

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 1022-2H4BS
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) ST UT ML 22651	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	165 FNL 750 FEL	NENE	2	10.0 S	22.0 E	S
Top of Uppermost Producing Zone	2074 FNL 493 FEL	SENE	2	10.0 S	22.0 E	S
At Total Depth	2074 FNL 493 FEL	SENE	2	10.0 S	22.0 E	S

21. COUNTY UINTAH	22. DISTANCE TO NEAREST LEASE LINE (Feet) 493	23. NUMBER OF ACRES IN DRILLING UNIT 620
24. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 557	25. PROPOSED DEPTH MD: 8840 TVD: 8521	
26. ELEVATION - GROUND LEVEL 4969	27. BOND NUMBER 22013542	28. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE 43-8496

Hole, Casing, and Cement Information										
String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
Surf	11	8.625	0 - 2130	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 - 8840	11.6	I-80 LT&C	12.5	Premium Lite High Strength	270	3.38	11.0
							50/50 Poz	1240	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 08/10/2011	EMAIL gina.becker@anadarko.com
API NUMBER ASSIGNED 43047518250000	APPROVAL  Permit Manager	

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 1022-2H4BS**

Surface: 165 FNL / 750 FEL NENE
 BHL: 2074 FNL / 493 FEL SENE

Section 2 T10S R22E

Uintah County, Utah
 Mineral Lease: ST UT ML 22651

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	1051	
Birds Nest	1311	Water
Mahogany	1675	Water
Wasatch	4105	Gas
Mesaverde	6340	Gas
MVU2	7301	Gas
MVL1	7895	Gas
TVD	8521	
TD	8840	

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 8521' TVD, approximately equals
 5,453 psi 0.64 psi/ft = actual bottomhole gradient

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

Maximum anticipated surface pressure equals approximately 3,567 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

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	TENSION	
CONDUCTOR	14"	0-40'							
SURFACE	8-5/8"	0 to 2,130	28.00	IJ-55	LTC	3,390	1,880	348,000	N/A
						2.54	1.89	6.66	N/A
PRODUCTION	4-1/2"	0 to 8,840	11.60	I-80	LTC/BTC	7,780	6,350	279,000	367,000
						1.11	1.15	3.36	4.42

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 1,630'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	150	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 3,600'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	270	20%	11.00	3.38
	TAIL 5,240'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,240	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

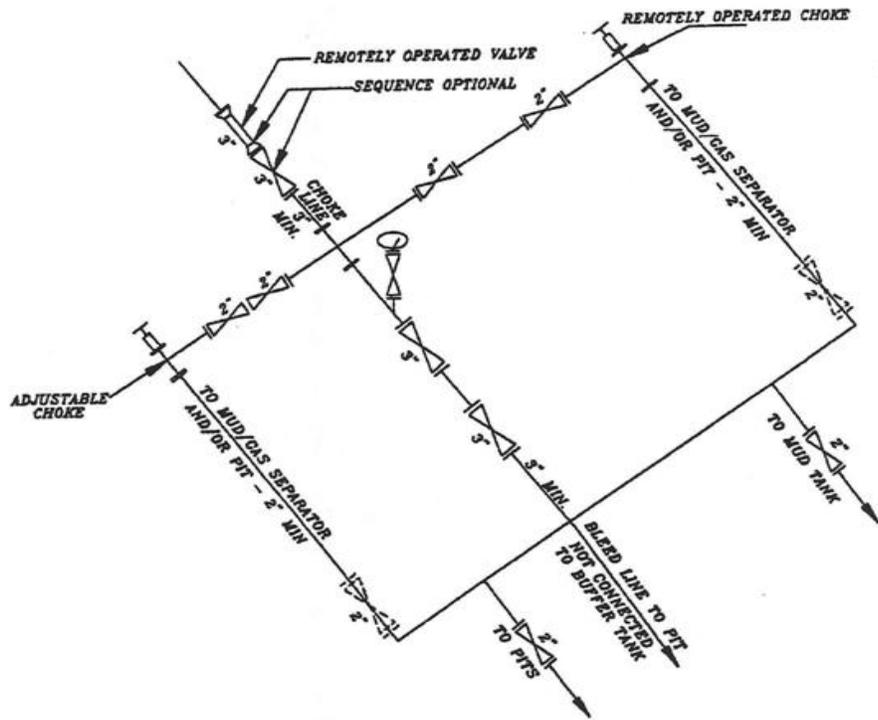
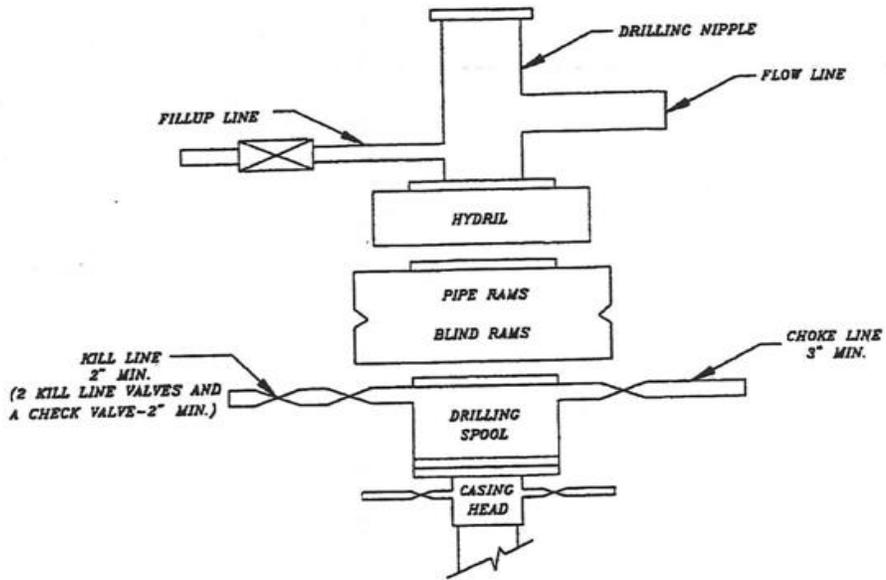
DATE: _____

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

DATE: _____

EXHIBIT A
NBU 1022-2H4BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

T10S, R22E, S.L.B.&M.

S89°57'E - 80.56 (G.L.O.)

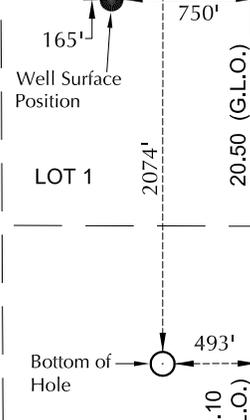
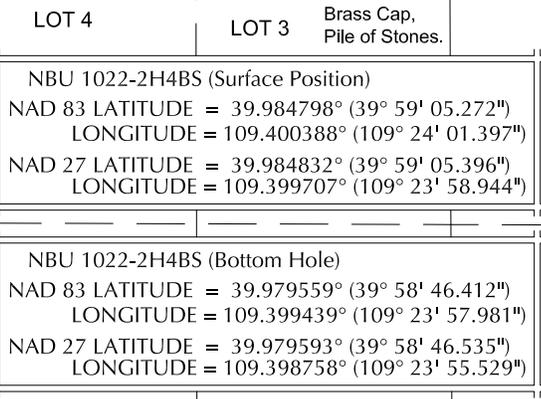
S89°59'39"E - 2658.67' (Meas.)

S89°58'01"E - 2658.78' (Meas.)

Found 1977
Brass Cap in
Pile of Stones,
Fence Post.

Found 1977
Brass Cap,
Steel Post.

NORTH - 40.28 (G.L.O.)
N00°02'06"W - 2658.04' (Meas.)
20.275 (G.L.O.)



20.50 (G.L.O.)
N00°18'14"W (Basis of Bearings)
2679.29' (Measured)
N0°16'W - 40.60 (G.L.O.)

Found 1991
Aluminum Cap
with Pile of
Stones.

Found 1991
Aluminum Cap,
Pile of Stones.

N0°10'W - 40.06 (G.L.O.)
N00°11'35"W - 2643.82' (Meas.)

WELL LOCATION: NBU 1022-2H4BS

ELEV. UNGRADED GROUND = 4968.8'

N00°00'47"W - 2623.27' (Meas.)
N0°01'E - 39.75 (G.L.O.)

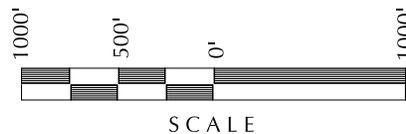
Found 1991
Aluminum Cap,
Steel Post &
Pile of Stones.

Found 1991 Aluminum
Cap with Pile of
Stones. Fence Post
on SE side of Cap.

25.23 (G.L.O.) (Measured to Witness Corner)
N89°55'57"W - 3073.93'
S89°59'W - 80.04 (G.L.O.) (Measured to Witness Corner)
S89°58'17"W - 2247.80'

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 S07°58'16"E 1927.38' 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.

PROF. SEAL OF SURVEYOR
No. 6028691
JOHN R SAUGH
STATE OF UTAH
1-24-11

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

WELL PAD: NBU 1022-2A

**NBU 1022-2H4BS
WELL PLAT**

**2074' FNL, 493' FEL (Bottom Hole)
SE ¼ NE ¼ OF SECTION 2, T10S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH.**

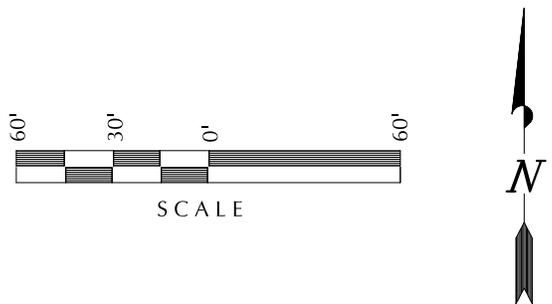


609 CONSULTING, LLC
2155 North Main Street
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

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

DATE SURVEYED: 01-08-11	SURVEYED BY: M.S.B.	SHEET NO: 3 3 OF 17
DATE DRAWN: 01-20-11	DRAWN BY: E.M.S.	
SCALE: 1" = 1000'		Date Last Revised:

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 1022-2H1BS	39°59'05.260"	109°24'01.139"	39°59'05.384"	109°23'58.686"	167' FNL	39°58'52.972"	109°23'58.033"	39°58'53.096"	109°23'55.581"	1410' FNL
NBU 1022-2H1CS	39°59'05.267"	109°24'01.268"	39°59'05.391"	109°23'58.815"	730' FEL	39°58'49.682"	109°23'58.014"	39°58'49.806"	109°23'55.561"	494' FEL
NBU 1022-2H4BS	39°59'05.272"	109°24'01.397"	39°59'05.396"	109°23'58.944"	740' FEL	39°58'46.412"	109°23'57.981"	39°58'46.535"	109°23'55.529"	1743' FNL
NBU 1022-2G1CS	39°59'05.278"	109°24'01.524"	39°59'05.402"	109°23'59.071"	165' FNL	39°58'48.098"	109°24'14.957"	39°58'48.222"	109°24'12.503"	494' FEL
NBU 1022-2G1BS	39°59'05.284"	109°24'01.653"	39°59'05.408"	109°23'59.200"	750' FEL	39°58'51.378"	109°24'14.989"	39°58'51.502"	109°24'12.536"	2074' FNL
NBU 1022-2A4S	39°59'04.863"	109°24'02.565"	39°59'04.987"	109°24'00.112"	164' FNL	39°58'51.378"	109°24'14.989"	39°58'51.502"	109°24'12.536"	770' FEL
CIGE 67D-2-10-22	39°59'04.824"	109°24'02.717"	39°59'04.948"	109°24'00.264"	207' FNL	39°58'51.378"	109°24'14.989"	39°58'51.502"	109°24'12.536"	841' FEL
NBU 1022-2A3S	39°59'04.874"	109°24'02.817"	39°59'04.998"	109°24'00.364"	211' FNL	39°58'47.08"	109°24'00.73"	39°58'47.08"	109°24'00.73"	853' FEL
CIGE 67A	39°59'04.888"	109°24'03.040"	39°59'05.012"	109°24'00.587"	206' FNL	39°58'47.08"	109°24'00.73"	39°58'47.08"	109°24'00.73"	861' FEL
NBU 1022-2A2T	39°59'04.897"	109°24'03.268"	39°59'05.021"	109°24'00.815"	204' FNL	39°58'47.08"	109°24'00.73"	39°58'47.08"	109°24'00.73"	878' FEL
NBU 1022-2B2S	39°59'04.913"	109°24'03.523"	39°59'05.037"	109°24'01.070"	204' FNL	39°58'47.08"	109°24'00.73"	39°58'47.08"	109°24'00.73"	896' FEL
NBU 1022-2B2SX	39°59'04.922"	109°24'03.783"	39°59'05.046"	109°24'01.330"	202' FNL	39°58'47.08"	109°24'00.73"	39°58'47.08"	109°24'00.73"	916' FEL
NBU 1022-2B2SX	39°59'04.922"	109°24'03.783"	39°59'05.046"	109°24'01.330"	201' FNL	39°58'47.08"	109°24'00.73"	39°58'47.08"	109°24'00.73"	936' FEL

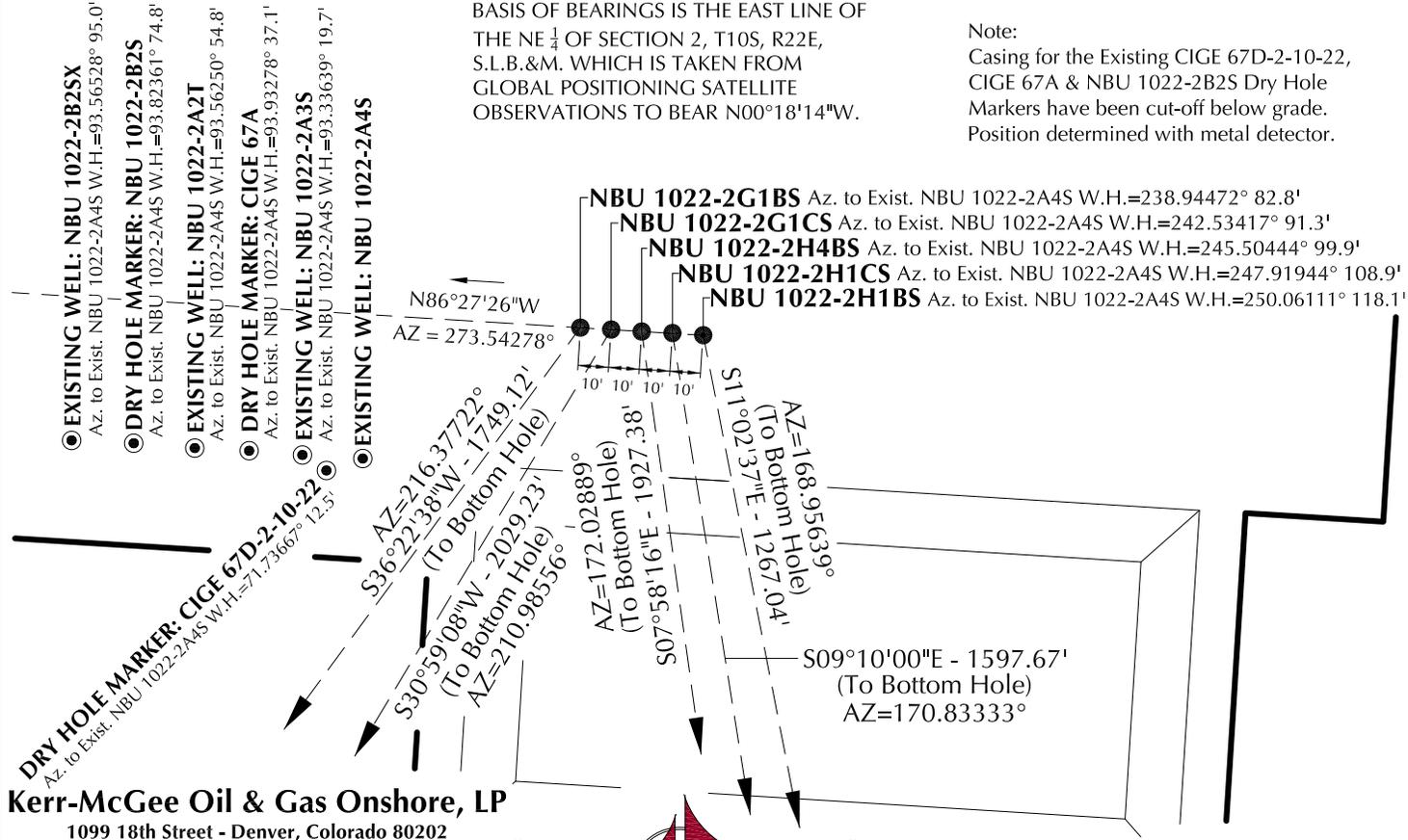


RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 1022-2H1BS	-1,243.6'	242.7'	NBU 1022-2H1CS	-1,577.3'	254.5'	NBU 1022-2H4BS	-1,908.8'	267.3'	NBU 1022-2G1CS	-1,739.7'	-1,044.7'
NBU 1022-2G1BS	-1,408.3'	-1,037.4'									

BASIS OF BEARINGS IS THE EAST LINE OF THE NE 1/4 OF SECTION 2, T10S, R22E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°18'14"W.

Note:
Casing for the Existing CIGE 67D-2-10-22, CIGE 67A & NBU 1022-2B2S Dry Hole Markers have been cut-off below grade. Position determined with metal detector.



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

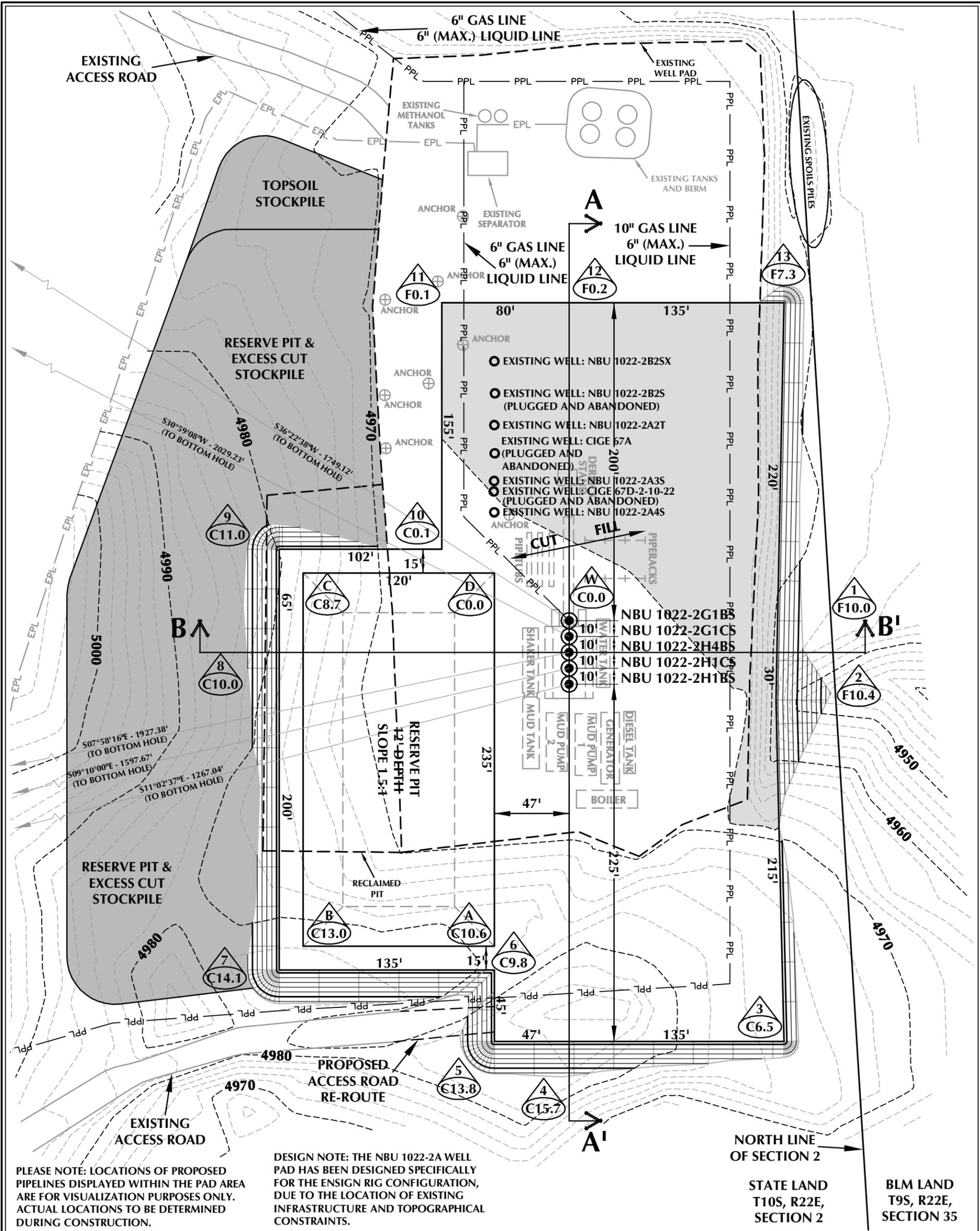


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209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 01-08-11	SURVEYED BY: M.S.B.	SHEET NO: 6 6 OF 17
DATE DRAWN: 01-20-11	DRAWN BY: E.M.S.	
SCALE: 1" = 60'		Date Last Revised: 04-14-11 M.W.W.

WELL PAD - NBU 1022-2A
WELL PAD INTERFERENCE PLAT
WELLS - NBU 1022-2H1BS,
NBU 1022-2H1CS, NBU 1022-2H4BS,
NBU 1022-2G1CS & NBU 1022-2G1BS
LOCATED IN SECTION 2, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH.



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 1022-2A WELL PAD HAS BEEN DESIGNED SPECIFICALLY FOR THE ENSIGN RIG CONFIGURATION, DUE TO THE LOCATION OF EXISTING INFRASTRUCTURE AND TOPOGRAPHICAL CONSTRAINTS.

NORTH LINE OF SECTION 2
STATE LAND T10S, R22E, SECTION 2
BLM LAND T9S, R22E, SECTION 35

WELL PAD - NBU 1022-2A DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4968.8'
FINISHED GRADE ELEVATION = 4968.8'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.28 ACRES
TOTAL DISTURBANCE AREA = 5.90 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

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

WELL PAD - NBU 1022-2A
WELL PAD - LOCATION LAYOUT
NBU 1022-2H1BS,
NBU 1022-2H1CS, NBU 1022-2H4BS,
NBU 1022-2G1CS & NBU 1022-2G1BS
LOCATED IN SECTION 2, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

WELL PAD QUANTITIES
TOTAL CUT FOR WELL PAD = 14,726 C.Y.
TOTAL FILL FOR WELL PAD = 2,376 C.Y.
TOPSOIL @ 6" DEPTH = 1,323 C.Y.
EXCESS MATERIAL = 12,370 C.Y.

