

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 1022-10A4CS
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) UO 01197-A	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	190 FNL 775 FEL	NENE	10	10.0 S	22.0 E	S
Top of Uppermost Producing Zone	1235 FNL 570 FEL	NENE	10	10.0 S	22.0 E	S
At Total Depth	1235 FNL 570 FEL	NENE	10	10.0 S	22.0 E	S

21. COUNTY UINTAH	22. DISTANCE TO NEAREST LEASE LINE (Feet) 83	23. NUMBER OF ACRES IN DRILLING UNIT 1674
24. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 433	25. PROPOSED DEPTH MD: 8683 TVD: 8616	
26. ELEVATION - GROUND LEVEL 5062	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 - 2220	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 - 8683	11.6	I-80 LT&C	12.0	Premium Lite High Strength	280	3.38	12.0
							50/50 Poz	1200	1.31	14.3

ATTACHMENTS

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

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

NAME Danielle Piernot	TITLE Regulatory Analyst	PHONE 720 929-6156
SIGNATURE	DATE 07/19/2012	EMAIL danielle.piernot@anadarko.com
API NUMBER ASSIGNED 43047529950000	APPROVAL  Permit Manager	

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 1022-10A4CS**

Surface: 190 FNL / 775 FEL NENE
 BHL: 1235 FNL / 570 FEL NENE

Section 10 T10S R22E

Uintah County, Utah
 Mineral Lease: UT ST UO 01197-A ST

ONSHORE ORDER NO. 1**DRILLING PROGRAM**

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

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,000'	
Birds Nest	1,220'	Water
Mahogany	1,770'	Water
Wasatch	4,104'	Gas
Mesaverde	6,409'	Gas
Sego	8,516'	Gas
TVD	8,516'	
TD	8,683'	

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 8683' TVD, approximately equals
5,195 psi 0.61 psi/ft = actual bottomhole gradient

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

Maximum anticipated surface pressure equals approximately 3,344 psi (bottom hole pressure
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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

8. Anticipated Starting Dates:

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

9. Variances:

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

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

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

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

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

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

Background

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

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

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

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

Variance for BOPE Requirements

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

Variance for Mud Material Requirements

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

Variance for Special Drilling Operation (surface equipment placement) Requirements

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

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

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

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

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

Variance for FIT Requirements

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

Conclusion

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

10. **Other Information:**

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

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 2,220	28.00	IJ-55	LTC	2.44	1.81	6.39	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	1.19		3.25
						7,780	6,350	223,000	267,035
	4-1/2"	5,000 to 8,683'	11.60	I-80	LTC	1.11	1.19	6.39	

Surface casing:

(Burst Assumptions: TD = 12.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe
Fracture at surface shoe with 0.1 psi/ft gas gradient above
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.61 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 1,720'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	160	35%	11.00	3.82
	TAIL 500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
	TOP OUT CMT as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD 3,603'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	280	35%	12.00	3.38
	TAIL 5,080'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,200	35%	14.30	1.31

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained
*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

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

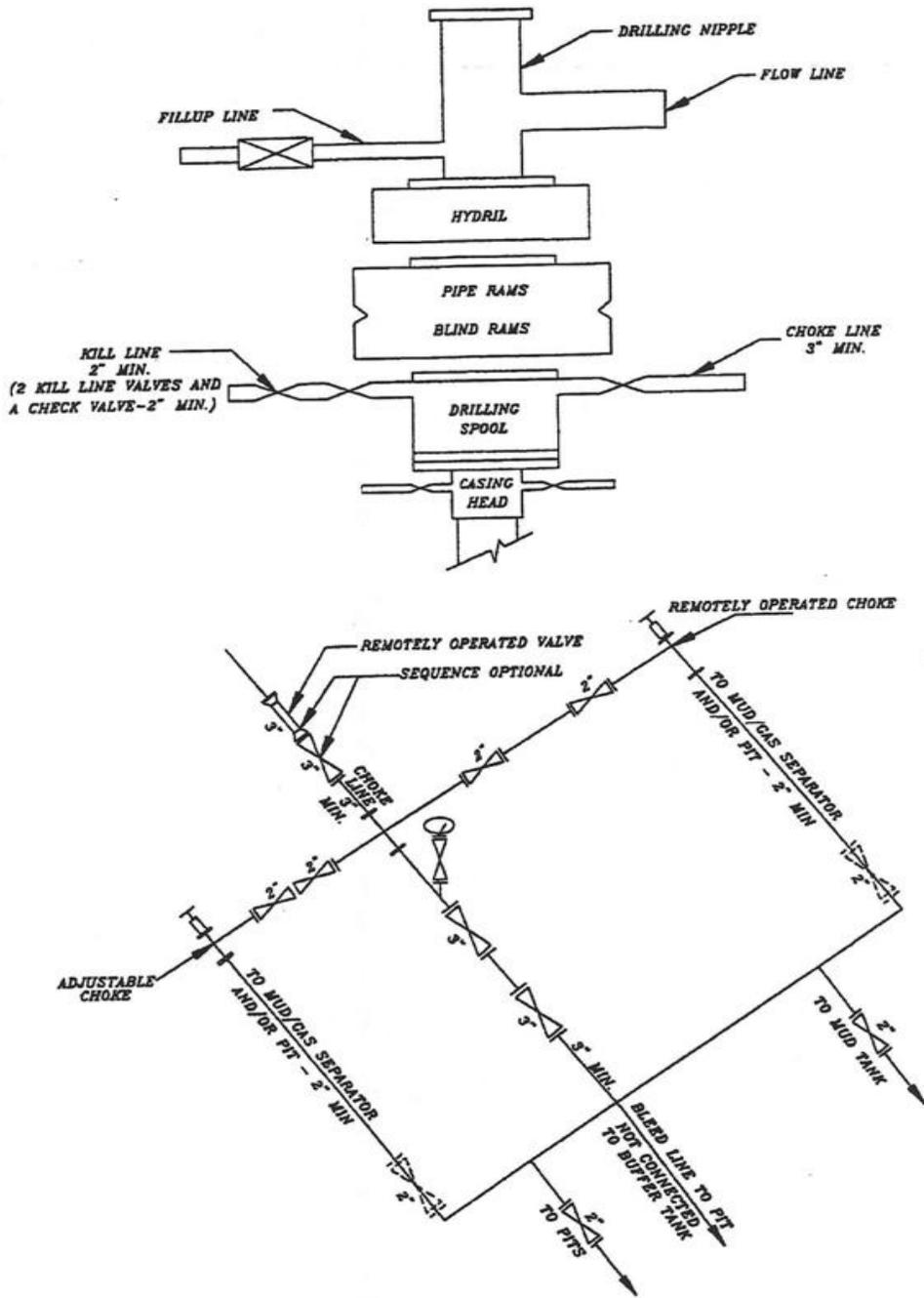
DATE:

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

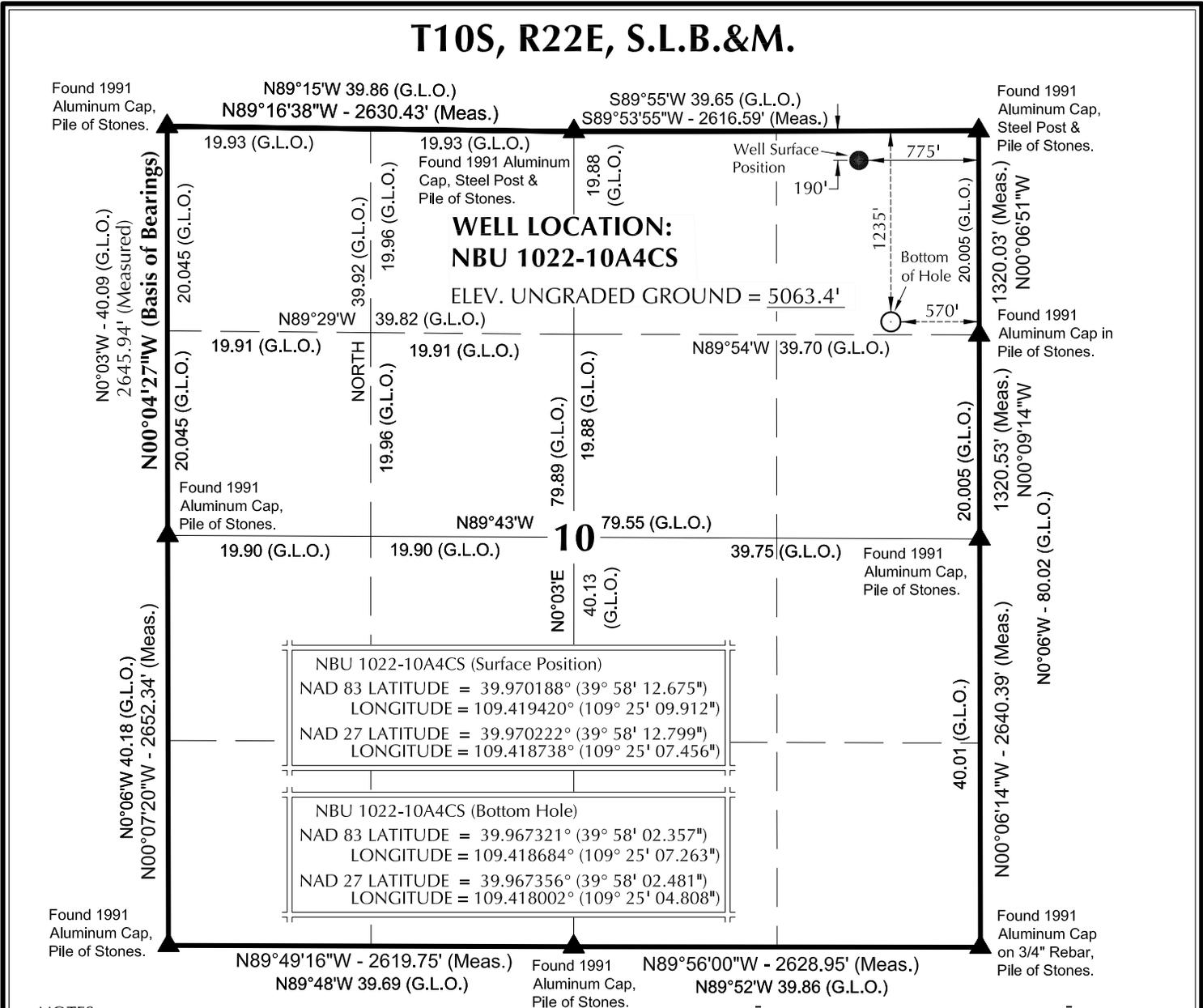
DATE:

EXHIBIT A NBU 1022-10A4CS



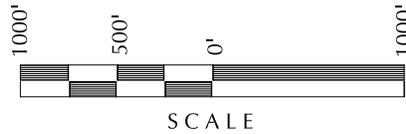
SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

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



NOTES:

- ▲ = Section Corners Located
- 1. Well footages are measured at right angles to the Section Lines.
- 2. G.L.O. distances are shown in feet or chains.
1 chain = 66 feet.
- 3. The Bottom of hole bears S11°12'05"E 1064.56' 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.

6-14-12
No. 6028691
JOHN R. LAUGH
PROFESSIONAL LAND SURVEYOR
REGISTRATION No. 6028691
STATE OF UTAH

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

WELL PAD: NBU 1022-10A

**NBU 1022-10A4CS
WELL PLAT**
1235' FNL, 570' FEL (Bottom Hole)
NE ¼ NE ¼ OF SECTION 10, T10S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH.



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

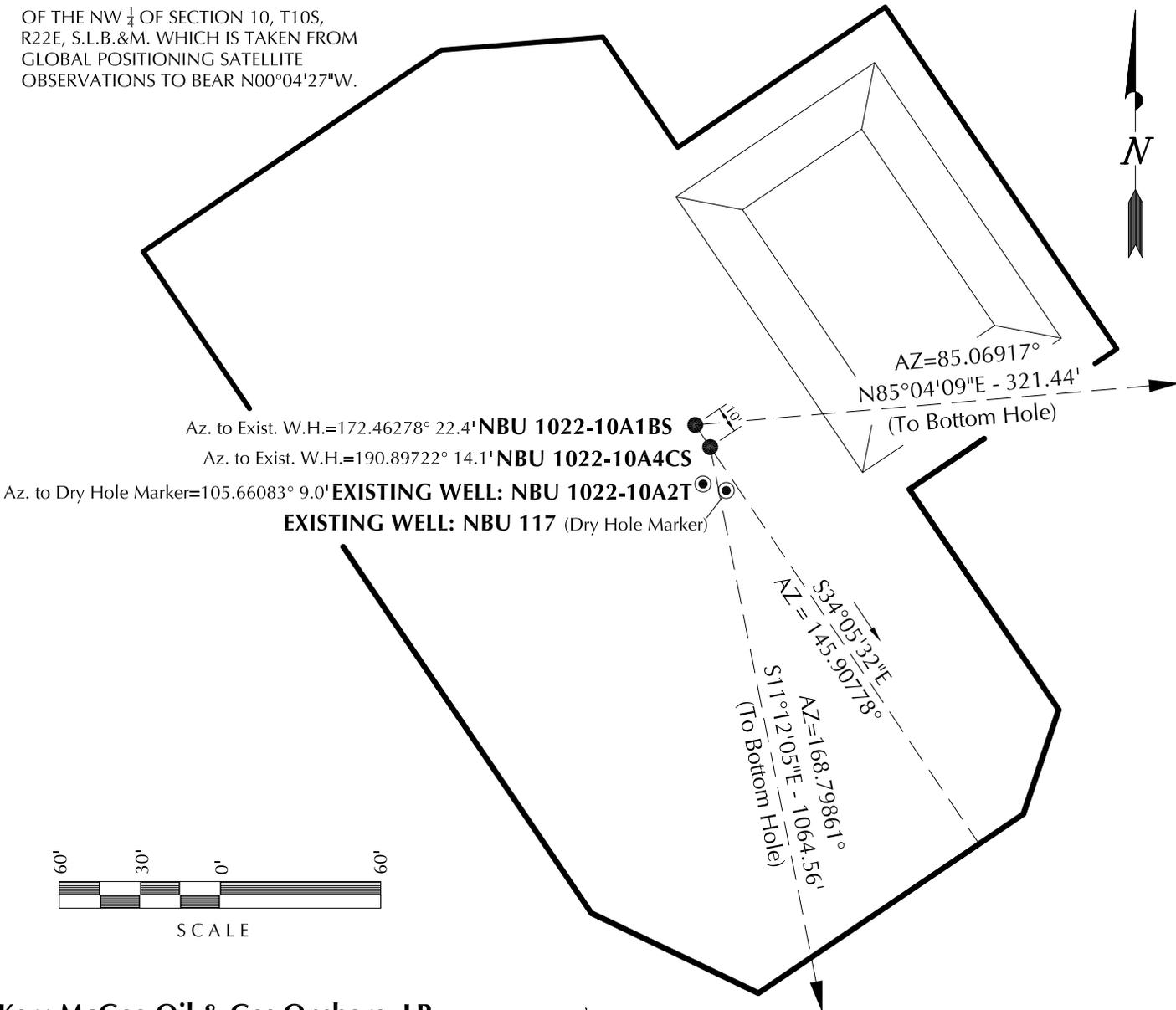
TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 6-4-12	SURVEYED BY: A.F.	SHEET NO: 2
DATE DRAWN: 6-8-12	DRAWN BY: M.W.W.	
SCALE: 1" = 1000'		2 OF 14

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 1022-10A1BS	39°58'12.757"	109°25'09.984"	39°58'12.881"	109°25'07.528"	182' FNL 780' FEL	39°58'13.029"	109°25'05.871"	39°58'13.152"	109°25'03.416"	155' FNL 460' FEL
NBU 1022-10A4CS	39°58'12.675"	109°25'09.912"	39°58'12.799"	109°25'07.456"	190' FNL 775' FEL	39°58'02.357"	109°25'07.263"	39°58'02.481"	109°25'04.808"	1235' FNL 570' FEL
NBU 1022-10A2T	39°58'12.538"	109°25'09.946"	39°58'12.662"	109°25'07.491"	204' FNL 777' FEL					
NBU 117	39°58'12.514"	109°25'09.834"	39°58'12.638"	109°25'07.379"	207' FNL 769' FEL					

RELATIVE COORDINATES - From Surface Position to Bottom Hole					
WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 1022-10A1BS	27.6'	320.3'	NBU 1022-10A4CS	-1,044.3'	206.8'

BASIS OF BEARINGS IS THE WEST LINE OF THE NW ¼ OF SECTION 10, T10S, R22E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°04'27"W.



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

WELL PAD - NBU 1022-10A

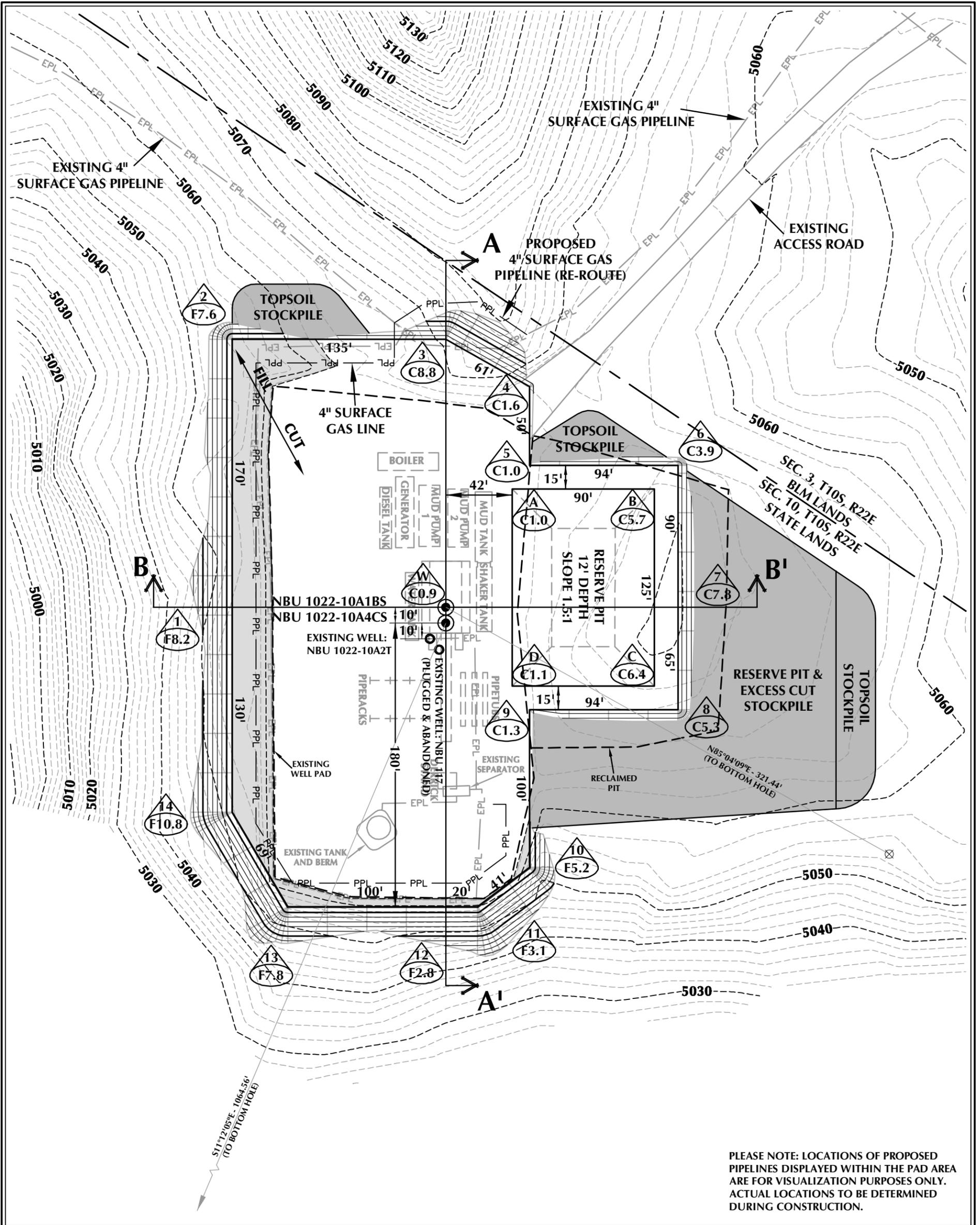
**WELL PAD INTERFERENCE PLAT
WELLS - NBU 1022-10A1BS &
NBU 1022-10A4CS
LOCATED IN SECTION 10, T10S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH.**



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: 6-4-12	SURVEYED BY: A.F.	SHEET NO: 3
DATE DRAWN: 6-8-12	DRAWN BY: M.W.W.	
SCALE: 1" = 60'	Date Last Revised:	3 OF 14



WELL PAD - NBU 1022-10A DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5063.3'
 FINISHED GRADE ELEVATION = 5062.4'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 2.23 ACRES
 TOTAL DISTURBANCE AREA = 2.93 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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

WELL PAD - NBU 1022-10A

WELL PAD - LOCATION LAYOUT
 NBU 1022-10A1BS &
 NBU 1022-10A4CS
 LOCATED IN SECTION 10, T10S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH



