

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 922-36K1BS
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>		3. FIELD OR WILDCAT NATURAL BUTTES
4. TYPE OF WELL Gas Well Coalbed Methane Well: NO		5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. OPERATOR PHONE 720 929-6515
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217		9. OPERATOR E-MAIL julie.jacobson@anadarko.com
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) ML-22650	11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>	
12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>		13. NAME OF SURFACE OWNER (if box 12 = 'fee')
14. SURFACE OWNER PHONE (if box 12 = 'fee')		15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')
16. SURFACE OWNER E-MAIL (if box 12 = 'fee')		17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')
18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		19. SLANT VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	1798 FSL 1998 FWL	NESW	36	9.0 S	22.0 E	S
Top of Uppermost Producing Zone	2567 FSL 2148 FWL	NESW	36	9.0 S	22.0 E	S
At Total Depth	2567 FSL 2148 FWL	NESW	36	9.0 S	22.0 E	S

21. COUNTY UINTAH	22. DISTANCE TO NEAREST LEASE LINE (Feet) 2148	23. NUMBER OF ACRES IN DRILLING UNIT 640
24. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 165	25. PROPOSED DEPTH MD: 8791 TVD: 8674	
26. ELEVATION - GROUND LEVEL 4965	27. BOND NUMBER 22013542	28. 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 - 2250	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 - 8791	11.6	I-80 LT&C	12.5	Premium Lite High Strength	280	3.38	11.0
							50/50 Poz	1200	1.31	14.3

ATTACHMENTS

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

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP

NAME Gina Becker	TITLE Regulatory Analyst II	PHONE 720 929-6086
SIGNATURE	DATE 05/14/2011	EMAIL gina.becker@anadarko.com
API NUMBER ASSIGNED 43047515900000	APPROVAL  Permit Manager	

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 922-36K1BS**

Surface: 1798 FSL / 1998 FWL NESW
 BHL: 2567 FSL / 2148 FWL NESW

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:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1142	
Birds Nest	1421	Water
Mahogany	1800	Water
Wasatch	4237	Gas
Mesaverde	6443	Gas
MVU2	7476	Gas
MVL1	8026	Gas
TVD	8674	
TD	8791	

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

Please refer to the attached Drilling Program

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

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 8674' TVD, approximately equals
5,539 psi (0.64 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 3,631 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.

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

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.

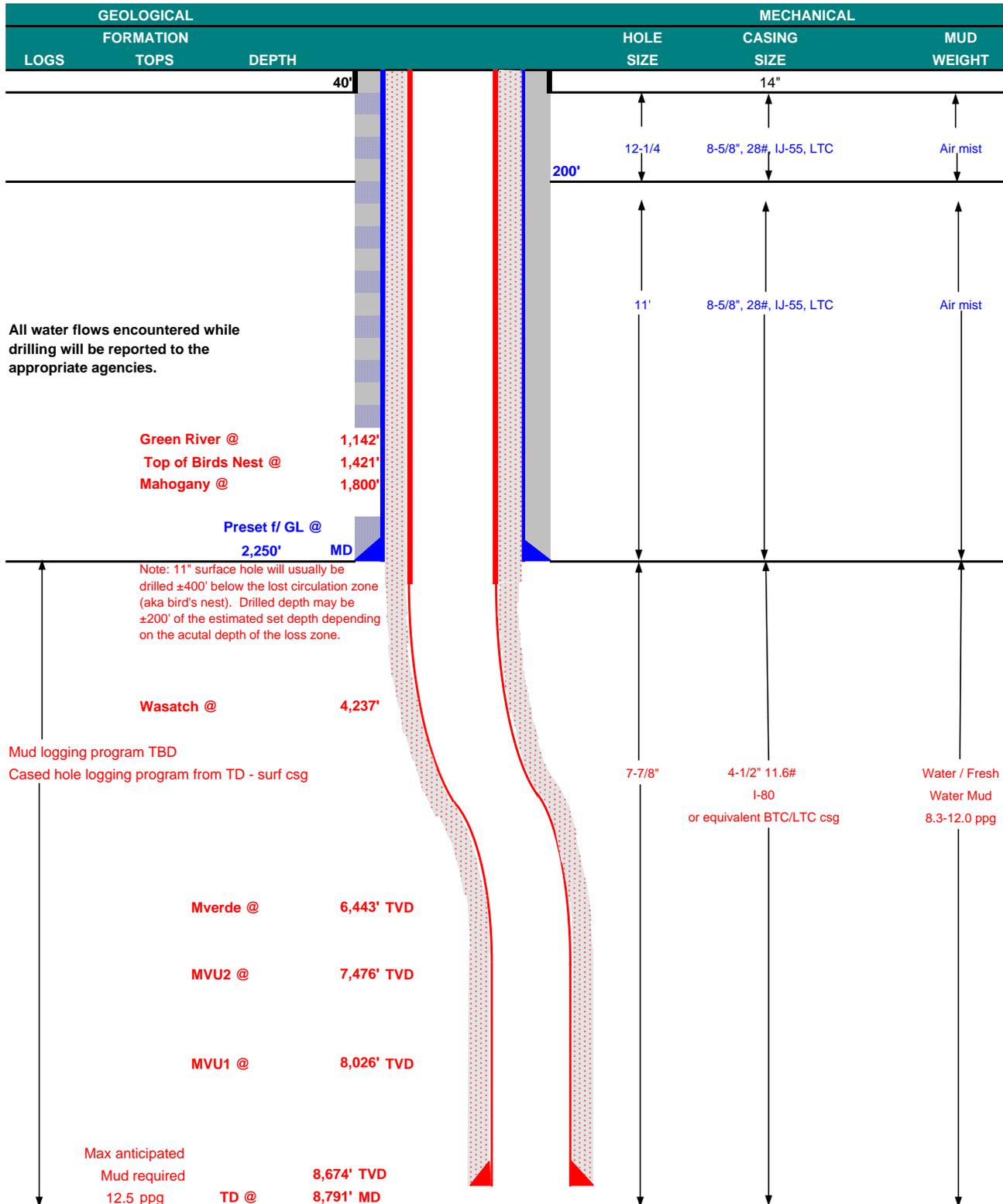
10. Other Information:

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	May 12, 2011			
WELL NAME	NBU 922-36K1BS		TD	8,674'	TVD	8,791' MD	
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION	4964.9
SURFACE LOCATION	NESW	1798 FSL	1998 FWL	Sec 36	T 9S	R 22E	
	Latitude: 39.990211		Longitude: -109.389912		NAD 27		
BTM HOLE LOCATION	NESW	2567 FSL	2148 FWL	Sec 36	T 9S	R 22E	
	Latitude: 39.99232		Longitude: -109.389381		NAD 27		
OBJECTIVE ZONE(S)	Wasatch/Mesaverde						
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.						





KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	TENSION	
CONDUCTOR	14"	0-40'							
SURFACE	8-5/8"	0 to 2,250	28.00	IJ-55	LTC	3,390	1,880	348,000	N/A
						2.40	1.79	6.31	N/A
PRODUCTION	4-1/2"	0 to 8,791	11.60	I-80	LTC/BTC	7,780	6,350	279,000	367,000
						1.11	1.13	3.38	4.45

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				
NOTE: If well will circulate water to surface, option 2 will be utilized							
SURFACE	LEAD	1,750'	65/35 Poz + 6% Gel + 10 pps gilsonite	160	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	3,731'	Premium Lite II +0.25 pps	280	20%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	5,060'	50/50 Poz/G + 10% salt + 2% gel	1,200	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:

Nick Spence / Emile Goodwin

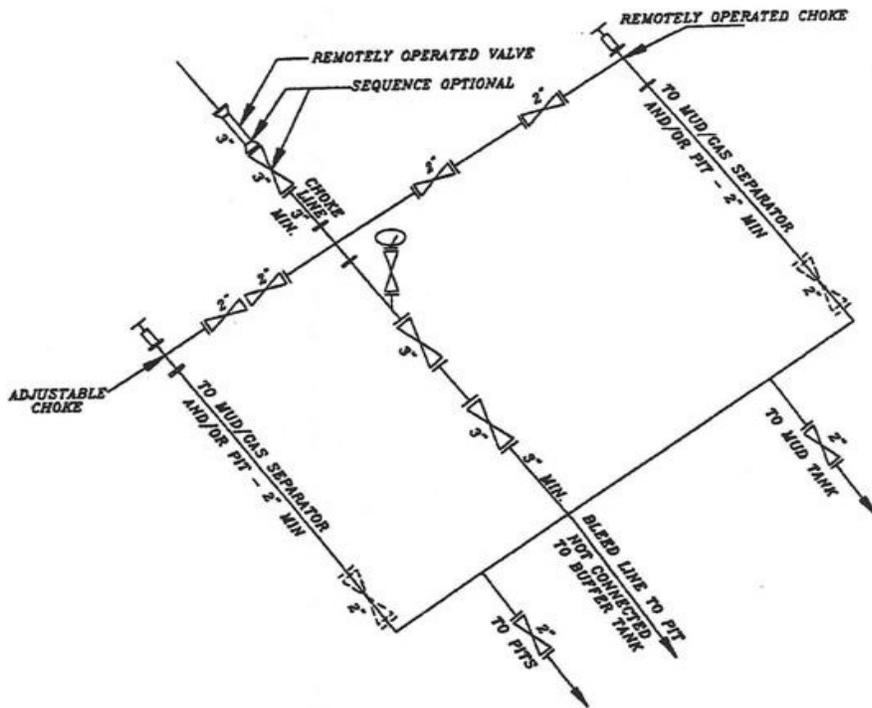
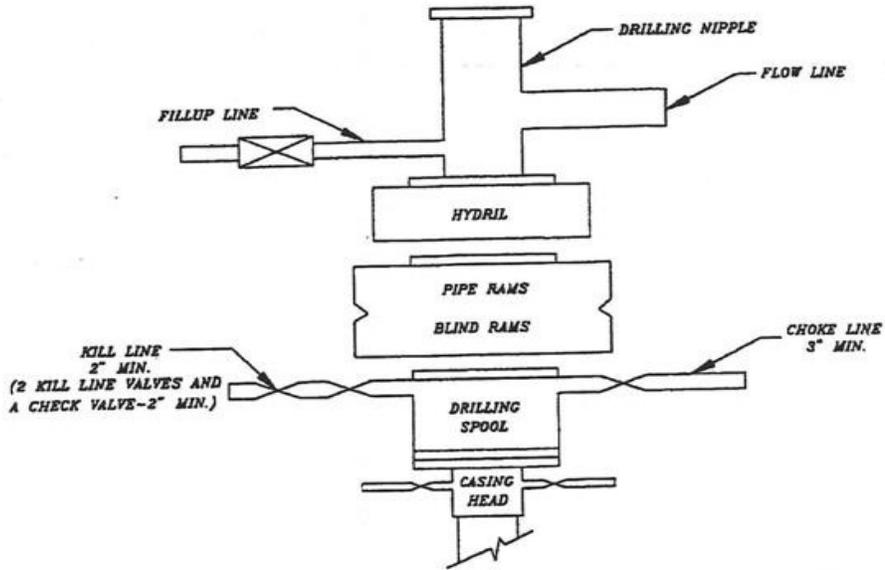
DATE:

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

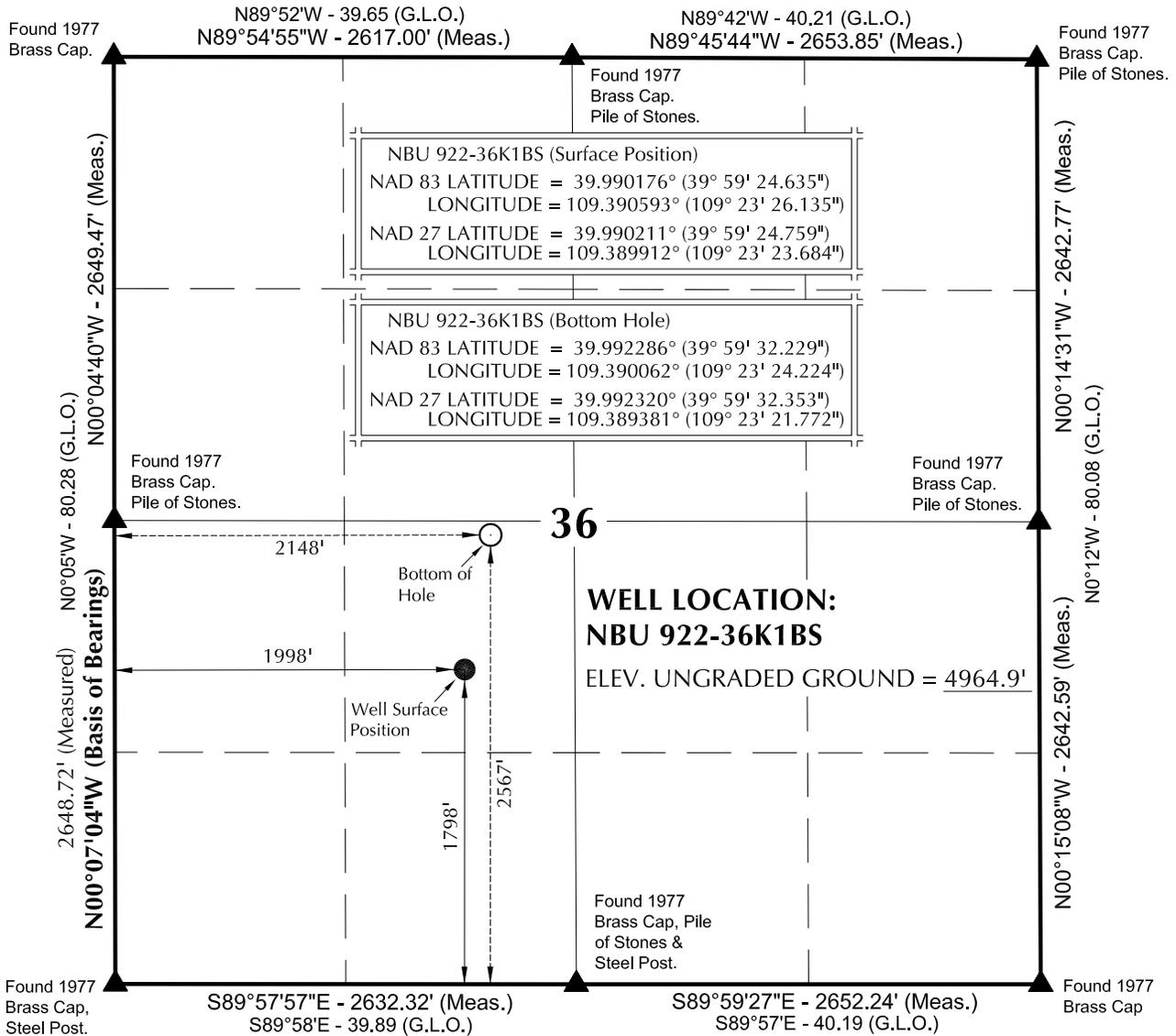
DATE:

EXHIBIT A
NBU 922-36K1BS



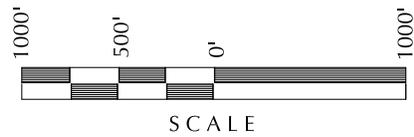
SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

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 N10°54'39"E 782.88' from the Surface Position.
- 4. Bearings are based on Global Positioning Satellite observations.
- 5. Basis of elevation is Tri-Sta "Two Water" located in the NW ¼ of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.



SURVEYOR'S CERTIFICATE

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

John R. Saugh
 PROFESSIONAL LAND SURVEYOR
 REGISTRATION NO. 6028691
 STATE OF UTAH

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



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

Well Pad: NBU 922-36K

NBU 922-36K1BS
WELL PLAT
 2567' FSL, 2148' FWL (Bottom Hole)
 NE ¼ SW ¼ OF SECTION 36, T9S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH.

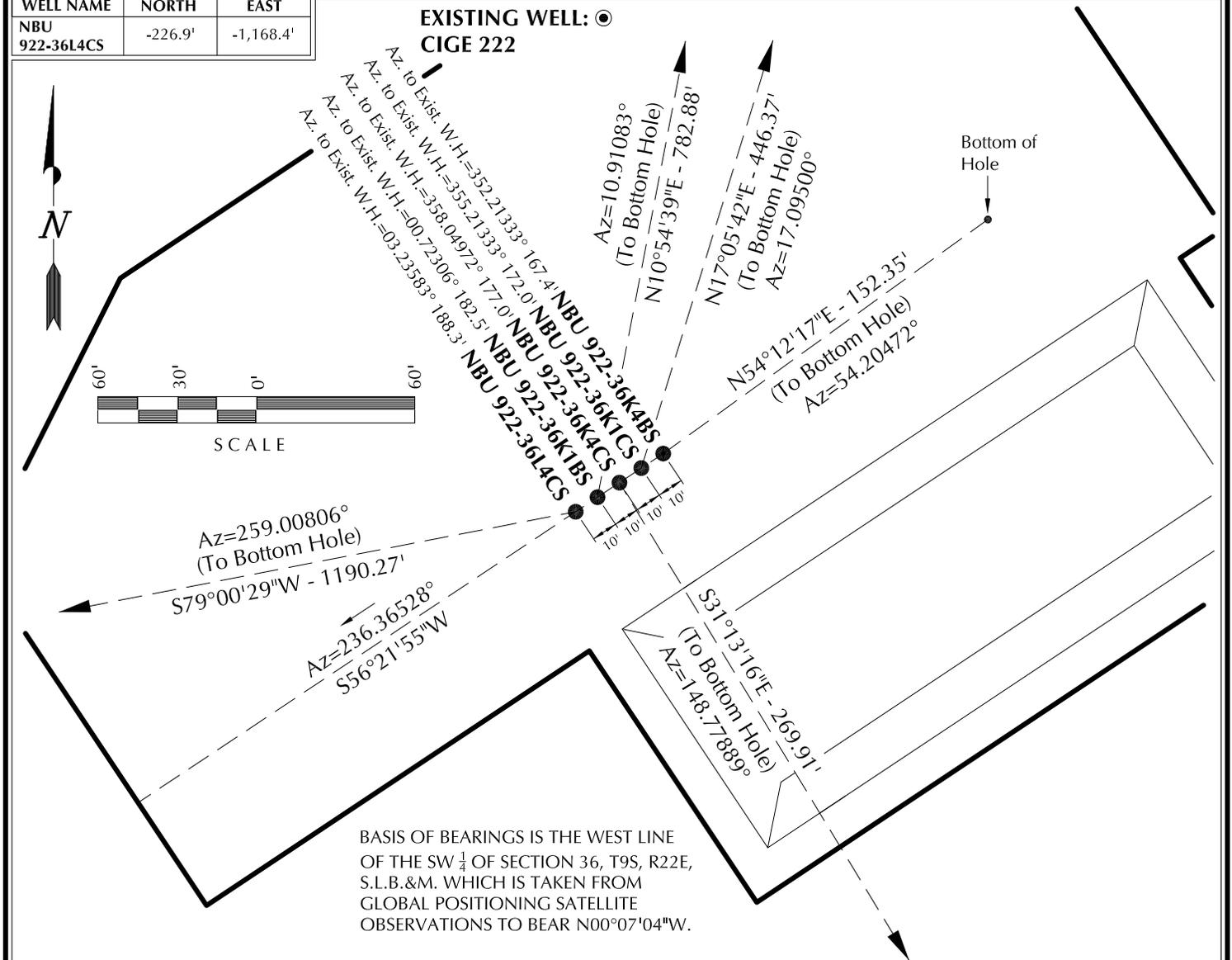
TIMBERLINE (435) 789-1365
 ENGINEERING & LAND SURVEYING, INC.
 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 11-09-10	SURVEYED BY: R.Y.	SHEET NO: 4
DATE DRAWN: 11-12-10	DRAWN BY: B.M.	
SCALE: 1" = 1000'		4 OF 17

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 922-36K4BS	39°59'24.799"	109°23'25.814"	39°59'24.923"	109°23'23.363"	1815' FSL 2023' FWL	39°59'25.678"	109°23'24.226"	39°59'25.802"	109°23'21.775"	1904' FSL 2147' FWL
NBU 922-36K1CS	39°59'24.744"	109°23'25.921"	39°59'24.868"	109°23'23.470"	1809' FSL 2015' FWL	39°59'28.958"	109°23'24.232"	39°59'29.082"	109°23'21.780"	2236' FSL 2147' FWL
NBU 922-36K4CS	39°59'24.690"	109°23'26.028"	39°59'24.813"	109°23'23.577"	1804' FSL 2006' FWL	39°59'22.408"	109°23'24.234"	39°59'22.532"	109°23'21.782"	1573' FSL 2146' FWL
NBU 922-36K1BS	39°59'24.635"	109°23'26.135"	39°59'24.759"	109°23'23.684"	1798' FSL 1998' FWL	39°59'32.229"	109°23'24.224"	39°59'32.353"	109°23'21.772"	2567' FSL 2148' FWL
NBU 922-36L4CS	39°59'24.580"	109°23'26.242"	39°59'24.704"	109°23'23.791"	1793' FSL 1990' FWL	39°59'22.347"	109°23'41.253"	39°59'22.471"	109°23'38.800"	1565' FSL 821' FWL
CIGE 222	39°59'26.437"	109°23'26.104"	39°59'26.561"	109°23'23.652"	1981' FSL 2001' FWL	39.989541°	109.394792°	39.989575°	109.394111°	

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 922-36K4BS	89.1'	123.6'	NBU 922-36K1CS	426.6'	131.2'	NBU 922-36K4CS	-230.8'	139.9'	NBU 922-36K1BS	768.7'	148.2'
NBU 922-36L4CS	-226.9'	-1,168.4'									



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

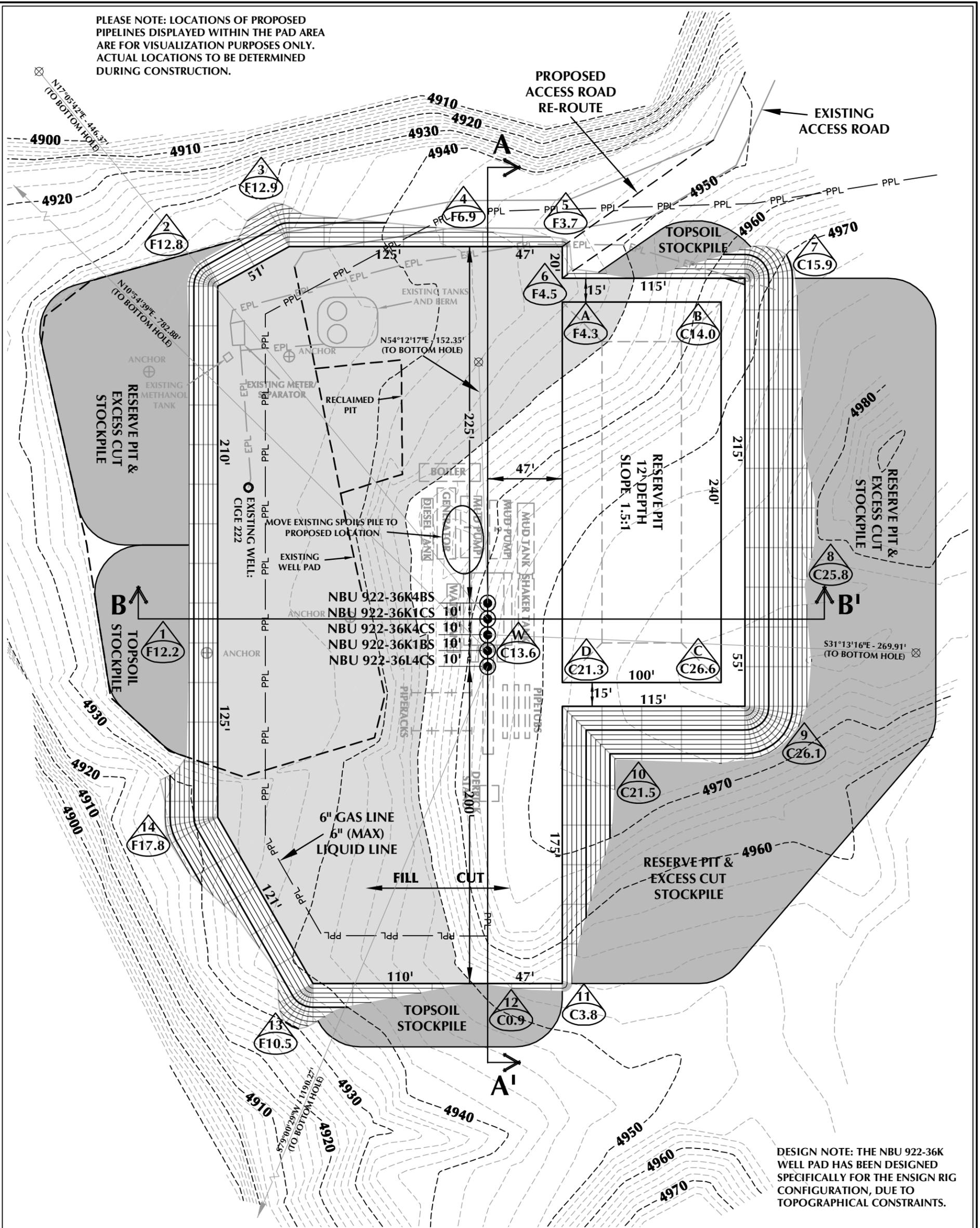


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Phone 307-674-0609
Fax 307-674-0182

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

DATE SURVEYED: 11-09-10	SURVEYED BY: R.Y.	SHEET NO: 6
DATE DRAWN: 11-12-10	DRAWN BY: B.M.	
SCALE: 1" = 60'		6 OF 17

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



DESIGN NOTE: THE NBU 922-36K WELL PAD HAS BEEN DESIGNED SPECIFICALLY FOR THE ENSIGN RIG CONFIGURATION, DUE TO TOPOGRAPHICAL CONSTRAINTS.

WELL PAD - NBU 922-36K DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4963.6'
 FINISHED GRADE ELEVATION = 4950.0'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.76 ACRES
 TOTAL DAMAGE AREA = 6.10 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

Kerr-McGee Oil & Gas Onshore, LP
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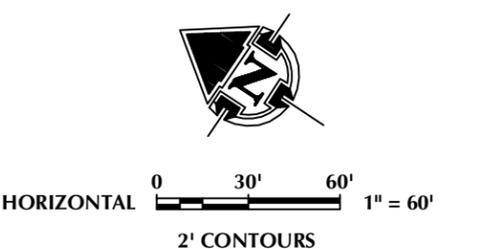
WELL PAD - NBU 922-36K
 WELL PAD - LOCATION LAYOUT
 NBU 922-36K4BS,
 NBU 922-36K1CS, NBU 922-36K4CS,
 NBU 922-36K1BS & NBU 922-36L4CS
 LOCATED IN SECTION 36, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH



WELL PAD QUANTITIES
 TOTAL CUT FOR WELL PAD = 39,245 C.Y.
 TOTAL FILL FOR WELL PAD = 30,822 C.Y.
 TOPSOIL @ 6" DEPTH = 2,454 C.Y.
 EXCESS MATERIAL = 8,423 C.Y.

