API Well Number: 43047515870000

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

FORM 3

AMENDED REPORT ☐

APPLICATION FOR PERMIT TO DRILL

1. WELL NAME and NUMBER
NBU 922-36H4CS

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

3. FIELD OR WILDCAT
NATURAL BUTTES

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

5. UNIT or COMMUNITIZATION AGREEMENT NAME
NATURAL BUTTES

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

7. OPERATOR PHONE
720 929-6515

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

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

10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)
ML-22650

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	2014 FSL 792 FEL	NESE	36	9.0 S	22.0 E	S
Top of Uppermost Producing Zone	2508 FNL 495 FEL	SENE	36	9.0 S	22.0 E	S
At Total Depth	2508 FNL 495 FEL	SENE	36	9.0 S	22.0 E	S

21. COUNTY
UINTAH

22. DISTANCE TO NEAREST LEASE LINE (Feet)
495

23. NUMBER OF ACRES IN DRILLING UNIT
640

25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)
281

26. PROPOSED DEPTH
MD: 8823 TVD: 8699

27. ELEVATION - GROUND LEVEL
5029

28. BOND NUMBER
22013542

29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE
Permit #43-8496

Hole, Casing, and Cement Information

String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
Surf	11	8.625	0 - 2320	28.0	J-55 LT&C	0.2	Type V	180	1.15	15.8
							Class G	270	1.15	15.8
Prod	7.875	4.5	0 - 8823	11.6	I-80 LT&C	12.5	Premium Lite High Strength	280	3.38	11.0
							50/50 Poz	1190	1.31	14.3

ATTACHMENTS

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

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

NAME Gina Becker **TITLE** Regulatory Analyst II **PHONE** 720 929-6086

SIGNATURE **DATE** 05/14/2011 **EMAIL** gina.becker@anadarko.com

API NUMBER ASSIGNED
43047515870000

APPROVAL
Permit Manager

RECEIVED: Jul. 26, 2011

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

NBU 922-36H4CS

Surface:	2014 FSL / 792 FEL	NESE
BHL:	2508 FNL / 495 FEL	SENE

Section 36 T9S R22E

Unitah County, Utah
Mineral Lease: ML-22650

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	1221	
Birds Nest	1505	Water
Mahogany	1868	Water
Wasatch	4293	Gas
Mesaverde	6500	Gas
MVU2	7498	Gas
MVL1	8060	Gas
TVD	8699	
TD	8823	

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

RECEIVED: Jul. 26, 2011

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 8699' TVD, approximately equals 5,741 psi 0.64 psi/ft = actual bottomhole gradient

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

Maximum anticipated surface pressure equals approximately 3,641 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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

8. Anticipated Starting Dates:

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

9. Variances:

Please refer to the attached 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.

RECEIVED: Jul. 26, 2011

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 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

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

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

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

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

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

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

RECEIVED: Jul. 26, 2011

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.

RECEIVED: Jul. 26, 2011

API Well Number: 43047515870000

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	May 6, 2011
WELL NAME	**NBU 922-36H4CS**	TD	8,699' TVD 8,823' MD
FIELD	Natural Buttes	COUNTY Uintah	STATE Utah FINISHED ELEVATION 5028.8
SURFACE LOCATION	NESE 2014 FSL 792 FEL Sec 36 T 9S R 22E		
	Latitude: 39.990794 Longitude: -109.38103 NAD 27		
BTM HOLE LOCATION	SENE 2508 FNL 495 FEL Sec 36 T 9S R 22E		
	Latitude: 39.992894 Longitude: -109.379981 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"	
		200'	12-1/4	8-5/8", 28#, IJ-55, LTC	Air mist
			11'	8-5/8", 28#, IJ-55, LTC	Air mist
			7-7/8"	4-1/2" 11.6# I-80 or equivalent BTC/LTC csg	Water / Fresh Water Mud 8.3-12.0 ppg

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

Green River @ 1,221'
Top of Birds Nest @ 1,505'
Mahogany @ 1,868'

Preset f/ GL @ 2,320' 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 @ 4,293'

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

Mverde @ 6,500' TVD

MVU2 @ 7,498' TVD

MVU1 @ 8,060' TVD

Max anticipated Mud required 12.5 ppg

TD @ 8,699' TVD
8,823' MD

RECEIVED: Jul. 26, 2011

API Well Number: 43047515870000

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	LTC	BTC TENSION
CONDUCTOR	14"	0-40'									
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,320	28.00	IJ-55	LTC	2.33	1.73	6.12	N/A
								7,780	6,350	279,000	367,000
PRODUCTION	4-1/2"	0	to	8,823	11.60	I-80	LTC/BTC	1.11	1.12	3.37	4.43

Surface Casing:

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

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

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

Production casing:

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

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

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1			+ 0.25 pps flocele					
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
			+ 2% CaCl + 0.25 pps flocele					
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**					
Option 2	LEAD	1,820'	65/35 Poz + 6% Gel + 10 pps gilsonite	170	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	3,793'	Premium Lite II +0.25 pps	280	20%	11.00		3.38
			celloflake + 5 pps gilsonite + 10% gel					
			+ 0.5% extender					
	TAIL	5,030'	50/50 Poz/G + 10% salt + 2% gel	1,190	35%	14.30		1.31
			+ 0.1% R-3					

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

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

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 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:** _____

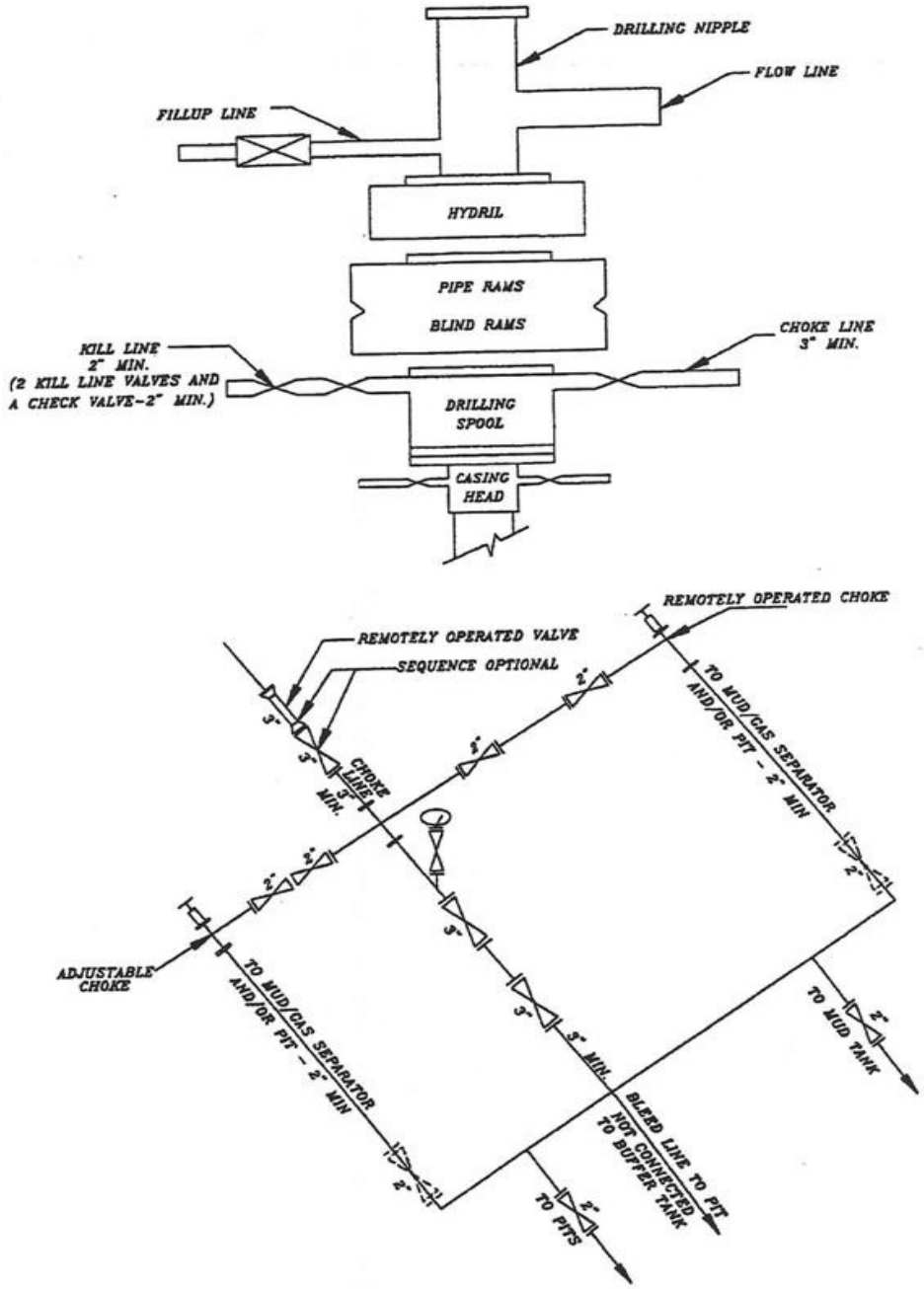
Nick Spence / Emile Goodwin

DRILLING SUPERINTENDENT: _____ **DATE:** _____

Kenny Gathings / Lovel Young

RECEIVED: Jul. 26, 2011

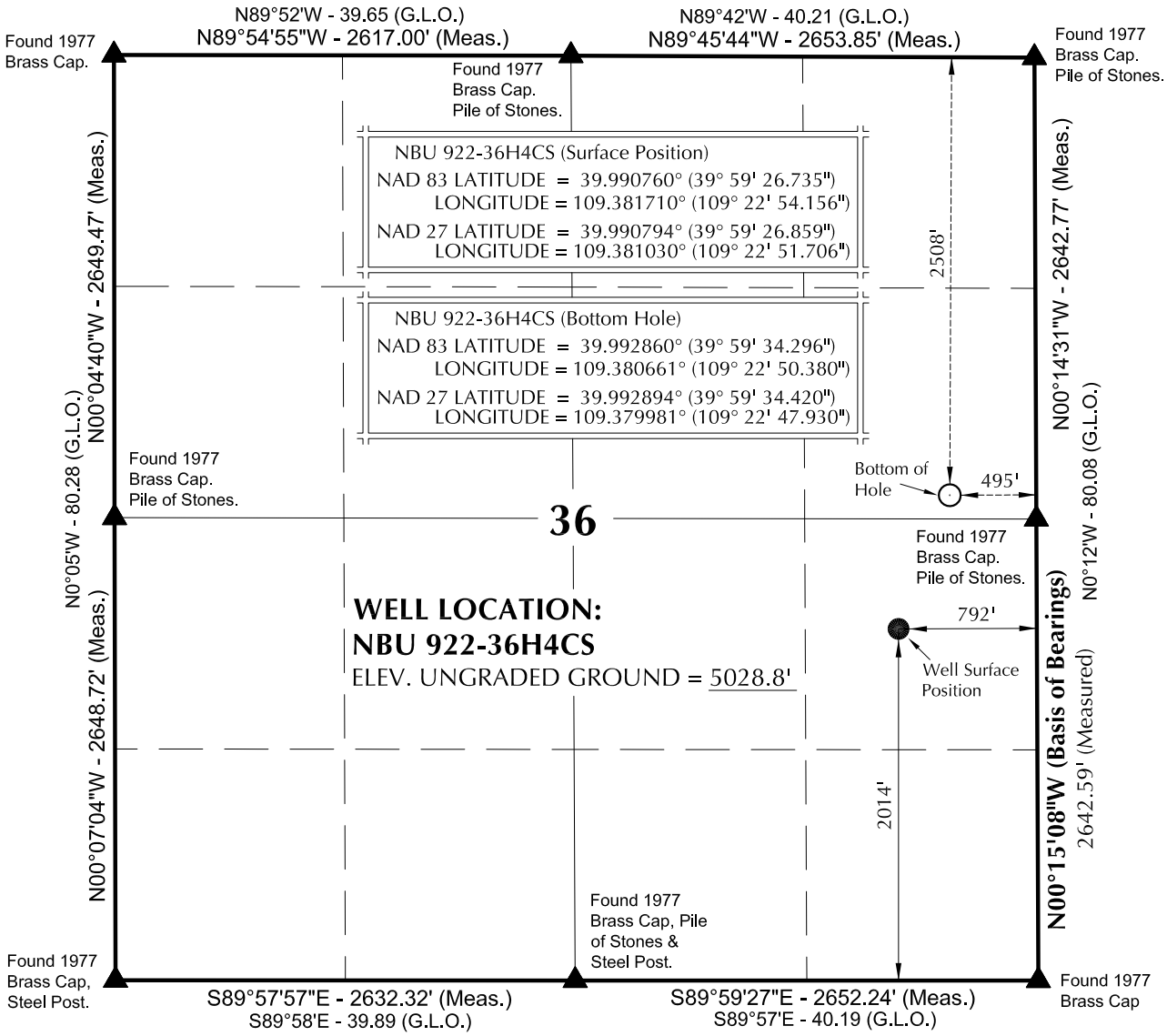
EXHIBIT A
NBU 922-36H4CS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

RECEIVED: Jul. 26, 2011

T9S, R22E, 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 N20°57'48"E 819.81' from the Surface Position.
4. Bearings are based on Global Positioning Satellite observations.
5. Basis of elevation is Tri-Sta "Two Water" located in the NW $\frac{1}{4}$ of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.

N

1000' 500' 0' 1000'

SCALE

SURVEYOR'S CERTIFICATE

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

PROFESSIONAL LAND SURVEYOR No.6028691 JOHN R KLAUGH 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 922-36I

NBU 922-36H4CS
WELL PLAT
2508' FNL, 495' FEL (Bottom Hole)
SE $\frac{1}{4}$ NE $\frac{1}{4}$ OF SECTION 36, T9S, R22E, 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: 11-08-10	SURVEYED BY: M.S.B.	SHEET NO:
DATE DRAWN: 11-18-10	DRAWN BY: B.M.	2
SCALE: 1" = 1000'	Date Last Revised: 12-14-10 M.W.W.	2 OF 16

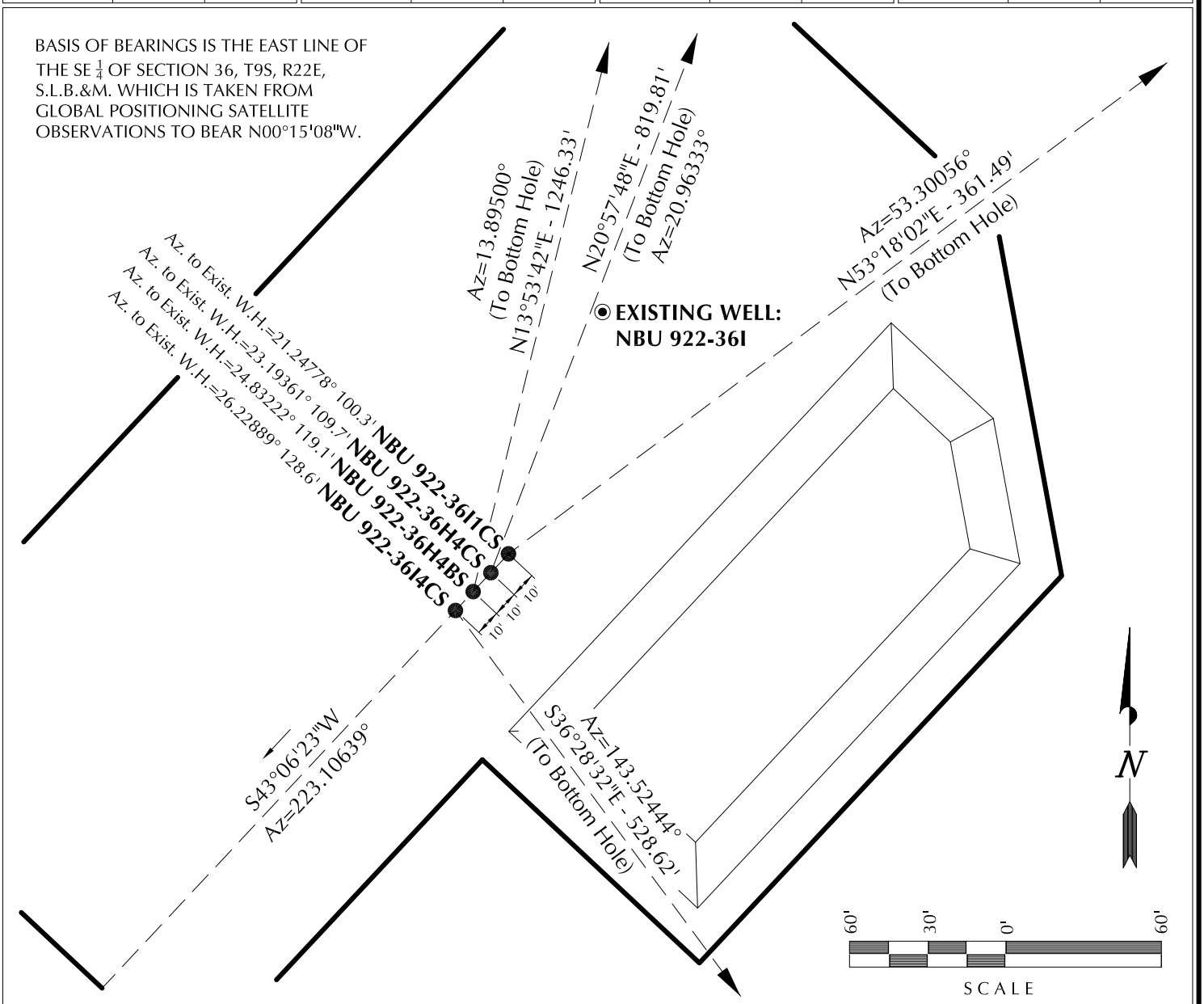
RECEIVED: Jul. 26, 2011

API Well Number: 43047515870000

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27			NAD83		NAD27		
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES
NBU 922-36I1CS	39°59'26.807" 39.990780°	109°22'54.069" 109.381686°	39°59'26.931" 39.990814°	109°22'51.618" 109.381005°	2021' FSL 785' FEL	39°59'28.939" 39.991372°	109°22'50.343" 109.380651°	39°59'29.063" 39.991406°	109°22'47.893" 109.379970°	2237' FSL 494' FEL
NBU 922-36H4CS	39°59'26.735" 39.990760°	109°22'54.156" 109.381710°	39°59'26.859" 39.990794°	109°22'51.706" 109.381030°	2014' FSL 792' FEL	39°59'34.296" 39.992860°	109°22'50.380" 109.380661°	39°59'34.420" 39.992894°	109°22'47.930" 109.379981°	2508' FNL 495' FEL
NBU 922-36H4BS	39°59'26.663" 39.990740°	109°22'54.244" 109.381735°	39°59'26.787" 39.990774°	109°22'51.794" 109.381054°	2006' FSL 799' FEL	39°59'38.614" 39.994059°	109°22'50.386" 109.380663°	39°59'38.738" 39.994094°	109°22'47.935" 109.379982°	2071' FNL 494' FEL
NBU 922-36I4CS	39°59'26.591" 39.990720°	109°22'54.332" 109.381759°	39°59'26.715" 39.990754°	109°22'51.882" 109.381078°	1999' FSL 805' FEL	39°59'22.389" 39.989552°	109°22'50.301" 109.380639°	39°59'22.512" 39.989587°	109°22'47.851" 109.379959°	1574' FSL 493' FEL
NBU 922-36I	39°59'27.731" 39.991036°	109°22'53.601" 109.381556°	39°59'27.854" 39.991071°	109°22'51.150" 109.380875°	2114' FSL 748' FEL					

RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 922-36I1CS	216.0'	289.8'	NBU 922-36H4CS	765.5'	293.3'	NBU 922-36H4BS	1,209.9'	299.3'	NBU 922-36I4CS	-425.1'	314.3'



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

WELL PAD - NBU 922-36I

WELL PAD INTERFERENCE PLAT

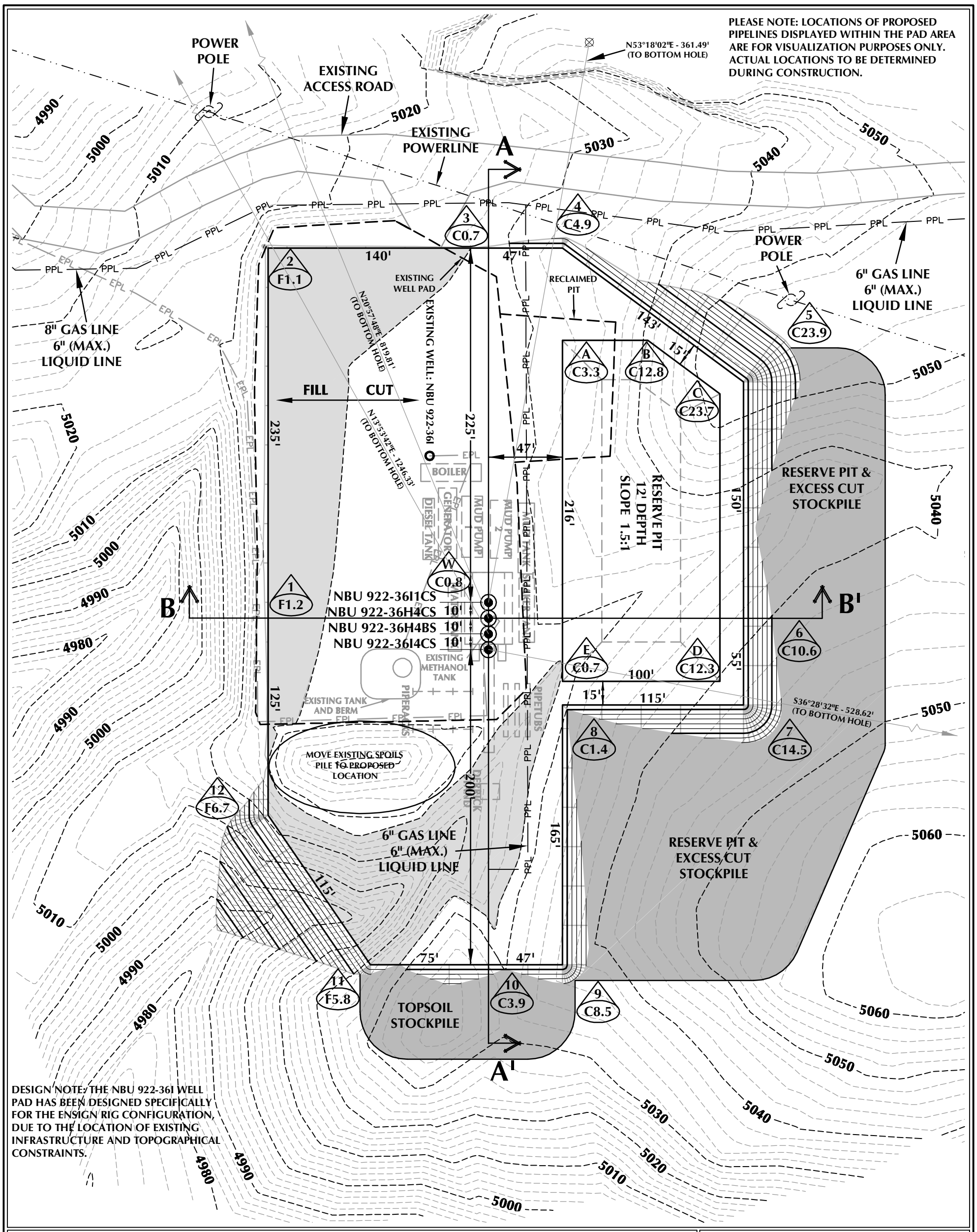
WELLS - NBU 922-36I1CS, NBU 922-36H4CS, NBU 922-36H4BS & NBU 922-36I4CS LOCATED IN SECTION 36, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

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: 11-08-10	SURVEYED BY: M.S.B.	SHEET NO: 5
DATE DRAWN: 11-18-10	DRAWN BY: B.M.	5 OF 16
SCALE: 1" = 60'	Date Last Revised: 12-14-10 M.W.W.	

RECEIVED: Jul. 26, 2011



DESIGN NOTE: THE NBU 922-36I WELL PAD HAS BEEN DESIGNED SPECIFICALLY FOR THE ENSIGN RIG CONFIGURATION, DUE TO THE LOCATION OF EXISTING INFRASTRUCTURE AND TOPOGRAPHICAL CONSTRAINTS.

WELL PAD - NBU 922-36I DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5028.8'
FINISHED GRADE ELEVATION = 5028.0'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 2.98 ACRES
TOTAL DAMAGE AREA = 5.58 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

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

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 14,506 C.Y.
TOTAL FILL FOR WELL PAD = 6,449 C.Y.
TOPSOIL @ 6" DEPTH = 1,532 C.Y.
EXCESS MATERIAL = 8,057 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT +/- 7,020 C.Y.
RESERVE PIT CAPACITY (2' OF FREEBOARD) +/- 26,630 BARRELS

WELL PAD LEGEND

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

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

WELL PAD - NBU 922-36I

WELL PAD - LOCATION LAYOUT
NBU 922-36I1CS, NBU 922-36H4CS, NBU 922-36H4BS & NBU 922-36I4CS
LOCATED IN SECTION 36, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

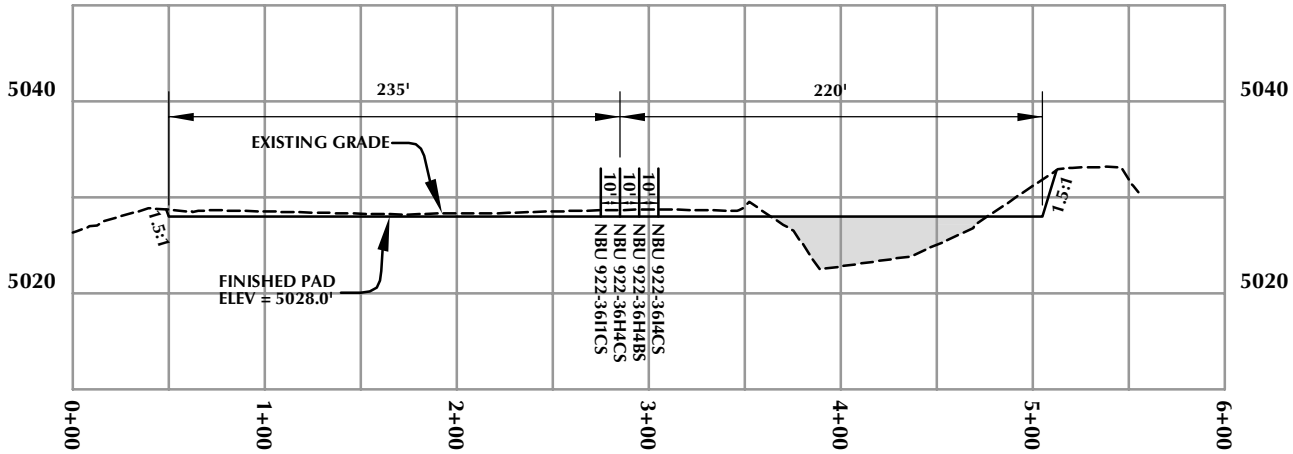
609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

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

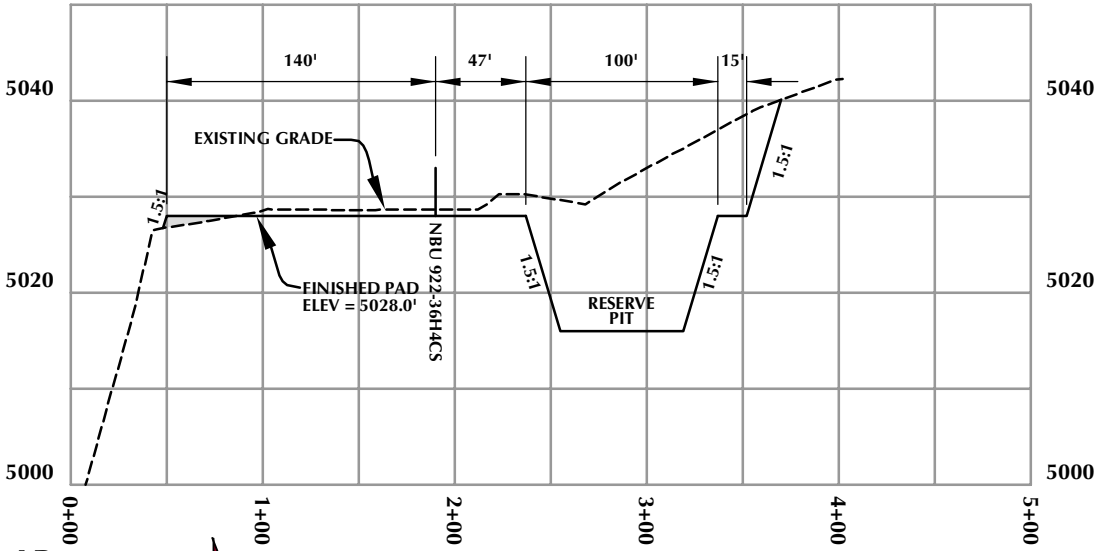
SCALE: 1"=60' | DATE: 12/3/10 | SHEET NO: 6
REVISED:
6 OF 16

C:\ANADARKO\2010_48_NBU_FOCUS_SEC_36-922\DWGS\NBU 922-36I\NBU_922-36I_PAD_20101109.dwg, 12/9/2010 10:01:35 AM

RECEIVED: Jul. 26, 2011



CROSS SECTION A-A'



CROSS SECTION B-B'

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

WELL PAD - NBU 922-36I

WELL PAD - CROSS SECTIONS
NBU 922-36I1CS, NBU 922-36H4CS,
NBU 922-36H4BS & NBU 922-36I4CS
LOCATED IN SECTION 36, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

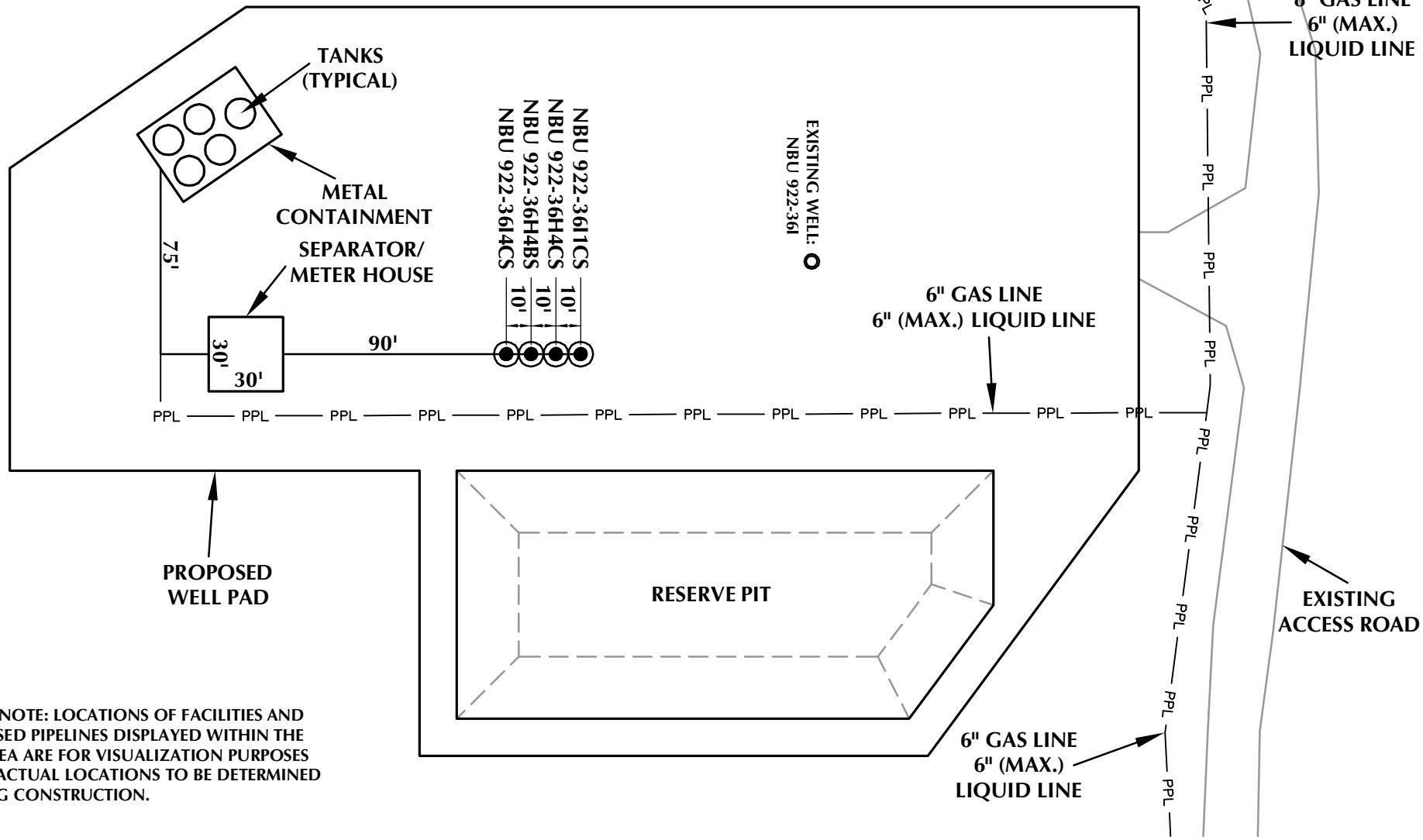
609
CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

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: 12/3/10 | SHEET NO: 7
REVISED:
7 OF 16

K:\ANADARKO\2010_48_NBU_FOCUS_SEC_36-922\DWGS\NBU 922-36I\NBU_922-36I_PAD_20101109.dwg, 11/29/2010 3:21:29 PM, jake



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

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

WELL PAD - NBU 922-36I

WELL PAD - FACILITIES DIAGRAM
NBU 922-36I1CS, NBU 922-36H4CS, NBU 922-36H4BS & NBU 922-36I4CS
LOCATED IN SECTION 36, T9S, R22E, 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: 12/3/10 | SHEET NO: 8
REVISED:
8 OF 16

