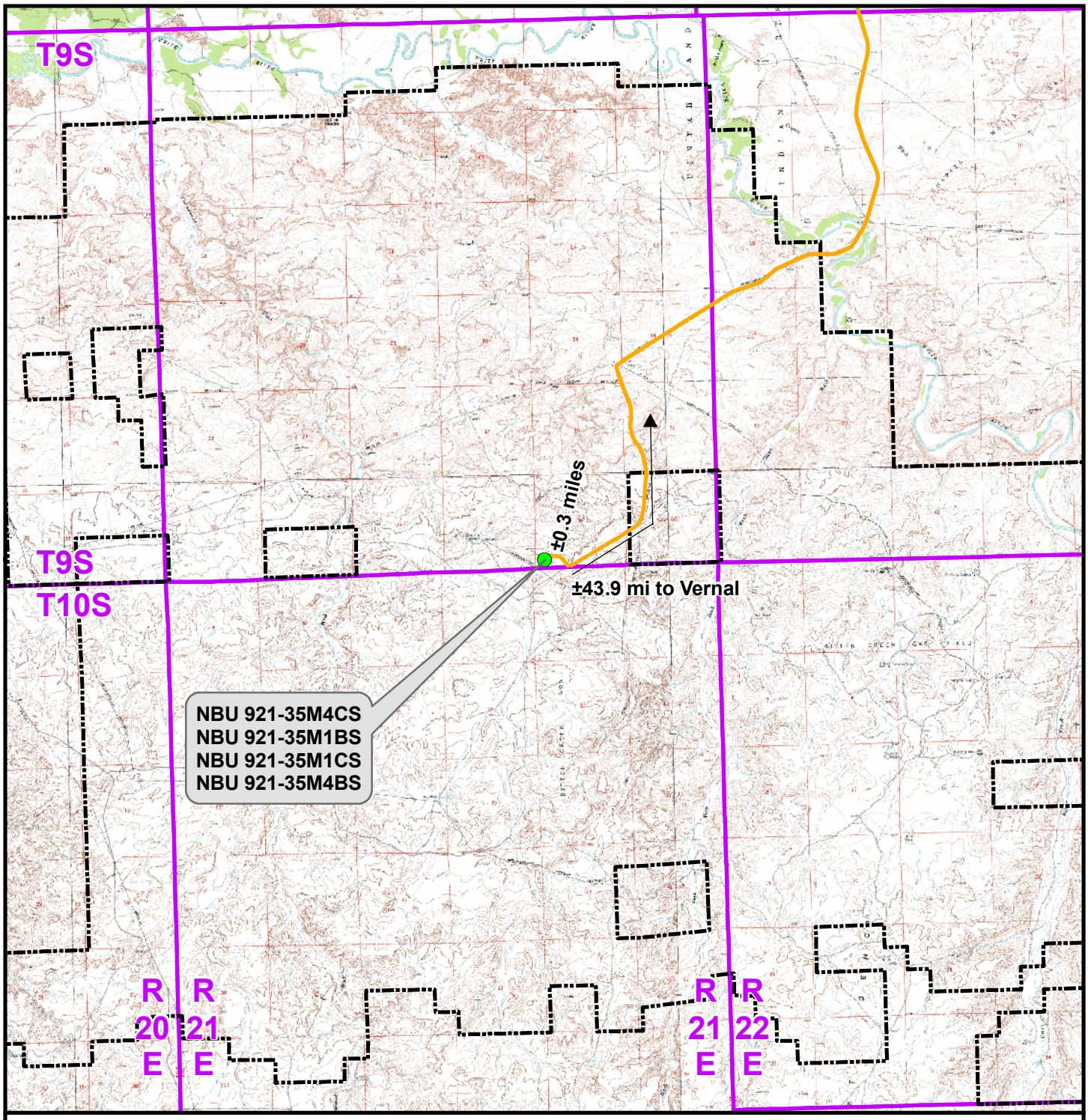
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

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

DATE PHOTOS TAKEN: 09-29-10	PHOTOS TAKEN BY: D.J.S.	SHEET NO:
DATE DRAWN: 10-05-10	DRAWN BY: E.M.S.	9
Date Last Revised:		9 OF 16

'APIWellNo:43047513940000'



Legend

Distance From Well Pad - NBU 921-35M To Unit Boundary: ±4,742ft

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

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

WELL PAD - NBU 921-35M

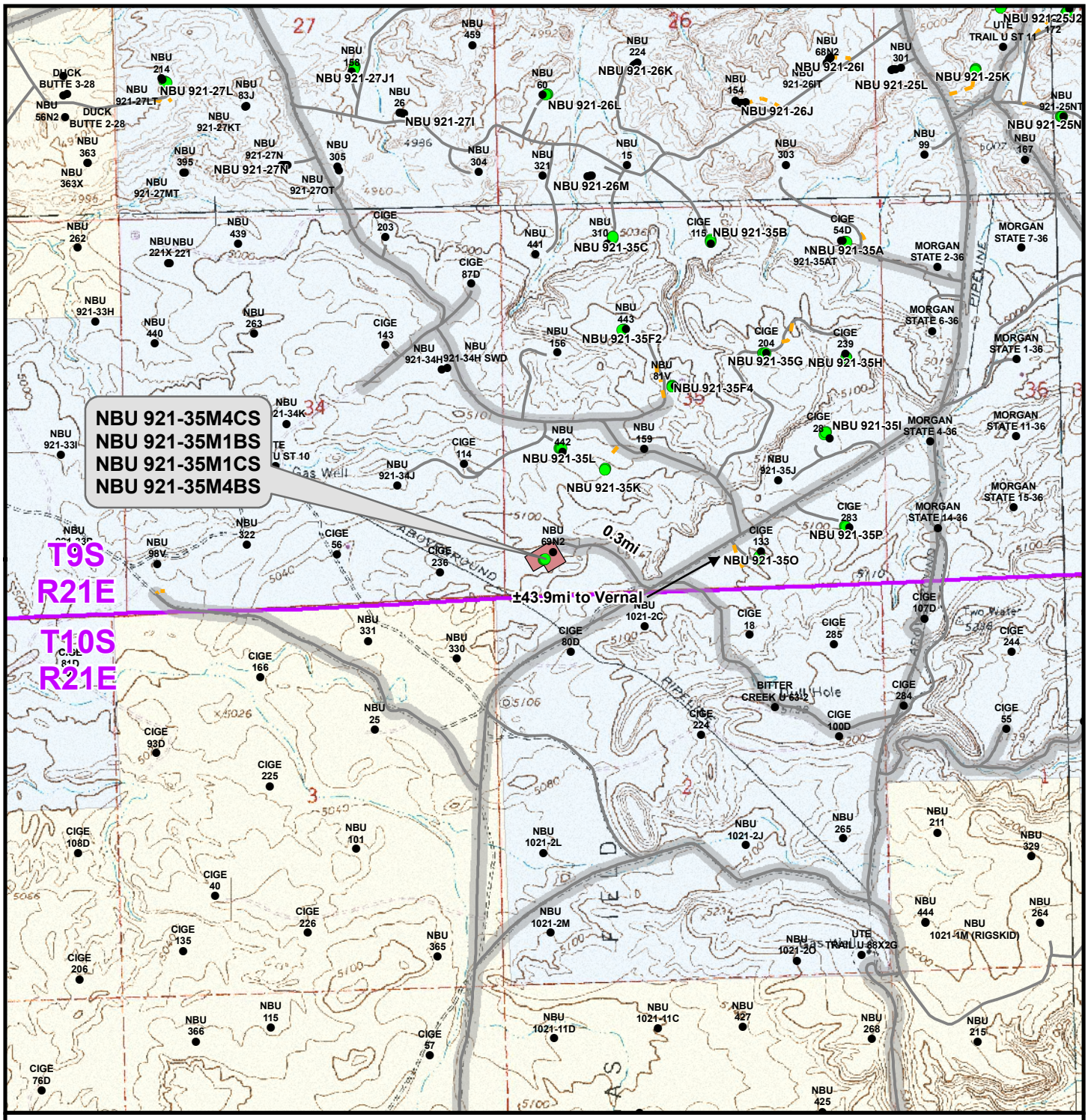
TOPO A
NBU 921-35M4CS, NBU 921-35M1BS, NBU 921-35M1CS & NBU 921-35M4BS
LOCATED IN SECTION 35, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH

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

N

Scale: 1:100,000	NAD83 USP Central		Sheet No: 10
Drawn: KGS	Date: 19 Oct 2010		10 of 16
Revised:	Date:		

'APIWellNo:43047513940000'



Legend

Total Proposed Road Length: ±0ft

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

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

WELL PAD - NBU 921-35M

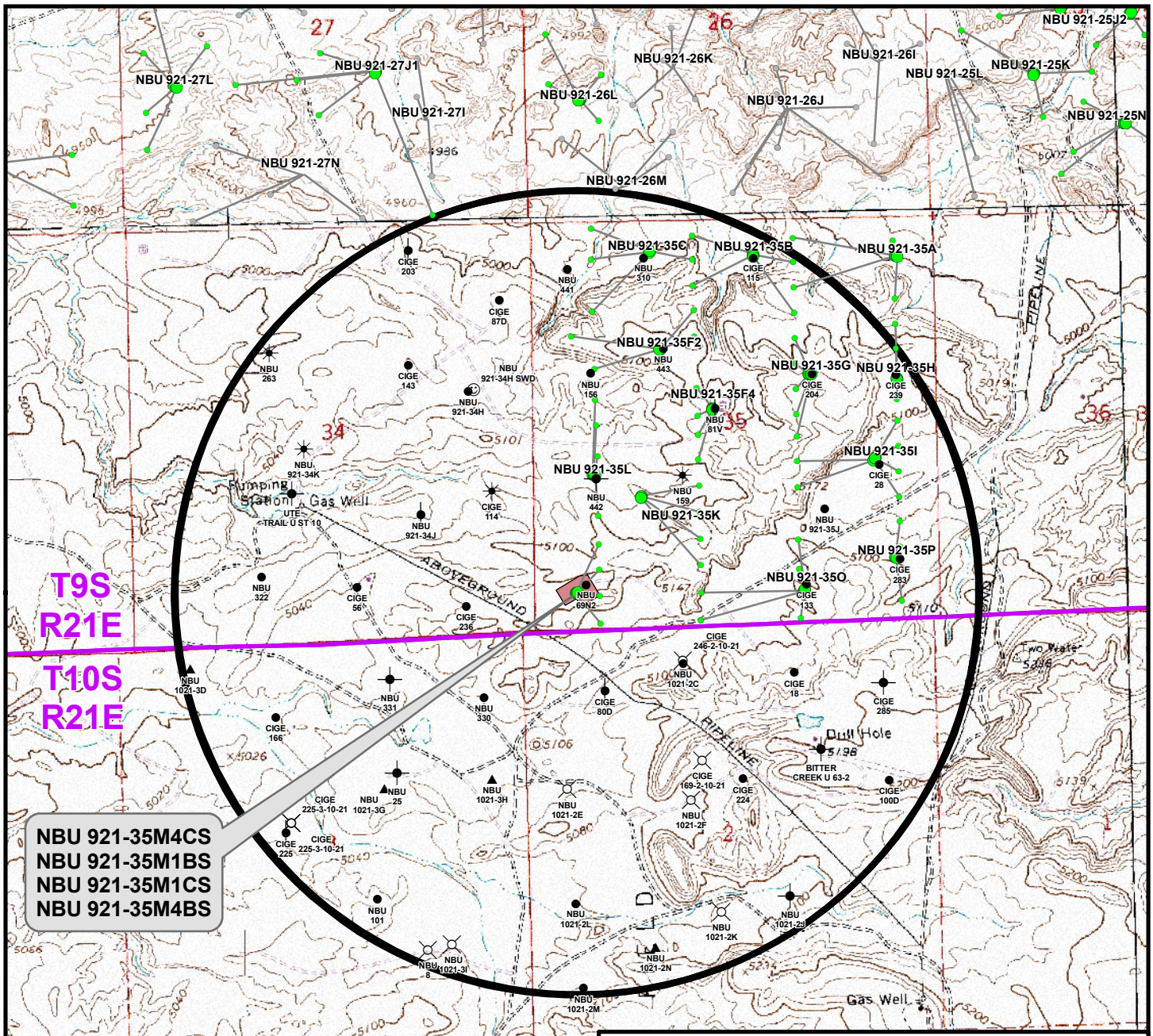
TOPO B
NBU 921-35M4CS, NBU 921-35M1BS, NBU 921-35M1CS & NBU 921-35M4BS
LOCATED IN SECTION 35, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH

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

N

Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: 11	
Drawn: KGS	Date: 19 Oct 2010		11 of 16
Revised:	Date:		

'APIWellNo:43047513940000'



Proposed Well	Nearest Well Bore	Footage
NBU 921-35M4CS	NBU 69N2	547ft
NBU 921-35M1BS	NBU 69N2	556ft
NBU 921-35M1CS	NBU 69N2	262ft
NBU 921-35M4BS	NBU 69N2	234ft

Well locations derived from State of Utah, Dept. of Natural Resources, Division of Oil, Gas and Mining