RESERVE PIT QUANTITIES
 TOTAL CUT FOR RESERVE PIT
 +/- 8,140 C.Y.
 RESERVE PIT CAPACITY (2' OF FREEBOARD)
 +/- 30,960 BARRELS

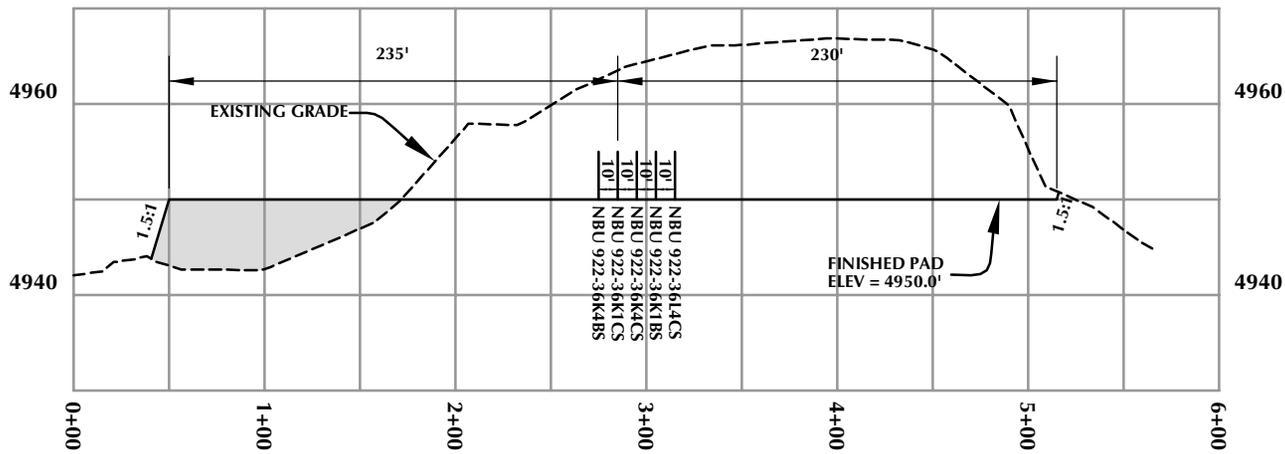
- WELL PAD LEGEND**
- EXISTING WELL LOCATION
 - PROPOSED WELL LOCATION
 - PROPOSED BOTTOM HOLE LOCATION
 - EXISTING CONTOURS (2' INTERVAL)
 - PROPOSED CONTOURS (2' INTERVAL)
 - PPL - PROPOSED PIPELINE
 - EPL - EXISTING PIPELINE



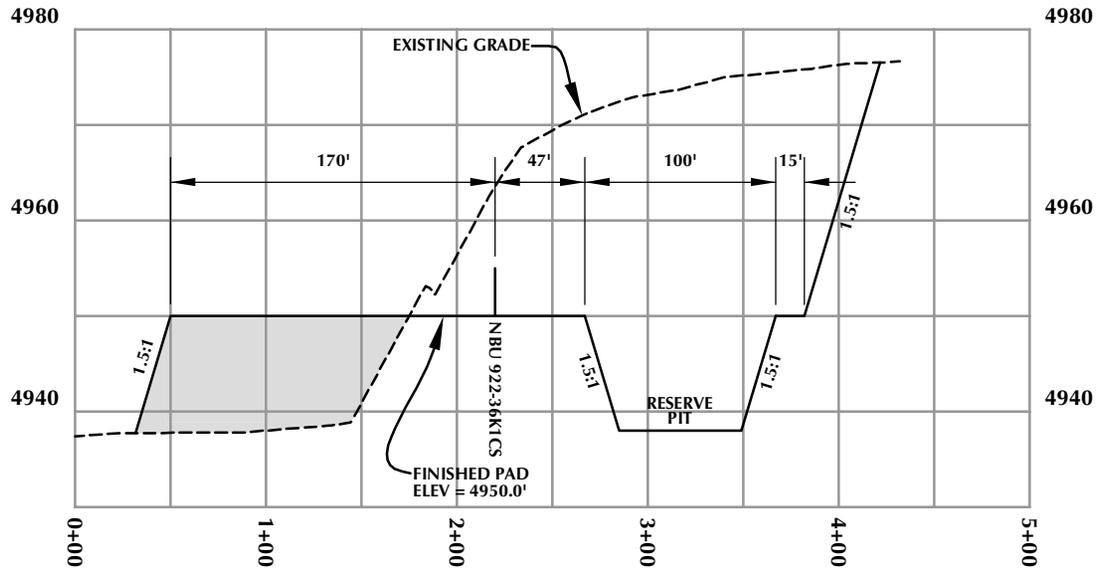
TIMBERLINE ENGINEERING & LAND SURVEYING, INC. (435) 789-1365
 209 NORTH 300 WEST - VERNAL, UTAH 84078

SCALE: 1"=60' DATE: 12/3/10 SHEET NO: **7** OF 17

C:\ANADARKO\2010_48_NBU_FOCUS_SEC_36-922\DWGS\NBU 922-36K\NBU 922-36K_PAD_2010101109.dwg, 12/7/2010 9:24:38 AM



CROSS SECTION A-A'



CROSS SECTION B-B'

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

WELL PAD - NBU 922-36K

WELL PAD - CROSS SECTIONS
NBU 922-36K4BS,

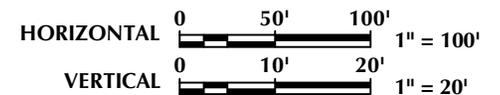
NBU 922-36K1CS, NBU 922-36K4CS,
NBU 922-36K1BS & NBU 922-36L4CS
LOCATED IN SECTION 36, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH



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

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

(435) 789-1365



Scale: 1"=100'

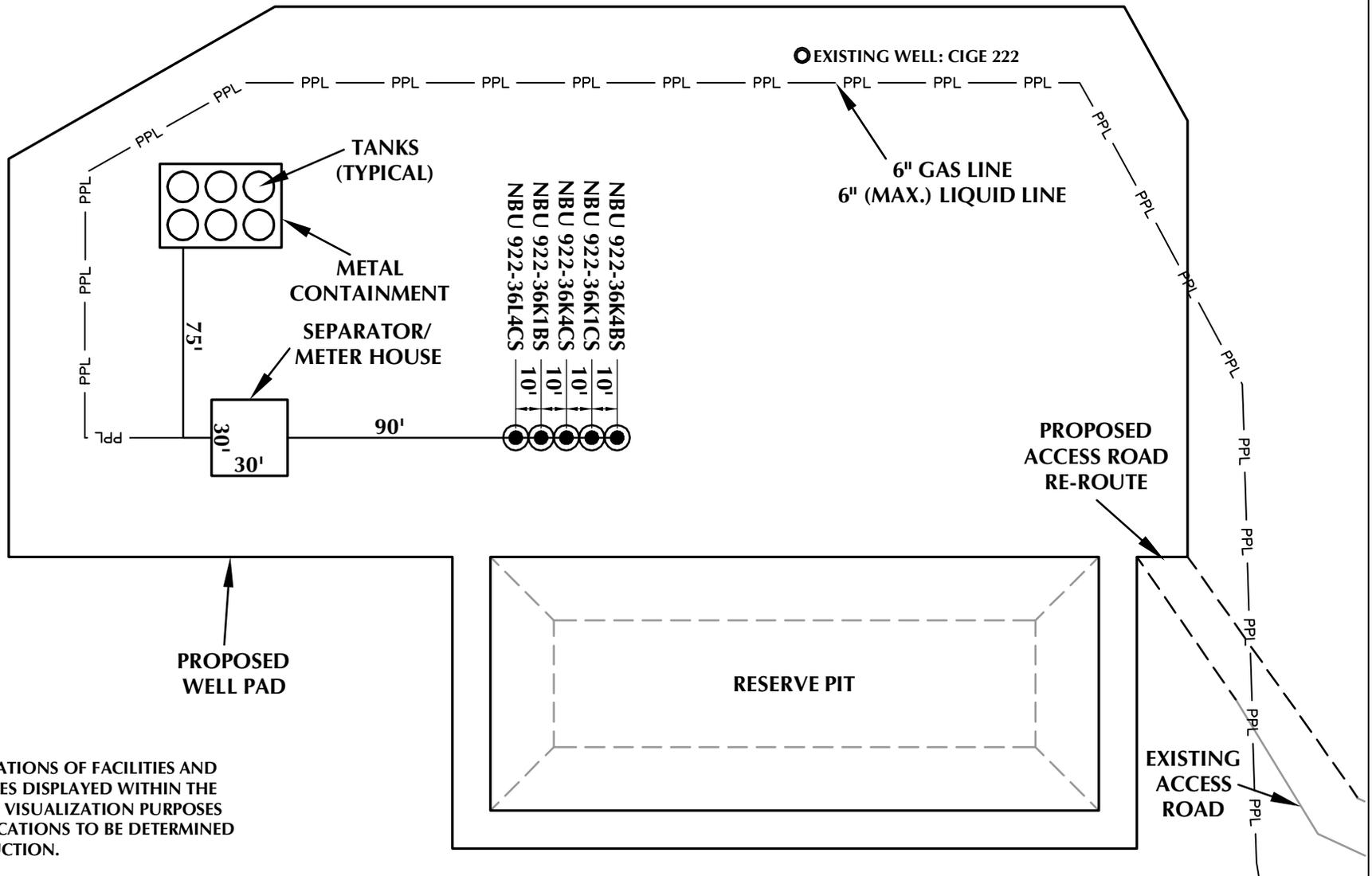
Date: 12/3/10

SHEET NO:

REVISED:

8

8 OF 17



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 922-36K

WELL PAD - FACILITIES DIAGRAM
NBU 922-36K4BS,
NBU 922-36K1CS, NBU 922-36K4CS,
NBU 922-36K1BS & NBU 922-36L4CS
LOCATED IN SECTION 36, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH



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 1" = 60'

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

Scale: 1"=60' Date: 12/3/10
REVISED:

SHEET NO:
9 9 OF 17

K:\ANADARKO\2010_48_NBU_FOCUS_SEC_36-922\DWGS\NBU_922-36K\NBU_922-36K_PAD_20101109.dwg, 12/7/2010 9:18:39 AM

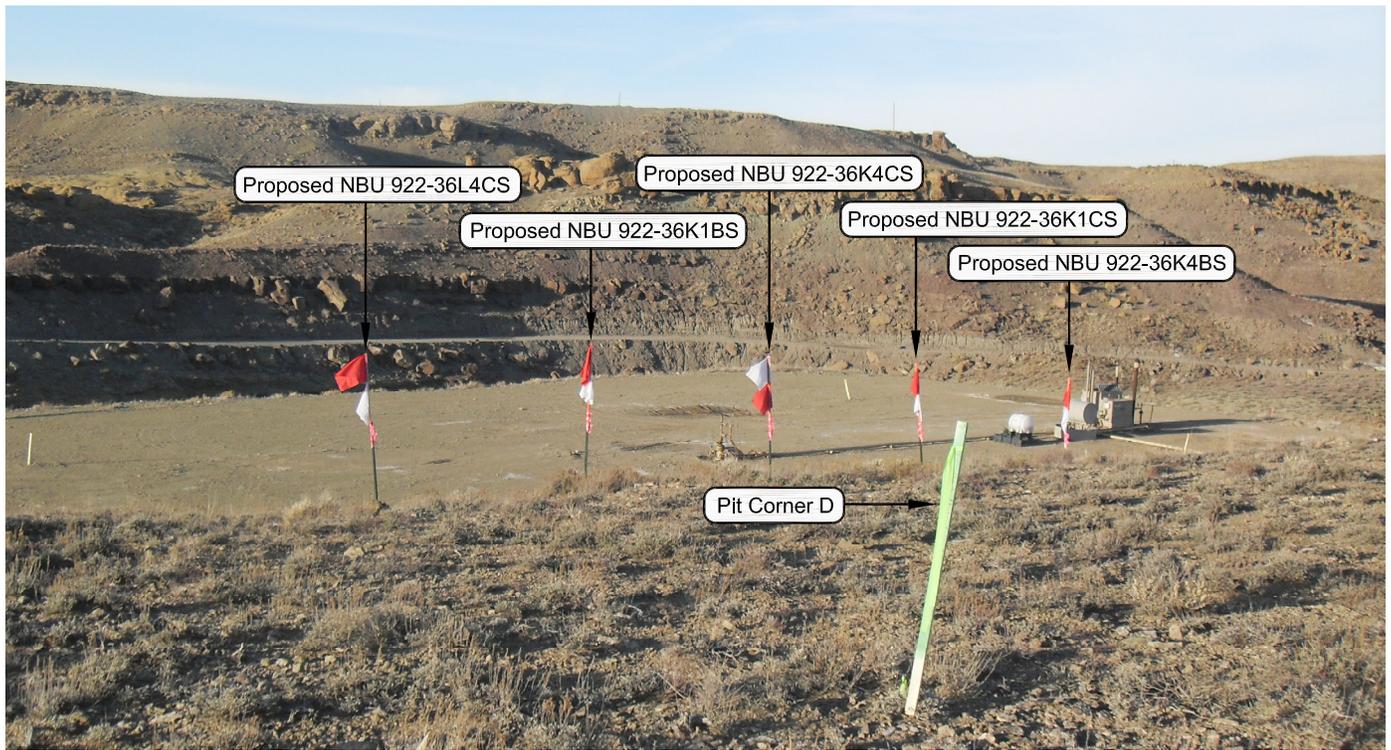


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: NORTHWESTERLY

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

Well Pad - NBU 922-36K

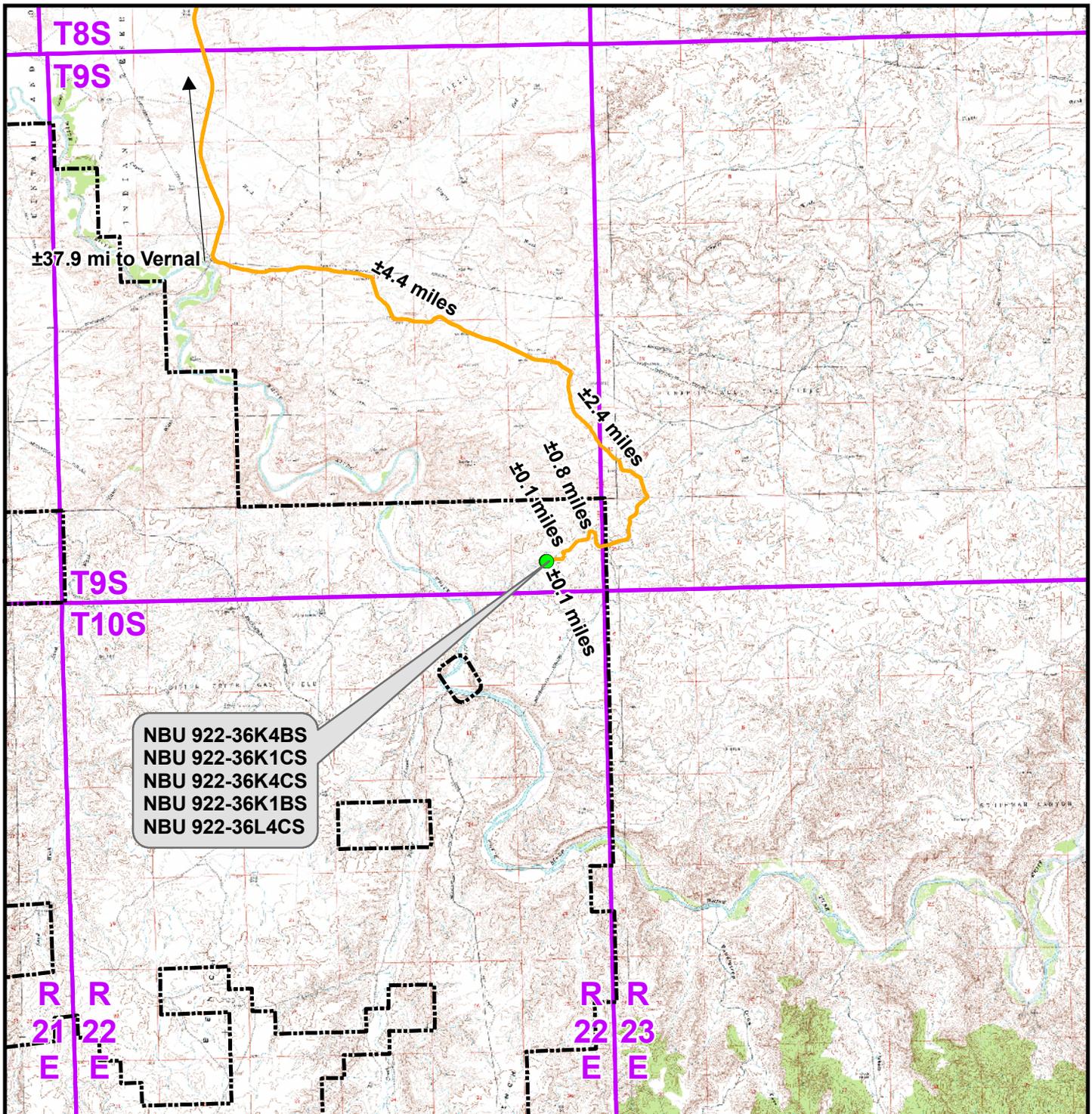
LOCATION PHOTOS
 NBU 922-36K4BS,
 NBU 922-36K1CS, NBU 922-36K4CS,
 NBU 922-36K1BS & NBU 922-36L4CS
 LOCATED IN SECTION 36, T9S, R22E,
 S.L.B.&M., Uintah County, Utah.



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

DATE PHOTOS TAKEN: 11-17-10	PHOTOS TAKEN BY: M.S.B.	SHEET NO: 10
DATE DRAWN: 11-18-10	DRAWN BY: B.M.	
Date Last Revised:		10 OF 17



Legend

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

Distance From Well Pad - NBU 922-36K To Unit Boundary: ±3,256ft

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

WELL PAD - NBU 922-36K

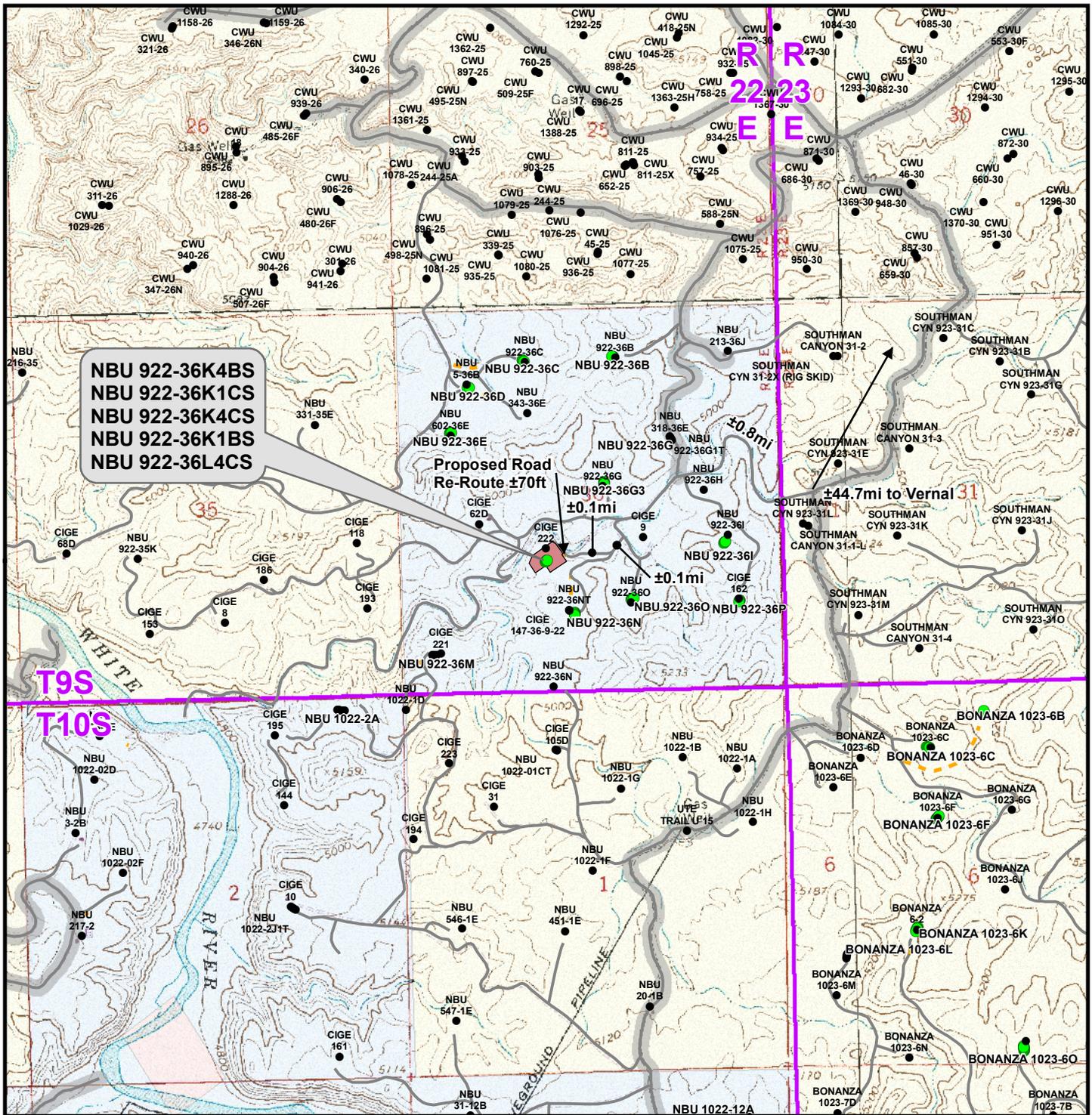
TOPO A
 NBU 922-36K4BS,
 NBU 922-36K1CS, NBU 922-36K4CS,
 NBU 922-36K1BS & NBU 922-36L4CS
 LOCATED IN SECTION 36, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH



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



Scale: 1:100,000	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 3 Dec 2010	11
Revised:	Date:	



Legend

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

Total Proposed Road Re-Route Length: ±70ft

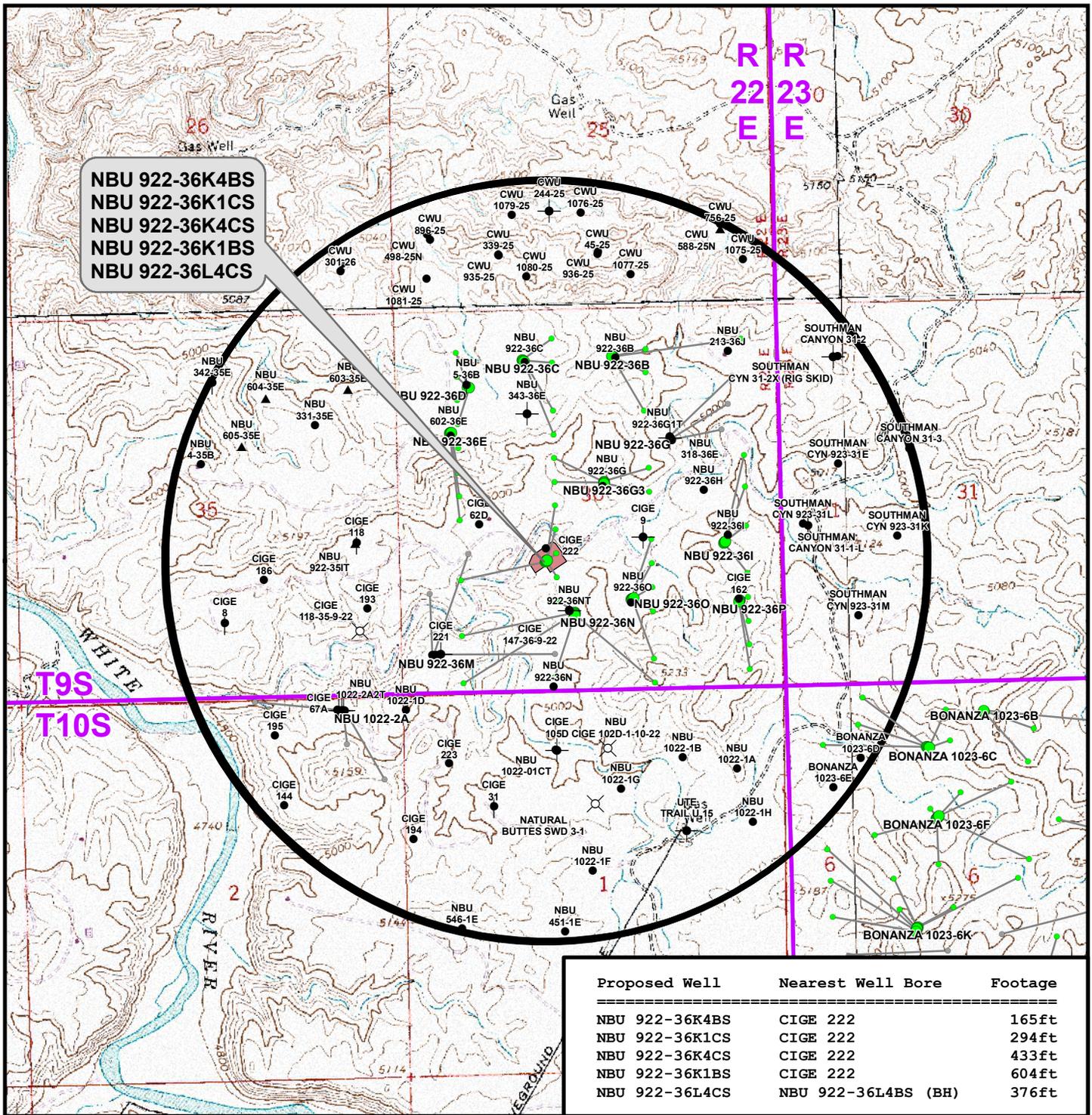
Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

WELL PAD - NBU 922-36K

TOPO B
NBU 922-36K4BS,
NBU 922-36K1CS, NBU 922-36K4CS,
NBU 922-36K1BS & NBU 922-36L4CS
LOCATED IN SECTION 36, T9S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH

CONSULTING, LLC
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Sheridan, WY 82801
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Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: 12 12 of 17
Drawn: TL	Date: 3 Dec 2010	
Revised:	Date:	



Proposed Well	Nearest Well Bore	Footage
NBU 922-36K4BS	CIGE 222	165ft
NBU 922-36K1CS	CIGE 222	294ft
NBU 922-36K4CS	CIGE 222	433ft
NBU 922-36K1BS	CIGE 222	604ft
NBU 922-36L4CS	NBU 922-36L4BS (BH)	376ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Well Pad
- Well Path
- Bottom Hole - Existing
- Well - 1 Mile Radius
- Producing
- Temporarily-Abandoned
- ★ Active
- Shut-In
- ⊙ Spudded (Drilling commenced; Not yet completed)
- ▲ Approved permit (APD); not yet spudded
- Plugged and Abandoned
- ⊕ Inactive
- ⊗ Drilling Operations Suspended
- ⊘ Location Abandoned
- ⊙ Dry hole marker, buried
- ⊙ Returned APD (Unapproved)

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

WELL PAD - NBU 922-36K

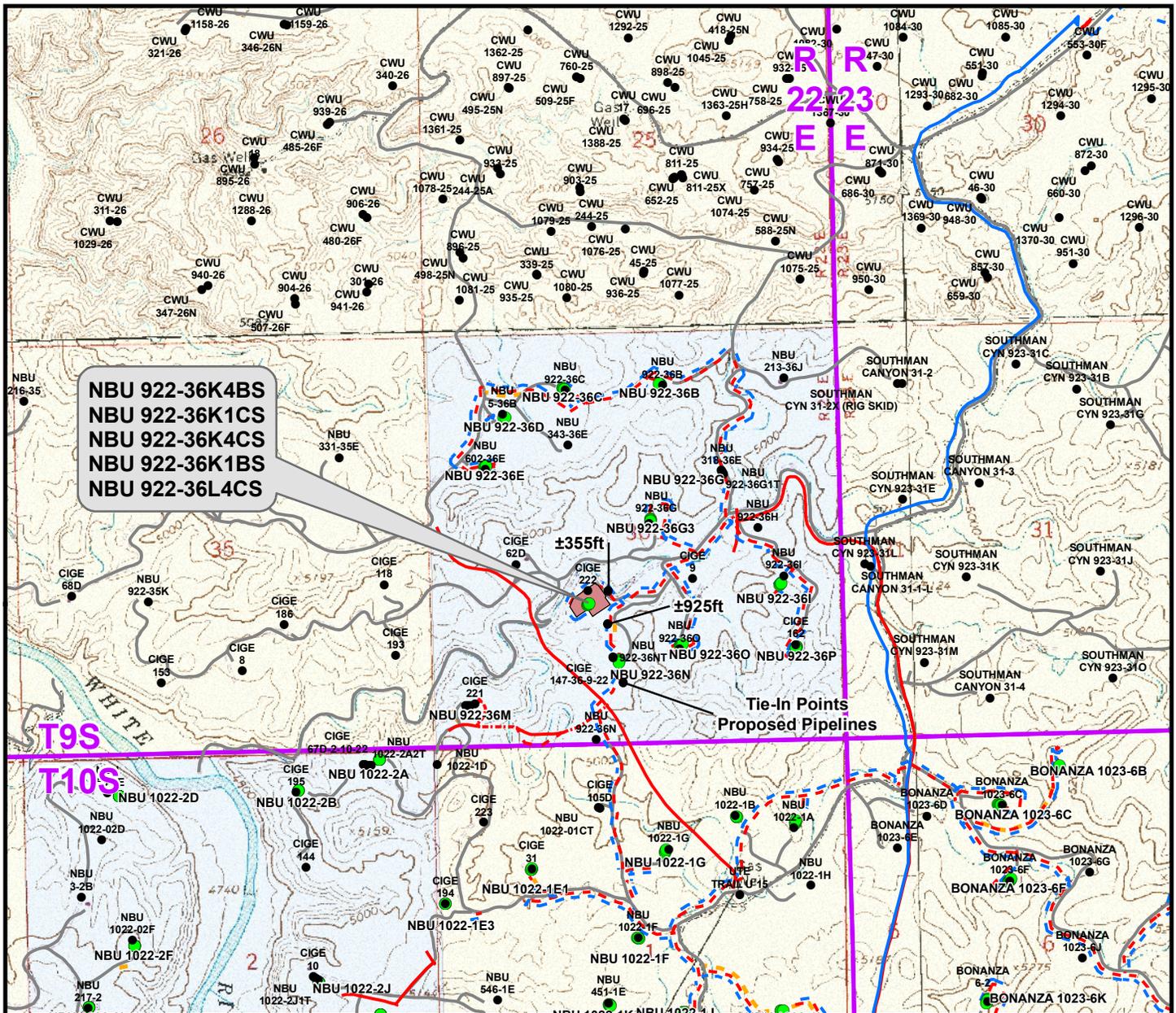
TOPO C
NBU 922-36K4BS,
NBU 922-36K1CS, NBU 922-36K4CS,
NBU 922-36K1BS & NBU 922-36L4CS
LOCATED IN SECTION 36, T9S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH

609

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



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 3 Dec 2010	13
Revised:	Date:	



NBU 922-36K4BS
NBU 922-36K1CS
NBU 922-36K4CS
NBU 922-36K1BS
NBU 922-36L4CS

Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±660ft	Proposed 6" (Meter House to Edge of Pad)	±660ft
Proposed 6" (Max.) (Edge of Pad to 360 Intersection)	±355ft	Proposed 6" (Edge of Pad to 360 Intersection)	±355ft
Proposed 6" (Max.) (360 Intersection to 36N Intersection)	±925ft	Proposed 16" (360 Intersection to 36N Intersection)	±925ft
TOTAL PROPOSED LIQUID PIPELINE =	±1,940ft	TOTAL PROPOSED GAS PIPELINE =	±1,940ft

Legend

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

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

WELL PAD - NBU 922-36K

TOPO D
NBU 922-36K4BS,
NBU 922-36K1CS, NBU 922-36K4CS,
NBU 922-36K1BS & NBU 922-36L4CS
LOCATED IN SECTION 36, T9S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH

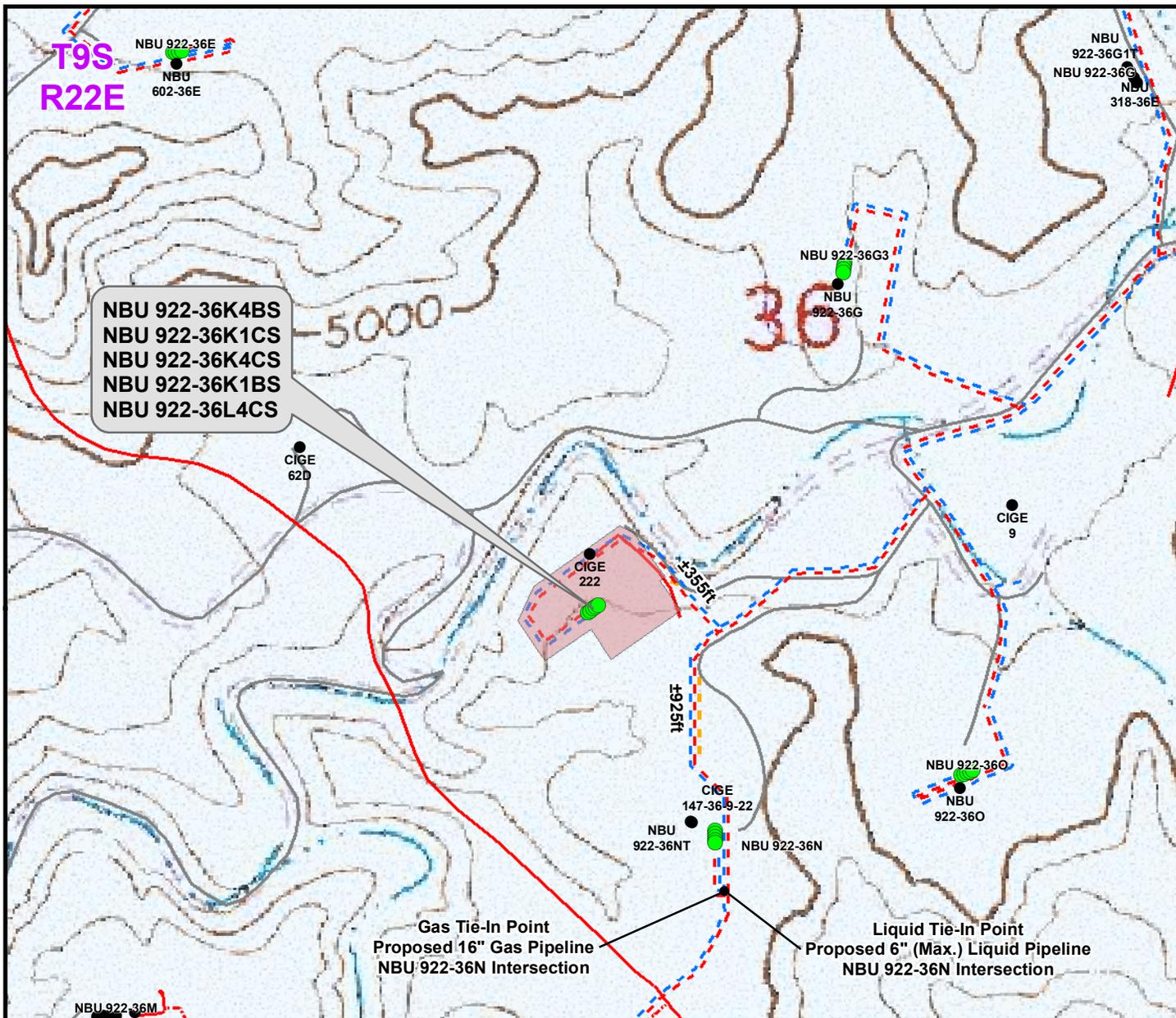
609

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



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 3 Dec 2010	14
Revised: TL	Date: 24 Jan 2011	

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Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±660ft	Proposed 6" (Meter House to Edge of Pad)	±660ft
Proposed 6" (Max.) (Edge of Pad to 360 Intersection)	±355ft	Proposed 6" (Edge of Pad to 360 Intersection)	±355ft
Proposed 6" (Max.) (360 Intersection to 36N Intersection)	±925ft	Proposed 16" (360 Intersection to 36N Intersection)	±925ft
TOTAL PROPOSED LIQUID PIPELINE =	±1,940ft	TOTAL PROPOSED GAS PIPELINE =	±1,940ft

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

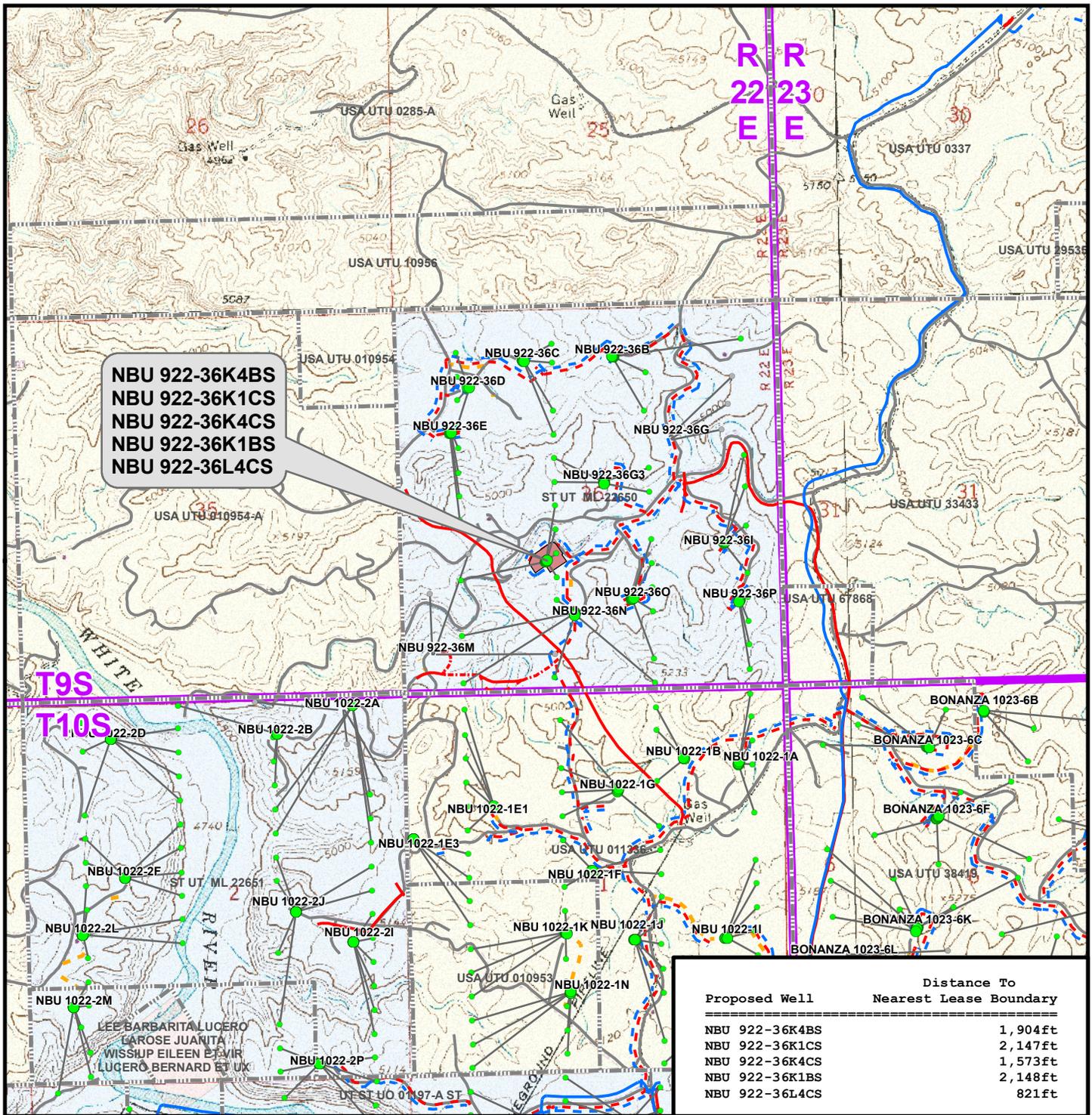
Kerr-McGee Oil & Gas Onshore, LP
 1099 18th Street, Denver, Colorado 80202

WELL PAD - NBU 922-36K
TOPO D2 (PAD & PIPELINE DETAIL)
 NBU 922-36K4BS,
 NBU 922-36K1CS, NBU 922-36K4CS,
 NBU 922-36K1BS & NBU 922-36L4CS
 LOCATED IN SECTION 36, T9S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH

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



Scale: 1" = 500ft	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 3 Dec 2010	15 15 of 17
Revised: TL	Date: 24 Jan 2011	



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 922-36K

TOPO E
 NBU 922-36K4BS,
 NBU 922-36K1CS, NBU 922-36K4CS,
 NBU 922-36K1BS & NBU 922-36L4CS
 LOCATED IN SECTION 36, T9S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH



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



Scale: 1" = 2,000ft | NAD83 USP Central
 Drawn: TL | Date: 3 Dec 2010
 Revised: TL | Date: 24 Jan 2011

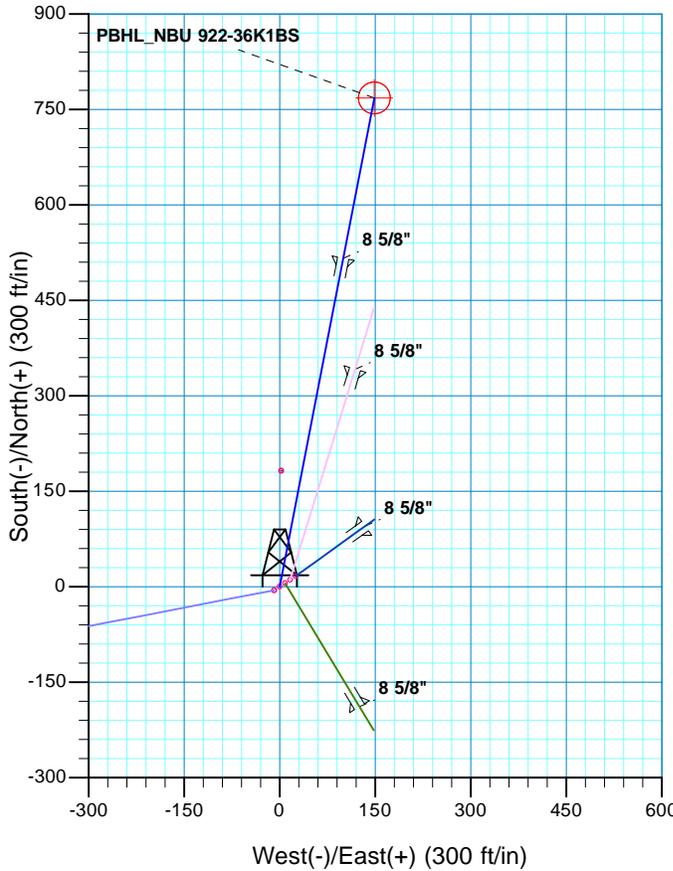
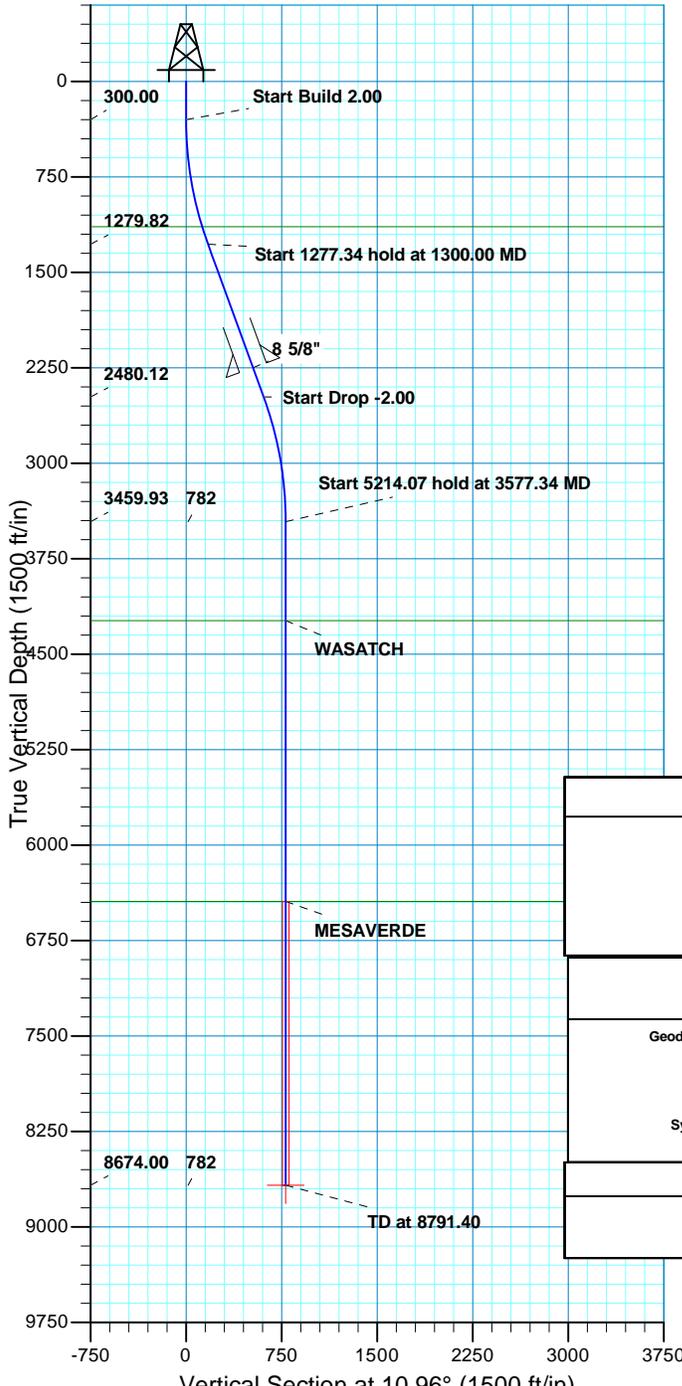
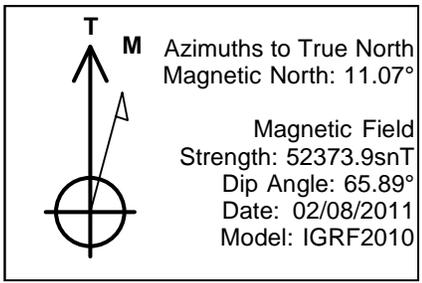
Sheet No:
16 of 17

**Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – NBU 922-36K
WELLS – NBU 922-36K4BS,
NBU 922-36K1CS, NBU 922-36K4CS,
NBU 922-36K1BS & NBU 922-36L4CS
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 an existing service road to the southwest. Exit right and proceed in a southwesterly, then northerly, then southwesterly direction along the service road approximately 0.8 miles to a second service road to the southwest. Exit right and proceed in a southwesterly direction along the second service road approximately 0.1 miles to an existing access road to the west. Exit right and proceed in a westerly direction along the access road approximately 0.1 miles to the proposed access road. Follow road flags in a northwesterly direction approximately 70 feet to the proposed well pad.

Total distance from Vernal, Utah to the proposed well location is approximately 45.7 miles in a southerly direction.

WELL DETAILS: NBU 922-36K1BS						
GL 4950 & KB 4 @ 4954.00ft (ASSUMED)						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	14526552.82	2091410.02	39° 59' 24.760 N	109° 23' 23.683 W	
DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude
PBHL	8674.00	768.14	148.76	14527323.52	2091544.89	39° 59' 32.352 N
						109° 23' 21.772 W
						Circle (Radius: 25.00)
						- plan hits target center



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	10.96	1279.82	169.62	32.85	2.00	10.96	172.77	
2577.34	20.00	10.96	2480.12	598.52	115.91	0.00	0.00	609.64	
3577.34	0.00	0.00	3459.93	768.14	148.76	2.00	180.00	782.41	
8791.40	0.00	0.00	8674.00	768.14	148.76	0.00	0.00	782.41	PBHL_NBU 922-36K1BS

PROJECT DETAILS: Uintah County, UT UTM12		FORMATION TOP DETAILS		
Geodetic System: Universal Transverse Mercator (US Survey Feet)		TVDPath	MDPath	Formation
Datum: NAD 1927 - Western US		4237.00	4354.40	GREEN RIVER
Ellipsoid: Clarke 1866		6443.00	6560.40	WASATCH
Zone: Zone 12N (114 W to 108 W)				MESAVERDE
Location: SECTION 36 T9S R22E				
System Datum: Mean Sea Level				

CASING DETAILS				
TVD	MD	Name	Size	
2250.00	2332.45	8 5/8"	8.625	



Kerr McGee Oil and Gas Onshore LP

**Uintah County, UT UTM12
NBU 922-36K PAD
NBU 922-36K1BS**

OH

Plan: PLAN #1 2-8-11 RHS

Standard Planning Report

09 February, 2011





SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 922-36K1BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4950 & KB 4 @ 4954.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4950 & KB 4 @ 4954.00ft (ASSUMED)
Site:	NBU 922-36K PAD	North Reference:	True
Well:	NBU 922-36K1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-8-11 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 922-36K PAD, SECTION 36 T9S R22E				
Site Position:	Northing:	14,526,552.82 usft	Latitude:	39° 59' 24.760 N	
From:	Lat/Long	Easting:	2,091,410.02 usft	Longitude:	109° 23' 23.683 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	1.03 °

Well	NBU 922-36K1BS, 1798 FSL 1998 FWL					
Well Position	+N/-S	0.00 ft	Northing:	14,526,552.82 usft	Latitude:	39° 59' 24.760 N
	+E/-W	0.00 ft	Easting:	2,091,410.02 usft	Longitude:	109° 23' 23.683 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,950.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	02/08/2011	11.07	65.89	52,374

Design	PLAN #1 2-8-11 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	10.96

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	10.96	1,279.82	169.62	32.85	2.00	2.00	0.00	10.96	
2,577.34	20.00	10.96	2,480.12	598.52	115.91	0.00	0.00	0.00	0.00	
3,577.34	0.00	0.00	3,459.93	768.14	148.76	2.00	-2.00	0.00	180.00	
8,791.40	0.00	0.00	8,674.00	768.14	148.76	0.00	0.00	0.00	0.00	PBHL_NBU 922-36K



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 922-36K1BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4950 & KB 4 @ 4954.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4950 & KB 4 @ 4954.00ft (ASSUMED)
Site:	NBU 922-36K PAD	North Reference:	True
Well:	NBU 922-36K1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-8-11 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	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00										
400.00	2.00	10.96	399.98	1.71	0.33	1.75	2.00	2.00	2.00	0.00
500.00	4.00	10.96	499.84	6.85	1.33	6.98	2.00	2.00	2.00	0.00
600.00	6.00	10.96	599.45	15.41	2.98	15.69	2.00	2.00	2.00	0.00
700.00	8.00	10.96	698.70	27.37	5.30	27.88	2.00	2.00	2.00	0.00
800.00	10.00	10.96	797.47	42.73	8.28	43.52	2.00	2.00	2.00	0.00
900.00	12.00	10.96	895.62	61.46	11.90	62.60	2.00	2.00	2.00	0.00
1,000.00	14.00	10.96	993.06	83.54	16.18	85.10	2.00	2.00	2.00	0.00
1,100.00	16.00	10.96	1,089.64	108.95	21.10	110.98	2.00	2.00	2.00	0.00
1,154.62	17.09	10.96	1,142.00	124.22	24.06	126.53	2.00	2.00	2.00	0.00
GREEN RIVER										
1,200.00	18.00	10.96	1,185.27	137.66	26.66	140.21	2.00	2.00	2.00	0.00
1,300.00	20.00	10.96	1,279.82	169.62	32.85	172.77	2.00	2.00	2.00	0.00
Start 1277.34 hold at 1300.00 MD										
1,400.00	20.00	10.96	1,373.78	203.19	39.35	206.97	0.00	0.00	0.00	0.00
1,500.00	20.00	10.96	1,467.75	236.77	45.86	241.17	0.00	0.00	0.00	0.00
1,600.00	20.00	10.96	1,561.72	270.35	52.36	275.37	0.00	0.00	0.00	0.00
1,700.00	20.00	10.96	1,655.69	303.93	58.86	309.58	0.00	0.00	0.00	0.00
1,800.00	20.00	10.96	1,749.66	337.51	65.36	343.78	0.00	0.00	0.00	0.00
1,900.00	20.00	10.96	1,843.63	371.08	71.87	377.98	0.00	0.00	0.00	0.00
2,000.00	20.00	10.96	1,937.60	404.66	78.37	412.18	0.00	0.00	0.00	0.00
2,100.00	20.00	10.96	2,031.57	438.24	84.87	446.38	0.00	0.00	0.00	0.00
2,200.00	20.00	10.96	2,125.54	471.82	91.38	480.59	0.00	0.00	0.00	0.00
2,300.00	20.00	10.96	2,219.51	505.40	97.88	514.79	0.00	0.00	0.00	0.00
2,332.45	20.00	10.96	2,250.00	516.29	99.99	525.89	0.00	0.00	0.00	0.00
8 5/8"										
2,400.00	20.00	10.96	2,313.48	538.98	104.38	548.99	0.00	0.00	0.00	0.00
2,500.00	20.00	10.96	2,407.45	572.55	110.88	583.19	0.00	0.00	0.00	0.00
2,577.34	20.00	10.96	2,480.12	598.52	115.91	609.64	0.00	0.00	0.00	0.00
Start Drop -2.00										
2,600.00	19.55	10.96	2,501.45	606.05	117.37	617.31	2.00	-2.00	2.00	0.00
2,700.00	17.55	10.96	2,596.25	637.27	123.42	649.12	2.00	-2.00	2.00	0.00
2,800.00	15.55	10.96	2,692.10	665.23	128.83	677.59	2.00	-2.00	2.00	0.00
2,900.00	13.55	10.96	2,788.89	689.89	133.61	702.71	2.00	-2.00	2.00	0.00
3,000.00	11.55	10.96	2,886.50	711.22	137.74	724.43	2.00	-2.00	2.00	0.00
3,100.00	9.55	10.96	2,984.80	729.19	141.22	742.74	2.00	-2.00	2.00	0.00
3,200.00	7.55	10.96	3,083.69	743.78	144.04	757.60	2.00	-2.00	2.00	0.00
3,300.00	5.55	10.96	3,183.03	754.97	146.21	769.00	2.00	-2.00	2.00	0.00
3,400.00	3.55	10.96	3,282.71	762.75	147.72	776.92	2.00	-2.00	2.00	0.00
3,500.00	1.55	10.96	3,382.61	767.11	148.56	781.37	2.00	-2.00	2.00	0.00
3,577.34	0.00	0.00	3,459.93	768.14	148.76	782.41	2.00	-2.00	2.00	0.00
Start 5214.07 hold at 3577.34 MD										
3,600.00	0.00	0.00	3,482.60	768.14	148.76	782.41	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,582.60	768.14	148.76	782.41	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,682.60	768.14	148.76	782.41	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,782.60	768.14	148.76	782.41	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	3,882.60	768.14	148.76	782.41	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	3,982.60	768.14	148.76	782.41	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,082.60	768.14	148.76	782.41	0.00	0.00	0.00	0.00



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 922-36K1BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4950 & KB 4 @ 4954.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4950 & KB 4 @ 4954.00ft (ASSUMED)
Site:	NBU 922-36K PAD	North Reference:	True
Well:	NBU 922-36K1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-8-11 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)
4,300.00	0.00	0.00	4,182.60	768.14	148.76	782.41	0.00	0.00	0.00
4,354.40	0.00	0.00	4,237.00	768.14	148.76	782.41	0.00	0.00	0.00
WASATCH									
4,400.00	0.00	0.00	4,282.60	768.14	148.76	782.41	0.00	0.00	0.00
4,500.00	0.00	0.00	4,382.60	768.14	148.76	782.41	0.00	0.00	0.00
4,600.00	0.00	0.00	4,482.60	768.14	148.76	782.41	0.00	0.00	0.00
4,700.00	0.00	0.00	4,582.60	768.14	148.76	782.41	0.00	0.00	0.00
4,800.00	0.00	0.00	4,682.60	768.14	148.76	782.41	0.00	0.00	0.00
4,900.00	0.00	0.00	4,782.60	768.14	148.76	782.41	0.00	0.00	0.00
5,000.00	0.00	0.00	4,882.60	768.14	148.76	782.41	0.00	0.00	0.00
5,100.00	0.00	0.00	4,982.60	768.14	148.76	782.41	0.00	0.00	0.00
5,200.00	0.00	0.00	5,082.60	768.14	148.76	782.41	0.00	0.00	0.00
5,300.00	0.00	0.00	5,182.60	768.14	148.76	782.41	0.00	0.00	0.00
5,400.00	0.00	0.00	5,282.60	768.14	148.76	782.41	0.00	0.00	0.00
5,500.00	0.00	0.00	5,382.60	768.14	148.76	782.41	0.00	0.00	0.00
5,600.00	0.00	0.00	5,482.60	768.14	148.76	782.41	0.00	0.00	0.00
5,700.00	0.00	0.00	5,582.60	768.14	148.76	782.41	0.00	0.00	0.00
5,800.00	0.00	0.00	5,682.60	768.14	148.76	782.41	0.00	0.00	0.00
5,900.00	0.00	0.00	5,782.60	768.14	148.76	782.41	0.00	0.00	0.00
6,000.00	0.00	0.00	5,882.60	768.14	148.76	782.41	0.00	0.00	0.00
6,100.00	0.00	0.00	5,982.60	768.14	148.76	782.41	0.00	0.00	0.00
6,200.00	0.00	0.00	6,082.60	768.14	148.76	782.41	0.00	0.00	0.00
6,300.00	0.00	0.00	6,182.60	768.14	148.76	782.41	0.00	0.00	0.00
6,400.00	0.00	0.00	6,282.60	768.14	148.76	782.41	0.00	0.00	0.00
6,500.00	0.00	0.00	6,382.60	768.14	148.76	782.41	0.00	0.00	0.00
6,560.40	0.00	0.00	6,443.00	768.14	148.76	782.41	0.00	0.00	0.00
MESAVERDE									
6,600.00	0.00	0.00	6,482.60	768.14	148.76	782.41	0.00	0.00	0.00
6,700.00	0.00	0.00	6,582.60	768.14	148.76	782.41	0.00	0.00	0.00
6,800.00	0.00	0.00	6,682.60	768.14	148.76	782.41	0.00	0.00	0.00
6,900.00	0.00	0.00	6,782.60	768.14	148.76	782.41	0.00	0.00	0.00
7,000.00	0.00	0.00	6,882.60	768.14	148.76	782.41	0.00	0.00	0.00
7,100.00	0.00	0.00	6,982.60	768.14	148.76	782.41	0.00	0.00	0.00
7,200.00	0.00	0.00	7,082.60	768.14	148.76	782.41	0.00	0.00	0.00
7,300.00	0.00	0.00	7,182.60	768.14	148.76	782.41	0.00	0.00	0.00
7,400.00	0.00	0.00	7,282.60	768.14	148.76	782.41	0.00	0.00	0.00
7,500.00	0.00	0.00	7,382.60	768.14	148.76	782.41	0.00	0.00	0.00
7,600.00	0.00	0.00	7,482.60	768.14	148.76	782.41	0.00	0.00	0.00
7,700.00	0.00	0.00	7,582.60	768.14	148.76	782.41	0.00	0.00	0.00
7,800.00	0.00	0.00	7,682.60	768.14	148.76	782.41	0.00	0.00	0.00
7,900.00	0.00	0.00	7,782.60	768.14	148.76	782.41	0.00	0.00	0.00
8,000.00	0.00	0.00	7,882.60	768.14	148.76	782.41	0.00	0.00	0.00
8,100.00	0.00	0.00	7,982.60	768.14	148.76	782.41	0.00	0.00	0.00
8,200.00	0.00	0.00	8,082.60	768.14	148.76	782.41	0.00	0.00	0.00
8,300.00	0.00	0.00	8,182.60	768.14	148.76	782.41	0.00	0.00	0.00
8,400.00	0.00	0.00	8,282.60	768.14	148.76	782.41	0.00	0.00	0.00
8,500.00	0.00	0.00	8,382.60	768.14	148.76	782.41	0.00	0.00	0.00
8,600.00	0.00	0.00	8,482.60	768.14	148.76	782.41	0.00	0.00	0.00
8,700.00	0.00	0.00	8,582.60	768.14	148.76	782.41	0.00	0.00	0.00
8,791.40	0.00	0.00	8,674.00	768.14	148.76	782.41	0.00	0.00	0.00
PBHL_NBU 922-36K1BS									