RESERVE PIT QUANTITIES
TOTAL CUT FOR RESERVE PIT
+/- 9,890 C.Y.
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 37,880 BARRELS



609 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

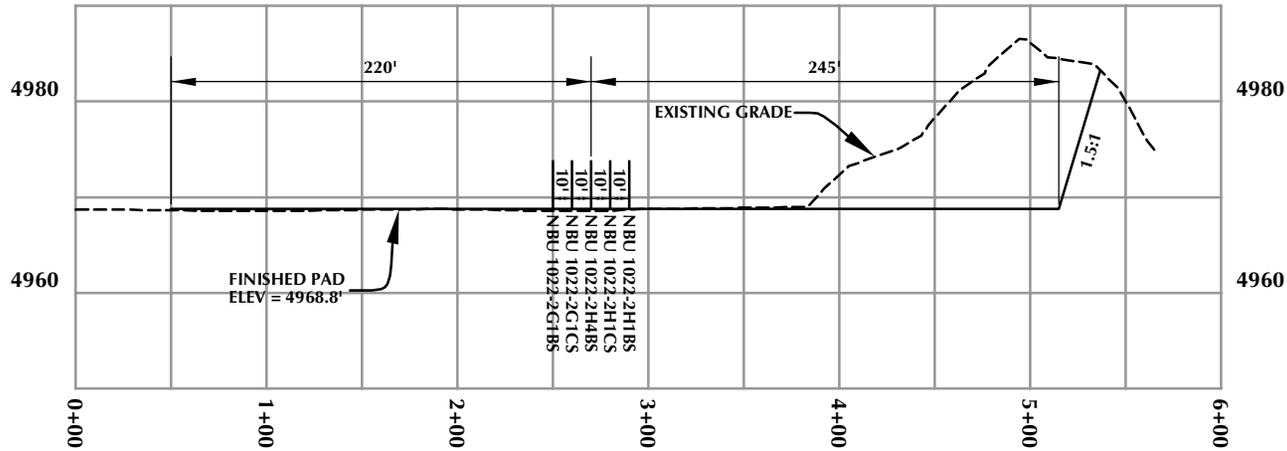
- WELL PAD LEGEND**
- EXISTING WELL LOCATION
 - PROPOSED WELL LOCATION
 - PROPOSED BOTTOM HOLE LOCATION
 - EXISTING CONTOURS (2' INTERVAL)
 - PROPOSED CONTOURS (2' INTERVAL)
 - PPL - PROPOSED PIPELINE
 - EPL - EXISTING PIPELINE



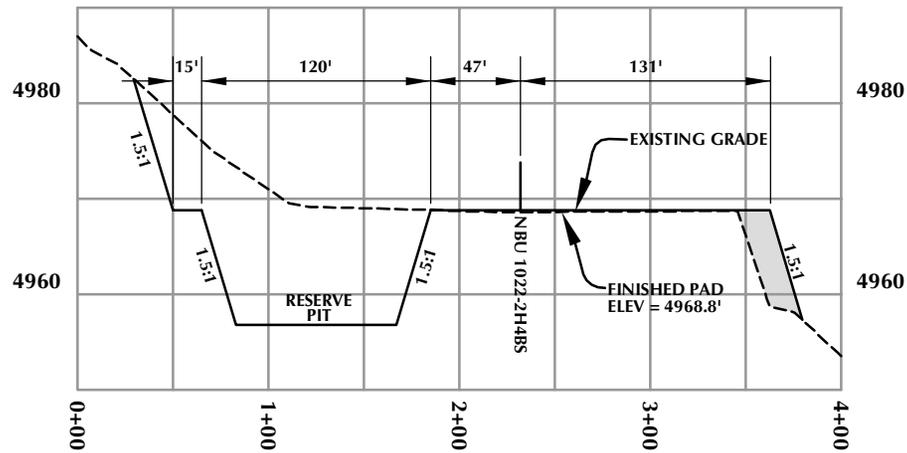
HORIZONTAL 0 30' 60' 1" = 60'
2' CONTOURS

SCALE: 1"=60' DATE: 3/30/11 SHEET NO:
REVISED: TAR 4/21/11 **7** 7 OF 17

C:\ANADARKO\2010\10_63_NBU_FOCUS_1022-2\DWG\NBU_1022-2A\NBU_1022-2A_PAD_20110113.dwg, 4/21/2011 1:49:07 PM



CROSS SECTION A-A'



CROSS SECTION B-B'

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

WELL PAD - NBU 1022-2A

WELL PAD - CROSS SECTIONS

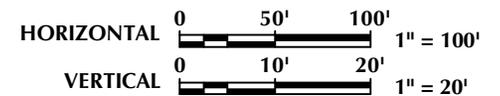
NBU 1022-2H1BS,
NBU 1022-2H1CS, NBU 1022-2H4BS,
NBU 1022-2G1CS & NBU 1022-2G1BS
LOCATED IN SECTION 2, T10S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH



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

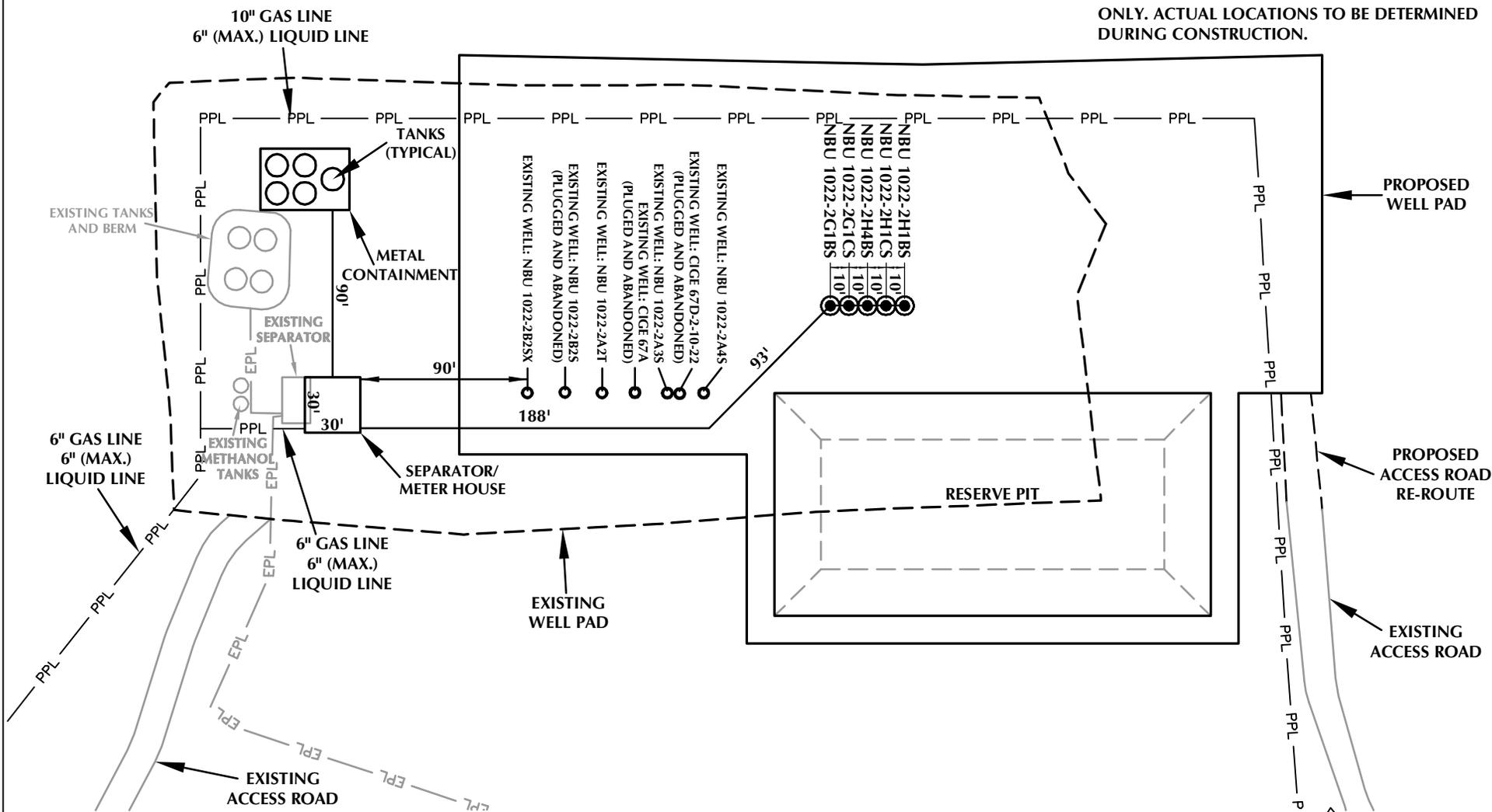
(435) 789-1365



Scale: 1"=100'	Date: 3/30/11	SHEET NO:
REVISED:	TAR 4/21/11	8 8 OF 17

RECEIVED: August 10, 2011

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 1022-2A

WELL PAD - FACILITIES DIAGRAM
NBU 1022-2H1BS,
NBU 1022-2H1CS, NBU 1022-2H4BS,
NBU 1022-2G1CS & NBU 1022-2G1BS
LOCATED IN SECTION 2, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC
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Sheridan, WY 82801
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WELL PAD LEGEND

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



HORIZONTAL 0 40' 80' 1" = 80'

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

Scale: 1"=80'	Date: 3/30/11	SHEET NO:
REVISED:	TAR 4/19/11	9 9 OF 17

RECEIVED: August 10, 2011

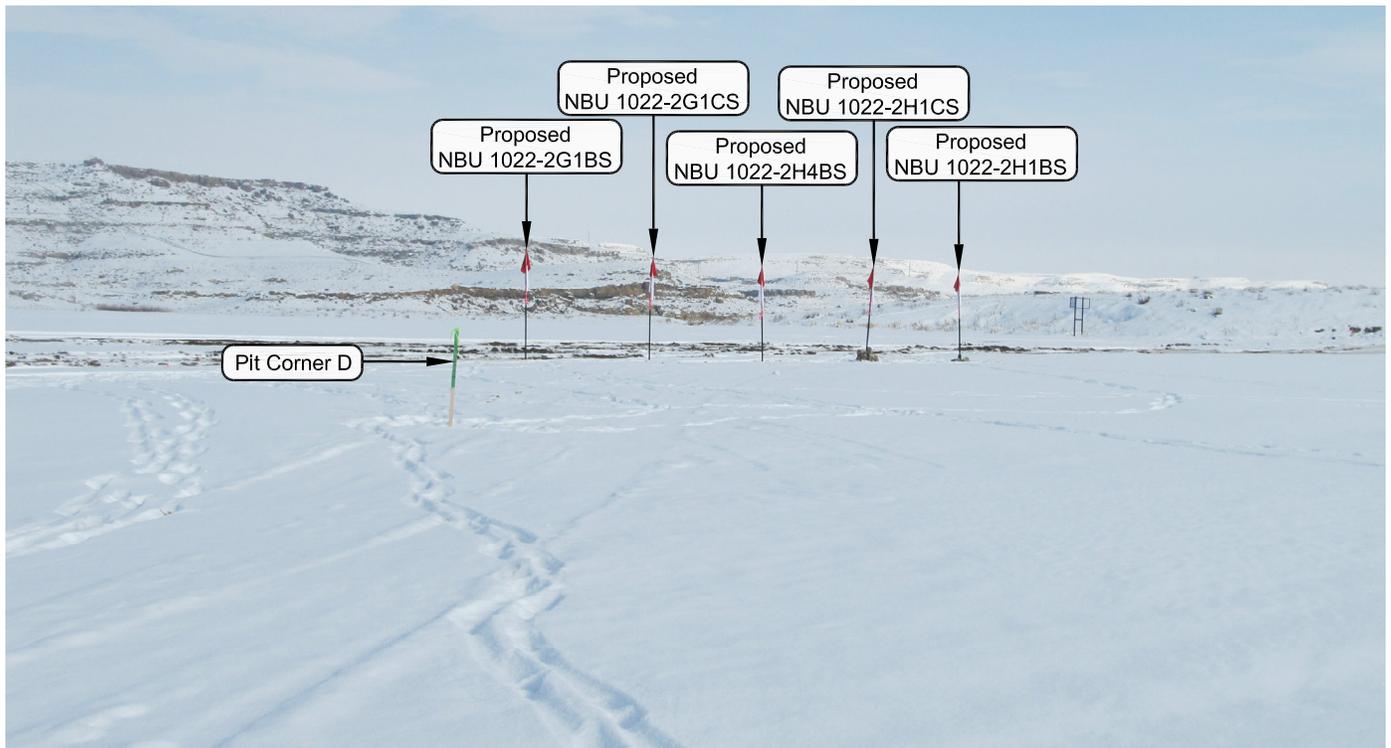


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHERLY

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

WELL PAD - NBU 1022-2A

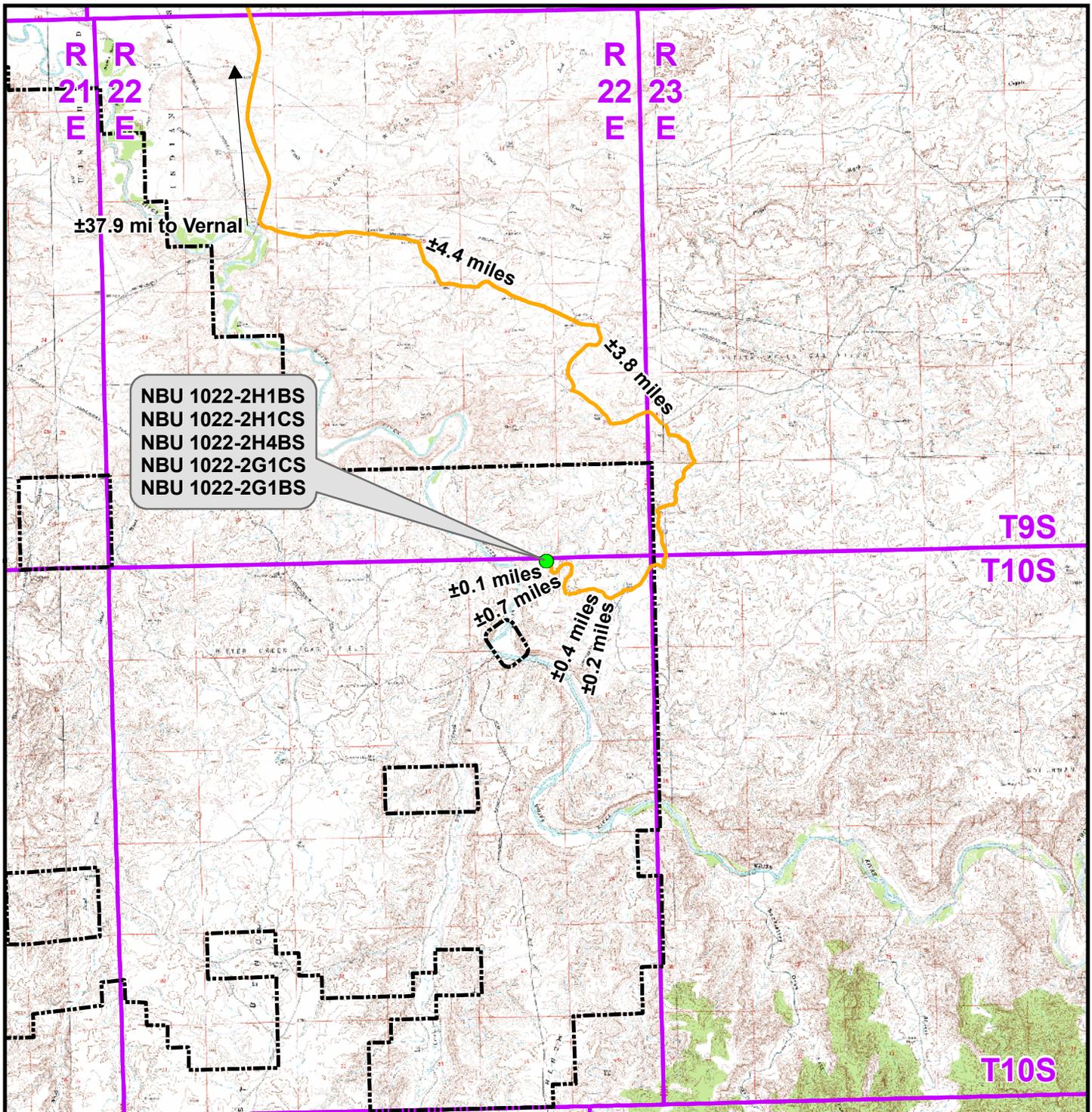
LOCATION PHOTOS
 NBU 1022-2H1BS,
 NBU 1022-2H1CS, NBU 1022-2H4BS,
 NBU 1022-2G1CS & NBU 1022-2G1BS
 LOCATED IN SECTION 2, T10S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH.



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

DATE PHOTOS TAKEN: 01-08-11	PHOTOS TAKEN BY: M.S.B.	SHEET NO: 10
DATE DRAWN: 01-20-11	DRAWN BY: E.M.S.	
Date Last Revised:		10 OF 17



Legend

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

Distance From Well Pad - NBU 1022-2A To Unit Boundary: ±4,681ft

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

WELL PAD - NBU 1022-2A

TOPO A
 NBU 1022-2H1BS,
 NBU 1022-2H1CS, NBU 1022-2H4BS,
 NBU 1022-2G1CS & NBU 1022-2G1BS
 LOCATED IN SECTION 2, T10S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

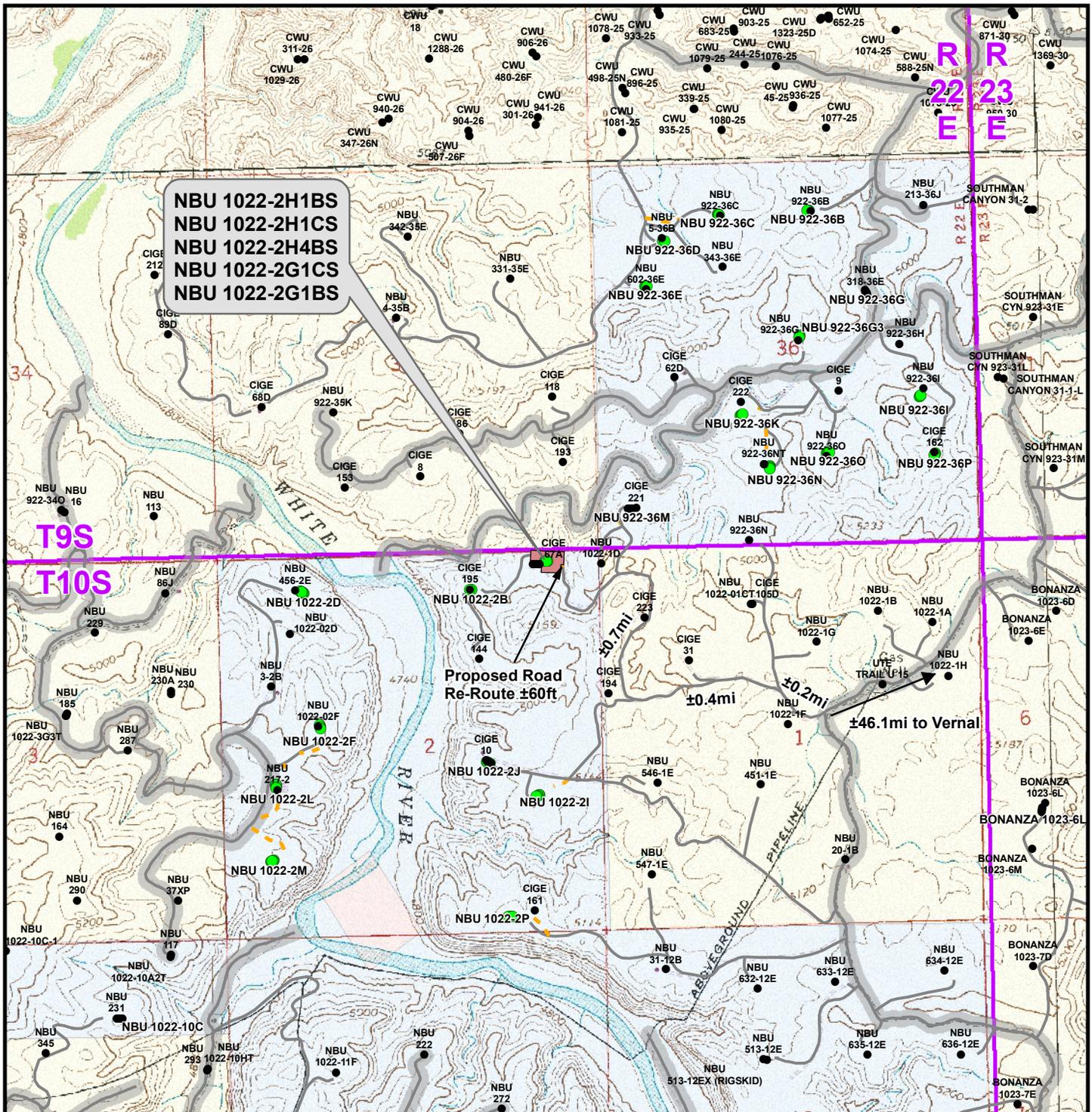


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Scale: 1:100,000	NAD83 USP Central
Drawn: KGS	Date: 30 Mar 2011
Revised:	Date:

Sheet No:
11
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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: ±60ft

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

WELL PAD - NBU 1022-2A

TOPO B
NBU 1022-2H1BS,
NBU 1022-2H1CS, NBU 1022-2H4BS,
NBU 1022-2G1CS & NBU 1022-2G1BS
LOCATED IN SECTION 2, T10S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH

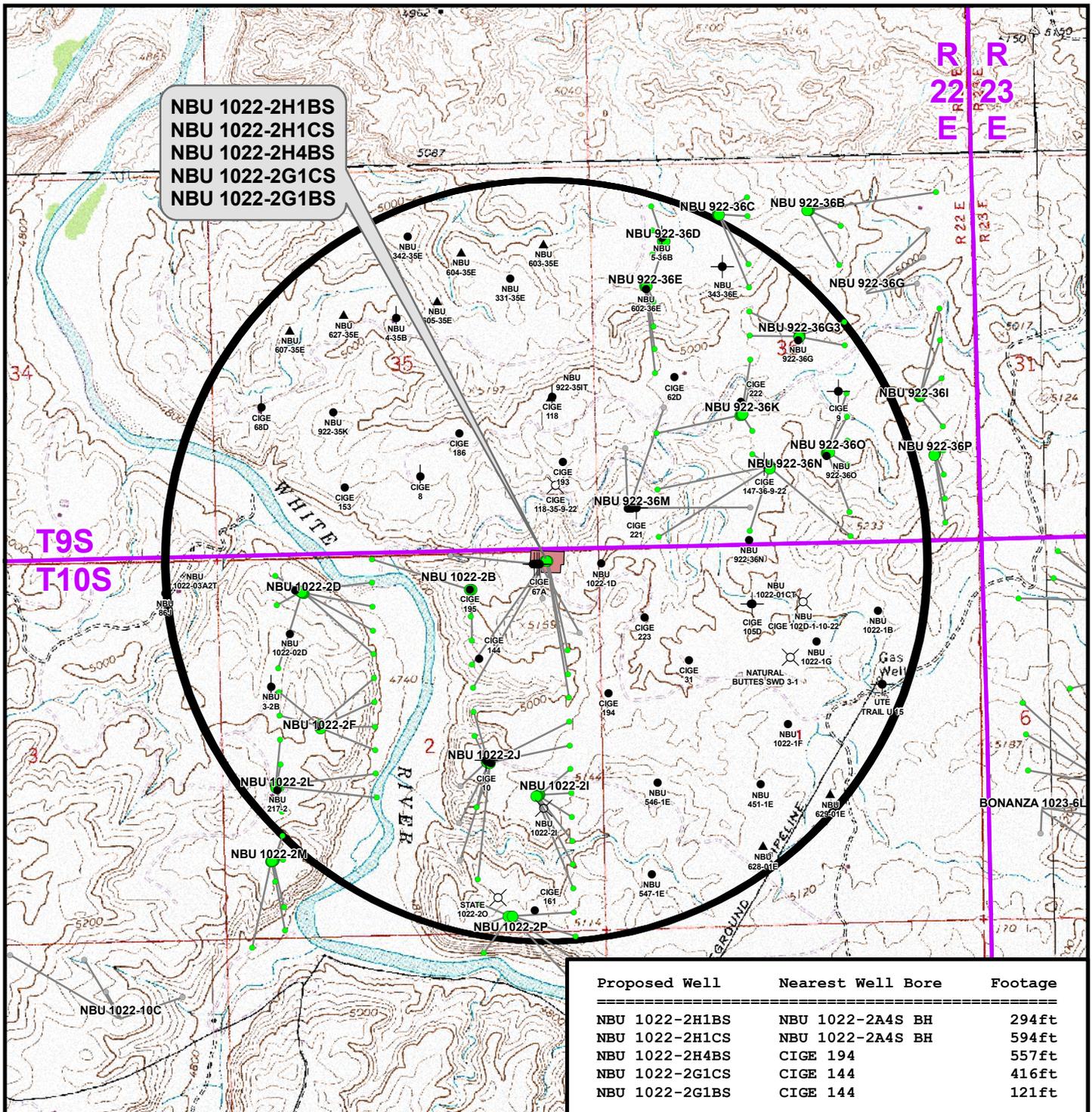


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Sheridan, WY 82801
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Fax (307) 674-0182



Scale: 1" = 2,000ft | NAD83 USP Central
Drawn: KGS | Date: 30 Mar 2011
Revised: | Date:

Sheet No:
12 12 of 17



NBU 1022-2H1BS
 NBU 1022-2H1CS
 NBU 1022-2H4BS
 NBU 1022-2G1CS
 NBU 1022-2G1BS

Proposed Well	Nearest Well Bore	Footage
NBU 1022-2H1BS	NBU 1022-2A4S BH	294ft
NBU 1022-2H1CS	NBU 1022-2A4S BH	594ft
NBU 1022-2H4BS	CIGE 194	557ft
NBU 1022-2G1CS	CIGE 144	416ft
NBU 1022-2G1BS	CIGE 144	121ft