Legend

- Well - Proposed
- Well Path
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Pad
- Well - 1 Mile Radius
- Producing
- Active
- Spudded (Drilling commenced: Not yet completed)
- Approved permit (APD); not yet spudded
- New Permit (Not yet approved or drilled)
- Inactive
- Drilling Operations Suspended
- Temporarily-Abandoned
- Shut-In
- Plugged and Abandoned
- Location Abandoned
- Dry hole marker, buried
- Returned APD (Unapproved)

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

WELL PAD - NBU 921-35M

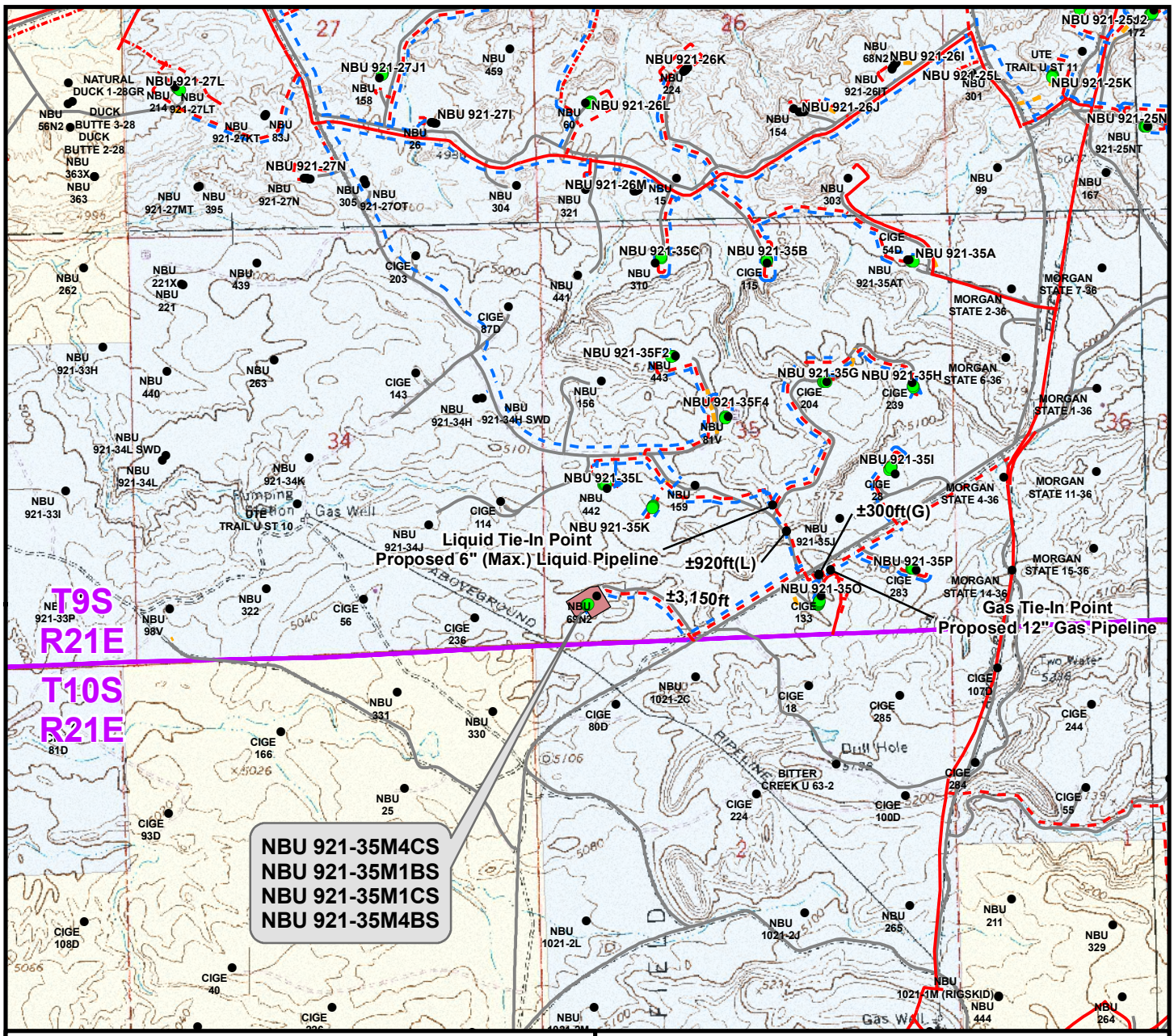
TOPO C
NBU 921-35M4CS, NBU 921-35M1BS, NBU 921-35M1CS & NBU 921-35M4BS
LOCATED IN SECTION 35, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH

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

N

Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: 12
Drawn: KGS	Date: 19 Oct 2010	12 of 16
Revised:	Date:	

'APIWellNo:43047513940000'



Proposed Liquid Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±530ft
Proposed 6" (Max.) (Edge of Pad to 35O Intersection)	±3,150ft
Proposed 6" (Max.) (35O Intersection to 35G Intersection)	±920ft
TOTAL PROPOSED LIQUID PIPELINE =	±4,600ft

Proposed Gas Pipeline	Length
Proposed 6" (Meter House to Edge of Pad)	±530ft
Proposed 6" (Edge of Pad to 35G Intersection)	±3,150ft
Proposed 12" (35G Intersection to 35O Intersection)	±300ft
TOTAL PROPOSED GAS PIPELINE =	±3,980ft

Legend

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

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

WELL PAD - NBU 921-35M

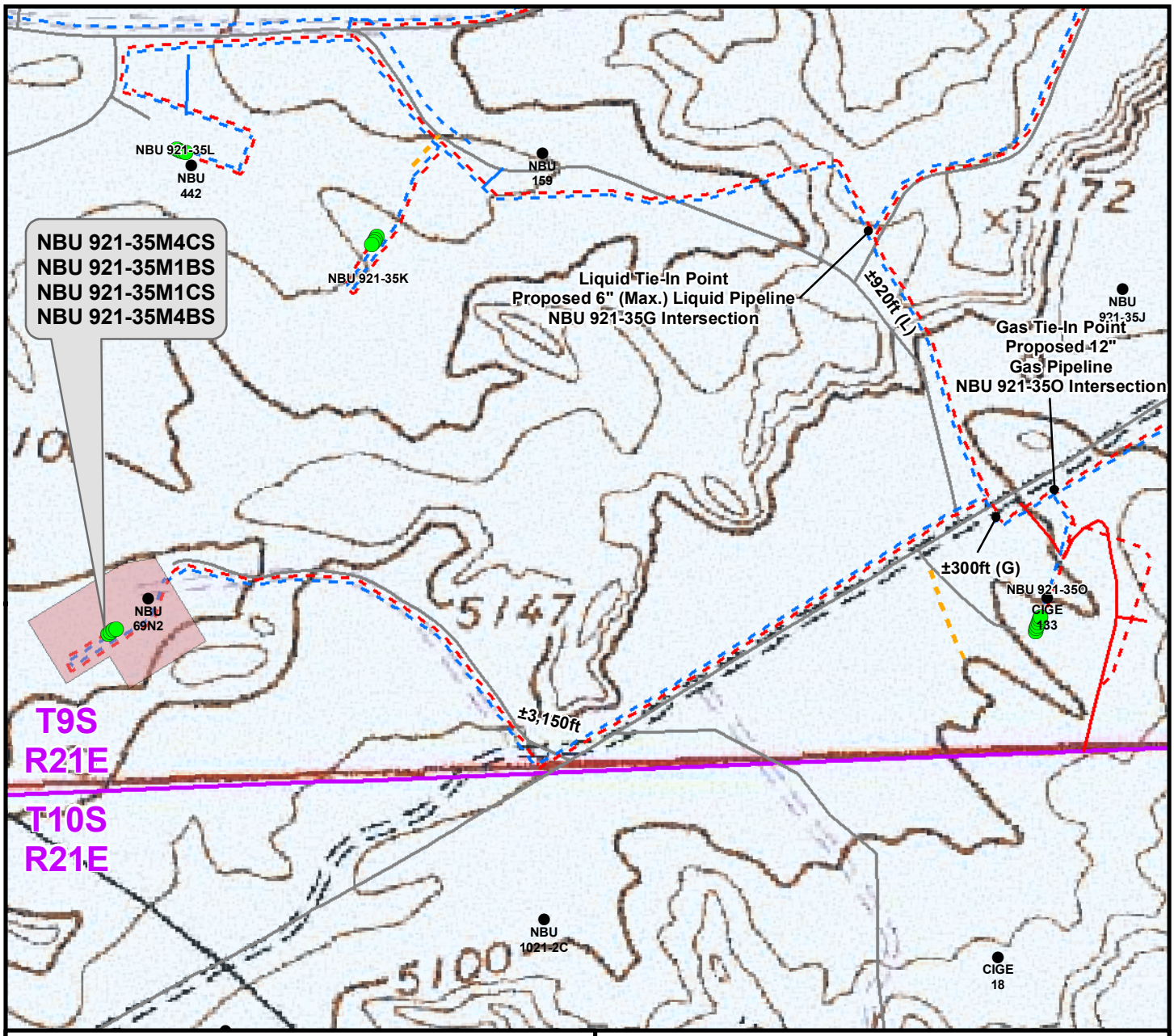
TOPO D
NBU 921-35M4CS, NBU 921-35M1BS, NBU 921-35M1CS & NBU 921-35M4BS
LOCATED IN SECTION 35, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH

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

N

Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: 13
Drawn: KGS	Date: 19 Oct 2010	13 of 16
Revised:	Date:	

'APIWellNo:43047513940000'



Proposed Liquid Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±530ft
Proposed 6" (Max.) (Edge of Pad to 35O Intersection)	±3,150ft
Proposed 6" (Max.) (35O Intersection to 35G Intersection)	±920ft
TOTAL PROPOSED LIQUID PIPELINE =	±4,600ft

Proposed Gas Pipeline	Length
Proposed 6" (Meter House to Edge of Pad)	±530ft
Proposed 6" (Edge of Pad to 35G Intersection)	±3,150ft
Proposed 12" (35G Intersection to 35O Intersection)	±300ft
TOTAL PROPOSED GAS PIPELINE =	±3,980ft

Legend

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

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

WELL PAD - NBU 921-35M

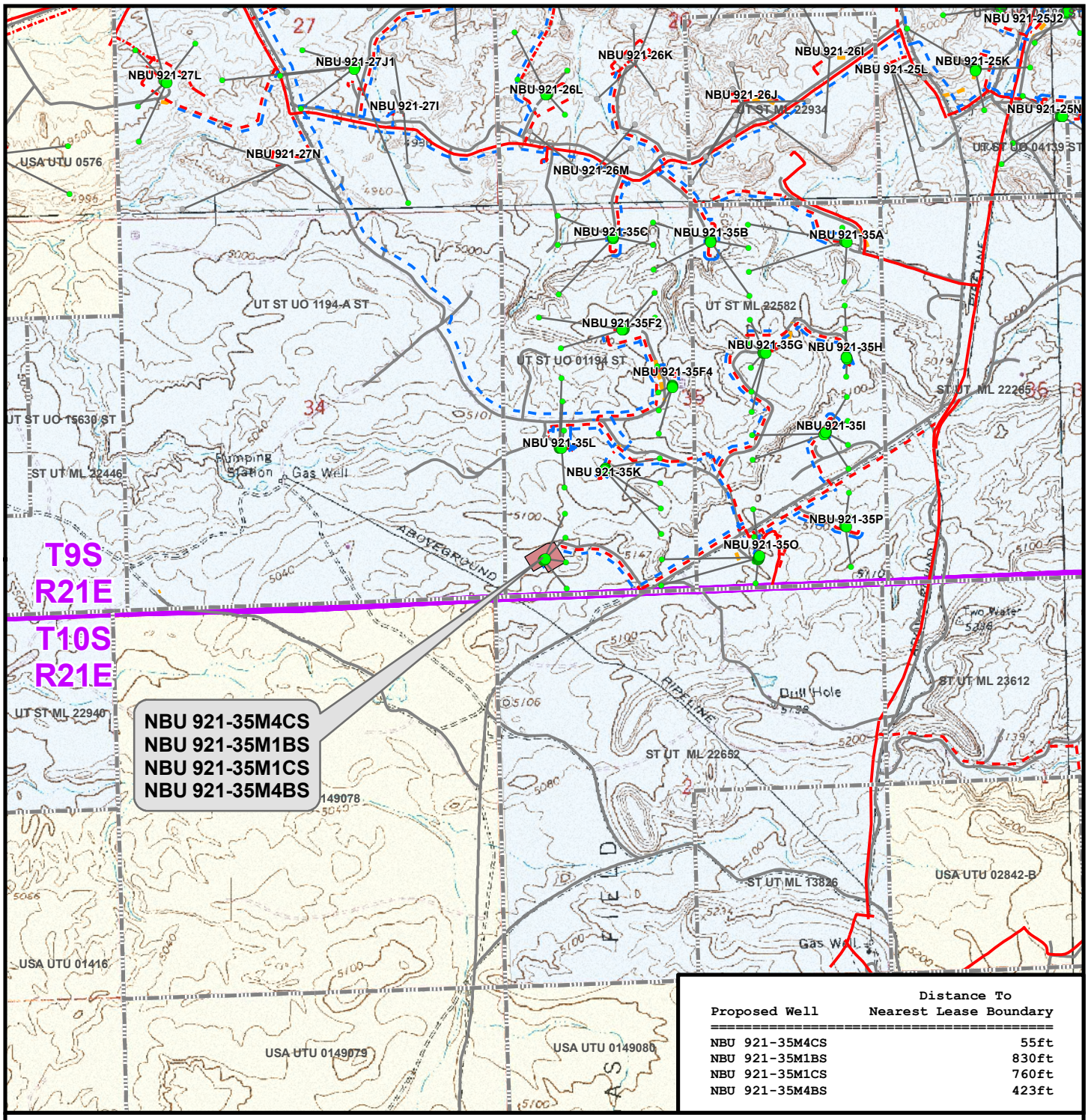
TOPO D2 (PAD & PIPELINE DETAIL)
NBU 921-35M4CS, NBU 921-35M1BS, NBU 921-35M1CS & NBU 921-35M4BS
LOCATED IN SECTION 35, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH