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 922-36K1BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4950 & KB 4 @ 4954.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4950 & KB 4 @ 4954.00ft (ASSUMED)
Site:	NBU 922-36K PAD	North Reference:	True
Well:	NBU 922-36K1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-8-11 RHS		

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 922-36K1BS: - hit/miss target - Shape	0.00	0.00	8,674.00	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W
- plan hits target center - Circle (radius 25.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,332.45	2,250.00	8 5/8"	8.625	11.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,154.62	1,138.00	GREEN RIVER			
4,354.40	4,233.00	WASATCH			
6,560.40	6,439.00	MESAVERDE			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
300.00	300.00	0.00	0.00	Start Build 2.00	
1,300.00	1,279.82	169.62	32.85	Start 1277.34 hold at 1300.00 MD	
2,577.34	2,480.12	598.52	115.91	Start Drop -2.00	
3,577.34	3,459.93	768.14	148.76	Start 5214.07 hold at 3577.34 MD	
8,791.40	8,674.00	768.14	148.76	TD at 8791.40	



Kerr McGee Oil and Gas Onshore LP

**Uintah County, UT UTM12
NBU 922-36K PAD
NBU 922-36K1BS**

OH

Plan: PLAN #1 2-8-11 RHS

Standard Planning Report - Geographic

09 February, 2011





Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 922-36K1BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4950 & KB 4 @ 4954.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4950 & KB 4 @ 4954.00ft (ASSUMED)
Site:	NBU 922-36K PAD	North Reference:	True
Well:	NBU 922-36K1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-8-11 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 922-36K PAD, SECTION 36 T9S R22E				
Site Position:	Northing:	14,526,552.82 usft	Latitude:	39° 59' 24.760 N	
From: Lat/Long	Easting:	2,091,410.02 usft	Longitude:	109° 23' 23.683 W	
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	1.03 °

Well	NBU 922-36K1BS, 1798 FSL 1998 FWL					
Well Position	+N/-S	0.00 ft	Northing:	14,526,552.82 usft	Latitude:	39° 59' 24.760 N
	+E/-W	0.00 ft	Easting:	2,091,410.02 usft	Longitude:	109° 23' 23.683 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,950.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	02/08/2011	11.07	65.89	52,374

Design	PLAN #1 2-8-11 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	10.96

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	10.96	1,279.82	169.62	32.85	2.00	2.00	0.00	10.96	
2,577.34	20.00	10.96	2,480.12	598.52	115.91	0.00	0.00	0.00	0.00	
3,577.34	0.00	0.00	3,459.93	768.14	148.76	2.00	-2.00	0.00	180.00	
8,791.40	0.00	0.00	8,674.00	768.14	148.76	0.00	0.00	0.00	0.00	PBHL_NBU 922-36K



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 922-36K1BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4950 & KB 4 @ 4954.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4950 & KB 4 @ 4954.00ft (ASSUMED)
Site:	NBU 922-36K PAD	North Reference:	True
Well:	NBU 922-36K1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-8-11 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	14,526,552.82	2,091,410.02	39° 59' 24.760 N	109° 23' 23.683 W	
100.00	0.00	0.00	100.00	0.00	0.00	14,526,552.82	2,091,410.02	39° 59' 24.760 N	109° 23' 23.683 W	
200.00	0.00	0.00	200.00	0.00	0.00	14,526,552.82	2,091,410.02	39° 59' 24.760 N	109° 23' 23.683 W	
300.00	0.00	0.00	300.00	0.00	0.00	14,526,552.82	2,091,410.02	39° 59' 24.760 N	109° 23' 23.683 W	
Start Build 2.00										
400.00	2.00	10.96	399.98	1.71	0.33	14,526,554.54	2,091,410.32	39° 59' 24.777 N	109° 23' 23.679 W	
500.00	4.00	10.96	499.84	6.85	1.33	14,526,559.70	2,091,411.22	39° 59' 24.827 N	109° 23' 23.666 W	
600.00	6.00	10.96	599.45	15.41	2.98	14,526,568.28	2,091,412.72	39° 59' 24.912 N	109° 23' 23.645 W	
700.00	8.00	10.96	698.70	27.37	5.30	14,526,580.28	2,091,414.82	39° 59' 25.030 N	109° 23' 23.615 W	
800.00	10.00	10.96	797.47	42.73	8.28	14,526,595.69	2,091,417.52	39° 59' 25.182 N	109° 23' 23.577 W	
900.00	12.00	10.96	895.62	61.46	11.90	14,526,614.49	2,091,420.81	39° 59' 25.367 N	109° 23' 23.530 W	
1,000.00	14.00	10.96	993.06	83.54	16.18	14,526,636.64	2,091,424.69	39° 59' 25.585 N	109° 23' 23.475 W	
1,100.00	16.00	10.96	1,089.64	108.95	21.10	14,526,662.14	2,091,429.15	39° 59' 25.837 N	109° 23' 23.412 W	
1,154.62	17.09	10.96	1,142.00	124.22	24.06	14,526,677.46	2,091,431.83	39° 59' 25.987 N	109° 23' 23.374 W	
GREEN RIVER										
1,200.00	18.00	10.96	1,185.27	137.66	26.66	14,526,690.94	2,091,434.19	39° 59' 26.120 N	109° 23' 23.341 W	
1,300.00	20.00	10.96	1,279.82	169.62	32.85	14,526,723.00	2,091,439.80	39° 59' 26.436 N	109° 23' 23.261 W	
Start 1277.34 hold at 1300.00 MD										
1,400.00	20.00	10.96	1,373.78	203.19	39.35	14,526,756.69	2,091,445.69	39° 59' 26.768 N	109° 23' 23.178 W	
1,500.00	20.00	10.96	1,467.75	236.77	45.86	14,526,790.38	2,091,451.59	39° 59' 27.100 N	109° 23' 23.094 W	
1,600.00	20.00	10.96	1,561.72	270.35	52.36	14,526,824.07	2,091,457.48	39° 59' 27.432 N	109° 23' 23.010 W	
1,700.00	20.00	10.96	1,655.69	303.93	58.86	14,526,857.76	2,091,463.38	39° 59' 27.764 N	109° 23' 22.927 W	
1,800.00	20.00	10.96	1,749.66	337.51	65.36	14,526,891.45	2,091,469.27	39° 59' 28.096 N	109° 23' 22.843 W	
1,900.00	20.00	10.96	1,843.63	371.08	71.87	14,526,925.14	2,091,475.17	39° 59' 28.427 N	109° 23' 22.760 W	
2,000.00	20.00	10.96	1,937.60	404.66	78.37	14,526,958.83	2,091,481.07	39° 59' 28.759 N	109° 23' 22.676 W	
2,100.00	20.00	10.96	2,031.57	438.24	84.87	14,526,992.52	2,091,486.96	39° 59' 29.091 N	109° 23' 22.593 W	
2,200.00	20.00	10.96	2,125.54	471.82	91.38	14,527,026.21	2,091,492.86	39° 59' 29.423 N	109° 23' 22.509 W	
2,300.00	20.00	10.96	2,219.51	505.40	97.88	14,527,059.90	2,091,498.75	39° 59' 29.755 N	109° 23' 22.425 W	
2,332.45	20.00	10.96	2,250.00	516.29	99.99	14,527,070.84	2,091,500.66	39° 59' 29.863 N	109° 23' 22.398 W	
8 5/8"										
2,400.00	20.00	10.96	2,313.48	538.98	104.38	14,527,093.59	2,091,504.65	39° 59' 30.087 N	109° 23' 22.342 W	
2,500.00	20.00	10.96	2,407.45	572.55	110.88	14,527,127.28	2,091,510.54	39° 59' 30.419 N	109° 23' 22.258 W	
2,577.34	20.00	10.96	2,480.12	598.52	115.91	14,527,153.34	2,091,515.10	39° 59' 30.675 N	109° 23' 22.194 W	
Start Drop -2.00										
2,600.00	19.55	10.96	2,501.45	606.05	117.37	14,527,160.89	2,091,516.42	39° 59' 30.750 N	109° 23' 22.175 W	
2,700.00	17.55	10.96	2,596.25	637.27	123.42	14,527,192.22	2,091,521.91	39° 59' 31.059 N	109° 23' 22.097 W	
2,800.00	15.55	10.96	2,692.10	665.23	128.83	14,527,220.27	2,091,526.81	39° 59' 31.335 N	109° 23' 22.028 W	
2,900.00	13.55	10.96	2,788.89	689.89	133.61	14,527,245.01	2,091,531.14	39° 59' 31.579 N	109° 23' 21.966 W	
3,000.00	11.55	10.96	2,886.50	711.22	137.74	14,527,266.41	2,091,534.89	39° 59' 31.789 N	109° 23' 21.913 W	
3,100.00	9.55	10.96	2,984.80	729.19	141.22	14,527,284.44	2,091,538.04	39° 59' 31.967 N	109° 23' 21.869 W	
3,200.00	7.55	10.96	3,083.69	743.78	144.04	14,527,299.08	2,091,540.60	39° 59' 32.111 N	109° 23' 21.832 W	
3,300.00	5.55	10.96	3,183.03	754.97	146.21	14,527,310.31	2,091,542.57	39° 59' 32.222 N	109° 23' 21.804 W	
3,400.00	3.55	10.96	3,282.71	762.75	147.72	14,527,318.12	2,091,543.94	39° 59' 32.299 N	109° 23' 21.785 W	
3,500.00	1.55	10.96	3,382.61	767.11	148.56	14,527,322.49	2,091,544.70	39° 59' 32.342 N	109° 23' 21.774 W	
3,577.34	0.00	0.00	3,459.93	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
Start 5214.07 hold at 3577.34 MD										
3,600.00	0.00	0.00	3,482.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
3,700.00	0.00	0.00	3,582.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
3,800.00	0.00	0.00	3,682.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
3,900.00	0.00	0.00	3,782.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
4,000.00	0.00	0.00	3,882.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
4,100.00	0.00	0.00	3,982.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
4,200.00	0.00	0.00	4,082.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
4,300.00	0.00	0.00	4,182.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 922-36K1BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4950 & KB 4 @ 4954.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4950 & KB 4 @ 4954.00ft (ASSUMED)
Site:	NBU 922-36K PAD	North Reference:	True
Well:	NBU 922-36K1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-8-11 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	
4,354.40	0.00	0.00	4,237.00	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
WASATCH										
4,400.00	0.00	0.00	4,282.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
4,500.00	0.00	0.00	4,382.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
4,600.00	0.00	0.00	4,482.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
4,700.00	0.00	0.00	4,582.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
4,800.00	0.00	0.00	4,682.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
4,900.00	0.00	0.00	4,782.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
5,000.00	0.00	0.00	4,882.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
5,100.00	0.00	0.00	4,982.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
5,200.00	0.00	0.00	5,082.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
5,300.00	0.00	0.00	5,182.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
5,400.00	0.00	0.00	5,282.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
5,500.00	0.00	0.00	5,382.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
5,600.00	0.00	0.00	5,482.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
5,700.00	0.00	0.00	5,582.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
5,800.00	0.00	0.00	5,682.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
5,900.00	0.00	0.00	5,782.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
6,000.00	0.00	0.00	5,882.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
6,100.00	0.00	0.00	5,982.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
6,200.00	0.00	0.00	6,082.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
6,300.00	0.00	0.00	6,182.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
6,400.00	0.00	0.00	6,282.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
6,500.00	0.00	0.00	6,382.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
6,560.40	0.00	0.00	6,443.00	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
MESAVERDE										
6,600.00	0.00	0.00	6,482.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
6,700.00	0.00	0.00	6,582.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
6,800.00	0.00	0.00	6,682.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
6,900.00	0.00	0.00	6,782.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
7,000.00	0.00	0.00	6,882.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
7,100.00	0.00	0.00	6,982.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
7,200.00	0.00	0.00	7,082.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
7,300.00	0.00	0.00	7,182.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
7,400.00	0.00	0.00	7,282.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
7,500.00	0.00	0.00	7,382.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
7,600.00	0.00	0.00	7,482.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
7,700.00	0.00	0.00	7,582.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
7,800.00	0.00	0.00	7,682.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
7,900.00	0.00	0.00	7,782.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
8,000.00	0.00	0.00	7,882.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
8,100.00	0.00	0.00	7,982.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
8,200.00	0.00	0.00	8,082.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
8,300.00	0.00	0.00	8,182.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
8,400.00	0.00	0.00	8,282.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
8,500.00	0.00	0.00	8,382.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
8,600.00	0.00	0.00	8,482.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
8,700.00	0.00	0.00	8,582.60	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
8,791.40	0.00	0.00	8,674.00	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W	
PBHL_NBU 922-36K1BS										



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 922-36K1BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4950 & KB 4 @ 4954.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4950 & KB 4 @ 4954.00ft (ASSUMED)
Site:	NBU 922-36K PAD	North Reference:	True
Well:	NBU 922-36K1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-8-11 RHS		

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 922-36K1BS: - hit/miss target - Shape	0.00	0.00	8,674.00	768.14	148.76	14,527,323.52	2,091,544.88	39° 59' 32.352 N	109° 23' 21.772 W
- plan hits target center - Circle (radius 25.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,332.45	2,250.00	8 5/8"	8.625	11.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,154.62	1,142.00	GREEN RIVER			
4,354.40	4,237.00	WASATCH			
6,560.40	6,443.00	MESAVERDE			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
300.00	300.00	0.00	0.00	Start Build 2.00	
1,300.00	1,279.82	169.62	32.85	Start 1277.34 hold at 1300.00 MD	
2,577.34	2,480.12	598.52	115.91	Start Drop -2.00	
3,577.34	3,459.93	768.14	148.76	Start 5214.07 hold at 3577.34 MD	
8,791.40	8,674.00	768.14	148.76	TD at 8791.40	

NBU 922-36K1BS

Surface: 1798' FSL 1998' FWL (NE/4SW/4)
BHL: 2567' FSL 2148' FWL (NE/4SW/4)

NBU 922-36K1CS

Surface: 1809' FSL 2015' FWL (NE/4SW/4)
BHL: 2236' FSL 2147' FWL (NE/4SW/4)

NBU 922-36K4BS

Surface: 1815' FSL 2023' FWL (NE/4SW/4)
BHL: 1904' FSL 2147' FWL (NE/4SW/4)

NBU 922-36K4CS

Surface: 1804' FSL 2006' FWL (NE/4SW/4)
BHL: 1573' FSL 2146' FWL (NE/4SW/4)

NBU 922-36L4CS

Surface: 1793' FSL 1990' FWL (NE/4SW/4)
BHL: 1565' FSL 821' FWL (NW/4SW/4)

Pad: NBU 922-36K 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. Existing Roads:

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.

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:

One new access road is proposed (see Topo Map B). The $\pm 70'$ road re-route will run along the North East perimeter of the edge of the pad due to the pad expansion. 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 CIGE 222. The CIGE 222 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:

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 $\pm 1,940'$ and the individual segments are broken up as follows:

- $\pm 660'$ (0.13 miles) –New 6" buried gas pipeline from the meter to the edge of the pad. Please refer to Topo D2.
- $\pm 355'$ (0.07 miles) –New 6" buried gas pipeline from the edge of pad to tie-in to the proposed 16" buried gas pipeline 36O intersection. Please refer to Topo D.
- $\pm 925'$ (0.18 miles) –New 16" buried gas pipeline from the proposed 36O intersection to tie-in to the proposed 36N intersection. Please refer to Topo D.

The total liquid gathering pipeline distance from the separator to the tie in point is $\pm 1,940'$ and the individual segments are broken up as follows:

- $\pm 660'$ (0.13 miles) –New 6" buried liquid pipeline from the separator to the edge of the pad. Please refer to Topo D2.
- $\pm 355'$ (0.07 miles) –New 6" buried liquid pipeline from the edge of pad to the tie-in at the proposed 6" liquid pipeline at the proposed 36O intersection. Please refer to Topo D.
- $\pm 925'$ (0.18 miles) –New 6" buried liquid pipeline from the proposed 36O intersection to the tie-in at the 6" buried liquid pipeline at the proposed 36N 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 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.

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36K4BS/ 36K4CS/ 36L4CS

Surface Use Plan of Operations
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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:

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 922-36K1BS / 36K1CS/
36K4BS/ 36K4CS/ 36L4CS**

**Surface Use Plan of Operations
Page 5**

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 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.

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 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

**NBU 922-36K1BS / 36K1CS/
36K4BS/ 36K4CS/ 36L4CS**

**Surface Use Plan of Operations
Page 8**

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.

J. Surface/Mineral Ownership:

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

K. Other Information:

None

NBU 922-36K1BS / 36K1CS/
36K4BS/ 36K4CS/ 36L4CS

Surface Use Plan of Operations
Page 9

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



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 922-36K1BS
T9S-R22E
Section 36: NESW/NESW
Surface: 1798' FSL, 1998' FWL
Bottom Hole: 2567' FSL, 2148' FWL
Uintah County, Utah

Dear Ms. Mason:

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

- Kerr-McGee's NBU 922-36K1BS 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.

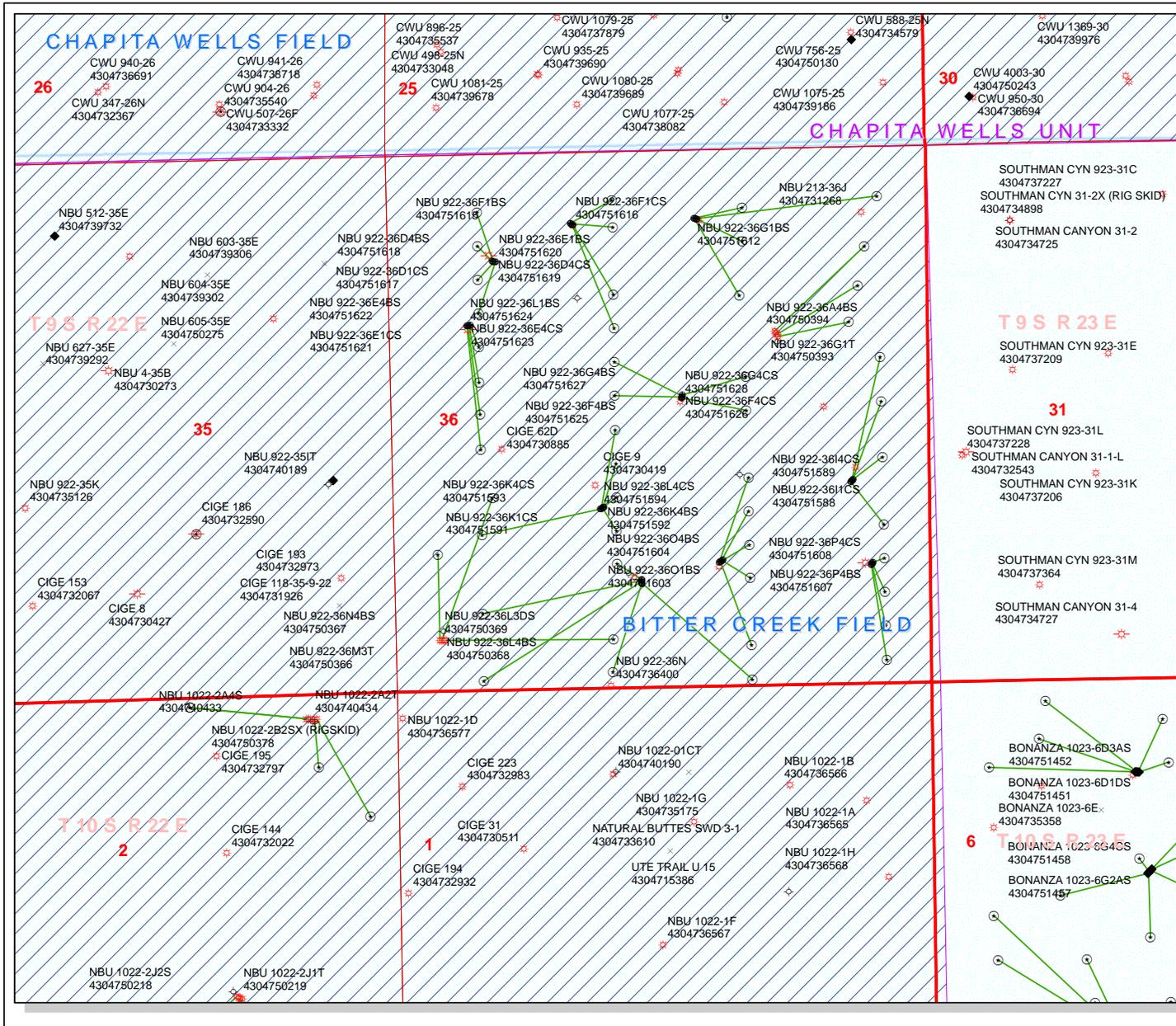
Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink, appearing to read 'Joe D. Johnson', with a horizontal line underneath.

Joseph D. Johnson
Landman



API Number: 4304751590
Well Name: NBU 922-36K1BS
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

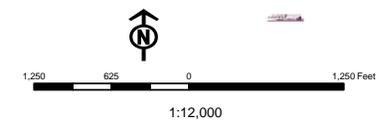
Units	Wells Query Status
ACTIVE	APD - Approved Permit
EXPLORATORY	DRIL - Spudded (Drilling Commenced)
GAS STORAGE	GIW - Gas Injection
NF PP OIL	GS - Gas Storage
NF SECONDARY	LA - Location Abandoned
PI OIL	LOC - New Location
PP GAS	DPS - Operation Suspended
PP GEOTHERMAL	PA - Plugged Abandoned
PP OIL	PGW - Producing Gas Well
SECONDARY	POW - Producing Oil Well
TERMINATED	RET - Returned APD
Status	SGW - Shut-in Gas Well
Unknown	SOW - Shut-in Oil Well
ABANDONED	TA - Temp. Abandoned
ACTIVE	TW - Test Well
COMBINED	WDW - Water Disposal
INACTIVE	WIW - Water Injection Well
STORAGE	WSW - Water Supply Well
TERMINATED	
Sections	
Township	

SOUTHMAN CYN 923-31C
 4304737227
 SOUTHMAN CYN 31-2X (RIG SKID)
 4304734898
 SOUTHMAN CANYON 31-2
 4304734725

SOUTHMAN CYN 923-31E
 4304737209

SOUTHMAN CYN 923-31L
 4304737228
 SOUTHMAN CANYON 31-1-L
 4304732543
 SOUTHMAN CYN 923-31K
 4304737206

SOUTHMAN CYN 923-31M
 4304737364
 SOUTHMAN CANYON 31-4
 4304734727



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
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(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

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

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

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

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

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 922-36K1BS			
String	Surf	Prod		
Casing Size(")	8.625	4.500		
Setting Depth (TVD)	2173	8674		
Previous Shoe Setting Depth (TVD)	40	2173		
Max Mud Weight (ppg)	8.4	12.5		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	7780		
Operators Max Anticipated Pressure (psi)	5551	12.3		

Calculations	Surf String	8.625	"
Max BHP (psi)	.052*Setting Depth*MW=	949	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	688	NO <input type="text" value="air drill"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	471	YES <input type="text" value="OK"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	480	NO <input type="text" value="Reasonable"/>
Required Casing/BOPE Test Pressure=		2173	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=	5638	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4597	YES <input type="text"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3730	YES <input type="text" value="OK"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	4208	NO <input type="text" value="REasonable"/>
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2173	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 <input type="text"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO <input type="text"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO <input type="text"/>
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 <input type="text"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO <input type="text"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO <input type="text"/>
Required Casing/BOPE Test Pressure=			psi

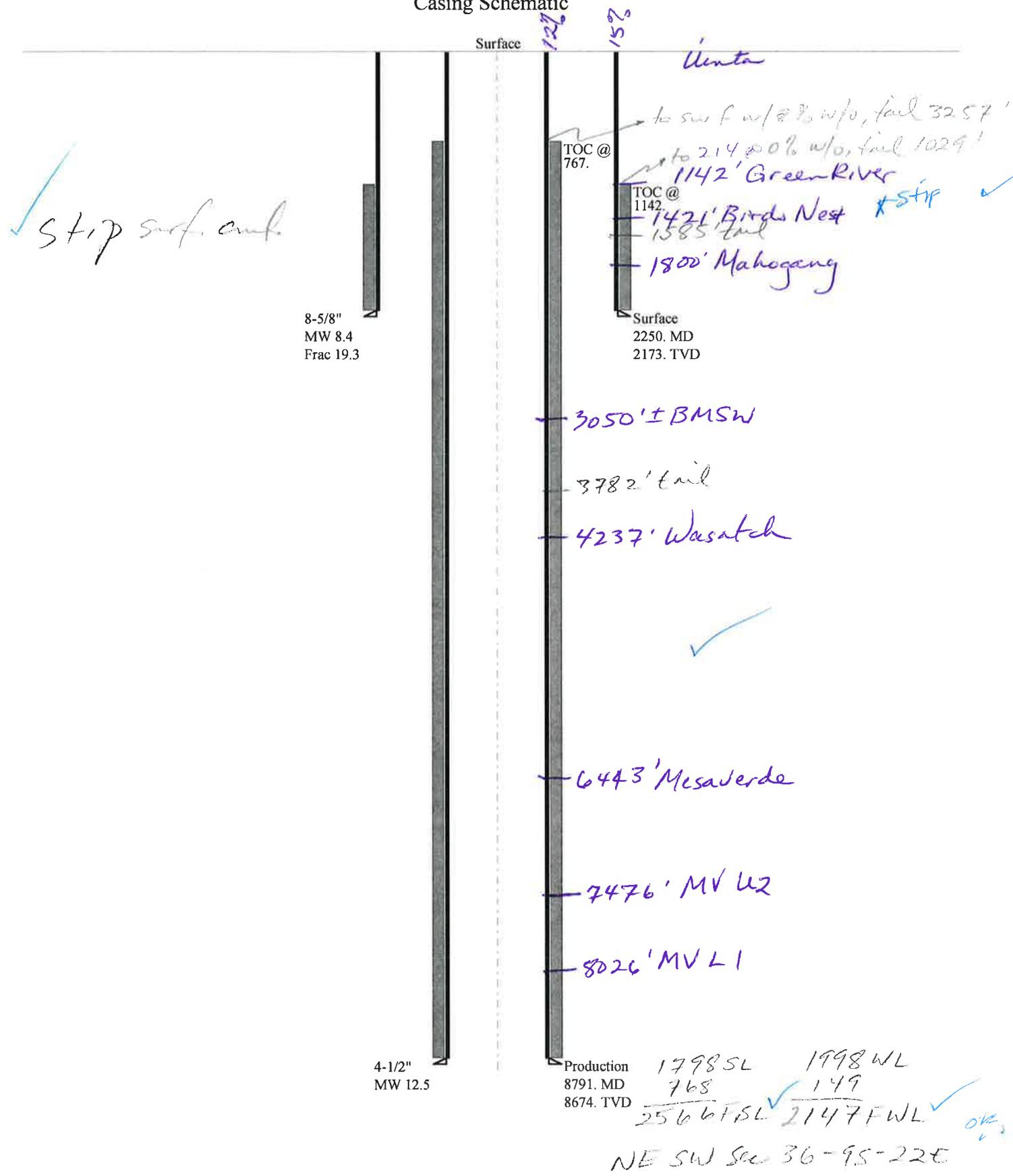
API Well Number: 43047515900000

*Max Pressure Allowed @ Previous Casing Shoe=

psi *Assumes 1psi/ft frac gradient

43047515900000 NBU 922-36K1BS

Casing Schematic



Well name:	43047515900000 NBU 922-36K1BS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Surface	Project ID:	43-047-51590
Location:	UINTAH	COUNTY	

Design parameters:

Collapse

Mud weight: 8.400 ppg
Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 104 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 1,142 ft

Burst

Max anticipated surface pressure: 1,980 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,241 psi

No backup mud specified.

Tension:

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

Tension is based on air weight.
Neutral point: 1,964 ft

Directional Info - Build & Hold

Kick-off point 300 ft
Departure at shoe: 498 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 20 °

Re subsequent strings:

Next setting depth: 8,791 ft
Next mud weight: 12.500 ppg
Next setting BHP: 5,708 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,250 ft
Injection pressure: 2,250 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	2250	8.625	28.00	I-55	LT&C	2173	2250	7.892	89100
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	948	1880	1.983	2241	3390	1.51	60.8	348	5.72 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 2173 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.