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

WELL PAD QUANTITIES

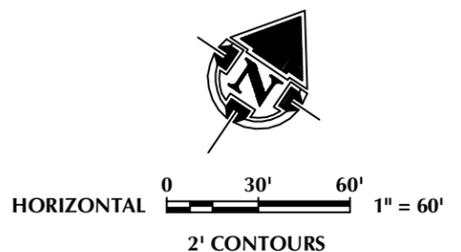
TOTAL CUT FOR WELL PAD = 4,841 C.Y.
 TOTAL FILL FOR WELL PAD = 4,173 C.Y.
 TOPSOIL @ 6" DEPTH = 873 C.Y.
 EXCESS MATERIAL = 668 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT
 +/- 3,470 C.Y.
 RESERVE PIT CAPACITY (2' OF FREEBOARD)
 +/- 12,930 BARRELS

WELL PAD LEGEND

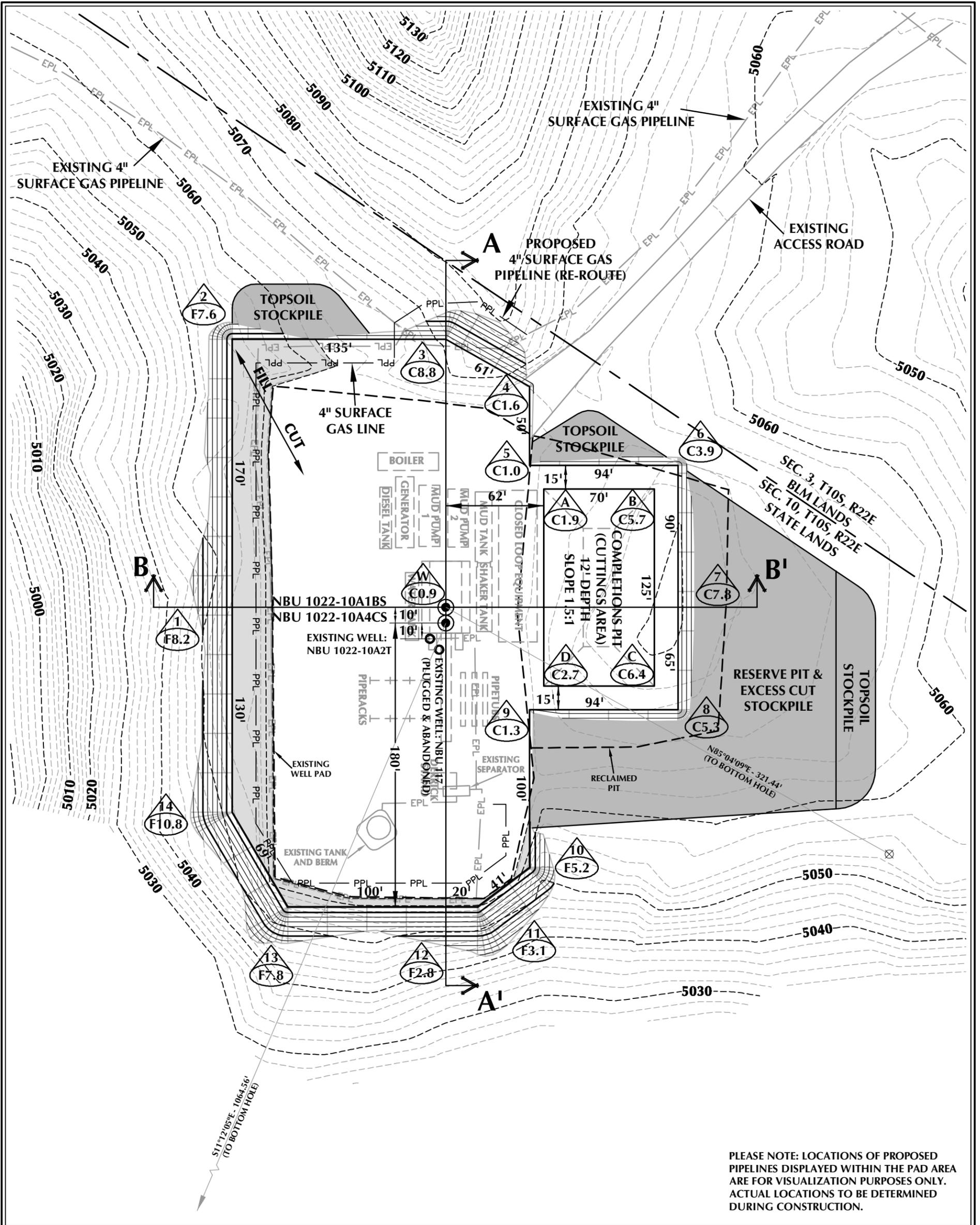
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PROPOSED PIPELINE
- EXISTING PIPELINE



SCALE: 1"=60' DATE: 6/12/12 SHEET NO: 4 OF 14

REVIS: 4 OF 14

RECEIVED: July 19, 2012



WELL PAD - NBU 1022-10A (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5063.3'
 FINISHED GRADE ELEVATION = 5062.4'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 2.23 ACRES
 TOTAL DISTURBANCE AREA = 2.93 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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

WELL PAD - NBU 1022-10A

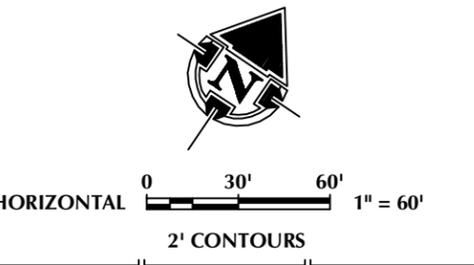
WELL PAD - LOCATION LAYOUT
 NBU 1022-10A1BS &
 NBU 1022-10A4CS
 LOCATED IN SECTION 10, T10S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH



WELL PAD QUANTITIES
 TOTAL CUT FOR WELL PAD = 4,841 C.Y.
 TOTAL FILL FOR WELL PAD = 4,173 C.Y.
 TOPSOIL @ 6" DEPTH = 873 C.Y.
 EXCESS MATERIAL = 668 C.Y.

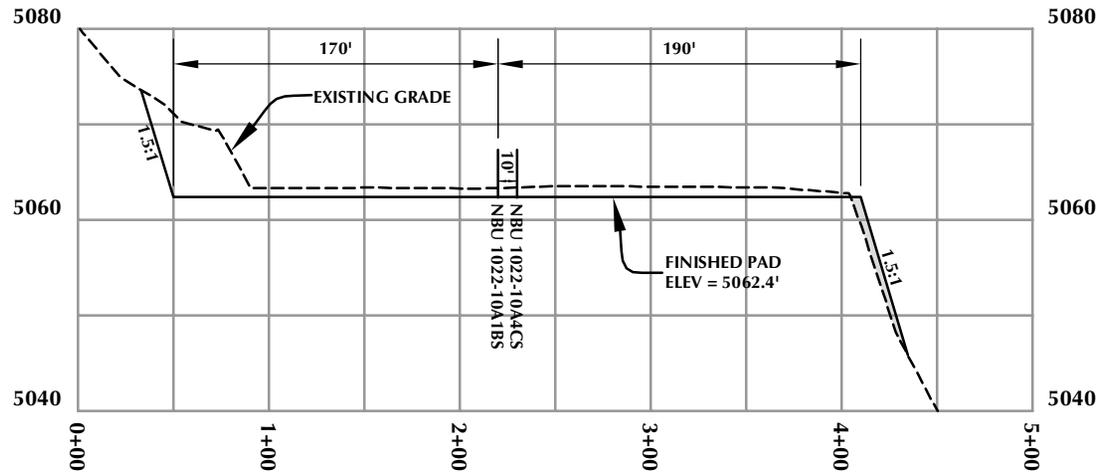
COMPLETIONS PIT QUANTITIES
 TOTAL CUT FOR COMPLETIONS PIT
 +/- 2,520 C.Y.
 COMPLETIONS PIT CAPACITY
 (2' OF FREEBOARD)
 +/- 9,220 BARRELS

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

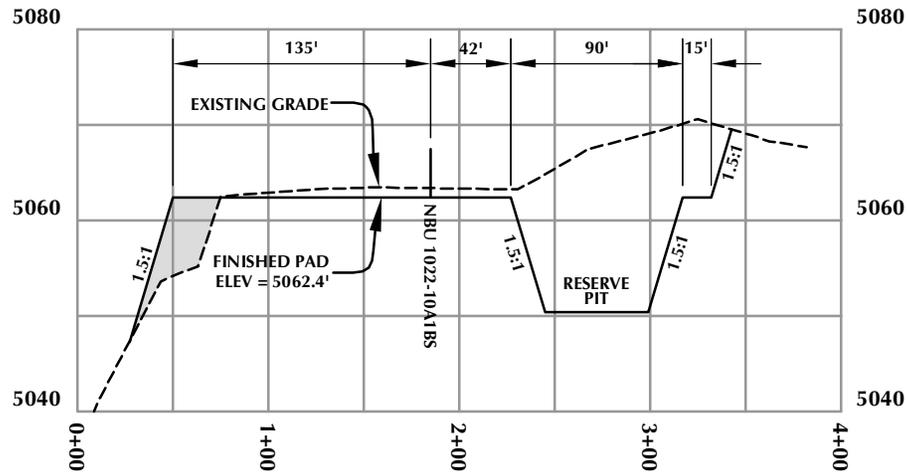


TIMBERLINE ENGINEERING & LAND SURVEYING, INC.
 209 NORTH 300 WEST - VERNAL, UTAH 84078
 (435) 789-1365

SCALE: 1"=60' DATE: 6/12/12 SHEET NO: **4B** 4B OF 14
 REVISED:



CROSS SECTION A-A'



CROSS SECTION B-B'

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

WELL PAD - NBU 1022-10A

WELL PAD - CROSS SECTIONS
NBU 1022-10A1BS &
NBU 1022-10A4CS
LOCATED IN SECTION 10, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH



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209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365



Scale: 1"=100'

Date: 6/12/12

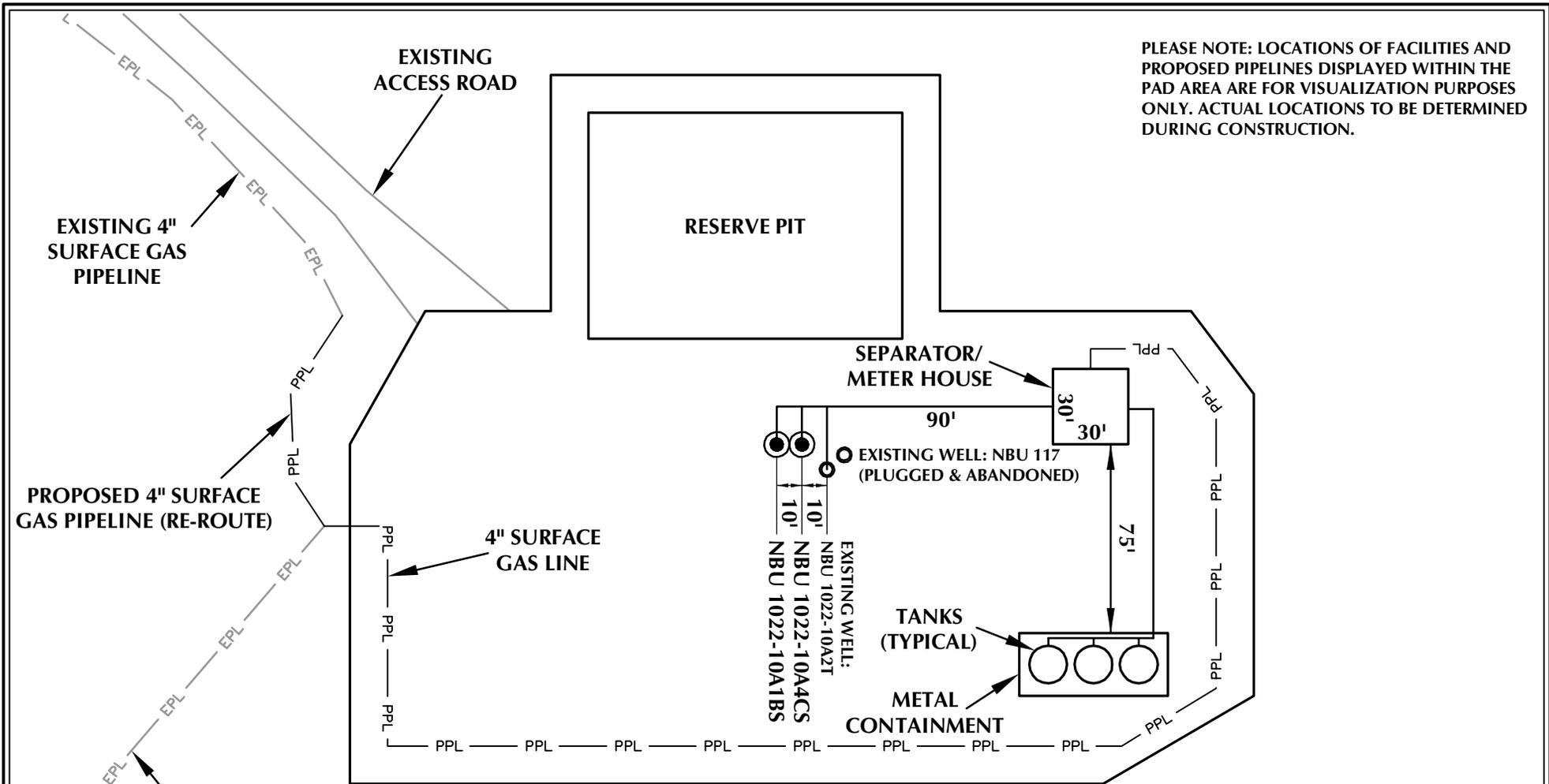
SHEET NO:

REVISED:

5

5 OF 14

K:\ANADARKO\2012\2012\FOCUS\NBU_1022-10\DWG\NBU_1022-10A1BS.dwg 6/12/12 8:11:10 AM



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.

K:\ANADARKO\2012\2012_18_NBU_FOCUS_1022-10.DWG\NBU_1022-10A\NBU_1022-10A.dwg, h10a0

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

WELL PAD - NBU 1022-10A

WELL PAD - FACILITIES DIAGRAM
NBU 1022-10A1BS &
NBU 1022-10A4CS
LOCATED IN SECTION 10, T10S, R22E,
S.L.B.&M., Uintah County, Utah



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

WELL PAD LEGEND

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



HORIZONTAL 1" = 60'

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

Scale: 1"=60'	Date: 6/12/12	SHEET NO:
REVISED:		6 6 OF 14



Proposed NBU 1022-10A1BS (10' OFFSET)

Proposed NBU 1022-10A4CS (10' OFFSET)

Well Head
NBU 1022-10A2T

PHOTO VIEW: FROM CORNER #1 TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY



Existing Access Road

PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: SOUTHERLY

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

WELL PAD - NBU 1022-10A

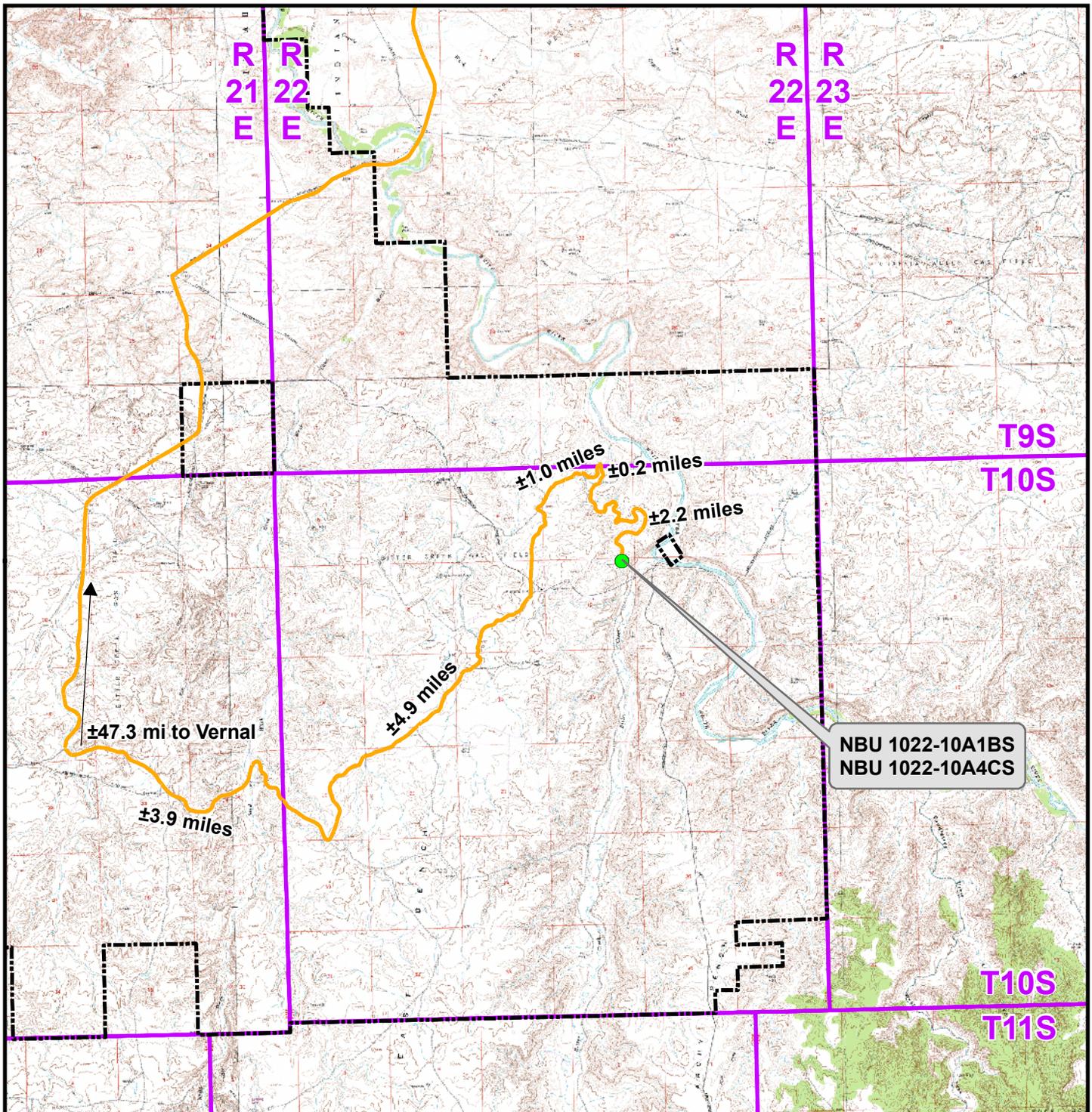
LOCATION PHOTOS
NBU 1022-10A1BS &
NBU 1022-10A4CS
LOCATED IN SECTION 10, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH.