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

N

Scale: 1" = 500ft	NAD83 USP Central		Sheet No: 14
Drawn: KGS	Date: 19 Oct 2010		14 of 16
Revised:	Date:		

'APIWellNo:43047513940000'



Proposed Well	Distance To Nearest Lease Boundary
NBU 921-35M4CS	55ft
NBU 921-35M1BS	830ft
NBU 921-35M1CS	760ft
NBU 921-35M4BS	423ft

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

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

WELL PAD - NBU 921-35M

TOPO E
NBU 921-35M4CS, NBU 921-35M1BS, NBU 921-35M1CS & NBU 921-35M4BS
LOCATED IN SECTION 35, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH

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

N

Scale: 1" = 2,000ft	NAD83 USP Central		Sheet No: 15
Drawn: TL	Date: 19 Oct 2010		15 of 16
Revised:	Date:		

Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – NBU 921-35M
WELLS – NBU 921-35M4CS, NBU 921-35M1BS,
NBU 921-35M1CS & NBU 921-35M4BS
Section 35, 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 20.4 miles to a Class D County Road to the northwest. Exit right and proceed in a northwesterly direction along the Class D County Road approximately 0.3 miles to the proposed well pad.

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

'APIWellNo:43047513940000'

Scientific Drilling
Rocky Mountain Operations

Project: Uintah County, UT UTM12
Site: NBU 921-35M PAD
Well: NBU 921-35M4CS
Wellbore: OH
Design: PLAN #1

Anadarko Petroleum Corporation

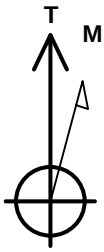
WELL DETAILS: NBU 921-35M4CS

GL 5089' & KB 14'
@ 5103.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14524521.75	2053368.85	39° 59' 11.191 N	109° 31' 32.873 W

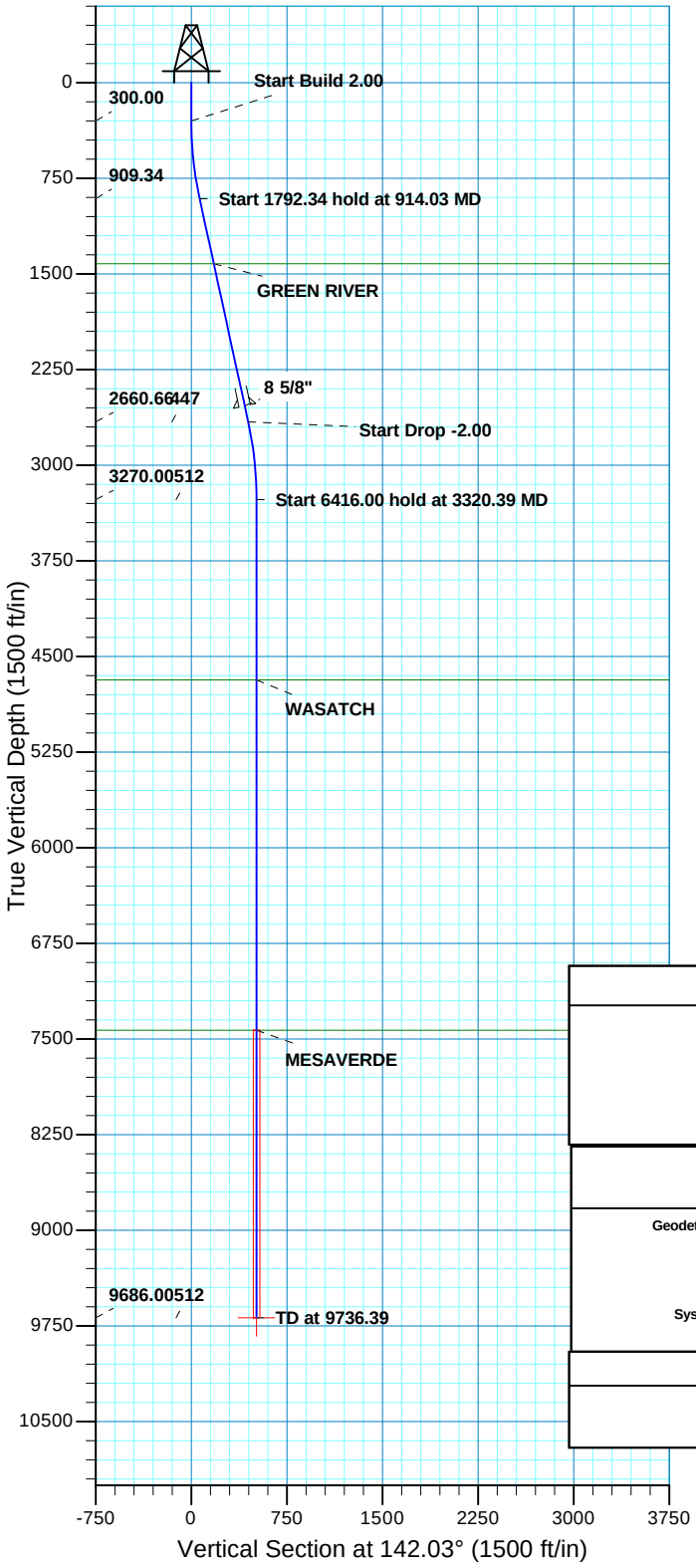
DESIGN TARGET DETAILS

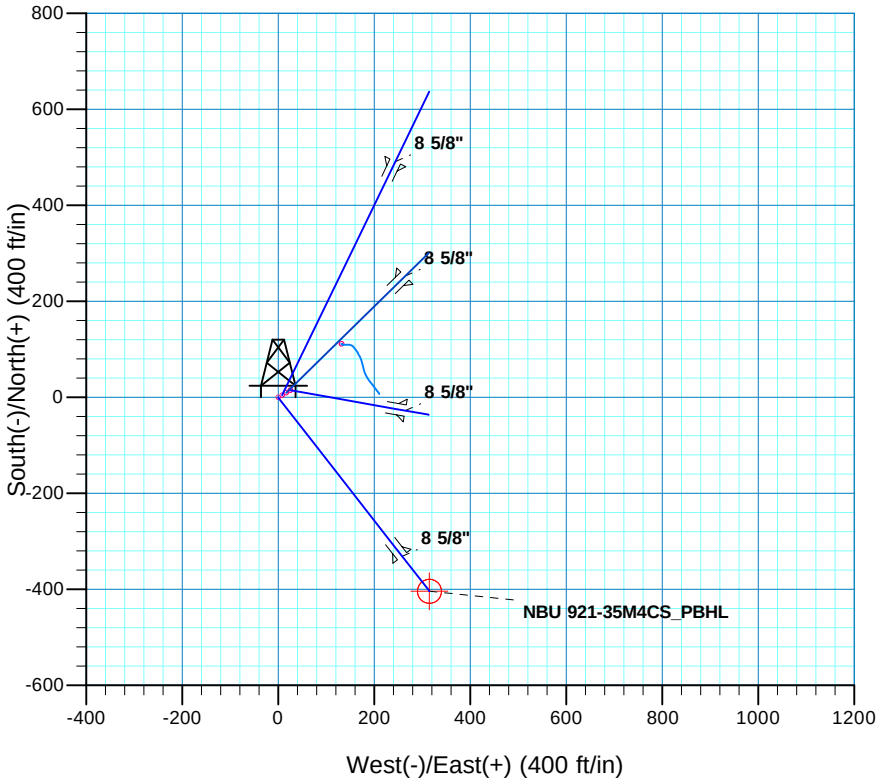
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	9686.00	-403.90	315.19	14524123.12	2053690.68	39° 59' 7.199 N	109° 31' 28.823 W	Circle (Radius: 25.00)
- plan hits target center								



Azimuths to True North
Magnetic North: 11.16°

Magnetic Field
Strength: 52379.8snT
Dip Angle: 65.87°
Date: 10/28/2010
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	
914.03	12.28	142.03	909.34	-51.68	40.33	2.00	142.03	65.55	
2706.37	12.28	142.03	2660.66	-352.22	274.87	0.00	0.00	446.78	
3320.39	0.00	0.00	3270.00	-403.90	315.19	2.00	180.00	512.33	
9736.39	0.00	0.00	9686.00	-403.90	315.19	0.00	0.00	512.33	NBU 921-35M4CS_PBHL

PROJECT DETAILS: Uintah County, UT UTM12

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 - Western US
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SEC 35 T9S R21E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1420.00	1436.65	GREEN RIVER
4684.00	4734.39	WASATCH
7431.00	7481.39	MESAVERDE

CASING DETAILS

TVD	MD	Name	Size
2536.00	2578.78	8 5/8"	8.625

Plan: PLAN #1 (NBU 921-35M4CS/OH)

Created By: RobertScott Date: 14:48, October 28 2010

Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12
NBU 921-35M PAD
NBU 921-35M4CS

OH

Plan: PLAN #1

Standard Planning Report

28 October, 2010

Anadarko
Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 921-35M4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5089' & KB 14' @ 5103.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5089' & KB 14' @ 5103.00ft (ASSUMED)
Site:	NBU 921-35M PAD	**North Reference:**	True
Well:	NBU 921-35M4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Project Uintah County, UT UTM12

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

Site NBU 921-35M PAD, SEC 35 T9S R21E

Site Position:		**Northing:**	14,524,537.11 usft	**Latitude:**	39° 59' 11.339 N
From:	Lat/Long	**Easting:**	2,053,394.37 usft	**Longitude:**	109° 31' 32.542 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.95 °

Well NBU 921-35M4CS, 469' FSL 517' FWL

Well Position	**+N/-S**	-14.93 ft	**Northing:**	14,524,521.76 usft	**Latitude:**	39° 59' 11.191 N
	+E/-W	-25.78 ft	**Easting:**	2,053,368.85 usft	**Longitude:**	109° 31' 32.873 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**		**Ground Level:**	5,089.00 ft

Wellbore OH

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	10/28/2010	11.16	65.87	52,380

Design PLAN #1

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	142.03

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	
914.03	12.28	142.03	909.34	-51.68	40.33	2.00	2.00	0.00	142.03	
2,706.37	12.28	142.03	2,660.66	-352.22	274.87	0.00	0.00	0.00	0.00	
3,320.39	0.00	0.00	3,270.00	-403.90	315.19	2.00	-2.00	0.00	180.00	
9,736.39	0.00	0.00	9,686.00	-403.90	315.19	0.00	0.00	0.00	0.00	NBU 921-35M4CS_P