Well name:	43047515900000 NBU 922-36K1BS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Production	Project ID:	43-047-51590
Location:	UINTAH COUNTY		

Design parameters:

Collapse

Mud weight: 12.500 ppg
 Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
 Surface temperature: 74 °F
 Bottom hole temperature: 195 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 100 ft
 Cement top: 767 ft

Burst

Max anticipated surface pressure: 3,724 psi
 Internal gradient: 0.220 psi/ft
 Calculated BHP 5,632 psi

No backup mud specified.

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: 7,170 ft

Directional Info - Build & Hold

Kick-off point 300 ft
 Departure at shoe: 782 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	8791	4.5	11.60	I-80	LT&C	8674	8791	3.875	116041
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	5632	6360	1.129	5632	7780	1.38	100.6	212	2.11 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 8674 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.

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.
Well Name NBU 922-36K1BS
API Number 43047515900000 **APD No** 3807 **Field/Unit** NATURAL BUTTES
Location: 1/4,1/4 NESW **Sec** 36 **Tw** 9.0S **Rng** 22.0E 1798 **FSL** 1998 **FWL**
GPS Coord (UTM) 637468 4427710 **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 45.7 road miles following Utah State, Uintah County and oilfield development roads to the location.

Five additional gas wells will be added to and directionally drilled from the NBU 922-36K pad. They are the NBU 922-36K4BS, NBU 922-36K1CS, NBU 922-36K4CS, NBU 922-36K1BS and NBU 922-36L4CS. The pad contains the existing CIGE 222 gas well. A new location essentially will be constructed using the existing pad for the northwest corner. Because of the limited space in the area, the width of the pad has been reduced 20 feet from the desired width. The location will be extended to the south onto a rocky ridge which has a flat top. A swale to the west will be missed. A deep rocky drainage is to the north. Fill should be kept out of this draw. A cut of 26.6 feet occurs at pit corner C. Maximum fill is 17.0 feet at location corner 1`4. Both of the corners have been angled so as avoid excessive fill and the draw in this area. Where the pad is cut into steep side slopes, the cut slope may be left at about ¼:1 to reduce the amount of cutting and disturbance. Reserve pit corner A is in 4.5 feet of fill. With the proposed 15 foot outer bench, 2 feet of freeboard, a 30-mil liner and the spoils placed along this side, it should be stable. The existing pad shows no stability problems. Although heavy excavation is required for enlarging the pad, no stability concerns exist. The selected site 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
Wildlife Habitat
Existing Well Pad

New Road Miles	Well Pad	Src Const Material	Surface Formation
0	Width 332 Length 465	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Area beyond the existing pad is poorly vegetated with blue bunch wheatgrass, Indian ricegrass, 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 shallow and rocky.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diversion Required? N

Berm Required? N

Erosion Sedimentation Control Required? N

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

Reserve Pit

Site-Specific Factors

Site Ranking

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

Characteristics / Requirements

The reserve pit is planned mostly in an area of cut in the northwest side of the location. Dimensions are 100' x 240' x 12' deep with 2' of freeboard. Corner A is within 4.3 feet of fill. With the proposed 15 foot outer bench, 2 feet of freeboard, a 30-mil liner and the spoils placed along this side, it should be stable.

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

Other Observations / Comments

Floyd Bartlett
Evaluator

5/24/2011
Date / Time

Application for Permit to Drill

Statement of Basis

7/26/2011

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
3807	43047515900000	SITLA	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		Surface Owner-APD		
Well Name	NBU 922-36K1BS		Unit	NATURAL BUTTES	
Field	NATURAL BUTTES		Type of Work	DRILL	
Location	NESW 36 9S 22E S 1798 FSL 1998 FWL GPS Coord (UTM)			637460E	4427701N

Geologic Statement of Basis

Kerr McGee proposes to set 2,250' 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 3,050'. 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
APD Evaluator

6/21/2011
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 $\frac{3}{4}$ 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 45.7 road miles following Utah State, Uintah County and oilfield development roads to the location.

Five additional gas wells will be added to and directionally drilled from the NBU 922-36K pad. They are the NBU 922-36K4BS, NBU 922-36K1CS, NBU 922-36K4CS, NBU 922-36K1BS and NBU 922-36L4CS. The pad contains the existing CIGE 222 gas well. A new location essentially will be constructed using the existing pad for the northwest corner. Because of the limited space in the area, the width of the pad has been reduced 20 feet from the desired width. The location will be extended to the south onto a rocky ridge which has a flat top. A swale to the west will be missed. A deep rocky drainage is to the north. Fill should be kept out of this draw. A cut of 26.6 feet occurs at pit corner C. Maximum fill is 17.0 feet at location corner 1'4. Both of the corners have been angled so as avoid excessive fill and the draw in this area. Where the pad is cut into steep side slopes, the cut slope may be left at about $\frac{1}{4}$:1 to reduce the amount of cutting and disturbance. Reserve pit corner A is in 4.5 feet of fill. With the proposed 15 foot outer bench, 2 feet of freeboard, a 30-mil liner and the spoils placed along this side, it should be stable. The existing pad shows no stability problems. Although heavy excavation is required for enlarging the pad, no stability concerns exist. The selected site 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

Application for Permit to Drill Statement of Basis

7/26/2011

Utah Division of Oil, Gas and Mining

Page 2

values would be significantly affected by drilling and operating the additional wells at this location.

Floyd Bartlett
Onsite Evaluator

5/24/2011
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	The reserve pit shall be fenced upon completion of drilling operations.

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 5/14/2011

API NO. ASSIGNED: 43047515900000

WELL NAME: NBU 922-36K1BS

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

PHONE NUMBER: 720 929-6086

CONTACT: Gina Becker

PROPOSED LOCATION: NESW 36 090S 220E

Permit Tech Review:

SURFACE: 1798 FSL 1998 FWL

Engineering Review:

BOTTOM: 2567 FSL 2148 FWL

Geology Review:

COUNTY: UINTAH

LATITUDE: 39.99020

LONGITUDE: -109.38995

UTM SURF EASTINGS: 637460.00

NORTHINGS: 4427701.00

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 - hmadonald



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 922-36K1BS
API Well Number: 43047515900000
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:

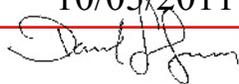
All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- 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
SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-22650
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 922-36K1BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047515900000	
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: 1798 FSL 1998 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW 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	
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 10/3/2011	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> APD EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input checked="" type="checkbox"/> OTHER	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	OTHER: <input type="text" value="Pit Refurb/ ACTS"/>	
<input type="checkbox"/> SPUD REPORT Date of Spud:		
<input type="checkbox"/> DRILLING REPORT Report Date:		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
<p>Kerr-McGee Oil & Gas Onshore, LP is requesting to refurb the existing pit on this multi-well pad for completion operations. The refurb pit will be relined per the requirements in the COA of the APD. Upon completion of the wells on this pad, Kerr-McGee is also requesting to utilize this pit as an ACTS staging pit to be utilized for other completion operations in the area. The trucks will unload water into these tanks before the water is placed into the refurbished pit. The purpose of the frac tanks is to collect any hydro-carbons that may have been associated with the other completion operations before releasing into the pit. We plan to keep this pit open for 1 year. During this time the surrounding well location completion fluids will be recycled in this pit and utilized for other frac jobs in the surrounding sections. Thank you.</p>		
		<p>Approved by the Utah Division of Oil, Gas and Mining</p> <p>Date: <u>10/05/2011</u> By: </p>
NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 9/26/2011	

Please Review Attached Conditions of Approval

RECEIVED Sep. 26, 2011



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Sundry Conditions of Approval Well Number 43047515900000

A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the pit.

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
 Submitted By SHEILA WOPSOCK Phone Number 435.781.7024
 Well Name/Number NBU 922-36K1BS
 Qtr/Qtr NE/SW Section 36 Township 9S Range 22E
 Lease Serial Number ML-22650
 API Number 4304751590

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

Date/Time 10/12/2011 0800 HRS AM PM

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

- Surface Casing
- Intermediate Casing
- Production Casing
- Liner
- Other

RECEIVED
 OCT 07 2011
 DIV. OF OIL, GAS & MINING

Date/Time 10/18/2011 0800 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
LOVEL YOUNG AT 435.781.7051 FOR MORE

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-22650
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 922-36K1BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1798 FSL 1998 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 36 Township: 09.0S Range: 22.0E Meridian: S		9. API NUMBER: 43047515900000
PHONE NUMBER: 720 929-6515 Ext		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UINTAH		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
<input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 10/12/2011	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION	
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION	
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 10/12/2011 AT 1200 HRS.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY		
NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUMBER 435 781-7024	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 10/13/2011	

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
4304751590	NBU 922-36K1BS		NESW	36	9S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
B	99999	2900	10/12/2011			10/31/11	
Comments: MIRU PETE MARTIN BUCKET RIG. <i>WSTMVD</i> SPUD WELL ON 10/12/2011 AT 1200 HRS. <i>BHL = NESW</i>							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751594	NBU 922-36L4CS		NESW	36	9S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
B	99999	2900	10/13/2011			10/31/11	
Comments: MIRU PETE MARTIN BUCKET RIG. <i>WSTMVD</i> SPUD WELL ON 10/12/2011 AT 1400 HRS. <i>BHL = NWSW</i>							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
Comments:							

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

10/13/2011

Title

Date

RECEIVED

OCT 27 2011

DIV. OF OIL, GAS & MINING

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9	
SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-22650	
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 922-36K1BS		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047515900000		
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: 1798 FSL 1998 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW 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		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 10/17/2011 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 50px;" type="text"/>
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.			
<p>The operator requests changes to the production casing program to Ultra DQX/LTC, the drilling program to allow for the use of a Closed Loop system, and requests a variance for FIT Requirements. Please see attached explanation. Thank you.</p> <div style="text-align: right;"> <p>Approved by the Utah Division of Oil, Gas and Mining</p> <p>Date: <u>11/10/2011</u></p> <p>By: <u><i>Dark K. Quist</i></u></p> </div>			
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst	
SIGNATURE N/A	DATE 10/17/2011		

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 922-36K1BS**

Surface: 1798 FSL / 1998 FWL NESW
 BHL: 2567 FSL / 2148 FWL NESW

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:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,142'	
Birds Nest	1,421'	Water
Mahogany	1,800'	Water
Wasatch	4,237'	Gas
Mesaverde	6,443'	Gas
MVU2	7,476'	Gas
MVL1	8,026'	Gas
TVD	8,674'	
TD	8,791'	

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

Please refer to the attached Drilling Program

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

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 8674' TVD, approximately equals
5,551 psi 0.64 psi/ft = actual bottomhole gradient

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

Maximum anticipated surface pressure equals approximately 3,631 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.

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

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

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

Variance for BOPE Requirements

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

Variance for Mud Material Requirements

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

Variance for Special Drilling Operation (surface equipment placement) Requirements

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

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

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

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

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

Variance for FIT Requirements

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

Conclusion

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

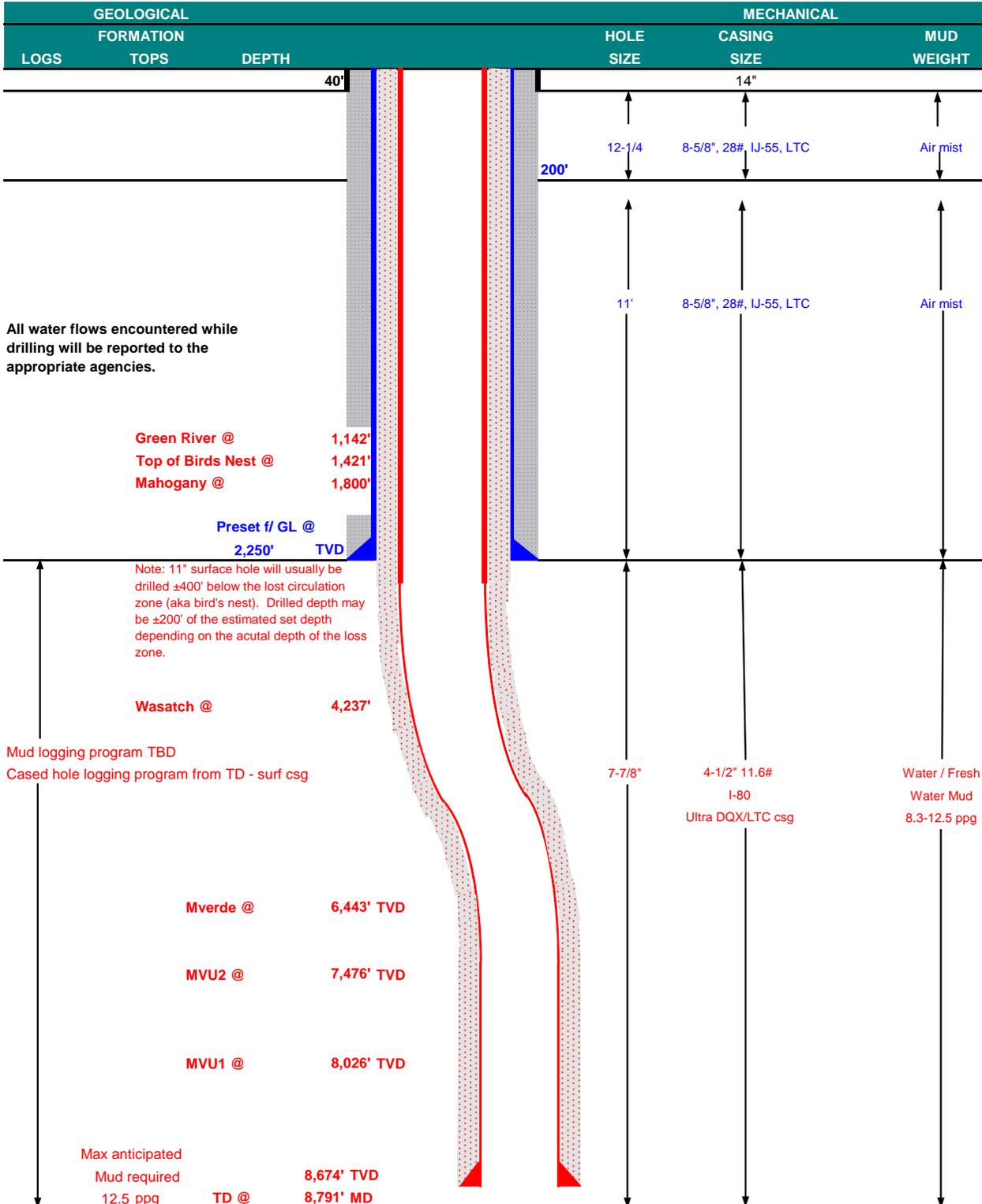
10. **Other Information:**

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	October 17, 2011	
WELL NAME	NBU 922-36K1BS		TD	8,674' TVD	8,791' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
SURFACE LOCATION	NESW 1798 FSL	1998 FWL	Sec 36	T 9S	R 22E
	Latitude: 39.990211		Longitude: -109.389912		NAD 27
BTM HOLE LOCATION	NESW 2567 FSL	2148 FWL	Sec 36	T 9S	R 22E
	Latitude: 39.99232		Longitude: -109.389381		NAD 27
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.				





KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	LTC		DQX
							COLLAPSE	TENSION	
CONDUCTOR	14"	0-40'				3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,250	28.00	IJ-55	LTC	2.40	1.79	6.31	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	1.13		3.24
						1.11	1.13	6.27	

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 Option 1	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80		1.15
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80		1.15
NOTE: If well will circulate water to surface, option 2 will be utilized								
SURFACE Option 2	LEAD	1,750'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	160	35%	11.00		3.82
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80		1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	3,731'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	280	20%	11.00		3.38
	TAIL	5,060'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,200	35%	14.30		1.31

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

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

FLOAT EQUIPMENT & CENTRALIZERS

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

Nick Spence / Danny Showers / Chad Loesel

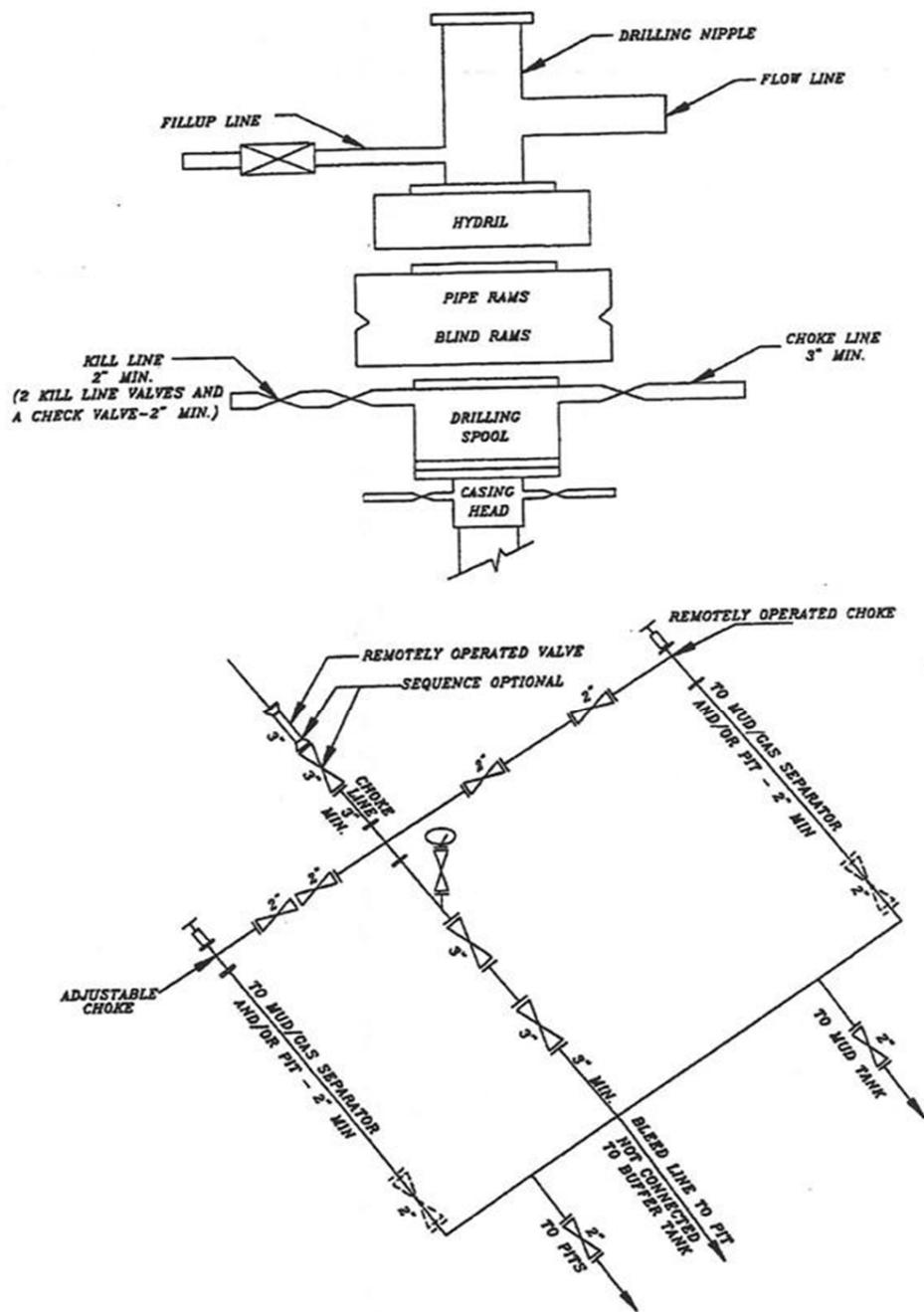
DATE:

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

DATE:

EXHIBIT A
NBU 922-36K1BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

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.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-22650
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 922-36K1BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047515900000	
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: 1798 FSL 1998 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW 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	
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<p>The operator requests changes to the production casing program to Ultra DQX/LTC, the drilling program to allow for the use of a Closed Loop system, and requests a variance for FIT Requirements. Please see attached explanation. Thank you.</p>		
		<p>Approved by the Utah Division of Oil, Gas and Mining</p> <p>Date: 11/10/2011</p> <p>By: <u><i>Dark K. Quist</i></u></p>
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 10/17/2011	

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 922-36K1BS**

Surface: 1798 FSL / 1998 FWL NESW
 BHL: 2567 FSL / 2148 FWL NESW

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:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
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Mahogany	1,800'	Water
Wasatch	4,237'	Gas
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MVU2	7,476'	Gas
MVL1	8,026'	Gas
TVD	8,674'	
TD	8,791'	

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

Please refer to the attached Drilling Program

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

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

7. Abnormal Conditions:

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5,551 psi 0.64 psi/ft = actual bottomhole gradient

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

Maximum anticipated surface pressure equals approximately 3,631 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.

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

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

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

Variance for BOPE Requirements

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

Variance for Mud Material Requirements

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

Variance for Special Drilling Operation (surface equipment placement) Requirements

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

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

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

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

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

Variance for FIT Requirements

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

Conclusion

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

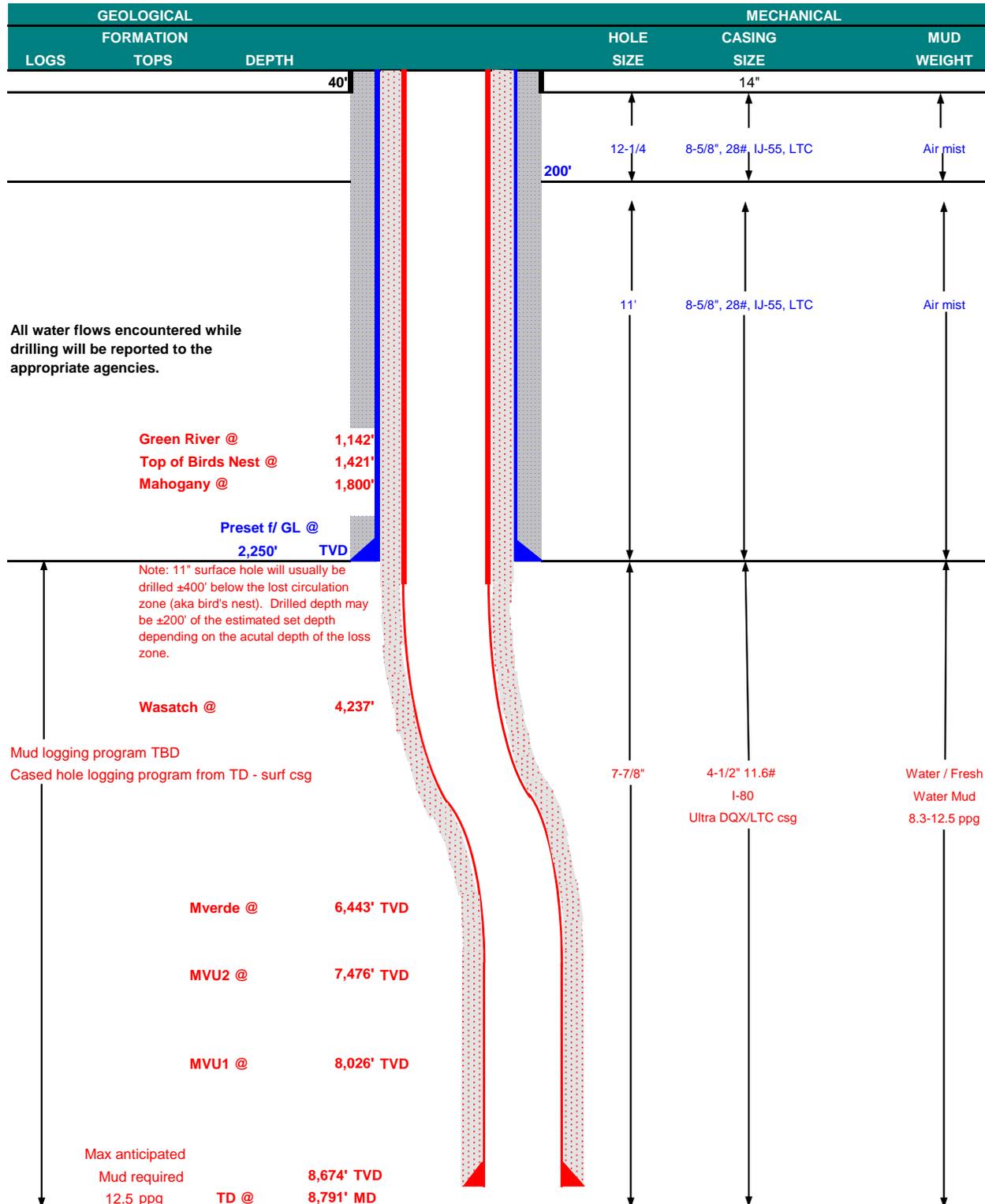
10. **Other Information:**

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	October 17, 2011	
WELL NAME	NBU 922-36K1BS		TD	8,674' TVD	8,791' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
SURFACE LOCATION	NESW 1798 FSL	1998 FWL	Sec 36	T 9S	R 22E
	Latitude: 39.990211	Longitude: -109.389912	NAD 27		
BTM HOLE LOCATION	NESW 2567 FSL	2148 FWL	Sec 36	T 9S	R 22E
	Latitude: 39.99232	Longitude: -109.389381	NAD 27		
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.				





KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	LTC		DQX
							COLLAPSE	TENSION	
CONDUCTOR	14"	0-40'				3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,250	28.00	IJ-55	LTC	2.40	1.79	6.31	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	1.13		3.24
						1.11	1.13	6.27	

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*Buoys.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*Buoys.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD
SURFACE Option 1	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80		1.15
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80		1.15
NOTE: If well will circulate water to surface, option 2 will be utilized								
SURFACE Option 2	LEAD	1,750'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	160	35%	11.00		3.82
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80		1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	3,731'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	280	20%	11.00		3.38
	TAIL	5,060'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,200	35%	14.30		1.31

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

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

FLOAT EQUIPMENT & CENTRALIZERS

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

Nick Spence / Danny Showers / Chad Loesel

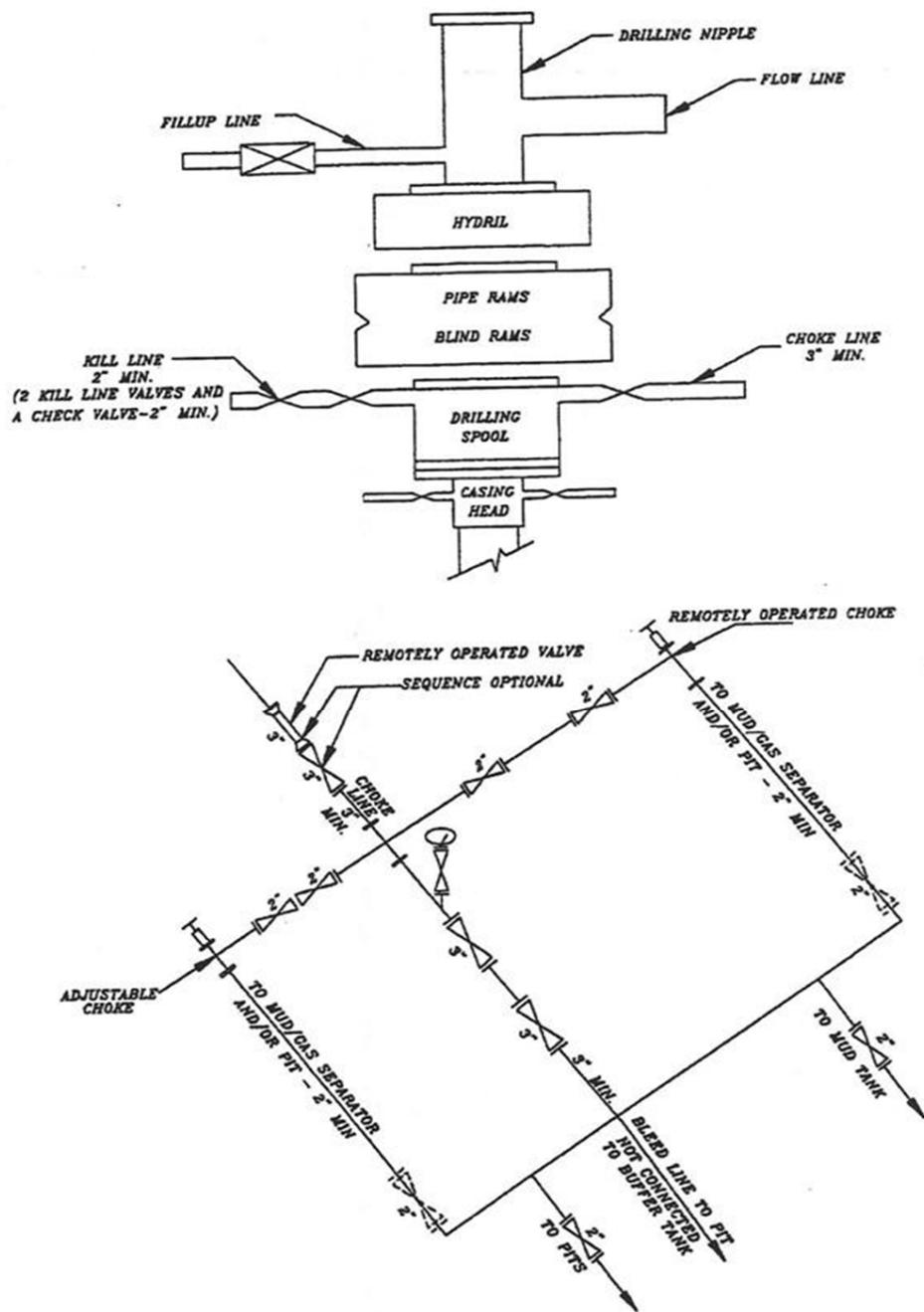
DATE:

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

DATE:

EXHIBIT A
NBU 922-36K1BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

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.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-22650
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 922-36K1BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047515900000	
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: 1798 FSL 1998 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW 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	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 11/7/2011	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> OTHER	
<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU AIR RIG ON NOV. 5, 2011. DRILLED SURFACE HOLE TO 2390'. 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) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 11/8/2011	

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# Ensign 138
Submitted By DALTON KING Phone Number 435- 828-0982
Well Name/Number NBU 922-36K1BS
Qtr/Qtr NE/SW Section 36 Township 9S Range 22E
Lease Serial Number ML-22650
API Number 43-047-51590

Casing – Time casing run starts, not cementing times.