K:\ANADARKO\2010_48_NBU_FOCUS_SEC_36-922\DWGS\NBU 922-36I\NBU_922-36I_PAD_20101109.dwg, 11/30/2010 1:32:19 PM

RECEIVED: Jul. 26, 2011

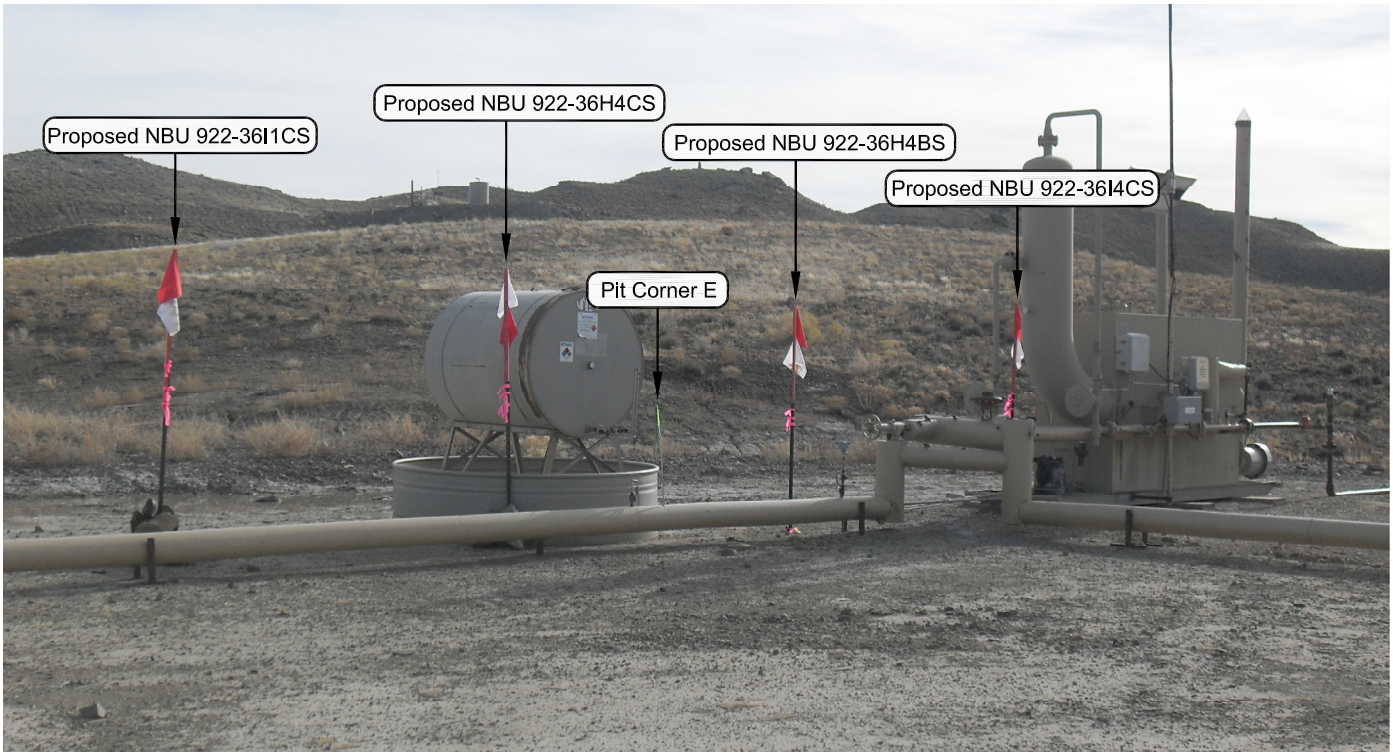


PHOTO VIEW: FROM LOCATION STAKE TO PIT CORNER E — CAMERA ANGLE: SOUTHEASTERLY

PHOTO VIEW: FROM EXISTING ACCESS ROAD — CAMERA ANGLE: SOUTHWESTERLY

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

WELL PAD - NBU 922-36I

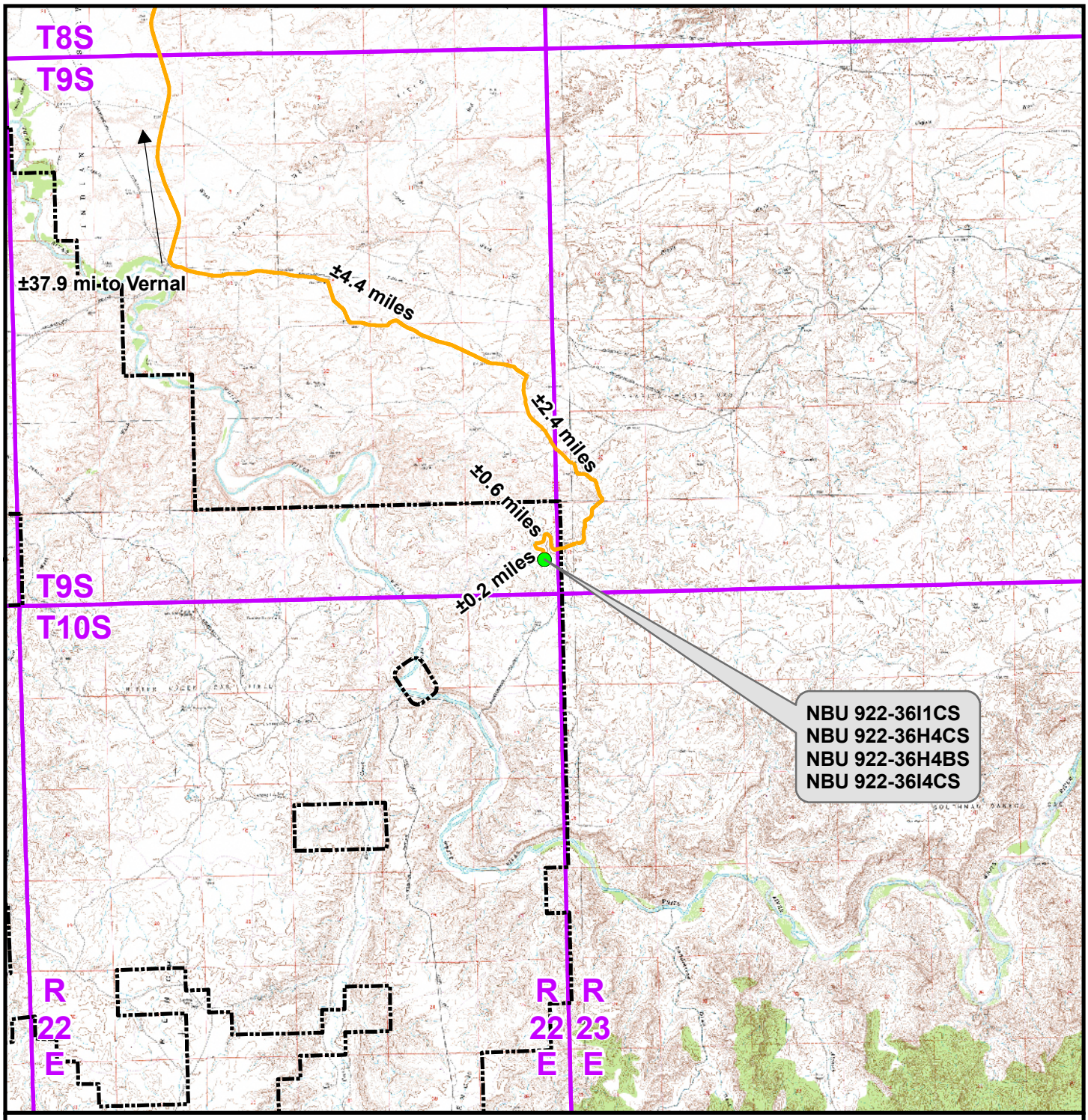
LOCATION PHOTOS
NBU 922-36I1CS, NBU 922-36H4CS, NBU 922-36H4BS & NBU 922-36I4CS
LOCATED IN SECTION 36, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

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 PHOTOS TAKEN: 11-18-10	PHOTOS TAKEN BY: M.S.B.	SHEET NO: 9
DATE DRAWN: 11-18-10	DRAWN BY: B.M.	
Date Last Revised:		9 OF 16

RECEIVED: Jul. 26, 2011



Legend

Distance From Well Pad - NBU 922-36I To Unit Boundary: ±785ft

- 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 922-36I

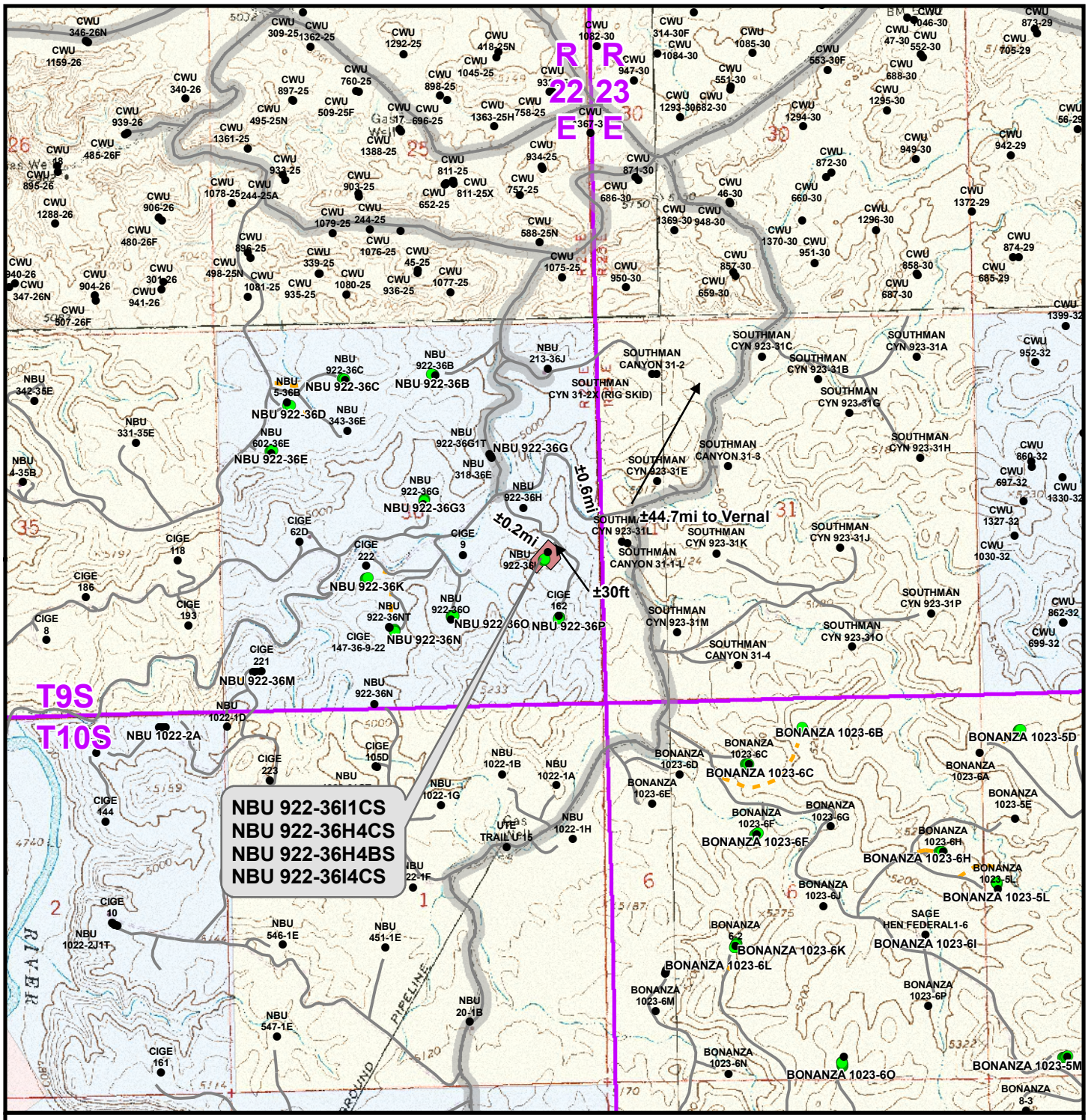
TOPO A
NBU 922-36I1CS, NBU 922-36H4CS, NBU 922-36H4BS & NBU 922-36I4CS LOCATED IN SECTION 36, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

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: TL	Date: 3 Dec 2010		10 of 16
Revised:	Date:		

RECEIVED: Jul. 26, 2011



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 922-36I

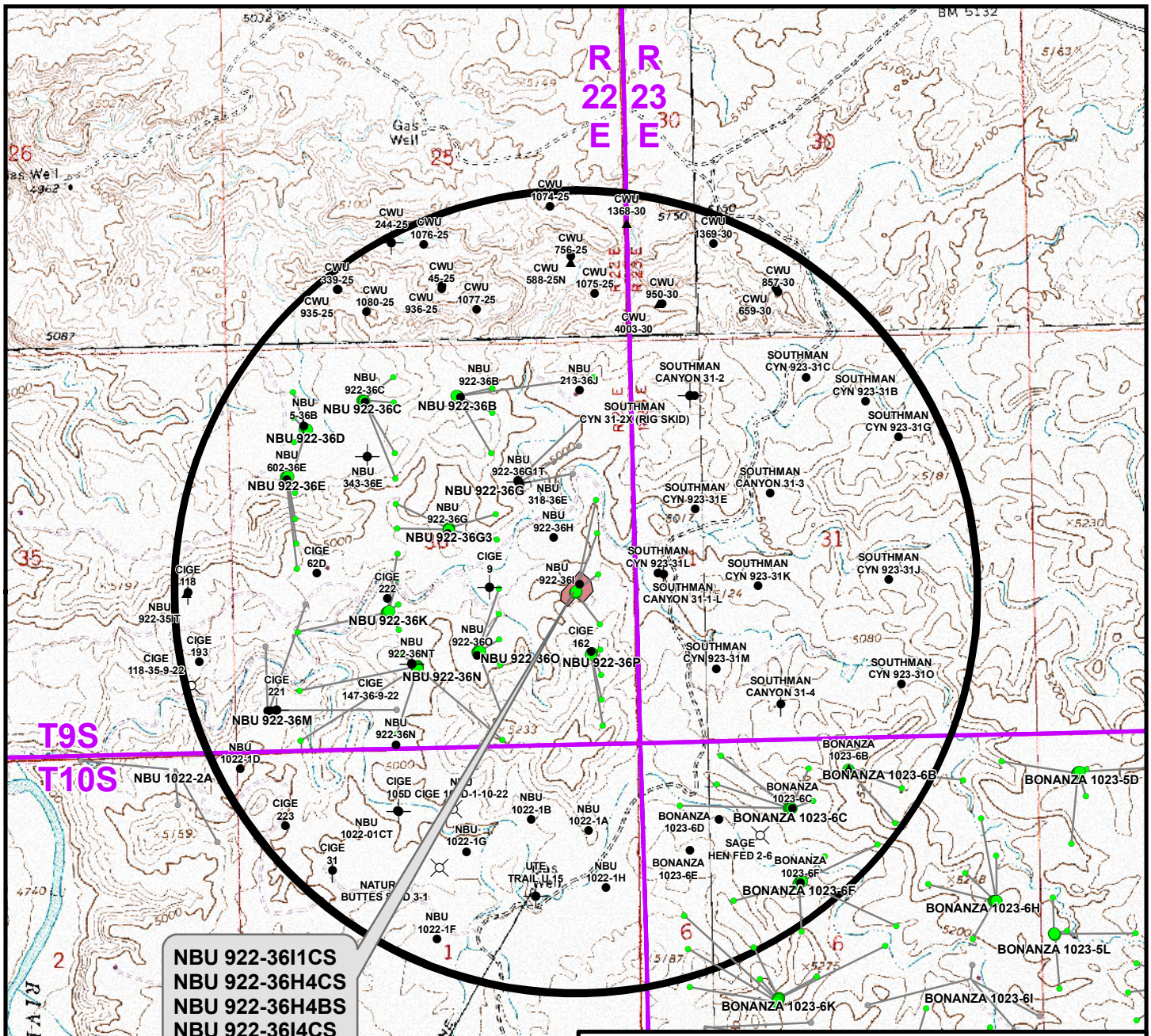
TOPO B
NBU 922-36I1CS, NBU 922-36H4CS,
NBU 922-36H4BS & NBU 922-36I4CS
LOCATED IN SECTION 36, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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: TL	Date: 3 Dec 2010		11 of 16
Revised:	Date:		

RECEIVED: Jul. 26, 2011



Proposed Well	Nearest Well Bore	Footage
NBU 922-36I1CS	NBU 922-36I	281ft
NBU 922-36H4CS	NBU 922-36H	574ft
NBU 922-36H4BS	NBU 922-36H2DS (BH)	464ft
NBU 922-36I4CS	CIGE 162	371ft

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 922-36I

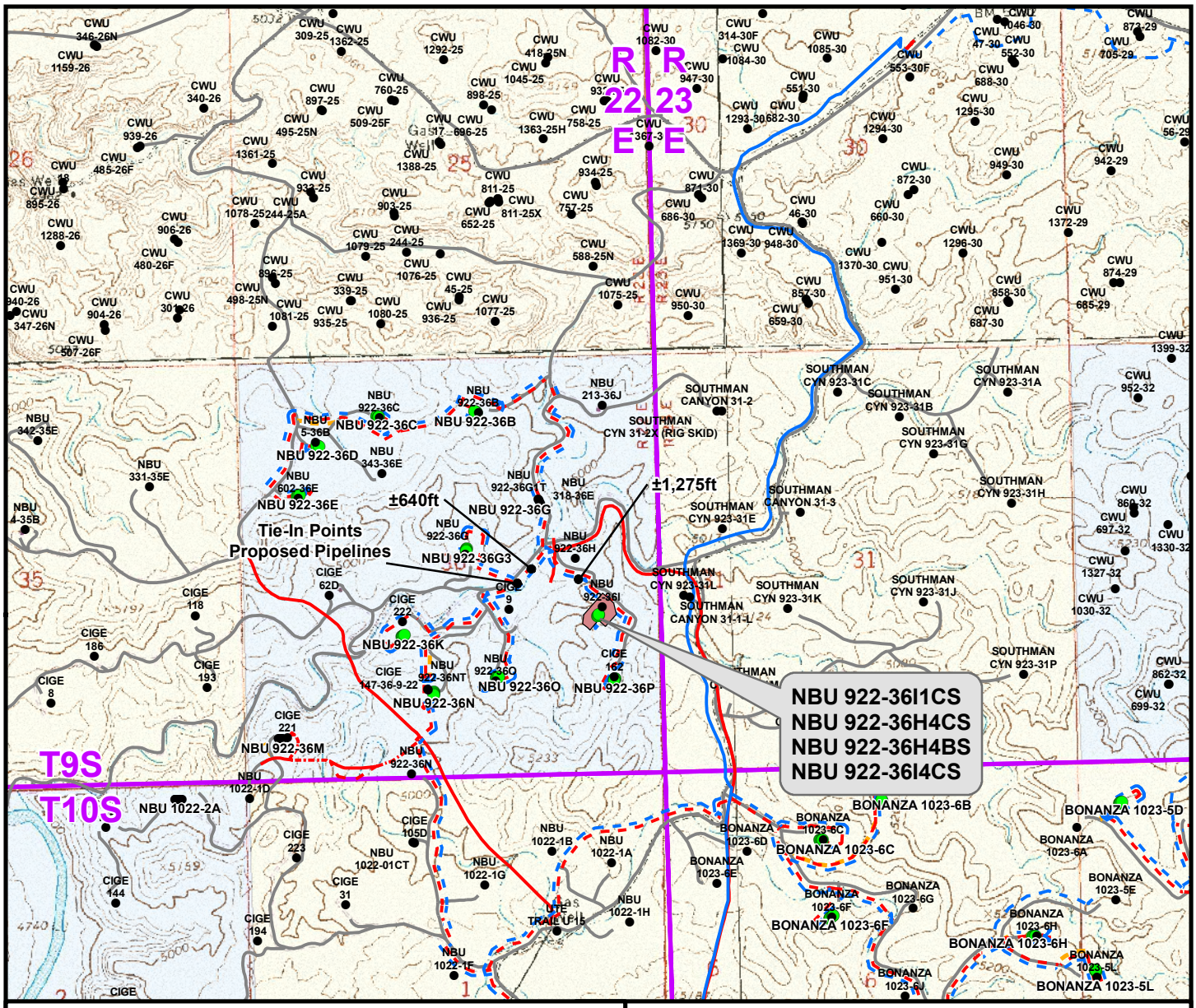
TOPO C
NBU 922-36I1CS, NBU 922-36H4CS, NBU 922-36H4BS & NBU 922-36I4CS
LOCATED IN SECTION 36, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

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: TL	Date: 3 Dec 2010	12 of 16
Revised:	Date:	

RECEIVED: Jul. 26, 2011



Proposed Liquid Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±460ft
Proposed 6" (Max.) (Edge of Pad to 36P Intersection)	±30ft
Proposed 6" (Max.) (36P Intersection to 36B Intersection)	±1,245ft
Proposed 6" (Max.) (36B Intersection to 36G3 Intersection)	±640ft
TOTAL PROPOSED LIQUID PIPELINE =	±2,375ft

Proposed Gas Pipeline	Length
Proposed 6" (Meter House to Edge of Pad)	±460ft
Proposed 6" (Edge of Pad to 36P Intersection)	±30ft
Proposed 8" (36P Intersection to 36B Intersection)	±1,245ft
Proposed 16" (36B Intersection to 36G3 Intersection)	±640ft
TOTAL PROPOSED GAS PIPELINE =	±2,375ft