Legend

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

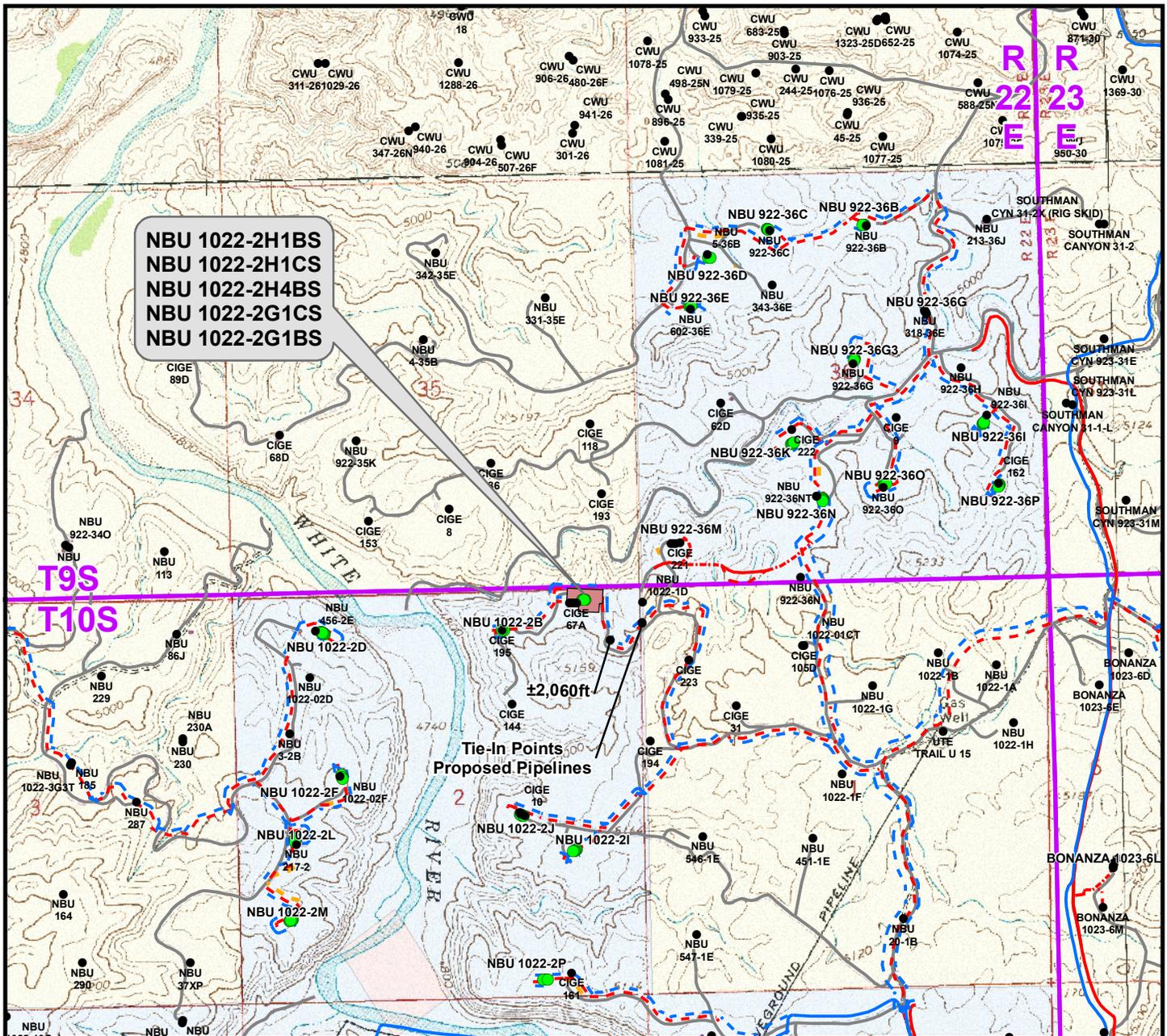
Kerr-McGee Oil & Gas Onshore, LP
 1099 18th Street, Denver, Colorado 80202

WELL PAD - NBU 1022-2A

TOPO C
 NBU 1022-2H1BS,
 NBU 1022-2H1CS, NBU 1022-2H4BS,
 NBU 1022-2G1CS & NBU 1022-2G1BS
 LOCATED IN SECTION 2, T10S, 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: 13
Drawn: KGS	Date: 30 Mar 2011	13 of 17
Revised:	Date:	



Proposed Liquid Pipeline		Length	Proposed Gas Pipeline		Length
Proposed 6" (Max.) (Meter House to 2B Intersection)		±75ft	Proposed 6" (Meter House to 2B Intersection)		±75ft
Proposed 6" (Max.) (2B Intersection to East line of Section 2)		±2,060ft	Proposed 10" (2B Intersection to East Line of Section 2)		±2,060ft
TOTAL PROPOSED LIQUID PIPELINE =		±2,135ft	TOTAL PROPOSED GAS PIPELINE =		±2,135ft

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

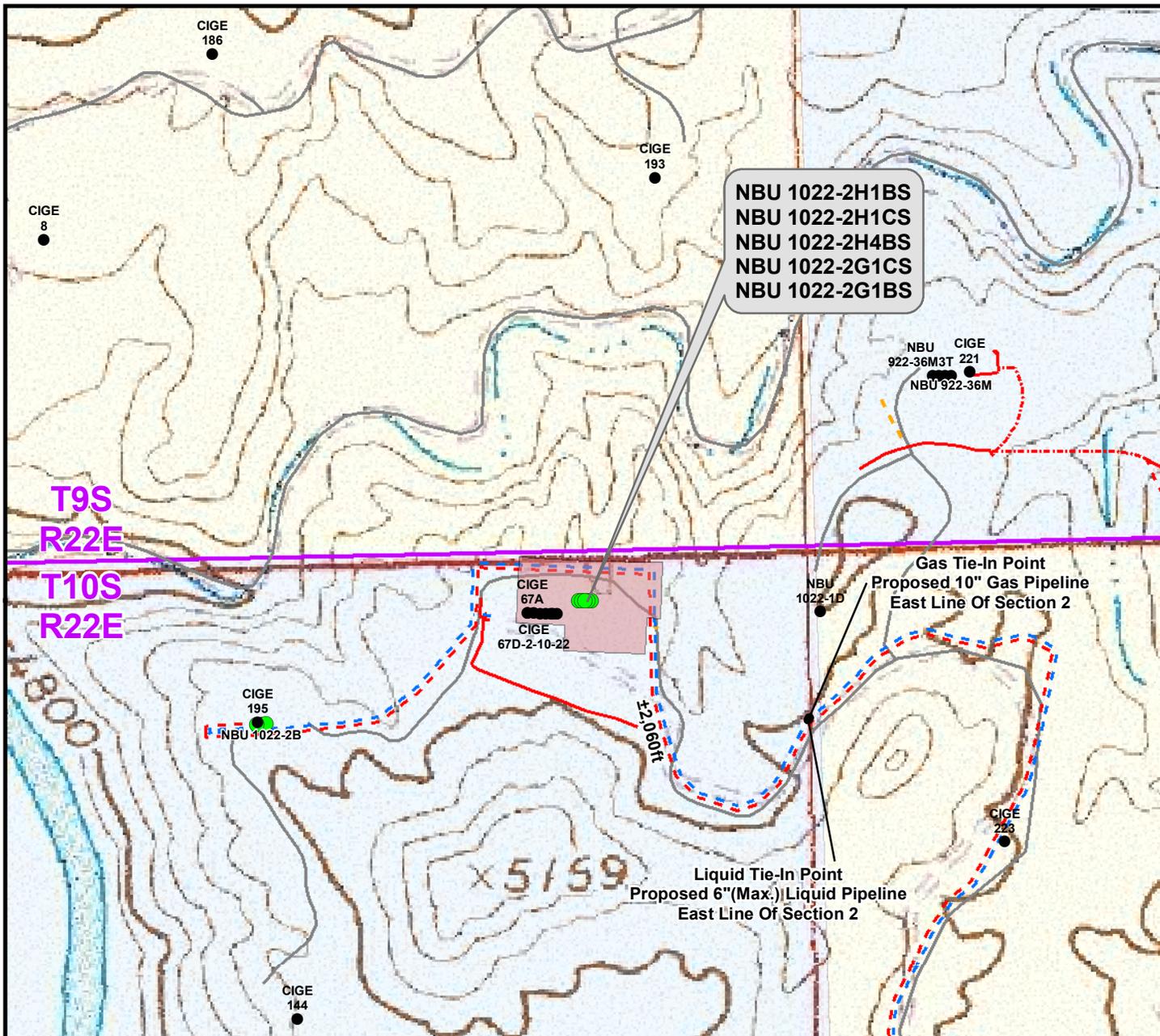
WELL PAD - NBU 1022-2A

TOPO D
 NBU 1022-2H1BS,
 NBU 1022-2H1CS, NBU 1022-2H4BS,
 NBU 1022-2G1CS & NBU 1022-2G1BS
 LOCATED IN SECTION 2, T10S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH

CONSULTING, LLC
 2155 North Main Street
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Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 30 Mar 2011	14
Revised:	Date:	

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Proposed Liquid Pipeline	Length
Proposed 6" (Max.) (Meter House to 2B Intersection)	±75ft
Proposed 6" (Max.) (2B Intersection to East line of Section 2)	±2,060ft
TOTAL PROPOSED LIQUID PIPELINE =	±2,135ft

Proposed Gas Pipeline	Length
Proposed 6" (Meter House to 2B Intersection)	±75ft
Proposed 10" (2B Intersection to East Line of Section 2)	±2,060ft
TOTAL PROPOSED GAS PIPELINE =	±2,135ft

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 1022-2A

TOPO D2 (PAD & PIPELINE DETAIL)

NBU 1022-2H1BS,

NBU 1022-2H1CS, NBU 1022-2H4BS,

NBU 1022-2G1CS & NBU 1022-2G1BS

**LOCATED IN SECTION 2, T10S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH**

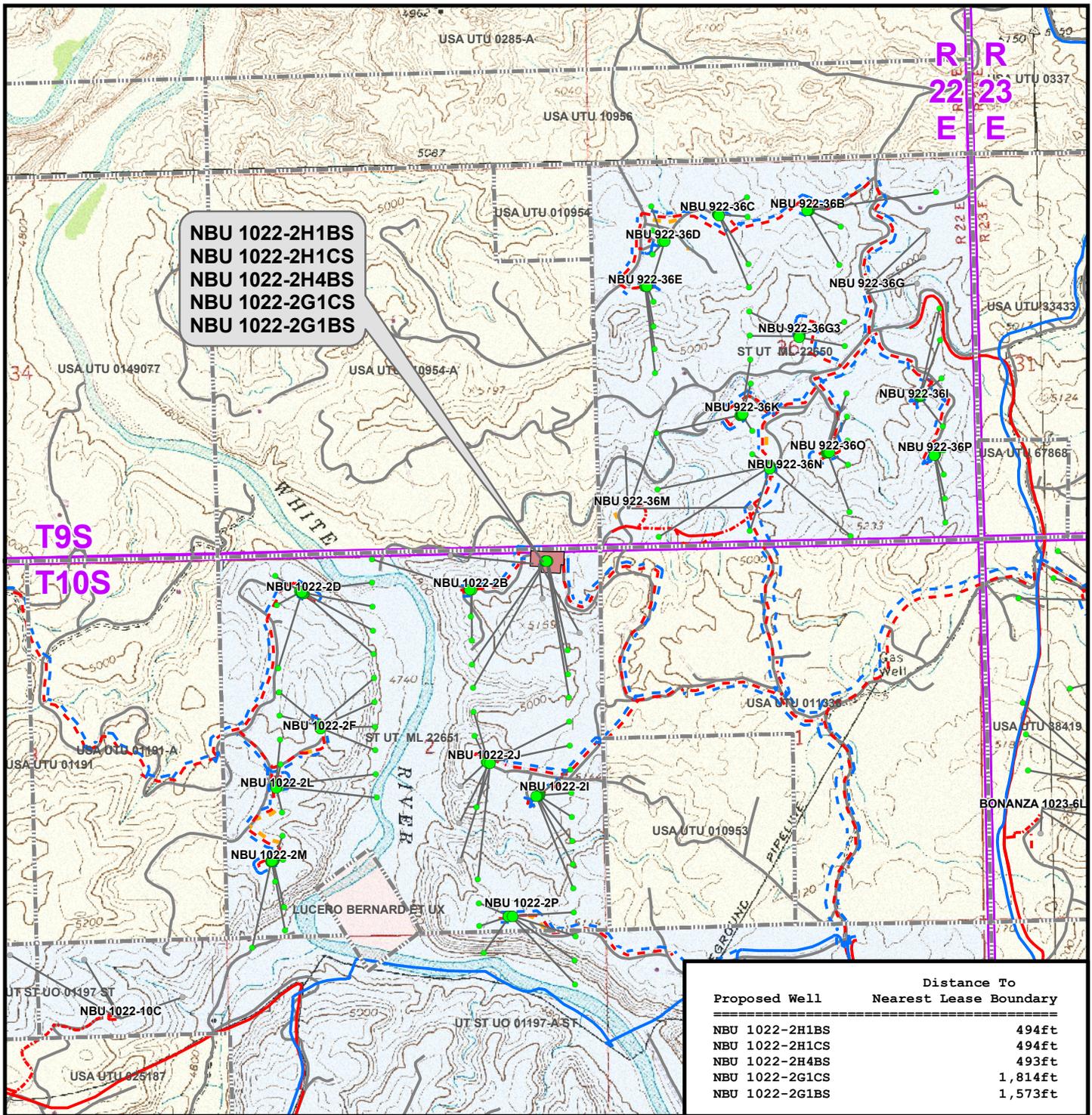


CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone (307) 674-0609
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Scale: 1" = 500ft	NAD83 USP Central
Drawn: TL	Date: 30 Mar 2011
Revised:	Date:

Sheet No:
15 15 of 16



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 1022-2A

TOPO E
 NBU 1022-2H1BS,
 NBU 1022-2H1CS, NBU 1022-2H4BS,
 NBU 1022-2G1CS & NBU 1022-2G1BS
 LOCATED IN SECTION 2, T10S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC
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 Sheridan, WY 82801
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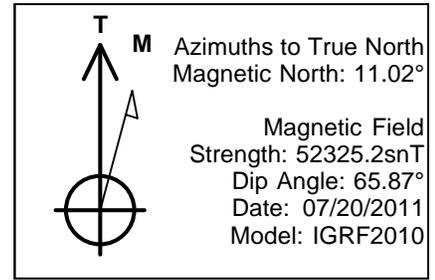


Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: 16
Drawn: TL	Date: 30 Mar 2011	16 of 17
Revised:	Date:	

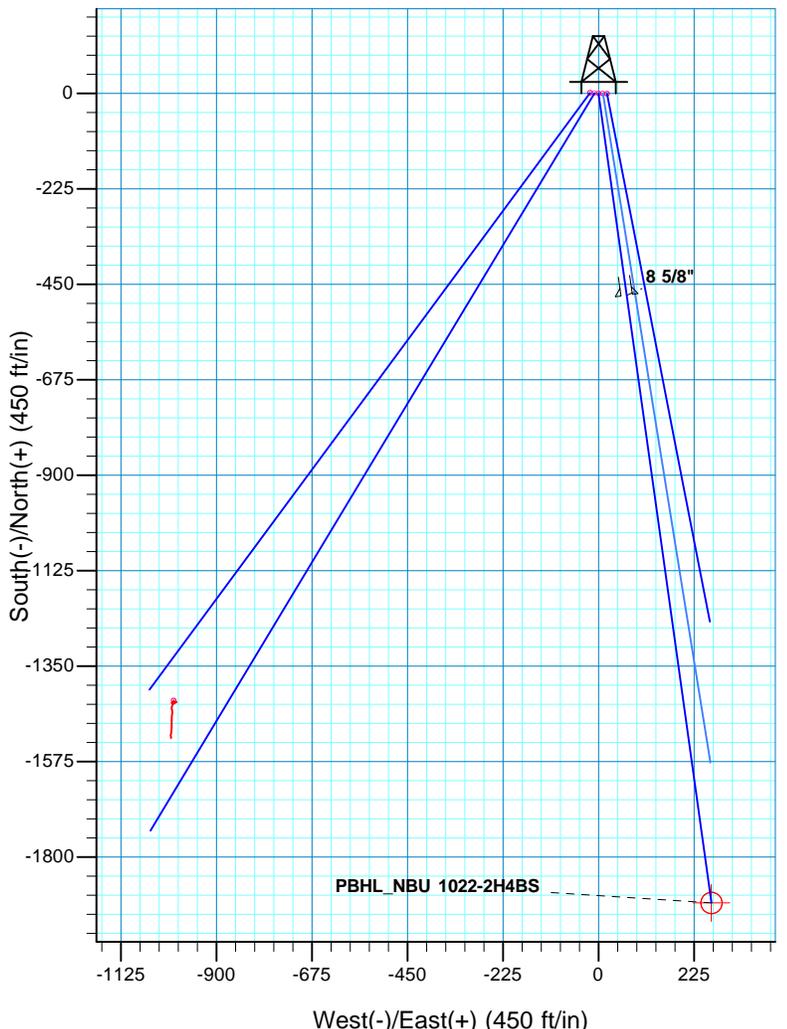
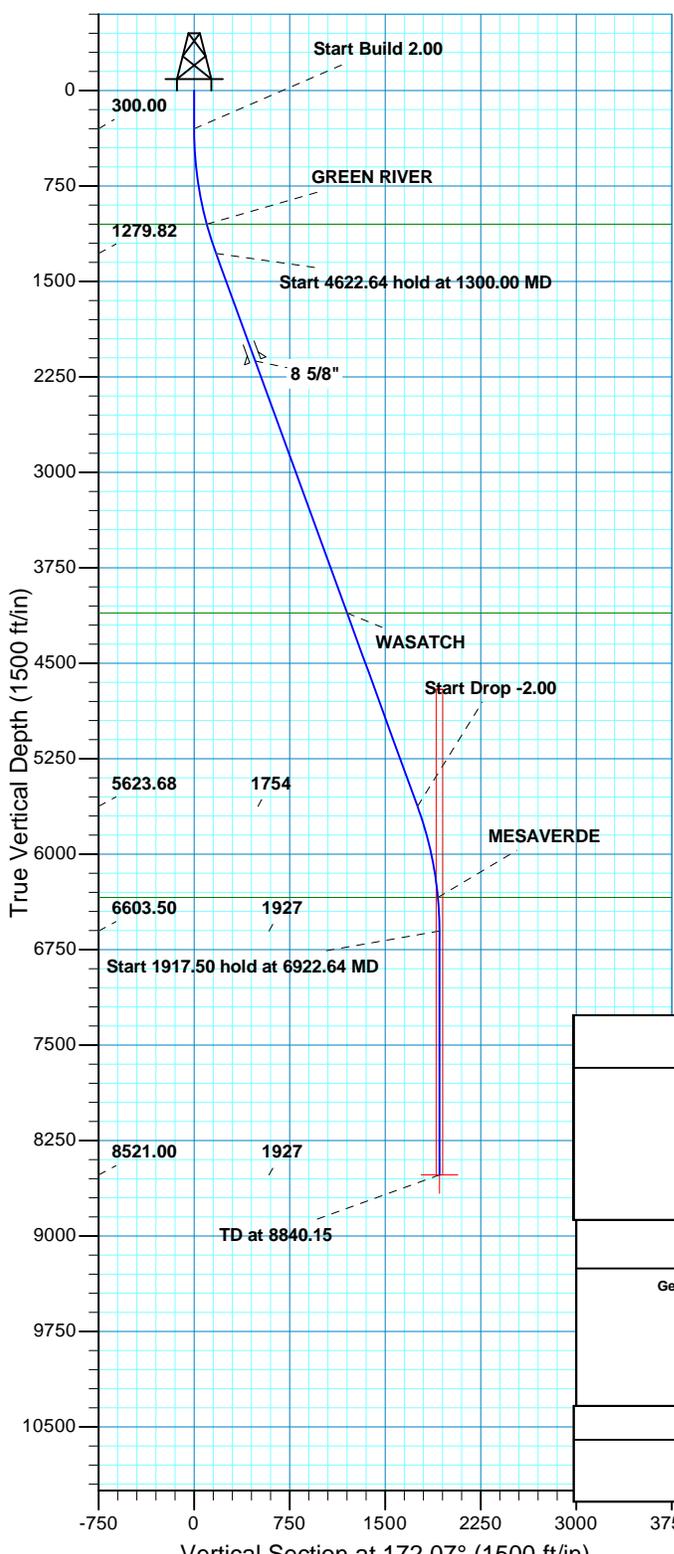
**Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – NBU 1022-2A
WELLS – NBU 1022-2H1BS,
NBU 1022-2H1CS, NBU 1022-2H4BS,
NBU 1022-2G1CS & NBU 1022-2G1BS
Section 2, T10S, R22E, S.L.B.&M.**

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 southeasterly, then southwesterly direction along the Seven Sisters Road approximately 3.8 miles to a service road to the west. Exit right and proceed in a westerly, then northwesterly direction along the service road approximately 0.2 miles to a second service road to the northwest. Exit left and proceed in a northwesterly, then westerly direction along the second service road approximately 0.4 miles to a third service road to the northwest. Exit right and proceed in a northwesterly, northeasterly, southwesterly, then northerly direction along the third service road approximately 0.7 miles to the proposed access road. Follow the road flags in a northerly direction approximately 60 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 47.4 miles in a southerly direction.