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

DATE PHOTOS TAKEN: 6-4-12	PHOTOS TAKEN BY: A.F.	SHEET NO: 7 7 OF 14
DATE DRAWN: 6-8-12	DRAWN BY: M.W.W.	
Date Last Revised:		



Legend

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

Distance From Well Pad - NBU 1022-10A To Unit Boundary: ±5,529ft

WELL PAD - NBU 1022-10A

TOPO A
NBU 1022-10A1BS
& NBU 1022-10A4CS
 LOCATED IN SECTION 10, T10S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

**1099 18th Street
 Denver, Colorado 80202**



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



SCALE: 1:100,000

NAD83 USP Central

SHEET NO:

DRAWN: TL

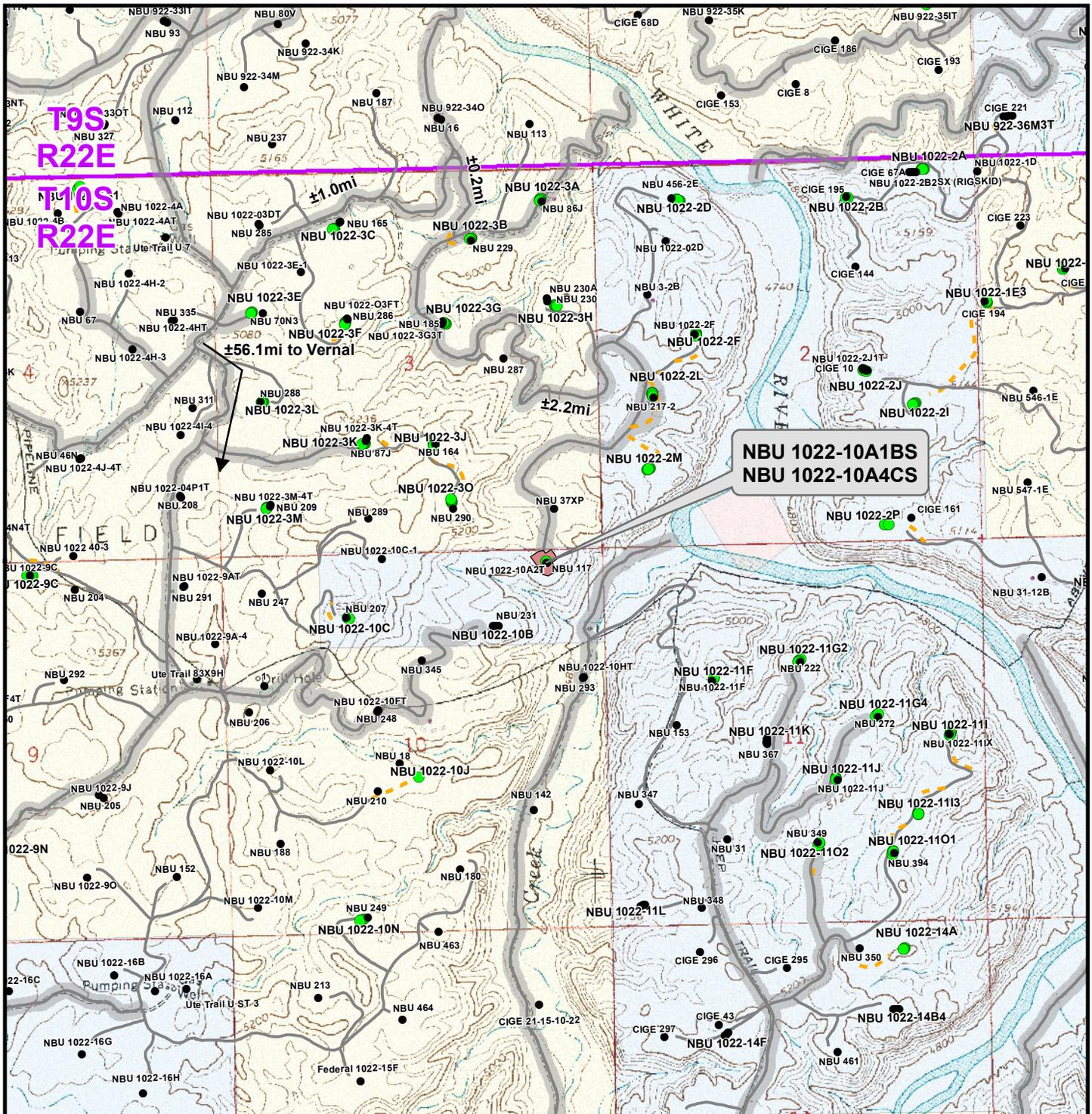
DATE: 12 June 2012

8

REVISED:

DATE:

8 OF 14



Legend

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

Total Proposed Road Length: ±0ft

WELL PAD - NBU 1022-10A

TOPO B
NBU 1022-10A1BS
& NBU 1022-10A4CS
 LOCATED IN SECTION 10, T10S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

**1099 18th Street
 Denver, Colorado 80202**

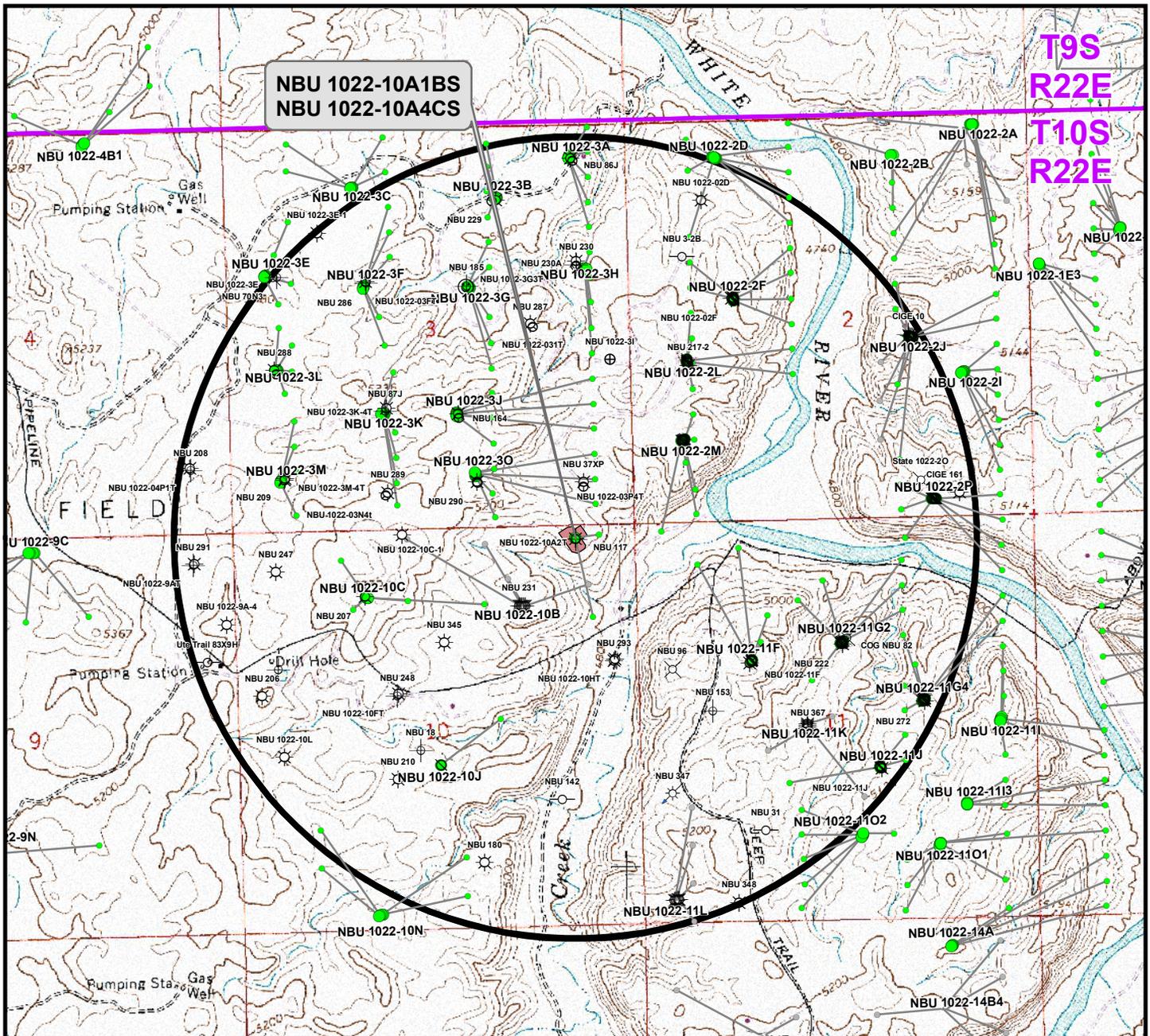


CONSULTING, LLC

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



SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 9
DRAWN: TL	DATE: 12 June 2012	9 OF 14
REVISED:	DATE:	



**NBU 1022-10A1BS
NBU 1022-10A4CS**

**T9S
R22E
T10S
R22E**

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

Proposed Well	Nearest Well Bore	Footage
NBU 1022-10A1BS	NBU 117	313ft
NBU 1022-10A4CS	NBU 1022-10A4BS BH	433ft

Legend

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

WELL PAD - NBU 1022-10A

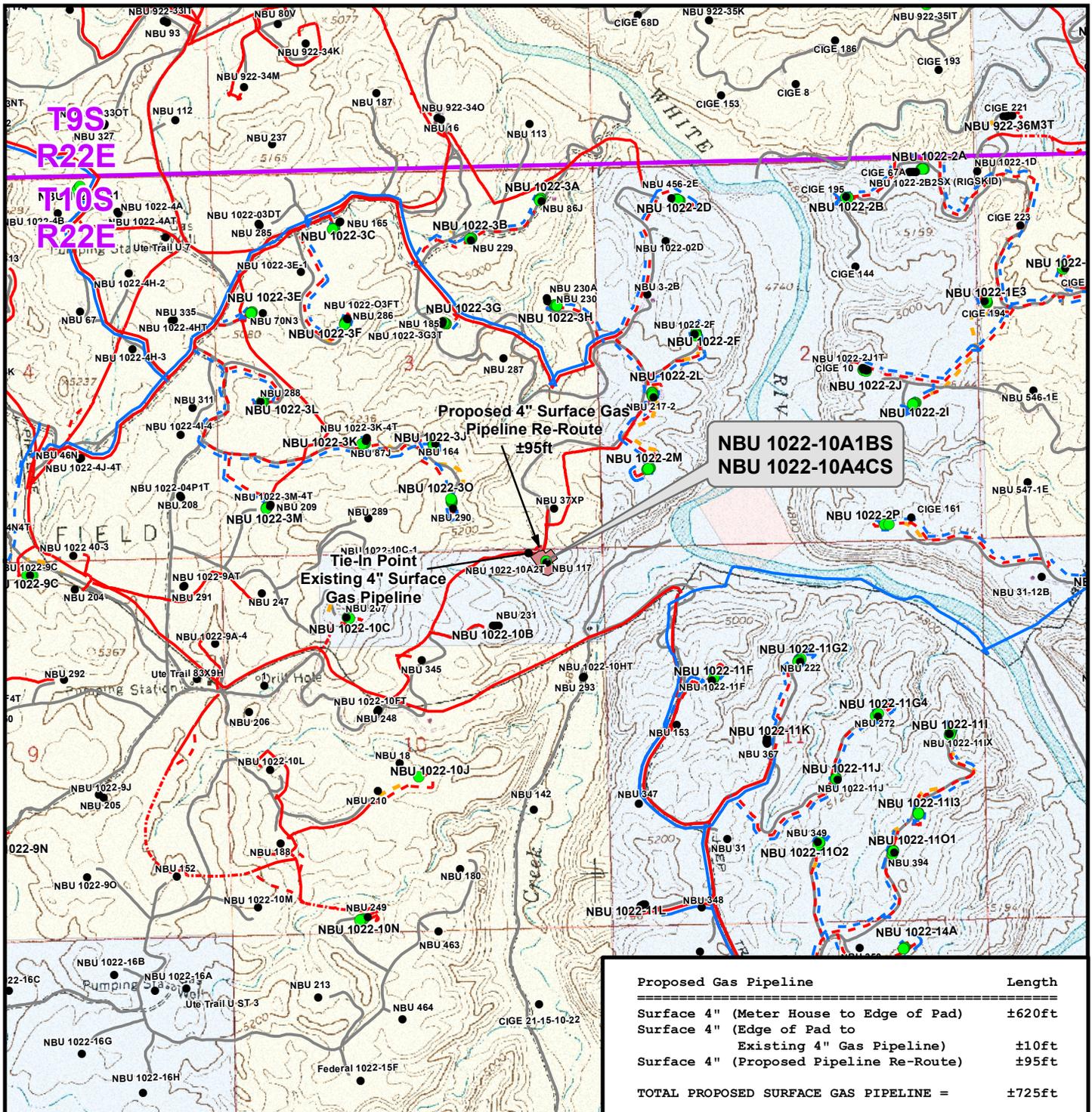
**TOPO C
NBU 1022-10A1BS
& NBU 1022-10A4CS
LOCATED IN SECTION 10, T10S, R22E,
S.L.B.&M., Uintah County, Utah**

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

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Denver, Colorado 80202**

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Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 10 10 OF 14
DRAWN: TL	DATE: 12 June 2012	
REVISED:	DATE:	



Legend

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

WELL PAD - NBU 1022-10A

TOPO D
NBU 1022-10A1BS
& NBU 1022-10A4CS
 LOCATED IN SECTION 10, T10S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH

**Kerr-McGee Oil &
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SCALE: 1" = 2,000ft

NAD83 USP Central

SHEET NO:

DRAWN: TL

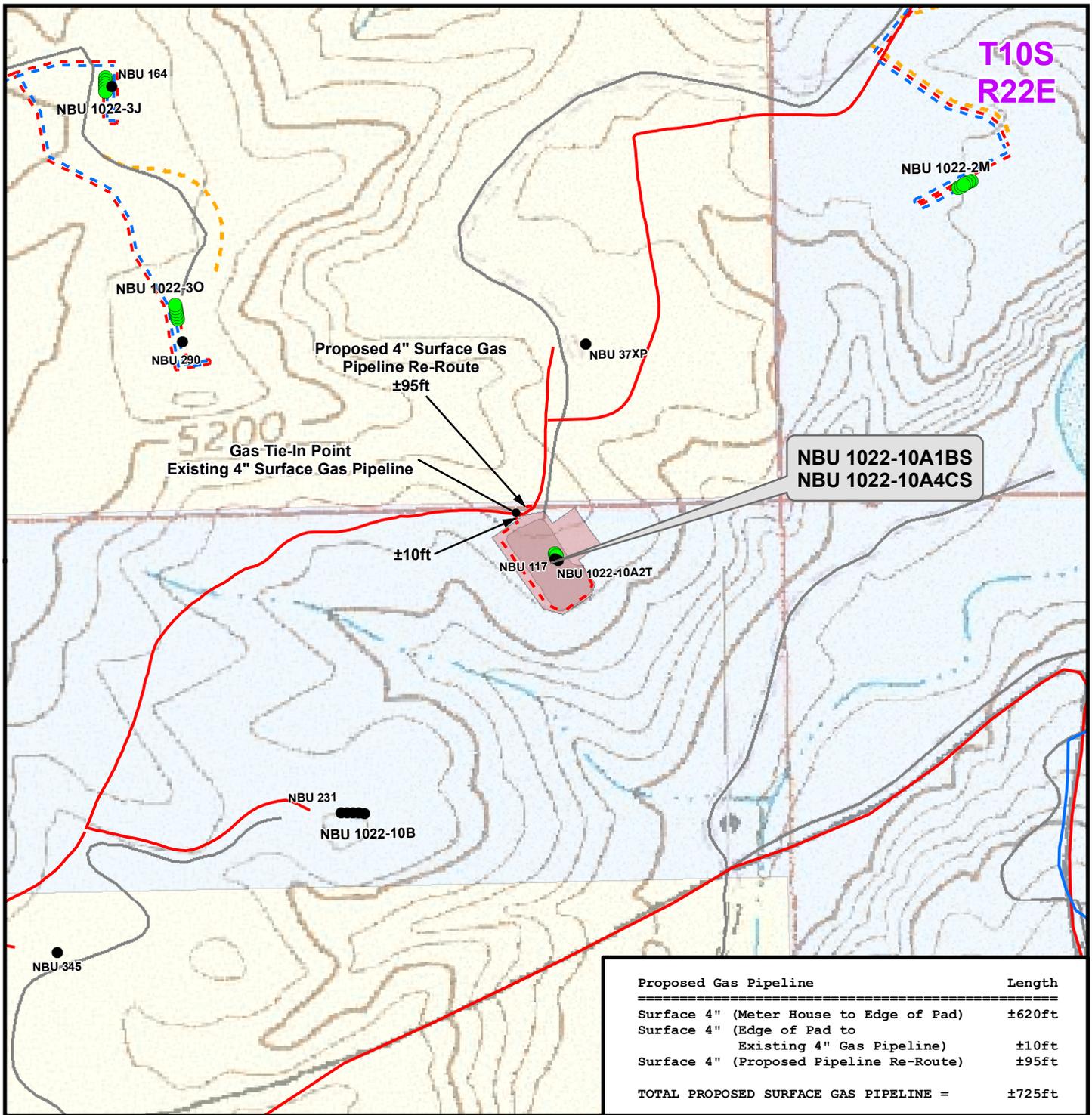
DATE: 12 June 2012

11

REVISED:

DATE:

11 OF 14



Proposed Gas Pipeline	Length
Surface 4" (Meter House to Edge of Pad)	±620ft
Surface 4" (Edge of Pad to Existing 4" Gas Pipeline)	±10ft
Surface 4" (Proposed Pipeline Re-Route)	±95ft
TOTAL PROPOSED SURFACE GAS PIPELINE =	±725ft

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

WELL PAD - NBU 1022-10A

TOPO D2 (PAD & PIPELINE DETAIL)
NBU 1022-10A1BS
& NBU 1022-10A4CS
LOCATED IN SECTION 10, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

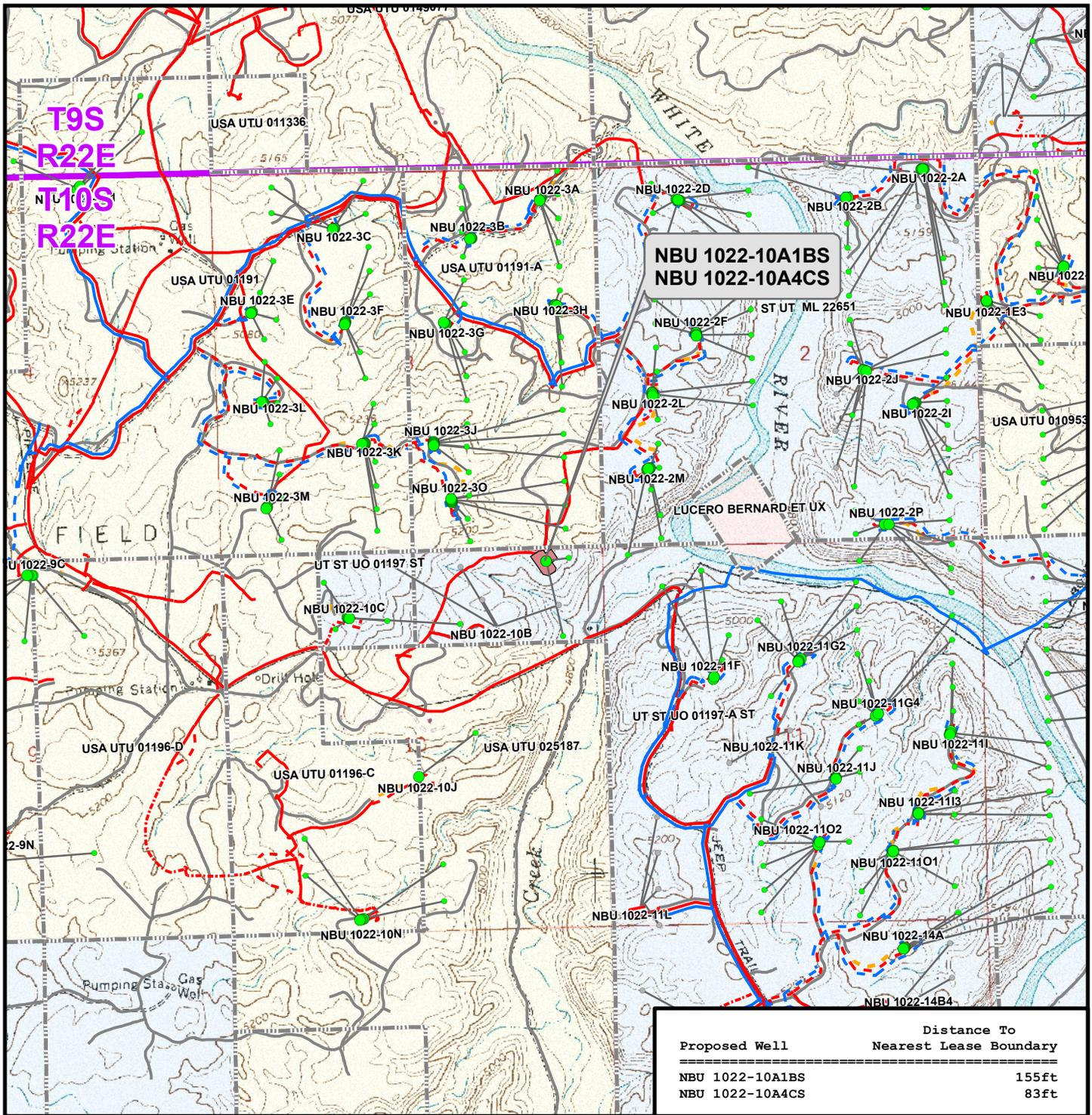


CONSULTING, LLC
 2155 North Main Street
 Sheridan, Wyoming 82801
 Phone 307-674-0609
 Fax 307-674-0182



SCALE: 1" = 500ft	NAD83 USP Central	SHEET NO:
DRAWN: TL	DATE: 12 June 2012	12
REVISED:	DATE:	

12 OF 14



Proposed Well	Distance To Nearest Lease Boundary
NBU 1022-10A1BS	155ft
NBU 1022-10A4CS	83ft

Legend

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

WELL PAD - NBU 1022-10A

**TOPO E
NBU 1022-10A1BS
& NBU 1022-10A4CS
LOCATED IN SECTION 10, T10S, R22E,
S.L.B.&M., Uintah County, Utah**

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

**1099 18th Street
Denver, Colorado 80202**



CONSULTING, LLC

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

SCALE: 1" = 2,000ft

DRAWN: TL

REVISED:

NAD83 USP Central

DATE: 12 June 2012

DATE:

SHEET NO:

13

13 OF 14

Kerr-McGee Oil & Gas Onshore, LP
WELL PAD - NBU 1022-10A
WELLS – NBU 1022-10A1BS
& NBU 1022-10A4CS
Section 10, 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 23.8 miles to the intersection of the Bitter Creek Road (County B Road 4120). Exit left and proceed in a southeasterly direction along the Bitter Creek Road approximately 3.9 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the Class D County Road approximately 4.9 miles to a second Class D County Road to the northeast. Exit right and proceed in a northeasterly direction along the second Class D County Road approximately 1.0 miles to a third Class D County Road to the south. Exit right and proceed in a southerly direction along the third Class D County Road approximately 0.2 miles to a fourth Class D County Road to the southwest. Exit right and proceed in a southwesterly, then southeasterly, then southerly direction along the fourth Class D County Road approximately 2.2 miles to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 59.5 miles in a southerly direction.