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 921-35M4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5089' & KB 14' @ 5103.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5089' & KB 14' @ 5103.00ft (ASSUMED)
Site:	NBU 921-35M PAD	**North Reference:**	True
Well:	NBU 921-35M4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
400.00	2.00	142.03	399.98	-1.38	1.07	1.75	2.00	2.00	0.00
500.00	4.00	142.03	499.84	-5.50	4.29	6.98	2.00	2.00	0.00
600.00	6.00	142.03	599.45	-12.37	9.65	15.69	2.00	2.00	0.00
700.00	8.00	142.03	698.70	-21.98	17.15	27.88	2.00	2.00	0.00
800.00	10.00	142.03	797.47	-34.31	26.78	43.52	2.00	2.00	0.00
900.00	12.00	142.03	895.62	-49.35	38.51	62.60	2.00	2.00	0.00
914.03	12.28	142.03	909.34	-51.68	40.33	65.55	2.00	2.00	0.00
Start 1792.34 hold at 914.03 MD									
1,000.00	12.28	142.03	993.34	-66.10	51.58	83.84	0.00	0.00	0.00
1,100.00	12.28	142.03	1,091.05	-82.86	64.66	105.11	0.00	0.00	0.00
1,200.00	12.28	142.03	1,188.77	-99.63	77.75	126.38	0.00	0.00	0.00
1,300.00	12.28	142.03	1,286.48	-116.40	90.84	147.65	0.00	0.00	0.00
1,400.00	12.28	142.03	1,384.19	-133.17	103.92	168.92	0.00	0.00	0.00
1,436.65	12.28	142.03	1,420.00	-139.31	108.72	176.71	0.00	0.00	0.00
GREEN RIVER									
1,500.00	12.28	142.03	1,481.90	-149.94	117.01	190.19	0.00	0.00	0.00
1,600.00	12.28	142.03	1,579.61	-166.70	130.09	211.46	0.00	0.00	0.00
1,700.00	12.28	142.03	1,677.32	-183.47	143.18	232.73	0.00	0.00	0.00
1,800.00	12.28	142.03	1,775.04	-200.24	156.26	254.00	0.00	0.00	0.00
1,900.00	12.28	142.03	1,872.75	-217.01	169.35	275.27	0.00	0.00	0.00
2,000.00	12.28	142.03	1,970.46	-233.78	182.43	296.54	0.00	0.00	0.00
2,100.00	12.28	142.03	2,068.17	-250.55	195.52	317.81	0.00	0.00	0.00
2,200.00	12.28	142.03	2,165.88	-267.31	208.61	339.08	0.00	0.00	0.00
2,300.00	12.28	142.03	2,263.60	-284.08	221.69	360.35	0.00	0.00	0.00
2,400.00	12.28	142.03	2,361.31	-300.85	234.78	381.62	0.00	0.00	0.00
2,500.00	12.28	142.03	2,459.02	-317.62	247.86	402.89	0.00	0.00	0.00
2,578.78	12.28	142.03	2,536.00	-330.83	258.17	419.64	0.00	0.00	0.00
8 5/8"									
2,600.00	12.28	142.03	2,556.73	-334.39	260.95	424.16	0.00	0.00	0.00
2,700.00	12.28	142.03	2,654.44	-351.16	274.03	445.43	0.00	0.00	0.00
2,706.37	12.28	142.03	2,660.66	-352.22	274.87	446.78	0.00	0.00	0.00
Start Drop -2.00									
2,800.00	10.41	142.03	2,752.46	-366.74	286.20	465.20	2.00	-2.00	0.00
2,900.00	8.41	142.03	2,851.11	-379.63	296.25	481.54	2.00	-2.00	0.00
3,000.00	6.41	142.03	2,950.27	-389.79	304.18	494.43	2.00	-2.00	0.00
3,100.00	4.41	142.03	3,049.82	-397.22	309.98	503.86	2.00	-2.00	0.00
3,200.00	2.41	142.03	3,149.64	-401.91	313.64	509.80	2.00	-2.00	0.00
3,300.00	0.41	142.03	3,249.61	-403.84	315.15	512.26	2.00	-2.00	0.00
3,320.39	0.00	0.00	3,270.00	-403.90	315.19	512.33	2.00	-2.00	0.00
Start 6416.00 hold at 3320.39 MD									
3,400.00	0.00	0.00	3,349.61	-403.90	315.19	512.33	0.00	0.00	0.00
3,500.00	0.00	0.00	3,449.61	-403.90	315.19	512.33	0.00	0.00	0.00
3,600.00	0.00	0.00	3,549.61	-403.90	315.19	512.33	0.00	0.00	0.00
3,700.00	0.00	0.00	3,649.61	-403.90	315.19	512.33	0.00	0.00	0.00
3,800.00	0.00	0.00	3,749.61	-403.90	315.19	512.33	0.00	0.00	0.00
3,900.00	0.00	0.00	3,849.61	-403.90	315.19	512.33	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 921-35M4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5089' & KB 14' @ 5103.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5089' & KB 14' @ 5103.00ft (ASSUMED)
Site:	NBU 921-35M PAD	**North Reference:**	True
Well:	NBU 921-35M4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,000.00	0.00	0.00	3,949.61	-403.90	315.19	512.33	0.00	0.00	0.00
4,100.00	0.00	0.00	4,049.61	-403.90	315.19	512.33	0.00	0.00	0.00
4,200.00	0.00	0.00	4,149.61	-403.90	315.19	512.33	0.00	0.00	0.00
4,300.00	0.00	0.00	4,249.61	-403.90	315.19	512.33	0.00	0.00	0.00
4,400.00	0.00	0.00	4,349.61	-403.90	315.19	512.33	0.00	0.00	0.00
4,500.00	0.00	0.00	4,449.61	-403.90	315.19	512.33	0.00	0.00	0.00
4,600.00	0.00	0.00	4,549.61	-403.90	315.19	512.33	0.00	0.00	0.00
4,700.00	0.00	0.00	4,649.61	-403.90	315.19	512.33	0.00	0.00	0.00
4,734.39	0.00	0.00	4,684.00	-403.90	315.19	512.33	0.00	0.00	0.00
WASATCH									
4,800.00	0.00	0.00	4,749.61	-403.90	315.19	512.33	0.00	0.00	0.00
4,900.00	0.00	0.00	4,849.61	-403.90	315.19	512.33	0.00	0.00	0.00
5,000.00	0.00	0.00	4,949.61	-403.90	315.19	512.33	0.00	0.00	0.00
5,100.00	0.00	0.00	5,049.61	-403.90	315.19	512.33	0.00	0.00	0.00
5,200.00	0.00	0.00	5,149.61	-403.90	315.19	512.33	0.00	0.00	0.00
5,300.00	0.00	0.00	5,249.61	-403.90	315.19	512.33	0.00	0.00	0.00
5,400.00	0.00	0.00	5,349.61	-403.90	315.19	512.33	0.00	0.00	0.00
5,500.00	0.00	0.00	5,449.61	-403.90	315.19	512.33	0.00	0.00	0.00
5,600.00	0.00	0.00	5,549.61	-403.90	315.19	512.33	0.00	0.00	0.00
5,700.00	0.00	0.00	5,649.61	-403.90	315.19	512.33	0.00	0.00	0.00
5,800.00	0.00	0.00	5,749.61	-403.90	315.19	512.33	0.00	0.00	0.00
5,900.00	0.00	0.00	5,849.61	-403.90	315.19	512.33	0.00	0.00	0.00
6,000.00	0.00	0.00	5,949.61	-403.90	315.19	512.33	0.00	0.00	0.00
6,100.00	0.00	0.00	6,049.61	-403.90	315.19	512.33	0.00	0.00	0.00
6,200.00	0.00	0.00	6,149.61	-403.90	315.19	512.33	0.00	0.00	0.00
6,300.00	0.00	0.00	6,249.61	-403.90	315.19	512.33	0.00	0.00	0.00
6,400.00	0.00	0.00	6,349.61	-403.90	315.19	512.33	0.00	0.00	0.00
6,500.00	0.00	0.00	6,449.61	-403.90	315.19	512.33	0.00	0.00	0.00
6,600.00	0.00	0.00	6,549.61	-403.90	315.19	512.33	0.00	0.00	0.00
6,700.00	0.00	0.00	6,649.61	-403.90	315.19	512.33	0.00	0.00	0.00
6,800.00	0.00	0.00	6,749.61	-403.90	315.19	512.33	0.00	0.00	0.00
6,900.00	0.00	0.00	6,849.61	-403.90	315.19	512.33	0.00	0.00	0.00
7,000.00	0.00	0.00	6,949.61	-403.90	315.19	512.33	0.00	0.00	0.00
7,100.00	0.00	0.00	7,049.61	-403.90	315.19	512.33	0.00	0.00	0.00
7,200.00	0.00	0.00	7,149.61	-403.90	315.19	512.33	0.00	0.00	0.00
7,300.00	0.00	0.00	7,249.61	-403.90	315.19	512.33	0.00	0.00	0.00
7,400.00	0.00	0.00	7,349.61	-403.90	315.19	512.33	0.00	0.00	0.00
7,481.39	0.00	0.00	7,431.00	-403.90	315.19	512.33	0.00	0.00	0.00
MESAVERDE									
7,500.00	0.00	0.00	7,449.61	-403.90	315.19	512.33	0.00	0.00	0.00
7,600.00	0.00	0.00	7,549.61	-403.90	315.19	512.33	0.00	0.00	0.00
7,700.00	0.00	0.00	7,649.61	-403.90	315.19	512.33	0.00	0.00	0.00
7,800.00	0.00	0.00	7,749.61	-403.90	315.19	512.33	0.00	0.00	0.00
7,900.00	0.00	0.00	7,849.61	-403.90	315.19	512.33	0.00	0.00	0.00
8,000.00	0.00	0.00	7,949.61	-403.90	315.19	512.33	0.00	0.00	0.00
8,100.00	0.00	0.00	8,049.61	-403.90	315.19	512.33	0.00	0.00	0.00
8,200.00	0.00	0.00	8,149.61	-403.90	315.19	512.33	0.00	0.00	0.00
8,300.00	0.00	0.00	8,249.61	-403.90	315.19	512.33	0.00	0.00	0.00
8,400.00	0.00	0.00	8,349.61	-403.90	315.19	512.33	0.00	0.00	0.00
8,500.00	0.00	0.00	8,449.61	-403.90	315.19	512.33	0.00	0.00	0.00
8,600.00	0.00	0.00	8,549.61	-403.90	315.19	512.33	0.00	0.00	0.00
8,700.00	0.00	0.00	8,649.61	-403.90	315.19	512.33	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 921-35M4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5089' & KB 14' @ 5103.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5089' & KB 14' @ 5103.00ft (ASSUMED)
Site:	NBU 921-35M PAD	**North Reference:**	True
Well:	NBU 921-35M4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,800.00	0.00	0.00	8,749.61	-403.90	315.19	512.33	0.00	0.00	0.00
8,900.00	0.00	0.00	8,849.61	-403.90	315.19	512.33	0.00	0.00	0.00
9,000.00	0.00	0.00	8,949.61	-403.90	315.19	512.33	0.00	0.00	0.00
9,100.00	0.00	0.00	9,049.61	-403.90	315.19	512.33	0.00	0.00	0.00
9,200.00	0.00	0.00	9,149.61	-403.90	315.19	512.33	0.00	0.00	0.00
9,300.00	0.00	0.00	9,249.61	-403.90	315.19	512.33	0.00	0.00	0.00
9,400.00	0.00	0.00	9,349.61	-403.90	315.19	512.33	0.00	0.00	0.00
9,500.00	0.00	0.00	9,449.61	-403.90	315.19	512.33	0.00	0.00	0.00
9,600.00	0.00	0.00	9,549.61	-403.90	315.19	512.33	0.00	0.00	0.00
9,700.00	0.00	0.00	9,649.61	-403.90	315.19	512.33	0.00	0.00	0.00
9,736.39	0.00	0.00	9,686.00	-403.90	315.19	512.33	0.00	0.00	0.00
NBU 921-35M4CS_PBHL									

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
NBU 921-35M4CS_PBH - plan hits target center - Circle (radius 25.00)	0.00	0.00	9,686.00	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,578.78	2,536.00	8 5/8"	8.625	11.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,436.65	1,420.00	GREEN RIVER			
4,734.39	4,684.00	WASATCH			
7,481.39	7,431.00	MESAVERDE			

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
914.03	909.34	-51.68	40.33	Start 1792.34 hold at 914.03 MD
2,706.37	2,660.66	-352.22	274.87	Start Drop -2.00
3,320.39	3,270.00	-403.90	315.19	Start 6416.00 hold at 3320.39 MD
9,736.39	9,686.00	-403.90	315.19	TD at 9736.39

Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12
NBU 921-35M PAD
NBU 921-35M4CS

OH

Plan: PLAN #1

Standard Planning Report - Geographic

28 October, 2010

Anadarko
Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 921-35M4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5089' & KB 14' @ 5103.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5089' & KB 14' @ 5103.00ft (ASSUMED)
Site:	NBU 921-35M PAD	**North Reference:**	True
Well:	NBU 921-35M4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Project Uintah County, UT UTM12

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

Site NBU 921-35M PAD, SEC 35 T9S R21E

Site Position:		**Northing:**	14,524,537.11 usft	**Latitude:**	39° 59' 11.339 N
From:	Lat/Long	**Easting:**	2,053,394.37 usft	**Longitude:**	109° 31' 32.542 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.95 °

Well NBU 921-35M4CS, 469' FSL 517' FWL

Well Position	**+N/-S**	0.00 ft	**Northing:**	14,524,521.76 usft	**Latitude:**	39° 59' 11.191 N
	+E/-W	0.00 ft	**Easting:**	2,053,368.85 usft	**Longitude:**	109° 31' 32.873 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**		**Ground Level:**	5,089.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/28/2010	11.16	65.87	52,380

Design PLAN #1

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	142.03

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	
914.03	12.28	142.03	909.34	-51.68	40.33	2.00	2.00	0.00	142.03	
2,706.37	12.28	142.03	2,660.66	-352.22	274.87	0.00	0.00	0.00	0.00	
3,320.39	0.00	0.00	3,270.00	-403.90	315.19	2.00	-2.00	0.00	180.00	
9,736.39	0.00	0.00	9,686.00	-403.90	315.19	0.00	0.00	0.00	0.00	NBU 921-35M4CS_P