WELL DETAILS: NBU 1022-2H4BS						
GL 4969' & KB 4' @ 4973.00ft (ASSUMED)						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	14524544.60	2088701.44	39° 59' 5.395 N	109° 23' 58.945 W	
DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude Longitude Shape
PBHL	8521.00	-1908.13	265.91	14522641.55	2089001.56	39° 58' 46.535 N 109° 23' 55.529 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	172.07	1279.82	-171.11	23.85	2.00	172.07	172.77			
5922.64	20.00	172.07	5623.68	-1737.02	242.07	0.00	0.00	1753.81			
6922.64	0.00	0.00	6603.50	-1908.13	265.91	2.00	180.00	1926.57			
8840.15	0.00	0.00	8521.00	-1908.13	265.91	0.00	0.00	1926.57	PBHL_NBU 1022-2H4BS		
PROJECT DETAILS: Uintah County, UT UTM12							FORMATION TOP DETAILS				
Geodetic System: Universal Transverse Mercator (US Survey Feet) Datum: NAD 1927 - Western US Ellipsoid: Clarke 1866 Zone: Zone 12N (114 W to 108 W) Location: SECTION 2 T10S R22E System Datum: Mean Sea Level							TVDPath	MDPath	Formation		
							1051.00	1059.88	GREEN RIVER		
							4105.00	4306.50	WASATCH		
							6340.00	6658.78	MESAVERDE		
CASING DETAILS											
			TVD	MD	Name	Size					
			2125.00	2199.43	8 5/8"	8.625					
Plan: PLAN #1 PRELIMINARY (NBU 1022-2H4BS/OH)											
Created By: RobertScott Date: 9:08, July 20 2011											

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Kerr McGee Oil and Gas Onshore LP

**Uintah County, UT UTM12
NBU 1022-2A PAD
NBU 1022-2H4BS**

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

20 July, 2011





SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-2H4BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4969' & KB 4' @ 4973.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4969' & KB 4' @ 4973.00ft (ASSUMED)
Site:	NBU 1022-2A PAD	North Reference:	True
Well:	NBU 1022-2H4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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 1022-2A PAD, SECTION 2 T10S R22E				
Site Position:		Northing:	14,524,545.70 usft	Latitude:	39° 59' 5.410 N
From:	Lat/Long	Easting:	2,088,681.52 usft	Longitude:	109° 23' 59.201 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	1.03 °

Well	NBU 1022-2H4BS, 165 FNL 750 FEL					
Well Position	+N/-S	-1.46 ft	Northing:	14,524,544.60 usft	Latitude:	39° 59' 5.395 N
	+E/-W	19.89 ft	Easting:	2,088,701.43 usft	Longitude:	109° 23' 58.945 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,969.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	07/20/11	11.02	65.87	52,325

Design	PLAN #1 PRELIMINARY			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	172.07

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	172.07	1,279.82	-171.11	23.85	2.00	2.00	0.00	172.07	
5,922.64	20.00	172.07	5,623.68	-1,737.02	242.07	0.00	0.00	0.00	0.00	
6,922.64	0.00	0.00	6,603.50	-1,908.13	265.91	2.00	-2.00	0.00	180.00	
8,840.15	0.00	0.00	8,521.00	-1,908.13	265.91	0.00	0.00	0.00	0.00	PBHL_NBU 1022-2H4



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-2H4BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4969' & KB 4' @ 4973.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4969' & KB 4' @ 4973.00ft (ASSUMED)
Site:	NBU 1022-2A PAD	North Reference:	True
Well:	NBU 1022-2H4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
Start Build 2.00										
400.00	2.00	172.07	399.98	-1.73	0.24	1.75	2.00	2.00	0.00	
500.00	4.00	172.07	499.84	-6.91	0.96	6.98	2.00	2.00	0.00	
600.00	6.00	172.07	599.45	-15.54	2.17	15.69	2.00	2.00	0.00	
700.00	8.00	172.07	698.70	-27.61	3.85	27.88	2.00	2.00	0.00	
800.00	10.00	172.07	797.47	-43.11	6.01	43.52	2.00	2.00	0.00	
900.00	12.00	172.07	895.62	-62.00	8.64	62.60	2.00	2.00	0.00	
1,000.00	14.00	172.07	993.06	-84.28	11.75	85.10	2.00	2.00	0.00	
1,059.88	15.20	172.07	1,051.00	-99.23	13.83	100.19	2.00	2.00	0.00	
GREEN RIVER										
1,100.00	16.00	172.07	1,089.64	-109.91	15.32	110.98	2.00	2.00	0.00	
1,200.00	18.00	172.07	1,185.27	-138.87	19.35	140.21	2.00	2.00	0.00	
1,300.00	20.00	172.07	1,279.82	-171.11	23.85	172.77	2.00	2.00	0.00	
Start 4622.64 hold at 1300.00 MD										
1,400.00	20.00	172.07	1,373.78	-204.99	28.57	206.97	0.00	0.00	0.00	
1,500.00	20.00	172.07	1,467.75	-238.86	33.29	241.17	0.00	0.00	0.00	
1,600.00	20.00	172.07	1,561.72	-272.74	38.01	275.37	0.00	0.00	0.00	
1,700.00	20.00	172.07	1,655.69	-306.61	42.73	309.58	0.00	0.00	0.00	
1,800.00	20.00	172.07	1,749.66	-340.49	47.45	343.78	0.00	0.00	0.00	
1,900.00	20.00	172.07	1,843.63	-374.36	52.17	377.98	0.00	0.00	0.00	
2,000.00	20.00	172.07	1,937.60	-408.24	56.89	412.18	0.00	0.00	0.00	
2,100.00	20.00	172.07	2,031.57	-442.11	61.61	446.38	0.00	0.00	0.00	
2,199.43	20.00	172.07	2,125.00	-475.79	66.31	480.39	0.00	0.00	0.00	
8 5/8"										
2,200.00	20.00	172.07	2,125.54	-475.99	66.33	480.59	0.00	0.00	0.00	
2,300.00	20.00	172.07	2,219.51	-509.86	71.05	514.79	0.00	0.00	0.00	
2,400.00	20.00	172.07	2,313.48	-543.74	75.77	548.99	0.00	0.00	0.00	
2,500.00	20.00	172.07	2,407.45	-577.61	80.49	583.19	0.00	0.00	0.00	
2,600.00	20.00	172.07	2,501.42	-611.49	85.21	617.39	0.00	0.00	0.00	
2,700.00	20.00	172.07	2,595.39	-645.36	89.94	651.60	0.00	0.00	0.00	
2,800.00	20.00	172.07	2,689.35	-679.23	94.66	685.80	0.00	0.00	0.00	
2,900.00	20.00	172.07	2,783.32	-713.11	99.38	720.00	0.00	0.00	0.00	
3,000.00	20.00	172.07	2,877.29	-746.98	104.10	754.20	0.00	0.00	0.00	
3,100.00	20.00	172.07	2,971.26	-780.86	108.82	788.40	0.00	0.00	0.00	
3,200.00	20.00	172.07	3,065.23	-814.73	113.54	822.61	0.00	0.00	0.00	
3,300.00	20.00	172.07	3,159.20	-848.61	118.26	856.81	0.00	0.00	0.00	
3,400.00	20.00	172.07	3,253.17	-882.48	122.98	891.01	0.00	0.00	0.00	
3,500.00	20.00	172.07	3,347.14	-916.36	127.70	925.21	0.00	0.00	0.00	
3,600.00	20.00	172.07	3,441.11	-950.23	132.42	959.41	0.00	0.00	0.00	
3,700.00	20.00	172.07	3,535.08	-984.11	137.14	993.62	0.00	0.00	0.00	
3,800.00	20.00	172.07	3,629.05	-1,017.98	141.86	1,027.82	0.00	0.00	0.00	
3,900.00	20.00	172.07	3,723.02	-1,051.86	146.58	1,062.02	0.00	0.00	0.00	
4,000.00	20.00	172.07	3,816.99	-1,085.73	151.30	1,096.22	0.00	0.00	0.00	
4,100.00	20.00	172.07	3,910.95	-1,119.61	156.03	1,130.42	0.00	0.00	0.00	
4,200.00	20.00	172.07	4,004.92	-1,153.48	160.75	1,164.63	0.00	0.00	0.00	
4,300.00	20.00	172.07	4,098.89	-1,187.35	165.47	1,198.83	0.00	0.00	0.00	
4,306.50	20.00	172.07	4,105.00	-1,189.56	165.77	1,201.05	0.00	0.00	0.00	



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-2H4BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4969' & KB 4' @ 4973.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4969' & KB 4' @ 4973.00ft (ASSUMED)
Site:	NBU 1022-2A PAD	North Reference:	True
Well:	NBU 1022-2H4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
WASATCH										
4,400.00	20.00	172.07	4,192.86	-1,221.23	170.19	1,233.03	0.00	0.00	0.00	
4,500.00	20.00	172.07	4,286.83	-1,255.10	174.91	1,267.23	0.00	0.00	0.00	
4,600.00	20.00	172.07	4,380.80	-1,288.98	179.63	1,301.43	0.00	0.00	0.00	
4,700.00	20.00	172.07	4,474.77	-1,322.85	184.35	1,335.64	0.00	0.00	0.00	
4,800.00	20.00	172.07	4,568.74	-1,356.73	189.07	1,369.84	0.00	0.00	0.00	
4,900.00	20.00	172.07	4,662.71	-1,390.60	193.79	1,404.04	0.00	0.00	0.00	
5,000.00	20.00	172.07	4,756.68	-1,424.48	198.51	1,438.24	0.00	0.00	0.00	
5,100.00	20.00	172.07	4,850.65	-1,458.35	203.23	1,472.44	0.00	0.00	0.00	
5,200.00	20.00	172.07	4,944.62	-1,492.23	207.95	1,506.65	0.00	0.00	0.00	
5,300.00	20.00	172.07	5,038.59	-1,526.10	212.67	1,540.85	0.00	0.00	0.00	
5,400.00	20.00	172.07	5,132.56	-1,559.98	217.39	1,575.05	0.00	0.00	0.00	
5,500.00	20.00	172.07	5,226.52	-1,593.85	222.11	1,609.25	0.00	0.00	0.00	
5,600.00	20.00	172.07	5,320.49	-1,627.73	226.84	1,643.45	0.00	0.00	0.00	
5,700.00	20.00	172.07	5,414.46	-1,661.60	231.56	1,677.66	0.00	0.00	0.00	
5,800.00	20.00	172.07	5,508.43	-1,695.47	236.28	1,711.86	0.00	0.00	0.00	
5,900.00	20.00	172.07	5,602.40	-1,729.35	241.00	1,746.06	0.00	0.00	0.00	
5,922.64	20.00	172.07	5,623.68	-1,737.02	242.07	1,753.81	0.00	0.00	0.00	
Start Drop -2.00										
6,000.00	18.45	172.07	5,696.72	-1,762.25	245.58	1,779.28	2.00	-2.00	0.00	
6,100.00	16.45	172.07	5,792.11	-1,791.95	249.72	1,809.27	2.00	-2.00	0.00	
6,200.00	14.45	172.07	5,888.49	-1,818.34	253.40	1,835.91	2.00	-2.00	0.00	
6,300.00	12.45	172.07	5,985.74	-1,841.38	256.61	1,859.18	2.00	-2.00	0.00	
6,400.00	10.45	172.07	6,083.75	-1,861.05	259.35	1,879.03	2.00	-2.00	0.00	
6,500.00	8.45	172.07	6,182.38	-1,877.31	261.62	1,895.45	2.00	-2.00	0.00	
6,600.00	6.45	172.07	6,281.53	-1,890.16	263.41	1,908.42	2.00	-2.00	0.00	
6,658.78	5.28	172.07	6,340.00	-1,896.11	264.24	1,914.43	2.00	-2.00	0.00	
MESAVERDE										
6,700.00	4.45	172.07	6,381.08	-1,899.57	264.72	1,917.93	2.00	-2.00	0.00	
6,800.00	2.45	172.07	6,480.89	-1,905.53	265.55	1,923.95	2.00	-2.00	0.00	
6,900.00	0.45	172.07	6,580.85	-1,908.05	265.90	1,926.48	2.00	-2.00	0.00	
6,922.64	0.00	0.00	6,603.50	-1,908.13	265.91	1,926.57	2.00	-2.00	0.00	
Start 1917.50 hold at 6922.64 MD										
7,000.00	0.00	0.00	6,680.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	
7,100.00	0.00	0.00	6,780.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	
7,200.00	0.00	0.00	6,880.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	
7,300.00	0.00	0.00	6,980.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,080.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,180.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,280.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,380.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,480.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,580.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,680.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	
8,100.00	0.00	0.00	7,780.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	
8,200.00	0.00	0.00	7,880.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	
8,300.00	0.00	0.00	7,980.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,080.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,180.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,280.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,380.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,480.85	-1,908.13	265.91	1,926.57	0.00	0.00	0.00	



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-2H4BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4969' & KB 4' @ 4973.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4969' & KB 4' @ 4973.00ft (ASSUMED)
Site:	NBU 1022-2A PAD	North Reference:	True
Well:	NBU 1022-2H4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,840.15	0.00	0.00	8,521.00	-1,908.13	265.91	1,926.57	0.00	0.00	0.00
TD at 8840.15 - PBHL_NBU 1022-2H4BS									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 1022-2H4B: - hit/miss target - Shape - Circle (radius 25.00)	0.00	0.00	8,521.00	-1,908.13	265.91	14,522,641.55	2,089,001.55	39° 58' 46.535 N	109° 23' 55.529 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,199.43	2,125.00	8 5/8"	8.625	11.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,059.88	1,051.00	GREEN RIVER			
4,306.50	4,105.00	WASATCH			
6,658.78	6,340.00	MESAVERDE			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
1,300.00	1,279.82	-171.11	23.85	Start 4622.64 hold at 1300.00 MD
5,922.64	5,623.68	-1,737.02	242.07	Start Drop -2.00
6,922.64	6,603.50	-1,908.13	265.91	Start 1917.50 hold at 6922.64 MD
8,840.15	8,521.00	-1,908.13	265.91	TD at 8840.15

NBU 1022-2G1BS/ 1022-2G1CS/ 1022-2H1BS/ 1022-2H1CS/
1022-2H4BSSurface Use Plan of Operations
1 of 9**NBU 1022-2G1BS**

Surface:	164 FNL / 770 FEL	NENE	Lot 1
BHL:	1573 FNL / 1815 FEL	SWNE	Lot

NBU 1022-2G1CS

Surface:	165 FNL / 760 FEL	NENE	Lot 1
BHL:	1905 FNL / 1814 FEL	SWNE	Lot

NBU 1022-2H1BS

Surface:	167 FNL / 730 FEL	NENE	Lot 1
BHL:	1410 FNL / 494 FEL	SENE	Lot

NBU 1022-2H1CS

Surface:	166 FNL / 740 FEL	NENE	Lot 1
BHL:	1743 FNL / 494 FEL	SENE	Lot

NBU 1022-2H4BS

Surface:	165 FNL / 750 FEL	NENE	Lot 1
BHL:	2074 FNL / 493 FEL	SENE	Lot

Pad: NBU 1022-2A PAD
Section 2 T10S R22E
Mineral Lease: ST UT ML 22651

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

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 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 $\pm 60'$ reroute will follow the proposed gas and liquid pipelines from the SE edge of the pad to the existing access road. 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 NBU 1022-2A pad. The NBU 1022-2A2T well location is a vertical producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of June 1, 2011. The NBU 1022-2A4S well location is a directional producing well according to UDOGM records as of June 1, 2011. The NBU 1022-2B2SX well location is a directional producing well according to UDOGM records as of June 1, 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.

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 $\pm 2,135'$ and the individual segments are broken up as follows:

- $\pm 75'$ (0.01 miles) –New 6" buried gas pipeline from the meter to the tie-in at the proposed 1022-2B Intersection 10" gas pipeline. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 2,060'$ (0.39 miles) –New 10" buried gas pipeline from the tie-in at the proposed 1022-2B Intersection 10" gas pipeline to the East Line of Section 2. Please refer to Topo D2 - Pad and Pipeline detail

The total liquid gathering pipeline distance from the separator to the tie in point is $\pm 2,135'$ and the individual segments are broken up as follows:

- $\pm 75'$ (0.01 miles) –New 6" buried liquid pipeline from the separator to the tie-in at the proposed 1022-2B Intersection 6" liquid pipeline. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 2,060'$ (0.39 miles) –New 6" buried liquid pipeline from the tie-in at the proposed 1022-2B Intersection 6" liquid pipeline to the East Line of Section 2. Please refer to Topo D2 - Pad and Pipeline Detail

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 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.

Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity 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 for Handling Waste Materials:

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

RNI in Sec. 5 T9S R22E
 Ace Oilfield in Sec. 2 T6S R20E
 MC&MC in Sec. 12 T6S R19E
 Pipeline Facility in Sec. 36 T9S R20E
 Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E
 Bonanza Evaporation Pond in Sec. 2 T10S R23E
 Ouray #1 SWD in Sec. 1 T9S R21E
 NBU 159 SWD in Sec. 35 T9S R21E
 CIGE 112D SWD in Sec. 19 T9S R21E
 CIGE 114 SWD in Sec. 34 T9S R21E
 NBU 921-34K SWD in Sec. 34 T9S R21E
 NBU 921-33F SWD in Sec. 33 T9S R21E
 NBU 921-34L SWD in Sec. 34 T9S R21E

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

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions or well testing, product will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly

be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods (e.g. solidification.)

The reserve and/or fracture stimulation pit will be lined with a synthetic material 20 mil or thicker, The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. Any additional pits necessary 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 is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

Interim Reclamation

Interim reclamation 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 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.

NBU 1022-2G1BS/ 1022-2G1CS/ 1022-2H1BS/ 1022-2H1CS/
1022-2H4BS

J. Surface/Mineral Ownership:

SITLA

675 East 500 South, Suite 500

Salt Lake City, UT 84102

L. Other Information:

None

NBU 1022-2G1BS/ 1022-2G1CS/ 1022-2H1BS/ 1022-2H1CS/
1022-2H4BS

Surface Use Plan of Operations
9 of 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

August 10, 2011
Date



Joseph D. Johnson
1099 18TH STREET STE. 1800 • DENVER, CO 80202
720-929-6708 • FAX 720-929-7708
E-MAIL: JOE.JOHNSON@ANADARKO.COM

August 4, 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 1022-2H4BS
T10S-R22E
Section 2: NENE
Surface: 165' FNL, 750' FEL
T10S-R22E
Section 2: SENE
Bottom Hole: 2074' FNL, 493' FEL
Uintah County, Utah

Dear Ms. Mason:

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

- Kerr-McGee's NBU 1022-2H4BS 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

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)

August 19, 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 1022-11F PAD

43-047-51797	NBU 1022-11C2CS	Sec 11 T10S R22E 1860 FNL 1499 FWL
	BHL	Sec 11 T10S R22E 0370 FNL 1365 FWL

43-047-51799	NBU 1022-11C3DS	Sec 11 T10S R22E 1852 FNL 1505 FWL
	BHL	Sec 11 T10S R22E 1268 FNL 1726 FWL

43-047-51800	NBU 1022-11D1CS	Sec 11 T10S R22E 1868 FNL 1493 FWL
	BHL	Sec 11 T10S R22E 0576 FNL 0818 FWL

43-047-51801	NBU 1022-11F2DS	Sec 11 T10S R22E 1844 FNL 1512 FWL
	BHL	Sec 11 T10S R22E 1622 FNL 1625 FWL

NBU 1022-11G2 PAD

43-047-51802	NBU 1022-11B4CS	Sec 11 T10S R22E 1627 FNL 2594 FEL
	BHL	Sec 11 T10S R22E 1238 FNL 1803 FEL

43-047-51813	NBU 1022-11B4BS	Sec 11 T10S R22E 1633 FNL 2601 FEL
	BHL	Sec 11 T10S R22E 0908 FNL 1804 FEL

43-047-51815	NBU 1022-11B1CS	Sec 11 T10S R22E 1639 FNL 2609 FEL
	BHL	Sec 11 T10S R22E 0577 FNL 1805 FEL

43-047-51817	NBU 1022-C4AS	Sec 11 T10S R22E 1645 FNL 2617 FEL
	BHL	Sec 11 T10S R22E 0825 FNL 2462 FWL

43-047-51818	NBU 1022-11C4CS	Sec 11 T10S R22E 1651 FNL 2625 FEL
	BHL	Sec 11 T10S R22E 1071 FNL 2131 FWL

RECEIVED: August 22, 2011

API #	WELL NAME	LOCATION						
(Proposed PZ WASATCH-MESA VERDE)								
43-047-51855	NBU 1022-11F4AS	Sec 11	T10S	R22E	1657	FNL	2633	FEL
	BHL	Sec 11	T10S	R22E	2138	FNL	2288	FWL
NBU 1022-2A PAD								
43-047-51803	NBU 1022-2G1CS	Sec 02	T10S	R22E	0165	FNL	0760	FEL
	BHL	Sec 02	T10S	R22E	1905	FNL	1814	FEL
43-047-51807	NBU 1022-2G1BS	Sec 02	T10S	R22E	0164	FNL	0770	FEL
	BHL	Sec 02	T10S	R22E	1573	FNL	1815	FEL
43-047-51808	NBU 1022-2H1BS	Sec 02	T10S	R22E	0167	FNL	0730	FEL
	BHL	Sec 02	T10S	R22E	1410	FNL	0494	FEL
43-047-51812	NBU 1022-2H1CS	Sec 02	T10S	R22E	0166	FNL	0740	FEL
	BHL	Sec 02	T10S	R22E	1743	FNL	0494	FEL
43-047-51825	NBU 1022-2H4BS	Sec 02	T10S	R22E	0165	FNL	0750	FEL
	BHL	Sec 02	T10S	R22E	2074	FNL	0493	FEL
NBU 1022-11G4 PAD								
43-047-51805	NBU 1022-11A4CS	Sec 11	T10S	R22E	2411	FNL	1535	FEL
	BHL	Sec 11	T10S	R22E	1075	FNL	0490	FEL
43-047-51814	NBU 1022-11H1BS	Sec 11	T10S	R22E	2405	FNL	1526	FEL
	BHL	Sec 11	T10S	R22E	1406	FNL	0490	FEL
43-047-51822	NBU 1022-11G4CS	Sec 11	T10S	R22E	2435	FNL	1566	FEL
	BHL	Sec 11	T10S	R22E	2559	FNL	1799	FEL
43-047-51823	NBU 1022-11G1BS	Sec 11	T10S	R22E	2423	FNL	1550	FEL
	BHL	Sec 11	T10S	R22E	1568	FNL	1802	FEL
43-047-51837	NBU 1022-11G1CS	Sec 11	T10S	R22E	2417	FNL	1542	FEL
	BHL	Sec 11	T10S	R22E	1954	FNL	1646	FEL
43-047-51853	NBU 1022-11G4BS	Sec 11	T10S	R22E	2429	FNL	1558	FEL
	BHL	Sec 11	T10S	R22E	2229	FNL	1800	FEL
NBU 1022-2I PAD								
43-047-51809	NBU 1022-2I4CS	Sec 02	T10S	R22E	1886	FSL	0949	FEL
	BHL	Sec 02	T10S	R22E	1576	FSL	0492	FEL
43-047-51810	NBU 1022-2P1BS	Sec 02	T10S	R22E	1881	FSL	0957	FEL
	BHL	Sec 02	T10S	R22E	1245	FSL	0492	FEL
43-047-51824	NBU 1022-2I1CS	Sec 02	T10S	R22E	1895	FSL	0931	FEL
	BHL	Sec 02	T10S	R22E	2240	FSL	0493	FEL
43-047-51829	NBU 1022-2I4BS	Sec 02	T10S	R22E	1890	FSL	0940	FEL
	BHL	Sec 02	T10S	R22E	1909	FSL	0492	FEL
43-047-51838	NBU 1022-2P4BS	Sec 02	T10S	R22E	1872	FSL	0975	FEL
	BHL	Sec 02	T10S	R22E	0581	FSL	0492	FEL
43-047-51852	NBU 1022-2P1CS	Sec 02	T10S	R22E	1877	FSL	0966	FEL
	BHL	Sec 02	T10S	R22E	0913	FSL	0492	FEL
NBU 1022-2B PAD								
43-047-51811	NBU 1022-2B1CS	Sec 02	T10S	R22E	0544	FNL	1813	FEL
	BHL	Sec 02	T10S	R22E	0579	FNL	1818	FEL

API #	WELL NAME	LOCATION						
(Proposed PZ WASATCH-MESA VERDE)								
43-047-51827	NBU 1022-2B4CS	Sec 02	T10S	R22E	0543	FNL	1793	FEL
		BHL Sec 02	T10S	R22E	1242	FNL	1816	FEL
43-047-51828	NBU 1022-2B4BS	Sec 02	T10S	R22E	0543	FNL	1803	FEL
		BHL Sec 02	T10S	R22E	0910	FNL	1817	FEL
43-047-51830	NBU 1022-2C1BS	Sec 02	T10S	R22E	0544	FNL	1823	FEL
		BHL Sec 02	T10S	R22E	0090	FNL	2158	FWL
NBU 1022-11J PAD								
43-047-51816	NBU 1022-11K4BS	Sec 11	T10S	R22E	1980	FSL	2131	FEL
		BHL Sec 11	T10S	R22E	1804	FSL	1963	FWL
43-047-51843	NBU 1022-11J1CS	Sec 11	T10S	R22E	1990	FSL	2130	FEL
		BHL Sec 11	T10S	R22E	2065	FSL	1797	FEL
43-047-51851	NBU 1022-11J1BS	Sec 11	T10S	R22E	2000	FSL	2129	FEL
		BHL Sec 11	T10S	R22E	2395	FSL	1798	FEL
NBU 1022-2J PAD								
43-047-51819	NBU 1022-2G4CS	Sec 02	T10S	R22E	2375	FSL	1639	FEL
		BHL Sec 02	T10S	R22E	2568	FNL	1813	FEL
43-047-51820	NBU 1022-2H4CS	Sec 02	T10S	R22E	2351	FSL	1584	FEL
		BHL Sec 02	T10S	R22E	2406	FNL	0493	FEL
43-047-51844	NBU 1022-2J4BS	Sec 02	T10S	R22E	2367	FSL	1621	FEL
		BHL Sec 02	T10S	R22E	1741	FSL	1811	FEL
43-047-51845	NBU 1022-2O1CS	Sec 02	T10S	R22E	2343	FSL	1566	FEL
		BHL Sec 02	T10S	R22E	0747	FSL	1808	FEL
43-047-51847	NBU 1022-2I1BS	Sec 02	T10S	R22E	2347	FSL	1575	FEL
		BHL Sec 02	T10S	R22E	2572	FSL	0493	FEL
43-047-51854	NBU 1022-2G4BS	Sec 02	T10S	R22E	2359	FSL	1602	FEL
		BHL Sec 02	T10S	R22E	2237	FNL	1814	FEL
NBU 1022-O1 PAD								
43-047-51821	NBU 1022-11O1CS	Sec 11	T10S	R22E	0944	FSL	1360	FEL
		BHL Sec 11	T10S	R22E	0744	FSL	1793	FEL
43-047-51831	NBU 1022-11O4CS	Sec 11	T10S	R22E	0925	FSL	1366	FEL
		BHL Sec 11	T10S	R22E	0079	FSL	1824	FEL
43-047-51832	NBU 1022-11P1BS	Sec 11	T10S	R22E	0973	FSL	1351	FEL
		BHL Sec 11	T10S	R22E	1068	FSL	0474	FEL
43-047-51833	NBU 1022-11P4BS	Sec 11	T10S	R22E	0954	FSL	1357	FEL
		BHL Sec 11	T10S	R22E	0456	FSL	0504	FEL
43-047-51836	NBU 1022-12M1BS	Sec 11	T10S	R22E	0963	FSL	1354	FEL
		BHL Sec 12	T10S	R22E	1077	FSL	0824	FWL
43-047-51856	NBU 1022-11O4BS	Sec 11	T10S	R22E	0935	FSL	1363	FEL
		BHL Sec 11	T10S	R22E	0413	FSL	1792	FEL