Site: NBU 1022-10A PAD
 Well: NBU 1022-10A4CS
 Wellbore: OH
 Design: PLAN #1 PRELIMINARY



WELL DETAILS: NBU 1022-10A4CS
GL 5062 & KB 4 @ 5066.00ft (ASSUMED)

+N-S 0.00	+E-W 0.00	Northing 14519129.12	Easting 2083464.47	Latitude 39.970222	Longitude -109.418738
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DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8516.00	-1043.84	206.27	14518089.11	2083689.21	39.967356	-109.418002	Circle (Radius: 25)
- plan hits target center								

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1000.00	1007.16	GREEN RIVER
1220.00	1236.60	BIRDSNEST
1770.00	1821.64	MAHOGANY
4104.00	4271.01	WASATCH
6409.00	6576.06	MESAVERDE
8515.99	8683.05	SEGO

CASING DETAILS			
TVD	MD	Name	Size
2220.00	2300.52	8 5/8"	8.625

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	168.82	1279.82	-169.49	33.49	2.00	168.82	172.77
3400.71	20.00	168.82	3253.84	-874.35	172.77	0.00	0.00	891.25
4400.71	0.00	0.00	4233.66	-1043.84	206.27	2.00	180.00	1064.02
8683.06	0.00	0.00	8516.00	-1043.84	206.27	0.00	0.00	1064.02

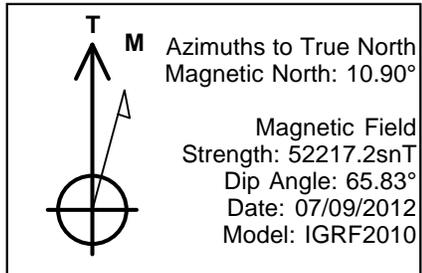
PBHL_NBU 1022-10A4CS

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

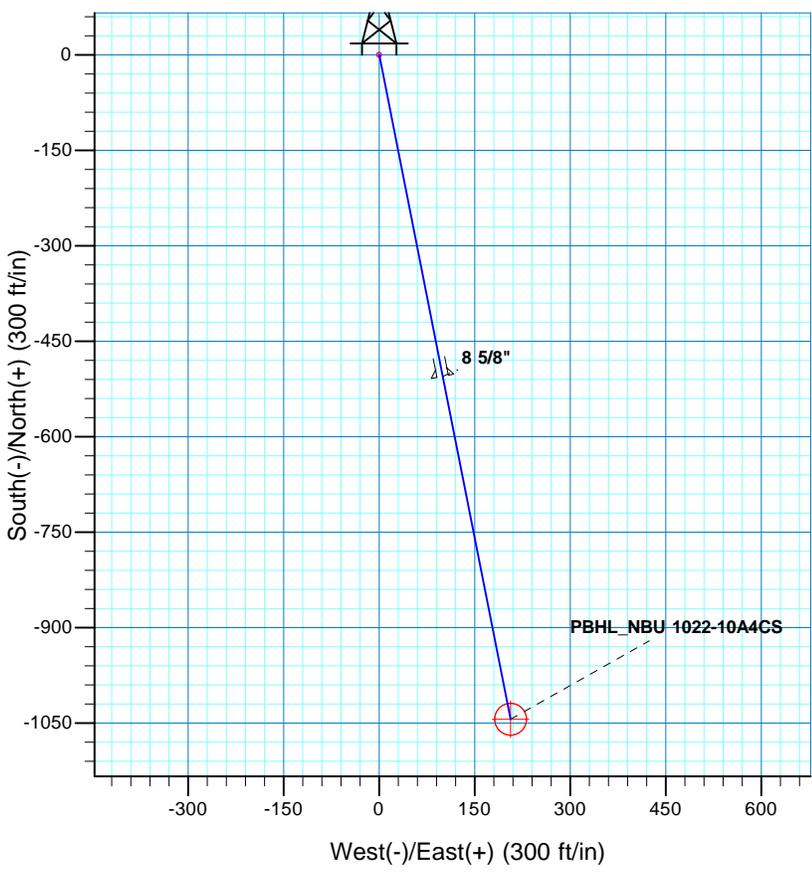
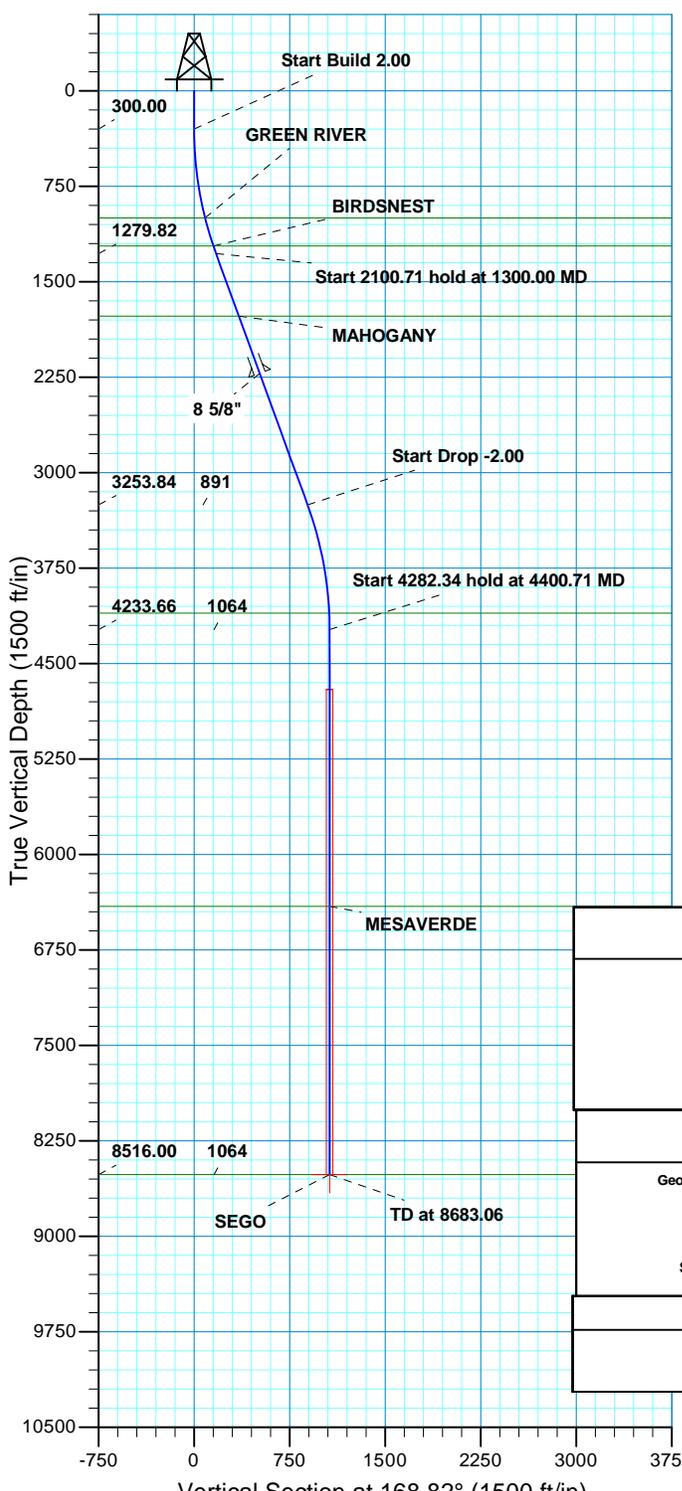
Geodetic System: Universal Transverse Mercator (US Survey Feet)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: Zone 12N (114 W to 108 W)
 Location: SECTION 10 T10S R22E
 System Datum: Mean Sea Level



Site: NBU 1022-10A PAD
Well: NBU 1022-10A4CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY



WELL DETAILS: NBU 1022-10A4CS								
GL 5062 & KB 4 @ 5066.00ft (ASSUMED)								
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude			
0.00	0.00	14519129.12	2083464.47	39.970222	-109.418738			
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8516.00	-1043.84	206.27	14518089.11	2083689.21	39.967356	-109.418002	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	168.82	1279.82	-169.49	33.49	2.00	168.82	172.77	
3400.71	20.00	168.82	3253.84	-874.35	172.77	0.00	0.00	891.25	
4400.71	0.00	0.00	4233.66	-1043.84	206.27	2.00	180.00	1064.02	
8683.06	0.00	0.00	8516.00	-1043.84	206.27	0.00	0.00	1064.02	PBHL_NBU 1022-10A4CS

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1000.00	1007.16	GREEN RIVER
1220.00	1236.60	BIRDSNEST
1770.00	1821.64	MAHOGANY
4104.00	4271.01	WASATCH
6409.00	6576.06	MESAVERDE
8515.99	8683.05	SEGO

CASING DETAILS			
TVD	MD	Name	Size
2220.00	2300.52	8 5/8"	8.625

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N
Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 10 T10S R22E
System Datum: Mean Sea Level

Vertical Section at 168.82° (1500 ft/in)

RECEIVED



Scientific Drilling

US ROCKIES REGION PLANNING

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

NBU 1022-10A PAD

NBU 1022-10A4CS

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

09 July, 2012





Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-10A4CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5062 & KB 4 @ 5066.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5062 & KB 4 @ 5066.00ft (ASSUMED)
Site:	NBU 1022-10A PAD	North Reference:	True
Well:	NBU 1022-10A4CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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

Site	NBU 1022-10A PAD, SECTION 10 T10S R22E				
Site Position:	Northing:	14,519,137.40 usft	Latitude:	39.970245	
From: Lat/Long	Easting:	2,083,458.71 usft	Longitude:	-109.418758	
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	1.02 °

Well	NBU 1022-10A4CS, 190 FNL 775 FEL					
Well Position	+N/-S	-8.38 ft	Northing:	14,519,129.13 usft	Latitude:	39.970222
	+E/-W	5.60 ft	Easting:	2,083,464.46 usft	Longitude:	-109.418738
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,062.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	07/09/12	10.90	65.83	52,217

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	168.82

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	168.82	1,279.82	-169.49	33.49	2.00	2.00	0.00	168.82	
3,400.71	20.00	168.82	3,253.84	-874.35	172.77	0.00	0.00	0.00	0.00	
4,400.71	0.00	0.00	4,233.66	-1,043.84	206.27	2.00	-2.00	0.00	180.00	
8,683.06	0.00	0.00	8,516.00	-1,043.84	206.27	0.00	0.00	0.00	0.00	PBHL_NBU 1022-10A



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-10A4CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5062 & KB 4 @ 5066.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5062 & KB 4 @ 5066.00ft (ASSUMED)
Site:	NBU 1022-10A PAD	North Reference:	True
Well:	NBU 1022-10A4CS	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	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00										
400.00	2.00	168.82	399.98	-1.71	0.34	1.75	2.00	2.00	2.00	0.00
500.00	4.00	168.82	499.84	-6.85	1.35	6.98	2.00	2.00	2.00	0.00
600.00	6.00	168.82	599.45	-15.40	3.04	15.69	2.00	2.00	2.00	0.00
700.00	8.00	168.82	698.70	-27.35	5.40	27.88	2.00	2.00	2.00	0.00
800.00	10.00	168.82	797.47	-42.70	8.44	43.52	2.00	2.00	2.00	0.00
900.00	12.00	168.82	895.62	-61.41	12.14	62.60	2.00	2.00	2.00	0.00
1,000.00	14.00	168.82	993.06	-83.48	16.50	85.10	2.00	2.00	2.00	0.00
1,007.16	14.14	168.82	1,000.00	-85.19	16.83	86.84	2.00	2.00	2.00	0.00
GREEN RIVER										
1,100.00	16.00	168.82	1,089.64	-108.87	21.51	110.98	2.00	2.00	2.00	0.00
1,200.00	18.00	168.82	1,185.27	-137.55	27.18	140.21	2.00	2.00	2.00	0.00
1,236.60	18.73	168.82	1,220.00	-148.86	29.42	151.74	2.00	2.00	2.00	0.00
BIRDSNEST										
1,300.00	20.00	168.82	1,279.82	-169.49	33.49	172.77	2.00	2.00	2.00	0.00
Start 2100.71 hold at 1300.00 MD										
1,400.00	20.00	168.82	1,373.78	-203.04	40.12	206.97	0.00	0.00	0.00	0.00
1,500.00	20.00	168.82	1,467.75	-236.60	46.75	241.17	0.00	0.00	0.00	0.00
1,600.00	20.00	168.82	1,561.72	-270.15	53.38	275.37	0.00	0.00	0.00	0.00
1,700.00	20.00	168.82	1,655.69	-303.70	60.01	309.58	0.00	0.00	0.00	0.00
1,800.00	20.00	168.82	1,749.66	-337.26	66.64	343.78	0.00	0.00	0.00	0.00
1,821.64	20.00	168.82	1,770.00	-344.52	68.08	351.18	0.00	0.00	0.00	0.00
MAHOGANY										
1,900.00	20.00	168.82	1,843.63	-370.81	73.27	377.98	0.00	0.00	0.00	0.00
2,000.00	20.00	168.82	1,937.60	-404.36	79.90	412.18	0.00	0.00	0.00	0.00
2,100.00	20.00	168.82	2,031.57	-437.92	86.53	446.38	0.00	0.00	0.00	0.00
2,200.00	20.00	168.82	2,125.54	-471.47	93.16	480.59	0.00	0.00	0.00	0.00
2,300.00	20.00	168.82	2,219.51	-505.02	99.79	514.79	0.00	0.00	0.00	0.00
2,300.52	20.00	168.82	2,220.00	-505.20	99.83	514.97	0.00	0.00	0.00	0.00
8 5/8"										
2,400.00	20.00	168.82	2,313.48	-538.58	106.42	548.99	0.00	0.00	0.00	0.00
2,500.00	20.00	168.82	2,407.45	-572.13	113.05	583.19	0.00	0.00	0.00	0.00
2,600.00	20.00	168.82	2,501.42	-605.68	119.68	617.39	0.00	0.00	0.00	0.00
2,700.00	20.00	168.82	2,595.39	-639.24	126.32	651.60	0.00	0.00	0.00	0.00
2,800.00	20.00	168.82	2,689.35	-672.79	132.95	685.80	0.00	0.00	0.00	0.00
2,900.00	20.00	168.82	2,783.32	-706.34	139.58	720.00	0.00	0.00	0.00	0.00
3,000.00	20.00	168.82	2,877.29	-739.90	146.21	754.20	0.00	0.00	0.00	0.00
3,100.00	20.00	168.82	2,971.26	-773.45	152.84	788.40	0.00	0.00	0.00	0.00
3,200.00	20.00	168.82	3,065.23	-807.00	159.47	822.61	0.00	0.00	0.00	0.00
3,300.00	20.00	168.82	3,159.20	-840.55	166.10	856.81	0.00	0.00	0.00	0.00
3,400.00	20.00	168.82	3,253.17	-874.11	172.73	891.01	0.00	0.00	0.00	0.00
3,400.71	20.00	168.82	3,253.84	-874.35	172.77	891.25	0.00	0.00	0.00	0.00
Start Drop -2.00										
3,500.00	18.01	168.82	3,347.71	-906.07	179.04	923.59	2.00	-2.00	2.00	0.00
3,600.00	16.01	168.82	3,443.33	-934.77	184.71	952.85	2.00	-2.00	2.00	0.00
3,700.00	14.01	168.82	3,539.91	-960.19	189.74	978.75	2.00	-2.00	2.00	0.00
3,800.00	12.01	168.82	3,637.34	-982.28	194.10	1,001.27	2.00	-2.00	2.00	0.00
3,900.00	10.01	168.82	3,735.49	-1,001.02	197.80	1,020.38	2.00	-2.00	2.00	0.00
4,000.00	8.01	168.82	3,834.25	-1,016.39	200.84	1,036.04	2.00	-2.00	2.00	0.00



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-10A4CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5062 & KB 4 @ 5066.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5062 & KB 4 @ 5066.00ft (ASSUMED)
Site:	NBU 1022-10A PAD	North Reference:	True
Well:	NBU 1022-10A4CS	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)	
4,100.00	6.01	168.82	3,933.49	-1,028.37	203.21	1,048.25	2.00	-2.00	0.00	
4,200.00	4.01	168.82	4,033.11	-1,036.94	204.90	1,056.99	2.00	-2.00	0.00	
4,271.01	2.59	168.82	4,104.00	-1,040.96	205.70	1,061.09	2.00	-2.00	0.00	
WASATCH										
4,300.00	2.01	168.82	4,132.96	-1,042.10	205.92	1,062.25	2.00	-2.00	0.00	
4,400.00	0.01	168.82	4,232.94	-1,043.84	206.27	1,064.02	2.00	-2.00	0.00	
4,400.71	0.00	0.00	4,233.66	-1,043.84	206.27	1,064.02	2.00	-2.00	0.00	
Start 4282.34 hold at 4400.71 MD										
4,500.00	0.00	0.00	4,332.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
4,600.00	0.00	0.00	4,432.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
4,700.00	0.00	0.00	4,532.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
4,800.00	0.00	0.00	4,632.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,732.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
5,000.00	0.00	0.00	4,832.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
5,100.00	0.00	0.00	4,932.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,032.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,132.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,232.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,332.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,432.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,532.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,632.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,732.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,832.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
6,100.00	0.00	0.00	5,932.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,032.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,132.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,232.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,332.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
6,576.06	0.00	0.00	6,409.00	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
MESAVERDE										
6,600.00	0.00	0.00	6,432.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,532.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,632.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,732.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,832.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
7,100.00	0.00	0.00	6,932.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
7,200.00	0.00	0.00	7,032.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,132.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,232.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,332.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,432.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,532.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,632.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,732.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,832.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
8,100.00	0.00	0.00	7,932.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
8,200.00	0.00	0.00	8,032.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,132.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,232.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,332.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,432.94	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	
8,683.05	0.00	0.00	8,515.99	-1,043.84	206.27	1,064.02	0.00	0.00	0.00	



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-10A4CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5062 & KB 4 @ 5066.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5062 & KB 4 @ 5066.00ft (ASSUMED)
Site:	NBU 1022-10A PAD	North Reference:	True
Well:	NBU 1022-10A4CS	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)
SEGO									
8,683.06	0.00	0.00	8,516.00	-1,043.84	206.27	1,064.02	0.00	0.00	0.00
TD at 8683.06 - PBHL_NBU 1022-10A4CS									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 1022-10A4C - hit/miss target - Shape - Circle (radius 25.00)	0.00	0.00	8,516.00	-1,043.84	206.27	14,518,089.11	2,083,689.21	39.967356	-109.418002

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,300.52	2,220.00	8 5/8"	8.625	11.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,007.16	996.00	GREEN RIVER			
1,236.60	1,216.00	BIRDSNEST			
1,821.64	1,766.00	MAHOGANY			
4,271.01	4,100.00	WASATCH			
6,576.06	6,405.00	MESAVERDE			
8,683.05	8,511.99	SEGO		0.00	

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	-169.49	33.49	Start 2100.71 hold at 1300.00 MD	
3,400.71	3,253.84	-874.35	172.77	Start Drop -2.00	
4,400.71	4,233.66	-1,043.84	206.27	Start 4282.34 hold at 4400.71 MD	
8,683.06	8,516.00	-1,043.84	206.27	TD at 8683.06	

NBU 1022-10A1BS			
Surface:	182 FNL / 780 FEL	NENE	Lot
BHL:	155 FNL / 460 FEL	NENE	Lot
NBU 1022-10A4CS			
Surface:	190 FNL / 775 FEL	NENE	Lot
BHL:	1235 FNL / 570 FEL	NENE	Lot

Pad: NBU 1022-10A PAD
Section 10 T10S R22E
Mineral Lease: UO 01197-A

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:

No new access road is proposed (see Topo Map B).

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

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

C. Location of Existing and Proposed Facilities:

This pad will expand the existing pad for the NBU 1022-10A2T, which is a producing well and for the NBU 117, which is a Plugged and Abandoned well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of July 18, 2012.

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 $\pm 725'$ and the individual segments are broken up as follows:

- $\pm 620'$ (0.1 miles) –New 4" surface gas pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 10'$ (0.01 miles) –New 4" surface gas pipeline from the edge of the pad to the existing 4" gas pipeline. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 95'$ (0.02 miles) –Proposed 4" surface gas pipeline re-route. Please refer to Topo D2 - Pad and Pipeline Detail.

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

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.

Unless otherwise approved, no oil or other oil based drill additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water, biodegradable polymer soap, bentonite clay, and /or non-toxic additives will be used in the 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 release into the pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternative 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 the 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)

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

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.