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 921-35M4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5089' & KB 14' @ 5103.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5089' & KB 14' @ 5103.00ft (ASSUMED)
Site:	NBU 921-35M PAD	**North Reference:**	True
Well:	NBU 921-35M4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,524,521.76	2,053,368.85	39° 59' 11.191 N	109° 31' 32.873 W
100.00	0.00	0.00	100.00	0.00	0.00	14,524,521.76	2,053,368.85	39° 59' 11.191 N	109° 31' 32.873 W
200.00	0.00	0.00	200.00	0.00	0.00	14,524,521.76	2,053,368.85	39° 59' 11.191 N	109° 31' 32.873 W
300.00	0.00	0.00	300.00	0.00	0.00	14,524,521.76	2,053,368.85	39° 59' 11.191 N	109° 31' 32.873 W
Start Build 2.00									
400.00	2.00	142.03	399.98	-1.38	1.07	14,524,520.40	2,053,369.95	39° 59' 11.178 N	109° 31' 32.859 W
500.00	4.00	142.03	499.84	-5.50	4.29	14,524,516.33	2,053,373.23	39° 59' 11.137 N	109° 31' 32.818 W
600.00	6.00	142.03	599.45	-12.37	9.65	14,524,509.55	2,053,378.71	39° 59' 11.069 N	109° 31' 32.749 W
700.00	8.00	142.03	698.70	-21.98	17.15	14,524,500.06	2,053,386.36	39° 59' 10.974 N	109° 31' 32.652 W
800.00	10.00	142.03	797.47	-34.31	26.78	14,524,487.89	2,053,396.19	39° 59' 10.852 N	109° 31' 32.529 W
900.00	12.00	142.03	895.62	-49.35	38.51	14,524,473.05	2,053,408.17	39° 59' 10.703 N	109° 31' 32.378 W
914.03	12.28	142.03	909.34	-51.68	40.33	14,524,470.75	2,053,410.03	39° 59' 10.680 N	109° 31' 32.355 W
Start 1792.34 hold at 914.03 MD									
1,000.00	12.28	142.03	993.34	-66.10	51.58	14,524,456.52	2,053,421.51	39° 59' 10.538 N	109° 31' 32.210 W
1,100.00	12.28	142.03	1,091.05	-82.86	64.66	14,524,439.97	2,053,434.87	39° 59' 10.372 N	109° 31' 32.042 W
1,200.00	12.28	142.03	1,188.77	-99.63	77.75	14,524,423.42	2,053,448.24	39° 59' 10.206 N	109° 31' 31.874 W
1,300.00	12.28	142.03	1,286.48	-116.40	90.84	14,524,406.87	2,053,461.60	39° 59' 10.041 N	109° 31' 31.706 W
1,400.00	12.28	142.03	1,384.19	-133.17	103.92	14,524,390.33	2,053,474.96	39° 59' 9.875 N	109° 31' 31.537 W
1,436.65	12.28	142.03	1,420.00	-139.31	108.72	14,524,384.26	2,053,479.85	39° 59' 9.814 N	109° 31' 31.476 W
GREEN RIVER									
1,500.00	12.28	142.03	1,481.90	-149.94	117.01	14,524,373.78	2,053,488.32	39° 59' 9.709 N	109° 31' 31.369 W
1,600.00	12.28	142.03	1,579.61	-166.70	130.09	14,524,357.23	2,053,501.68	39° 59' 9.543 N	109° 31' 31.201 W
1,700.00	12.28	142.03	1,677.32	-183.47	143.18	14,524,340.68	2,053,515.04	39° 59' 9.378 N	109° 31' 31.033 W
1,800.00	12.28	142.03	1,775.04	-200.24	156.26	14,524,324.13	2,053,528.40	39° 59' 9.212 N	109° 31' 30.865 W
1,900.00	12.28	142.03	1,872.75	-217.01	169.35	14,524,307.58	2,053,541.76	39° 59' 9.046 N	109° 31' 30.697 W
2,000.00	12.28	142.03	1,970.46	-233.78	182.43	14,524,291.03	2,053,555.12	39° 59' 8.880 N	109° 31' 30.529 W
2,100.00	12.28	142.03	2,068.17	-250.55	195.52	14,524,274.48	2,053,568.48	39° 59' 8.715 N	109° 31' 30.361 W
2,200.00	12.28	142.03	2,165.88	-267.31	208.61	14,524,257.93	2,053,581.85	39° 59' 8.549 N	109° 31' 30.192 W
2,300.00	12.28	142.03	2,263.60	-284.08	221.69	14,524,241.38	2,053,595.21	39° 59' 8.383 N	109° 31' 30.024 W
2,400.00	12.28	142.03	2,361.31	-300.85	234.78	14,524,224.83	2,053,608.57	39° 59' 8.217 N	109° 31' 29.856 W
2,500.00	12.28	142.03	2,459.02	-317.62	247.86	14,524,208.28	2,053,621.93	39° 59' 8.052 N	109° 31' 29.688 W
2,578.78	12.28	142.03	2,536.00	-330.83	258.17	14,524,195.24	2,053,632.46	39° 59' 7.921 N	109° 31' 29.555 W
8 5/8"									
2,600.00	12.28	142.03	2,556.73	-334.39	260.95	14,524,191.73	2,053,635.29	39° 59' 7.886 N	109° 31' 29.520 W
2,700.00	12.28	142.03	2,654.44	-351.16	274.03	14,524,175.18	2,053,648.65	39° 59' 7.720 N	109° 31' 29.352 W
2,706.37	12.28	142.03	2,660.66	-352.22	274.87	14,524,174.13	2,053,649.50	39° 59' 7.710 N	109° 31' 29.341 W
Start Drop -2.00									
2,800.00	10.41	142.03	2,752.46	-366.74	286.20	14,524,159.80	2,053,661.07	39° 59' 7.566 N	109° 31' 29.195 W
2,900.00	8.41	142.03	2,851.11	-379.63	296.25	14,524,147.08	2,053,671.34	39° 59' 7.439 N	109° 31' 29.066 W
3,000.00	6.41	142.03	2,950.27	-389.79	304.18	14,524,137.05	2,053,679.44	39° 59' 7.338 N	109° 31' 28.964 W
3,100.00	4.41	142.03	3,049.82	-397.22	309.98	14,524,129.72	2,053,685.36	39° 59' 7.265 N	109° 31' 28.890 W
3,200.00	2.41	142.03	3,149.64	-401.91	313.64	14,524,125.09	2,053,689.09	39° 59' 7.219 N	109° 31' 28.843 W
3,300.00	0.41	142.03	3,249.61	-403.84	315.15	14,524,123.18	2,053,690.63	39° 59' 7.199 N	109° 31' 28.823 W
3,320.39	0.00	0.00	3,270.00	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
Start 6416.00 hold at 3320.39 MD									
3,400.00	0.00	0.00	3,349.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
3,500.00	0.00	0.00	3,449.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
3,600.00	0.00	0.00	3,549.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
3,700.00	0.00	0.00	3,649.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
3,800.00	0.00	0.00	3,749.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
3,900.00	0.00	0.00	3,849.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
4,000.00	0.00	0.00	3,949.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 921-35M4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5089' & KB 14' @ 5103.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5089' & KB 14' @ 5103.00ft (ASSUMED)
Site:	NBU 921-35M PAD	**North Reference:**	True
Well:	NBU 921-35M4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,100.00	0.00	0.00	4,049.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
4,200.00	0.00	0.00	4,149.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
4,300.00	0.00	0.00	4,249.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
4,400.00	0.00	0.00	4,349.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
4,500.00	0.00	0.00	4,449.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
4,600.00	0.00	0.00	4,549.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
4,700.00	0.00	0.00	4,649.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
4,734.39	0.00	0.00	4,684.00	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
WASATCH									
4,800.00	0.00	0.00	4,749.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
4,900.00	0.00	0.00	4,849.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
5,000.00	0.00	0.00	4,949.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
5,100.00	0.00	0.00	5,049.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
5,200.00	0.00	0.00	5,149.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
5,300.00	0.00	0.00	5,249.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
5,400.00	0.00	0.00	5,349.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
5,500.00	0.00	0.00	5,449.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
5,600.00	0.00	0.00	5,549.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
5,700.00	0.00	0.00	5,649.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
5,800.00	0.00	0.00	5,749.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
5,900.00	0.00	0.00	5,849.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
6,000.00	0.00	0.00	5,949.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
6,100.00	0.00	0.00	6,049.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
6,200.00	0.00	0.00	6,149.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
6,300.00	0.00	0.00	6,249.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
6,400.00	0.00	0.00	6,349.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
6,500.00	0.00	0.00	6,449.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
6,600.00	0.00	0.00	6,549.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
6,700.00	0.00	0.00	6,649.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
6,800.00	0.00	0.00	6,749.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
6,900.00	0.00	0.00	6,849.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
7,000.00	0.00	0.00	6,949.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
7,100.00	0.00	0.00	7,049.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
7,200.00	0.00	0.00	7,149.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
7,300.00	0.00	0.00	7,249.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
7,400.00	0.00	0.00	7,349.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
7,481.39	0.00	0.00	7,431.00	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
MESAVERDE									
7,500.00	0.00	0.00	7,449.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
7,600.00	0.00	0.00	7,549.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
7,700.00	0.00	0.00	7,649.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
7,800.00	0.00	0.00	7,749.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
7,900.00	0.00	0.00	7,849.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
8,000.00	0.00	0.00	7,949.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
8,100.00	0.00	0.00	8,049.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
8,200.00	0.00	0.00	8,149.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
8,300.00	0.00	0.00	8,249.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
8,400.00	0.00	0.00	8,349.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
8,500.00	0.00	0.00	8,449.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
8,600.00	0.00	0.00	8,549.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
8,700.00	0.00	0.00	8,649.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
8,800.00	0.00	0.00	8,749.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 921-35M4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5089' & KB 14' @ 5103.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5089' & KB 14' @ 5103.00ft (ASSUMED)
Site:	NBU 921-35M PAD	**North Reference:**	True
Well:	NBU 921-35M4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,900.00	0.00	0.00	8,849.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
9,000.00	0.00	0.00	8,949.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
9,100.00	0.00	0.00	9,049.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
9,200.00	0.00	0.00	9,149.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
9,300.00	0.00	0.00	9,249.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
9,400.00	0.00	0.00	9,349.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
9,500.00	0.00	0.00	9,449.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
9,600.00	0.00	0.00	9,549.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
9,700.00	0.00	0.00	9,649.61	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
9,736.39	0.00	0.00	9,686.00	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W
NBU 921-35M4CS_PBHL									

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
NBU 921-35M4CS_PBH - plan hits target center - Circle (radius 25.00)	0.00	0.00	9,686.00	-403.90	315.19	14,524,123.12	2,053,690.68	39° 59' 7.199 N	109° 31' 28.823 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,578.78	2,536.00	8 5/8"	8.625	11.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,436.65	1,420.00	GREEN RIVER			
4,734.39	4,684.00	WASATCH			
7,481.39	7,431.00	MESAVERDE			

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
914.03	909.34	-51.68	40.33	Start 1792.34 hold at 914.03 MD
2,706.37	2,660.66	-352.22	274.87	Start Drop -2.00
3,320.39	3,270.00	-403.90	315.19	Start 6416.00 hold at 3320.39 MD
9,736.39	9,686.00	-403.90	315.19	TD at 9736.39

NBU 921-35M1BS
Surface: 469' FSL 526' FWL (SW/4SW/4) Lot 4
BHL: 1,096' FSL 830' FWL (SW/4SW/4) Lot 4

NBU 921-35M1CS
Surface: 474' FSL 534' FWL (SW/4SW/4) Lot 4
BHL: 760' FSL 830' FWL (SW/4SW/4) Lot 4

NBU 921-35M4BS
Surface: 478' FSL 543' FWL (SW/4SW/4) Lot 4
BHL: 423' FSL 831' FWL (SW/4SW/4) Lot 4

NBU 921-35M4CS
Surface: 464' FSL 517' FWL (SW/4SW/4) Lot 4
BHL: 55' FSL 834' FWL (SW/4SW/4) Lot 4

Pad: NBU 921-35M
Section 35 T9S R21E
Mineral Lease: UO 1194 ST

Uintah County, Utah
Operator: Kerr-McGee Oil & Gas Onshore LP

MULTI-POINT SURFACE USE PLAN of OPERATIONS (SUPO)

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to APC/KMG (including, but not limited to, APDs/SULAs/ROEs/ROWs and/or easements).

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

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

A. <u>Existing Roads</u>:

Existing roads consist of county roads and improved/unimproved lease roads. APC/KMG will maintain existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each

other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

B. Planned Access Roads:

No new access road is proposed (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

Where roads are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

Turnouts; major cut and fills; culverts; bridges; gates; cattle guards; low water crossings; or modifications needed to existing infrastructure/facilities were determined at the on-site and, as applicable, are typically shown on attached Exhibits and Topo maps.

C. Location of Existing and Proposed Facilities:

This pad will expand the existing pad for the NBU 69N2. This well location is a vertical producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of November 11, 2010.

Production facilities (see Well Pad Design Summary and Facilities Diagram):

Production facilities will be installed on the disturbed portion of each well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) aboveground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

Production 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 are not to be used for disposal of liquids from additional sources without prior approval of UDOGM.
Gathering facilities:

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is ±3,980' and the individual segments are broken up as follows:

- ±530' (0.1 miles) –New 6" buried gas pipeline from the meter to the edge of the pad.
- ±3,150' (0.6 miles) –New 6" buried gas pipeline from the edge of pad to the NBU 921-35G pad intersection.
- ±330' (0.1 miles) –New 12" buried gas pipeline from the NBU 921-35G pad intersection to the NBU 921-35O pad intersection.