- Production Casing
 Other

Date/Time _____ AM PM

BOPE

- Initial BOPE test at surface casing point
 Other

Date/Time 12/26/2011 18:00 AM PM

RECEIVED

DEC 28 2011

DIV. OF OIL, GAS & MINING

Rig Move

Location To: BONANZA 922-36K4CS

Date/Time 12/26/2011 16:00 AM PM

Remarks TIME IS ESTIMATED

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# Ensign 138
Submitted By DALTON KING Phone Number 435- 828-0982
Well Name/Number NBU 922-36K1BS
Qtr/Qtr NE/SW Section 36 Township 9S Range 22E
Lease Serial Number ML-22650
API Number 43-047-51590

Casing – Time casing run starts, not cementing times.

- Production Casing
- Other

Date/Time _____ AM PM

BOPE

- Initial BOPE test at surface casing point
- Other

RECEIVED

DEC 30 2011

DIV. OF OIL, GAS & MINING

Date/Time 12/26/2011 18:00 AM PM

Rig Move

Location To: BONANZA 922-36K4CS

Date/Time 12/26/2011 16:00 AM PM

Remarks TIME IS ESTIMATED

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-22650
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 922-36K1BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047515900000	
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: 1798 FSL 1998 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW 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	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 1/2/2012	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	
		<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
MIRU ROTARY RIG. FINISHED DRILLING FROM 2390' TO 8825' ON DEC. 30, 2011. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED ENSIGN RIG 138 ON JAN. 2, 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 1/3/2012		
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 1/3/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: ML-22650	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
8. WELL NAME and NUMBER: NBU 922-36K1BS	
9. API NUMBER: 43047515900000	
9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
COUNTY: Uintah	
STATE: UTAH	

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. TYPE OF WELL Gas Well	11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1798 FSL 1998 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 36 Township: 09.0S Range: 22.0E Meridian: S	

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 2/24/2012	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input checked="" type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 02/24/2012 AT 1700 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 06, 2012

NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUMBER 435 781-7024	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 3/1/2012	

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



AMENDED REPORT FORM 8
(highlight changes)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

<p>1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> OTHER _____</p> <p>b. TYPE OF WORK: NEW WELL <input checked="" type="checkbox"/> HORIZ. LATS. <input type="checkbox"/> DEEP-EN <input type="checkbox"/> RE-ENTRY <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER _____</p>	<p>5. LEASE DESIGNATION AND SERIAL NUMBER: ML-22650</p> <p>6. IF INDIAN, ALLOTTEE OR TRIBE NAME</p> <p>7. UNIT or CA AGREEMENT NAME: UTU63047A</p> <p>8. WELL NAME and NUMBER: NBU 922-36K1BS</p>
--	--

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

9. API NUMBER: **4304751590**

3. ADDRESS OF OPERATOR: **P.O.BOX 173779 DENVER CO 80217** PHONE NUMBER: **(720) 929-6304**

10. FIELD AND POOL, OR WILDCAT: **NATURAL BUTTES**

4. LOCATION OF WELL (FOOTAGES):
AT SURFACE: **NESW 1798 FSL 1998 FWL S36,T9S,R22E**
AT TOP PRODUCING INTERVAL REPORTED BELOW: **NESW 2568 FSL 2143 FWL S36,T9S,R22E**
AT TOTAL DEPTH: **NESW 2576 FSL 2151 FWL S36,T9S,R22E**

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
NESW 36 9S 22E S

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

14. DATE SPUDDED: **10/12/2011** 15. DATE T.D. REACHED: **12/30/2011** 16. DATE COMPLETED: **2/24/2012** ABANDONED READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL): **4950 GL**

18. TOTAL DEPTH: MD **8,825** TVD **8,706** 19. PLUG BACK T.D.: MD **8,760** TVD **8,641** 20. IF MULTIPLE COMPLETIONS, HOW MANY? *

21. DEPTH BRIDGE MD PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each):
HDIL-ZDL-CNGR-SYNTHETIC COMBO-RSL/SM-CBL/COLLARS/TEMP/GR

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

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

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#	0	40		28			
11"	8 5/8" IJ-55	28#	0	2,371		675		0	
7 7/8"	4 1/2" I-80	11.6#	0	8,804		1,701		120	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	8,145							

26. PRODUCING INTERVALS					27. PERFORATION RECORD				
FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS	
(A) WASATCH	5,334	6,142			5,334 6,142	0.36	72	Open <input checked="" type="checkbox"/>	Squeezed <input type="checkbox"/>
(B) MESAVERDE	6,925	8,660			6,925 8,660	0.36	144	Open <input checked="" type="checkbox"/>	Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>

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

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
5334-8660	PUMP 8354 BBLs SLICK H2O & 189,252# 30/50 OTTAWA SAND
	9 STAGES

29. ENCLOSED ATTACHMENTS: ELECTRICAL/MECHANICAL LOGS GEOLOGIC REPORT DST REPORT DIRECTIONAL SURVEY
 SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION CORE ANALYSIS OTHER _____

30. WELL STATUS: **PROD**

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 2/24/2012		TEST DATE: 2/26/2012		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 2,569	WATER - BBL: 453	PROD METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 1,604	CSG. PRESS. 1,829	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 2,569	WATER - BBL: 453	INTERVAL STATUS: PROD

INTERVAL B (As shown in item #26)

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

INTERVAL C (As shown in item #26)

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

INTERVAL D (As shown in item #26)

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

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

33. SUMMARY OF POROUS ZONES (Include Aquifers):

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

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				GREEN RIVER	1,142
				BIRD'S NEST	1,426
				MAHOGANY	1,832
				WASATCH	4,367
				MESAVERDE	6,551

35. ADDITIONAL REMARKS (Include plugging procedure)

The first 210' of the surface hole was drilled with a 12 1/4" bit. The remainder of surface hole was drilled with an 11" bit. DQX csg was run from surface to 5068'. LTC csg was run from 5068' to 8804'. Attached is the chronological well history, perforation report & final survey.

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

NAME (PLEASE PRINT) JAIME SCHARNOWSKE TITLE REGULATORY ANALYST
 SIGNATURE *Jaime Scharnowske* DATE 3/23/2012

This report must be submitted within 30 days of

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

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

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

Send to: Utah Division of Oil, Gas and Mining Phone: 801-538-5340
 1594 West North Temple, Suite 1210
 Box 145801 Fax: 801-359-3940
 Salt Lake City, Utah 84114-5801

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-36K1BS GREEN

Spud Date: 11/5/2011

Project: UTAH-UINTAH

Site: NBU 922-36K PAD

Rig Name No: PROPETRO 12/12, ENSIGN 138/138

Event: DRILLING

Start Date: 10/6/2011

End Date: 1/2/2012

Active Datum: RKB @4,964.00usft (above Mean Sea Level)

UWI: NE/SW/0/9/S/22/E/36/0/0/26/PM/S/1798/W/0/1998/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
11/5/2011	12:00 - 14:00	2.00	MIRU	01	C	P		SKID RIG 10' TO NBU 922-36K1BS (WELL 4 OF 5). INSTALL DIVERTOR HEAD AND BOWE LINE. BUILD DITCH. SPOT IN RIG. SPOT IN CATWALK AND PIPE RACKS. READY, RIG UP PIT PUMP, RIG UP PUMP. PRIME PUMP, INSPECT RIG.
	14:00 - 14:30	0.50	PRSPD	01	B	P		HELD PRE-SPUD SAFETY MEETING. TALKED ABOUT WORKING WITH SUSPENDED LOADS. P/U 8" 1.83 BEND .17 RPG MUD MOTOR (5TH RUN) (SN 775-77294). M/U QD507 12.25" BIT (7TH RUN) (SN 7137066). TRIP IN TO SPUD.
	14:30 - 16:00	1.50	DRLSUR	02	D	P		SPUD 11/05/2011 14:30. DRILL 12.25" HOLE 44'-210' (166', 83'/HR), GPM 400. DH RPM 68 RPM=45. WOB 5-15K. PSI ON/OFF 600/400. UP/DOWN/ ROT 20/20/20 K. DRAG 0 K. CIRC RESERVE W. 8.3# WATER. DRILL DOWN TO 210' W/ 6" COLLARS.
	16:00 - 18:00	2.00	DRLSUR	06	A	P		TRIP OUT. LAY DOWN 6" DRILL COLLARS, 12 1/4 BIT. CHECK BIT AND MOTOR. PICK UP Q506 11" BIT (7TH RUN) (SN 7133300) SCRIBE MOTOR. P/U 8" DIRECTIONAL ASSEMBLY AND SCRIBE. INSTALL EM TOOL. TRIP IN TO 210' TO DRILL AHEAD.
	18:00 - 0:00	6.00	DRLSUR	02	D	P		DRILL 11" HOLE ROTATE/SLIDE 210'-1000' (790', 130'/HR). GPM 491. DH RPM 86 RPM=55, WOB 15-20K. PSI ON/OFF 1,140/910. UP/DOWN/ ROT 54/47/50 K. DRAG 4 K. CIRC RESERVE W. 8.3# WATER.
11/6/2011	0:00 - 5:00	6.00	DRLSUR	02	D	P		DRILL 11" HOLE ROTATE/SLIDE 1000'-1510' (510', 85'/HR). GPM 491. DH RPM 86 RPM=55, WOB 15-20K. PSI ON/OFF 1,240/1,060. UP/DOWN/ ROT 65/48/58 K. DRAG 7 K. CIRC RESERVE W. 8.3# WATER.
	5:00 - 14:30	9.50	DRLSUR	02	D	P		DRILL 11" HOLE ROTATE/SLIDE 1510'-2390' (880', 93'/HR). TD @ 11/06/2011 14:30 GPM 491, DH RPM 86 RPM=55. WOB 15-20K. PSI ON/OFF 1,790/1,550. UP/DOWN/ ROT 83/55/69 K, DRAG 14 K, CIRC RESERVE W. 8.3# WATER.
	14:30 - 16:30	2.00	DRLSUR	05	A	P		CIRCULATE AND CONDITION HOLE FOR CASING RUN.
	16:30 - 20:00	3.50	DRLSUR	06	D	P		LDDS NO TIGHT WHILE LAYING DOWN DRILL STRING. LAY DOWN DIRECTIONAL TOOLS. PULL MOTOR AND BREAK BIT. LAY DOWN MOTOR.
	20:00 - 21:00	1.00	DRLSUR	12	A	P		MOVE PIPE RACKS AND CATWALK. PULL DIVERTER HEAD. RIG UP TO RUN CSG. AND MOVE CSG INTO POSITION TO P/U.
	21:00 - 0:00	3.00	DRLSUR	12	C	P		HOLD SAFETY MEETING. RUN 55 JTS OF 8-5/8" 28# J-55 LTC CSG. LAND FLOAT SHOE @ 2360.54' KB, LAND BAFFLE PLATE @ 2314.42' KB. MADE FLOAT SHOE UP WITH THREAD LOCK. RAN 5 TOTAL CENTRALIZERS.

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 922-36K1BS GREEN		Spud Date: 11/5/2011	
Project: UTAH-UINTAH		Site: NBU 922-36K PAD	Rig Name No: PROPETRO 12/12, ENSIGN 138/138
Event: DRILLING		Start Date: 10/6/2011	End Date: 1/2/2012
Active Datum: RKB @4,964.00usft (above Mean Sea Level)		UWI: NE/SW0/9/S/22/E/36/0/0/26/PM/S/1798/W/0/1998/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
11/7/2011	0:00 - 1:00	1.00	DRLSUR	12	C	P		HOLD SAFETY MEETING. RUN 55 JTS OF 8-5/8" 28# J-55 LTC CSG. LAND FLOAT SHOE @ 2360.54' KB. LAND BAFFLE PLATE @ 2314.42' KB. MADE FLOAT SHOE UP WITH THREAD LOCK. RAN 5 TOTAL CENTRALIZERS.
	1:00 - 2:30	1.50	DRLSUR	12	B	P		HOLD SAFETY MEETING. RUN 200' OF 1" RIG DOWN RIG MOVE OFF WELL, REBUILD DITCH. RIG UP CEMENT TRUCK, 2" HARD LINES, CEMENT HEAD, LOAD PLUG.
	2:30 - 3:30	1.00	DRLSUR	12	E	P		PRESSURE TEST LINES TO 2000 PSI. PUMP 130 BBLs OF WATER AHEAD. CATCH PSI. PUMP 20 BBLs OF 8.3# GEL WATER AHEAD. PUMP (300 SX) 61.4 BBLs OF 15.8# 1.15 YD 5 GAL/SK PREMIUM CEMENT W/ 2% CALC. DROP PLUG ON FLY. DISPLACE W/ 144.2 BBLs OF H2O. NO CIRC THROUGH OUT. FINAL LIFT OF 340 PSI AT 4 BBL/MIN. BUMP PLUG WITH 900 PSI. HELD 900 PSI FOR 5 MIN. FLOAT HELD.
	3:30 - 6:30	3.00	DRLSUR	12	E	P		PUMP (150 SX) 30.7 BBLs OF SAME TAIL CEMENT W/ 4% CALC. DOWN BACKSIDE NO CEMENT TO SURFACE. WAIT 2 HOURS PUMP (225 SX) 46.1 BBLs OF SAME TAIL CEMENT W/ 4% CALC. DOWN BACKSIDE NO CEMENT TO SURFACE. SHUT DOWN AND CLEAN TRUCK. WILL TOP OUT AFTER NEXT CEMENT JOB. RELEASE RIG @ 11/07/2011 06:30
12/27/2011	0:00 - 2:00	2.00	MIRU	01	C	P		SKID THE RIG AND CENTER IT OVER THE HOLE
	2:00 - 2:30	0.50	MIRU	14	A	P		SET THE BOP
	2:30 - 3:30	1.00	MIRU	01	B	P		RIG UP THE FLOOR AND MUD LINES
	3:30 - 6:30	5.00	MIRU	15	A	P		TESTING BOP, FLOOR VALVES, UPPER TOP DRIVE VALVE, INSIDE & OUTSIDE KILL LINE & CHOKE VALES, HCR VALVE, CHOKE MONIFOLD, PIPE & BLIND RAMS 250 PSI F/ 5 MIN, 5000 PSI F/ 10 MIN, ANNULAR 250 PSI F/ 5 MIN, 2500 PSI F/ 10 MIN, CASING 1500 PSI F/ 30 MIN R/D TESTER
	8:30 - 9:00	0.50	MIRU	14	B	P		INSTALL THE WEAR BUSHING
	9:00 - 9:30	0.50	MAINT	07	A	P		RIG SERVICE
	9:30 - 10:00	0.50	ALL	08	A	Z		REPLACE THE SWIVEL PACKING
	10:00 - 13:00	3.00	DRLPRO	06	A	P		PICK UP A BIT AND MOTOR, SCRIBE THE DIRECTIONAL ASSY, HAD PROBLEMS MAKING UP THE DRILLFORMANCE BIT. TIH W/ HWDP
	13:00 - 14:00	1.00	ALL	08	A	Z		WORK ON THE IRON DERRICKMAN. BROKEN WIRE IN THE SERVICE LOOP
	14:00 - 15:30	1.50	DRLPRO	06	A	P		TIH TAGGED CEMENT @ 2280'
	15:30 - 16:30	1.00	DRLPRO	02	F	P		DRILLING THE SHOE TRACK
	16:30 - 0:00	7.50	DRLPRO	02	D	P		DRILL F/ 2400'- 3601', 1201' @ 160.1' HR , WOB 18-20, RPM 50/151, SPM 120, GPM 540, TORQ 7/4, ON/OFF 1790/1430, UP/SO/ROT 145/125/128 RUNNING CLOSED LOOP EQUIPMENT 100% 1 CENTRIFUGE STILL DOWN FOR REPAIRS SLID 78' .66 HR., 118'/HR. AVG.

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-36K1BS GREEN Spud Date: 11/5/2011

Project: UTAH-UINTAH Site: NBU 922-36K PAD Rig Name No: PROPETRO 12/12, ENSIGN 138/138

Event: DRILLING Start Date: 10/6/2011 End Date: 1/2/2012

Active Datum: RKB @4,964.00usft (above Mean Sea Level) UWI: NE/SW0/9/S/22/E/36/0/0/26/PM/S/1798/W/0/1998/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/28/2011	0:00 - 6:00	6.00	DRLPRO	02	D	P		HR., DRILL F/ 3601'- 4652', 151' @ 175.2' HR , WOB 18-20, RPM 50/151, SPM 120, GPM 540, TORQ8/6, ON/OFF 1950/1430, UP/SO/ROT 123/119/120 RUNNING CLOSED LOOP EQUIPMENT 100% 1 CENTRIFUGE STILL DOWN FOR REPAIRS
	6:00 - 13:00	7.00	DRLPRO	02	D	P		SLID 80', .67 @ 119.4'/HR DRILL F/ 4652'- 5476', 824' @ 117.7' HR , WOB 18-20, RPM 50/151, SPM 120, GPM 540, TORQ 9/7, ON/OFF 1950/1430, UP/SO/ROT 153/136/140 RUNNING CLOSED LOOP EQUIPMENT 100% 1 CENTRIFUGE STILL DOWN FOR REPAIRS
	13:00 - 13:30	0.50	DRLPRO	07	A	P		SLID 45', .34 HR @ 132'/HR RIG SERVICE
	13:30 - 0:00	10.50	DRLPRO	02	D	P		DRILL F/ 5476'-6330', 854' @ 81.3' HR , WOB 18-20, RPM 50/151, SPM 120, GPM 540, TORQ 10/8, ON/OFF 1950/1430, UP/SO/ROT 175/146/155 RUNNING CLOSED LOOP EQUIPMENT 100% 1 CENTRIFUGE STILL DOWN FOR REPAIRS
12/29/2011	0:00 - 6:00	6.00	DRLPRO	02	D	P		SLID 106', 1.84HR, 57.6'/HR DRILL F/ 6330'-6769', 439' @ 81.3' HR , WOB 18-20, RPM 50/151, SPM 120, GPM 540, TORQ 10/8, ON/OFF 2000/1650, UP/SO/ROT 175/146/155 RUNNING CLOSED LOOP EQUIPMENT 100% 1 CENTRIFUGE STILL DOWN FOR REPAIRS
	6:00 - 12:00	6.00	DRLPRO	02	D	P		SLID 0 TOTAL FLUID LOSS APP. 400 BBL. STARTED SEEPING OUT FROM UNDER THE SHOE DRILL F/ 6769'- 7082', 313' @ 52.2' HR , WOB 18-20, RPM 50/151, SPM 120, GPM 540, TORQ 11/9, ON/OFF 2500/2250, UP/SO/ROT 175/146/155 RUNNING CENTRIFUGE
	12:00 - 12:30	0.50	DRLPRO	07	A	P		STARTED MUDDING UP @ 6900' SLID 38', .75 HR., @ 50.7'/HR. RIG SERVICE

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 922-36K1BS GREEN Spud Date: 11/5/2011

Project: UTAH-UINTAH Site: NBU 922-36K PAD Rig Name No: PROPETRO 12/12, ENSIGN 138/138

Event: DRILLING Start Date: 10/6/2011 End Date: 1/2/2012

Active Datum: RKB @4,964.00usft (above Mean Sea Level) UWI: NE/SW0/9/S/22/E/36/0/0/26/PM/S/1798/W/0/1998/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	12:30 - 21:00	8.50	DRLPRO			P		DRILL F/ 7082'- 7553' 471' @ 55.4' HR , WOB 18-24, RPM 50/151, SPM 120. GPM 540, TORQ 12/10, ON/OFF 2550/2300, UP/SO/ROT 188/144/150 RUNNING 1 CENTRIFUGE SLID 0 MUD 36/VIS 10.4/WT.
12/30/2011	21:00 - 0:00	3.00	DRLPRO	06	A	S		TOH FOR A BIT
	0:00 - 3:30	3.50	DRLPRO	06	A	S		TOH FOR A BIT
	3:30 - 5:30	2.00	DRLPRO	06	A	S		LD MUD MOTOR, PICKUP A .16 MOTOR AND MDI 616 BIT SCRIBE THE ASSY.
	5:30 - 11:00	5.50	DRLPRO	06	A	S		TIH TO 5782' HAD TO WASH THROUGH BRIDGES 4335-4530, 4743-5002, 5171-5540
	11:00 - 12:00	1.00	DRLPRO	05	B	S		CONDITIONING MUD AND RAISING THE VIS AND WEIGHT. WASATCH WAS SLUFFING ON US. WORK THROUGH A TIGHT SPOT 5782'-6106'. TOOK SOME LOSSES WHEN IT PACKED OFF AND PRESSURED UP. RAISED THE MUD WEIGHT FROM 10.3 TO 11.0. RAISED THE VIS TO 40.
	12:00 - 15:00	3.00	DRLPRO	06	A	S		TIH WASHED BRIDGES @ 6324-6330, 6514-6605, 7296-7553.
	15:00 - 0:00	9.00	DRLPRO	02	D	P		LOST APP. 250 BBL. ON THE TRIP DRILL F/ 7553'-8225' 672' @ 74.6' HR , WOB 18-24, RPM 50/76, SPM 106, GPM 478, TORQ 14/12, ON/OFF 2820/2490, UP/SO/ROT 194/160/175 RUNNING 1 CENTRIFUGE SLID 127, 2.42 HR. @52.5'/HR MUD 42 VIS, 11.2 MW
12/31/2011	0:00 - 2:30	2.50	DRLPRO	02	D	P		DRILL F/ 8225'-8417' 192' @ 76.8' HR , WOB 18-24, RPM 50/76, SPM 106, GPM 478, TORQ 14/12, ON/OFF 2820/2490, UP/SO/ROT 194/160/175 RUNNING 1 CENTRIFUGE SLID MUD 42 VIS, 11.2 MW SEEPED 50 BBL. RIG SERVICE
	2:30 - 3:00	0.50	DRLPRO	07	A	P		
	3:00 - 8:30	5.50	DRLPRO	02	D	P		DRILL F/ 8417'- 8825' 408' @ 74.2' HR , WOB 18-24, RPM 50/76, SPM 106, GPM 478, TORQ 14/12, ON/OFF 2840/2490, UP/SO/ROT 198/163/180
	8:30 - 10:00	1.50	DRLPRO	05	C	P		SLID MUD 42 VIS, 11.2 MW CIRC. BEFORE THE WIPER TRIP

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-36K1BS GREEN

Spud Date: 11/5/2011

Project: UTAH-UINTAH

Site: NBU 922-36K PAD

Rig Name No: PROPETRO 12/12, ENSIGN 138/138

Event: DRILLING

Start Date: 10/6/2011

End Date: 1/2/2012

Active Datum: RKB @4,964.00usft (above Mean Sea Level)

UWI: NE/SW09/S/22/E/36/0/0/26/PM/S/1798/W/0/1998/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/1/2012	10:00 - 21:30	11.50	DRLPRO	06	E	P		MADE A WIPER TRIP TO THE CASING SHOE SLIGHT OVERPULL @ 5077' & 4400'
	21:30 - 0:00	2.50	DRLPRO	05	C	P		PRECAUTIONARY WASHED THE LAST STAND DOWN TO BOTTOM, CIRC. AND COND. FOR LOGS.
	0:00 - 10:00	10.00	DRLPRO	06	B	P		TOH FOR LOGS HAD TO PUMP OUT OF THE HOLE TO 5900', LD THE MUD MOTOR AND MWD.
	10:00 - 10:30	0.50	DRLPRO	14	B	P		RETRIEVE THE WEAR BUSHING
	10:30 - 15:30	5.00	EVALPR	11	D	P		S/M WITH BAKER ATLAS PICKED UP TOOLS AND RAN TRIPLE COMBO LOGS , LOGS BRIDGED OUT, DRILLERS TD 8825', LOGGERS TD-5606. CALLED IN AND IT WAS DECIDED TO LOG OUT AND RUN PIPE
	15:30 - 21:00	5.50	CSG	12	C	P		HELD A S/M WITH FRANKS WESTATE, RU AND RUN 89 JTS OF 4.5"/ 11.6# / I-80 / LTC, 121 JTS OF 4.5" / 11.6# / I-80 / DQX CASING FOR A TOTAL OF 210 JTS. LANDED @ 8803.89' MD, FC @ 8758.73' MD, MV MARKER @ 6207.04' MD, X/O JT. @ 5046.93' MD
	21:00 - 0:00	3.00	ALL	22	L	Z		CIRC. CASING @ 4050' WORKING ON TORQUE TURN EQUIPMENT, WAITING ON NEW EQUIPMENT FROM TOWN.
1/2/2012	0:00 - 2:00	2.00	CSG	12	C	P		RUN 89 JTS OF 4.5"/ 11.6# / I-80 / LTC, 121 JTS OF 4.5" / 11.6# / I-80 / DQX CASING FOR A TOTAL OF 210 JTS. LANDED @ 8803.89' MD, FC @ 8758.73' MD, MV MARKER @ 6207.04' MD, X/O JT. @ 5046.93' MD
	2:00 - 3:00	1.00	ALL	22	L	Z		RUNNING FROM 4000' TO 5530'
	3:00 - 7:30	4.50	CSG	12	C	P		CHANGED OUT THE CASING TONGS RUN 89 JTS OF 4.5"/ 11.6# / I-80 / LTC, 121 JTS OF 4.5" / 11.6# / I-80 / DQX CASING FOR A TOTAL OF 210 JTS. LANDED @ 8803.89' MD, FC @ 8758.73' MD, MV MARKER @ 6207.04' MD, X/O JT. @ 5046.93' MD
	7:30 - 9:00	1.50	CSG	05	D	P		RAN FROM 5530' - 8803' WASHED THROUGH A BRIDGE @ 5620' AND WASHED THE LAST 5 JTS. TO BOTTOM CIRC. THE CASING @ 383 GPM 840 PSI. HAD A 4' FLARE ON BOTTOMS UP

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-36K1BS GREEN		Spud Date: 11/5/2011	
Project: UTAH-UINTAH		Site: NBU 922-36K PAD	Rig Name No: PROPETRO 12/12, ENSIGN 138/138
Event: DRILLING		Start Date: 10/6/2011	End Date: 1/2/2012
Active Datum: RKB @4,964.00usft (above Mean Sea Level)		UWI: NE/SW0/9/S/22/E/36/0/0/26/PM/S/1798/NW0/1998/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	9:00 - 12:00	3.00	CSG	12	E	P		DROPPED BOTTOM PLUG, PUMPED 25 BBL 8.34 WATER SPACER , 421 SX PREMIUM LITE II CEMENT + 0.5 LBS/SX STATIC FREE + 0.15% BWOC R-3 + 0.25 LBS/SX CELLO FLAKE + 10 LBS/SX KOL SEAL + 0.4% BWOC SODIUM METASILICATE + 6% BWOC BENTONITE II +.4 BWOC FL-52 + 118% FRESH WATER 12.0#, 2.26 YIELD LEAD CEMENT , 1280 SX 50:50 POZ (ASH FLY) CLASS G + 0.005 LBS/SX STATIC FREE + 10% BWOW SODIUM CHLORIDE + 0.15% BWOC R-3 + 0.002 GPS FP-6L + 2% BENTONITE II + 58.7% FRESH WATER, FLUSHED CEMENT LINES DROPPED THE TOP PLUG, DISPLACE W/ 136.5 BBLS CLAYCARE + 1 GAL MAGNACIDE @ 8.34 PPG WATER , FINAL LIFT 2500 PSI, BUMPED BLUG @ 3000 PSI , HELD PRESSURE FOR 5 MIN, RETURNED 1.5 BBL. BACK TO THE TRUCK FLOATS HELD, 10 BBLS CEMENT BACK TO PIT, TOP OF TAIL EST @ 3731 ' , FLUSH STACK, R/D CEMENTERS, SET C-22 SLIPS @ 90K NIPPLE DOWN THE BOP STACK CUT OFF THE CASING PREP THE RIG TO SKID. RIG RELEASED @ 15:00
	12:00 - 13:30	1.50	CSG	14	B	P		
	13:30 - 15:00	1.50	MIRU	01	E			