J. Surface/Mineral Ownership:

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

L. Other Information:

None

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

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

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

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

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

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

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

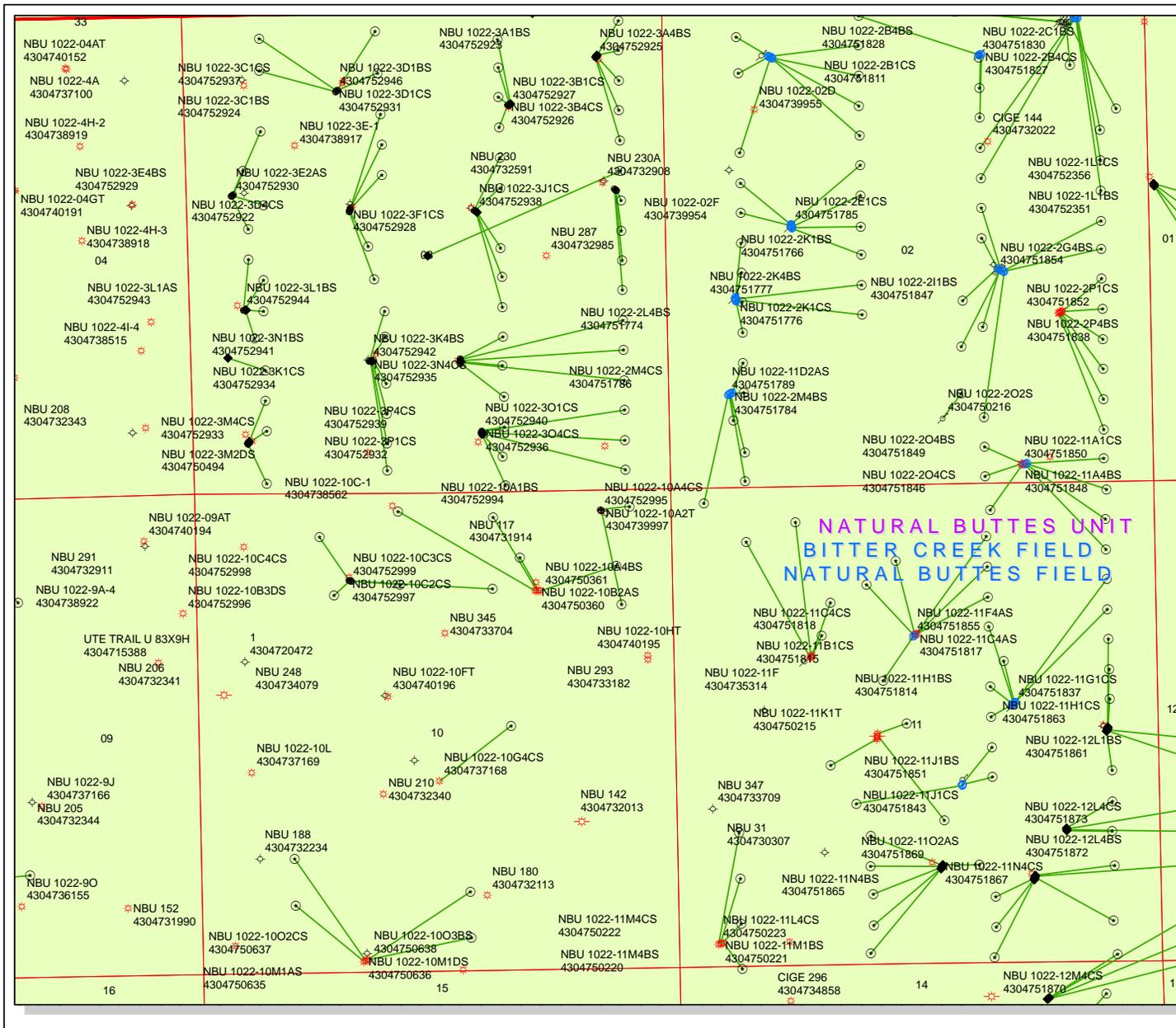
I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan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



Danielle Piernot

July 18, 2012

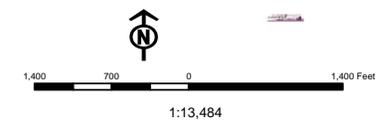
Date



API Number: 4304752995
Well Name: NBU 1022-10A4CS
Township T10.0S Range R22.0E Section 10
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 | DRIL - Spudded (Drilling Commenced) |
| GAS STORAGE | GIW - Gas Injection |
| NF PP OIL | GS - Gas Storage |
| NF SECONDARY | LOC - New Location |
| PI OIL | OPS - Operation Suspended |
| PP GAS | PA - Plugged Abandoned |
| PP GEOTHERM | PGW - Producing Gas Well |
| PP OIL | SGW - Shut-in Gas Well |
| SECONDARY | POW - Producing Oil Well |
| TERMINATED | SGW - Shut-in Oil Well |
| Fields STATUS | TA - Temp. Abandoned |
| UNKNOWN | TW - Test Well |
| ABANDONED | WDW - Water Disposal |
| ACTIVE | WW - Water Injection Well |
| COMBINED | WSW - Water Supply Well |
| INACTIVE | Bottom Hole Location - Oil/Gas/DB |
| STORAGE | |
| TERMINATED | |



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)

July 30, 2012

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

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

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

API #	WELL NAME	LOCATION
-------	-----------	----------

(Proposed PZ WASATCH-MESA VERDE)

WELL PAD - NBU 1022-10A

43-047-52994	NBU 1022-10A1BS	Sec 10 T10S R22E 0182 FNL 0780 FEL
	BHL	Sec 10 T10S R22E 0155 FNL 0460 FEL

43-047-52995	NBU 1022-10A4CS	Sec 10 T10S R22E 0190 FNL 0775 FEL
	BHL	Sec 10 T10S R22E 1235 FNL 0570 FEL

WELL PAD - NBU 920-14D

43-047-52951	NBU 920-14E1BS	Sec 14 T09S R20E 0603 FNL 0623 FWL
	BHL	Sec 14 T09S R20E 1592 FNL 0710 FWL

43-047-52952	NBU 920-14F2DS	Sec 14 T09S R20E 0593 FNL 0620 FWL
	BHL	Sec 14 T09S R20E 1924 FNL 1806 FWL

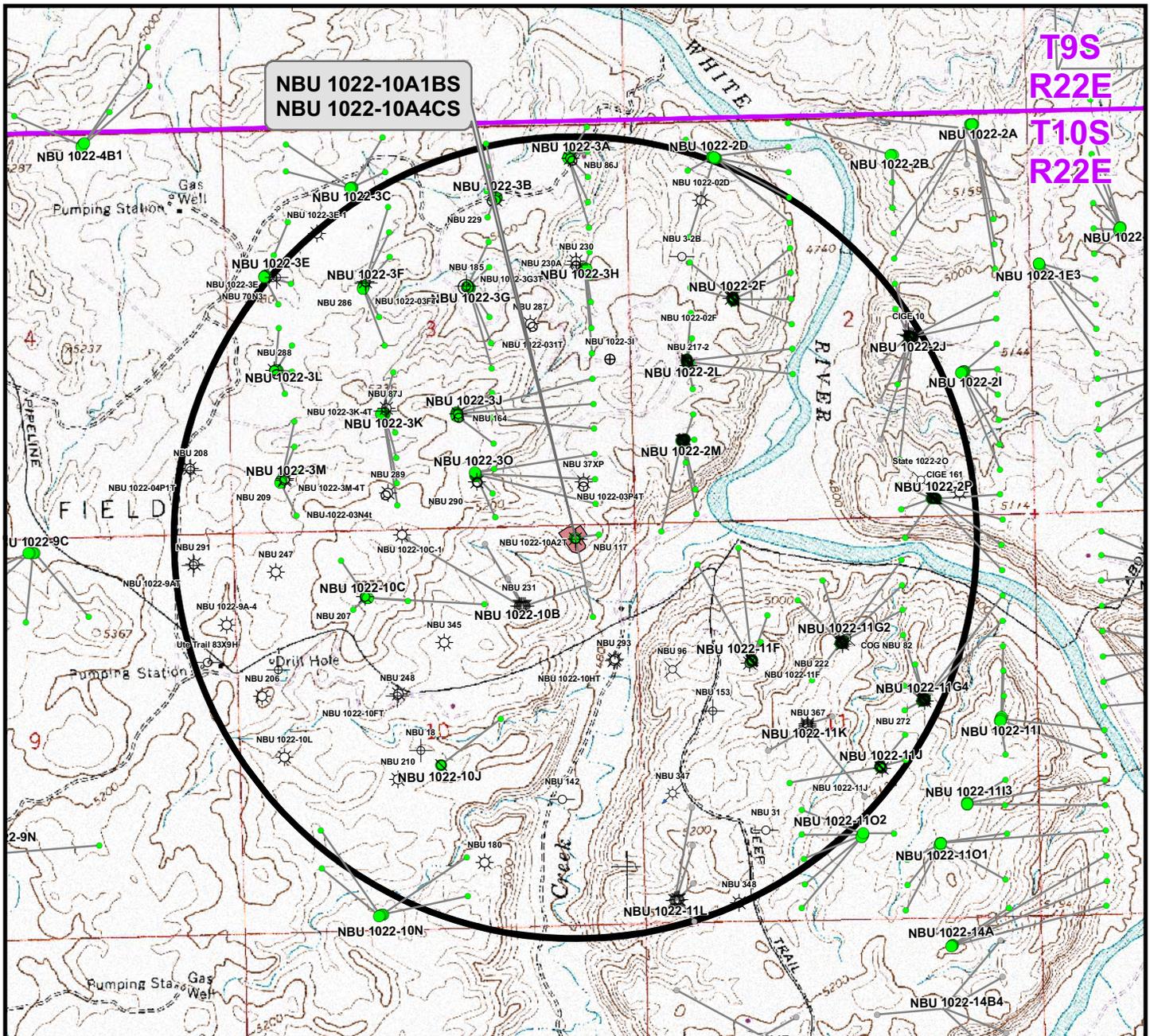
43-047-52953	NBU 920-14C3DS	Sec 14 T09S R20E 0584 FNL 0617 FWL
	BHL	Sec 14 T09S R20E 1041 FNL 1827 FWL

WELL PAD - NBU 1022-10C

43-047-52996	NBU 1022-10B3DS	Sec 10 T10S R22E 0922 FNL 1715 FWL
	BHL	Sec 10 T10S R22E 1038 FNL 1990 FEL

43-047-52997	NBU 1022-10C2CS	Sec 10 T10S R22E 0916 FNL 1695 FWL
	BHL	Sec 10 T10S R22E 0435 FNL 1379 FWL

RECEIVED: July 31, 2012



T9S
R22E
T10S
R22E

NBU 1022-10A1BS
NBU 1022-10A4CS

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

Proposed Well	Nearest Well Bore	Footage
NBU 1022-10A1BS	NBU 117	313ft
NBU 1022-10A4CS	NBU 1022-10A4BS BH	433ft

Legend

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

WELL PAD - NBU 1022-10A

TOPO C
NBU 1022-10A1BS
& NBU 1022-10A4CS
LOCATED IN SECTION 10, T10S, R22E,
S.L.B.&M., Uintah County, Utah

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

1099 18th Street
Denver, Colorado 80202



CONSULTING, LLC

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



SCALE: 1" = 2,000ft	NAD83 USP Central	10
DRAWN: TL	DATE: 12 June 2012	
REVISED:	DATE:	

SHEET NO:

10 OF 14



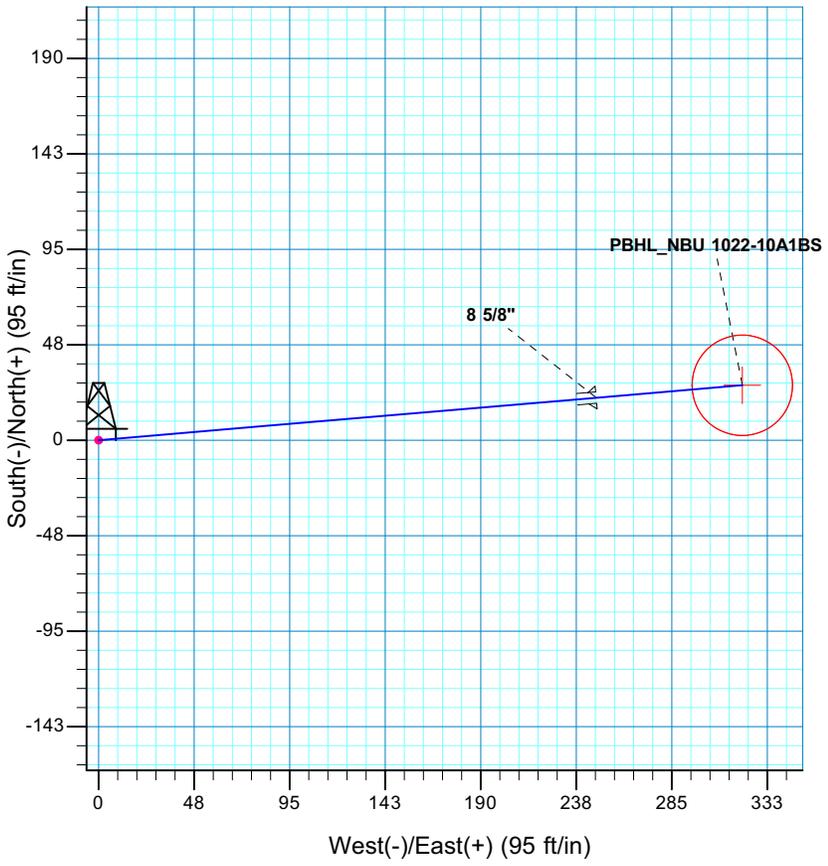
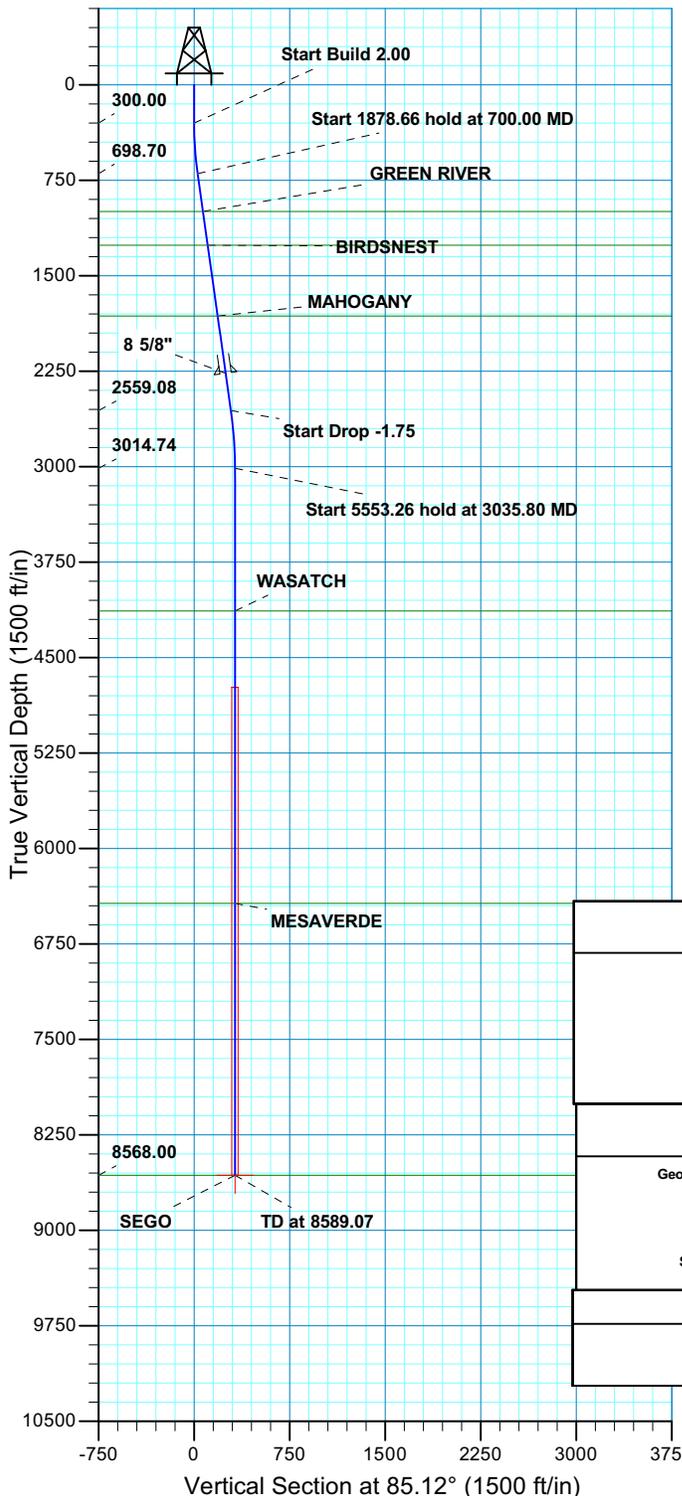
Site: NBU 1022-10A PAD
Well: NBU 1022-10A1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY



Azimuths to True North
Magnetic North: 10.90°

Magnetic Field
Strength: 52217.2snT
Dip Angle: 65.83°
Date: 07/09/2012
Model: IGRF2010

WELL DETAILS: NBU 1022-10A1BS									
GL 5062 & KB 4 @ 5066.00ft (ASSUMED)									
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude				
0.00	0.00	14519137.40	2083458.71	39.970245	-109.418758				
DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
PBHL	8568.00	27.32	320.04	14519170.39	2083778.22	39.970320	-109.417616	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	
700.00	8.00	85.12	698.70	2.37	27.78	2.00	85.12	27.88	
2578.66	8.00	85.12	2559.08	24.61	288.29	0.00	0.00	289.34	
3035.80	0.00	0.00	3014.74	27.32	320.04	1.75	180.00	321.20	
8589.07	0.00	0.00	8568.00	27.32	320.04	0.00	0.00	321.20	PBHL_NBU 1022-10A1BS

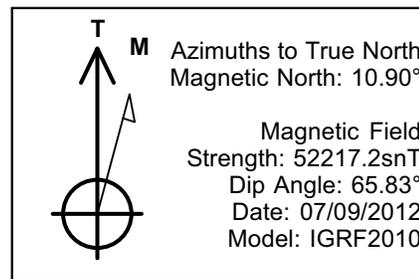
PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N		
Geodetic System:	Universal Transverse Mercator (US Survey Feet)	
Datum:	NAD 1927 (NADCON CONUS)	
Ellipsoid:	Clarke 1866	
Zone:	Zone 12N (114 W to 108 W)	
Location:	SECTION 10 T10S R22E	
System Datum:	Mean Sea Level	

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
997.00	1001.23	GREEN RIVER
1260.00	1266.81	BIRDSNEST
1817.00	1829.29	MAHOGANY
4134.00	4155.07	WASATCH
6432.00	6453.07	MESAVERDE
8568.00	8589.07	SEGO

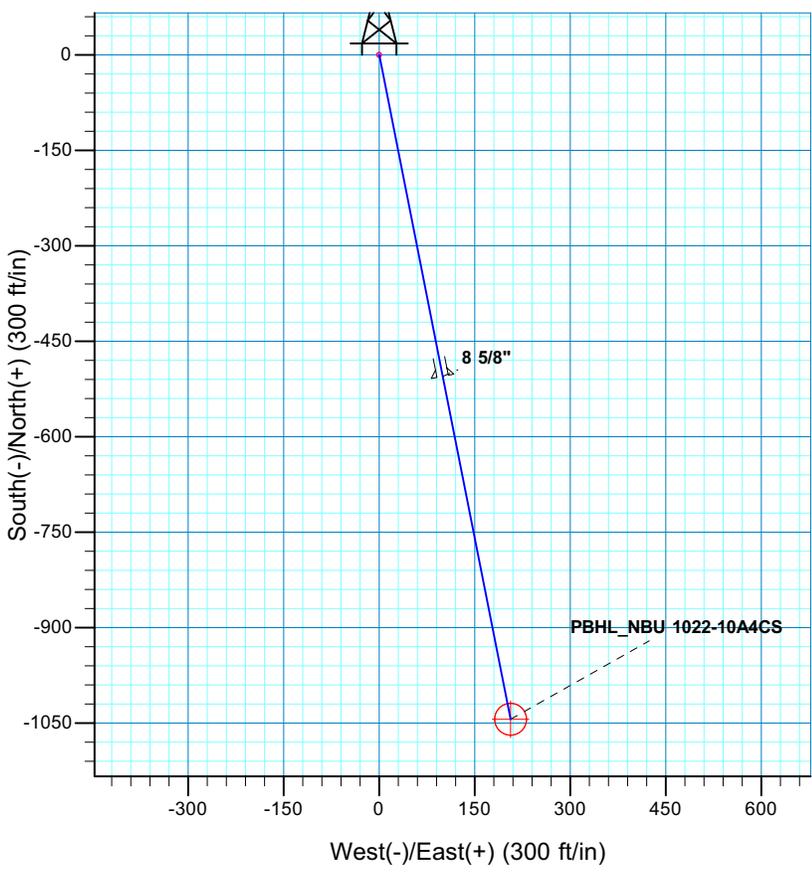
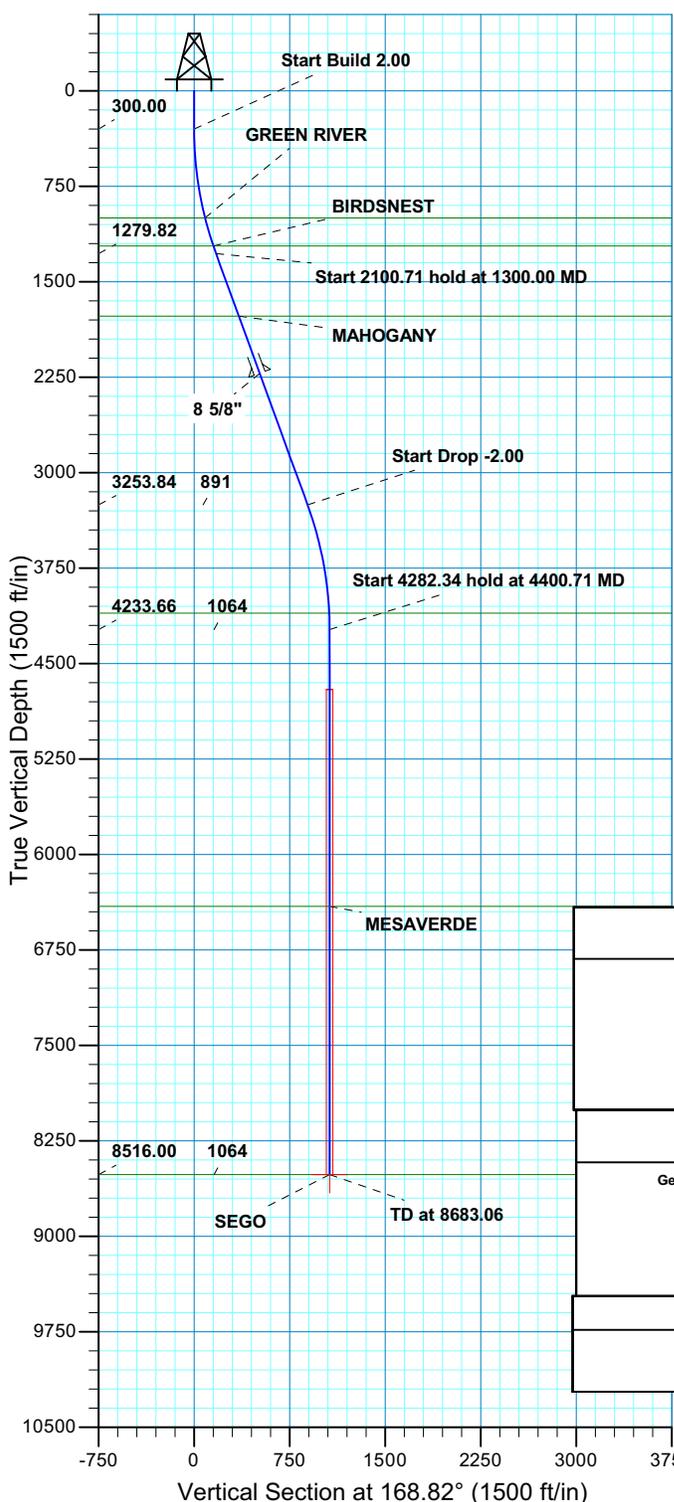
CASING DETAILS			
TVD	MD	Name	Size
2267.00	2283.71	8 5/8"	8.625