The total liquid gathering pipeline distance from the separator to the tie in point is ±4,600' and the individual segments are broken up as follows:

±530' (0.1 miles) –New 6" buried liquid pipeline from the meter to the edge of the pad.

±3,150' (0.6 miles) –New 6" buried liquid pipeline from the edge of pad to the NBU 921-35O pad intersection.

±920' (0.2 miles) –New 6" buried liquid pipeline from the NBU 921-35O pad intersection to the NBU 921-35G pad intersection.

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.

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. 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. Kerr-McGee requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, Kerr-McGee requests a temporary 45' construction right-of-way and 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.
Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

D. <u>Location and Type of Water Supply</u>:

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

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.

E. Source of Construction Materials:

Construction operations will typically be completed with native materials found on location. If needed, 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 and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

F. Methods of Handling Waste Materials:

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

RNI in Sec. 5 T9S R22E
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
Ouray #1 SWD in Sec. 1 T9S R21E
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. 33 T9S R21E
NBU 921-34L SWD in Sec. 34 T9S R21E

Drill cuttings and/or fluids will be contained in the reserve/frac pit. Cuttings will be buried in pit(s) upon closure. Unless otherwise approved, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions or well testing, product 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 SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with a synthetic material 20-mil or thicker, 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. Any additional pits necessary to 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.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered 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.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after six (6) months 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. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

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 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.

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.

Any undesirable event, accidental release, or in excess of reportable quantities will be managed according to the notification requirements of UDOGMs “Reporting Oil and Gas Undesirable Events” rule, and, where State wells are participatory to a Federal agreement, according to NTL-3A.

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.

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 and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

G. Ancillary Facilities:

None are anticipated.

H. Well Site Layout (see Well Pad Design Summary):

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; 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 and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1983 (NAD83) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

I. Plans for Reclamation of the Surface:

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. This 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 are not limited to: 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 includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

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.

Final Reclamation

Final reclamation will be performed for newly drilled unproductive wells and/or at 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 APC/KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. 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, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

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.

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

Seeding and Measures Common to Interim and Final Reclamation

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope 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 and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. 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-

'APIWellNo:43047513940000'

vegetation. The site specific seed mix will be provided by SITLA.

J. Surface/Mineral Ownership:

SITLA
675 East 500 South, Suite 500
Salt Lake City, UT 84102

K. Other Information:

None

'APIWellNo:43047513940000'

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

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

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

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

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

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

Bond coverage for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, by Bureau of Land Management Nationwide Bond WYB000291.

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

Danielle Piernot
Danielle Piernot

November 19, 2010
Date

'APIWellNo:43047513940000'

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

October 25, 2010

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 921-35M4CS
T9S-R21E
Section 35: SWSW (Surf), SWSW (Bottom)
Surface: 464' FSL, 517' FWL
Bottom Hole: 55' FSL, 834' FWL
Uintah County, Utah

Dear Ms. Mason:

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

- Kerr-McGee's NBU 921-35M4CS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

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

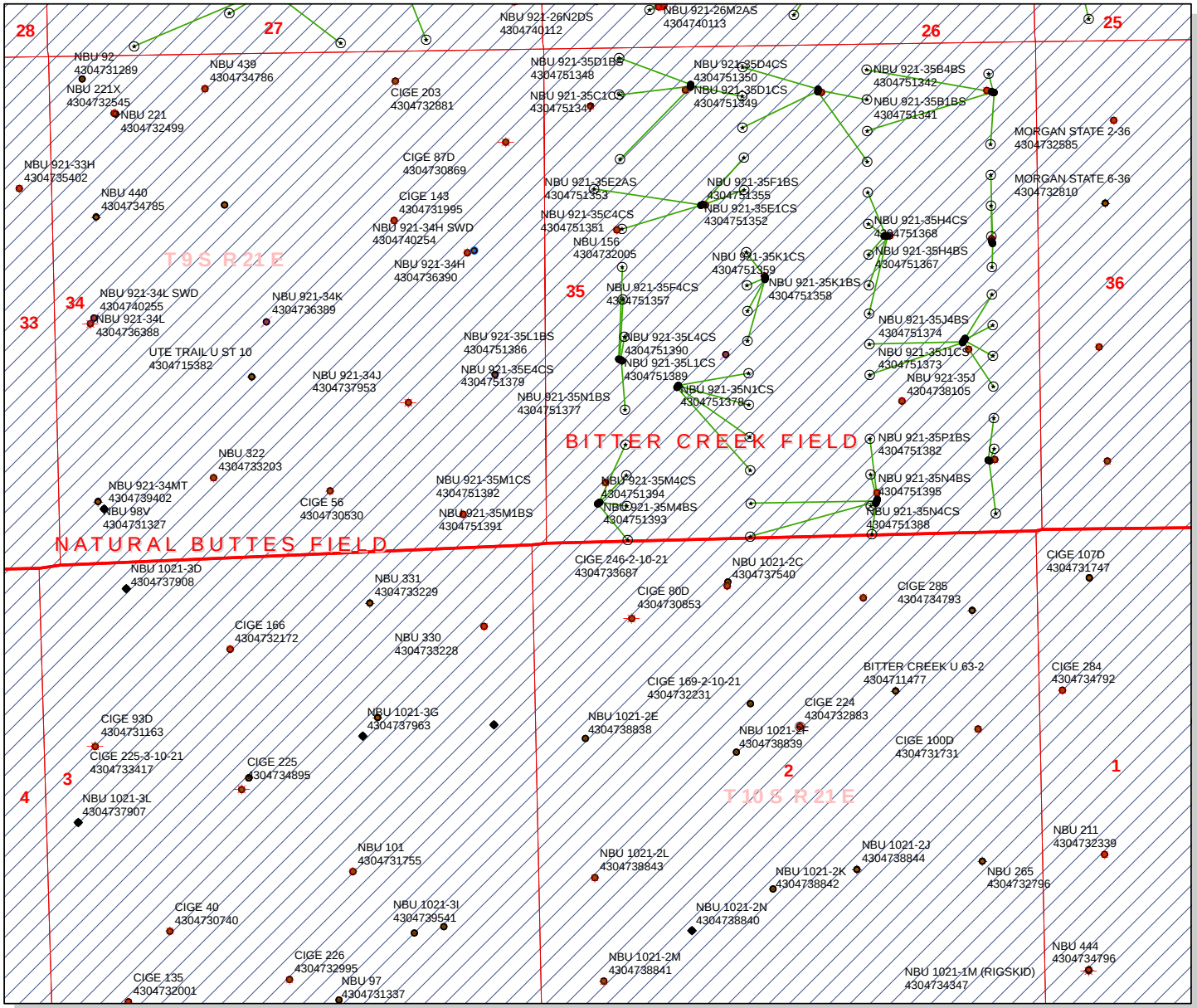
Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Joe Matney

Joe Matney
Sr. Staff Landman

'APIWellNo:4304751394000'



API Number: 4304751394

Well Name: NBU 921-35M4CS

Township 09.0 S Range 21.0 E Section 35

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
- Sections
- Township
- Bottom Hole Location - AGRC

Wells Query
- <all other values>

Status
- APD - Aproved Permit
- DRL - Spuded (Drilling Commenced)
- GIW - Gas Injection
- GS - Gas Storage
- LA - Location Abandoned
- LOC - New Location
- OPS - Operation Suspended
- PA - Plugged Abandoned
- PGW - Producing Gas Well
- POW - Producing Oil Well
- RET - Returned APD
- 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

1:13,286

'APIWellNo:43047513940000'

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:
3160
(UT-922)

December 1, 2010

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2010 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 2010 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION

(Proposed PZ WASATCH-MESA VERDE)

NBU 921-35F2 Pad

43-047-51355	NBU 921-35F1BS	Sec 35 T09S R21E 1684 FNL 1709 FWL
		BHL Sec 35 T09S R21E 1531 FNL 2146 FWL

NBU 921-35F4 PAD

43-047-51356	NBU 921-35F4BS	Sec 35 T09S R21E 2473 FNL 2358 FWL
		BHL Sec 35 T09S R21E 2210 FNL 2158 FWL
43-047-51357	NBU 921-35F4CS	Sec 35 T09S R21E 2483 FNL 2358 FWL
		BHL Sec 35 T09S R21E 2567 FNL 2159 FWL
43-047-51358	NBU 921-35K1BS	Sec 35 T09S R21E 2493 FNL 2358 FWL
		BHL Sec 35 T09S R21E 2484 FSL 2161 FWL
43-047-51359	NBU 921-35K1CS	Sec 35 T09S R21E 2503 FNL 2357 FWL
		BHL Sec 35 T09S R21E 2163 FSL 2155 FWL

NBU 921-35G Pad

43-047-51360	NBU 921-35G1BS	Sec 35 T09S R21E 2053 FNL 1633 FEL
		BHL Sec 35 T09S R21E 1583 FNL 1819 FEL
43-047-51361	NBU 921-35G1CS	Sec 35 T09S R21E 2053 FNL 1653 FEL
		BHL Sec 35 T09S R21E 1916 FNL 1820 FEL
43-047-51362	NBU 921-35G4BS	Sec 35 T09S R21E 2053 FNL 1643 FEL
		BHL Sec 35 T09S R21E 2250 FNL 1822 FEL

API #	WELL NAME	LOCATION

(Proposed PZ WASATCH-MESA VERDE)

43-047-51363	NBU 921-35G4CS	Sec 35 T09S R21E 2053 FNL 1623 FEL
		BHL Sec 35 T09S R21E 2583 FNL 1823 FEL
43-047-51364	NBU 921-35J1BS	Sec 35 T09S R21E 2053 FNL 1613 FEL
		BHL Sec 35 T09S R21E 2419 FSL 1824 FEL

NBU 921-35H PAD

43-047-51365	NBU 921-35H1BS	Sec 35 T09S R21E 2143 FNL 0486 FEL
		BHL Sec 35 T09S R21E 1411 FNL 0494 FEL
43-047-51366	NBU 921-35H1CS	Sec 35 T09S R21E 2133 FNL 0490 FEL
		BHL Sec 35 T09S R21E 1743 FNL 0495 FEL
43-047-51367	NBU 921-35H4BS	Sec 35 T09S R21E 2124 FNL 0493 FEL
		BHL Sec 35 T09S R21E 2075 FNL 0495 FEL
43-047-51368	NBU 921-35H4CS	Sec 35 T09S R21E 2152 FNL 0483 FEL
		BHL Sec 35 T09S R21E 2407 FNL 0495 FEL

NBU 921-35I PAD

43-047-51369	NBU 921-35I1BS	Sec 35 T09S R21E 2106 FSL 0794 FEL
		BHL Sec 35 T09S R21E 2572 FSL 0496 FEL
43-047-51370	NBU 921-35I1CS	Sec 35 T09S R21E 2098 FSL 0800 FEL
		BHL Sec 35 T09S R21E 2240 FSL 0496 FEL
43-047-51371	NBU 921-35I4BS	Sec 35 T09S R21E 2090 FSL 0806 FEL
		BHL Sec 35 T09S R21E 1908 FSL 0496 FEL
43-047-51372	NBU 921-35I4CS	Sec 35 T09S R21E 2082 FSL 0811 FEL
		BHL Sec 35 T09S R21E 1577 FSL 0497 FEL
43-047-51373	NBU 921-35J1CS	Sec 35 T09S R21E 2074 FSL 0817 FEL
		BHL Sec 35 T09S R21E 2086 FSL 1825 FEL
43-047-51374	NBU 921-35J4BS	Sec 35 T09S R21E 2066 FSL 0823 FEL
		BHL Sec 35 T09S R21E 1752 FSL 1826 FEL

NBU 921-35K PAD

43-047-51375	NBU 921-35K4BS	Sec 35 T09S R21E 1710 FSL 1409 FWL
		BHL Sec 35 T09S R21E 1814 FSL 2165 FWL
43-047-51376	NBU 921-35K4CS	Sec 35 T09S R21E 1702 FSL 1403 FWL
		BHL Sec 35 T09S R21E 1469 FSL 2163 FWL
43-047-51377	NBU 921-35N1BS	Sec 35 T09S R21E 1694 FSL 1397 FWL
		BHL Sec 35 T09S R21E 1124 FSL 2161 FWL
43-047-51378	NBU 921-35N1CS	Sec 35 T09S R21E 1686 FSL 1392 FWL
		BHL Sec 35 T09S R21E 0771 FSL 2162 FWL