Legend

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

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

WELL PAD - NBU 922-36I

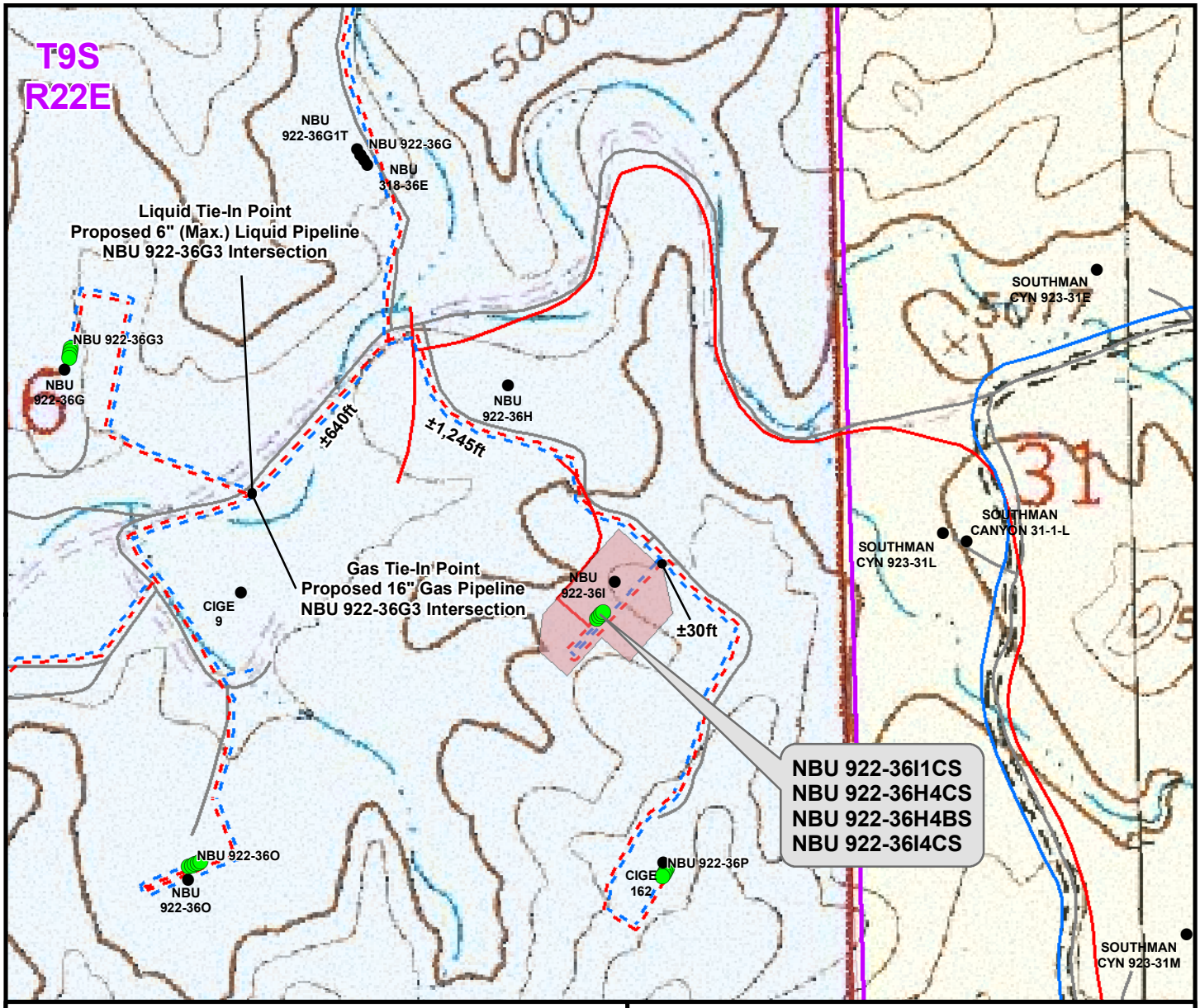
TOPO D
NBU 922-36I1CS, NBU 922-36H4CS, NBU 922-36H4BS & NBU 922-36I4CS
LOCATED IN SECTION 36, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

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: TL	Date: 3 Dec 2010	13 of 16
Revised:	Date:	

RECEIVED: Jul. 26, 2011



Proposed Liquid Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±460ft
Proposed 6" (Max.) (Edge of Pad to 36P Intersection)	±30ft
Proposed 6" (Max.) (36P Intersection to 36B Intersection)	±1,245ft
Proposed 6" (Max.) (36B Intersection to 36G3 Intersection)	±640ft
TOTAL PROPOSED LIQUID PIPELINE =	±2,375ft

Proposed Gas Pipeline	Length
Proposed 6" (Meter House to Edge of Pad)	±460ft
Proposed 6" (Edge of Pad to 36P Intersection)	±30ft
Proposed 8" (36P Intersection to 36B Intersection)	±1,245ft
Proposed 16" (36B Intersection to 36G3 Intersection)	±640ft
TOTAL PROPOSED GAS PIPELINE =	±2,375ft

Legend

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

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

WELL PAD - NBU 922-36I

TOPO D2 (PAD & PIPELINE DETAIL)
NBU 922-36I1CS, NBU 922-36H4CS,
NBU 922-36H4BS & NBU 922-36I4CS
LOCATED IN SECTION 36, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

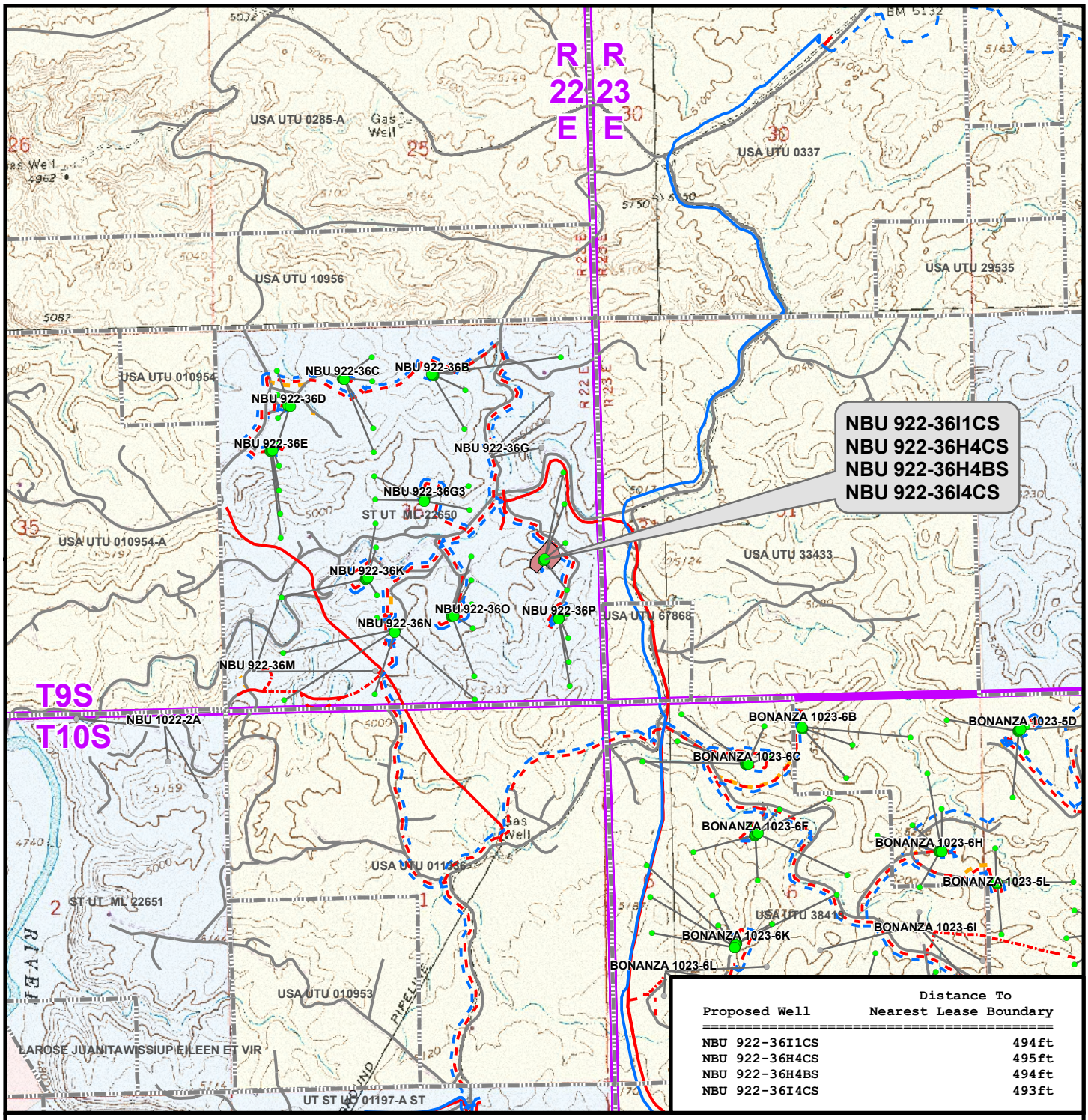
609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1" = 500ft	NAD83 USP Central	Sheet No: 14	
Drawn: TL	Date: 3 Dec 2010		14 of 16
Revised:	Date:		

RECEIVED: Jul. 26, 2011

API Well Number: 43047515870000



Proposed Well	Distance To Nearest Lease Boundary
NBU 922-36I1CS	494ft
NBU 922-36H4CS	495ft
NBU 922-36H4BS	494ft
NBU 922-36I4CS	493ft

Legend

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

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

WELL PAD - NBU 922-36I

TOPO E
NBU 922-36I1CS, NBU 922-36H4CS, NBU 922-36H4BS & NBU 922-36I4CS
LOCATED IN SECTION 36, T9S, R22E, 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: 3 Dec 2010		15 of 16
Revised:	Date:		

RECEIVED: Jul. 26, 2011

Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – NBU 922-36I
WELLS – NBU 922-36I1CS, NBU 922-36H4CS,
NBU 922-36H4BS & NBU 922-36I4CS
Section 36, T9S, R22E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 14.4 miles to the intersection of the Fidlar Road (County B Road 3410) which road intersection is approximately 400 feet northeast of the Mountain Fuel Bridge at the White River. Exit left and proceed in a southeasterly direction along the Fidlar Road approximately 4.4 miles to the intersection of the Seven Sisters Road (County B Road 3420). Exit right and proceed in a southerly, then southeasterly direction along the Seven Sisters Road approximately 2.4 miles to a service road to the southwest. Exit right and proceed in a southwesterly then northerly then southwesterly direction along the service road approximately 0.6 miles to a second service road to the southeast. Exit left and proceed in a southeasterly direction along the second service road approximately 0.2 miles to an access road to the southwest. Exit right and proceed along the access road in a southwesterly direction approximately 30 feet to the proposed well pad.

Total distance from Vernal, Utah to the proposed well location is approximately 45.5 miles in a southerly direction.

RECEIVED: Jul. 26, 2011

API Well Number: 43047515870000

Scientific Drilling
Rocky Mountain Operations

Project: Uintah County, UT UTM12
Site: NBU 922-36I PAD
Well: NBU 922-36H4CS
Wellbore: OH
Design: PLAN #1 2-10-11 RHS

Anadarko Petroleum Corporation

WELL DETAILS: NBU 922-36H4CS

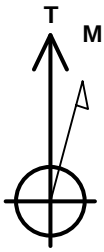
GL 5028' & KB 4'
@ 5032.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14526810.19	2093894.17	39° 59' 26.858 N	109° 22' 51.708 W

DESIGN TARGET DETAILS

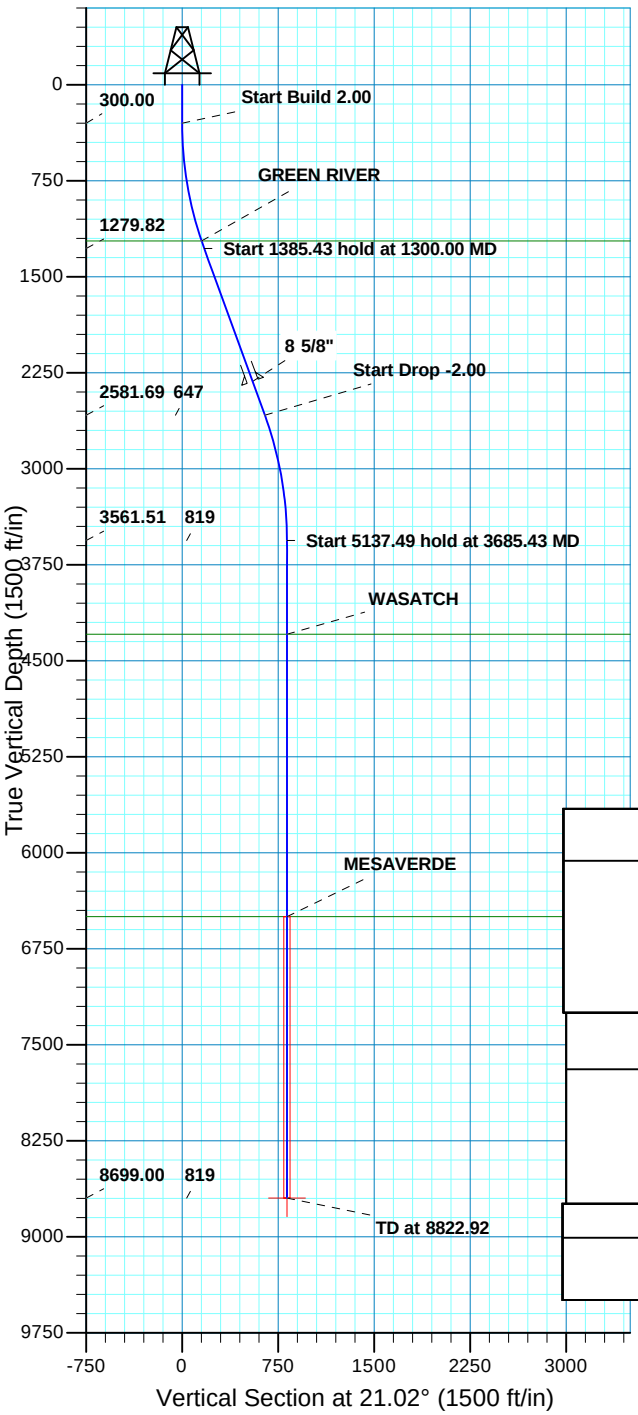
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8699.00	764.86	293.88	14527580.26	2094174.11	39° 59' 34.418 N	109° 22' 47.932 W	Circle (Radius: 25.00)

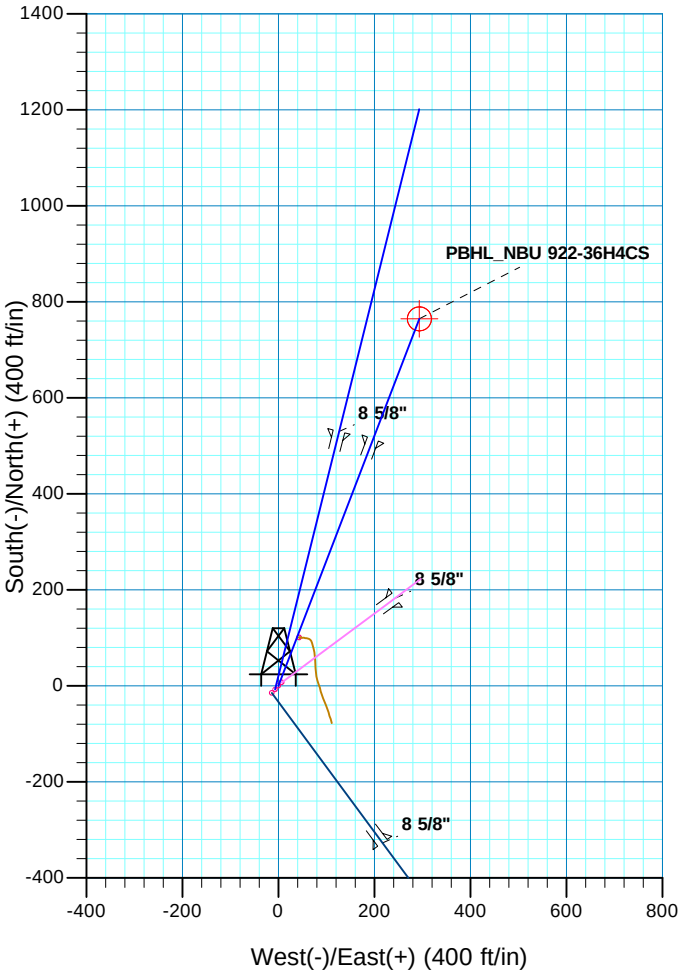
- plan hits target center



Azimuths to True North
Magnetic North: 11.07°

Magnetic Field
Strength: 52374.2snT
Dip Angle: 65.89°
Date: 02/10/2011
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	
1300.00	20.00	21.02	1279.82	161.27	61.97	2.00	21.02	172.77	
2685.43	20.00	21.02	2581.69	603.59	231.92	0.00	0.00	646.61	
3685.43	0.00	0.00	3561.51	764.86	293.88	2.00	180.00	819.38	
8822.92	0.00	0.00	8699.00	764.86	293.88	0.00	0.00	819.38	PBHL_NBU 922-36H4CS

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: SECTION 36 T9S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1221.00	1237.65	GREEN RIVER
4293.00	4416.92	WASATCH
6500.00	6623.92	MESAVERDE

CASING DETAILS

TVD	MD	Name	Size
2318.00	2404.81	8 5/8"	8.625

RECEIVED: Jul. 26, 2011

Plan: PLAN #1 2-10-11 RHS (NBU 922-36H4CS/OH)

Created By: RobertScott Date: 9:26, February 10 2011

Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12
NBU 922-36I PAD
NBU 922-36H4CS

OH

Plan: PLAN #1 2-10-11 RHS

Standard Planning Report

10 February, 2011

Anadarko
Petroleum Corporation

RECEIVED: Jul. 26, 2011

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-36H4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5028' & KB 4' @ 5032.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5028' & KB 4' @ 5032.00ft (ASSUMED)
Site:	NBU 922-36I PAD	**North Reference:**	True
Well:	NBU 922-36H4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-10-11 RHS		

Project Uintah County, UT UTM12

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

Site NBU 922-36I PAD, SECTION 36 T9S R22E

Site Position:		**Northing:**	14,526,795.38 usft	**Latitude:**	39° 59' 26.714 N
From:	Lat/Long	**Easting:**	2,093,880.99 usft	**Longitude:**	109° 22' 51.881 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	1.04 °

Well NBU 922-36H4CS, 2014 FSL 792 FEL

Well Position	**+N/-S**	14.57 ft	**Northing:**	14,526,810.19 usft	**Latitude:**	39° 59' 26.858 N
	+E/-W	13.45 ft	**Easting:**	2,093,894.17 usft	**Longitude:**	109° 22' 51.708 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**		**Ground Level:**	5,028.00 ft

Wellbore OH

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	02/10/2011	11.07	65.89	52,374

Design PLAN #1 2-10-11 RHS

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	21.02

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	20.00	21.02	1,279.82	161.27	61.97	2.00	2.00	0.00	21.02	
2,685.43	20.00	21.02	2,581.69	603.59	231.92	0.00	0.00	0.00	0.00	
3,685.43	0.00	0.00	3,561.51	764.86	293.88	2.00	-2.00	0.00	180.00	
8,822.92	0.00	0.00	8,699.00	764.86	293.88	0.00	0.00	0.00	0.00	PBHL_NBU 922-36H4

RECEIVED: Jul. 26, 2011

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-36H4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5028' & KB 4' @ 5032.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5028' & KB 4' @ 5032.00ft (ASSUMED)
Site:	NBU 922-36I PAD	**North Reference:**	True
Well:	NBU 922-36H4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-10-11 RHS		