Site: NBU 1022-10A PAD
Well: NBU 1022-10A4CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY



WELL DETAILS: NBU 1022-10A4CS								
GL 5062 & KB 4 @ 5066.00ft (ASSUMED)								
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude			
0.00	0.00	14519129.12	2083464.47	39.970222	-109.418738			
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8516.00	-1043.84	206.27	14518089.11	2083689.21	39.967356	-109.418002	Circle (Radius: 25.00)
- plan hits target center								

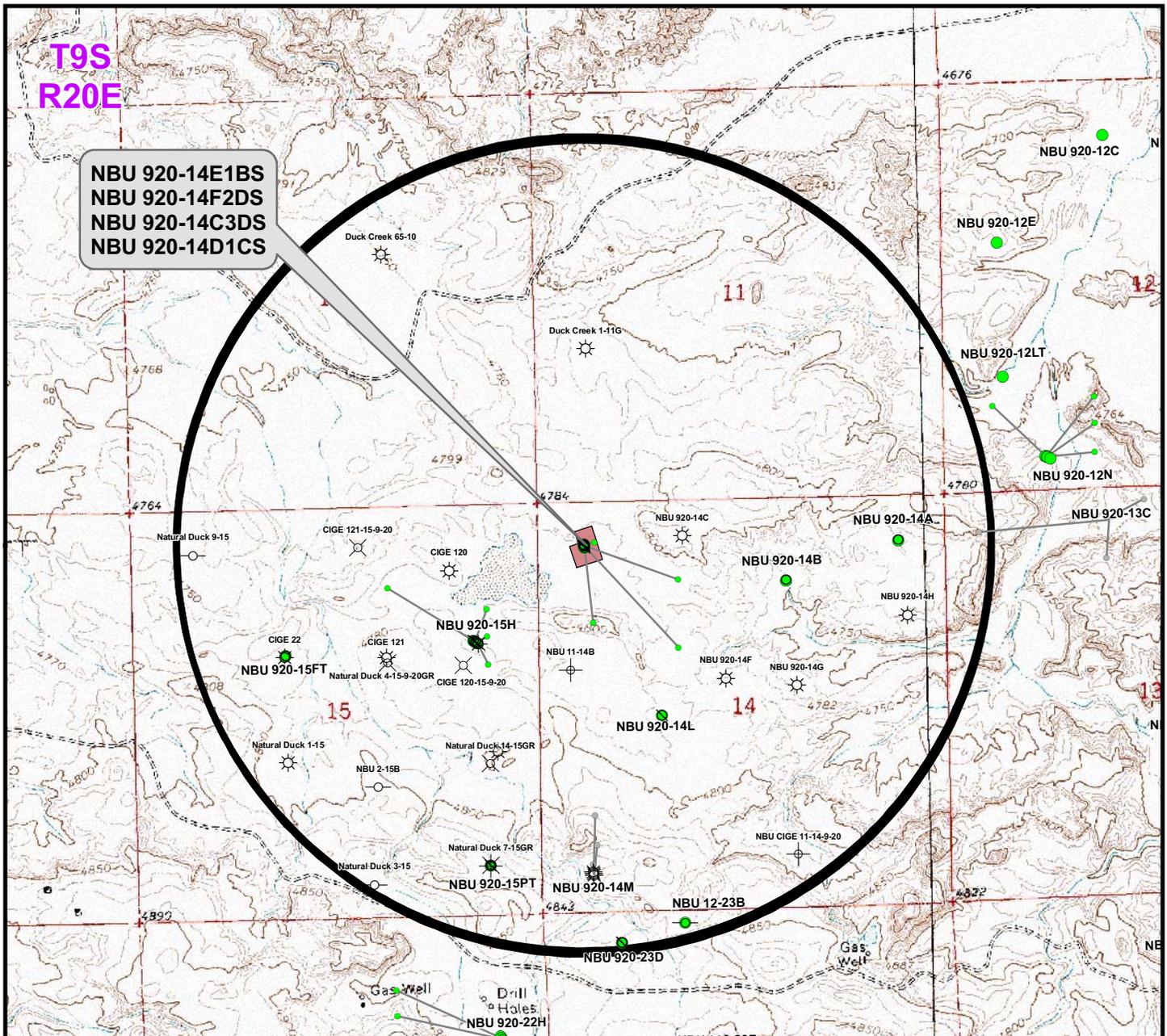


SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	168.82	1279.82	-169.49	33.49	2.00	168.82	172.77	
3400.71	20.00	168.82	3253.84	-874.35	172.77	0.00	0.00	891.25	
4400.71	0.00	0.00	4233.66	-1043.84	206.27	2.00	180.00	1064.02	
8683.06	0.00	0.00	8516.00	-1043.84	206.27	0.00	0.00	1064.02	PBHL_NBU 1022-10A4CS

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1000.00	1007.16	GREEN RIVER
1220.00	1236.60	BIRDSNEST
1770.00	1821.64	MAHOGANY
4104.00	4271.01	WASATCH
6409.00	6576.06	MESAVERDE
8515.99	8683.05	SEGO

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N			
Geodetic System: Universal Transverse Mercator (US Survey Feet)			
Datum: NAD 1927 (NADCON CONUS)			
Ellipsoid: Clarke 1866			
Zone: Zone 12N (114 W to 108 W)			
Location: SECTION 10 T10S R22E			
System Datum: Mean Sea Level			

CASING DETAILS			
TVD	MD	Name	Size
2220.00	2300.52	8 5/8"	8.625



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

Proposed Well	Nearest Well Bore	Footage
NBU 920-14E1BS	NBU 11-14B	669ft
NBU 920-14F2DS	NBU 920-14F	734ft
NBU 920-14C3DS	NBU 920-14C	567ft
NBU 920-14D1CS	NBU 920-14C	1,145ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- ☀ Producing
- ☺ Spudded
- APD Approved
- ⊙ Preliminary Location
- ⊕ Deferred
- ⊗ Cancelled
- ⊖ Temporarily Abandoned
- ⚡ Active Injector
- ⊗ Location Abandoned
- ⊖ Plugged & Abandoned
- ⊖ Shut-In

WELL PAD - NBU 920-14D

TOPO C
 NBU 920-14E1BS, NBU 920-14F2DS,
 NBU 920-14C3DS & NBU 920-14D1CS
 LOCATED IN SECTION 14, T9S, R20E,
 S.L.B.&M., UINTAH COUNTY, UTAH

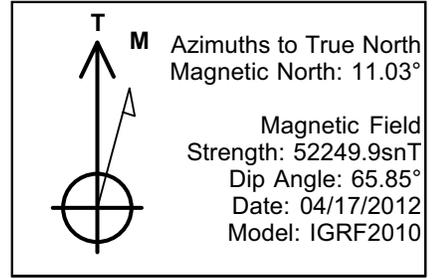
**Kerr-McGee Oil &
 Gas Onshore L.P.**

1099 18th Street
 Denver, Colorado 80202

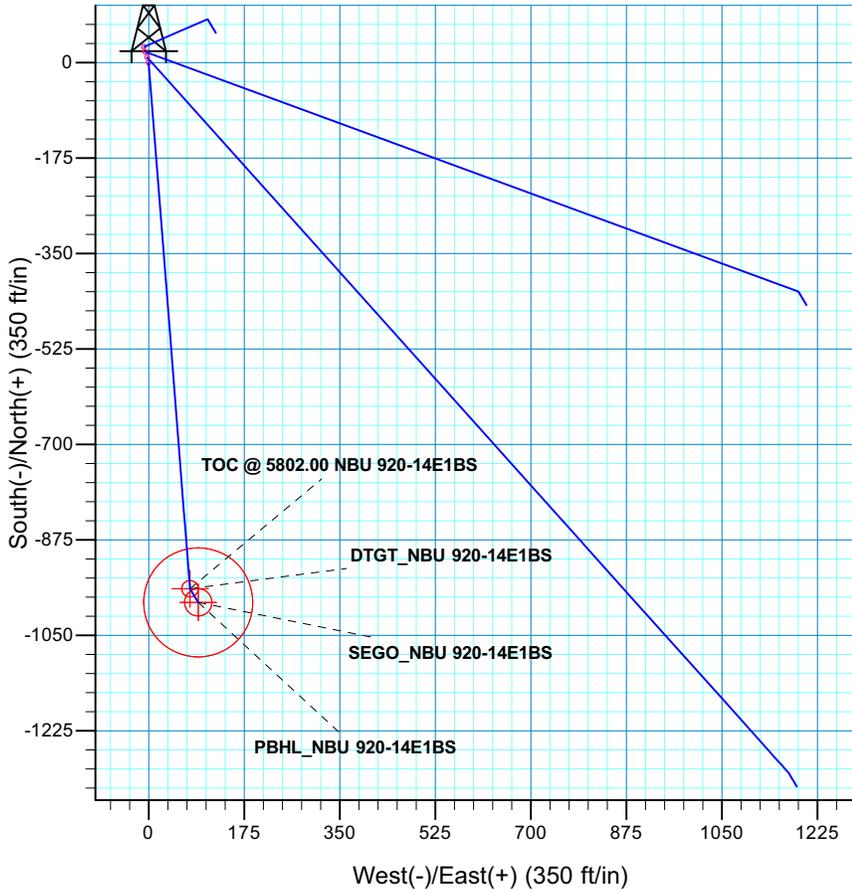
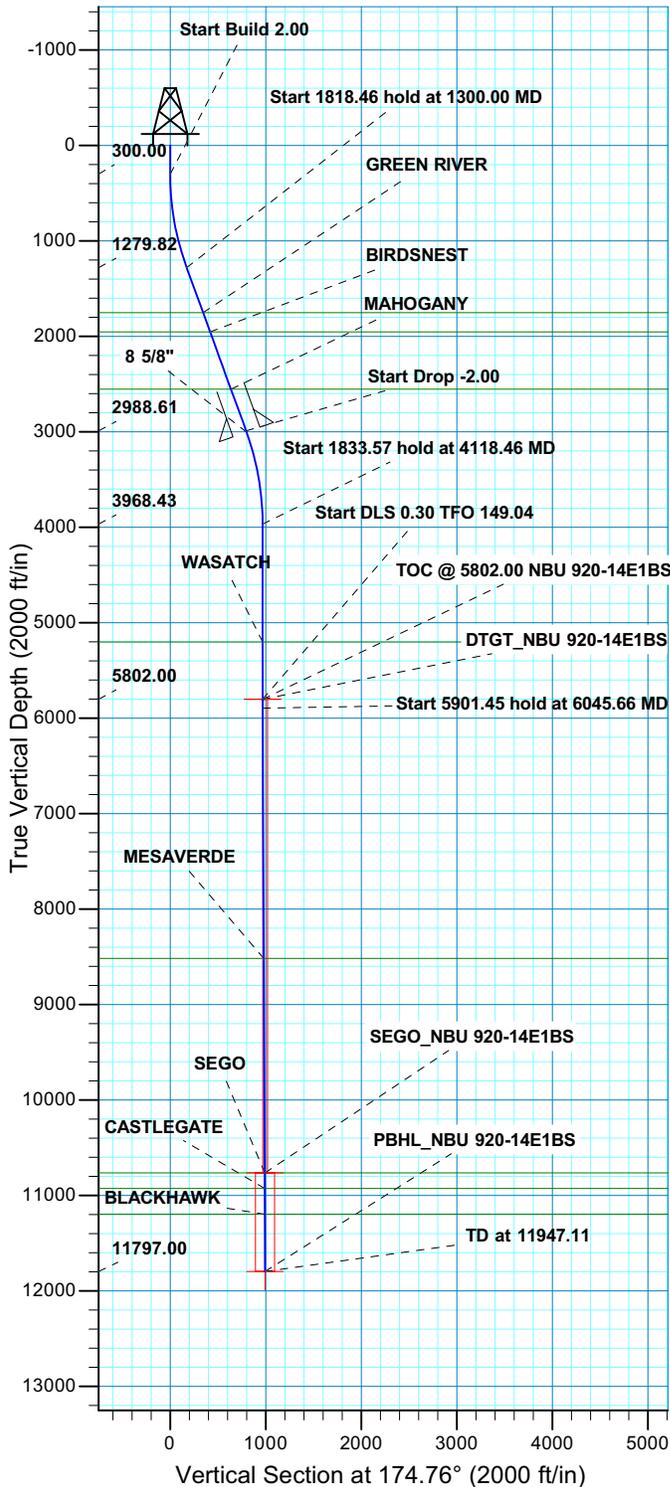


CONSULTING, LLC
 2155 North Main Street
 Sheridan, Wyoming 82801
 Phone 307-674-0609
 Fax 307-674-0182

SCALE: 1" = 2,000ft	NAD83 USP Central	12 12 OF 16
DRAWN: JELo	DATE: 25 Dec 2009	
REVISED: TL	DATE: 30 Mar 2012	



WELL DETAILS: NBU 920-14E1BS								
GL 4775 & KB 4 @ 4779.00ft (ASSUMED)								
	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
	0.00	0.00	14543892.47	2020871.43	40.041041	-109.640724		
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
DTGT	5802.00	-964.52	75.70	14542929.22	2020961.85	40.038393	-109.640454	Circle (Radius: 15.00)
- plan hits target center								
TOC	5802.00	-964.52	75.70	14542929.22	2020961.85	40.038393	-109.640454	Point
- plan hits target center								
SEGO	10764.00	-989.52	90.70	14542904.45	2020977.23	40.038324	-109.640400	Circle (Radius: 25.00)
- plan misses target center by 5.06ft at 10914.12ft MD (10764.02 TVD, -985.18 N, 88.10 E)								
PBHL	11797.00	-989.52	90.70	14542904.45	2020977.23	40.038324	-109.640400	Circle (Radius: 100.00)
- plan hits target center								

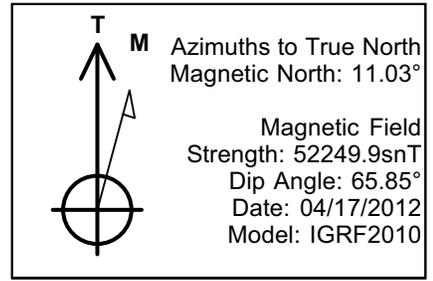


SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Deg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	175.51	1279.82	-172.24	13.52	2.00	175.51	172.75	
3118.46	20.00	175.51	2988.61	-792.28	62.18	0.00	0.00	794.65	
4118.46	0.00	0.00	3968.43	-964.52	75.70	2.00	180.00	967.40	
5952.04	0.00	0.00	5802.00	-964.52	75.70	0.00	0.00	967.40	DTGT_NBU 920-14E1BS
6045.66	0.28	149.04	5895.63	-964.72	75.82	0.30	149.04	967.61	
11947.11	0.28	149.04	11797.00	-989.52	90.70	0.00	0.00	993.67	PBHL_NBU 920-14E1BS

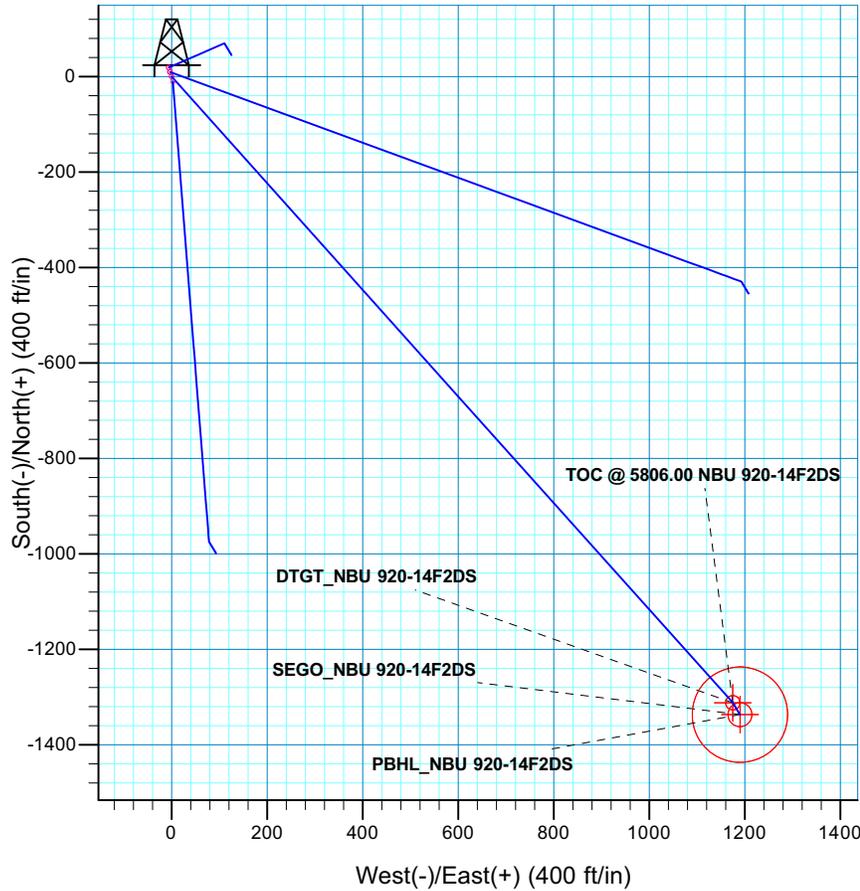
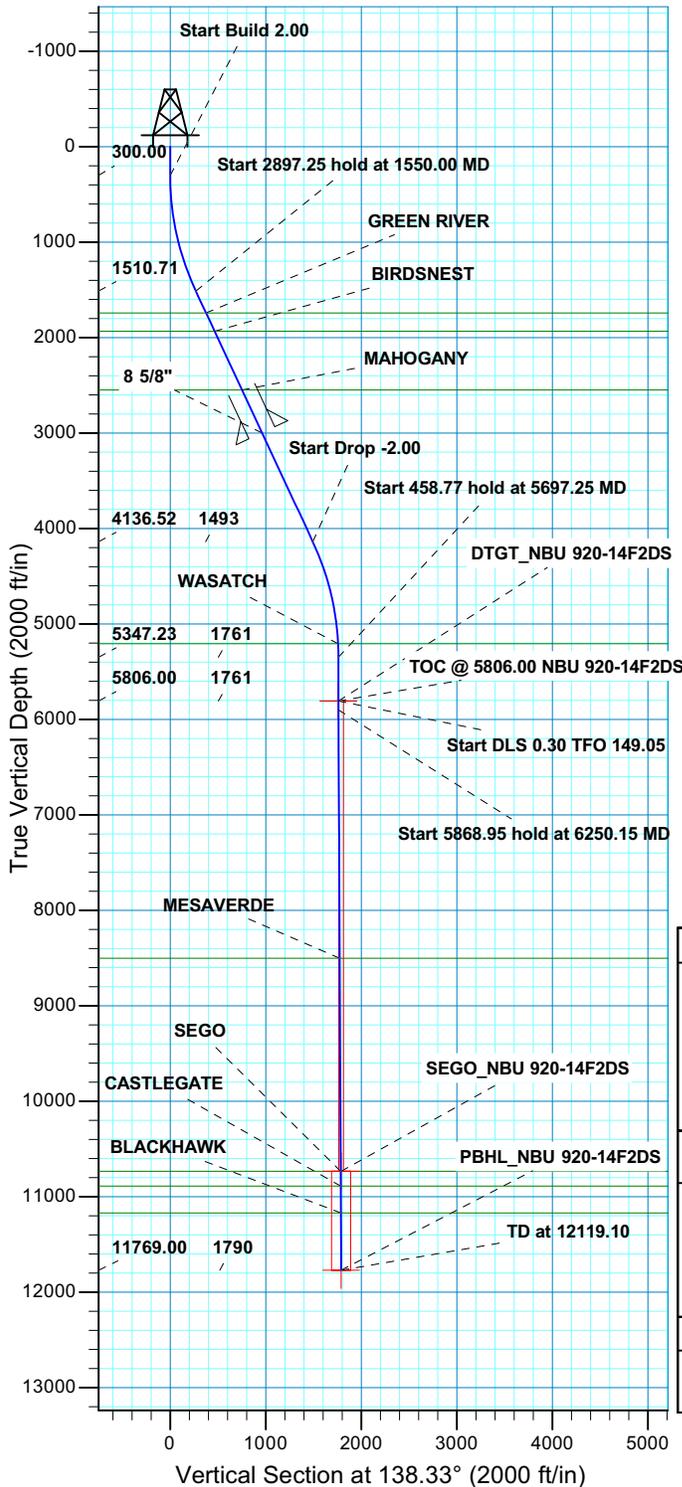
PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N			
Geodetic System:	Universal Transverse Mercator (US Survey Feet)		
Datum:	NAD 1927 (NADCON CONUS)		
Ellipsoid:	Clarke 1866		
Zone:	Zone 12N (114 W to 108 W)		
Location:	SECTION 14 T9S R20E		
System Datum:	Mean Sea Level		