API #	WELL NAME	LOCATION
NBU 921-35L PAD		
43-047-51379	NBU 921-35E4CS	Sec 35 T09S R21E 2016 FSL 0768 FWL
		BHL Sec 35 T09S R21E 2343 FNL 0823 FWL
43-047-51386	NBU 921-35L1BS	Sec 35 T09S R21E 2013 FSL 0778 FWL
		BHL Sec 35 T09S R21E 2658 FSL 0826 FWL
43-047-51389	NBU 921-35L1CS	Sec 35 T09S R21E 2009 FSL 0787 FWL
		BHL Sec 35 T09S R21E 2255 FSL 0835 FWL
43-047-51390	NBU 921-35L4CS	Sec 35 T09S R21E 2005 FSL 0796 FWL
		BHL Sec 35 T09S R21E 1470 FSL 0832 FWL
NBU 921-35P PAD		
43-047-51380	NBU 921-35P4CS	Sec 35 T09S R21E 0781 FSL 0557 FEL
		BHL Sec 35 T09S R21E 0208 FSL 0489 FEL
43-047-51381	NBU 921-35P1CS	Sec 35 T09S R21E 0778 FSL 0547 FEL
		BHL Sec 35 T09S R21E 0913 FSL 0497 FEL
43-047-51382	NBU 921-35P1BS	Sec 35 T09S R21E 0785 FSL 0566 FEL
		BHL Sec 35 T09S R21E 1245 FSL 0497 FEL
NBU 921-35O PAD		
43-047-51383	NBU 921-35O4CS	Sec 35 T09S R21E 0360 FSL 1780 FEL
		BHL Sec 35 T09S R21E 0026 FSL 1826 FEL
43-047-51384	NBU 921-35O4BS	Sec 35 T09S R21E 0370 FSL 1777 FEL
		BHL Sec 35 T09S R21E 0336 FSL 1833 FEL
43-047-51385	NBU 921-35O1CS	Sec 35 T09S R21E 0398 FSL 1766 FEL
		BHL Sec 35 T09S R21E 0674 FSL 1828 FEL
43-047-51387	NBU 921-35O1BS	Sec 35 T09S R21E 0407 FSL 1763 FEL
		BHL Sec 35 T09S R21E 1059 FSL 1833 FEL
43-047-51388	NBU 921-35N4CS	Sec 35 T09S R21E 0379 FSL 1773 FEL
		BHL Sec 35 T09S R21E 0051 FSL 2153 FWL
43-047-51395	NBU 921-35N4BS	Sec 35 T09S R21E 0388 FSL 1770 FEL
		BHL Sec 35 T09S R21E 0410 FSL 2164 FWL
NBU 921-35M PAD		
43-047-51391	NBU 921-35M1BS	Sec 35 T09S R21E 0469 FSL 0526 FWL
		BHL Sec 35 T09S R21E 1096 FSL 0830 FWL
43-047-51392	NBU 921-35M1CS	Sec 35 T09S R21E 0474 FSL 0534 FWL
		BHL Sec 35 T09S R21E 0760 FSL 0830 FWL

'APIWellNo:43047513940000'

API #	WELL NAME	LOCATION
43-047-51393	NBU 921-35M4BS	Sec 35 T09S R21E 0478 FSL 0543 FWL
		BHL Sec 35 T09S R21E 0423 FSL 0831 FWL
43-047-51394	NBU 921-35M4CS	Sec 35 T09S R21E 0464 FSL 0517 FWL
		BHL Sec 35 T09S R21E 0055 FSL 0834 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: 2010.12.01 10:03:00 -07'00'

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

MCoulthard:mc:12-1-10

'APIWellNo:43047513940000'

From: Jim Davis
To: Bonner, Ed; Hill, Brad; Mason, Diana
CC: Curry, Kristine; Danielle Piernot; Garrison, LaVonne; Hayden, Martha;...
Date: 12/22/2010 5:49 AM
Subject: Kerr McGee APD approvals in 9S 21E Sec 35
Attachments: KMG approvals 921-35 on 12.22.2010.xls

The following wells have been approved by SITLA under the following arch and paleo stipulations. This is a long list, so I'm attaching a spreadsheet with the same information.

A note on arch and paleo stipulations: Wells that have an arch note "non-significant site" do not need to be avoided or mitigated. Only those that say "needs to be avoided".
The paleo reports make recommendations for "spot paleo monitoring" or "full paleo monitoring". It is my understanding that Kerr McGee is taking these stipulations and doing full monitoring in either case, in an abundance of caution.
-Jim Davis

Well Name	API	Paleo Stipulations	Arch Stipulations
Kerr-McGee's NBU 921-35A1BS	API #4304751339	IPC 10-98 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s)	
Kerr-McGee's NBU 921-35A4CS	API #4304751340	IPC 10-98 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s)	
Kerr-McGee's NBU 921-35B1BS	API #4304751341	IPC 10-98 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s)	
Kerr-McGee's NBU 921-35B4BS	API #4304751342	IPC 10-98 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s)	
Kerr-McGee's NBU 921-35B1CS	API #4304751343	IPC 10-98 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s; eligible site 42Un6461, just south of proposed pipeline needs to be avoided)	
Kerr-McGee's NBU 921-35B4CS	API #4304751344	IPC 10-98 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s; eligible site 42Un6461, just south of proposed pipeline needs to be avoided)	
Kerr-McGee's NBU 921-35C1BS	API #4304751345	IPC 10-98 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s; eligible site 42Un6461, just south of proposed pipeline needs to be avoided)	
Kerr-McGee's NBU 921-35C4BS	API #4304751346	IPC 10-98 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s; eligible site 42Un6461, just south of proposed pipeline needs to be avoided)	
Kerr-McGee's NBU 921-35C1CS	API #4304751347	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)	
Kerr-McGee's NBU 921-35D1BS	API #4304751348	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)	
Kerr-McGee's NBU 921-35D1CS	API #4304751349	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)	
Kerr-McGee's NBU 921-35D4CS	API #4304751350	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)	
Kerr-McGee's NBU 921-35C4CS	API #4304751351	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)	
Kerr-McGee's NBU 921-35E1CS	API #4304751352	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)	
Kerr-McGee's NBU 921-35E2AS	API #4304751353	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)	
Kerr-McGee's NBU 921-35F1BS	API #4304751355	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)	
Kerr-McGee's NBU 921-35F4BS	API #4304751356	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)	
Kerr-McGee's NBU 921-35F4CS	API #4304751357	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)	
Kerr-McGee's NBU 921-35K1BS	API #4304751358	IPC 10-97 Full Paleo Monitoring (U-07-	

MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35K1CS API #4304751359 IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35G1BS API #4304751360 IPC 10-98 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road)
Kerr-McGee's NBU 921-35G1CS API #4304751361 IPC 10-98 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road)
Kerr-McGee's NBU 921-35G4BS API #4304751362 IPC 10-98 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road)
Kerr-McGee's NBU 921-35G4CS API #4304751363 IPC 10-98 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road)
Kerr-McGee's NBU 921-35J1S API #4304751364 IPC 10-98 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road)
Kerr-McGee's NBU 921-35H1BS API #4304751365 IPC 10-98 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35H1CS API #4304751366 IPC 10-98 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35H4BS API #4304751367 IPC 10-98 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35H4CS API #4304751368 IPC 10-98 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35I1BS API #4304751369 IPC 10-100 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35I1CS API #4304751370 IPC 10-100 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35I4BS API #4304751371 IPC 10-100 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35I4CS API #4304751372 IPC 10-100 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35J1CS API #4304751373 IPC 10-98 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35J4BS API #4304751374 IPC 10-100 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35K4BS API #4304751375 IPC 10-99 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35K4CS API #4304751376 IPC 10-99 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35N1BS API #4304751377 IPC 10-99 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35N1CS API #4304751378 IPC 10-99 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35E4CS API #4304751379 IPC 10-99 Spot Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35P4CS API #4304751380 IPC 10-100 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35P1CS API #4304751381 IPC 10-100 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35P1BS API #4304751382 IPC 10-100 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35O4CS API #4304751383 IPC 10-100 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline)
Kerr-McGee's NBU 921-35O4BS API #4304751384 IPC 10-100 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline)
Kerr-McGee's NBU 921-35O1CS API #4304751385 IPC 10-100 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline)
Kerr-McGee's NBU 921-35L1BS API #4304751386 IPC 10-99 Spot Paleo Monitoring

'APIWellNo:43047513940000'

(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35O1BS API #4304751387 IPC 10-100 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline)
Kerr-McGee's NBU 921-35N4CS API #4304751388 IPC 10-100 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline)
Kerr-McGee's NBU 921-35L1CS API #4304751389 IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35L4CS API #4304751390 IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35M1BS API #4304751391 IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35M1CS API #4304751392 IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35M4BS API #4304751393 IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35M4CS API #4304751394 IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35N4BS API #4304751395 IPC 10-100 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline)

BOPE REVIEW KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 921-35M4CS 43047513940000

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 921-35M4CS 430475139			
String	Surf	Prod		
Casing Size(")	8.625	4.500		
Setting Depth (TVD)	2498	9686		
Previous Shoe Setting Depth (TVD)	40	2498		
Max Mud Weight (ppg)	8.3	12.0		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	7780		
Operators Max Anticipated Pressure (psi)	5908	11.7		

Calculations	**Surf String**	**8.625**	**"**	
Max BHP (psi)	.052*Setting Depth*MW=	1082		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	782	NO	air drill
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	532	NO	
			***Can Full Expected Pressure Be Held At Previous Shoe?**	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	541	NO	Reasonable depth in area
Required Casing/BOPE Test Pressure=		2373	psi	
***Max Pressure Allowed @ Previous Casing Shoe=**		40	psi *Assumes 1psi/ft frac gradient	

Calculations	**Prod String**	**4.500**	**"**	
Max BHP (psi)	.052*Setting Depth*MW=	6044		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4882	YES	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3913	YES	OK
			***Can Full Expected Pressure Be Held At Previous Shoe?**	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	4463	NO	Reasonable
Required Casing/BOPE Test Pressure=		5000	psi	
***Max Pressure Allowed @ Previous Casing Shoe=**		2498	psi *Assumes 1psi/ft frac gradient	

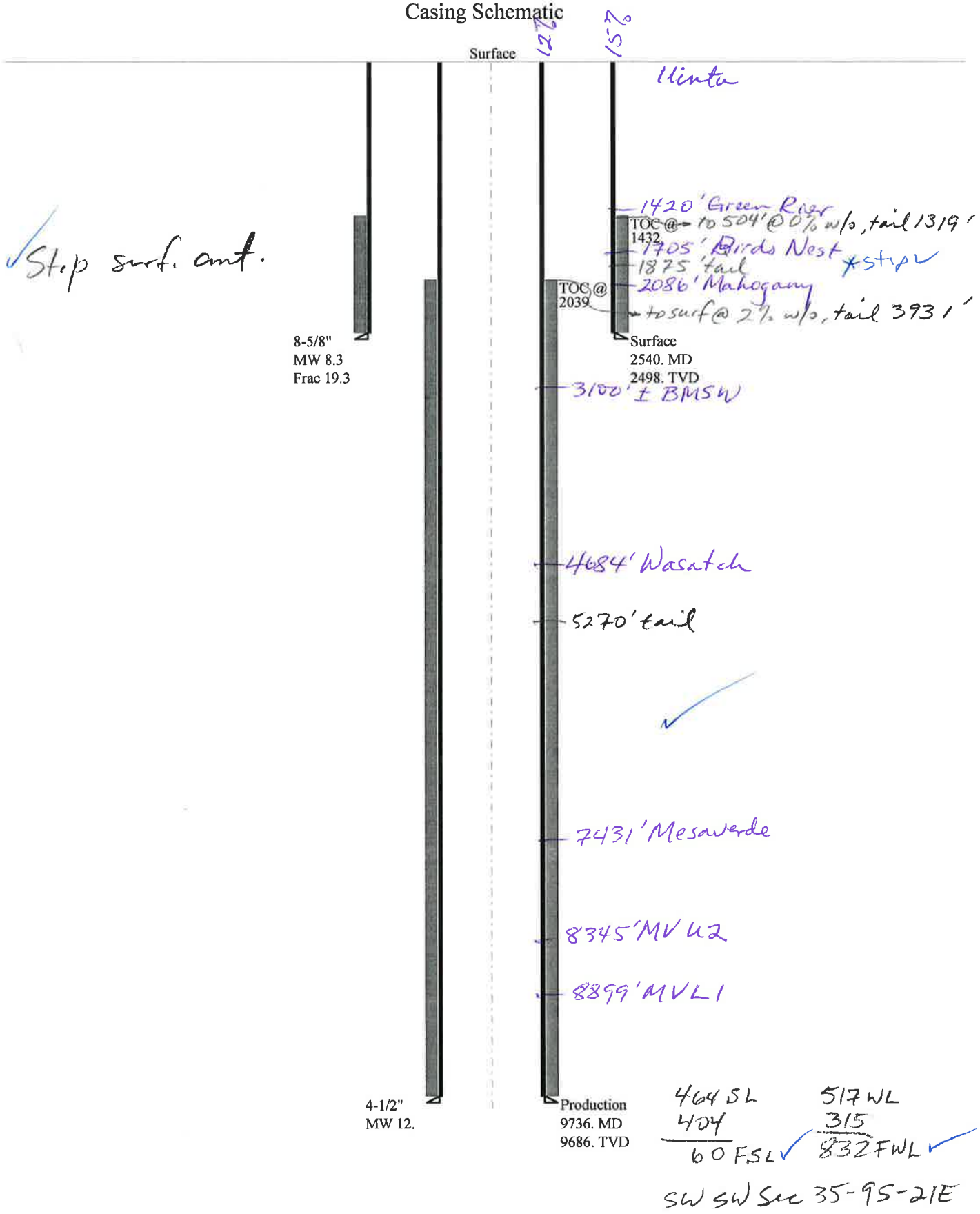
Calculations	**String**		**"**	
Max BHP (psi)	.052*Setting Depth*MW=			
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO	
			***Can Full Expected Pressure Be Held At Previous Shoe?**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