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	21.02	399.98	1.63	0.63	1.75	2.00	2.00	0.00
500.00	4.00	21.02	499.84	6.51	2.50	6.98	2.00	2.00	0.00
600.00	6.00	21.02	599.45	14.65	5.63	15.69	2.00	2.00	0.00
700.00	8.00	21.02	698.70	26.02	10.00	27.88	2.00	2.00	0.00
800.00	10.00	21.02	797.47	40.63	15.61	43.52	2.00	2.00	0.00
900.00	12.00	21.02	895.62	58.44	22.45	62.60	2.00	2.00	0.00
1,000.00	14.00	21.02	993.06	79.43	30.52	85.10	2.00	2.00	0.00
1,100.00	16.00	21.02	1,089.64	103.59	39.80	110.98	2.00	2.00	0.00
1,200.00	18.00	21.02	1,185.27	130.88	50.29	140.21	2.00	2.00	0.00
1,237.65	18.75	21.02	1,221.00	141.96	54.55	152.08	2.00	2.00	0.00
GREEN RIVER									
1,300.00	20.00	21.02	1,279.82	161.27	61.97	172.77	2.00	2.00	0.00
Start 1385.43 hold at 1300.00 MD									
1,400.00	20.00	21.02	1,373.78	193.20	74.23	206.97	0.00	0.00	0.00
1,500.00	20.00	21.02	1,467.75	225.13	86.50	241.17	0.00	0.00	0.00
1,600.00	20.00	21.02	1,561.72	257.05	98.77	275.37	0.00	0.00	0.00
1,700.00	20.00	21.02	1,655.69	288.98	111.03	309.58	0.00	0.00	0.00
1,800.00	20.00	21.02	1,749.66	320.91	123.30	343.78	0.00	0.00	0.00
1,900.00	20.00	21.02	1,843.63	352.83	135.57	377.98	0.00	0.00	0.00
2,000.00	20.00	21.02	1,937.60	384.76	147.83	412.18	0.00	0.00	0.00
2,100.00	20.00	21.02	2,031.57	416.68	160.10	446.38	0.00	0.00	0.00
2,200.00	20.00	21.02	2,125.54	448.61	172.37	480.59	0.00	0.00	0.00
2,300.00	20.00	21.02	2,219.51	480.54	184.64	514.79	0.00	0.00	0.00
2,400.00	20.00	21.02	2,313.48	512.46	196.90	548.99	0.00	0.00	0.00
2,404.81	20.00	21.02	2,318.00	514.00	197.49	550.64	0.00	0.00	0.00
8 5/8"									
2,500.00	20.00	21.02	2,407.45	544.39	209.17	583.19	0.00	0.00	0.00
2,600.00	20.00	21.02	2,501.42	576.32	221.44	617.39	0.00	0.00	0.00
2,685.43	20.00	21.02	2,581.69	603.59	231.92	646.61	0.00	0.00	0.00
Start Drop -2.00									
2,700.00	19.71	21.02	2,595.40	608.21	233.69	651.56	2.00	-2.00	0.00
2,800.00	17.71	21.02	2,690.11	638.15	245.20	683.64	2.00	-2.00	0.00
2,900.00	15.71	21.02	2,785.88	664.99	255.51	712.38	2.00	-2.00	0.00
3,000.00	13.71	21.02	2,882.60	688.69	264.61	737.77	2.00	-2.00	0.00
3,100.00	11.71	21.02	2,980.15	709.22	272.50	759.77	2.00	-2.00	0.00
3,200.00	9.71	21.02	3,078.40	726.56	279.17	778.35	2.00	-2.00	0.00
3,300.00	7.71	21.02	3,177.24	740.70	284.60	793.49	2.00	-2.00	0.00
3,400.00	5.71	21.02	3,276.55	751.60	288.79	805.17	2.00	-2.00	0.00
3,500.00	3.71	21.02	3,376.21	759.26	291.73	813.38	2.00	-2.00	0.00
3,600.00	1.71	21.02	3,476.09	763.67	293.43	818.11	2.00	-2.00	0.00
3,685.43	0.00	0.00	3,561.51	764.86	293.88	819.38	2.00	-2.00	0.00
Start 5137.49 hold at 3685.43 MD									
3,700.00	0.00	0.00	3,576.08	764.86	293.88	819.38	0.00	0.00	0.00
3,800.00	0.00	0.00	3,676.08	764.86	293.88	819.38	0.00	0.00	0.00
3,900.00	0.00	0.00	3,776.08	764.86	293.88	819.38	0.00	0.00	0.00
4,000.00	0.00	0.00	3,876.08	764.86	293.88	819.38	0.00	0.00	0.00

RECEIVED: Jul. 26, 2011

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-36H4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5028' & KB 4' @ 5032.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5028' & KB 4' @ 5032.00ft (ASSUMED)
Site:	NBU 922-36I PAD	**North Reference:**	True
Well:	NBU 922-36H4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-10-11 RHS		

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)
4,100.00	0.00	0.00	3,976.08	764.86	293.88	819.38	0.00	0.00	0.00
4,200.00	0.00	0.00	4,076.08	764.86	293.88	819.38	0.00	0.00	0.00
4,300.00	0.00	0.00	4,176.08	764.86	293.88	819.38	0.00	0.00	0.00
4,400.00	0.00	0.00	4,276.08	764.86	293.88	819.38	0.00	0.00	0.00
4,416.92	0.00	0.00	4,293.00	764.86	293.88	819.38	0.00	0.00	0.00
WASATCH									
4,500.00	0.00	0.00	4,376.08	764.86	293.88	819.38	0.00	0.00	0.00
4,600.00	0.00	0.00	4,476.08	764.86	293.88	819.38	0.00	0.00	0.00
4,700.00	0.00	0.00	4,576.08	764.86	293.88	819.38	0.00	0.00	0.00
4,800.00	0.00	0.00	4,676.08	764.86	293.88	819.38	0.00	0.00	0.00
4,900.00	0.00	0.00	4,776.08	764.86	293.88	819.38	0.00	0.00	0.00
5,000.00	0.00	0.00	4,876.08	764.86	293.88	819.38	0.00	0.00	0.00
5,100.00	0.00	0.00	4,976.08	764.86	293.88	819.38	0.00	0.00	0.00
5,200.00	0.00	0.00	5,076.08	764.86	293.88	819.38	0.00	0.00	0.00
5,300.00	0.00	0.00	5,176.08	764.86	293.88	819.38	0.00	0.00	0.00
5,400.00	0.00	0.00	5,276.08	764.86	293.88	819.38	0.00	0.00	0.00
5,500.00	0.00	0.00	5,376.08	764.86	293.88	819.38	0.00	0.00	0.00
5,600.00	0.00	0.00	5,476.08	764.86	293.88	819.38	0.00	0.00	0.00
5,700.00	0.00	0.00	5,576.08	764.86	293.88	819.38	0.00	0.00	0.00
5,800.00	0.00	0.00	5,676.08	764.86	293.88	819.38	0.00	0.00	0.00
5,900.00	0.00	0.00	5,776.08	764.86	293.88	819.38	0.00	0.00	0.00
6,000.00	0.00	0.00	5,876.08	764.86	293.88	819.38	0.00	0.00	0.00
6,100.00	0.00	0.00	5,976.08	764.86	293.88	819.38	0.00	0.00	0.00
6,200.00	0.00	0.00	6,076.08	764.86	293.88	819.38	0.00	0.00	0.00
6,300.00	0.00	0.00	6,176.08	764.86	293.88	819.38	0.00	0.00	0.00
6,400.00	0.00	0.00	6,276.08	764.86	293.88	819.38	0.00	0.00	0.00
6,500.00	0.00	0.00	6,376.08	764.86	293.88	819.38	0.00	0.00	0.00
6,600.00	0.00	0.00	6,476.08	764.86	293.88	819.38	0.00	0.00	0.00
6,623.92	0.00	0.00	6,500.00	764.86	293.88	819.38	0.00	0.00	0.00
MESAVERDE									
6,700.00	0.00	0.00	6,576.08	764.86	293.88	819.38	0.00	0.00	0.00
6,800.00	0.00	0.00	6,676.08	764.86	293.88	819.38	0.00	0.00	0.00
6,900.00	0.00	0.00	6,776.08	764.86	293.88	819.38	0.00	0.00	0.00
7,000.00	0.00	0.00	6,876.08	764.86	293.88	819.38	0.00	0.00	0.00
7,100.00	0.00	0.00	6,976.08	764.86	293.88	819.38	0.00	0.00	0.00
7,200.00	0.00	0.00	7,076.08	764.86	293.88	819.38	0.00	0.00	0.00
7,300.00	0.00	0.00	7,176.08	764.86	293.88	819.38	0.00	0.00	0.00
7,400.00	0.00	0.00	7,276.08	764.86	293.88	819.38	0.00	0.00	0.00
7,500.00	0.00	0.00	7,376.08	764.86	293.88	819.38	0.00	0.00	0.00
7,600.00	0.00	0.00	7,476.08	764.86	293.88	819.38	0.00	0.00	0.00
7,700.00	0.00	0.00	7,576.08	764.86	293.88	819.38	0.00	0.00	0.00
7,800.00	0.00	0.00	7,676.08	764.86	293.88	819.38	0.00	0.00	0.00
7,900.00	0.00	0.00	7,776.08	764.86	293.88	819.38	0.00	0.00	0.00
8,000.00	0.00	0.00	7,876.08	764.86	293.88	819.38	0.00	0.00	0.00
8,100.00	0.00	0.00	7,976.08	764.86	293.88	819.38	0.00	0.00	0.00
8,200.00	0.00	0.00	8,076.08	764.86	293.88	819.38	0.00	0.00	0.00
8,300.00	0.00	0.00	8,176.08	764.86	293.88	819.38	0.00	0.00	0.00
8,400.00	0.00	0.00	8,276.08	764.86	293.88	819.38	0.00	0.00	0.00
8,500.00	0.00	0.00	8,376.08	764.86	293.88	819.38	0.00	0.00	0.00
8,600.00	0.00	0.00	8,476.08	764.86	293.88	819.38	0.00	0.00	0.00
8,700.00	0.00	0.00	8,576.08	764.86	293.88	819.38	0.00	0.00	0.00
8,800.00	0.00	0.00	8,676.08	764.86	293.88	819.38	0.00	0.00	0.00

RECEIVED: Jul. 26, 2011

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-36H4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5028' & KB 4' @ 5032.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5028' & KB 4' @ 5032.00ft (ASSUMED)
Site:	NBU 922-36I PAD	**North Reference:**	True
Well:	NBU 922-36H4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-10-11 RHS		

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)
8,822.92	0.00	0.00	8,699.00	764.86	293.88	819.38	0.00	0.00	0.00
TD at 8822.92 - PBHL_NBU 922-36H4CS									

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
PBHL_NBU 922-36H4C - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,699.00	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,404.81	2,318.00	8 5/8"	8.625	11.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,237.65	1,221.00	GREEN RIVER			
4,416.92	4,293.00	WASATCH			
6,623.92	6,500.00	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
1,300.00	1,279.82	161.27	61.97	Start 1385.43 hold at 1300.00 MD
2,685.43	2,581.69	603.59	231.92	Start Drop -2.00
3,685.43	3,561.51	764.86	293.88	Start 5137.49 hold at 3685.43 MD
8,822.92	8,699.00	764.86	293.88	TD at 8822.92

RECEIVED: Jul. 26, 2011

Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12
NBU 922-36I PAD
NBU 922-36H4CS

OH

Plan: PLAN #1 2-10-11 RHS

Standard Planning Report - Geographic

10 February, 2011

Anadarko
Petroleum Corporation

RECEIVED: Jul. 26, 2011

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report - Geographic

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-36H4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5028' & KB 4' @ 5032.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5028' & KB 4' @ 5032.00ft (ASSUMED)
Site:	NBU 922-36I PAD	**North Reference:**	True
Well:	NBU 922-36H4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-10-11 RHS		

Project Uintah County, UT UTM12

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

Site NBU 922-36I PAD, SECTION 36 T9S R22E

Site Position:		**Northing:**	14,526,795.38 usft	**Latitude:**	39° 59' 26.714 N
From:	Lat/Long	**Easting:**	2,093,880.99 usft	**Longitude:**	109° 22' 51.881 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	1.04 °

Well NBU 922-36H4CS, 2014 FSL 792 FEL

Well Position	**+N/-S**	0.00 ft	**Northing:**	14,526,810.19 usft	**Latitude:**	39° 59' 26.858 N
	+E/-W	0.00 ft	**Easting:**	2,093,894.17 usft	**Longitude:**	109° 22' 51.708 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**		**Ground Level:**	5,028.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	02/10/2011	11.07	65.89	52,374

Design PLAN #1 2-10-11 RHS

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	21.02

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	20.00	21.02	1,279.82	161.27	61.97	2.00	2.00	0.00	21.02	
2,685.43	20.00	21.02	2,581.69	603.59	231.92	0.00	0.00	0.00	0.00	
3,685.43	0.00	0.00	3,561.51	764.86	293.88	2.00	-2.00	0.00	180.00	
8,822.92	0.00	0.00	8,699.00	764.86	293.88	0.00	0.00	0.00	0.00	PBHL_NBU 922-36H4

RECEIVED: Jul. 26, 2011

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report - Geographic

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-36H4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5028' & KB 4' @ 5032.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5028' & KB 4' @ 5032.00ft (ASSUMED)
Site:	NBU 922-36I PAD	**North Reference:**	True
Well:	NBU 922-36H4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-10-11 RHS		

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	14,526,810.19	2,093,894.17	39° 59' 26.858 N	109° 22' 51.708 W
100.00	0.00	0.00	100.00	0.00	0.00	14,526,810.19	2,093,894.17	39° 59' 26.858 N	109° 22' 51.708 W
200.00	0.00	0.00	200.00	0.00	0.00	14,526,810.19	2,093,894.17	39° 59' 26.858 N	109° 22' 51.708 W
300.00	0.00	0.00	300.00	0.00	0.00	14,526,810.19	2,093,894.17	39° 59' 26.858 N	109° 22' 51.708 W
Start Build 2.00									
400.00	2.00	21.02	399.98	1.63	0.63	14,526,811.84	2,093,894.76	39° 59' 26.875 N	109° 22' 51.700 W
500.00	4.00	21.02	499.84	6.51	2.50	14,526,816.75	2,093,896.55	39° 59' 26.923 N	109° 22' 51.676 W
600.00	6.00	21.02	599.45	14.65	5.63	14,526,824.94	2,093,899.53	39° 59' 27.003 N	109° 22' 51.636 W
700.00	8.00	21.02	698.70	26.02	10.00	14,526,836.40	2,093,903.69	39° 59' 27.116 N	109° 22' 51.580 W
800.00	10.00	21.02	797.47	40.63	15.61	14,526,851.10	2,093,909.04	39° 59' 27.260 N	109° 22' 51.507 W
900.00	12.00	21.02	895.62	58.44	22.45	14,526,869.03	2,093,915.56	39° 59' 27.436 N	109° 22' 51.419 W
1,000.00	14.00	21.02	993.06	79.43	30.52	14,526,890.17	2,093,923.24	39° 59' 27.644 N	109° 22' 51.316 W
1,100.00	16.00	21.02	1,089.64	103.59	39.80	14,526,914.49	2,093,932.08	39° 59' 27.882 N	109° 22' 51.197 W
1,200.00	18.00	21.02	1,185.27	130.88	50.29	14,526,941.97	2,093,942.07	39° 59' 28.152 N	109° 22' 51.062 W
1,237.65	18.75	21.02	1,221.00	141.96	54.55	14,526,953.13	2,093,946.13	39° 59' 28.262 N	109° 22' 51.007 W
GREEN RIVER									
1,300.00	20.00	21.02	1,279.82	161.27	61.97	14,526,972.57	2,093,953.19	39° 59' 28.452 N	109° 22' 50.912 W
Start 1385.43 hold at 1300.00 MD									
1,400.00	20.00	21.02	1,373.78	193.20	74.23	14,527,004.71	2,093,964.88	39° 59' 28.768 N	109° 22' 50.754 W
1,500.00	20.00	21.02	1,467.75	225.13	86.50	14,527,036.85	2,093,976.57	39° 59' 29.084 N	109° 22' 50.596 W
1,600.00	20.00	21.02	1,561.72	257.05	98.77	14,527,069.00	2,093,988.25	39° 59' 29.399 N	109° 22' 50.439 W
1,700.00	20.00	21.02	1,655.69	288.98	111.03	14,527,101.14	2,093,999.94	39° 59' 29.715 N	109° 22' 50.281 W
1,800.00	20.00	21.02	1,749.66	320.91	123.30	14,527,133.29	2,094,011.62	39° 59' 30.030 N	109° 22' 50.124 W
1,900.00	20.00	21.02	1,843.63	352.83	135.57	14,527,165.43	2,094,023.31	39° 59' 30.346 N	109° 22' 49.966 W
2,000.00	20.00	21.02	1,937.60	384.76	147.83	14,527,197.57	2,094,034.99	39° 59' 30.661 N	109° 22' 49.808 W
2,100.00	20.00	21.02	2,031.57	416.68	160.10	14,527,229.72	2,094,046.68	39° 59' 30.977 N	109° 22' 49.651 W
2,200.00	20.00	21.02	2,125.54	448.61	172.37	14,527,261.86	2,094,058.36	39° 59' 31.293 N	109° 22' 49.493 W
2,300.00	20.00	21.02	2,219.51	480.54	184.64	14,527,294.01	2,094,070.05	39° 59' 31.608 N	109° 22' 49.335 W
2,400.00	20.00	21.02	2,313.48	512.46	196.90	14,527,326.15	2,094,081.73	39° 59' 31.924 N	109° 22' 49.178 W
2,404.81	20.00	21.02	2,318.00	514.00	197.49	14,527,327.70	2,094,082.29	39° 59' 31.939 N	109° 22' 49.170 W
8 5/8"									
2,500.00	20.00	21.02	2,407.45	544.39	209.17	14,527,358.29	2,094,093.42	39° 59' 32.239 N	109° 22' 49.020 W
2,600.00	20.00	21.02	2,501.42	576.32	221.44	14,527,390.44	2,094,105.10	39° 59' 32.555 N	109° 22' 48.863 W
2,685.43	20.00	21.02	2,581.69	603.59	231.92	14,527,417.90	2,094,115.08	39° 59' 32.824 N	109° 22' 48.728 W
Start Drop -2.00									
2,700.00	19.71	21.02	2,595.40	608.21	233.69	14,527,422.55	2,094,116.77	39° 59' 32.870 N	109° 22' 48.705 W
2,800.00	17.71	21.02	2,690.11	638.15	245.20	14,527,452.69	2,094,127.73	39° 59' 33.166 N	109° 22' 48.557 W
2,900.00	15.71	21.02	2,785.88	664.99	255.51	14,527,479.71	2,094,137.55	39° 59' 33.431 N	109° 22' 48.425 W
3,000.00	13.71	21.02	2,882.60	688.69	264.61	14,527,503.57	2,094,146.23	39° 59' 33.665 N	109° 22' 48.308 W
3,100.00	11.71	21.02	2,980.15	709.22	272.50	14,527,524.25	2,094,153.74	39° 59' 33.868 N	109° 22' 48.206 W
3,200.00	9.71	21.02	3,078.40	726.56	279.17	14,527,541.71	2,094,160.09	39° 59' 34.040 N	109° 22' 48.121 W
3,300.00	7.71	21.02	3,177.24	740.70	284.60	14,527,555.94	2,094,165.27	39° 59' 34.180 N	109° 22' 48.051 W
3,400.00	5.71	21.02	3,276.55	751.60	288.79	14,527,566.92	2,094,169.26	39° 59' 34.287 N	109° 22' 47.997 W
3,500.00	3.71	21.02	3,376.21	759.26	291.73	14,527,574.63	2,094,172.06	39° 59' 34.363 N	109° 22' 47.959 W
3,600.00	1.71	21.02	3,476.09	763.67	293.43	14,527,579.07	2,094,173.67	39° 59' 34.407 N	109° 22' 47.937 W
3,685.43	0.00	0.00	3,561.51	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
Start 5137.49 hold at 3685.43 MD									
3,700.00	0.00	0.00	3,576.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
3,800.00	0.00	0.00	3,676.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
3,900.00	0.00	0.00	3,776.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
4,000.00	0.00	0.00	3,876.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
4,100.00	0.00	0.00	3,976.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W