FORMATION TOP DETAILS			
TVDPath	MDPath	Formation	
1752.00	1802.49	GREEN RIVER	
1953.00	2016.39	BIRDSNEST	
2553.00	2654.89	MAHOGANY	
5202.00	5352.04	WASATCH	
8518.00	8668.07	MESAVERDE	
10764.00	10914.09	SEGO	
10927.00	11077.10	CASTLEGATE	
11197.00	11347.10	BLACKHAWK	

CASING DETAILS			
TVD	MD	Name	Size
3003.00	3133.76	8 5/8"	8.625



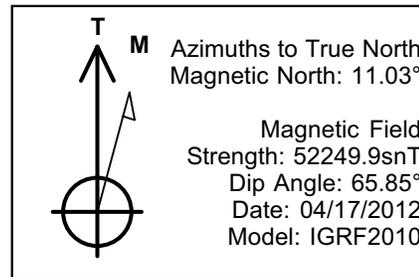
WELL DETAILS: NBU 920-14F2DS								
GL 4775 & KB 4 @ 4779.00ft (ASSUMED)								
	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
	0.00	0.00	14543902.26	2020868.48	40.041068	-109.640734		
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
DTGT	5806.00	-1311.94	1175.08	14542608.42	2022063.45	40.037466	-109.636537	Circle (Radius: 15.00)
- plan hits target center								
TOC	5806.00	-1311.94	1175.08	14542608.42	2022063.45	40.037466	-109.636537	Point
- plan hits target center								
SEGO	10733.00	-1336.94	1190.08	14542583.65	2022078.83	40.037397	-109.636483	Circle (Radius: 25.00)
- plan misses target center by 5.11ft at 11083.11ft MD (10733.03 TVD, -1332.56 N, 1187.45 E)								
PBHL	11769.00	-1336.94	1190.08	14542583.65	2022078.83	40.037397	-109.636483	Circle (Radius: 100.00)
- plan hits target center								



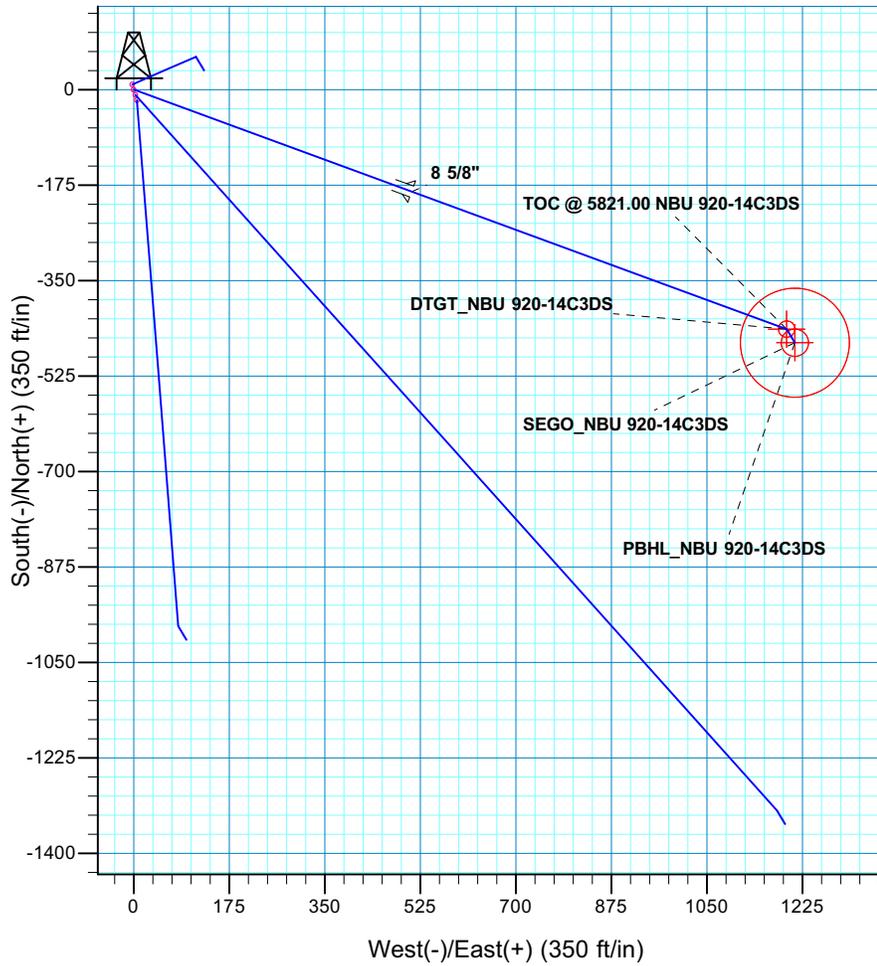
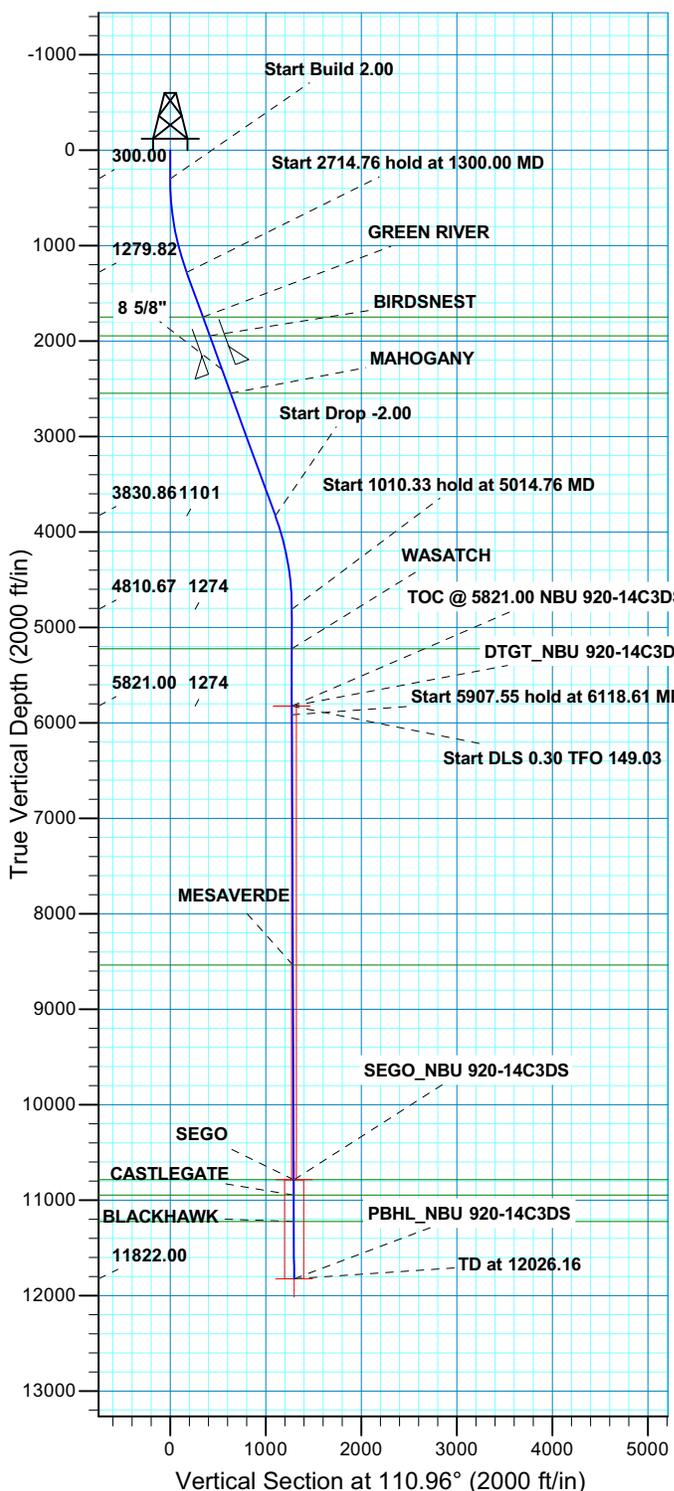
SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Deg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1550.00	25.00	138.15	1510.71	-199.94	179.08	2.00	138.15	268.41	
4447.25	25.00	138.15	4136.52	-1112.00	996.00	0.00	0.00	1492.83	
5697.25	0.00	0.00	5347.23	-1311.94	1175.08	2.00	180.00	1761.24	DTGT_NBU 920-14F2DS
6156.03	0.00	0.00	5806.00	-1311.94	1175.08	0.00	0.00	1761.24	
6250.15	0.28	149.05	5900.12	-1312.14	1175.20	0.30	149.05	1761.47	
12119.10	0.28	149.05	11769.00	-1336.94	1190.08	0.00	0.00	1789.89	PBHL_NBU 920-14F2DS
FORMATION TOP DETAILS									
TVDPath	MDPath	Formation							
1741.00	1804.09	GREEN RIVER							
1933.00	2015.94	BIRDSNEST							
2547.00	2693.42	MAHOGANY							
5206.00	5555.97	WASATCH							
8502.00	8852.06	MESAVERDE							
10733.00	11083.08	SEGO							
10887.00	11237.09	CASTLEGATE							
11169.00	11519.09	BLACKHAWK							
CASING DETAILS									
TVD	MD	Name	Size						
2997.00	3189.94	8 5/8"	8.625						

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N	
Geodetic System: Universal Transverse Mercator (US Survey Feet)	
Datum: NAD 1927 (NADCON CONUS)	
Ellipsoid: Clarke 1866	
Zone: Zone 12N (114 W to 108 W)	
Location: SECTION 14 T9S R20E	
System Datum: Mean Sea Level	

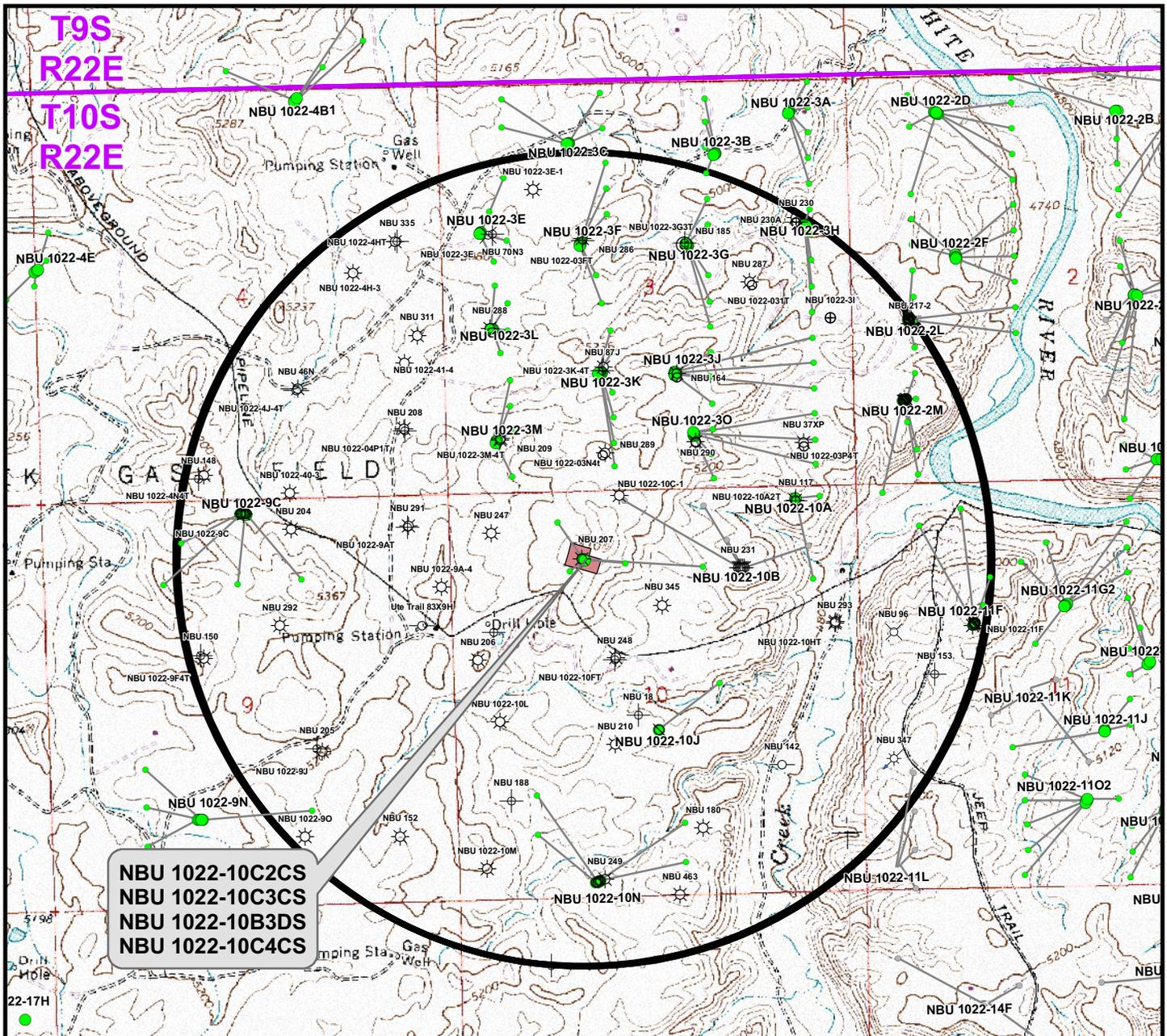
TVDPath	MDPath	Formation
1741.00	1804.09	GREEN RIVER
1933.00	2015.94	BIRDSNEST
2547.00	2693.42	MAHOGANY
5206.00	5555.97	WASATCH
8502.00	8852.06	MESAVERDE
10733.00	11083.08	SEGO
10887.00	11237.09	CASTLEGATE
11169.00	11519.09	BLACKHAWK



WELL DETAILS: NBU 920-14C3DS								
GL 4775 & KB 4 @ 4779.00ft (ASSUMED)								
	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
	0.00	0.00	14543911.69	2020865.26	40.041094	-109.640745		
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
DTGT	5821.00	-438.96	1196.03	14543491.03	2022067.85	40.039889	-109.636473	Circle (Radius: 15.00)
- plan hits target center								
TOC	5821.00	-438.96	1196.03	14543491.03	2022067.85	40.039889	-109.636473	Point
- plan hits target center								
SEGO	10784.00	-463.96	1211.03	14543466.27	2022083.23	40.039820	-109.636419	Circle (Radius: 25.00)
- plan misses target center by 5.08ft at 10988.17ft MD (10784.02 TVD, -459.60 N, 1208.42 E)								
PBHL	11822.00	-463.96	1211.03	14543466.27	2022083.23	40.039820	-109.636419	Circle (Radius: 100.00)
- 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	110.15	1279.82	-59.53	162.19	2.00	110.15	172.75	
4014.76	20.00	110.15	3830.86	-379.43	1033.84	0.00	0.00	1101.16	
5014.76	0.00	0.00	4810.67	-438.96	1196.03	2.00	180.00	1273.91	
6025.09	0.00	0.00	5821.00	-438.96	1196.03	0.00	0.00	1273.91	DTGT_NBU 920-14C3DS
6118.61	0.28	149.03	5914.52	-439.16	1196.15	0.30	149.03	1274.09	
12026.16	0.28	149.03	11822.00	-463.96	1211.03	0.00	0.00	1296.86	PBHL_NBU 920-14C3DS
FORMATION TOP DETAILS									
PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N									
TVDPath	MDPath	Formation							
1747.00	1797.17	GREEN RIVER							
1943.00	2005.75	BIRDSNEST							
2545.00	2646.38	MAHOGANY							
5221.00	5425.09	WASATCH							
8535.00	8739.12	MESAVERDE							
10784.00	10988.15	SEGO							
10946.00	11150.15	CASTLEGATE							
11222.00	11426.15	BLACKHAWK							
CASING DETAILS									
TVD	MD	Name	Size						
2295.00	2380.34	8 5/8"	8.625						



NBU 1022-10C2CS
NBU 1022-10C3CS
NBU 1022-10B3DS
NBU 1022-10C4CS

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

Proposed Well	Nearest Well Bore	Footage
NBU 1022-10C2CS	NBU 207	572ft
NBU 1022-10C3CS	NBU 207	227ft
NBU 1022-10B3DS	NBU 231	448ft
NBU 1022-10C4CS	NBU 207	569ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- ☀ Producing
- ☺ Spudded
- APD Approved
- ⊙ Preliminary Location
- ⊕ Deferred
- ⊗ Cancelled
- ⊖ Temporarily Abandoned
- ☀ Active Injector
- ⊖ Location Abandoned
- ⊖ Shut-In

WELL PAD - NBU 1022-10C

TOPO C
NBU 1022-10C2CS, NBU 1022-10C3CS,
NBU 1022-10B3DS & NBU 1022-10C4CS
LOCATED IN SECTION 10, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.
1099 18th Street
Denver, Colorado 80202



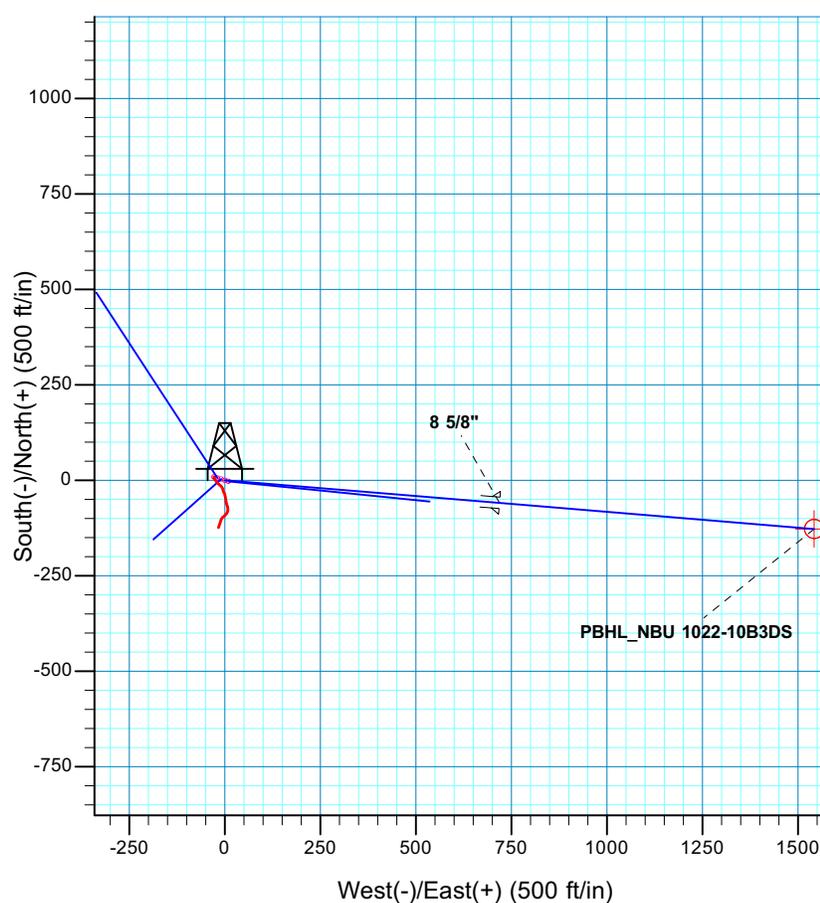
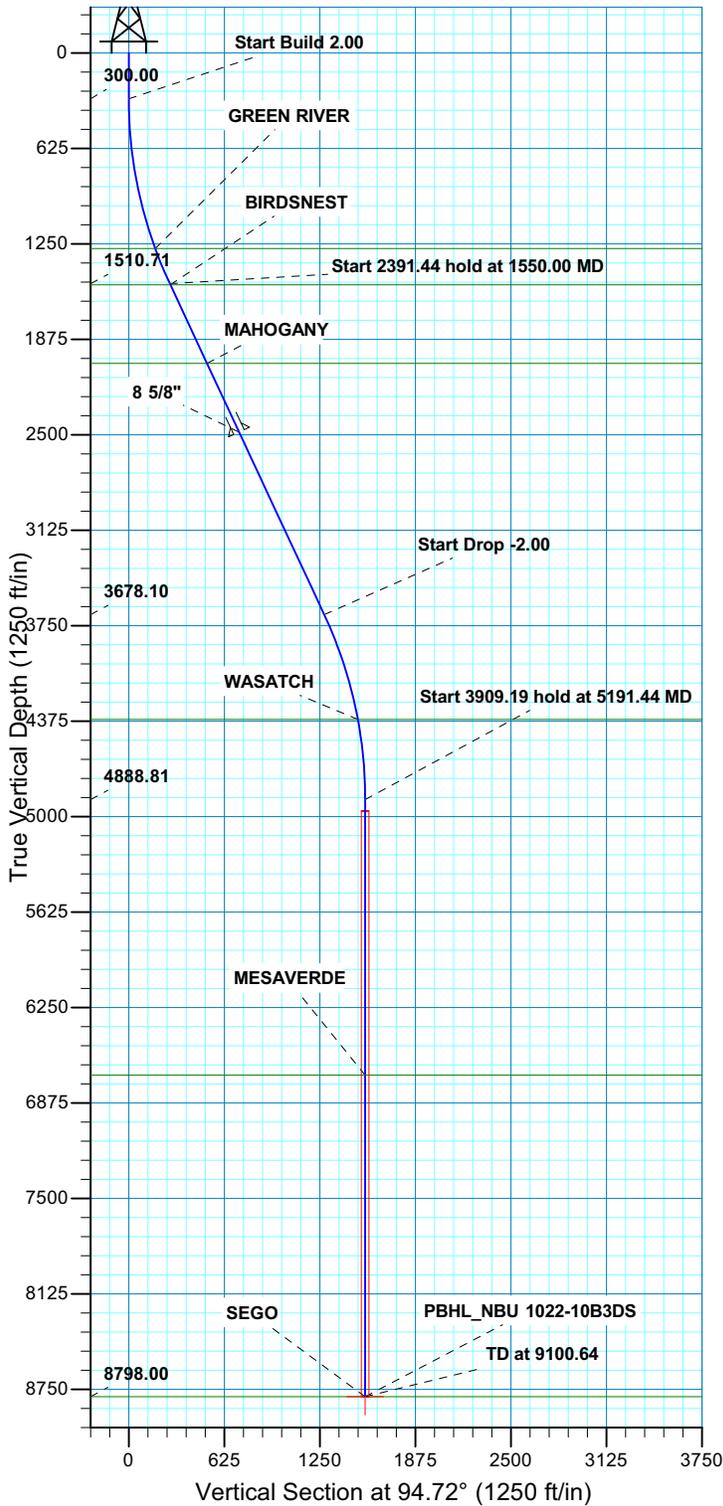
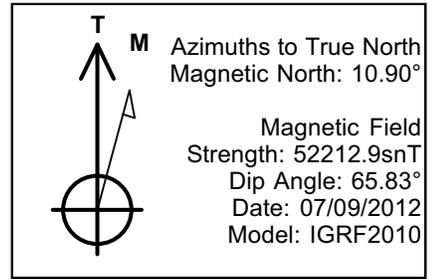
CONSULTING, LLC
 2155 North Main Street
 Sheridan, Wyoming 82801
 Phone 307-674-0609
 Fax 307-674-0182