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

'APIWellNo:43047513940000'

43047513940000 NBU 921-35M4CS

Casing Schematic



464 SL
404
60 FSL

517 WL
315
832 FWL

SW SW Sec 35-9S-21E

Well name:	**43047513940000 NBU 921-35M4CS**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Surface
Project ID:	43-047-51394
Location:	UINTAH COUNTY

Design parameters:

Collapse

Mud weight: 8.330 ppg
Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 2,235 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,535 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Tension:

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

Tension is based on air weight.
Neutral point: 2,226 ft

Environment:

H2S considered?	No
Surface temperature:	74 °F
Bottom hole temperature:	109 °F
Temperature gradient:	1.40 °F/100ft
Minimum section length:	100 ft
Cement top:	1,432 ft

Directional Info - Build & Drop

Kick-off point	300 ft
Departure at shoe:	411 ft
Maximum dogleg:	2 °/100ft
Inclination at shoe:	12.28 °

Re subsequent strings:

Next setting depth:	9,686 ft
Next mud weight:	12.000 ppg
Next setting BHP:	6,038 psi
Fracture mud wt:	19.250 ppg
Fracture depth:	2,540 ft
Injection pressure:	2,540 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
1	2540	8.625	28.00	I-55	LT&C	2498	2540	7.892	100584

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	1081	1880	1.739	2535	3390	1.34	69.9	348	4.98 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940
Date: December 28,2010
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 2498 ft, a mud weight of 8.33 ppg The casing is considered to be evacuated for collapse purposes.
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	**43047513940000 NBU 921-35M4CS**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Production
Project ID:	43-047-51394
Location:	UINTAH COUNTY

Design parameters:

Collapse

Mud weight:	12.000 ppg
Internal fluid density:	1.000 ppg

Burst

Max anticipated surface pressure:	3,907 psi
Internal gradient:	0.220 psi/ft
Calculated BHP	6,038 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor	1.125

Burst:

Design factor	1.00

Tension:

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

Tension is based on air weight.
Neutral point: 7,999 ft

Environment:

H2S considered?	No
Surface temperature:	74 °F
Bottom hole temperature:	210 °F
Temperature gradient:	1.40 °F/100ft
Minimum section length:	100 ft
Cement top:	2,039 ft

Directional Info - Build & Drop

Kick-off point	300 ft
Departure at shoe:	512 ft
Maximum dogleg:	2 °/100ft
Inclination at shoe:	0 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
1	9736	4.5	11.60	I-80	LT&C	9686	9736	3.875	128515

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	5535	6360	1.149	6038	7780	1.29	112.4	212	1.89 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940
Date: December 28,2010
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 9686 ft, a mud weight of 12 ppg An internal gradient of .052 psi/ft was used for collapse from TD to
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

ON-SITE PREDRILL EVALUATION
Utah Division of Oil, Gas and Mining

Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.				
Well Name	NBU 921-35M4CS				
API Number	43047513940000	**APD No**	3219	**Field/Unit**	NATURAL BUTTES
Location: 1/4,1/4	SWSW **Sec** 35 **Tw** 9.0S **Rng** 21.0E 464 FSL 517 FWL				
GPS Coord (UTM)		**Surface Owner**			

Participants

See other comments:

Regional/Local Setting & Topography

The general area is within the Natural Buttes Unit in the lower portion of the Sand Wash Drainage of Uintah, County, approximately 37 air miles and 44.2 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads to the site. Topography of the Sand Wash area is characterized by broad open flats dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs, furnishing water for antelope or livestock.

The NBU 921-35M pad will be created by significantly enlarging the existing pad of the NBU 69N2 gas well. It will be enlarged in all directions except to the east. Four gas wells, to be directionally drilled, will be added. They are the NBU 921-35M4CS, NBU 921-35M1BS, NBU 921-35M1CS and NBU 921-35M4BS. The site is in moderately hilly terrain. A rock ridge exists to the north. A diversion ditch for the existing pad has been cut at the south toe of this ridge and must be maintained. This limits the north extension of the pad. The pad extends to the south into a hill which will be excavated for the reserve pit. A major tributary of Sand Wash is about 1 mile to the east of the site and the White River about 3 mile down drainage. The selected site appears to be suitable for enlarging a pad, drilling and operating the proposed wells and is the only site in the immediate area.

Both the surface and minerals are owned by SITLA.

Surface Use Plan

Current Surface Use

Grazing
Wildlfe Habitat
Existing Well Pad

New Road Miles	Well Pad	Src Const Material	Surface Formation
0	**Width** 352 **Length** 455	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Vegetation is a poor desert shrub type, which includes rabbit brush, Indian ricegrass, stipa commata, greasewood, broom snakeweed, shadscale and halogeton.

Antelope, sheep during the winter, rabbits, coyotes, and small mammals, birds and raptors.

Soil Type and Characteristics

Surface soils are a shallow rocky sandy loam

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diverson Required? N

Berm Required? N

Erosion Sedimentation Control Required? N

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

Reserve Pit

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

Characteristics / Requirements

The proposed reserve pit is 120’ x 260’ x 12’ deep located in a cut on the southeast corner of the location. Kerr McGee plans a 30-mil liner with a double felt sub-liner.

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

Other Observations / Comments

Floyd Bartlett (DOGM), Sheila Wopsock, Clay Einerson, Lovell Young, Grizz Oleen, Charles Chase, Colby Sutton, Doyle Holmes, Claudia Sass, (Kerr McGee), Mitch Batty, John Slaugh, (Timberline Engineering and Land Surveying), Jim Davis (SITLA) and Ben Williams, (UDWR).

Floyd Bartlett	11/30/2010
Evaluator	**Date / Time**

Application for Permit to Drill
Statement of Basis

Utah Division of Oil, Gas and Mining

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
3219	43047513940000	SITLA	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		**Surface Owner-APD**		
Well Name	NBU 921-35M4CS		**Unit**	NATURAL BUTTES	
Field	NATURAL BUTTES		**Type of Work**	DRILL	
Location	SWSW 35 9S 21E S 464 FSL 517 FWL		GPS Coord (UTM)	625869E 4427070N	

Geologic Statement of Basis

Kerr McGee proposes to set 2,540’ of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 3,100'. A search of Division of Water Rights records shows one water well within a 10,000 foot radius of the center of Section 35. The well is listed as 2,640 feet deep and used for drilling water. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Production casing cement should be brought up to cover the base of the moderately saline ground water in order to isolate fresher waters uphole.

Brad Hill	12/15/2010
APD Evaluator	**Date / Time**

Surface Statement of Basis

The general area is within the Natural Buttes Unit in the lower portion of the Sand Wash Drainage of Uintah, County, approximately 37 air miles and 44.2 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads to the site. Topography of the Sand Wash area is characterized by broad open flats dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs, furnishing water for antelope or livestock.

The NBU 921-35M pad will be created by significantly enlarging the existing pad of the NBU 69N2 gas well. It will be enlarged in all directions except to the east. Four gas wells, to be directionally drilled, will be added. They are the NBU 921-35M4CS, NBU 921-35M1BS, NBU 921-35M1CS and NBU 921-35M4BS. The site is in moderately hilly terrain. A rock ridge exists to the north. A diversion ditch for the existing pad has been cut at the south toe of this ridge and must be maintained. This limits the north extension of the pad. The pad extends to the south into a hill which will be excavated for the reserve pit. A major tributary of Sand Wash is about 1 mile to the east of the site and the White River about 3 mile down drainage. The selected site appears to be suitable for enlarging a pad, drilling and operating the proposed wells and is the only site in the immediate area.

Both the surface and minerals are owned by SITLA. Jim Davis represented SITLA at the pre-site investigation. Mr. Davis had no concerns pertaining to this location excepted as covered above. SITLA provided a seed mix to be used when reclaiming the site.

Ben Williams represented the Utah Division of Wildlife Resources. Mr. Williams stated the area is classified as crucial yearlong antelope habitat but recommended no restrictions for this species. No other wildlife will be significantly affected.

Floyd Bartlett	11/30/2010
Onsite Evaluator	**Date / Time**

Application for Permit to Drill
Statement of Basis

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 30 mils with a double felt subliner shall be properly installed and maintained in the reserve pit.
Surface	The reserve pit shall be fenced upon completion of drilling operations.
Surface	Drainages adjacent to the proposed pad shall be diverted around the location.

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/23/2010 **API NO. ASSIGNED:** 43047513940000
WELL NAME: NBU 921-35M4CS
OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6156
CONTACT: Danielle Piernot

PROPOSED LOCATION: SWSW 35 090S 210E **Permit Tech Review:** ✔

SURFACE: 0464 FSL 0517 FWL **Engineering Review:** ✔

BOTTOM: 0055 FSL 0834 FWL **Geology Review:** ✔

COUNTY: UINTAH
LATITUDE: 39.98633 **LONGITUDE:** -109.52580
UTM SURF EASTINGS: 625869.00 **NORTHINGS:** 4427070.00
FIELD NAME: NATURAL BUTTES
LEASE TYPE: 3 - State
LEASE NUMBER: UO 01194 ST **PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE
SURFACE OWNER: 3 - State **COALBED METHANE:** NO

RECEIVED AND/OR REVIEWED:

- ✔ **PLAT**
- ✔ **Bond:** STATE/FEE - 22013542
- ☐ **Potash**
- ✔ **Oil Shale 190-5**
- ☐ **Oil Shale 190-3**
- ☐ **Oil Shale 190-13**
- ✔ **Water Permit:** 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
5 - Statement of Basis - bhill
15 - Directional - dmason
17 - Oil Shale 190-5(b) - dmason
25 - Surface Casing - hmacdonald

GARY R. HERBERT
Governor
GREGORY S. BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

Permit To Drill

****

Well Name: NBU 921-35M4CS
API Well Number: 43047513940000
Lease Number: UO 01194 ST
Surface Owner: STATE
Approval Date: 12/30/2010

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

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

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

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

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

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

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

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

Surface casing shall be cemented to the surface.

Additional Approvals:
The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:
- Any changes to the approved drilling plan – contact Dustin Doucet
- Significant plug back of the well – contact Dustin Doucet
- Plug and abandonment of the well – contact Dustin Doucet

Notification Requirements:
The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:
- Within 24 hours following the spudding of the well – contact Carol Daniels
  OR
  submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at https://oilgas.ogm.utah.gov
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing – contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program – contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well – contact Dan Jarvis

Contact Information:
The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):
- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office
  801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office
  801-231-8956 - after office hours

Reporting Requirements:
All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:
- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

Approved By:

For John Rogers
Associate Director, Oil & Gas

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: UO 01194 ST

SUNDRY NOTICES AND REPORTS ON WELLS

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

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 921-35M4CS

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

9. API NUMBER: 43047513940000

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: 0464 FSL 0517 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 35 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: 12/30/2011	☐ 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: 01/03/2012

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Danielle Piernot	720 929-6156	Regulatory Analyst

SIGNATURE	DATE
N/A	12/21/2011

RECEIVED Dec. 21, 2011

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047513940000

API: 43047513940000
Well Name: NBU 921-35M4CS
Location: 0464 FSL 0517 FWL QTR SWSW SEC 35 TWNP 090S RNG 210E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 12/30/2010

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: Danielle Piernot **Date:** 12/21/2011
Title: Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED Dec. 21, 2011

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: UO 01194 ST

SUNDRY NOTICES AND REPORTS ON WELLS

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7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

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8. WELL NAME and NUMBER: NBU 921-35M4CS

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

9. API NUMBER: 43047513940000

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

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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: 12/30/2012
- ☐ SUBSEQUENT REPORT — Date of Work Completion:
- ☐ 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
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☐ 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: December 12, 2012

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Luke Urban	720 929-6501	Regulatory Specialist

SIGNATURE	DATE
N/A	12/11/2012

RECEIVED: Dec. 11, 2012

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047513940000

API: 43047513940000
Well Name: NBU 921-35M4CS
Location: 0464 FSL 0517 FWL QTR SWSW SEC 35 TWNP 090S RNG 210E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 12/30/2010

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

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- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

Signature: Luke Urban **Date:** 12/11/2012
Title: Regulatory Specialist **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED: Dec. 11, 2012

GARY R. HERBERT
Governor

SPENCER J. COX
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

January 9, 2014

Kerr McGee Oil & Gas Onshore, L.P.
P.O. Box 173779
Denver, CO 80217

Re: APD Rescinded – NBU 921-35M4CS, Sec. 35, T.9S, R.21E, Uintah County, Utah API No. 43-047-51394

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on December 30, 2010. On January 3, 2012 and December 12, 2012 the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective January 9, 2014.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason
Environmental Scientist

cc: Well File
SITLA, Ed Bonner

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

UTAH DNR OIL, GAS & MINING