RECEIVED: Jul. 26, 2011

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report - Geographic

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-36H4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5028' & KB 4' @ 5032.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5028' & KB 4' @ 5032.00ft (ASSUMED)
Site:	NBU 922-36I PAD	**North Reference:**	True
Well:	NBU 922-36H4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-10-11 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,200.00	0.00	0.00	4,076.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
4,300.00	0.00	0.00	4,176.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
4,400.00	0.00	0.00	4,276.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
4,416.92	0.00	0.00	4,293.00	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
WASATCH									
4,500.00	0.00	0.00	4,376.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
4,600.00	0.00	0.00	4,476.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
4,700.00	0.00	0.00	4,576.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
4,800.00	0.00	0.00	4,676.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
4,900.00	0.00	0.00	4,776.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
5,000.00	0.00	0.00	4,876.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
5,100.00	0.00	0.00	4,976.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
5,200.00	0.00	0.00	5,076.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
5,300.00	0.00	0.00	5,176.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
5,400.00	0.00	0.00	5,276.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
5,500.00	0.00	0.00	5,376.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
5,600.00	0.00	0.00	5,476.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
5,700.00	0.00	0.00	5,576.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
5,800.00	0.00	0.00	5,676.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
5,900.00	0.00	0.00	5,776.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
6,000.00	0.00	0.00	5,876.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
6,100.00	0.00	0.00	5,976.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
6,200.00	0.00	0.00	6,076.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
6,300.00	0.00	0.00	6,176.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
6,400.00	0.00	0.00	6,276.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
6,500.00	0.00	0.00	6,376.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
6,600.00	0.00	0.00	6,476.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
6,623.92	0.00	0.00	6,500.00	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
MESAVERDE									
6,700.00	0.00	0.00	6,576.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
6,800.00	0.00	0.00	6,676.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
6,900.00	0.00	0.00	6,776.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
7,000.00	0.00	0.00	6,876.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
7,100.00	0.00	0.00	6,976.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
7,200.00	0.00	0.00	7,076.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
7,300.00	0.00	0.00	7,176.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
7,400.00	0.00	0.00	7,276.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
7,500.00	0.00	0.00	7,376.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
7,600.00	0.00	0.00	7,476.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
7,700.00	0.00	0.00	7,576.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
7,800.00	0.00	0.00	7,676.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
7,900.00	0.00	0.00	7,776.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
8,000.00	0.00	0.00	7,876.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
8,100.00	0.00	0.00	7,976.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
8,200.00	0.00	0.00	8,076.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
8,300.00	0.00	0.00	8,176.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
8,400.00	0.00	0.00	8,276.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
8,500.00	0.00	0.00	8,376.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
8,600.00	0.00	0.00	8,476.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
8,700.00	0.00	0.00	8,576.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
8,800.00	0.00	0.00	8,676.08	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W

RECEIVED: Jul. 26, 2011

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report - Geographic

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-36H4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5028' & KB 4' @ 5032.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5028' & KB 4' @ 5032.00ft (ASSUMED)
Site:	NBU 922-36I PAD	**North Reference:**	True
Well:	NBU 922-36H4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-10-11 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,822.92	0.00	0.00	8,699.00	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W
TD at 8822.92 - PBHL_NBU 922-36H4CS									

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
PBHL_NBU 922-36H4C - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,699.00	764.86	293.88	14,527,580.27	2,094,174.11	39° 59' 34.418 N	109° 22' 47.932 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,404.81	2,318.00	8 5/8"	8.625	11.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,237.65	1,221.00	GREEN RIVER			
4,416.92	4,293.00	WASATCH			
6,623.92	6,500.00	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
1,300.00	1,279.82	161.27	61.97	Start 1385.43 hold at 1300.00 MD
2,685.43	2,581.69	603.59	231.92	Start Drop -2.00
3,685.43	3,561.51	764.86	293.88	Start 5137.49 hold at 3685.43 MD
8,822.92	8,699.00	764.86	293.88	TD at 8822.92

RECEIVED: Jul. 26, 2011

NBU 922-36H4BS
Surface: 2006' FSL 799' FEL (NE/4SE/4)
BHL: 2071' FNL 494' FEL (SE/4NE/4)

NBU 922-36H4CS
Surface: 2014' FSL 792' FEL (NE/4SE/4)
BHL: 2508' FNL 495' FEL (SE/4NE/4)

NBU 922-36I1CS
Surface: 2021' FSL 785' FEL (NE/4SE/4)
BHL: 2237' FSL 494' FEL (NE/4SE/4)

NBU 922-36I4CS
Surface: 1999' FSL 805' FEL (NE/4SE/4)
BHL: 1574' FSL 493' FEL (NE/4SE/4)

Pad: NBU 922-36I Pad
Section 36 T9S R22E
Mineral Lease: ML 22650

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. 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.

RECEIVED: Jul. 26, 2011

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.

If there are roads that 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.

During the onsite, turnouts, major cut and fills, culverts, bridges, gates, cattle guards, low water crossings, or modifications needed to existing infrastructure/facilities were determined, 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 922-36I. The NBU 922-36I well location is a vertical producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of May 5, 2011.

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

Production facilities will be installed on the disturbed portion of the 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) above ground 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:

RECEIVED: Jul. 26, 2011

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 ±2,375' and the individual segments are broken up as follows:

- ±460' (0.09 miles) –New 6" buried gas pipeline from the meter to the edge of the pad. Please refer to Topo D2.
- ±30' (0.01 miles) –New 6" buried gas pipeline from the edge of pad to the proposed 8" buried gas pipeline tie-in at the 36P intersection. Please refer to Topo D.
- ±1,245' (0.25 miles) –New 8" buried gas pipeline from the proposed 36P intersection to the proposed 16" buried gas pipeline at the 36B intersection. Please refer to Topo D.
- ±640' (0.12 miles) –New 16" buried gas pipeline from the proposed 36B intersection to the proposed 36G3 intersection. Please refer to Topo D.

The total liquid gathering pipeline distance from the separator to the tie in point is ±2,375'and the individual segments are broken up as follows:

- ±460' (0.09 miles) –New 6" buried liquid pipeline from the separator to the edge of the pad. Please refer to Topo D.
- ±30' (0.01 miles) –New 6" buried liquid pipeline from the edge of pad to the proposed 6" buried liquid pipeline tie-in at the 36P intersection. Please refer to Topo D.
- ±1,245' (0.25 miles) –New 6" buried liquid pipeline from the proposed 36P intersection to the proposed 6" buried liquid pipeline tie-in at the 36B intersection. Please refer to Topo D.
- ±640' (0.12 miles) –New 6" buried liquid pipeline from the proposed 36B intersection to the proposed 6" buried liquid pipeline tie-in at the 36G3 intersection. Please refer to Topo D.

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. KMG 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, KMG 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

RECEIVED: Jul. 26, 2011

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 and ownership, as well as 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. Location and Type of Water Supply:

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:

RECEIVED: Jul. 26, 2011

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

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

RECEIVED: Jul. 26, 2011

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, including accidental release of fluids, or release in excess of reportable quantities, will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule. Where State wells are participatory to a Federal agreement, according to NTL-3A, the appropriate Federal agencies will be notified.

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.

RECEIVED: Jul. 26, 2011

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, 1927 (NAD27) 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

RECEIVED: Jul. 26, 2011

API Well Number: 43047515870000

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

RECEIVED: Jul. 26, 2011

API Well Number: 43047515870000

J. **Surface/Mineral Ownership:**
SITLA
675 East 500 South, Suite 500
Salt Lake City, UT 84102

K. **Other Information:**

None

RECEIVED: Jul. 26, 2011

API Well Number: 43047515870000

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

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

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

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

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

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

Bond coverage 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.

Gina T. Becker

May 12, 2011
Date

RECEIVED: Jul. 26, 2011

JOE JOHNSON
LANDMAN

KERR-MCGEE ONSHORE OIL & GAS, L.P.
1099 18TH STREET, SUITE 1800
DENVER, CO 80202
720-929-6708 • FAX 720-929-7708
E-MAIL: JOE.JOHNSON@ANADARKO.COM

April 13, 2011

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

Re: Directional Drilling R649-3-11
NBU 922-36H4CS
T9S-R22E
Section 36: NESE/SENE
Surface: 2014' FSL, 792' FEL
Bottom Hole: 2508' FNL, 495' FEL
Uintah County, Utah

Dear Ms. Mason:

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

- Kerr-McGee's NBU 922-36H4CS 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.

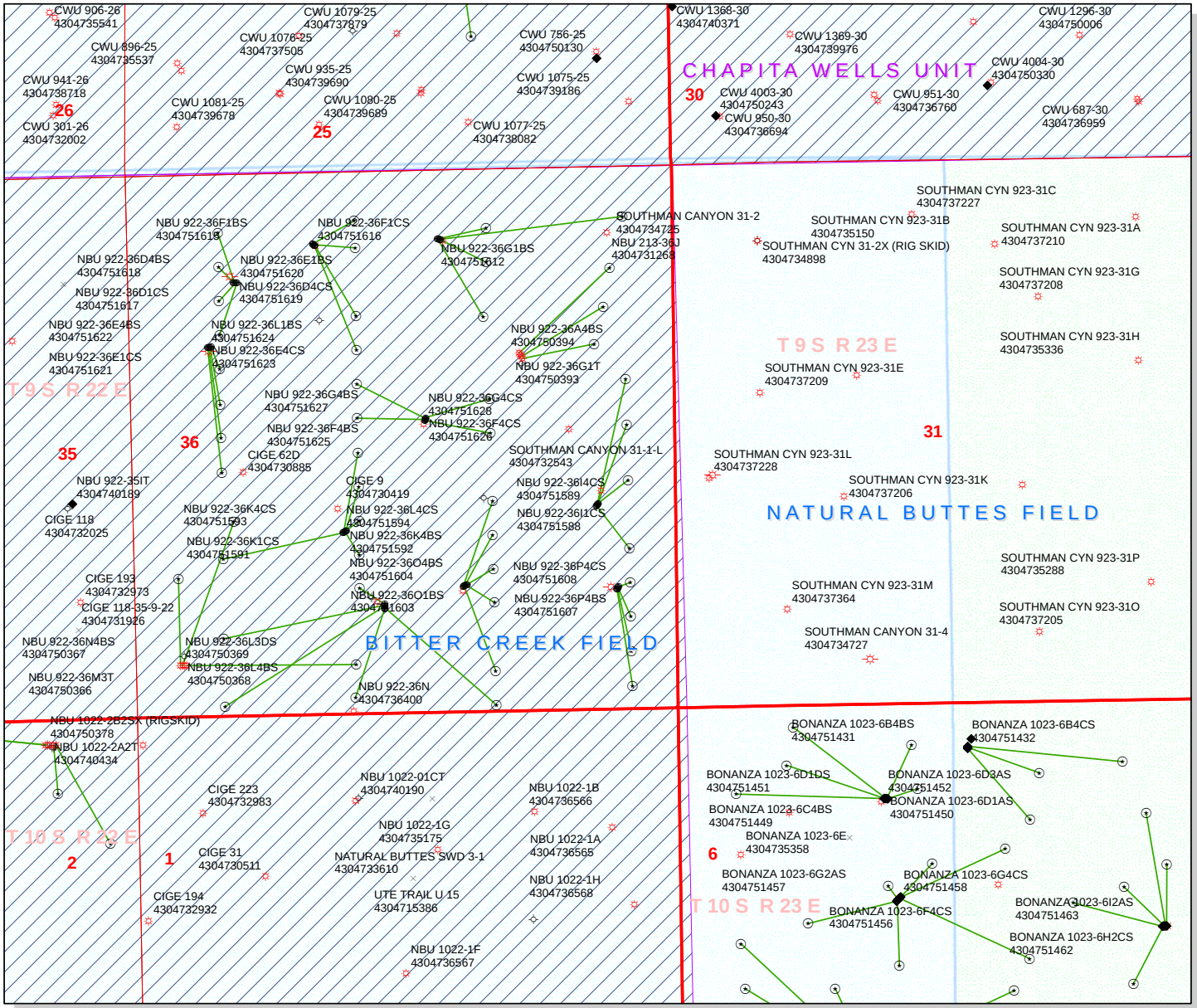
Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Joseph D. Johnson
Landman

RECEIVED: Jul. 26, 2011

API Well Number: 43047515870000



API Number: 4304751587

Well Name: NBU 922-36H4CS

Township T0.9 . Range R2.2 . Section 36

Meridian: SLBM

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

Map Prepared:
Map Produced by Diana Mason

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

Fields
STATUS
- Unknown
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- STORAGE
- TERMINATED
- Sections
- Township

Wells Query
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

1,250 625 0 1,250 Feet

1:12,000

RECEIVED: Jul. 26, 2011

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

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

IN REPLY REFER TO:
3160
(UT-922)

May 20, 2011

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2011 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 2011 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
NBU 922-36I PAD		
43-047-51586	NBU 922-36H4BS	Sec 36 T09S R22E 2006 FSL 0799 FEL
		BHL Sec 36 T09S R22E 2071 FNL 0494 FEL
43-047-51587	NBU 922-36H4CS	Sec 36 T09S R22E 2014 FSL 0792 FEL
		BHL Sec 36 T09S R22E 2508 FNL 0495 FEL
43-047-51588	NBU 922-36I1CS	Sec 36 T09S R22E 2021 FSL 0785 FEL
		BHL Sec 36 T09S R22E 2237 FSL 0494 FEL
43-047-51589	NBU 922-36I4CS	Sec 36 T09S R22E 1999 FSL 0805 FEL
		BHL Sec 36 T09S R22E 1574 FSL 0493 FEL
NBU 922-36K PAD		
43-047-51590	NBU 922-36K1BS	Sec 36 T09S R22E 1798 FSL 1998 FWL
		BHL Sec 36 T09S R22E 2567 FSL 2148 FWL
43-047-51591	NBU 922-36K1CS	Sec 36 T09S R22E 1809 FSL 2015 FWL
		BHL Sec 36 T09S R22E 2236 FSL 2147 FWL
43-047-51592	NBU 922-36K4BS	Sec 36 T09S R22E 1815 FSL 2023 FWL
		BHL Sec 36 T09S R22E 1904 FSL 2147 FWL
43-047-51593	NBU 922-36K4CS	Sec 36 T09S R22E 1804 FSL 2006 FWL
		BHL Sec 36 T09S R22E 1573 FSL 2146 FWL
43-047-51594	NBU 922-36L4CS	Sec 36 T09S R22E 1793 FSL 1990 FWL
		BHL Sec 36 T09S R22E 1565 FSL 0821 FWL