API #	WELL NAME	LOCATION						
(Proposed PZ WASATCH-MESA VERDE)								
NBU 1022-11I1 PAD								
43-047-51834	NBU 1022-11I1CS	Sec 11	T10S	R22E	2545	FSL	0532	FEL
	BHL	Sec 11	T10S	R22E	2112	FSL	0481	FEL
43-047-51835	NBU 1022-12L1CS	Sec 11	T10S	R22E	2554	FSL	0528	FEL
	BHL	Sec 12	T10S	R22E	2070	0FSL	823	FWL
43-047-51857	NBU 1022-11H4BS	Sec 11	T10S	R22E	2582	FSL	0518	FEL
	BHL	Sec 11	T10S	R22E	2067	FNL	0489	FEL
43-047-51858	NBU 1022-11H4CS	Sec 11	T10S	R22E	2592	FSL	0514	FEL
	BHL	Sec 11	T10S	R22E	2398	FNL	0489	FEL
43-047-51861	NBU 1022-12L1BS	Sec 11	T10S	R22E	2564	FSL	0525	FEL
	BHL	Sec 12	T10S	R22E	2401	FSL	0822	FWL
43-047-51863	NBU 1022-11H1CS	Sec 11	T10S	R22E	2573	FSL	0521	FEL
	BHL	Sec 11	T10S	R22E	1737	FNL	0490	FEL
NBU 1022-2P PAD								
43-047-51839	NBU 1022-2P4CS	Sec 02	T10S	R22E	0221	FSL	1342	FEL
	BHL	Sec 02	T10S	R22E	0255	FSL	0496	FEL
43-047-51841	NBU 1022-11B1BS	Sec 02	T10S	R22E	0221	FSL	1382	FEL
	BHL	Sec 11	T10S	R22E	0280	FNL	1755	FEL
43-047-51842	NBU 1022-11A1BS	Sec 02	T10S	R22E	0221	FSL	1352	FEL
	BHL	Sec 11	T10S	R22E	0080	FNL	0473	FEL
43-047-51846	NBU 1022-2O4CS	Sec 02	T10S	R22E	0220	FSL	1402	FEL
	BHL	Sec 02	T10S	R22E	0095	FSL	1804	FEL
43-047-51848	NBU 1022-11A4BS	Sec 02	T10S	R22E	0221	FSL	1372	FEL
	BHL	Sec 11	T10S	R22E	0744	FNL	0490	FEL
43-047-51849	NBU 1022-2O4BS	Sec 02	T10S	R22E	0221	FSL	1392	FEL
	BHL	Sec 02	T10S	R22E	0415	FSL	1807	FEL
43-047-51850	NBU 1022-11A1CS	Sec 02	T10S	R22E	0221	FSL	1362	FEL
	BHL	Sec 11	T10S	R22E	0413	FNL	0491	FEL
NBU 1022-14A PAD								
43-047-51840	NBU 1022-11P4CS	Sec 14	T10S	R22E	0379	FNL	1228	FEL
	BHL	Sec 11	T10S	R22E	0088	FSL	0466	FEL
43-047-51860	NBU 1022-12M1CS	Sec 14	T10S	R22E	0385	FNL	1236	FEL
	BHL	Sec 12	T10S	R22E	0746	FSL	0825	FWL
43-047-51868	NBU 1022-12M4BS	Sec 14	T10S	R22E	0391	FNL	1244	FEL
	BHL	Sec 12	T10S	R22E	0415	FSL	0825	FWL
43-047-51870	NBU 1022-12M4CS	Sec 14	T10S	R22E	0397	FNL	1252	FEL
	BHL	Sec 12	T10S	R22E	0086	FSL	0819	FWL
NBU 1022-11O2 PAD								
43-047-51859	NBU 1022-11K4CS	Sec 11	T10S	R22E	1103	FSL	2372	FEL
	BHL	Sec 11	T10S	R22E	1442	FSL	2113	FWL

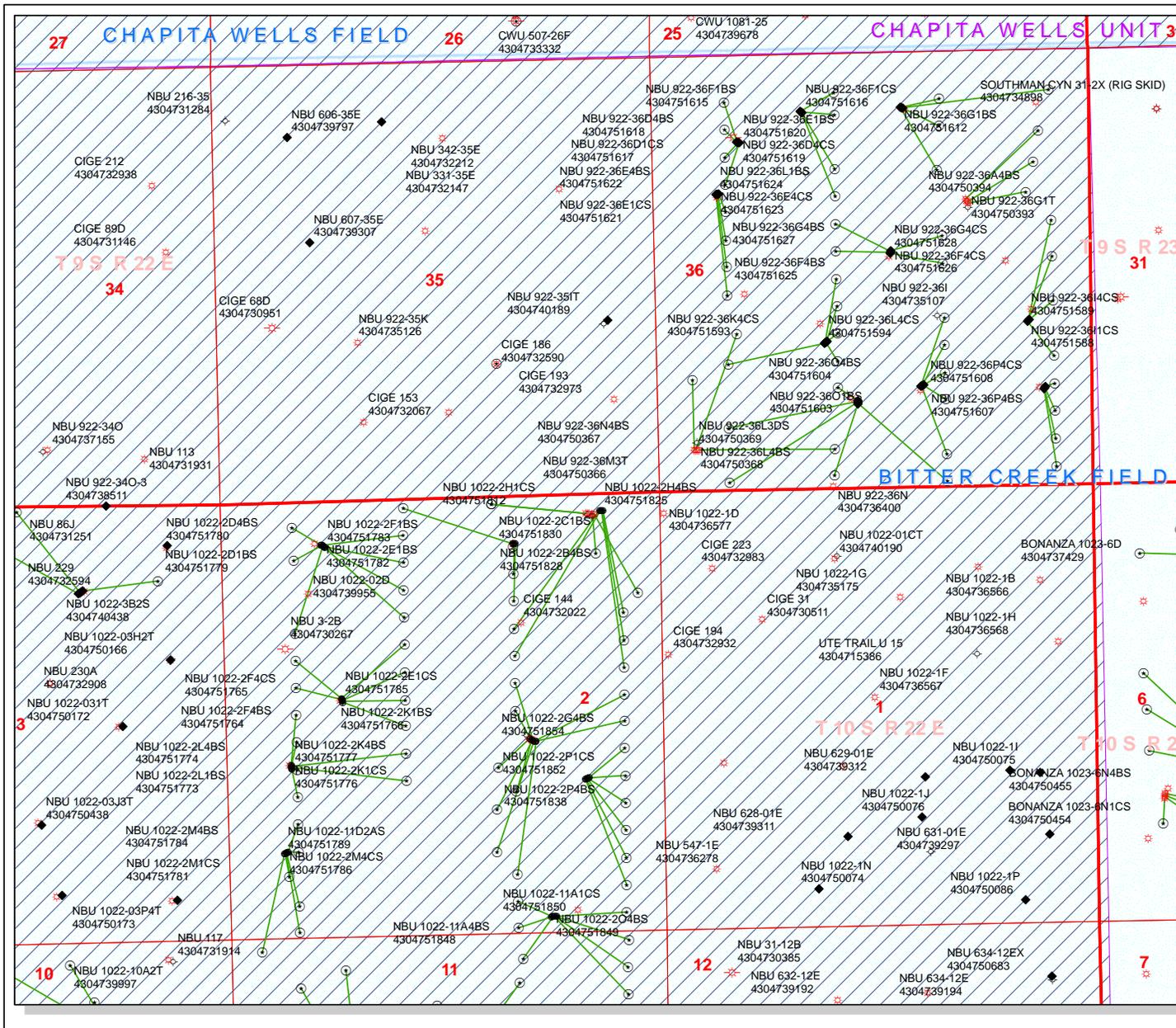
API #	WELL NAME	LOCATION						
(Proposed PZ WASATCH-MESA VERDE)								
43-047-51862	NBU 1022-11N1BS	Sec 11	T10S	R22E	1094	FSL	2377	FEL
		BHL	Sec 11	T10S	R22E	1111	FSL	2105
43-047-51864	NBU 1022-11N1CS	Sec 11	T10S	R22E	1085	FSL	2382	FEL
		BHL	Sec 11	T10S	R22E	0801	FSL	2127
43-047-51865	NBU 1022-11N4BS	Sec 11	T10S	R22E	1077	FSL	2387	FEL
		BHL	Sec 11	T10S	R22E	0462	FSL	2127
43-047-51867	NBU 1022-11N4CS	Sec 11	T10S	R22E	1068	FSL	2392	FEL
		BHL	Sec 11	T10S	R22E	0146	FSL	2084
43-047-51869	NBU 1022-11O2AS	Sec 11	T10S	R22E	1111	FSL	2367	FEL
		BHL	Sec 11	T10S	R22E	1102	FSL	1964
NBU 1022-11I3 PAD								
43-047-51866	NBU 1022-11I4BS	Sec 11	T10S	R22E	1489	FSL	0996	FEL
		BHL	Sec 11	T10S	R22E	1774	FSL	0485
43-047-51871	NBU 1022-11I4CS	Sec 11	T10S	R22E	1459	FSL	0997	FEL
		BHL	Sec 11	T10S	R22E	1443	FSL	0497
43-047-51872	NBU 1022-12L4BS	Sec 11	T10S	R22E	1479	FSL	0996	FEL
		BHL	Sec 12	T10S	R22E	1739	FSL	0823
43-047-51873	NBU 1022-12L4CS	Sec 11	T10S	R22E	1469	FSL	0996	FEL
		BHL	Sec 12	T10S	R22E	1408	FSL	0824

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: 2011.08.19 08:43:17 -06'00'

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

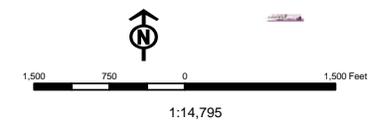
MCoulthard:mc:8-19-11



API Number: 4304751825
 Well Name: NBU 1022-2H4BS
 Township T1.0 Range R2.2 Section 02
 Meridian: SLBM
 Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
 Map Produced by Diana Mason

Units STATUS	Wells Query Status
ACTIVE	APD - Approved Permit
EXPLORATORY	DRL - 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	OPS - Operation Suspended
PP GEOTHERMAL	PA - Plugged Abandoned
PP OIL	PGW - Producing Gas Well
SECONDARY	POW - Producing Oil Well
TERMINATED	RET - Returned APD
Fields 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	



From: Jim Davis
To: Hill, Brad; Mason, Diana
CC: Bonner, Ed; Garrison, LaVonne; Lytle, Andy
Date: 9/26/2011 5:08 PM
Subject: Anadarko APD approvals 10S 22E Sec 2, 11 and 14
Attachments: Anadarko Approvals from SITLA 9.26.11.xls

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

4304751840 NBU 1022-11P4CS
4304751860 NBU 1022-12M1CS
4304751868 NBU 1022-12M4BS
4304751870 NBU 1022-12M4CS
4304751803 NBU 1022-2G1CS
4304751807 NBU 1022-2G1BS
4304751808 NBU 1022-2H1BS
4304751812 NBU 1022-2H1CS
4304751825 NBU 1022-2H4BS
4304751811 NBU 1022-2B1CS
4304751827 NBU 1022-2B4CS
4304751828 NBU 1022-2B4BS
4304751830 NBU 1022-2C1BS
4304751809 NBU 1022-2I4CS
4304751810 NBU 1022-2P1BS
4304751824 NBU 1022-2I1CS
4304751829 NBU 1022-2I4BS
4304751838 NBU 1022-2P4BS
4304751852 NBU 1022-2P1CS
4304751839 NBU 1022-2P4CS
4304751841 NBU 1022-11B1BS
4304751842 NBU 1022-11A1BS
4304751846 NBU 1022-2O4CS
4304751848 NBU 1022-11A4BS
4304751849 NBU 1022-2O4BS
4304751850 NBU 1022-11A1CS

These APDS are approved including arch clearance but will require **spot paleo monitoring** as recommended in the applicable paleo reports:

4304751758 NBU 1022-2C1CS
4304751767 NBU 1022-2C4BS
4304751768 NBU 1022-2C4CS
4304751779 NBU 1022-2D1BS
4304751780 NBU 1022-2D4BS
4304751782 NBU 1022-2E1BS
4304751783 NBU 1022-2F1BS
4304751760 NBU 1022-2E4BS
4304751761 NBU 1022-2F1CS
4304751764 NBU 1022-2F4BS
4304751765 NBU 1022-2F4CS
4304751766 NBU 1022-2K1BS
4304751785 NBU 1022-2E1CS
4304751775 NBU 1022-2L4CS
4304751778 NBU 1022-2M1BS
4304751781 NBU 1022-2M1CS
4304751784 NBU 1022-2M4BS
4304751786 NBU 1022-2M4CS
4304751789 NBU 1022-11D2AS

4304751802 NBU 1022-11B4CS
4304751813 NBU 1022-11B4BS
4304751815 NBU 1022-11B1CS
4304751817 NBU 1022-11C4AS
4304751818 NBU 1022-11C4CS
4304751855 NBU 1022-11F4AS
4304751805 NBU 1022-11A4CS
4304751814 NBU 1022-11H1BS
4304751822 NBU 1022-11G4CS
4304751823 NBU 1022-11G1BS
4304751837 NBU 1022-11G1CS
4304751853 NBU 1022-11G4BS
4304751834 NBU 1022-11I1CS
4304751835 NBU 1022-12L1CS
4304751857 NBU 1022-11H4BS
4304751858 NBU 1022-11H4CS
4304751861 NBU 1022-12L1BS
4304751863 NBU 1022-11H1CS
4304751866 NBU 1022-11I4BS
4304751871 NBU 1022-11I4CS
4304751872 NBU 1022-12L4BS
4304751873 NBU 1022-12L4CS
4304751816 NBU 1022-11K4BS
4304751843 NBU 1022-11J1CS
4304751851 NBU 1022-11J1BS
4304751859 NBU 1022-11K4CS
4304751862 NBU 1022-11N1BS
4304751864 NBU 1022-11N1CS
4304751865 NBU 1022-11N4BS
4304751867 NBU 1022-11N4CS
4304751869 NBU 1022-11O2AS

These APDS are approved including arch clearance but will require **full paleo monitoring** as recommended in the applicable paleo reports:

4304751771 NBU 1022-2E4CS
4304751772 NBU 1022-2L1CS
4304751773 NBU 1022-2L1BS
4304751774 NBU 1022-2L4BS
4304751776 NBU 1022-2K1CS
4304751777 NBU 1022-2K4BS
4304751819 NBU 1022-2G4CS
4304751820 NBU 1022-2H4CS
4304751844 NBU 1022-2J4BS
4304751845 NBU 1022-2O1CS
4304751847 NBU 1022-2I1BS
4304751854 NBU 1022-2G4BS
4304751797 NBU 1022-11C2CS
4304751799 NBU 1022-11C3DS
4304751800 NBU 1022-11D1CS
4304751801 NBU 1022-11F2DS
4304751821 NBU 1022-11O1CS
4304751831 NBU 1022-11O4CS
4304751832 NBU 1022-11P1BS
4304751833 NBU 1022-11P4BS
4304751836 NBU 1022-12M1BS
4304751856 NBU 1022-11O4BS

That's a big enough list that I'm including a simple spreadsheet that has this same information, but organized in such a way as may be more useful to some of you.

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 1022-2H4BS			
String	Surf	Prod		
Casing Size(")	8.625	4.500		
Setting Depth (TVD)	2060	8521		
Previous Shoe Setting Depth (TVD)	40	2060		
Max Mud Weight (ppg)	8.3	12.5		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	7780		
Operators Max Anticipated Pressure (psi)	5453	12.3		

Calculations	Surf String	8.625	"
Max BHP (psi)	.052*Setting Depth*MW=	889	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	642	NO <input type="checkbox"/> air drill
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	436	YES <input type="checkbox"/> OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	445	NO <input type="checkbox"/> Reasonable depth in area
Required Casing/BOPE Test Pressure=		2060	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=	5539	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4516	YES <input type="checkbox"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3664	YES <input type="checkbox"/> OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	4118	NO <input type="checkbox"/> Reasonable
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2060	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="checkbox"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO <input type="checkbox"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO <input type="checkbox"/>
Required Casing/BOPE Test Pressure=			psi
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient

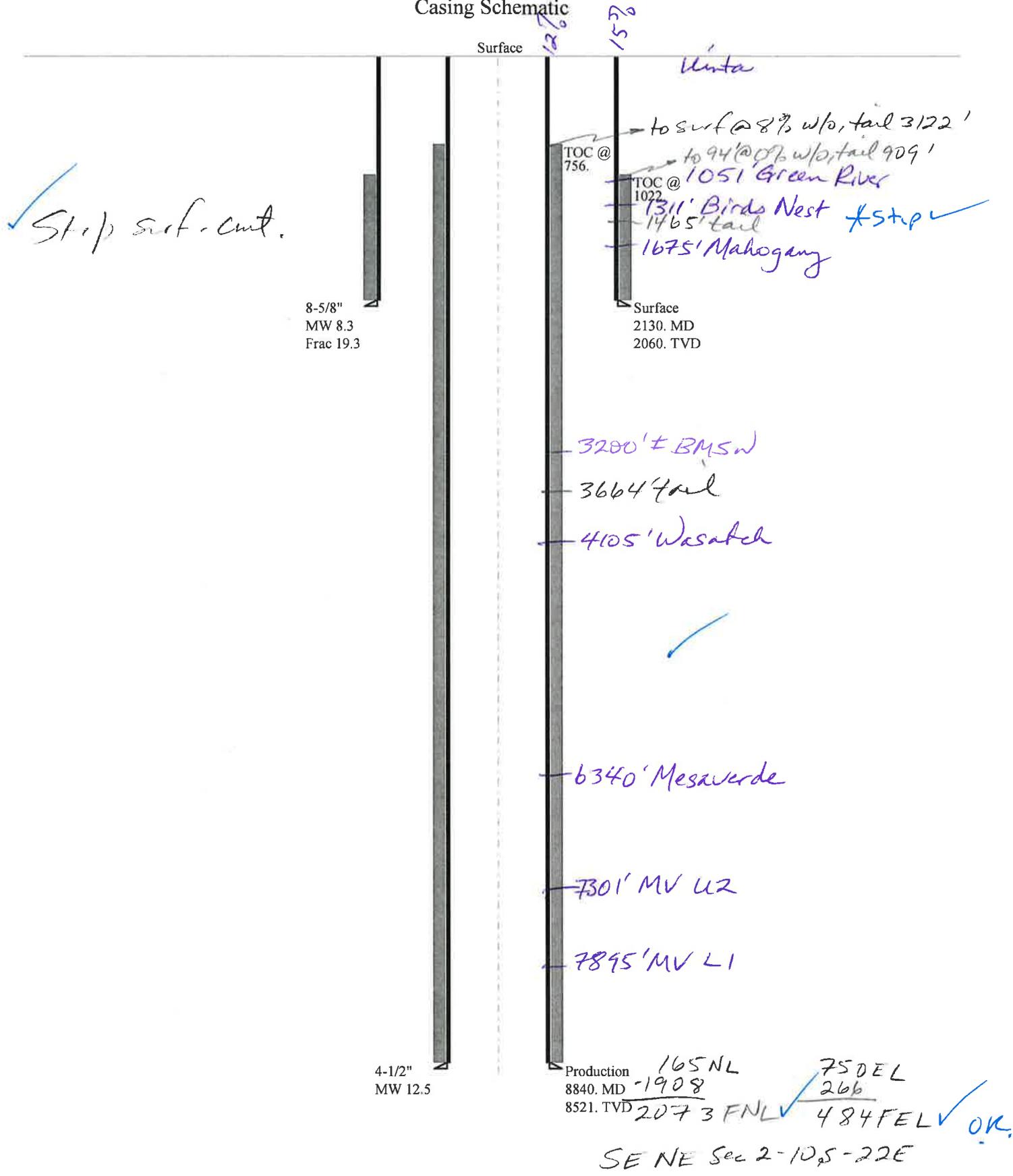
Calculations	String		"
Max BHP (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO <input type="checkbox"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO <input type="checkbox"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO <input type="checkbox"/>
Required Casing/BOPE Test Pressure=			psi

API Well Number: 43047518250000

*Max Pressure Allowed @ Previous Casing Shoe=	<input type="text"/>	psi *Assumes 1psi/ft frac gradient
---	----------------------	------------------------------------

43047518250000 NBU 1022-2H4BS

Casing Schematic



Well name:	43047518250000 NBU 1022-2H4BS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Surface	Project ID:	43-047-51825
Location:	UINTAH	COUNTY	

Design parameters:

Collapse

Mud weight: 8.330 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: 103 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 100 ft
 Cement top: 1,022 ft

Burst

Max anticipated surface pressure: 1,874 psi
 Internal gradient: 0.120 psi/ft
 Calculated BHP 2,122 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: 1,861 ft

Directional Info - Build & Drop

Kick-off point 300 ft
 Departure at shoe: 457 ft
 Maximum dogleg: 2 °/100ft
 Inclination at shoe: 20 °

Re subsequent strings:

Next setting depth: 8,840 ft
 Next mud weight: 12.500 ppg
 Next setting BHP: 5,740 psi
 Fracture mud wt: 19.250 ppg
 Fracture depth: 2,130 ft
 Injection pressure: 2,130 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	2130	8.625	28.00	I-55	LT&C	2060	2130	7.892	84348
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	891	1880	2.109	2122	3390	1.60	57.7	348	6.03 J

Prepared by: Helen Sadik-Macdonald
 Div of Oil, Gas & Mining

Phone: 801 538-5357
 FAX: 801-359-3940

Date: August 25, 2011
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2060 ft, a mud weight of 8.33 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Well name:	43047518250000 NBU 1022-2H4BS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Production	Project ID:	43-047-51825
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: 193 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 100 ft
 Cement top: 756 ft

Burst

Max anticipated surface pressure: 3,658 psi
 Internal gradient: 0.220 psi/ft
 Calculated BHP 5,533 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: 7,248 ft

Directional Info - Build & Drop

Kick-off point 300 ft
 Departure at shoe: 1927 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	8840	4.5	11.60	I-80	LT&C	8521	8840	3.875	116688
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	5533	6360	1.149	5533	7780	1.41	98.8	212	2.14 J

Prepared by: Helen Sadik-Macdonald
 Div of Oil, Gas & Mining

Phone: 801 538-5357
 FAX: 801-359-3940

Date: August 25, 2011
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 8521 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

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.
Well Name NBU 1022-2H4BS
API Number 43047518250000 **APD No** 4353 **Field/Unit** NATURAL BUTTES
Location: 1/4,1/4 NENE **Sec 2 Tw** 10.0S **Rng** 22.0E 165 FNL 750 FEL
GPS Coord (UTM) 636636 4427090 **Surface Owner**

Participants

Andy Lytle, Sheila Wopsock, Charles Chase, Grizz Oleen, Mark Kuehn, Doyle Holmes, (Kerr McGee). John Slaugh, Mitch Batty, (Timberline). Jim Davis (SITLA). David Hackford, (DOGM).

Regional/Local Setting & Topography

The general area is in the southeast portion of the Natural Buttes Unit . Within this area is the White River and rugged drainages that drain into it. 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 ¼ 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 40 air miles to the northwest. Access from Vernal is approximately 47.4 road miles following Utah State, Uintah County and oilfield development roads. The original access road will be used except for Approximately 60 feet of new road which will be constructed to reach the location.

Four wells in addition to this one will be directionally drilled from this location. There are four wells already on this location, plus three additional wells which have been PA'd. The location runs in an east-west direction along the top and sides of a ridge. This ridge breaks off sharply into rugged secondary canyons especially on the south side. New construction will consist of approx. 100 feet to the east and south of existing pad. No drainage concerns exist. And no diversions will be needed. The pad as modified should be stable and is the only suitable location in the immediate area.