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 922-36K1BS GREEN	Wellbore No.	OH
Well Name	NBU 922-36K1BS	Wellbore Name	NBU 922-36K1BS
Report No.	1	Report Date	2/14/2012
Project	UTAH-UJINTAH	Site	NBU 922-36K PAD
Rig Name/No.		Event	COMPLETION
Start Date	2/14/2012	End Date	2/24/2012
Spud Date	11/5/2011	Active Datum	RKB @4,964.00usft (above Mean Sea Level)
UWI	NE/SW/0/9/S/22/E/36/0/0/26/PM/S/1798/W/0/1998/0/0		

1.3 General

Contractor		Job Method	PERFORATE	Supervisor	
Perforated Assembly	PRODUCTION CASING	Conveyed Method	WIRELINE		

1.4 Initial Conditions

Fluid Type	KCL WATER	Fluid Density		Gross Interval	5,334.0 (usft)-8,660.0 (usft)	Start Date/Time	2/23/2012 12:00AM
Surface Press		Estimate Res Press		No. of Intervals	31	End Date/Time	2/23/2012 12:00AM
TVD Fluid Top		Fluid Head		Total Shots	216	Net Perforation Interval	56.00 (usft)
Hydrostatic Press		Press Difference		Avg Shot Density	3.86 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL					Final Press Date	

1.5 Summary

Formation/Reservoir		CCL@ (usft)		CCL-T S (usft)		MD Top (usft)	5,334.0	MD Base (usft)	5,340.0	Shot Density (-shot/ft)	4.00	Misfires/Add. Shot		Diameter (in)	0.360	Carr Type /Carr Manuf		Carr Size (in)	3.375	Phasing (°)	90.00	Charge Desc./Charge Manufacturer		Charge Weight (gram)	23,000	Reason	PRODUCTIO	Misrun
Date	2/23/2012 12:00AM	WASATCH/				EXP/																						

2 Intervals

2.1 Perforated Interval

Date	2/23/2012 12:00AM	Formation/Reservoir	WASATCH/	CCL@ (usft)		CCL-T S (usft)		MD Top (usft)	5,334.0	MD Base (usft)	5,340.0	Shot Density (-shot/ft)	4.00	Misfires/Add. Shot		Diameter (in)	0.360	Carr Type /Carr Manuf		Carr Size (in)	3.375	Phasing (°)	90.00	Charge Desc./Charge Manufacturer		Charge Weight (gram)	23,000	Reason	PRODUCTIO	Misrun

US ROCKIES REGION

2.1 Perforated Interval (Continued)

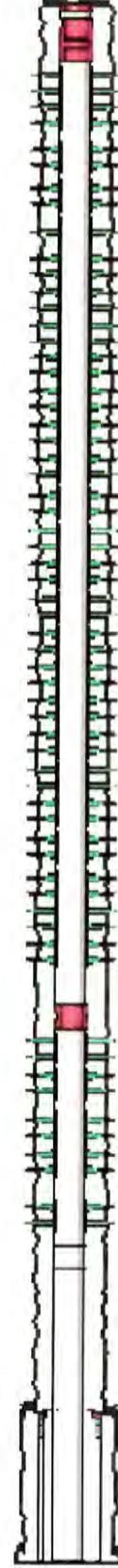
Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
2/23/2012 12:00AM	WASATCH/	5,760.0	5,762.0	5,762.0	4.00			0.360 EXP/		3.375	90.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	WASATCH/	5,816.0	5,820.0	5,820.0	4.00			0.360 EXP/		3.375	90.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	WASATCH/	6,067.0	6,071.0	6,071.0	4.00			0.360 EXP/		3.375	90.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	WASATCH/	6,140.0	6,142.0	6,142.0	4.00			0.360 EXP/		3.375	90.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	MESAVERDE/	6,925.0	6,927.0	6,927.0	4.00			0.360 EXP/		3.375	90.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	MESAVERDE/	6,966.0	6,967.0	6,967.0	4.00			0.360 EXP/		3.375	90.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	MESAVERDE/	6,999.0	7,001.0	7,001.0	4.00			0.360 EXP/		3.375	90.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	MESAVERDE/	7,141.0	7,142.0	7,142.0	4.00			0.360 EXP/		3.375	90.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	MESAVERDE/	7,236.0	7,239.0	7,239.0	4.00			0.360 EXP/		3.375	90.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	MESAVERDE/	7,274.0	7,275.0	7,275.0	4.00			0.360 EXP/		3.375	90.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	MESAVERDE/	7,353.0	7,354.0	7,354.0	4.00			0.360 EXP/		3.375	90.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	MESAVERDE/	7,415.0	7,416.0	7,416.0	4.00			0.360 EXP/		3.375	90.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	MESAVERDE/	7,462.0	7,463.0	7,463.0	4.00			0.360 EXP/		3.375	90.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	MESAVERDE/	7,492.0	7,493.0	7,493.0	4.00			0.360 EXP/		3.375	90.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	MESAVERDE/	7,560.0	7,562.0	7,562.0	4.00			0.360 EXP/		3.375	90.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	MESAVERDE/	7,641.0	7,642.0	7,642.0	4.00			0.360 EXP/		3.375	90.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	MESAVERDE/	7,682.0	7,683.0	7,683.0	4.00			0.360 EXP/		3.375	90.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	MESAVERDE/	7,760.0	7,762.0	7,762.0	4.00			0.360 EXP/		3.375	90.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	MESAVERDE/	7,868.0	7,869.0	7,869.0	3.00			0.360 EXP/		3.375	120.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	MESAVERDE/	7,921.0	7,923.0	7,923.0	3.00			0.360 EXP/		3.375	120.00	23.00 PRODUCTIO	N		
2/23/2012 12:00AM	MESAVERDE/	7,969.0	7,970.0	7,970.0	3.00			0.360 EXP/		3.375	120.00	23.00 PRODUCTIO	N		

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
2/23/2012 12:00AM	MESAVERDE/	8,026.0	8,027.0	8,027.0	3.00	0.360 EXP/	3.375	120.00	23.00	PRODUCTIO	N				
2/23/2012 12:00AM	MESAVERDE/	8,035.0	8,036.0	8,036.0	3.00	0.360 EXP/	3.375	120.00	23.00	PRODUCTIO	N				
2/23/2012 12:00AM	MESAVERDE/	8,070.0	8,071.0	8,071.0	3.00	0.360 EXP/	3.375	120.00	23.00	PRODUCTIO	N				
2/23/2012 12:00AM	MESAVERDE/	8,121.0	8,122.0	8,122.0	3.00	0.360 EXP/	3.375	120.00	23.00	PRODUCTIO	N				
2/23/2012 12:00AM	MESAVERDE/	8,181.0	8,182.0	8,182.0	4.00	0.360 EXP/	3.375	90.00	23.00	PRODUCTIO	N				
2/23/2012 12:00AM	MESAVERDE/	8,276.0	8,277.0	8,277.0	4.00	0.360 EXP/	3.375	90.00	23.00	PRODUCTIO	N				
2/23/2012 12:00AM	MESAVERDE/	8,416.0	8,420.0	8,420.0	4.00	0.360 EXP/	3.375	90.00	23.00	PRODUCTIO	N				
2/23/2012 12:00AM	MESAVERDE/	8,637.0	8,641.0	8,641.0	4.00	0.360 EXP/	3.375	90.00	23.00	PRODUCTIO	N				
2/23/2012 12:00AM	MESAVERDE/	8,658.0	8,660.0	8,660.0	4.00	0.360 EXP/	3.375	90.00	23.00	PRODUCTIO	N				

3 Plots

3.1 Wellbore Schematic



US ROCKIES REGION
Operation Summary Report

Well: NBU 922-36K1BS GREEN		Spud Date: 11/5/2011	
Project: UTAH-UINTAH		Site: NBU 922-36K PAD	Rig Name No: ROYAL WELL SERVICE 2/2
Event: COMPLETION		Start Date: 2/14/2012	End Date: 2/24/2012
Active Datum: RKB @4,964.00usft (above Mean Sea Level)		UWI: NE/SW0/9/S/22/E/36/0/0/26/PM/S/1798/W/0/1998/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/26/2012	-							
2/14/2012	14:00 - 16:00	2.00	COMP	33		P		FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI, HELD FOR 15 MIN LOST 13 PSI. PSI TEST T/ 3500 PSI, HELD FOR 15 MIN LOST 38 PSI. 1ST PSI TEST T/ 7000 PSI. HELD FOR 30 MIN LOST 125 PSI. 2ND PSI TEST T/ 7000 PSI. HELD FOR 30 MIN. LOST 143 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. WILL SET A CIBP IN AM AND RE TEST SWFW
2/15/2012	6:00 - 7:00	1.00	COMP	34		P		HELD SAFETY MEETING; POWER CHARGES
	7:00 - 8:00	1.00	COMP	33		P		RU CASED HOLE SOLUTIONS RIH SET "CIBP" @ MIRU B&C QUICK TEST. 3 RD PSI TEST T/ 7000 PSI. HELD FOR 30 MIN LOST 44 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG SWFW
2/18/2012	8:00 - 12:00	4.00	COMP	37		P		PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE, 90 DEG PHASING. RIH PERF AS PER PERF DESIGN. POOH. SWFW
2/20/2012	7:00 - 18:00	11.00	COMP	36	B	P		FRAC STAGE 1)WHP 1800 PSI, BRK 5068 PSI @ 4.7 BPM. ISIP 2408 PSI, FG .72. CALC PERFS OPEN @ 48.2 BPM @ 5470 PSI = 85% HOLES OPEN. ISIP 2818 PSI, FG .76, NPI 410 PSI. MP 6195 PSI, MR 50.9 BPM, AP 5143 PSI, AR 50.5 BPM, PUMPED 30/50 OWATTA SAND PERF STAGE 2) PU 4 1/2 HAL CBP, & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE, 90 DEG PHASING. SET CBP @ 8450'. P/U PERF AS PER DES. FRAC STAGE 2) WHP 1760 PSI, BRK 5440 PSI @ 4.9 BPM. ISIP 2816 PSI, FG .78. CALC PERFS OPEN @ 46.5 BPM @ 4843 PSI = 100% HOLES OPEN. ISIP 2622 PSI, FG .75, NPI -194 PSI. MP 6277 PSI, MR 51.4 BPM, AP 5059 PSI, AR 51 BPM, PUMPED 30/50 OWATTA SAND PERF STAGE 3) PU 4 1/2 HAL CBP, & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE, 120 DEG PHASING. SET CBP @ 8152'. P/U & PERF AS PER DES. SWFN.

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-36K1BS GREEN

Spud Date: 11/5/2011

Project: UTAH-UINTAH

Site: NBU 922-36K PAD

Rig Name No: ROYAL WELL SERVICE 2/2

Event: COMPLETION

Start Date: 2/14/2012

End Date: 2/24/2012

Active Datum: RKB @4,964.00usft (above Mean Sea Level)

UWI: NE/SW0/9/S/22/E/36/0/0/26/PM/S/1798/W/0/1998/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
2/21/2012	7:00 - 18:00	11.00	COMP	36	B	P		<p>HSM. FRAC STAGE 3) WHP 1800 PSI, BRK 3051 PSI @ 3.4 BPM. ISIP 1929 PSI, FG .68. CALC PERFS OPEN @ 48.1 BPM @ 4396 PSI = 100% HOLES OPEN. ISIP 2532 PSI, FG .76, NPI 603 PSI. MP 5305 PSI, MR 49.6 BPM, AP 4398 PSI, AR 49.2 BPM. PUMPED 30/50 OWATTA SAND. SWI, X-OVER FOR WL.</p> <p>PERF STAGE 4) PU 4 1/2 HAL CBP, & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE, 90 DEG PHASING. SET CBP @ 7792'. P/U & PERF AS PER DES.</p> <p>FRAC STG 4)WHP 810 PSI, BRK 3268 PSI @ 4.6 BPM. ISIP 1845 PSI, FG .68. CALC PERFS OPEN @ 51.6 BPM @ 4508 PSI = 100% HOLES OPEN. ISIP 2220 PSI, FG .84, NPI 375 PSI. MP 5364 PSI, MR 51.8 BPM, AP 4519 PSI, AR 51.5 BPM, PUMPED 30/50 OWATTA SAND. SWI, X-OVER FOR WL.</p> <p>PERF STG 5)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7523' P/U PERF AS PER DESIGN. POOH.</p> <p>FRAC STG 5)WHP 805 PSI, BRK 2997 PSI @ 4.5 BPM. ISIP 1824 PSI, FG .69. CALC PERFS OPEN @ 50.2 BPM @ 3981 PSI = 100% HOLES OPEN. ISIP 2320 PSI, FG .75, NPI 496 PSI. MP 5137 PSI, MR 52 BPM, AP 4346 PSI, AR 51.6 BPM, PUMPED 30/50 OWATTA SAND. SWI, X-OVER FOR WL.</p> <p>PERF STG 6)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 SEG PHASING. RIH SET CBP @ 7172' P/U PERF AS PER DESIGN.</p> <p>FRAC STG 6)WHP 200 PSI, BRK 2430 PSI @ 4.6 BPM. ISIP 1395 PSI, FG .64. CALC PERFS OPEN @ 51.4 BPM @ 4167 PSI = 94% HOLES OPEN. ISIP 2316 PSI, FG .77, NPI 921 PSI. MP 4939 PSI, MR 52.1 BPM, AP 4123 PSI, AR 51.7 BPM, PUMPED 30/50 OWATTA SAND. SWI, X-OVER FOR WL.</p> <p>PERF STG 7)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 6172' P/U PERF AS PER DESIGN. POOH. SWFN.</p>

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-36K1BS GREEN		Spud Date: 11/5/2011	
Project: UTAH-UINTAH		Site: NBU 922-36K PAD	Rig Name No: ROYAL WELL SERVICE 2/2
Event: COMPLETION		Start Date: 2/14/2012	End Date: 2/24/2012
Active Datum: RKB @4,964.00usft (above Mean Sea Level)		UWI: NE/SW/0/9/S/22/E/36/0/0/26/PM/S/1796/W/0/1998/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
2/22/2012	7:00 - 18:00	11.00	COMP	36	B	P		<p>HSM, FRAC STAGE 7) WHP 250 PSI, BRK 1794 PSI @ 4.0 BPM. ISIP 1030 PSI, FG .61. CALC PERFS OPEN @ 51.4 BPM @ 3223 PSI = 100% HOLES OPEN. ISIP 1553 PSI, FG .69, NPI 523 PSI. MP 4268 PSI, MR 51.7 BPM, AP 3735 PSI, AR 51.3 BPM, PUMPED 30/50 OWATTA SAND</p> <p>PERF STAGE 8) PU 4 1/2 HAL CBP, & 3 1/8 EXP GUN, 23 GM., .36 HOLE SIZE, 90 DEG PHASING. SET CBP @ 5850'. P/U & PERF AS PER DES.</p> <p>FRAC STAGE 8) WHP 340 PSI, BRK 1789 PSI @ 3.4 BPM. ISIP 841 PSI, FG .58. CALC PERFS OPEN @ 51 BPM @ 2764 PSI = 100% HOLES OPEN. ISIP 1301 PSI, FG .69, NPI 460 PSI. MP 3797 PSI, MR 51.8 BPM, AP 3106 PSI, AR 51.4 BPM, PUMPED 30/50 OWATTA SAND</p> <p>PERF STAGE 9) PU 4 1/2 HAL CBP, & 3 1/8 EXP GUN, 23 GM., .36 HOLE SIZE, 90 DEG PHASING. SET CBP @ 5370'. P/U & PERF AS PER DES.</p> <p>FRAC STG 9)WHP 95 PSI, BRK 1837 PSI @ 3.7 BPM. ISIP 877 PSI, FG .60. CALC PERFS OPEN @ 51.4 BPM @ 3469 PSI = 91% HOLES OPEN. ISIP 1685 PSI, FG .75, NPI 808 PSI. MP 4071 PSI, MR 51.5 BPM, AP 3847 PSI, AR 51.2 BPM, PUMPED 30/50 OWATTA SAND, SWI, X-OVER FOR WL.</p> <p>PU 4 1/2 8K HAL CBP. RIH SET KILL PLUG @ 5284'. POOH. DONE FRACING THIS WELL.</p> <p>TOTAL SAND = 189,252 LBS TOTAL CLFL = 8354 BBL HSM & JSA W/ROYAL WELL SERVICE</p>
2/23/2012	6:45 - 7:00	0.25	COMP	48		P		<p>MOVE IN STUBBS BACKHOE. FILL IN DIRT AROUND WELL HEADS TO RIG UP RIG. MIRU RIG - SPOT EQUIP. WHP 0 PSI, NDWH, NU BOPs, R/U FLOOR & TBG EQUIP. PREP & TALLY TBG. P/U 3 7/8" BIT, POBS & XN NIPPLE. RIH ON 166 JTS TBG. TAG FILL @ 5278'. R/D TBG EQUIP. R/U PWR SWWL & PUMP. P/T CSG & BOPs TO 3000 PSI. (0 PSI LOSS IN 15 MIN). SWI - SDFN, HSM & JSA W/ROYAL WELL SERVICE.</p>
	7:00 - 16:00	9.00	COMP	30	A	P		
2/24/2012	6:45 - 7:00	0.25	COMP	48		P		

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 922-36K1BS GREEN		Spud Date: 11/5/2011	
Project: UTAH-UINTAH		Site: NBU 922-36K PAD	Rig Name No: ROYAL WELL SERVICE 2/2
Event: COMPLETION		Start Date: 2/14/2012	End Date: 2/24/2012
Active Datum: RKB @4,964.00usft (above Mean Sea Level)		UWI: NE/SW/0/9/S/22/E/36/0/0/26/PM/S/1798/W/0/1998/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:00 - 7:00	0.00	COMP	44	C	P		<p>WHP 0 PSI. EOT @ 5152'. R/U PWR SWVL & PMP. RIH TAG FILL @ 5278'. C/O SND & D/O CBPs</p> <p>HALCO CBP @ PSI C/O FILL D/O CBP DIFF FCP</p> <p>CBP #1 @ 5290' 28 FT 04 MIN 0 PSI 0 PSI (LOST CIRCULATION - PMP'D 40 BBLs @ 3 BPM TO RE-ESTABLISH)</p> <p>CBP #2 @ 5370' 14 FT 03 MIN 0 PSI 0 PSI</p> <p>CBP #3 @ 5850' 20 FT 04 MIN 0 PSI 0 PSI (VERY LIGHT FLOW ONLY AFTER D/O PLGS 2 & 3, < 0.5 BBL/MIN)</p> <p>CBP #4 @ 6172' 32 FT 11 MIN 300 PSI 50 PSI</p> <p>CBP #5 @ 7172' 43 FT 07 MIN 300 PSI 250 PSI</p> <p>CBP #6 @ 7523' 27 FT 10 MIN 500 PSI 300 PSI</p> <p>CBP #7 @ 7800' 25 FT 10 MIN 500 PSI 200 PSI</p> <p>CBP #8 @ 8152' 33 FT 06 MIN 1000 PSI 250 PSI</p> <p>CBP #9 @ 8450' 39 FT 08 MIN 400 PSI 450 PSI</p> <p>RIH & TAG FILL @ 8722'. C/O TO 8742'. (BTM PERF @ 8660' - PBTD @ 8759'). FCP = 450 PSI. PMP 20 BBLs TMAC & CIRC WELL CLEAN. ND PWR SWVL, NU TBG EQUIP. LD 19 JTS ON FLOAT, (56 TOTAL ON FLOAT). LND TBG ON HNGR W/256 JTS NEW 2 3/8" 4.7# L80 TBG @ 8144.83'. RD FLOOR & TBG EQUIP. ND BOPs, DROP BALL, NUWH. PMP OFF BIT W/5 BBLs TMAC @ 1500 PSI. WAIT 30 MIN FOR BIT TO FALL TO BTM. PT SEPERATOR LINE TO 3300 PSI. TURN WELL TO F.B.C.</p> <p>KB 14' HANGER 0.83' XN NIPPLE 1.33' TBG 256 JTS = 8127.62' XN NIPPLE @ 8142.45' EOT @ 8144.83' (314 JTS DLVRD - 56 JTS RTND)</p> <p>TWTR = 8491 BBLs TVR = 820 BBLs TWLTR = 7671 SICP = 1400 PSI, SITP = 0 PSI. WELL TURNED TO SALES @ 1700 HR ON 2/24/2012 - 1400 MCFD, 1920 BWPD, FCP 1855#, FTP 1855#, 20/64 CK</p>
	17:00 -		PROD	50				

US ROCKIES REGION
Operation Summary Report

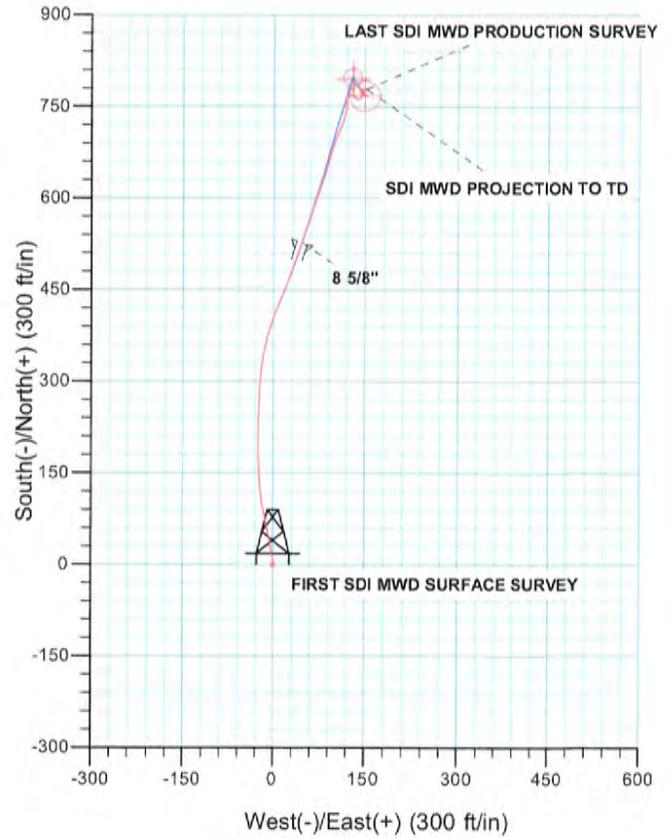
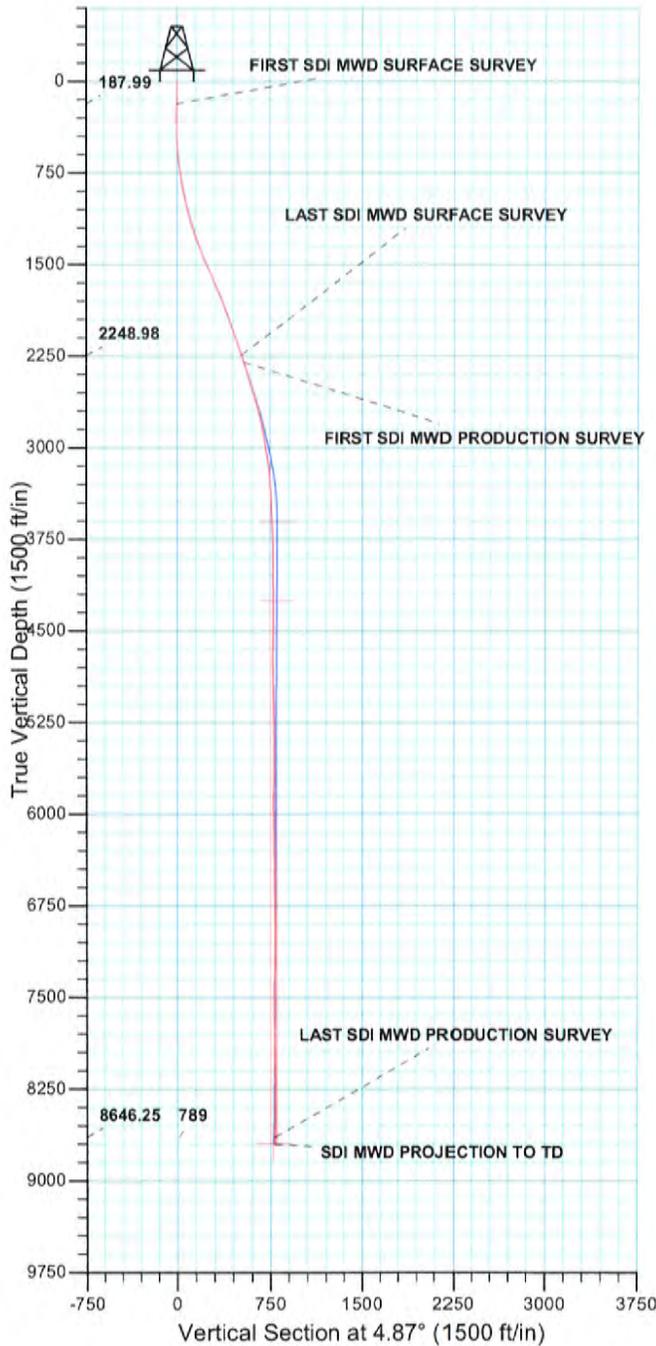
Well: NBU 922-36K1BS GREEN				Spud Date: 11/5/2011				
Project: UTAH-UINTAH			Site: NBU 922-36K PAD			Rig Name No: ROYAL WELL SERVICE 2/2		
Event: COMPLETION			Start Date: 2/14/2012		End Date: 2/24/2012			
Active Datum: RKB @4,964.00usft (above Mean Sea Level)				UWI: NE/SW0/9/S/22/E/36/0/0/26/PM/S/1798/W/0/1998/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
2/26/2012	7:00 -		PROD	50				WELL IP'D ON 2/26/12 - 2569 MCFD, 0 BOPD, 453 BHPD, CP 1829#, FTP 1604#, CK 20/64", LP 90#, 24 HRS

WELL DETAILS: NBU 922-36K1BS						
GL 4950 & KB 14 @ 4964.00ft (ENSIGN 138)						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	14526552.62	2091410.02	39° 59' 24.760 N	109° 23' 23.683 W	



Azimuths to True North
 Magnetic North: 10.99°

 Magnetic Field
 Strength: 52308.5snT
 Dip Angle: 65.87°
 Date: 2011/10/05
 Model: IGRF2010



PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N
Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location:
System Datum: Mean Sea Level

Design: OH (NBU 922-36K1BS/OH)
Created By: RobertScott Date: 9:28, January 18 2012



Scientific Drilling
Rocky Mountain Operations

US ROCKIES REGION PLANNING

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

UINTAH_NBU 922-36K PAD

NBU 922-36K1BS

OH

Design: OH

Standard Survey Report

18 January, 2012



Company: US ROCKIES REGION PLANNING
 Project: UTAH - UTM (feet), NAD27, Zone 12N
 Site: UINTAH_NBU 922-36K PAD
 Well: NBU 922-36K1BS
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well NBU 922-36K1BS
 TVD Reference: GL 4950 & KB 14 @ 4964.00ft (ENSIGN 138)
 MD Reference: GL 4950 & KB 14 @ 4964.00ft (ENSIGN 138)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: EDM5000-RobertS-Local

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

Site	UINTAH_NBU 922-36K PAD				
Site Position:		Northing:	14,526,569.66 usft	Latitude:	39° 59' 24.922 N
From:	Lat/Long	Easting:	2,091,434.65 usft	Longitude:	109° 23' 23.363 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	1.04 °

Well	NBU 922-36K1BS, 1798 FSL 1998 FWL					
Well Position	+N/-S	0.00 ft	Northing:	14,526,552.82 usft	Latitude:	39° 59' 24.760 N
	+E/-W	0.00 ft	Easting:	2,091,410.02 usft	Longitude:	109° 23' 23.683 W
Position Uncertainty	0.00 ft		Wellhead Elevation:	ft	Ground Level:	4,950.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/10/05	10.99	65.87	52,309

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	4.87	

Survey Program	Date	2012/01/18			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
10.00	2,337.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
2,391.00	8,825.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

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	
10.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	
188.00	0.75	155.73	187.99	-1.06	0.48	-1.02	0.42	0.42	0.00	
FIRST SDI MWD SURFACE SURVEY										
273.00	0.56	102.98	272.99	-1.66	1.11	-1.56	0.71	-0.22	-62.06	
357.00	1.08	27.09	356.98	-1.05	1.87	-0.89	1.30	0.62	-90.35	
447.00	2.13	353.03	446.95	1.37	2.06	1.54	1.53	1.17	-37.84	
537.00	3.81	348.20	536.82	5.95	1.24	6.04	1.89	1.87	-5.37	
627.00	5.85	345.69	626.50	13.33	-0.50	13.23	2.28	2.27	-2.79	
717.00	7.70	349.04	715.87	23.69	-2.78	23.37	2.10	2.06	3.72	

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: UINTAH_NBU 922-36K PAD
Well: NBU 922-36K1BS
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 922-36K1BS
TVD Reference: GL 4950 & KB 14 @ 4964.00ft (ENSIGN 138)
MD Reference: GL 4950 & KB 14 @ 4964.00ft (ENSIGN 138)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