RECEIVED: Jul. 26, 2011

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE

NBU 922-36N PAD

43-047-51595 NBU 922-36M1CS Sec 36 T09S R22E 1078 FSL 2379 FWL
BHL Sec 36 T09S R22E 0792 FSL 0816 FWL

43-047-51596 NBU 922-36M4CS Sec 36 T09S R22E 1068 FSL 2379 FWL
BHL Sec 36 T09S R22E 0132 FSL 0819 FWL

43-047-51597 NBU 922-36N1BS Sec 36 T09S R22E 1088 FSL 2379 FWL
BHL Sec 36 T09S R22E 1253 FSL 2140 FWL

43-047-51598 NBU 922-36N4CS Sec 36 T09S R22E 1048 FSL 2379 FWL
BHL Sec 36 T09S R22E 0190 FSL 2081 FWL

43-047-51599 NBU 922-36O4CS Sec 36 T09S R22E 1058 FSL 2379 FWL
BHL Sec 36 T09S R22E 0085 FSL 1814 FEL

NBU 922-36O PAD

43-047-51600 NBU 922-36J1CS Sec 36 T09S R22E 1247 FSL 2113 FEL
BHL Sec 36 T09S R22E 2071 FSL 1809 FEL

43-047-51601 NBU 922-36J4BS Sec 36 T09S R22E 1254 FSL 2094 FEL
BHL Sec 36 T09S R22E 1740 FSL 1816 FEL

43-047-51602 NBU 922-36J4CS Sec 36 T09S R22E 1261 FSL 2075 FEL
BHL Sec 36 T09S R22E 1409 FSL 1816 FEL

43-047-51603 NBU 922-36O1BS Sec 36 T09S R22E 1257 FSL 2085 FEL
BHL Sec 36 T09S R22E 1078 FSL 1815 FEL

43-047-51604 NBU 922-36O4BS Sec 36 T09S R22E 1250 FSL 2103 FEL
BHL Sec 36 T09S R22E 0415 FSL 1814 FEL

NBU 922-36P PAD

43-047-51605 NBU 922-36P1BS Sec 36 T09S R22E 1207 FSL 0606 FEL
BHL Sec 36 T09S R22E 1243 FSL 0493 FEL

43-047-51606 NBU 922-36P1CS Sec 36 T09S R22E 1198 FSL 0611 FEL
BHL Sec 36 T09S R22E 0911 FSL 0493 FEL

43-047-51607 NBU 922-36P4BS Sec 36 T09S R22E 1189 FSL 0616 FEL
BHL Sec 36 T09S R22E 0580 FSL 0493 FEL

43-047-51608 NBU 922-36P4CS Sec 36 T09S R22E 1181 FSL 0621 FEL
BHL Sec 36 T09S R22E 0243 FSL 0492 FEL

NBU 922-36B PAD

43-047-51609 NBU 922-36A1CS Sec 36 T09S R22E 0678 FNL 2273 FEL
BHL Sec 36 T09S R22E 0485 FNL 0494 FEL

43-047-51610 NBU 922-36B1CS Sec 36 T09S R22E 0674 FNL 2282 FEL
BHL Sec 36 T09S R22E 0579 FNL 1821 FEL

43-047-51611 NBU 922-36B4BS Sec 36 T09S R22E 0682 FNL 2264 FEL
BHL Sec 36 T09S R22E 0905 FNL 1828 FEL

RECEIVED: Jul. 26, 2011

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE

43-047-51612 NBU 922-36G1BS Sec 36 T09S R22E 0671 FNL 2291 FEL
BHL Sec 36 T09S R22E 1439 FNL 1861 FEL

NBU 922-36C PAD

43-047-51613 NBU 922-36C1CS Sec 36 T09S R22E 0700 FNL 1741 FWL
BHL Sec 36 T09S R22E 0485 FNL 2152 FWL

43-047-51614 NBU 922-36C4BS Sec 36 T09S R22E 0706 FNL 1749 FWL
BHL Sec 36 T09S R22E 0746 FNL 2153 FWL

43-047-51615 NBU 922-36F1BS Sec 36 T09S R22E 0718 FNL 1765 FWL
BHL Sec 36 T09S R22E 1407 FNL 2151 FWL

43-047-51616 NBU 922-36F1CS Sec 36 T09S R22E 0712 FNL 1757 FWL
BHL Sec 36 T09S R22E 1738 FNL 2150 FWL

NBU 922-36D PAD

43-047-51617 NBU 922-36D1CS Sec 36 T09S R22E 1062 FNL 0981 FWL
BHL Sec 36 T09S R22E 0579 FNL 0825 FWL

43-047-51618 NBU 922-36D4BS Sec 36 T09S R22E 1060 FNL 0971 FWL
BHL Sec 36 T09S R22E 0910 FNL 0825 FWL

43-047-51619 NBU 922-36D4CS Sec 36 T09S R22E 1064 FNL 0990 FWL
BHL Sec 36 T09S R22E 1241 FNL 0825 FWL

43-047-51620 NBU 922-36E1BS Sec 36 T09S R22E 1067 FNL 1000 FWL
BHL Sec 36 T09S R22E 1572 FNL 0825 FWL

NBU 922-36E PAD

43-047-51621 NBU 922-36E1CS Sec 36 T09S R22E 1682 FNL 0739 FWL
BHL Sec 36 T09S R22E 1903 FNL 0824 FWL

43-047-51622 NBU 922-36E4BS Sec 36 T09S R22E 1684 FNL 0729 FWL
BHL Sec 36 T09S R22E 2245 FNL 0818 FWL

43-047-51623 NBU 922-36E4CS Sec 36 T09S R22E 1686 FNL 0719 FWL
BHL Sec 36 T09S R22E 2565 FNL 0824 FWL

43-047-51624 NBU 922-36L1BS Sec 36 T09S R22E 1688 FNL 0709 FWL
BHL Sec 36 T09S R22E 2401 FSL 0824 FWL

NBU 922-36G3 PAD

43-047-51625 NBU 922-36F4BS Sec 36 T09S R22E 2414 FNL 2443 FEL
BHL Sec 36 T09S R22E 2070 FNL 2149 FWL

43-047-51626 NBU 922-36F4CS Sec 36 T09S R22E 2424 FNL 2445 FEL
BHL Sec 36 T09S R22E 2401 FNL 2149 FWL

43-047-51627 NBU 922-36G4BS Sec 36 T09S R22E 2405 FNL 2441 FEL
BHL Sec 36 T09S R22E 2235 FNL 1818 FEL

43-047-51628 NBU 922-36G4CS Sec 36 T09S R22E 2434 FNL 2447 FEL
BHL Sec 36 T09S R22E 2566 FNL 1818 FEL

RECEIVED: Jul. 26, 2011

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: 2011.05.23 07:16:05 -06'00'

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

MCoulthard:mc:5-20-11

RECEIVED: Jul. 26, 2011

From: Jim Davis
To: Bonner, Ed; Garrison, LaVonne; Hill, Brad; Mason, Diana
CC: Gina Becker; Lytle, Andy
Date: 6/8/2011 3:00 PM
Subject: Kerr McGee APD approvals.

The following APDs have been approved by SITLA including arch and paleo clearance.

4304751586	NBU 922-36H4BS
4304751587	NBU 922-36H4CS
4304751588	NBU 922-36I1CS
4304751589	NBU 922-36I4CS
4304751590	NBU 922-36K1BS
4304751591	NBU 922-36K1CS
4304751592	NBU 922-36K4BS
4304751593	NBU 922-36K4CS
4304751594	NBU 922-36L4CS
4304751595	NBU 922-36M1CS
4304751596	NBU 922-36M4CS
4304751597	NBU 922-36N1BS
4304751598	NBU 922-36N4CS
4304751599	NBU 922-36O4CS
4304751600	NBU 922-36J1CS
4304751601	NBU 922-36J4BS
4304751602	NBU 922-36J4CS
4304751603	NBU 922-36O1BS
4304751604	NBU 922-36O4BS
4304751605	NBU 922-36P1BS
4304751606	NBU 922-36P1CS
4304751607	NBU 922-36P4BS
4304751608	NBU 922-36P4CS
4304751613	NBU 922-36C1CS
4304751614	NBU 922-36C4BS
4304751615	NBU 922-36F1BS
4304751616	NBU 922-36F1CS
4304751617	NBU 922-36D1CS
4304751618	NBU 922-36D4BS
4304751619	NBU 922-36D4CS
4304751620	NBU 922-36E1BS
4304751621	NBU 922-36E1CS
4304751622	NBU 922-36E4BS
4304751623	NBU 922-36E4CS
4304751624	NBU 922-36L1BS
4304751625	NBU 922-36F4BS
4304751626	NBU 922-36F4CS
4304751627	NBU 922-36G4BS
4304751628	NBU 922-36G4CS

Full paleo monitoring is a required condition for the approval of these APDs- as recommended in the paleo report.

4304751609	NBU 922-36A1CS
4304751610	NBU 922-36B1CS
4304751611	NBU 922-36B4BS
4304751612	NBU 922-36G1BS

Thanks.
-Jim

RECEIVED: Jul. 26, 2011

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

RECEIVED: Jul. 26, 2011

API Well Number: 43047515870000

BOPE REVIEW KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 922-36H4CS 43047515870000

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 922-36H4CS			
String	Surf	Prod		
Casing Size(")	8.625	4.500		
Setting Depth (TVD)	2238	8699		
Previous Shoe Setting Depth (TVD)	40	2238		
Max Mud Weight (ppg)	8.4	12.5		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	7780		
Operators Max Anticipated Pressure (psi)	5567	12.3		

Calculations	**Surf String**	**8.625**	**"**	
Max BHP (psi)	.052*Setting Depth*MW=	978		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	709	NO	air drill
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	486	YES	OK
			***Can Full Expected Pressure Be Held At Previous Shoe?**	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	494	NO	Reasonable
Required Casing/BOPE Test Pressure=		2238	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=	5654		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4610	YES	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3740	YES	OK
			***Can Full Expected Pressure Be Held At Previous Shoe?**	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	4233	NO	Reasonable
Required Casing/BOPE Test Pressure=		5000	psi	
***Max Pressure Allowed @ Previous Casing Shoe=**		2238	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	

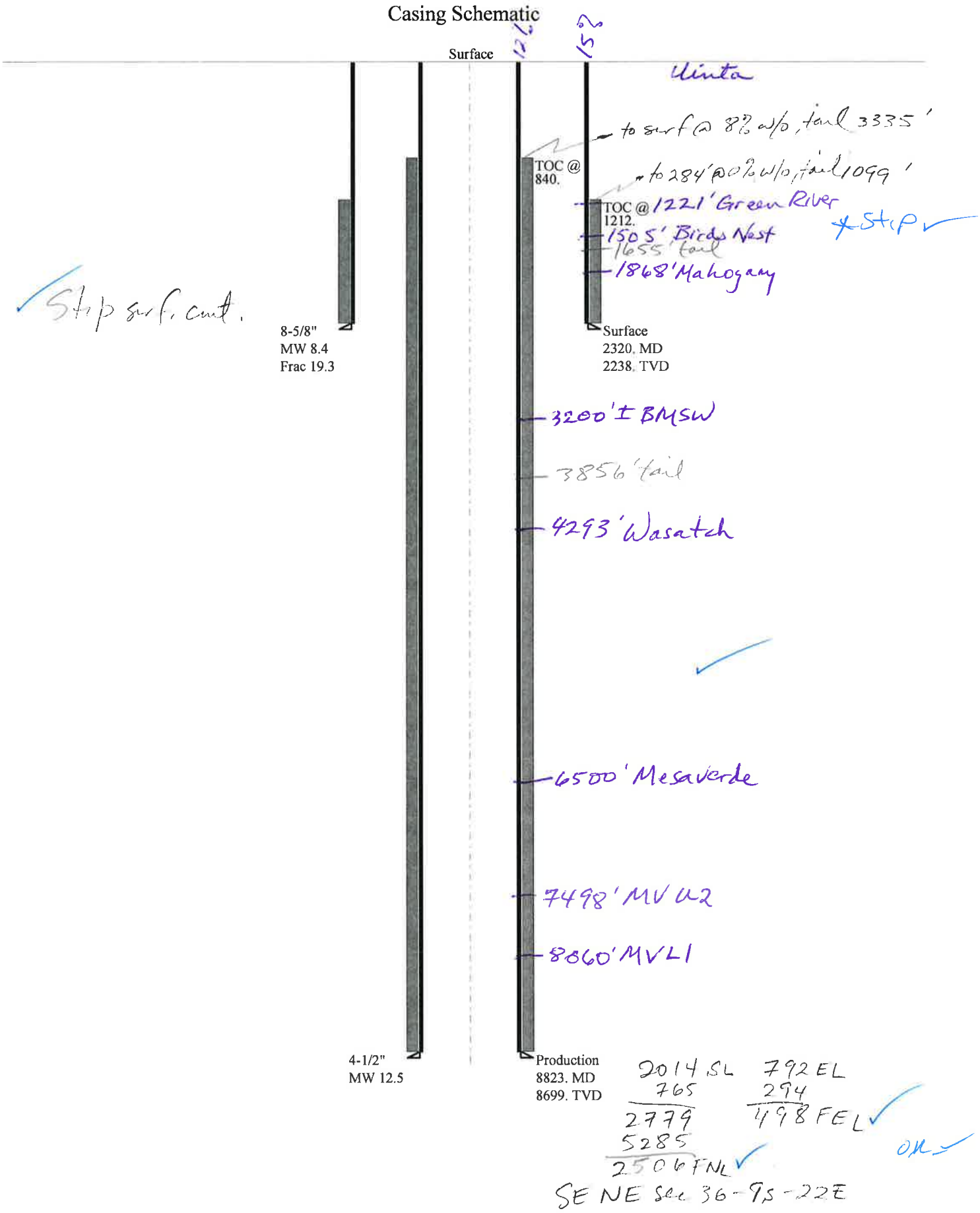
RECEIVED: Jul. 26, 2011

***Max Pressure Allowed @ Previous Casing Shoe=**		psi *Assumes 1psi/ft frac gradient

RECEIVED: Jul. 26, 2011

43047515870000 NBU 922-36H4CS

Casing Schematic



RECEIVED: Jul. 26, 2011

Well name:	**43047515870000 NBU 922-36H4CS**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Surface
Project ID:	43-047-51587
Location:	UINTAH COUNTY

Design parameters:

Collapse

Mud weight: 8.400 ppg

Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 2,042 psi

Internal gradient: 0.120 psi/ft

Calculated BHP 2,310 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: 2,025 ft

Environment:

H2S considered?	No
Surface temperature:	74 °F
Bottom hole temperature:	105 °F
Temperature gradient:	1.40 °F/100ft
Minimum section length:	100 ft
Cement top:	1,212 ft

Directional Info - Build & Drop

Kick-off point	300 ft
Departure at shoe:	522 ft
Maximum dogleg:	2 °/100ft
Inclination at shoe:	20 °

Re subsequent strings:

Next setting depth:	8,823 ft
Next mud weight:	12.500 ppg
Next setting BHP:	5,729 psi
Fracture mud wt:	19.250 ppg
Fracture depth:	2,320 ft
Injection pressure:	2,320 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	2320	8.625	28.00	I-55	LT&C	2238	2320	7.892	91872

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	977	1880	1.925	2310	3390	1.47	62.7	348	5.55 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940

Date: July 18,2011
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2238 ft, a mud weight of 8.4 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.

RECEIVED: Jul. 26, 2011

Well name:	**43047515870000 NBU 922-36H4CS**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Production
Project ID:	43-047-51587
Location:	UINTAH COUNTY

Design parameters:

Collapse

Mud weight: 12.500 ppg

Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 3,735 psi

Internal gradient: 0.220 psi/ft

Calculated BHP 5,649 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: 7,198 ft

Environment:

H2S considered?	No
Surface temperature:	74 °F
Bottom hole temperature:	196 °F
Temperature gradient:	1.40 °F/100ft
Minimum section length:	100 ft
Cement top:	840 ft

Directional Info - Build & Drop

Kick-off point	300 ft
Departure at shoe:	819 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	8823	4.5	11.60	I-80	LT&C	8699	8823	3.875	116464

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	5649	6360	1.126	5649	7780	1.38	100.9	212	2.10 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940

Date: July 18,2011
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 8699 ft, a mud weight of 12.5 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.

RECEIVED: Jul. 26, 2011

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

Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.				
Well Name	NBU 922-36H4CS				
API Number	43047515870000	**APD No**	3804	**Field/Unit**	NATURAL BUTTES
Location: 1/4,1/4	NESE **Sec** 36 **Tw** 9.0S **Rng** 22.0E 2014 FSL 792 FEL				
GPS Coord (UTM)	638219 4427781	**Surface Owner**			

Participants

Floyd Bartlett (DOGM), Sheila Wopsock, Lovell Young, Gina Becker, Mark Koehn, Griz Oleen (Kerr McGee), Ben Williams (UDWR) and Mitch Batty, John Slaugh (Timberline Engineering and Land Surveying).

Regional/Local Setting & Topography

The general area is in the southeast portion of the Natural Buttes Unit, which contains the White River and rugged drainages that drain into the White River. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River varies from ¾ mile to 2 miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 42 air miles to the northwest. Access from Vernal is approximately 45.5 road miles following Utah State, Uintah County and oilfield development roads to the location.

Four additional gas wells will be added to and directionally drilled from the NBU 922-36I pad. They are the NBU 922-36I1CS, NBU 922-36H4CS, NBU 922-36H4BS and NBU 922-36I4CS. The pad contains the existing NBU 922-36I gas well. The existing pad will be significantly enlarged. The site is in moderately rough terrain. The reserve pit is tapered on the northeast and the pad tapered on the southwest to avoid the steep terrain. Any drainage from the south will be caught with spoils during drilling. When closing the pit, this drainage should be reconstructed across the pit and pad area along the contour rejoining the drainage on the west. A deep draw to the north has been avoided. Where the pad is cut into the steep side slopes, leave the cut slope at about ¼:1 to reduce the amount of cutting and disturbance. Maximum cut is 23.9 feet at Corner 5 and maximum fill is 6.7 feet at Corner 12. The White River is approximately 1 3/4 miles to the west. The existing pad shows no stability problems and the site has no significant concerns for constructing an enlarged pad and drilling and operating the planned wells. It is the only suitable location 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** 302 **Length** 455	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

RECEIVED: Jul. 26, 2011

Flora / Fauna

Area beyond the existing pad is poorly vegetated with greasewood, cheatgrass, black sagebrush, broom snakeweed, globemallow, Sitanion hystrix , shadscale, rabbitbrush, loco weed, pepper weed, halogeton and annuals.

Sheep, deer, antelope, coyote, and other small mammals and birds.

Soil Type and Characteristics

Soils are a shallow rocky sandy loam.

Erosion Issues Y

The reserve pit is tapered on the northeast and the pad tapered on the southwest to avoid the steep terrain. Any drainage from the south will be caught with spoils during drilling.

Sedimentation Issues Y

The reserve pit is tapered on the northeast and the pad tapered on the southwest to avoid the steep terrain. Any drainage from the south will be caught with spoils during drilling.

Site Stability Issues N

Drainage Diverson Required? Y

The reserve pit is tapered on the northeast and the pad tapered on the southwest to avoid the steep terrain. Any drainage from the south will be caught with spoils during drilling.

Berm Required? N

Erosion Sedimentation Control Required? Y

Any drainage from the south will be caught with spoils during drilling. When closing the pit, this drainage should be reconstructed across the pit and pad area along the contour rejoining the drainage on the west.

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

Reserve Pit

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

Characteristics / Requirements

RECEIVED: Jul. 26, 2011

The reserve pit is planned mostly in an area of cut in the northwest side of the location. Dimensions are 100' x 216' x 12' deep with 2' of freeboard. The east end of the pit is tapered to avoid excessive cut in this area. Because the length of time the reserve pit will be used and the roughness of the terrain, Kerr McGee committed to line it with a 30-mil.liner and an appropriate thickness of felt sub-liner to cushion the rock.

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

Other Observations / Comments

Floyd Bartlett	5/24/2011
Evaluator	**Date / Time**

RECEIVED: Jul. 26, 2011

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
3804	43047515870000	SITLA	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		**Surface Owner-APD**		
Well Name	NBU 922-36H4CS		**Unit**	NATURAL BUTTES	
Field	NATURAL BUTTES		**Type of Work**	DRILL	
Location	NESE 36 9S 22E S 2014 FSL 792 FEL		GPS Coord (UTM)	638210E 4427785N	

Geologic Statement of Basis

Kerr McGee proposes to set 2,320' 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 3,200'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the proposed location . The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The production casing cement should be brought up above the base of the moderately saline ground water in order to isolate it from fresher waters up hole. The proposed casing and cement should adequately protect any usable ground water.

Brad Hill	6/21/2011
APD Evaluator	**Date / Time**

Surface Statement of Basis

The general area is in the southeast portion of the Natural Buttes Unit, which contains the White River and rugged drainages that drain into the White River. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River varies from ¾ mile to 2 miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 42 air miles to the northwest. Access from Vernal is approximately 45.5 road miles following Utah State, Uintah County and oilfield development roads to the location.

Four additional gas wells will be added to and directionally drilled from the NBU 922-36I pad. They are the NBU 922-36I1CS, NBU 922-36H4CS, NBU 922-36H4BS and NBU 922-36I4CS. The pad contains the existing NBU 922-36I gas well. The existing pad will be significantly enlarged. The site is in moderately rough terrain. The reserve pit is tapered on the northeast and the pad tapered on the southwest to avoid the steep terrain. Any drainage from the south will be caught with spoils during drilling. When closing the pit, this drainage should be reconstructed across the pit and pad area along the contour rejoining the drainage on the west. A deep draw to the north has been avoided. Where the pad is cut into the steep side slopes, leave the cut slope at about ¼:1 to reduce the amount of cutting and disturbance. Maximum cut is 23.9 feet at Corner 5 and maximum fill is 6.7 feet at Corner 12. The White River is approximately 1 3/4 miles to the west. The existing pad shows no stability problems and the site has no significant concerns for constructing an enlarged pad and drilling and operating the planned wells. It is the only suitable location in the immediate area.