Surface Use Plan

Current Surface Use

Wildlfe Habitat
Existing Well Pad

New Road Miles	Well Pad	Src Const Material	Surface Formation
0.01	Width 317 Length 425	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate? Y

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Prickly pear, wild onion, shadscale, mat saltbrush, Indian ricegrass, halogeton, pepper grass, annuals and curly Vegetation is a salt desert shrub type. Principal species present are cheatgrass, black sagebrush, stipa, mesquite grass.

Sheep, antelope, raptors and small mammals and birds.

Soil Type and Characteristics

Shallow rocky sandy loam

Erosion Issues N

Sedimentation Issues N

Site Stability Issues Y

Proposed construction plan should be adequate to control location stability.

Drainage Diversion Required? N

Berm Required? N

Erosion Sedimentation Control Required? N

Paleo Survey Run? Y **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)			
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 in an area of cut on the south side of the location. Dimensions are 135' x 200' x 12' deep with 2' of freeboard. Kerr McGee agreed to line the pit with a 30-mil liner and 2 layers of felt.

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

Other Observations / Comments

David Hackford
Evaluator

8/18/2011
Date / Time

Application for Permit to Drill Statement of Basis

10/12/2011

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
4353	43047518250000	SITLA	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		Surface Owner-APD		
Well Name	NBU 1022-2H4BS	Unit		NATURAL BUTTES	
Field	NATURAL BUTTES		Type of Work	DRILL	
Location	NENE 2 10S 22E S 165 FNL 750 FEL		GPS Coord (UTM)	636636E	4427084N

Geologic Statement of Basis

Kerr McGee proposes to set 2,130' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 3,200'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 2. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Production casing cement should be brought up above the base of the moderately saline ground water to isolate it from fresher waters uphole.

Brad Hill
APD Evaluator

9/22/2011
Date / Time

Surface Statement of Basis

The general area is in the southeast portion of the Natural Buttes Unit. Within this area is the White River and rugged drainages that drain into it. 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 ¼ 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 45 air miles to the northwest. Access from Vernal is approximately 47.4 road miles following Utah State, Uintah County and oilfield development roads. Approximately 60 feet of new road will be constructed to reach the location.

Five wells will be directionally drilled from this location. They are the NBU 1022-2H1BS, NBU 1022-2H1CS, NBU 1022-2H4BS, NBU 1022-2G1CS and the NBU 1022-2G1BS. The existing location has four previously drilled wells plus three wells that have been plugged and abandoned. The location runs in an east-west direction along the top and sides of a ridge. This ridge breaks off sharply into rugged secondary canyons especially on the south side. Here it was agreed to narrow the width of the pad up to 10 feet to reduce the overcast of the toe of the fill toward the edge of a bench that breaks off sharply to the south. No drainage concerns exist. And no diversions will be needed. The pad as modified should be stable and is the only suitable location in the immediate area.

Both the surface and minerals are owned by SITLA. Jim Davis of SITLA and Ben Williams with DWR were invited by email to the pre-site evaluation. Jim Davis was present. Kerr McGee was told to consult with SITLA for reclamation standards including seeding mixes to be used.

David Hackford
Onsite Evaluator

8/18/2011
Date / Time

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 30 mils and an appropriate thickness of felt sub-liner to cushion the liners shall be properly installed and maintained in the reserve pit.

RECEIVED: October 12, 2011

**Application for Permit to Drill
Statement of Basis**

10/12/2011

Utah Division of Oil, Gas and Mining

Page 2

Pits

The reserve pit should be located on the south side of the location.

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 8/10/2011**API NO. ASSIGNED:** 43047518250000**WELL NAME:** NBU 1022-2H4BS**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)**PHONE NUMBER:** 720 929-6086**CONTACT:** Gina Becker**PROPOSED LOCATION:** NENE 02 100S 220E**Permit Tech Review:** **SURFACE:** 0165 FNL 0750 FEL**Engineering Review:** **BOTTOM:** 2074 FNL 0493 FEL**Geology Review:** **COUNTY:** UINTAH**LATITUDE:** 39.98478**LONGITUDE:** -109.39973**UTM SURF EASTINGS:** 636636.00**NORTHINGS:** 4427084.00**FIELD NAME:** NATURAL BUTTES**LEASE TYPE:** 3 - State**LEASE NUMBER:** ST UT ML 22651**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:** 43-8496
- RDCC Review:**
- Fee Surface Agreement**
- Intent to Commingle**

Commingle Approved**LOCATION AND SITING:**

- R649-2-3.**
- Unit:** NATURAL BUTTES
- R649-3-2. General**
- R649-3-3. Exception**
- Drilling Unit**
- Board Cause No:** Cause 173-14
- Effective Date:** 12/2/1999
- Siting:** 460' Fr U Bdry & Uncommitted Tracts
- R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations:

- 3 - Commingle - ddoucet
- 5 - Statement of Basis - bhill
- 15 - Directional - dmason
- 17 - Oil Shale 190-5(b) - dmason
- 25 - Surface Casing - hmaconnald



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 1022-2H4BS
API Well Number: 43047518250000
Lease Number: ST UT ML 22651
Surface Owner: STATE
Approval Date: 10/12/2011

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.

Surface casing shall be cemented to the surface.

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

Additional Approvals:

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan – contact Dustin Doucet
- Significant plug back of the well – contact Dustin Doucet
- Plug and abandonment of the well – contact Dustin Doucet

Notification Requirements:

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

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

Contact Information:

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office
801-231-8956 - after office hours

Reporting Requirements:

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

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

Approved By:



For John Rogers
Associate Director, Oil & Gas

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
		5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML 22651
SUNDRY NOTICES AND REPORTS ON WELLS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well		8. WELL NAME and NUMBER: NBU 1022-2H4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		9. API NUMBER: 43047518250000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0165 FNL 0750 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 02 Township: 10.0S 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 checked="" type="checkbox"/> SPUD REPORT Date of Spud: 3/10/2012 <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> OTHER	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
MIRU TRIPPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL ON 03/10/2012 AT 1400 HRS.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY March 16, 2012		
NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUMBER 435 781-7024	TITLE Regulatory Analyst
SIGNATURE N/A		DATE 3/14/2012

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: ST UT ML 22651
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
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 1022-2H4BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0165 FNL 0750 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 02 Township: 10.0S Range: 22.0E Meridian: S		9. API NUMBER: 43047518250000
PHONE NUMBER: 720 929-6511		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"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 3/22/2012	<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"/> CHANGE WELL NAME	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input 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 MARCH 19, 2012. DRILLED SURFACE HOLE TO 2,520'. 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 March 26, 2012		
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regularatory Analyst
SIGNATURE N/A	DATE 3/26/2012	

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: ST UT ML 22651
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
1. TYPE OF WELL Gas Well		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		8. WELL NAME and NUMBER: NBU 1022-2H4BS
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		COUNTY: UINTAH
		STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 3/27/2012	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input type="text"/>

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

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

**Approved by the
Utah Division of
Oil, Gas and Mining**

Date: March 29, 2012

By: 

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 3/27/2012	

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

<u>NBU 1022-2H4BS</u>		
Surface:	165 FNL / 750 FEL	NENE
BHL:	2074 FNL / 493 FEL	SENE

Section 2 T10S R22E

Uintah County, Utah
Mineral Lease: ST UT ML 22651

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	1,051'	
Birds Nest	1,311'	Water
Mahogany	1,675'	Water
Wasatch	4,105'	Gas
Mesaverde	6,340'	Gas
Sego	8,521'	Gas
TVD	8,521'	
TD	8,840'	

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 8521' TVD, approximately equals
5,453 psi 0.64 psi/ft = actual bottomhole gradient

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

Maximum anticipated surface pressure equals approximately 3,567 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 not put the booster and standby compressor opposite from the bleed line.

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

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	LTC		DQX TENSION
							COLLAPSE		
CONDUCTOR	14"	0-40'							
						3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,130	28.00	IJ-55	LTC	2.54	1.89	6.66	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	1.15		3.22
	4-1/2"	5,000 to 8,840'	11.60	I-80	LTC	1.11	1.15	6.19	

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 + 0.25 pps flocele	180	60%	15.80	1.15
Option 1							
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
SURFACE			NOTE: If well will circulate water to surface, option 2 will be utilized				
Option 2	LEAD	1,630'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	150	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	3,600'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	290	35%	12.00	3.38
	TAIL	5,240'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,240	35%	14.30	1.31

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

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

FLOAT EQUIPMENT & CENTRALIZERS

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

ADDITIONAL INFORMATION

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

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

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

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

DRILLING ENGINEER:

Nick Spence / Danny Showers / Chad Loesel

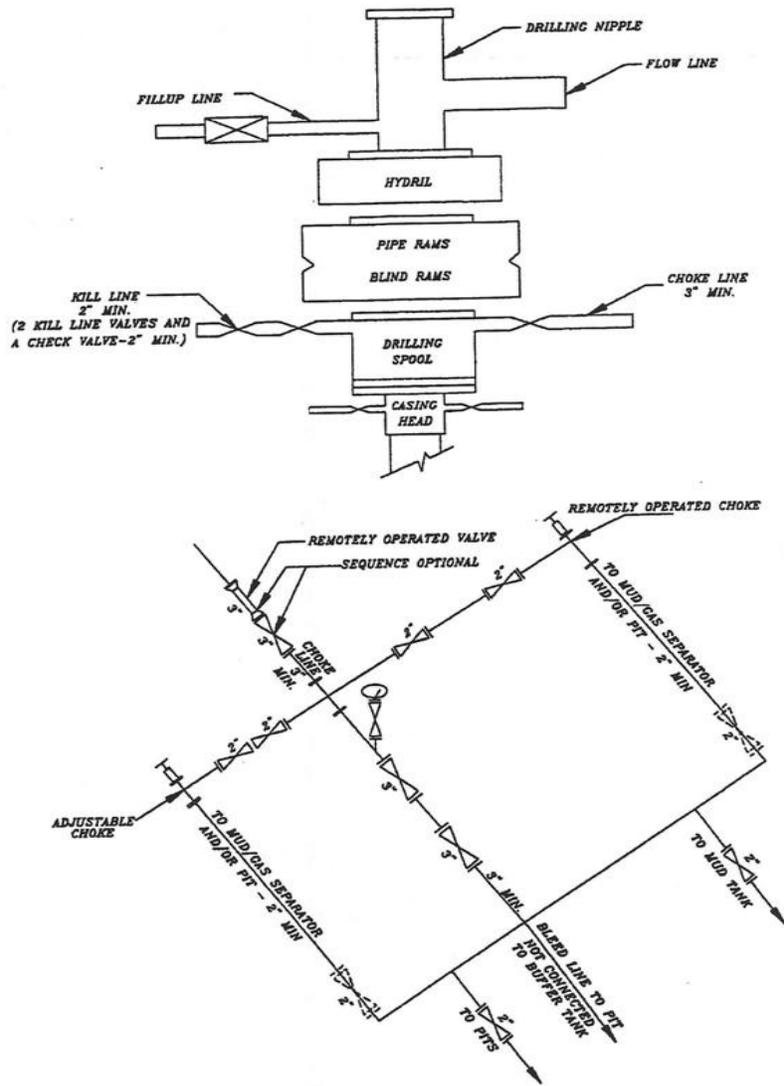
DATE:

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

DATE:

EXHIBIT A
NBU 1022-2H4BS



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 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
4304751807	NBU 1022-2G1BS		NENE	2	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
B	99999	2900	3/11/2012			3/20/2012	
Comments: MIRU TRIPPLE A BUCKET RIG. <i>WSMVD</i> SPUD WELL ON 03/11/2012 AT 1100 HRS. <i>BHL Swine</i>							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751803	NBU 1022-2G1CS		NENE	2	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
B	99999	2900	3/11/2012			3/20/2012	
Comments: MIRU TRIPPLE A BUCKET RIG. <i>WSMVD</i> SPUD WELL ON 03/11/2012 AT 0730 HRS. <i>BHL Swine</i>							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751825	NBU 1022-2H4BS		NENE	2	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
B	99999	2900	3/10/2012			3/20/2012	
Comments: MIRU TRIPPLE A BUCKET RIG. <i>WSMVD</i> SPUD WELL ON 03/10/2012 AT 1400 HRS. <i>BHL Swine</i>							

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)

Sheila Wopsock

Signature

REGULATORY ANALYST

3/13/2012

Title

Date

RECEIVED
MAR 15 2012

(5/2000)

Division of Oil, Gas & Mining

BLM - Vernal Field Office - Notification Form

Operator KERR MCGEE Rig Name/# H&P 311
Submitted By SCOTT ALLRED Phone Number 435- 790-1884
Well Name/Number NBU 1022-2H4BS
Qtr/Qtr NE/NE Section 2 Township 10S Range 22E
Lease Serial Number ST UT ML 22651
API Number 43-047-518250000

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

Date/Time _____ AM PM

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

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

RECEIVED
MAY 04 2012
DIV. OF OIL, GAS & MINING

Date/Time _____ AM PM

BOPE

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

Date/Time 5/5/2012 3:00 AM PM

Remarks TIME ESTIMATED

BLM - Vernal Field Office - Notification Form

Operator KERR MCGEE Rig Name/# H&P 311
Submitted By SCOTT ALLRED Phone Number 435- 790-1884
Well Name/Number NBU 1022-2H4BS
Qtr/Qtr NE/NE Section 2 Township 10S Range 22E
Lease Serial Number ST UT ML 22651
API Number 43-047-518250000

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

Date/Time _____ AM PM

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

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

Date/Time 5/9/2012 1:00 AM PM

BOPE

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

RECEIVED

MAY 08 2012

DIV. OF OIL, GAS & MINING

Date/Time _____ AM PM

Remarks TIME ESTIMATED

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS	
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	
1. TYPE OF WELL Gas Well	5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML 22651
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
PHONE NUMBER: 720 929-6511	8. WELL NAME and NUMBER: NBU 1022-2H4BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0165 FNL 0750 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 02 Township: 10.0S Range: 22.0E Meridian: S	9. API NUMBER: 43047518250000
	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
	COUNTY: UINTAH
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 5/9/2012	<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 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.

MIRU ROTARY RIG. FINISHED DRILLING FROM 2520' TO 9047' ON 5/8/2012. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED H&P 311 RIG ON 5/9/2012 @ 20:30 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
 May 10, 2012**

NAME (PLEASE PRINT) Cara Mahler	PHONE NUMBER 720 929-6029	TITLE Regulatory Analyst I
SIGNATURE N/A	DATE 5/10/2012	

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: ST UT ML 22651
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
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 1022-2H4BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0165 FNL 0750 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 02 Township: 10.0S Range: 22.0E Meridian: S		9. API NUMBER: 43047518250000
PHONE NUMBER: 720 929-6511		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"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 7/6/2012	<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"/> CHANGE WELL NAME	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. <p style="text-align: center;">No activity for the month of June 2012. Well TD at 9,047'.</p> <div style="text-align: right; margin-top: 20px;"> <p>Accepted by the Utah Division of Oil, Gas and Mining</p> <p>FOR RECORD ONLY</p> <p>July 10, 2012</p> </div>		
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regularatory Analyst
SIGNATURE N/A	DATE 7/6/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML 22651
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 1022-2H4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047518250000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511 9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0165 FNL 0750 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 02 Township: 10.0S 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"/> 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: 8/2/2012	<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 type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

Started completing the well in July 2012. Well TD at 9,047'.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 August 06, 2012**

NAME (PLEASE PRINT) Cara Mahler	PHONE NUMBER 720 929-6029	TITLE Regulatory Analyst I
SIGNATURE N/A	DATE 8/2/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML 22651
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 1022-2H4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047518250000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511 9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0165 FNL 0750 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 02 Township: 10.0S 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"/> 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: 8/21/2012	<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
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	<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 8/21/2012. 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
 August 24, 2012

NAME (PLEASE PRINT) Cara Mahler	PHONE NUMBER 720 929-6029	TITLE Regulatory Analyst I
SIGNATURE N/A	DATE 8/24/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML 22651
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 1022-2H4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047518250000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511 9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0165 FNL 0750 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 02 Township: 10.0S 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"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 9/5/2012	<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 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.

Well was completed, finishing well completion report. Well TD at 9,047

**Accepted by the
Utah Division of
Oil, Gas and Mining**

FOR RECORD ONLY

September 11, 2012

NAME (PLEASE PRINT) Lindsey Frazier	PHONE NUMBER 720 929-6857	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 9/5/2012	

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

5. LEASE DESIGNATION AND SERIAL NUMBER:
ST UT ML 22651

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT or CA AGREEMENT NAME
UTU63047A

8. WELL NAME and NUMBER:
NBU 1022-2H4BS ✓

9. API NUMBER:
4304751825

10. FIELD AND POOL, OR WLD/CAT
NATURAL BUTTES

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
NENE 2 10S 22E S

12. COUNTY
UINTAH

13. STATE
UTAH

14. DATE SPUDED:
3/10/2012

15. DATE T.D. REACHED:
5/8/2012

16. DATE COMPLETED:
8/21/2012

ABANDONED READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL):
4969 GL

18. TOTAL DEPTH: MD **9,047**
TVD **8,594**

19. PLUG BACK T.D.: MD **8,987**
TVD **8,534**

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)
CBL/GR/CCL/TEMP

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

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

3. ADDRESS OF OPERATOR:
P.O. BOX 173779 CITY **DENVER** STATE **CO** ZIP **80217** PHONE NUMBER: **(720) 929-6000**

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: **NENE 165 FNL 750 FEL S2,T10S,R22E**
AT TOP PRODUCING INTERVAL REPORTED BELOW: **SENE 2059 FNL 503 FEL S2,T10S,R22E**
AT TOTAL DEPTH: **SENE 2079 FNL 499 FEL S2,T10S,R22E** *BAL by HSM*

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	2,510		700		0	
7 7/8"	4 1/2" I-80	11.6#	0	9,032		1,595		383	

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"	8,348							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A) MESAVERDE	7,087	8,845			7,087 8,845	0.36	192	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(B)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

27. PERFORATION RECORD

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

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
7087-8845	PUMP 9217 BBLs SLICK H2O & 187,193 LBS 30/50 OTTAWA SAND PERF'D 8 STAGES; CEMENT SQUEEZE STAGE 8; FRAC 7 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 RECEIVED

31. INITIAL PRODUCTION

INTERVAL A (As shown in Item #26)

DATE FIRST PRODUCED: 8/21/2012		TEST DATE: 8/26/2012		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL - BBL: 248	GAS - MCF: 4,730	WATER - BBL: 555	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 696	CSG. PRESS. 1,537	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL: 248	GAS - MCF: 4,730	WATER - BBL: 555	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.)

SOLD

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	1,051
				BIRD'S NEST	1,391
				MAHOGANY	1,776
				WASATCH	4,579
				MESAVERDE	6,754

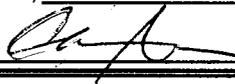
35. ADDITIONAL REMARKS (Include plugging procedure)

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 4975'; LTC csg was run from 4975' to 9032'. Stage 8 of the perf job went on a vacuum so a cement squeeze was done from 6926'-7016' with 200 sx cement. 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) CARA MAHLER

TITLE REGULATORY ANALYST

SIGNATURE 

DATE 9/13/2012

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
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340
Fax: 801-359-3940

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2H4BS (YELLOW)		Spud Date: 3/19/2012	
Project: UTAH-UINTAH		Site: NBU 1022-2A PAD	Rig Name No: PROPETRO 12/12, H&P 311/311
Event: DRILLING		Start Date: 3/1/2012	End Date: 5/9/2012
Active Datum: RKB @4,994.00usft (above Mean Sea Level)		UWI: NE/NE/0/10/S/22/E/2/0/0/26/PM/N/165/E/0/750/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub-Code	P/U	MD From (usft)	Operation
3/19/2012	16:00 - 21:00	5.00	DRLSUR	01	C	P		SKID RIG TO WELL 3/5 NBU 1022-2H4BS
	21:00 - 23:00	2.00	DRLSUR	02	C	P		SPUD 12.25" HOLE DRILL F/ 40' - 210' WOB 8-22 ROT 45-55 GPM 275 - 580 DHR 50-99 NO LOSSES
	23:00 - 0:00	1.00	DRLSUR	06	A	P		TOOH FOR DIRECTIONAL TOOLS
3/20/2012	0:00 - 1:00	1.00	DRLSUR	06	A	P		INSTALL MWD TOOL ORIENT TO MUD MOTOR AND TIH
	1:00 - 19:00	18.00	DRLSUR	02	C	P		DRILL 11" HOLE F/ 210' - 1840' WOB 20-2282 ROT 45-65 DHR GPM 480 AIR 950 CFM (ON AT 1525') UP/DN/ROT 75/53/62 PSI ON/OFF 1560/1382 AVE ROP 90 FT HR LAST SURVEY 1874 30.78 DEG 173.18 AZI 10' HIGH 6' LEFT OF LINE
	19:00 - 0:00	5.00	DRLSUR	12	F	X		TOOH TO 1300' RIG UP AND PUMP 200 SX PREMIUM 15.8 PPG 1.15 YIELD TAIL CEMENT DOWN BACK SIDE CEMENT TO SURFACE. WAIT 4 HRS AND START TIH
3/21/2012	0:00 - 1:00	1.00	DRLSUR	13	A	P		WAIT ON CEMENT TRIP IN HOLE
	1:00 - 13:00	12.00	DRLSUR	02	C	P		DRILL 11" HOLE F/ 1840' - 2520' T.D. WOB 20-2282 ROT 45-65 DHR GPM 480 AIR 950 CFM (ON AT 1525') UP/DN/ROT 75/53/62 PSI ON/OFF 1560/1382 AVE ROP 56 FT HR LAST SURVEY 1874 30.78 DEG 173.18 AZI 10' HIGH 6' LEFT OF LINE
	13:00 - 15:00	2.00	DRLSUR	05	C	P		CIRCULATE AND CONDITION MUD PRIOR TO LDDS
	15:00 - 19:30	4.50	DRLSUR	06	A	P		TOOH LAYING DOWN DRILL STRING
	19:30 - 0:00	4.50	DRLSUR	12	C	P		RIG UP AND RUN 56 JOINTS 8.625 28# J55 SURFACE PIPE SHOE AT 2489' BAFFLE AT 2445'

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-2H4BS (YELLOW)

Spud Date: 3/19/2012

Project: UTAH-UINTAH

Site: NBU 1022-2A PAD

Rig Name No: PROPETRO 12/12, H&P 311/311

Event: DRILLING

Start Date: 3/1/2012

End Date: 5/9/2012

Active Datum: RKB @4,994.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/2/0/0/26/PM/N/165/E/0/750/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
3/22/2012	0:00 - 6:00	6.00	DRLSUR	12	E	P		PRESSURE TEST LINES TO 2000 PSI. PUMP 135 BBLs OF WATER AHEAD. CATCH PSI. PUMP 20 BBLs OF 8.3# GEL WATER AHEAD. MIX AND 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/ 143 BBLs OF H2O. NO CIRC THROUGH OUT. FINAL LIFT OF 210 PSI AT 4 BBL/MIN. BUMP PLUG WITH 500 PSI FOR 5 MIN. FLOAT HELD. MIX AND PUMP (150 SX) 30.7 BBLs OF SAME TAIL CEMENT W/ 4% CALC. DOWN BACKSIDE, NO CEMENT TO SURFACE. SHUT DOWN AND CLEAN TRUCK. WAIT 1.5 HOURS MIX AND PUMP (125 SX) 22.4 BBLs OF SAME TAIL CEMENT W/ 4% CALC. WAIT 1.5 HOURS MIX AND PUMP (125 SX) 22.4 BBLs OF SAME TAIL CEMENT W/ 4% CALC. DOWN BACKSIDE NO CEMENT TO SURFACE. SHUT DOWN AND CLEAN TRUCK. WILL TOP OUT ON NEXT JOB RELEASE RIG @ 0600
5/5/2012	3:00 - 4:30	1.50	DRLPRO	01	C	P		SKID RIG FROM NBU 1022-2H1CS
	4:30 - 5:30	1.00	DRLPRO	14	A	P		NIPPLE UP BOP'S
	5:30 - 10:00	4.50	DRLPRO	15	A	P		HOLD SAFTEY MEETING, RIG UP BOP TESTERS PRESS TEST THE BOP, TIW, DART VALVE, BOP VALVES, PIPE RAMS, BLIND RAMS, CHOKE VALVES, KILL LINE TO 250 PSI LOW/5MIN AND 5000 PSI HIGH/10 MIN. TESTED THE ANNULAR T/250 PSI LOW & 2500 PSI HIGH. INSTALL WEAR BUSHING.
	10:00 - 11:00	1.00	DRLPRO	09	A	P		SLIP AND CUT 106' OF DRILLING LINE
	11:00 - 13:00	2.00	DRLPRO	06	A	P		MAKE UP BIT, MOTOR AND MWD TOOLS TRIP IN TAG CEMENT @2445
	13:00 - 13:30	0.50	DRLPRO	02	F	P		DRILL CEMENT, FLOAT, SHOE AND CEMENT TO 2541'
	13:30 - 17:30	4.00	DRLPRO	02	B	P		DRILL 2541' TO 3079' / 4 HOURS / 538' TOTAL FEET @ 134.5 FEET PER HOUR WEIGHT ON BIT 17/25 K ROTARY RPM'S 55 MUD MOTOR RPM'S 129 STROKES PER MINUTE 122 - GPM 540 MUD WEIGHT 8.5 VIS 28 PICK UP STRING WEIGHT 172 K SLACK OFF STRING WEIGHT 71 K ROTATING STRING WEIGHT 90 K PRESSURE OFF BOTTOM 1277 PSI PRESSURE ON BOTTOM 1530 PSI TORQUE OFF BOTTOM 7,000 TORQUE ON BOTTOM 8,000 SLIDE 144' / 1.8 HRS / 80 FPH 4' W 3' HIGH OF TARGET CENTER 0 FEET TO 0 FEET FLARE NOV DEWATERING HOLE CONDITIONS (GOOD) RIG SERVICE
	17:30 - 18:00	0.50	DRLPRO	07	A	P		