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)	
807.00	9.65	348.88	804.83	37.01	-5.39	36.42	2.17	2.17	-0.18	
897.00	11.81	347.16	893.26	53.40	-8.89	52.45	2.43	2.40	-1.91	
987.00	13.45	347.82	981.07	72.61	-13.14	71.23	1.83	1.82	0.73	
1,077.00	14.79	349.68	1,068.35	94.14	-17.41	92.33	1.57	1.49	2.07	
1,167.00	16.62	353.27	1,154.99	118.23	-20.98	116.02	2.30	2.03	3.99	
1,257.00	18.18	357.24	1,240.87	145.04	-23.16	142.55	2.18	1.73	4.41	
1,347.00	20.01	358.56	1,325.92	174.46	-24.22	171.77	2.09	2.03	1.47	
1,437.00	21.59	359.12	1,410.05	206.41	-24.86	203.55	1.77	1.76	0.62	
1,527.00	21.93	1.74	1,493.64	239.76	-24.61	236.81	1.14	0.38	2.91	
1,617.00	23.29	2.78	1,576.72	274.34	-23.24	271.38	1.58	1.51	1.16	
1,707.00	22.57	5.21	1,659.61	309.31	-20.80	306.43	1.32	-0.80	2.70	
1,797.00	21.83	8.37	1,742.94	343.07	-16.80	340.40	1.56	-0.82	3.51	
1,887.00	21.58	14.96	1,826.57	375.62	-10.09	373.41	2.72	-0.28	7.32	
1,977.00	20.68	22.34	1,910.54	406.31	0.22	404.87	3.12	-1.00	8.20	
2,067.00	20.59	22.23	1,994.76	435.66	12.25	435.13	0.11	-0.10	-0.12	
2,157.00	20.61	21.64	2,079.01	465.03	24.08	465.40	0.23	0.02	-0.66	
2,247.00	19.32	20.08	2,163.60	493.74	35.03	494.93	1.55	-1.43	-1.73	
2,337.00	17.52	18.00	2,248.98	520.61	44.33	522.49	2.13	-2.00	-2.31	
LAST SDI MWD SURFACE SURVEY										
2,391.00	16.66	16.72	2,300.60	535.75	49.07	537.99	1.74	-1.59	-2.37	
FIRST SDI MWD PRODUCTION SURVEY										
2,485.00	17.51	17.43	2,390.45	562.15	57.18	564.98	0.93	0.90	0.76	
2,580.00	17.71	18.98	2,481.00	589.45	66.16	592.94	0.54	0.21	1.63	
2,674.00	16.24	19.57	2,570.90	615.36	75.22	619.52	1.57	-1.56	0.63	
2,769.00	14.99	18.54	2,662.39	639.52	83.57	644.31	1.35	-1.32	-1.08	
2,863.00	13.85	18.50	2,753.43	661.72	91.01	667.05	1.21	-1.21	-0.04	
2,958.00	11.93	16.72	2,846.03	681.91	97.44	687.72	2.06	-2.02	-1.87	
3,052.00	10.55	20.71	2,938.23	699.26	103.28	705.50	1.68	-1.47	4.24	
3,147.00	8.88	24.05	3,031.86	714.09	109.35	720.80	1.85	-1.76	3.52	
3,242.00	7.77	18.36	3,125.86	726.89	114.36	733.97	1.45	-1.17	-5.99	
3,336.00	6.20	14.19	3,219.16	737.84	117.60	745.16	1.75	-1.67	-4.44	
3,431.00	4.79	8.48	3,313.72	746.74	119.45	754.18	1.59	-1.48	-6.01	
3,525.00	3.22	3.06	3,407.49	753.25	120.17	760.73	1.72	-1.67	-5.77	
3,620.00	2.04	353.93	3,502.39	757.60	120.13	765.06	1.31	-1.24	-9.61	
3,714.00	1.89	356.37	3,596.34	760.81	119.85	768.24	0.18	-0.16	2.60	
3,809.00	1.40	359.73	3,691.30	763.53	119.75	770.94	0.53	-0.52	3.54	
3,904.00	0.74	335.47	3,786.28	765.25	119.49	772.63	0.83	-0.69	-25.54	
3,998.00	1.16	29.45	3,880.27	766.65	119.71	774.04	1.02	0.47	57.43	
4,093.00	2.09	63.54	3,975.23	768.27	121.75	775.83	1.36	0.96	35.88	
4,187.00	1.60	72.35	4,069.18	769.43	124.53	777.23	0.60	-0.52	9.37	
4,282.00	1.18	91.79	4,164.15	769.81	126.77	777.79	0.66	-0.44	20.46	
4,378.00	1.19	116.54	4,260.13	769.33	128.65	777.47	0.53	0.01	25.78	
4,471.00	1.32	128.38	4,353.11	768.23	130.36	776.52	0.31	0.14	12.73	

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: UINTAH_NBU 922-36K PAD
Well: NBU 922-36K1BS
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 922-36K1BS
TVD Reference: GL 4950 & KB 14 @ 4964.00ft (ENSIGN 138)
MD Reference: GL 4950 & KB 14 @ 4964.00ft (ENSIGN 138)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

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)
4,565.00	1.52	129.83	4,447.08	766.76	132.16	775.21	0.22	0.21	1.54
4,660.00	1.56	141.33	4,542.05	764.95	133.94	773.55	0.33	0.04	12.11
4,754.00	1.67	131.97	4,636.01	763.03	135.76	771.80	0.30	0.12	-9.96
4,849.00	1.23	60.71	4,730.99	762.60	137.67	771.53	1.82	-0.46	-75.01
4,943.00	1.36	68.16	4,824.96	763.51	139.59	772.60	0.23	0.14	7.93
5,038.00	1.49	40.75	4,919.94	764.87	141.44	774.11	0.72	0.14	-28.85
5,132.00	1.30	33.22	5,013.91	766.68	142.82	776.04	0.28	-0.20	-8.01
5,227.00	1.14	39.34	5,108.89	768.32	144.01	777.77	0.22	-0.17	6.44
5,322.00	1.14	60.00	5,203.87	769.52	145.43	779.09	0.43	0.00	21.75
5,416.00	0.79	53.23	5,297.85	770.38	146.76	780.05	0.39	-0.37	-7.20
5,511.00	0.97	77.40	5,392.84	770.94	148.07	780.73	0.43	0.19	25.44
5,605.00	0.70	107.02	5,486.83	770.95	149.39	780.84	0.53	-0.29	31.51
5,700.00	0.70	107.73	5,581.83	770.60	150.50	780.59	0.01	0.00	0.75
5,794.00	0.88	142.71	5,675.82	769.85	151.49	779.93	0.54	0.19	37.21
5,889.00	1.04	144.66	5,770.81	768.57	152.43	778.73	0.17	0.17	2.05
5,983.00	0.18	240.88	5,864.80	767.80	152.79	778.00	1.14	-0.91	102.36
6,078.00	1.52	299.18	5,959.79	768.34	151.56	778.43	1.51	1.41	61.37
6,173.00	2.29	308.53	6,054.73	770.14	148.98	780.00	0.87	0.81	9.84
6,267.00	2.02	309.88	6,148.67	772.37	146.24	781.99	0.29	-0.29	1.44
6,362.00	1.49	319.72	6,243.62	774.39	144.15	783.83	0.64	-0.56	10.36
6,456.00	1.06	306.27	6,337.60	775.83	142.66	785.14	0.55	-0.46	-14.31
6,551.00	1.06	312.60	6,432.58	776.95	141.31	786.14	0.12	0.00	6.66
6,646.00	0.35	311.33	6,527.58	777.74	140.44	786.85	0.75	-0.75	-1.34
6,835.00	0.44	284.74	6,716.57	778.30	139.31	787.31	0.11	0.05	-14.07
6,929.00	0.18	201.07	6,810.57	778.26	138.90	787.24	0.49	-0.28	-89.01
7,024.00	1.08	57.33	6,905.57	778.60	139.60	787.64	1.29	0.95	-151.31
7,118.00	0.98	67.73	6,999.55	779.38	141.09	788.54	0.23	-0.11	11.06
7,213.00	0.83	76.28	7,094.54	779.85	142.51	789.13	0.21	-0.16	9.00
7,307.00	0.98	127.79	7,188.53	779.52	143.81	788.91	0.85	0.16	54.80
7,402.00	1.23	145.17	7,283.51	778.19	145.03	787.69	0.44	0.26	18.29
7,498.00	1.14	152.11	7,379.49	776.50	146.07	786.09	0.18	-0.09	7.23
7,593.00	1.65	209.21	7,474.47	774.47	145.84	784.05	1.48	0.54	60.11
7,687.00	1.76	217.68	7,568.42	772.15	144.30	781.60	0.29	0.12	9.01
7,782.00	1.01	332.13	7,663.41	771.73	143.02	781.08	2.49	-0.79	120.47
7,876.00	1.48	350.83	7,757.39	773.66	142.44	782.96	0.65	0.50	19.89
7,971.00	0.86	4.36	7,852.37	775.58	142.30	784.86	0.71	-0.65	14.24
8,065.00	0.97	12.89	7,946.35	777.06	142.53	786.35	0.19	0.12	9.07
8,160.00	0.76	38.42	8,041.34	778.34	143.10	787.67	0.46	-0.22	26.87
8,254.00	0.79	58.95	8,135.34	779.16	144.04	788.57	0.30	0.03	21.84
8,349.00	1.05	75.62	8,230.32	779.72	145.45	789.25	0.39	0.27	17.55
8,443.00	1.14	75.03	8,324.31	780.17	147.18	789.85	0.10	0.10	-0.63
8,538.00	0.88	97.36	8,419.29	780.32	148.82	790.14	0.49	-0.27	23.51
8,633.00	1.14	118.45	8,514.28	779.78	150.37	789.73	0.47	0.27	22.20
8,727.00	0.96	126.97	8,608.26	778.86	151.83	788.93	0.25	-0.19	9.06

Company: US ROCKIES REGION PLANNING
 Project: UTAH - UTM (feet), NAD27, Zone 12N
 Site: UINTAH_NBU 922-36K PAD
 Well: NBU 922-36K1BS
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well NBU 922-36K1BS
 TVD Reference: GL 4950 & KB 14 @ 4964.00ft (ENSIGN 138)
 MD Reference: GL 4950 & KB 14 @ 4964.00ft (ENSIGN 138)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: EDM5000-RobertS-Local

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)
8,765.00	1.18	130.63	8,646.25	778.41	152.38	788.54	0.61	0.58	9.63
LAST SDI MWD PRODUCTION SURVEY									
8,825.00	1.18	130.63	8,706.24	777.61	153.31	787.81	0.00	0.00	0.00
SDI MWD PROJECTION TO TD									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
188.00	187.99	-1.06	0.48	FIRST SDI MWD SURFACE SURVEY
2,337.00	2,248.98	520.61	44.33	LAST SDI MWD SURFACE SURVEY
2,391.00	2,300.60	535.75	49.07	FIRST SDI MWD PRODUCTION SURVEY
8,765.00	8,646.25	778.41	152.38	LAST SDI MWD PRODUCTION SURVEY
8,825.00	8,706.24	777.61	153.31	SDI MWD PROJECTION TO TD

Checked By: _____ Approved By: _____ Date: _____



Scientific Drilling
Rocky Mountain Operations

US ROCKIES REGION PLANNING

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

UINTAH_NBU 922-36K PAD

NBU 922-36K1BS

OH

Design: OH

Survey Report - Geographic

18 January, 2012



Company: US ROCKIES REGION PLANNING	Local Co-ordinate Reference: Well NBU 922-36K1BS
Project: UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference: GL 4950 & KB 14 @ 4964.00ft (ENSIGN 138)
Site: UINTAH_NBU 922-36K PAD	MD Reference: GL 4950 & KB 14 @ 4964.00ft (ENSIGN 138)
Well: NBU 922-36K1BS	North Reference: True
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: OH	Database: EDM5000-RobertS-Local

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

Site	UINTAH_NBU 922-36K PAD				
Site Position:	Northing:	14,526,569.66 usft	Latitude:	39° 59' 24.922 N	
From: Lat/Long	Eastings:	2,091,434.65 usft	Longitude:	109° 23' 23.363 W	
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	1.04 °

Well	NBU 922-36K1BS, 1798 FSL 1998 FWL					
Well Position	+N/-S	0.00 ft	Northing:	14,526,552.82 usft	Latitude:	39° 59' 24.760 N
	+E/-W	0.00 ft	Eastings:	2,091,410.02 usft	Longitude:	109° 23' 23.683 W
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,950.00 ft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/10/05	10.99	65.87	52,309

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	4.87	

Survey Program	Date	2012/01/18			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
10.00	2,337.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
2,391.00	8,825.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

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	14,526,552.82	2,091,410.02	39° 59' 24.760 N	109° 23' 23.683 W
10.00	0.00	0.00	10.00	0.00	0.00	14,526,552.82	2,091,410.02	39° 59' 24.760 N	109° 23' 23.683 W
188.00	0.75	155.73	187.99	-1.06	0.48	14,526,551.77	2,091,410.52	39° 59' 24.749 N	109° 23' 23.677 W
FIRST SDI MWD SURFACE SURVEY									
273.00	0.56	102.98	272.99	-1.66	1.11	14,526,551.18	2,091,411.16	39° 59' 24.743 N	109° 23' 23.669 W
357.00	1.08	27.09	356.98	-1.05	1.87	14,526,551.81	2,091,411.91	39° 59' 24.749 N	109° 23' 23.659 W
447.00	2.13	353.03	446.95	1.37	2.06	14,526,554.22	2,091,412.05	39° 59' 24.773 N	109° 23' 23.657 W
537.00	3.81	348.20	536.82	5.95	1.24	14,526,558.80	2,091,411.15	39° 59' 24.818 N	109° 23' 23.667 W
627.00	5.85	345.69	626.50	13.33	-0.50	14,526,566.14	2,091,409.27	39° 59' 24.891 N	109° 23' 23.690 W
717.00	7.70	349.04	715.87	23.69	-2.78	14,526,576.46	2,091,406.81	39° 59' 24.994 N	109° 23' 23.719 W
807.00	9.65	348.88	804.83	37.01	-5.39	14,526,589.73	2,091,403.96	39° 59' 25.125 N	109° 23' 23.752 W

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: UINTAH_NBU 922-36K PAD
Well: NBU 922-36K1BS
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 922-36K1BS
TVD Reference: GL 4950 & KB 14 @ 4964.00ft (ENSIGN 138)
MD Reference: GL 4950 & KB 14 @ 4964.00ft (ENSIGN 138)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
897.00	11.81	347.16	893.26	53.40	-8.89	14,526,606.05	2,091,400.17	39° 59' 25.287 N	109° 23' 23.797 W
987.00	13.45	347.82	981.07	72.61	-13.14	14,526,625.18	2,091,395.57	39° 59' 25.477 N	109° 23' 23.852 W
1,077.00	14.79	349.68	1,068.35	94.14	-17.41	14,526,646.63	2,091,390.91	39° 59' 25.690 N	109° 23' 23.907 W
1,167.00	16.62	353.27	1,154.99	118.23	-20.98	14,526,670.65	2,091,386.91	39° 59' 25.928 N	109° 23' 23.953 W
1,257.00	18.18	357.24	1,240.87	145.04	-23.16	14,526,697.42	2,091,384.24	39° 59' 26.193 N	109° 23' 23.981 W
1,347.00	20.01	358.56	1,325.92	174.46	-24.22	14,526,726.81	2,091,382.65	39° 59' 26.484 N	109° 23' 23.994 W
1,437.00	21.59	359.12	1,410.05	206.41	-24.86	14,526,758.75	2,091,381.43	39° 59' 26.800 N	109° 23' 24.003 W
1,527.00	21.93	1.74	1,493.64	239.76	-24.61	14,526,792.10	2,091,381.08	39° 59' 27.129 N	109° 23' 23.999 W
1,617.00	23.29	2.78	1,576.72	274.34	-23.24	14,526,826.69	2,091,381.83	39° 59' 27.471 N	109° 23' 23.982 W
1,707.00	22.57	5.21	1,659.61	309.31	-20.80	14,526,861.70	2,091,383.63	39° 59' 27.817 N	109° 23' 23.951 W
1,797.00	21.83	8.37	1,742.94	343.07	-16.80	14,526,895.53	2,091,387.02	39° 59' 28.151 N	109° 23' 23.899 W
1,887.00	21.58	14.96	1,826.57	375.62	-10.09	14,526,928.19	2,091,393.14	39° 59' 28.472 N	109° 23' 23.813 W
1,977.00	20.68	22.34	1,910.54	406.31	0.22	14,526,959.07	2,091,402.90	39° 59' 28.776 N	109° 23' 23.680 W
2,067.00	20.59	22.23	1,994.76	435.66	12.25	14,526,988.63	2,091,414.40	39° 59' 29.066 N	109° 23' 23.526 W
2,157.00	20.61	21.64	2,079.01	465.03	24.08	14,527,018.21	2,091,425.70	39° 59' 29.356 N	109° 23' 23.374 W
2,247.00	19.32	20.08	2,163.60	493.74	35.03	14,527,047.11	2,091,436.13	39° 59' 29.640 N	109° 23' 23.233 W
2,337.00	17.52	18.00	2,248.98	520.61	44.33	14,527,074.15	2,091,444.94	39° 59' 29.905 N	109° 23' 23.114 W
LAST SDI MWD SURFACE SURVEY									
2,391.00	16.66	16.72	2,300.60	535.75	49.07	14,527,089.37	2,091,449.40	39° 59' 30.055 N	109° 23' 23.053 W
FIRST SDI MWD PRODUCTION SURVEY									
2,485.00	17.51	17.43	2,390.45	562.15	57.18	14,527,115.91	2,091,457.04	39° 59' 30.316 N	109° 23' 22.948 W
2,580.00	17.71	18.98	2,481.00	589.45	66.16	14,527,143.37	2,091,465.52	39° 59' 30.586 N	109° 23' 22.833 W
2,674.00	16.24	19.57	2,570.90	615.36	75.22	14,527,169.44	2,091,474.11	39° 59' 30.842 N	109° 23' 22.717 W
2,769.00	14.99	18.54	2,662.39	639.52	83.57	14,527,193.75	2,091,482.03	39° 59' 31.081 N	109° 23' 22.609 W
2,863.00	13.85	18.50	2,753.43	661.72	91.01	14,527,216.08	2,091,489.06	39° 59' 31.300 N	109° 23' 22.514 W
2,958.00	11.93	16.72	2,846.03	681.91	97.44	14,527,236.38	2,091,495.13	39° 59' 31.500 N	109° 23' 22.431 W
3,052.00	10.55	20.71	2,938.23	699.26	103.28	14,527,253.83	2,091,500.65	39° 59' 31.671 N	109° 23' 22.356 W
3,147.00	8.88	24.05	3,031.86	714.09	109.35	14,527,268.77	2,091,506.45	39° 59' 31.818 N	109° 23' 22.278 W
3,242.00	7.77	18.36	3,125.86	726.89	114.36	14,527,281.65	2,091,511.23	39° 59' 31.944 N	109° 23' 22.214 W
3,336.00	6.20	14.19	3,219.16	737.84	117.60	14,527,292.66	2,091,514.27	39° 59' 32.053 N	109° 23' 22.172 W
3,431.00	4.79	8.48	3,313.72	746.74	119.45	14,527,301.59	2,091,515.96	39° 59' 32.140 N	109° 23' 22.148 W
3,525.00	3.22	3.06	3,407.49	753.25	120.17	14,527,308.12	2,091,516.56	39° 59' 32.205 N	109° 23' 22.139 W
3,620.00	2.04	353.93	3,502.39	757.60	120.13	14,527,312.47	2,091,516.44	39° 59' 32.248 N	109° 23' 22.140 W
3,714.00	1.89	356.37	3,596.34	760.81	119.85	14,527,315.67	2,091,516.11	39° 59' 32.280 N	109° 23' 22.143 W
3,809.00	1.40	359.73	3,691.30	763.53	119.75	14,527,318.39	2,091,515.96	39° 59' 32.307 N	109° 23' 22.144 W
3,904.00	0.74	335.47	3,786.28	765.25	119.49	14,527,320.11	2,091,515.67	39° 59' 32.323 N	109° 23' 22.148 W
3,998.00	1.18	29.45	3,880.27	766.65	119.71	14,527,321.51	2,091,515.86	39° 59' 32.337 N	109° 23' 22.145 W
4,093.00	2.08	63.54	3,975.23	768.27	121.75	14,527,323.17	2,091,517.87	39° 59' 32.353 N	109° 23' 22.119 W
4,187.00	1.60	72.35	4,069.18	769.43	124.53	14,527,324.38	2,091,520.63	39° 59' 32.365 N	109° 23' 22.083 W
4,282.00	1.18	91.79	4,164.15	769.81	126.77	14,527,324.79	2,091,522.86	39° 59' 32.368 N	109° 23' 22.054 W
4,378.00	1.19	116.54	4,260.13	769.33	128.65	14,527,324.35	2,091,524.75	39° 59' 32.364 N	109° 23' 22.030 W
4,471.00	1.32	128.38	4,353.11	768.23	130.36	14,527,323.28	2,091,526.48	39° 59' 32.353 N	109° 23' 22.008 W
4,565.00	1.52	129.83	4,447.08	766.76	132.16	14,527,321.84	2,091,528.31	39° 59' 32.338 N	109° 23' 21.985 W
4,660.00	1.56	141.33	4,542.05	764.95	133.94	14,527,320.06	2,091,530.12	39° 59' 32.320 N	109° 23' 21.962 W
4,754.00	1.67	131.97	4,636.01	763.03	135.76	14,527,318.18	2,091,531.97	39° 59' 32.302 N	109° 23' 21.939 W
4,849.00	1.23	60.71	4,730.99	762.60	137.67	14,527,317.79	2,091,533.89	39° 59' 32.297 N	109° 23' 21.914 W
4,943.00	1.36	68.16	4,824.96	763.51	139.59	14,527,318.73	2,091,535.79	39° 59' 32.306 N	109° 23' 21.889 W
5,038.00	1.49	40.75	4,919.94	764.87	141.44	14,527,320.12	2,091,537.62	39° 59' 32.320 N	109° 23' 21.866 W
5,132.00	1.30	33.22	5,013.91	766.68	142.82	14,527,321.96	2,091,538.97	39° 59' 32.338 N	109° 23' 21.848 W
5,227.00	1.14	39.34	5,108.89	768.32	144.01	14,527,323.61	2,091,540.13	39° 59' 32.354 N	109° 23' 21.833 W
5,322.00	1.14	60.00	5,203.87	769.52	145.43	14,527,324.64	2,091,541.53	39° 59' 32.366 N	109° 23' 21.814 W
5,416.00	0.79	53.23	5,297.85	770.38	146.76	14,527,325.72	2,091,542.84	39° 59' 32.374 N	109° 23' 21.797 W
5,511.00	0.97	77.40	5,392.84	770.94	148.07	14,527,326.31	2,091,544.14	39° 59' 32.380 N	109° 23' 21.781 W
5,605.00	0.70	107.02	5,486.83	770.95	149.39	14,527,326.34	2,091,545.46	39° 59' 32.380 N	109° 23' 21.763 W
5,700.00	0.70	107.73	5,581.83	770.60	150.50	14,527,326.02	2,091,546.58	39° 59' 32.376 N	109° 23' 21.749 W

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: UINTAH_NBU 922-36K PAD
Well: NBU 922-36K1BS
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 922-36K1BS
TVD Reference: GL 4950 & KB 14 @ 4964.00ft (ENSIGN 138)
MD Reference: GL 4950 & KB 14 @ 4964.00ft (ENSIGN 138)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,794.00	0.88	142.71	5,675.82	769.85	151.49	14,527,325.28	2,091,547.57	39° 59' 32.369 N	109° 23' 21.737 W
5,889.00	1.04	144.86	5,770.81	768.57	152.43	14,527,324.02	2,091,548.54	39° 59' 32.356 N	109° 23' 21.725 W
5,983.00	0.18	240.88	5,864.80	767.80	152.79	14,527,323.26	2,091,548.92	39° 59' 32.349 N	109° 23' 21.720 W
6,078.00	1.52	299.18	5,959.79	768.34	151.56	14,527,323.78	2,091,547.68	39° 59' 32.354 N	109° 23' 21.736 W
6,173.00	2.29	308.53	6,054.73	770.14	148.98	14,527,325.53	2,091,545.06	39° 59' 32.372 N	109° 23' 21.769 W
6,267.00	2.02	309.88	6,148.67	772.37	146.24	14,527,327.71	2,091,542.28	39° 59' 32.394 N	109° 23' 21.804 W
6,362.00	1.49	319.72	6,243.62	774.39	144.15	14,527,329.69	2,091,540.16	39° 59' 32.414 N	109° 23' 21.831 W
6,456.00	1.06	306.27	6,337.60	775.83	142.66	14,527,331.11	2,091,538.64	39° 59' 32.428 N	109° 23' 21.850 W
6,551.00	1.06	312.60	6,432.58	776.95	141.31	14,527,332.20	2,091,537.27	39° 59' 32.439 N	109° 23' 21.867 W
6,646.00	0.35	311.33	6,527.58	777.74	140.44	14,527,332.97	2,091,536.39	39° 59' 32.447 N	109° 23' 21.879 W
6,835.00	0.44	284.74	6,716.57	778.30	139.31	14,527,333.51	2,091,535.24	39° 59' 32.452 N	109° 23' 21.893 W
6,929.00	0.18	201.07	6,810.57	778.26	138.90	14,527,333.46	2,091,534.84	39° 59' 32.452 N	109° 23' 21.898 W
7,024.00	1.08	57.33	6,905.57	778.60	139.60	14,527,333.81	2,091,535.54	39° 59' 32.455 N	109° 23' 21.889 W
7,118.00	0.98	67.73	6,999.55	779.38	141.09	14,527,334.62	2,091,537.01	39° 59' 32.463 N	109° 23' 21.870 W
7,213.00	0.83	76.28	7,094.54	779.85	142.51	14,527,335.12	2,091,538.42	39° 59' 32.468 N	109° 23' 21.852 W
7,307.00	0.98	127.79	7,188.53	779.52	143.81	14,527,334.81	2,091,539.72	39° 59' 32.465 N	109° 23' 21.835 W
7,402.00	1.23	145.17	7,283.51	778.19	145.03	14,527,333.50	2,091,540.97	39° 59' 32.451 N	109° 23' 21.820 W
7,498.00	1.14	152.11	7,379.49	776.50	146.07	14,527,331.83	2,091,542.04	39° 59' 32.435 N	109° 23' 21.806 W
7,593.00	1.65	209.21	7,474.47	774.47	145.84	14,527,329.80	2,091,541.85	39° 59' 32.415 N	109° 23' 21.809 W
7,687.00	1.76	217.68	7,568.42	772.15	144.30	14,527,327.45	2,091,540.35	39° 59' 32.392 N	109° 23' 21.829 W
7,782.00	1.01	332.13	7,663.41	771.73	143.02	14,527,327.01	2,091,539.07	39° 59' 32.388 N	109° 23' 21.845 W
7,876.00	1.48	350.83	7,757.39	773.66	142.44	14,527,328.93	2,091,538.46	39° 59' 32.407 N	109° 23' 21.853 W
7,971.00	0.86	4.36	7,852.37	775.58	142.30	14,527,330.85	2,091,538.28	39° 59' 32.426 N	109° 23' 21.855 W
8,065.00	0.97	12.89	7,946.35	777.06	142.53	14,527,332.33	2,091,538.49	39° 59' 32.440 N	109° 23' 21.852 W
8,160.00	0.76	38.42	8,041.34	778.34	143.10	14,527,333.62	2,091,539.03	39° 59' 32.453 N	109° 23' 21.844 W
8,254.00	0.79	58.95	8,135.34	779.16	144.04	14,527,334.46	2,091,539.96	39° 59' 32.461 N	109° 23' 21.832 W
8,349.00	1.05	75.62	8,230.32	779.72	145.45	14,527,335.04	2,091,541.36	39° 59' 32.466 N	109° 23' 21.814 W
8,443.00	1.14	75.03	8,324.31	780.17	147.18	14,527,335.52	2,091,543.08	39° 59' 32.471 N	109° 23' 21.792 W
8,538.00	0.88	97.36	8,419.29	780.32	148.82	14,527,335.70	2,091,544.72	39° 59' 32.472 N	109° 23' 21.771 W
8,633.00	1.14	118.45	8,514.28	779.78	150.37	14,527,335.19	2,091,546.28	39° 59' 32.467 N	109° 23' 21.751 W
8,727.00	0.96	126.97	8,608.26	778.86	151.83	14,527,334.30	2,091,547.75	39° 59' 32.458 N	109° 23' 21.732 W
8,765.00	1.18	130.63	8,646.25	778.41	152.38	14,527,333.86	2,091,548.31	39° 59' 32.454 N	109° 23' 21.725 W
LAST SDI MWD PRODUCTION SURVEY									
8,825.00	1.18	130.63	8,706.24	777.61	153.31	14,527,333.07	2,091,549.26	39° 59' 32.446 N	109° 23' 21.713 W
SDI MWD PROJECTION TO TD									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
188.00	187.99	-1.06	0.48	FIRST SDI MWD SURFACE SURVEY
2,337.00	2,248.98	520.61	44.33	LAST SDI MWD SURFACE SURVEY

Checked By: _____ Approved By: _____ Date: _____