Both the surface and minerals are owned by SITLA. Ed Bonner and Jim Davis of SITLA were invited to attend the pre-site evaluation. Neither attended. SITLA is to be contacted for reclamation standards including a seed mix to be used.

Ben Williams of the Utah Division of Wildlife Resources attended the pre-site. Mr. Williams stated no wildlife values would be significantly affected by drilling and operating the additional wells at this location.

RECEIVED: Jul. 26, 2011

Application for Permit to Drill
Statement of Basis

Floyd Bartlett	5/24/2011
Onsite Evaluator	**Date / Time**

Conditions of Approval / Application for Permit to Drill

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

RECEIVED: Jul. 26, 2011

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 5/14/2011 **API NO. ASSIGNED:** 43047515870000
WELL NAME: NBU 922-36H4CS
OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6086
CONTACT: Gina Becker

PROPOSED LOCATION: NESE 36 090S 220E **Permit Tech Review:** ✔

SURFACE: 2014 FSL 0792 FEL **Engineering Review:** ✔

BOTTOM: 2508 FNL 0495 FEL **Geology Review:** ✔

COUNTY: UINTAH
LATITUDE: 39.99083 **LONGITUDE:** -109.38115
UTM SURF EASTINGS: 638210.00 **NORTHINGS:** 4427785.00
FIELD NAME: NATURAL BUTTES
LEASE TYPE: 3 - State
LEASE NUMBER: ML-22650 **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

RECEIVED: Jul. 26, 2011

GARY R. HERBERT
Governor
GREGORY S. BELL
Lieutenant Governor

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

Permit To Drill
****

Well Name: NBU 922-36H4CS
API Well Number: 43047515870000
Lease Number: ML-22650
Surface Owner: STATE
Approval Date: 7/26/2011

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

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

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

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

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

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

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

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

Surface casing shall be cemented to the surface.

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

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

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

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

Approved By:

For John Rogers
Associate Director, Oil & Gas

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: ML-22650

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 922-36H4CS

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

9. API NUMBER: 43047515870000

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: 2014 FSL 0792 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESE Section: 36 Township: 09.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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

TYPE OF SUBMISSION

- ☐ NOTICE OF INTENT — Approximate date work will start:
- ☐ SUBSEQUENT REPORT — Date of Work Completion:
- ✓ SPUD REPORT — Date of Spud: 10/20/2011
- ☐ DRILLING REPORT — Report Date:

TYPE OF ACTION

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

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

MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL ON 10/20/2011 AT 1600 HRS.

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

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Sheila Wopsock	435 781-7024	Regulatory Analyst

SIGNATURE	DATE
N/A	10/25/2011

RECEIVED Oct. 25, 2011

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: ML-22650

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 922-36H4CS

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

9. API NUMBER: 43047515870000

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: 2014 FSL 0792 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESE Section: 36 Township: 09.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ 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
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 11/2/2011	☐ 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.

MIRU AIR RIG ON OCT. 31, 2011. DRILLED SURFACE HOLE TO 2428'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.

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

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jaime Scharnowske	720 929-6304	Regulartory Analyst

SIGNATURE	DATE
N/A	11/3/2011

RECEIVED Nov. 03, 2011

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

FORM 6

ENTITY ACTION FORM

Operator: KERR McGEE OIL & GAS ONSHORE LP

Operator Account Number: N 2995

Address: 1368 SOUTH 1200 EAST

city VERNAL

state UT zip 84078

Phone Number: (435) 781-7024

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751588	NBU 922-36I1CS		NESE	36	9S	22E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	2900	10/20/2011			10/31/11	

Comments: MIRU PETE MARTIN BUCKET RIG. WSMVD
SPUD WELL ON 10/20/2011 AT 0900 HRS. BHL= NESE

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751587	NBU 922-36H4CS		NESE	36	9S	22E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	2900	10/20/2011			10/31/11	

Comments: MIRU PETE MARTIN BUCKET RIG. WSMVD
SPUD WELL ON 10/20/2011 AT 1600 HRS. BHL= SENE

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751586	NBU 922-36H4BS		NESE	36	9S	22E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	2900	10/20/2011			10/31/11	

Comments: MIRU PETE MARTIN BUCKET RIG. WSMVD
SPUD WELL ON 10/20/2011 AT 1300 HRS. BHL= SENE

ACTION CODES:

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

SHEILA WOPSOCK
Name (Please Print)

Signature

REGULATORY ANALYST
Title

10/25/2011
Date

(5/2000)

RECEIVED
OCT 25 2011
DIV. OF OIL, GAS & MINING

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: ML-22650

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 922-36H4CS

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

9. API NUMBER: 43047515870000

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: 2014 FSL 0792 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESE Section: 36 Township: 09.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 12/15/2011	☐ 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.

The operator requests approval for changes in the drilling plan. Specifically, the Operator requests approval for a FIT waiver, closed loop drilling option, and a production casing change. All other aspects of the previously approved drilling plan will not change. These proposals do not deviate from previously submitted and approved plans. Please see attachments. Thank you.

Approved by the Utah Division of Oil, Gas and Mining

Date: 12/20/2011

By: Dark K Quist

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jaime Scharnowske	720 929-6304	Regulartory Analyst

SIGNATURE	DATE
N/A	12/15/2011

RECEIVED Dec. 15, 2011

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

NBU 922-36H4CS

Surface:	2014 FSL / 792 FEL	NESE
BHL:	2508 FNL / 495 FEL	SENE

Section 36 T9S R22E

Uintah County, Utah
Mineral Lease: ML-22650

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	1,221'	
Birds Nest	1,505'	Water
Mahogany	1,868'	Water
Wasatch	4,293'	Gas
Mesaverde	6,500'	Gas
MVU2	7,498'	Gas
MVL1	8,060'	Gas
TVD	8,699'	
TD	8,823'	

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

RECEIVED Dec. 15, 2011

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 8699' TVD, approximately equals 5,567 psi 0.64 psi/ft = actual bottomhole gradient

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

Maximum anticipated surface pressure equals approximately 3,641 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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

8. Anticipated Starting Dates:

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

9. Variances:

Please refer to the attached 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.

RECEIVED Dec. 15, 2011

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

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

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

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

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

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

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

RECEIVED Dec. 15, 2011

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

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

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

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

10. Other Information:

Please refer to the attached Drilling Program.

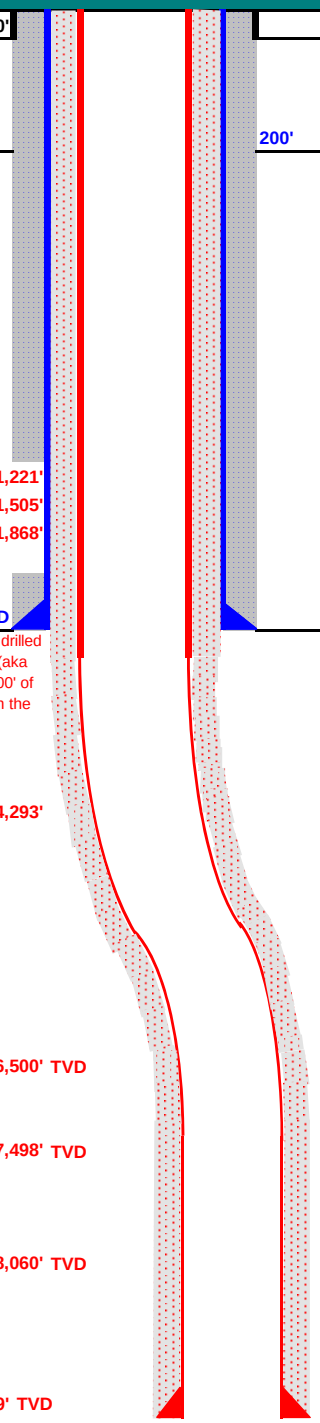
RECEIVED Dec. 15, 2011

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	December 15, 2011
WELL NAME	**NBU 922-36H4CS**	TD	8,699' TVD 8,823' MD
FIELD	Natural Buttes	COUNTY Uintah	STATE Utah
FINISHED ELEVATION	5,029'		
SURFACE LOCATION	NESE 2014 FSL 792 FEL Sec 36 T 9S R 22E		
	Latitude: 39.990794 Longitude: -109.381030 NAD 27		
BTM HOLE LOCATION	SENE 2508 FNL 495 FEL Sec 36 T 9S R 22E		
	Latitude: 39.992894 Longitude: -109.379981 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"	
			12-1/4	8-5/8", 28#, IJ-55, LTC	Air mist
		200'			
			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 @	**1,221'**			
	Top of Birds Nest @	**1,505'**			
	Mahogany @	**1,868'**			
	Preset f/ GL @	**2,320' TVD**			
	Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.				
	Wasatch @	**4,293'**			
Mud logging program TBD Cased hole logging program from TD - surf csg			7-7/8"	4-1/2" 11.6# I-80 Ultra DQX/LTC csg	Water / Fresh Water Mud 8.3-12.5 ppg
	Mverde @	**6,500' TVD**			
	MVU2 @	**7,498' TVD**			
	MVU1 @	**8,060' TVD**			
Max anticipated Mud required 12.5 ppg	**TD @**	**8,699' TVD** **8,823' MD**			



KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	LTC	DQX TENSION
CONDUCTOR	14"	0-40'									
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,320	28.00	IJ-55	LTC	2.33	1.73	6.12	N/A
								7,780	6,350	223,000	267,035
PRODUCTION	4-1/2"	0	to	5,000	11.60	I-80	DQX	1.11	1.12		3.23
	4-1/2"	5,000	to	8,823'	11.60	I-80	LTC	1.11	1.12	6.22	

Surface Casing:

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

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

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

Production casing:

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

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

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1			+ 0.25 pps flocele					
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
			+ 2% CaCl + 0.25 pps flocele					
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**					
Option 2	LEAD	1,820'	65/35 Poz + 6% Gel + 10 pps gilsonite	170	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	3,793'	Premium Lite II +0.25 pps	280	20%	12.00		3.38
			celloflake + 5 pps gilsonite + 10% gel					
			+ 0.5% extender					
	TAIL	5,030'	50/50 Poz/G + 10% salt + 2% gel	1,190	35%	14.30		1.31
			+ 0.1% R-3					

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

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

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk. 1 on first 3 joints and 1 every third from there up.

ADDITIONAL INFORMATION

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

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

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

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

DRILLING ENGINEER: _____ **DATE:** _____

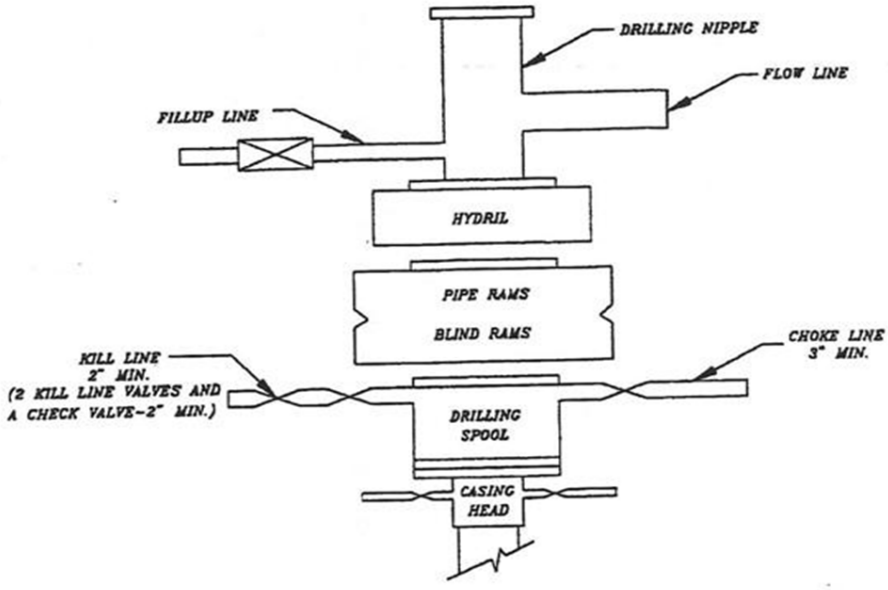
Nick Spence / Danny Showers / Chad Loesel

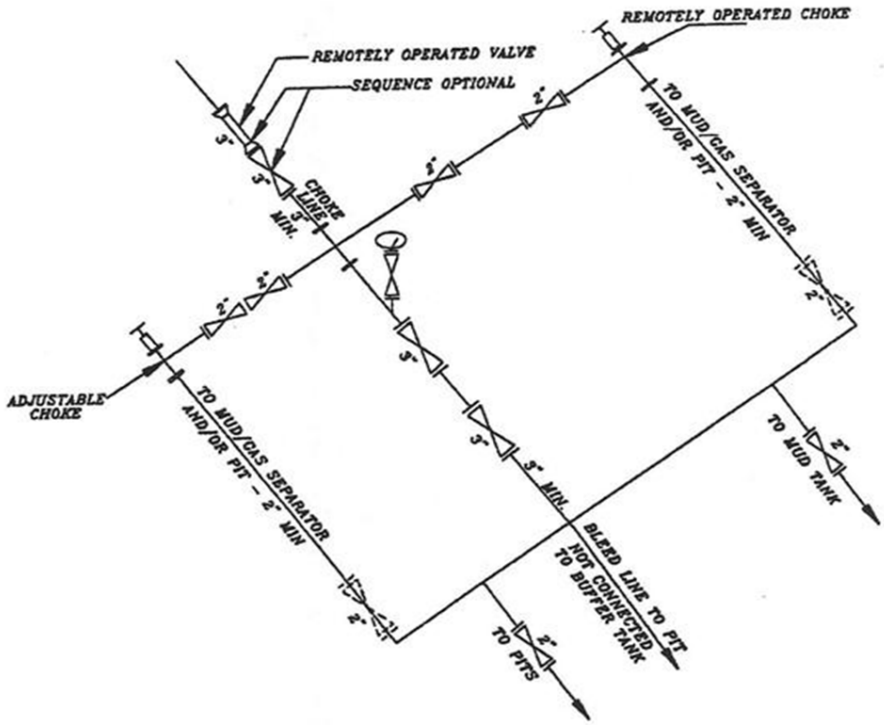
DRILLING SUPERINTENDENT: _____ **DATE:** _____

Kenny Gathings / Lovel Young

RECEIVED Dec. 15, 2011

EXHIBIT A
NBU 922-36H4CS





SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

RECEIVED Dec. 15, 2011

Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

RECEIVED Dec. 15, 2011

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: ML-22650

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 922-36H4CS

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

9. API NUMBER: 43047515870000

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: 2014 FSL 0792 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESE Section: 36 Township: 09.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 1/18/2012	☐ 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.

MIRU ROTARY RIG. FINISHED DRILLING FROM 2428' TO 8830' ON JAN. 16, 2012. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED ENSIGN RIG 139 ON JAN. 18, 2012 @ 15:00 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
January 19, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jaime Scharnowske	720 929-6304	Regulartory Analyst
SIGNATURE N/A		**DATE** 1/19/2012

RECEIVED: Jan. 19, 2012

BLM - Vernal Field Office - Notification Form

Operator ANADARKO Rig Name/# ENSIGN 139
Submitted By SID ARMSTRONG Phone Number 435- 828-0984
Well Name/Number NBU 922 - 36H4CS
Qtr/Qtr NE/SE Section 36 Township 9S Range 22E
Lease Serial Number ML-22650
API Number 43047515870000

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

Date/Time _____ _____ AM ☐ PM ☐

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

☐ Surface Casing
☐ Intermediate Casing
☐ Production Casing
☐ Liner
☐ Other

RECEIVED
JAN 13 2012
DIV. OF OIL, GAS & MINING

Date/Time _____ __ AM ☐ PM ☐

RECEIVED
JAN 13 2012
DIV. OF OIL, GAS & MINING

BOPE

☒ Initial BOPE test at surface casing point
☐ BOPE test at intermediate casing point
☐ 30 day BOPE test
☐ Other

Date/Time 1/13/2012 17:00 AM ☐ PM ☒

Remarks SKIDDING TO NBU 922 - 36H4CS & TESTING B.O.P'S

BLM - Vernal Field Office - Notification Form

Operator ANADARKO Rig Name/# ENSIGN 139
Submitted By SID ARMSTRONG Phone Number 435- 828-0984
Well Name/Number NBU 922 - 36H4CS
Qtr/Qtr NE/SE Section 36 Township 9S Range 22E
Lease Serial Number ML-22650
API Number 43047515870000

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

Date/Time _____ _____ AM ☐ PM ☐

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

- ☐ Surface Casing
- ☐ Intermediate Casing
- ☒ Production Casing
- ☐ Liner
- ☐ Other

Date/Time 1/18/2012 01:00 AM ☐ PM ☒

BOPE

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

RECEIVED
JAN 16 2012
DIV. OF OIL, GAS & MINING

Date/Time _____ __ AM ☐ PM ☐

Remarks SKIDING TO NBU 922 - 36H4BS & TESTING B.O.P'S

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: ML-22650

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 922-36H4CS

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

9. API NUMBER: 43047515870000

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: 2014 FSL 0792 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESE Section: 36 Township: 09.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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

TYPE OF SUBMISSION

- ☐ NOTICE OF INTENT — Approximate date work will start:
- ☐ SUBSEQUENT REPORT — Date of Work Completion:
- ☐ SPUD REPORT — Date of Spud:
- ✓ DRILLING REPORT — Report Date: 3/19/2012

TYPE OF ACTION

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

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

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 03/19/2012 AT 1330 HRS. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
March 26, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Sheila Wopsock	435 781-7024	Regulatory Analyst

SIGNATURE	DATE
N/A	3/20/2012

RECEIVED: Mar. 20, 2012

SUBMIT AS EMAIL | Print Form

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
Submitted By ANDY LYTLE Phone Number 720.929.6100
Well Name/Number NBU 922-36H4CS
Qtr/Qtr NESE Section 36 Township 9S Range 22E
Lease Serial Number ML 22650
API Number 4304751587

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

Date/Time 10/20/2011 11:00 HRS AM ☐ PM ☐

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

- ☑ Surface Casing
- ☐ Intermediate Casing
- ☐ Production Casing
- ☐ Liner
- ☐ Other

RECEIVED
OCT 19 2011
DIV. OF OIL, GAS & MINING

Date/Time 10/27/2011 08:00 HRS AM ☐ PM ☐

BOPE

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

Date/Time _____ _____ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT 435.828.0986 OR LOVEL YOUNG AT 435.781.7051