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2H4BS (YELLOW)

Spud Date: 3/19/2012

Project: UTAH-UJINTAH

Site: NBU 1022-2A PAD

Rig Name No: PROPETRO 12/12, H&P 311/311

Event: DRILLING

Start Date: 3/1/2012

End Date: 5/9/2012

Active Datum: RKB @4,994.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/2/0/0/26/PM/N/165/E/0/750/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	18:00 - 0:00	6.00	DRLPRO	02	B	P		DRILL 3079' TO 3740' / 6 HOURS / 661' TOTAL FEET @ 110.1 FEET PER HOUR WEIGHT ON BIT 17/25 K ROTARY RPM'S 55 MUD MOTOR RPM'S 129 STROKES PER MINUTE 122 - GPM 540 MUD WEIGHT 8.5 VIS 26 PICK UP STRING WEIGHT 135 K SLACK OFF STRING WEIGHT 75 K ROTATING STRING WEIGHT 97 K PRESSURE OFF BOTTOM 1380 PSI PRESSURE ON BOTTOM 1700 PSI TORQUE OFF BOTTOM 10,000 TORQUE ON BOTTOM 18,000 SLIDE 271" / 2.75 HRS / 98.5 FPH 22' HIGH 3' LEFT OF TARGET CENTER 0 FEET TO 0 FEET FLARE NOV DEWATERING HOLE CONDITIONS (LIGHT DRAG)
5/6/2012	0:00 - 17:30	17.50	DRLPRO	02	B	P		DRILL 3740' TO 6098' / 17.5 HOURS / 2358' TOTAL FEET @ 134.7 FEET PER HOUR WEIGHT ON BIT 25 K ROTARY RPM'S 55 MUD MOTOR RPM'S 124 STROKES PER MINUTE 122 - GPM 540 MUD WEIGHT 8.5 VIS 27 PICK UP STRING WEIGHT 220 K SLACK OFF STRING WEIGHT 102 K ROTATING STRING WEIGHT 133 K PRESSURE OFF BOTTOM 1645 PSI PRESSURE ON BOTTOM 1900 PSI TORQUE OFF BOTTOM 12,000 TORQUE ON BOTTOM 19,000 SLIDE 270' / 5.08 HRS / 53.7 FPH 15' W / 16' N OF TARGET CENTER 0 FEET TO 0 FEET FLARE NOV DEWATERING HOLE CONDITIONS (LIGHT DRAG)
	17:30 - 18:00	0.50	DRLPRO	07	A	P		RIG SERVICE

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-2H4BS (YELLOW)

Spud Date: 3/19/2012

Project: UTAH-UINTAH

Site: NBU 1022-2A PAD

Rig Name No: PROPETRO 12/12, H&P 311/311

Event: DRILLING

Start Date: 3/1/2012

End Date: 5/9/2012

Active Datum: RKB @4,994.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/2/0/0/26/PM/N/165/E/0/750/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	18:00 - 0:00	6.00	DRLPRO	02	B	P		DRILL 6098' TO 6555' / 6 HOURS / 457' TOTAL FEET @ 76.1 FEET PER HOUR WEIGHT ON BIT 25 K ROTARY RPM'S 55 MUD MOTOR RPM'S 124 STROKES PER MINUTE 122 - GPM 540 MUD WEIGHT 8.5 VIS 27 PICK UP STRING WEIGHT 249 K SLACK OFF STRING WEIGHT 97 K ROTATING STRING WEIGHT 143 K PRESSURE OFF BOTTOM 1680 PSI PRESSURE ON BOTTOM 1846 PSI TORQUE OFF BOTTOM 17,000 TORQUE ON BOTTOM 15,000 SLIDE 190' /3 HRS / 63.3 FPH 15' W / 16' N OF TARGET CENTER 0 FEET TO 0 FEET FLARE NOV DEWATERING HOLE CONDITIONS (HEAVY DRAG)
5/7/2012	0:00 - 17:30	17.50	DRLPRO	02	B	P		DRILL 6555' TO 8111' / 17.5 HOURS / 1558' TOTAL FEET @88.9 FEET PER HOUR WEIGHT ON BIT 25 K ROTARY RPM'S 55 MUD MOTOR RPM'S 124 STROKES PER MINUTE 122 - GPM 540 MUD WEIGHT 8.5 VIS 27 PICK UP STRING WEIGHT 320 K SLACK OFF STRING WEIGHT 125 K ROTATING STRING WEIGHT 168 K PRESSURE OFF BOTTOM 1878 PSI PRESSURE ON BOTTOM 2200 PSI TORQUE OFF BOTTOM 17,000 TORQUE ON BOTTOM 15,000 SLIDE 60' /2.42 HRS / 14.5 FPH 14' W / 14' N OF TARGET CENTER 10 FEET TO 20 FEET FLARE NOV DEWATERING HOLE CONDITIONS (HEAVY DRAG)
	17:30 - 18:00	0.50	DRLPRO	07	A	P		RIG SERVICE

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2H4BS (YELLOW)

Spud Date: 3/19/2012

Project: UTAH-UINTAH

Site: NBU 1022-2A PAD

Rig Name No: PROPETRO 12/12, H&P 311/311

Event: DRILLING

Start Date: 3/1/2012

End Date: 5/9/2012

Active Datum: RKB @4,994.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/2/0/0/26/PM/N/165/E/0/750/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	18:00 - 0:00	6.00	DRLPRO	02				DRILL 8111' TO 8559' / 6 HOURS / 448' TOTAL FEET @74.6 FEET PER HOUR WEIGHT ON BIT 25 K ROTARY RPM'S 55 MUD MOTOR RPM'S 124 STROKES PER MINUTE 122 - GPM 540 MUD WEIGHT 10.9 VIS 38 PICK UP STRING WEIGHT 290 K SLACK OFF STRING WEIGHT 108 K ROTATING STRING WEIGHT 163 K PRESSURE OFF BOTTOM 2500 PSI PRESSURE ON BOTTOM 2950 PSI TORQUE OFF BOTTOM 22,000 TORQUE ON BOTTOM 22,000 SLIDE 12' / .35 HRS / 34.2 FPH 10' W / 16' N OF TARGET CENTER 5 FEET TO 10 FEET FLARE NOV BYPASS HOLE CONDITIONS (TIGHT HOLE AND HEAVY DRAG CONDITIONS REQUIRED EARLY MUD UP @ 8300')
5/8/2012	0:00 - 6:30	6.50	DRLPRO	02	B	P		DRILL 8559' TO 9047' / 6.5 HOURS / 448' TOTAL FEET @75.1 FEET PER HOUR WEIGHT ON BIT 25 K ROTARY RPM'S 55 MUD MOTOR RPM'S 124 STROKES PER MINUTE 122 - GPM 540 MUD WEIGHT 10.9 VIS 38 PICK UP STRING WEIGHT 290 K SLACK OFF STRING WEIGHT 108 K ROTATING STRING WEIGHT 163 K PRESSURE OFF BOTTOM 2500 PSI PRESSURE ON BOTTOM 2950 PSI TORQUE OFF BOTTOM 22,000 TORQUE ON BOTTOM 22,000 SLIDE 0' / 0 HRS / 0 FPH 10' W / 16' N OF TARGET CENTER 5 FEET TO 10 FEET FLARE NOV BYPASS HOLE CONDITIONS (TIGHT HOLE AND HEAVY DRAG CONDITIONS REQUIRED EARLY MUD UP @ 8300')
	6:30 - 9:00	2.50	DRLPRO	05	A	P		CIRC. AND CODITION MUD FOR WPER TRIP.
	9:00 - 14:30	5.50	DRLPRO	06	E	P		PUMP 15 STANDS OUT TIGHT HOLE, TRIP TO SHOE AND BACK IN.
	14:30 - 16:30	2.00	DRLPRO	05	A	P		CIRC. AND CONDITION MUD AND HOLE FOR CASING
	16:30 - 20:30	4.00	DRLPRO	06	D	P		PUMP 5 STANDS OFF BOTTOM AND TRIP OUT.
	20:30 - 21:00	0.50	DRLPRO	07	A	P		RIG SERVICE
	21:30 - 23:00	1.50	DRLPRO	12	A			PULL WEAR BUSHING, SAFTEY MEETING WITH CASING CREW AND RIG UP
	23:00 - 0:00	1.00	DRLPRO	12	C	P		RUN 4½ PRODUCTION CASING

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2H4BS (YELLOW)

Spud Date: 3/19/2012

Project: UTAH-UINTAH

Site: NBU 1022-2A PAD

Rig Name No: PROPETRO 12/12, H&P 311/311

Event: DRILLING

Start Date: 3/1/2012

End Date: 5/9/2012

Active Datum: RKB @4,994.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/2/0/0/26/PM/N/165/E/0/750/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
5/9/2012	0:00 - 10:00	10.00	DRLPRO	12	B	P		RUN 210 JOINTS 4 1/2" 11.60# I-80 CASING, SHOE, 1-SHOE JOINT, FLOAT COLLAR & 62 JOINTS 4 1/2" I-80 11.6# LT&C CSG, 1 MARKER JOINT @ 6420', 34 JOINTS 4 1/2" I-80 11.6# LT&C, 1 X-OVER JOINT 4 1/2" DQX BOX BY LT&C PIN, 112 JOINTS 4 1/2" I-80 11.60# DQX CASING, SHOE SET @ 9032' & THE FLOAT COLLAR @ 8988' (TORQUE TURN DQX CSG) WASATCH MARKER JOINT @ 4975' & THE MESA VERDE MARKER JOINT @ 6420, R/D CASING CREWS
	10:00 - 11:00	1.00	DRLPRO	12	E	P		R/U CEMENTERS / CIRCULATE GAS OUT
	11:00 - 14:30	3.50	DRLPRO	12	E	Z		CEMENT PUMP TRUCK NOT WORKING WILL NOT WEIGH CEMENT - WAIT ON A DIFFERENT CEMENT PUMP TRUCK
	14:30 - 17:30	3.00	DRLPRO	12	E	P		HOLD SAFTEY MEETING, INTSTALL CEMENT HEAD, PRESSURE TEST LINES TO 5000 PSI, PUMPED 25 BBL PRE FLUSH 8.4 PPG H2O, LEAD CEMENT - 12.5 PPG @ 2.02 YIELD CU/FT SACK, 455 SACKS, 163 BBLS, TAIL CEMENT - 14.3 PPG @ 1.31 YIELD CU/FT SACK, 1140 SACKS, 266 BBLS, DISPLACED 139 BBLS H2O W/CLAY CARE, FINAL LIFT PRESS 2130 PSI, BUMP PLUG TO 3210 PSI HELD FOR 5 MIN BLEED OFF FLOATS HELD, 15 BBLS OF WATER TO SURFACE, 0 BBLS LEAD CEMENT TO SURFACE, EST. TOP OF TAIL 3669', R/D BJ CEMENTING
	17:30 - 20:30	3.00	DRLPRO	14	A	P		NIPPLE DOWN BOPE, SET 4 1/2" CASING SLIPS W/100K ON SLIPS, CUT OFF CASING, CLEAN MUD TANKS, RIG RELEASED ON 5/9/2012 20:30 HOURS

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 1022-2H4BS (YELLOW)	Wellbore No.	OH
Well Name	NBU 1022-2H4BS	Wellbore Name	NBU 1022-2H4BS
Report No.	1	Report Date	7/24/2012
Project	UTAH-UINTAH	Site	NBU 1022-2A PAD
Rig Name/No.		Event	COMPLETION
Start Date	7/30/2012	End Date	8/21/2012
Spud Date	3/19/2012	Active Datum	RKB @4,994.00usft (above Mean Sea Level)
UWI	NE/NE/O/10/S/22/E/2/O/O/26/PM/N/165/E/O/750/O/O		

1.3 General

Contractor	CASED HOLE SOLUTIONS	Job Method		Supervisor	ED GUDAC
Perforated Assembly	PRODUCTION CASING	Conveyed Method			

1.4 Initial Conditions

Fluid Type		Fluid Density	
Surface Press		Estimate Res Press	
TVD Fluid Top		Fluid Head	
Hydrostatic Press		Press Difference	
Balance Cond	NEUTRAL		

1.5 Summary

Gross Interval	7,087.0 (usft)-8,845.0 (usft)	Start Date/Time	7/23/2012 12:00AM
No. of Intervals	33	End Date/Time	7/23/2012 12:00AM
Total Shots	168	Net Perforation Interval	46.00 (usft)
Avg Shot Density	3.65 (shot/ft)	Final Surface Pressure	
		Final Press Date	

2 Intervals

2.1 Perforated Interval

Date	Formation/Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
7/23/2012 12:00AM	MESAVERDE/			7,087.0	7,088.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N

2.1 Perforated Interval (Continued)

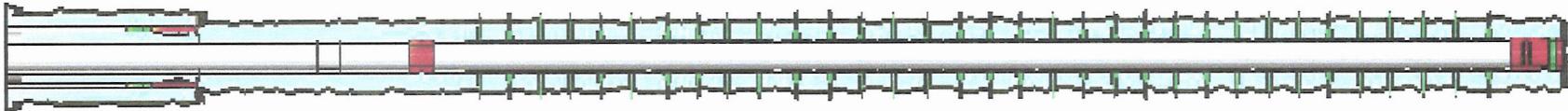
Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
7/23/2012 12:00AM	MESAVERDE/			7,112.0	7,113.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			7,153.0	7,154.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			7,165.0	7,166.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			7,200.0	7,201.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			7,244.0	7,245.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			7,381.0	7,382.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			7,427.0	7,428.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			7,438.0	7,440.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			7,482.0	7,484.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			7,668.0	7,670.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			7,776.0	7,778.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			7,803.0	7,805.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			7,878.0	7,880.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			7,978.0	7,980.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			8,074.0	8,075.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			8,095.0	8,096.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			8,116.0	8,118.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			8,187.0	8,189.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			8,229.0	8,230.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			8,277.0	8,278.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			8,302.0	8,303.0	4.00		0.360	EXP/	3.375	90.00		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 /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
7/23/2012 12:00AM	MESAVERDE/			8,329.0	8,330.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			8,384.0	8,385.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			8,407.0	8,408.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			8,470.0	8,471.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			8,496.0	8,497.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			8,534.0	8,535.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			8,574.0	8,576.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			8,586.0	8,587.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			8,687.0	8,688.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			8,750.0	8,752.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
7/23/2012 12:00AM	MESAVERDE/			8,842.0	8,845.0	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 1022-2H4BS (YELLOW)

Spud Date: 3/19/2012

Project: UTAH-UINTAH

Site: NBU 1022-2A PAD

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 7/30/2012

End Date: 8/21/2012

Active Datum: RKB @4,994.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/2/0/0/26/PM/N/165/E/0/750/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
3/19/2012	-							
3/20/2012	-							
7/24/2012	9:30 - 11:30	2.00	FLOWBK	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 19 PSI. 1ST PSI TEST T/ 7000 PSI. HELD FOR 30 MIN LOST 68 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. MOVE T/ NEXT WELL. SWFW
7/27/2012	7:00 - 11:00	4.00		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

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2H4BS (YELLOW)

Spud Date: 3/19/2012

Project: UTAH-UINTAH

Site: NBU 1022-2A PAD

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 7/30/2012

End Date: 8/21/2012

Active Datum: RKB @4,994.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/2/0/0/26/PM/N/165/E/0/750/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/30/2012	8:30 - 18:00	9.50	FRAC	36	B	P		<p>FRAC STG 1)WHP 264 PSI, BRK 2962 PSI @ 4.6 BPM. ISIP 2316 PSI, FG .70. CALC PERFS OPEN @ 51.1 BPM @ 4842 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 2606 PSI, FG .74, NPI 290 PSI. MP 6502 PSI, MR 51.2 BPM, AP 5073 PSI, AR 49.2 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO FOR WL.</p> <p>PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8617' P/U PERF AS PER DESIGN. POOH, XO FOR FRAC CREW.</p> <p>FRAC STG 2)WHP 2258 PSI, BRK 2652 PSI @ 5.8 BPM. ISIP 2322 PSI, FG .71. CALC PERFS OPEN @ 49 BPM @ 4974 PSI = 92% HOLES OPEN. (22/24 HOLES OPEN) ISIP 2559 PSI, FG .74, NPI 257 PSI. MP 5952 PSI, MR 49.3 BPM, AP 5005 PSI, AR 49.1 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO FOR WL.</p> <p>PERF STG 3)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8360' P/U PERF AS PER DESIGN. POOH, XO FOR FC.</p> <p>FRAC STG 3)WHP 2132 PSI, BRK 2609 PSI @ 4.8 BPM. ISIP 2207 PSI, FG .71. CALC PERFS OPEN @ 50 BPM @ 5023 PSI = 88% HOLES OPEN. (21/24 HOLES OPEN) ISIP 2509 PSI, FG .74, NPI 302 PSI. MP 5529 PSI, MR 50.3 BPM, AP 4912 PSI, AR 50.2 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ FRAC.</p> <p>PERF STG 4)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8148' P/U PERF AS PER DESIGN. POOH. SWIFN.</p>

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-2H4BS (YELLOW)

Spud Date: 3/19/2012

Project: UTAH-UINTAH

Site: NBU 1022-2A PAD

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 7/30/2012

End Date: 8/21/2012

Active Datum: RKB @4,994.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/2/0/0/26/PMWN/165/E/0/750/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/31/2012	8:00 - 18:00	10.00	FRAC	36	B	P		<p>FRAC STG 4)WHP 1850 PSI, BRK 2069 PSI @ 5.5 BPM. ISIP 1840 PSI, FG .67. CALC PERFS OPEN @ 50.2 BPM @ 4448 PSI = 96% HOLES OPEN. (23/24 HOLES OPEN) ISIP 2134 PSI, FG .71, NPI 294 PSI. MP 4931 PSI, MR 50.5 BPM, AP 4279 PSI, AR 50.3 BPM, PUMPED 30/50 OWATTA SAND. SWI. XO T/ WL.</p> <p>PERF STG 5)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8148' P/U PERF AS PER DESIGN. POOH. XO T/ FC.</p> <p>FRAC STG 5)WHP 899 PSI, BRK 2287 PSI @ 4.2 BPM. ISIP 1559 PSI, FG .64. CALC PERFS OPEN @ 50.7 BPM @ 5113 PSI = 71% HOLES OPEN. (17/24 HOLES OPEN) ISIP 2254 PSI, FG .73, NPI 695 PSI. MP 5526 PSI, MR 50.9 BPM, AP 4964 PSI, AR 50.7 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 6)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7514' P/U PERF AS PER DESIGN. POOH, XO T/ FC.</p> <p>FRAC STG 6)WHP 439 PSI, BRK 2225 PSI @ 4.2 BPM. ISIP 1209 PSI, FG .60. CALC PERFS OPEN @ 50.8 BPM @ 4609 PSI = 75% HOLES OPEN. (18/24 HOLES OPEN) ISIP 1984 PSI, FG .71, NPI 775 PSI. MP 4995 PSI, MR 51.3 BPM, AP 4623 PSI, AR 50.7 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ 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 TAG SAND @ 2500'. POOH. REFLUSH WELL. P/U PERF AS PER DESIGN. POOH, SWIFN.</p>

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-2H4BS (YELLOW)

Spud Date: 3/19/2012

Project: UTAH-UINTAH

Site: NBU 1022-2A PAD

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 7/30/2012

End Date: 8/21/2012

Active Datum: RKB @4,994.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/2/0/0/26/PM/N/165/E/0/750/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/1/2012	7:30 - 18:00	10.50	FRAC	36	B	P		<p>FRAC STG 7)WHP 348 PSI, BRK 2088 PSI @ 4.4 BPM. ISIP 1453 PSI, FG .64. CALC PERFS OPEN @ 52.7 BPM @ 4637 PSI = 79% HOLES OPEN. (19/24 HOLES OPEN) ISIP 2511 PSI, FG .79, NPI 1058 PSI. MP 5817 PSI, MR 52.7 BPM, AP 4730 PSI, AR 51.8 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 8)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7275' P/U PERF AS PER DESIGN. (((AFTER PERFINING THIS STG, WELL WENT ON A VACUUM.))) POOH, XO T/ FRC.</p> <p>FRAC STG 8)WHP 213 PSI, BRK 867 PSI @ 3.5 BPM. ISIP 385 PSI, FG .49. *** DID NOT FRAC THIS STG DUE T/ LOW FG. *** DON FRACING THIS WELL.</p> <p>SWI. DID NOT SET KILL PLUG IN THIS WELL. *** WILL NEED T/ CMT PERFS.</p> <p>TOTAL SAND = 187,193 LBS TOTAL CLFL = 9217 BBLS</p>
8/16/2012	12:00 - 13:00	1.00	DRLOUT	30	A	P		<p>MIRU, ND WH, NU BOP'S, RU FLOOR & TBG EQUIP MIRU CUTTERS WIRELINE, P/U COMPOSITE CEMENT RETAINER (CCR), RIH SET CCR @8826, POOH RD CUTTERS WIRELINE P/U TBG, REMOVE THREAD PROTECTORS, TALLY & DRIFT TBG TO CCR STING INTO RETAINER, PRESS TEST CSG ABOVE RETAINER TO 750 PSI, HELD GOOD, SDFN HSM, JSA</p>
	13:00 - 14:30	1.50	DRLOUT	34	B	P		
	14:30 - 17:00	2.50	DRLOUT	31	I	P		
	17:00 - 18:00	1.00	DRLOUT	52	F	P		
8/17/2012	6:30 - 6:45	0.25	DRLOUT	48		P		<p>MIRU PRO PETRO, PRESS TEST PUMP LINES, ESTB INJECTION RATE OF 2BPM @ 1200PSI, MIX & PUMP 200 SX CLASS G @ 15.8 PPG W/ 4% CaCl2 @ 2BPM W/ 700 PSI, START DISPLACEMENT @ 2BPM W/ 800PSI, DISPLACE 13 BBLS & SQUEEZE PERFS TO 1700PSI, STING OUT OF CCR & REVERSE OUT @ 1BPM W/ 1300PSI UNTIL CLEAR WTR, RD PRO PETRO TOOH W/ 2-3/8" TBG, LD STINGER, P/U USED BIT & SUB, TIH, SDFWE HSM, JSA</p>
	6:45 - 14:30	7.75	DRLOUT	51	A	P		
8/20/2012	7:00 - 7:15	0.25	DRLOUT	48		P		<p>MIRU PWR SWWL, D/O COMPOSITE CEMENT RETAINER & 153' OF CEMENT PRESS TEST CSG TO 1000PSI FOR 15 MINS LOST OPSI TOOH W/ 2-3/8" TBG, LD USED BIT, P/U NEW BIT & POBS, TIH W TBG</p>
	7:15 - 10:30	3.25	DRLOUT	44	A	P		
	10:30 - 11:00	0.50	DRLOUT	47	B	P		
	11:00 - 14:00	3.00	DRLOUT	31	I	P		
	14:00 - 14:00	0.00	DRLOUT					

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 1022-2H4BS (YELLOW)

Spud Date: 3/19/2012

Project: UTAH-UINTAH

Site: NBU 1022-2A PAD

Rig Name No: MILES 3/3

Event: COMPLETION

Start Date: 7/30/2012

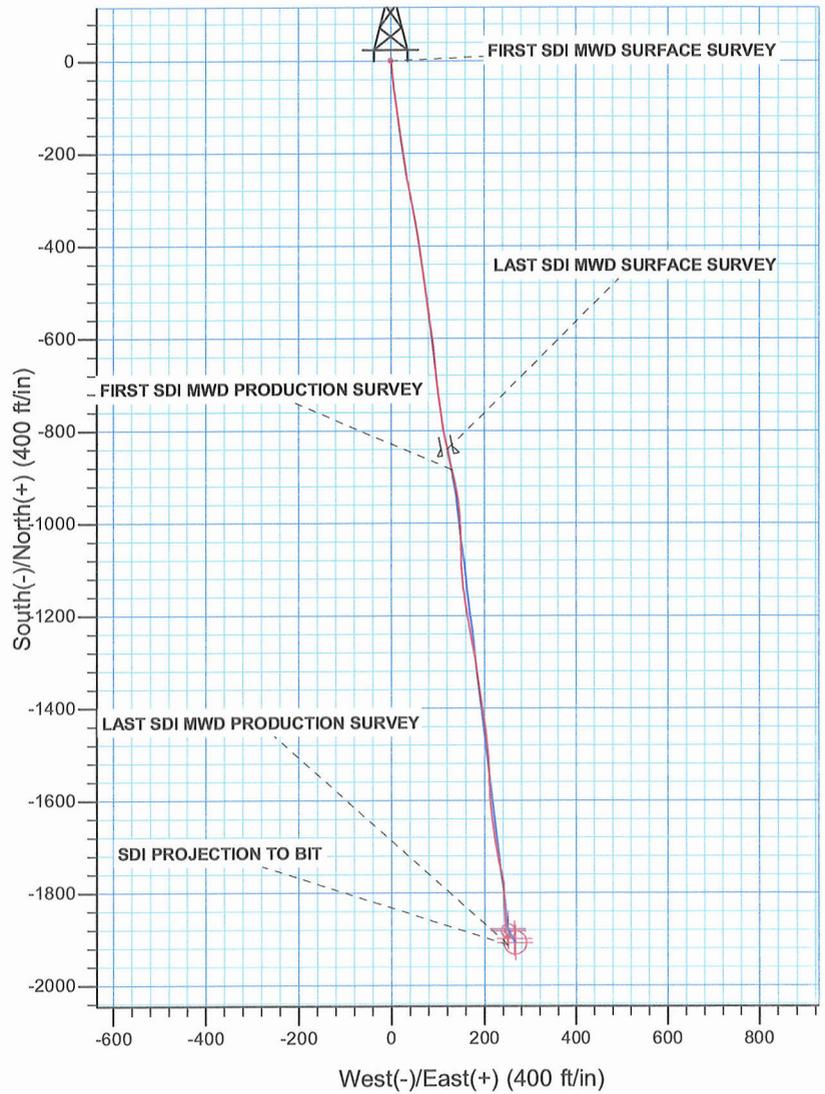
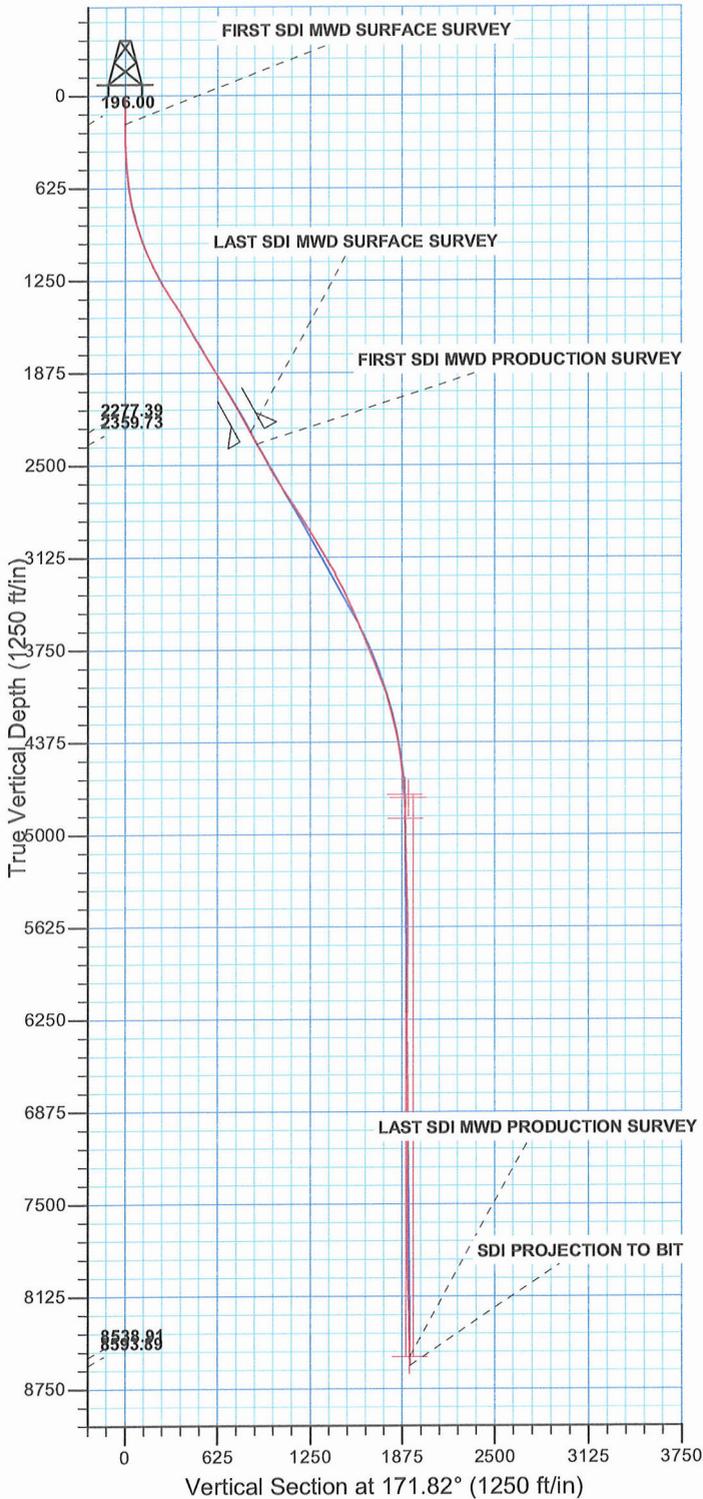
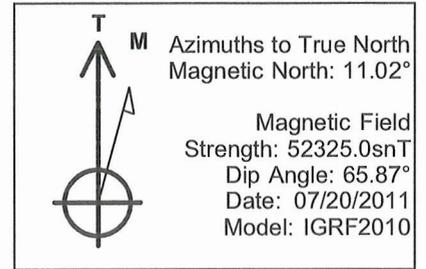
End Date: 8/21/2012

Active Datum: RKB @4,994.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/2/0/0/26/PM/N/165/E/0/750/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	14:00 - 16:00	2.00	DRLOUT	44	C	P		MIRU PWR SWWL & NEW WASHINGTON RUBBER
								C/O 15' SAND, TAG 1ST PLUG @ 7,054' DRL PLUG IN 3 MIN. 200 PSI INCREASE RIH, CSG PRESS 0 PSI.
								C/O 30' SAND, TAG 2ND PLUG @ 7,284' DRL PLUG IN 2 MIN. 100 PSI INCREASE RIH, CSG PRESS 400 PSI.
								C/O 25' SAND, TAG 3RD PLUG @ 7,284' DRL PLUG IN 2 MIN. 600 PSI INCREASE RIH, CSG PRESS 800 PSI.
								SWM, SDFN HSM, JSA
8/21/2012	7:00 - 7:15	0.25	DRLOUT	48		P		3100PSI ON WELL
	7:15 - 12:30	5.25	DRLOUT	44	C	P		C/O 25' SAND, TAG 4TH PLUG @ 7,851' DRL PLUG IN 4 MIN. 500 PSI INCREASE RIH, CSG PRESS 700 PSI.
								C/O 25' SAND, TAG 5TH PLUG @ 8,152' DRL PLUG IN 7 MIN. 400 PSI INCREASE RIH, CSG PRESS 900 PSI.
								C/O 25' SAND, TAG 6TH PLUG @ 8,361' DRL PLUG IN 4 MIN. 700 PSI INCREASE RIH, CSG PRESS 900 PSI.
								C/O 40' SAND, TAG 7TH PLUG @ 8,632' DRL PLUG IN 3 MIN. 600 PSI INCREASE RIH, CSG PRESS 900 PSI.
								PBTD @ 8,987', BTM PERF @ 8,845', RIH TO 8,904, TAG FILL, C/O TO 8,959' 114' PAST BTM PERF W/ 282 JTS 2 3/8" L-80 TBG, LD 20 JTS, PU & STRIP IN TBG HANGER & LAND TBG W/ 262 JTS 2 3/8" L-80, EOT 8,347.57'.
								RD POWER SWIVEL, FLOOR & TBG EQUIP, ND BOPS, NU WH, DROP BALL TO SHEAR OFF BIT W/ 1600 PSI, LET BIT FALL FOR 20 MIN.
								TURN OVER TO FLOW BACK CREW, RDMO.
								KB= 25' 4 1/16" WEATHERFORD HANGER= .83' TBG DELIVERED 283 JTS 262 JTS 2 3/8" L-80 = 8,319.54' TBG USED 262 JTS POBS= 2.20' TBG RETURNED 21 JTS EOT @8,347.57'
								TWTR= 9,217 BBLs TWR= 1,500 BBLs TWLTR= 7,717 BBLs

WELL DETAILS: NBU 1022-2H4BS					
GL 4969 & KB 25 @ 4994.00ft (H&P 311)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14524544.60	2088701.44	39.984832	-109.399707



PROJECT DETAILS: Uintah County, UT UTM12
Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 - Western US
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 2 T10S R22E
System Datum: Mean Sea Level

Design: OH (NBU 1022-2H4BS/OH)
Created By: Gabe Kendall Date: 10:08, June 15 2012



Scientific Drilling

Kerr McGee Oil and Gas Onshore LP

**Uintah County, UT UTM12
NBU 1022-2A PAD
NBU 1022-2H4BS**

OH

Design: OH

Standard Survey Report

15 June, 2012

Anadarko 
Petroleum Corporation

Company:	Kerr McGee Oil and Gas Onshore LP	Local Co-ordinate Reference:	Well NBU 1022-2H4BS
Project:	Uintah County, UT UTM12	TVD Reference:	GL 4969 & KB 25 @ 4994.00ft (H&P 311)
Site:	NBU 1022-2A PAD	MD Reference:	GL 4969 & KB 25 @ 4994.00ft (H&P 311)
Well:	NBU 1022-2H4BS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

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 1022-2A PAD, SECTION 2 T10S R22E				
Site Position:		Northing:	14,524,545.70 usft	Latitude:	39.984836
From:	Lat/Long	Easting:	2,088,681.52 usft	Longitude:	-109.399778
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	1.03 °

Well:	NBU 1022-2H4BS, 165 FNL 750 FEL					
Well Position:	+N/-S	0.00 ft	Northing:	14,524,544.60 usft	Latitude:	39.984832
	+E/-W	0.00 ft	Easting:	2,088,701.43 usft	Longitude:	-109.399707
Position Uncertainty:	0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,969.00 ft	

Wellbore:	OH				
Magnetics:	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	07/20/11	11.02	65.87	52,325

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	171.82	

Survey Program:	Date 06/15/12				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
21.00	2,486.00	Survey #1 SDI MWD SURFACE (OH)	MWD SDI	MWD - Standard ver 1.0.1	
2,580.00	9,047.00	Survey #2 SDI MWD PRODUCTION (OH)	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
21.00	0.00	0.00	21.00	0.00	0.00	0.00	0.00	0.00	0.00
196.00	0.44	232.33	196.00	-0.41	-0.53	0.33	0.25	0.25	0.00
FIRST SDI MWD SURFACE SURVEY									
282.00	1.06	152.79	281.99	-1.32	-0.43	1.25	1.25	0.72	-92.49
365.00	2.37	154.29	364.95	-3.55	0.67	3.61	1.58	1.58	1.81
455.00	3.84	172.23	454.82	-8.21	1.88	8.40	1.94	1.63	19.93
545.00	5.54	173.09	544.52	-15.51	2.81	15.75	1.89	1.89	0.96
635.00	8.22	177.29	633.86	-26.25	3.64	26.50	3.03	2.98	4.67
725.00	11.08	174.68	722.58	-41.29	4.74	41.55	3.21	3.18	-2.90

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT UTM12
Site: NBU 1022-2A PAD
Well: NBU 1022-2H4BS
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 1022-2H4BS
TVD Reference: GL 4969 & KB 25 @ 4994.00ft (H&P 311)
MD Reference: GL 4969 & KB 25 @ 4994.00ft (H&P 311)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
815.00	14.33	172.65	810.36	-60.96	6.97	61.33	3.64	3.61	-2.26
905.00	17.15	171.34	896.98	-85.13	10.40	85.74	3.16	3.13	-1.46
995.00	20.14	172.39	982.25	-113.61	14.45	114.51	3.34	3.32	1.17
1,085.00	22.60	171.51	1,066.05	-146.07	19.05	147.30	2.76	2.73	-0.98
1,175.00	26.01	172.30	1,148.06	-182.74	24.25	184.34	3.81	3.79	0.88
1,265.00	28.93	171.60	1,227.91	-223.84	30.08	225.85	3.26	3.24	-0.78
1,355.00	32.10	170.19	1,305.43	-268.95	37.33	271.53	3.61	3.52	-1.57
1,445.00	32.59	169.13	1,381.47	-316.32	45.98	319.65	0.83	0.54	-1.18
1,535.00	30.60	169.05	1,458.13	-362.62	54.90	366.74	2.21	-2.21	-0.09
1,625.00	30.34	171.25	1,535.70	-407.58	62.71	412.35	1.27	-0.29	2.44
1,715.00	31.39	172.57	1,612.95	-453.29	69.20	458.52	1.39	1.17	1.47
1,805.00	30.07	172.65	1,690.31	-498.89	75.11	504.50	1.47	-1.47	0.09
1,895.00	30.78	173.18	1,767.92	-544.12	80.73	550.07	0.84	0.79	0.59
1,985.00	31.92	171.86	1,844.78	-590.54	86.84	596.89	1.48	1.27	-1.47
2,075.00	31.30	173.71	1,921.43	-637.34	92.77	644.05	1.28	-0.69	2.06
2,165.00	30.51	174.76	1,998.65	-683.32	97.42	690.23	1.06	-0.88	1.17
2,255.00	29.99	171.34	2,076.40	-728.32	102.89	735.55	2.00	-0.58	-3.80
2,345.00	29.55	172.04	2,154.52	-772.53	109.35	780.23	0.62	-0.49	0.78
2,435.00	29.28	170.07	2,232.92	-816.19	116.22	824.42	1.12	-0.30	-2.19
2,486.00	29.37	168.88	2,277.39	-840.75	120.78	849.38	1.16	0.18	-2.33
LAST SDI MWD SURFACE SURVEY									
2,580.00	28.31	166.23	2,359.73	-885.02	130.53	894.59	1.77	-1.13	-2.82
FIRST SDI MWD PRODUCTION SURVEY									
2,674.00	29.11	169.48	2,442.18	-929.15	140.01	939.62	1.87	0.85	3.46
2,769.00	29.46	174.14	2,525.05	-975.12	146.62	986.06	2.43	0.37	4.91
2,863.00	32.01	178.88	2,605.85	-1,023.03	149.47	1,033.89	3.74	2.71	5.04
2,957.00	32.01	178.97	2,685.56	-1,072.85	150.40	1,083.34	0.05	0.00	0.10
3,052.00	32.27	174.75	2,766.01	-1,123.29	153.18	1,133.65	2.38	0.27	-4.44
3,146.00	33.68	170.89	2,844.87	-1,174.02	159.60	1,184.78	2.69	1.50	-4.11
3,240.00	31.39	170.27	2,924.12	-1,223.89	167.86	1,235.32	2.46	-2.44	-0.66
3,335.00	30.16	169.13	3,005.74	-1,271.71	176.55	1,283.89	1.43	-1.29	-1.20
3,429.00	31.74	171.41	3,086.36	-1,319.35	184.69	1,332.21	2.09	1.68	2.43
3,524.00	29.99	172.56	3,167.90	-1,367.61	191.50	1,380.94	1.94	-1.84	1.21
3,618.00	27.44	171.24	3,250.33	-1,412.32	197.84	1,426.10	2.80	-2.71	-1.40
3,712.00	27.79	173.17	3,333.63	-1,455.48	203.75	1,469.66	1.02	0.37	2.05
3,807.00	24.71	176.34	3,418.82	-1,497.30	207.65	1,511.61	3.56	-3.24	3.34
3,901.00	24.45	176.69	3,504.31	-1,536.33	210.03	1,550.58	0.32	-0.28	0.37
3,995.00	21.98	178.36	3,590.69	-1,573.34	211.65	1,587.45	2.72	-2.63	1.78
4,090.00	23.21	174.75	3,678.40	-1,609.75	213.88	1,623.81	1.95	1.29	-3.80
4,184.00	22.77	173.70	3,764.93	-1,646.28	217.57	1,660.49	0.64	-0.47	-1.12
4,278.00	23.30	170.80	3,851.44	-1,682.71	222.54	1,697.26	1.33	0.56	-3.09
4,373.00	20.49	170.27	3,939.58	-1,717.66	228.35	1,732.67	2.97	-2.96	-0.56
4,467.00	17.37	168.02	4,028.49	-1,747.60	234.04	1,763.13	3.41	-3.32	-2.39

Company: Kerr McGee Oil and Gas Onshore LP
Project: Uintah County, UT UTM12
Site: NBU 1022-2A PAD
Well: NBU 1022-2H4BS
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NBU 1022-2H4BS
TVD Reference: GL 4969 & KB 25 @ 4994.00ft (H&P 311)
MD Reference: GL 4969 & KB 25 @ 4994.00ft (H&P 311)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,562.00	15.56	167.72	4,119.59	-1,773.93	239.70	1,789.99	1.91	-1.91	-0.32
4,656.00	14.86	178.97	4,210.31	-1,798.31	242.60	1,814.53	3.22	-0.74	11.97
4,750.00	12.31	178.71	4,301.68	-1,820.38	243.04	1,836.44	2.71	-2.71	-0.28
4,845.00	9.20	178.17	4,395.00	-1,838.10	243.51	1,854.05	3.28	-3.27	-0.57
4,939.00	7.03	174.58	4,488.05	-1,851.34	244.29	1,867.26	2.37	-2.31	-3.82
5,034.00	5.80	178.62	4,582.45	-1,861.92	244.96	1,877.84	1.38	-1.29	4.25
5,128.00	4.48	175.63	4,676.07	-1,870.33	245.35	1,886.22	1.43	-1.40	-3.18
5,222.00	2.90	188.02	4,769.88	-1,876.35	245.30	1,892.16	1.87	-1.68	13.18
5,317.00	3.08	182.66	4,864.75	-1,881.28	244.85	1,896.98	0.35	0.19	-5.64
5,411.00	2.20	223.71	4,958.65	-1,885.10	243.48	1,900.57	2.16	-0.94	43.67
5,506.00	1.58	88.71	5,053.63	-1,886.39	243.53	1,901.85	3.68	-0.65	-142.11
5,600.00	0.88	145.40	5,147.61	-1,886.96	245.24	1,902.66	1.40	-0.74	60.31
5,694.00	1.14	151.73	5,241.60	-1,888.38	246.09	1,904.18	0.30	0.28	6.73
5,789.00	2.02	134.50	5,336.56	-1,890.38	247.73	1,906.40	1.04	0.93	-18.14
5,883.00	1.85	133.97	5,430.51	-1,892.60	250.01	1,908.91	0.18	-0.18	-0.56
5,977.00	2.37	122.02	5,524.44	-1,894.68	252.75	1,911.37	0.72	0.55	-12.71
6,072.00	0.97	154.54	5,619.40	-1,896.45	254.76	1,913.40	1.72	-1.47	34.23
6,166.00	0.26	282.42	5,713.40	-1,897.12	254.89	1,914.09	1.22	-0.76	136.04
6,260.00	1.58	312.83	5,807.38	-1,896.19	253.73	1,913.01	1.45	1.40	32.35
6,355.00	1.06	299.21	5,902.36	-1,894.87	252.01	1,911.45	0.64	-0.55	-14.34
6,449.00	0.97	303.16	5,996.34	-1,894.02	250.58	1,910.40	0.12	-0.10	4.20
6,543.00	0.70	267.74	6,090.34	-1,893.60	249.34	1,909.82	0.61	-0.29	-37.68
6,638.00	0.53	280.40	6,185.33	-1,893.55	248.33	1,909.62	0.23	-0.18	13.33
6,732.00	0.46	266.33	6,279.33	-1,893.49	247.52	1,909.45	0.15	-0.07	-14.97
6,827.00	0.35	232.23	6,374.32	-1,893.69	246.91	1,909.56	0.27	-0.12	-35.89
6,921.00	0.35	174.05	6,468.32	-1,894.16	246.72	1,909.99	0.36	0.00	-61.89
7,015.00	0.53	195.06	6,562.32	-1,894.86	246.63	1,910.68	0.25	0.19	22.35
7,110.00	1.06	174.49	6,657.31	-1,896.16	246.60	1,911.96	0.62	0.56	-21.65
7,204.00	1.06	170.80	6,751.29	-1,897.88	246.83	1,913.70	0.07	0.00	-3.93
7,298.00	1.49	99.52	6,845.28	-1,898.94	248.17	1,914.94	1.62	0.46	-75.83
7,393.00	1.32	51.44	6,940.25	-1,898.47	250.24	1,914.76	1.22	-0.18	-50.61
7,487.00	0.97	43.62	7,034.23	-1,897.22	251.64	1,913.72	0.41	-0.37	-8.32
7,582.00	0.97	65.68	7,129.22	-1,896.30	252.93	1,913.00	0.39	0.00	23.22
7,676.00	0.53	113.23	7,223.21	-1,896.15	254.05	1,913.00	0.77	-0.47	50.59
7,770.00	1.23	296.75	7,317.21	-1,895.86	253.55	1,912.65	1.87	0.74	-187.74
7,864.00	1.32	297.82	7,411.18	-1,894.90	251.69	1,911.44	0.10	0.10	1.14
7,959.00	1.23	296.57	7,506.16	-1,893.94	249.81	1,910.21	0.10	-0.09	-1.32
8,053.00	0.26	223.36	7,600.15	-1,893.64	248.76	1,909.77	1.26	-1.03	-77.88
8,148.00	0.09	268.27	7,695.15	-1,893.80	248.54	1,909.90	0.22	-0.18	47.27
8,242.00	0.53	216.33	7,789.15	-1,894.15	248.21	1,910.20	0.51	0.47	-55.26
8,337.00	1.23	159.99	7,884.14	-1,895.46	248.30	1,911.51	1.09	0.74	-59.31
8,431.00	1.14	169.13	7,978.12	-1,897.33	248.82	1,913.43	0.22	-0.10	9.72
8,525.00	1.49	167.81	8,072.09	-1,899.44	249.25	1,915.59	0.37	0.37	-1.40
8,620.00	1.49	167.99	8,167.06	-1,901.86	249.77	1,918.05	0.00	0.00	0.19

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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)
8,714.00	1.67	175.63	8,261.03	-1,904.42	250.13	1,920.64	0.29	0.19	8.13
8,808.00	1.49	172.03	8,354.99	-1,907.00	250.40	1,923.22	0.22	-0.19	-3.83
8,903.00	1.76	180.38	8,449.95	-1,909.68	250.57	1,925.90	0.38	0.28	8.79
8,992.00	1.58	167.81	8,538.91	-1,912.24	250.82	1,928.48	0.46	-0.20	-14.12
LAST SDI MWD PRODUCTION SURVEY									
9,047.00	1.58	167.81	8,593.89	-1,913.73	251.14	1,929.99	0.00	0.00	0.00
SDI PROJECTION TO BIT									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
196.00	196.00	-0.41	-0.53	FIRST SDI MWD SURFACE SURVEY
2,486.00	2,277.39	-840.75	120.78	LAST SDI MWD SURFACE SURVEY
2,580.00	2,359.73	-885.02	130.53	FIRST SDI MWD PRODUCTION SURVEY
8,992.00	8,538.91	-1,912.24	250.82	LAST SDI MWD PRODUCTION SURVEY
9,047.00	8,593.89	-1,913.73	251.14	SDI PROJECTION TO BIT

Checked By: _____ Approved By: _____ Date: _____