SCALE: 1" = 2,000ft	NAD83 USP Central	12
DRAWN: TL	DATE: 12 June 2012	
REVISED:	DATE:	

SHEET NO:
12 OF 16



WELL DETAILS: NBU 1022-10B3DS								
GL 5303 & KB 4 @ 5307.00ft (ASSUMED)								
	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
	0.00	0.00	14518359.02	2080721.99	39.968241	-109.428571		
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8798.00	-127.43	1542.23	14518258.79	2082266.22	39.967891	-109.423068	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	
1550.00	25.00	94.72	1510.71	-22.10	267.50	2.00	94.72	268.41	
3941.44	25.00	94.72	3678.10	-105.33	1274.73	0.00	0.00	1279.08	
5191.44	0.00	0.00	4888.81	-127.43	1542.23	2.00	180.00	1547.48	
9100.64	0.00	0.00	8798.00	-127.43	1542.23	0.00	0.00	1547.48	PBHL_NBU 1022-10B3DS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N			FORMATION TOP DETAILS		
Geodetic System: Universal Transverse Mercator (US Survey Feet)	TVDPath	MDPath	Formation		
Datum: NAD 1927 (NADCON CONUS)	1280.00	1300.20	GREEN RIVER		
Ellipsoid: Clarke 1866	1518.00	1558.04	BIRDSNEST		
Zone: Zone 12N (114 W to 108 W)	2033.00	2126.28	MAHOGANY		
Location: SECTION 10 T10S R22E	4364.00	4663.65	WASATCH		
System Datum: Mean Sea Level	6693.00	6995.64	MESAVERDE		
	8797.99	9100.63	SEGO		

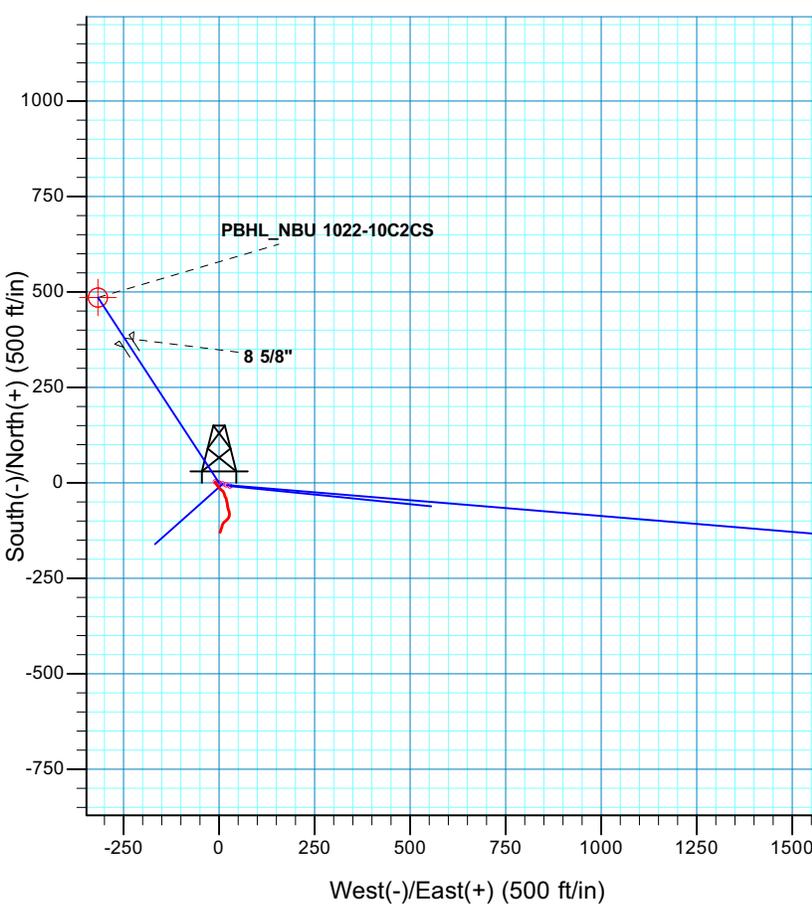
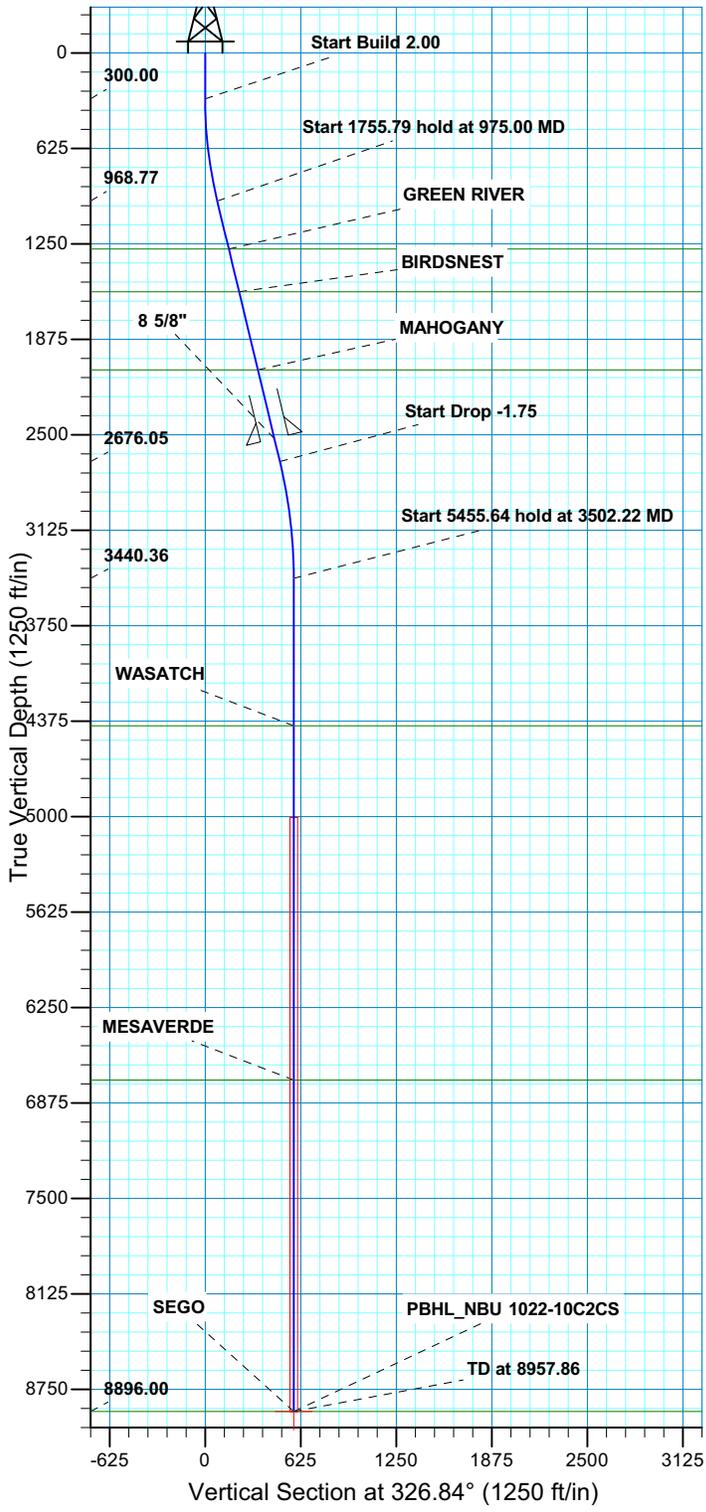
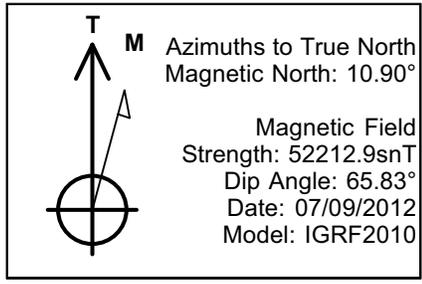
CASING DETAILS			
TVD	MD	Name	Size
2483.00	2622.80	8 5/8"	8.625



Site: NBU 1022-10C PAD
Well: NBU 1022-10C2CS
Wellbore: OH
Design: PLAN #1 PERMIT



WELL DETAILS: NBU 1022-10C2CS								
GL 5303 & KB 4 @ 5307.00ft (ASSUMED)								
	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
	0.00	0.00	14518364.51	2080702.83	39.968257	-109.428639		
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8896.00	485.13	-316.96	14518843.99	2080377.37	39.969589	-109.429770	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	
975.00	13.50	326.84	968.77	66.27	-43.29	2.00	326.84	79.15	
2730.79	13.50	326.84	2676.05	409.40	-267.48	0.00	0.00	489.04	
3502.22	0.00	0.00	3440.36	485.13	-316.96	1.75	180.00	579.50	
8957.86	0.00	0.00	8896.00	485.13	-316.96	0.00	0.00	579.50	PBHL_NBU 1022-10C2CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N			FORMATION TOP DETAILS		
Geodetic System: Universal Transverse Mercator (US Survey Feet)	TVDPath	MDPath	Formation		
Datum: NAD 1927 (NADCON CONUS)	1284.00	1299.19	GREEN RIVER		
Ellipsoid: Clarke 1866	1564.00	1587.14	BIRDSNEST		
Zone: Zone 12N (114 W to 108 W)	2075.00	2112.66	MAHOGANY		
Location: SECTION 10 T10S R22E	4406.00	4467.86	WASATCH		
System Datum: Mean Sea Level	6726.00	6787.86	MESAVERDE		
	8896.00	8957.86	SEGO		

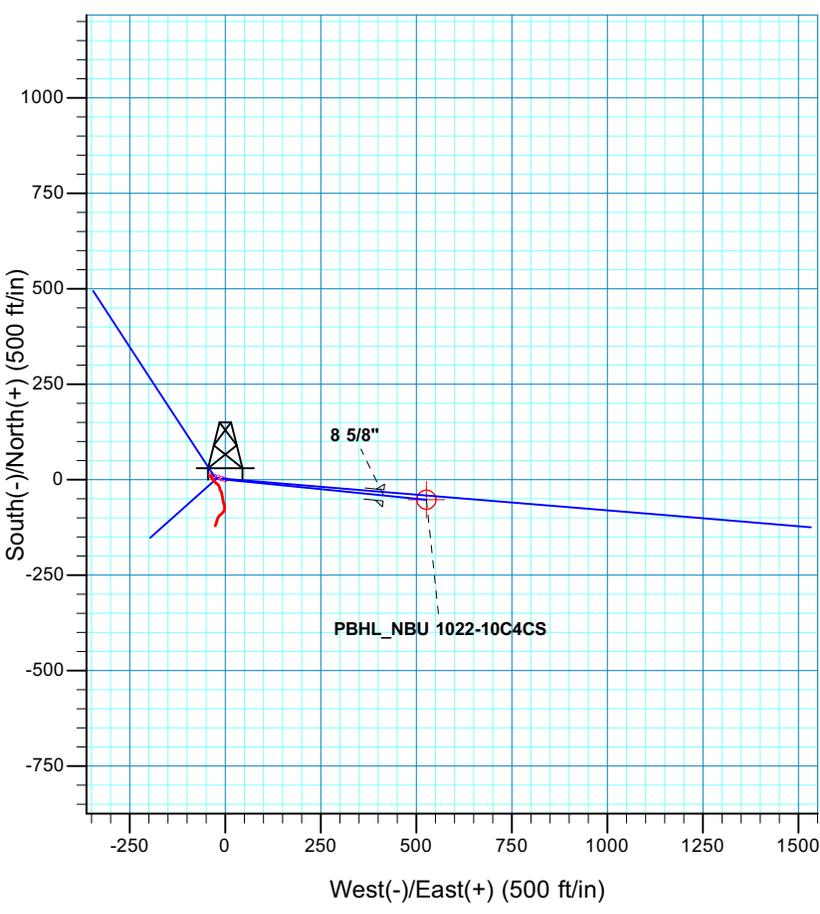
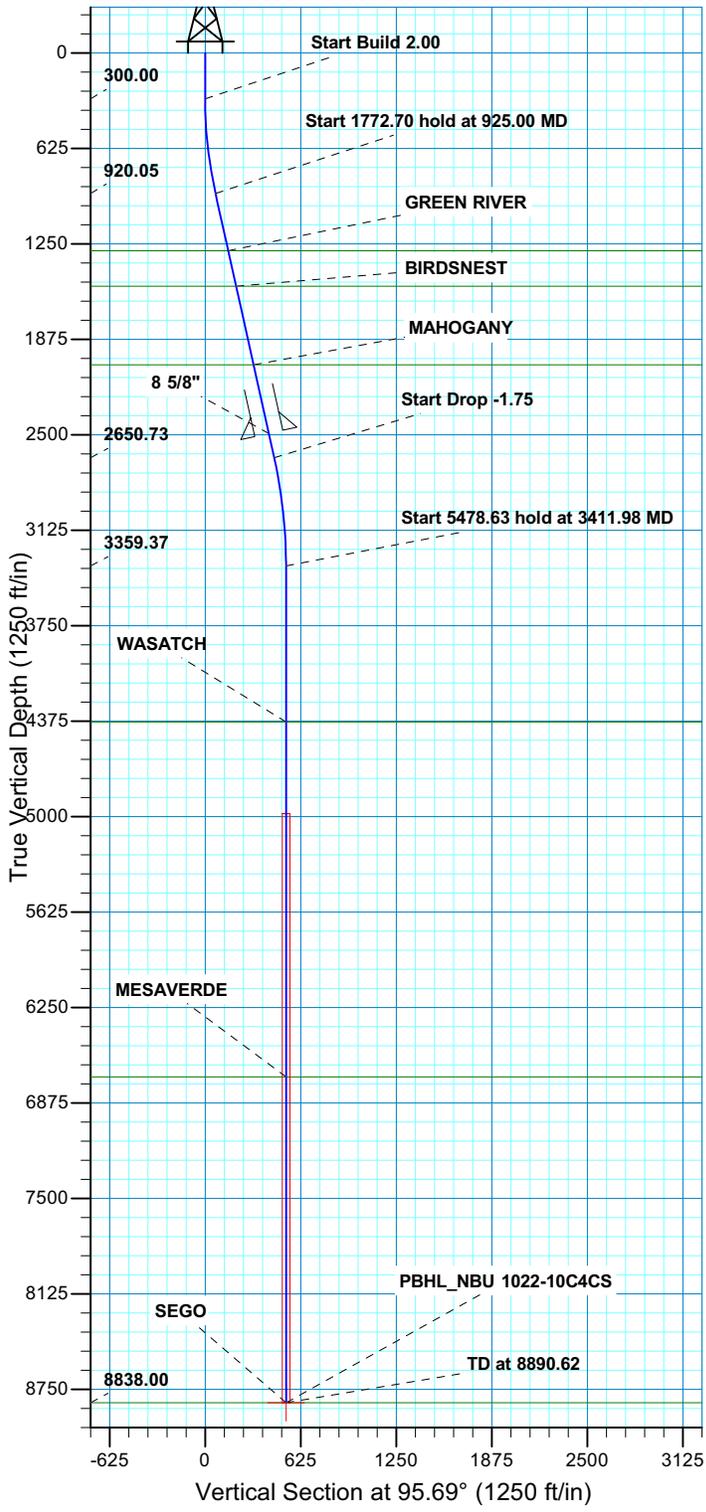
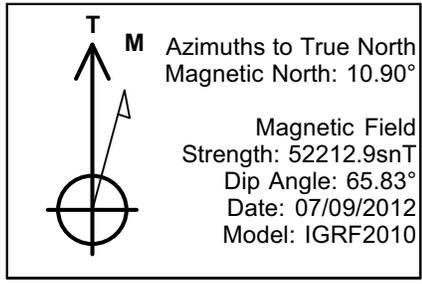
CASING DETAILS			
TVD	MD	Name	Size
2525.00	2575.45	8 5/8"	8.625



Site: NBU 1022-10C PAD
Well: NBU 1022-10C4CS
Wellbore: OH
Design: PLAN #1 PERMIT



WELL DETAILS: NBU 1022-10C4CS								
GL 5303 & KB 4 @ 5307.00ft (ASSUMED)								
	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
	0.00	0.00	14518356.28	2080731.56	39.968233	-109.428537		
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8838.00	-52.44	526.59	14518313.12	2081259.00	39.968089	-109.426658	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	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
925.00	12.50	95.69	920.05	-6.73	67.57	2.00	95.69	67.91	
2697.70	12.50	95.69	2650.73	-44.75	449.37	0.00	0.00	451.59	
3411.98	0.00	0.00	3359.37	-52.44	526.59	1.75	180.00	529.20	
8890.62	0.00	0.00	8838.00	-52.44	526.59	0.00	0.00	529.20	PBHL_NBU 1022-10C4CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N			FORMATION TOP DETAILS		
Geodetic System: Universal Transverse Mercator (US Survey Feet)	TVDPath	MDPath	Formation		
Datum: NAD 1927 (NADCON CONUS)	1295.00	1309.05	GREEN RIVER		
Ellipsoid: Clarke 1866	1528.00	1547.71	BIRDSNEST		
Zone: Zone 12N (114 W to 108 W)	2042.00	2074.19	MAHOGANY		
Location: SECTION 10 T10S R22E	4380.00	4432.62	WASATCH		
System Datum: Mean Sea Level	6704.00	6756.62	MESAVERDE		
	8838.00	8890.62	SEGO		

CASING DETAILS			
TVD	MD	Name	Size
2492.00	2535.11	8 5/8"	8.625



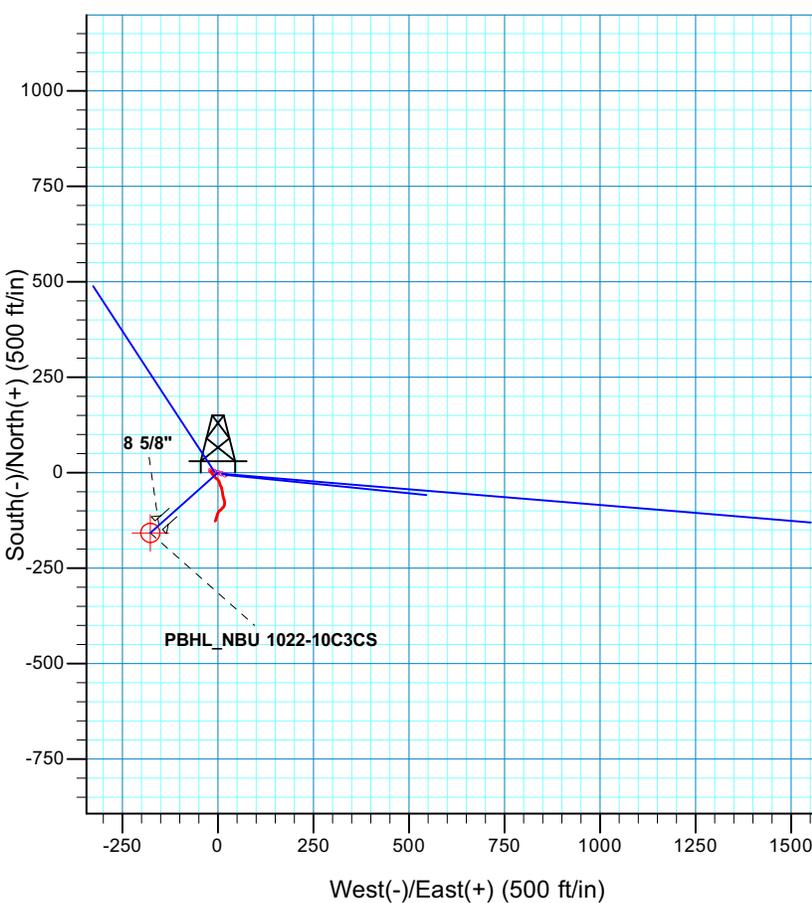
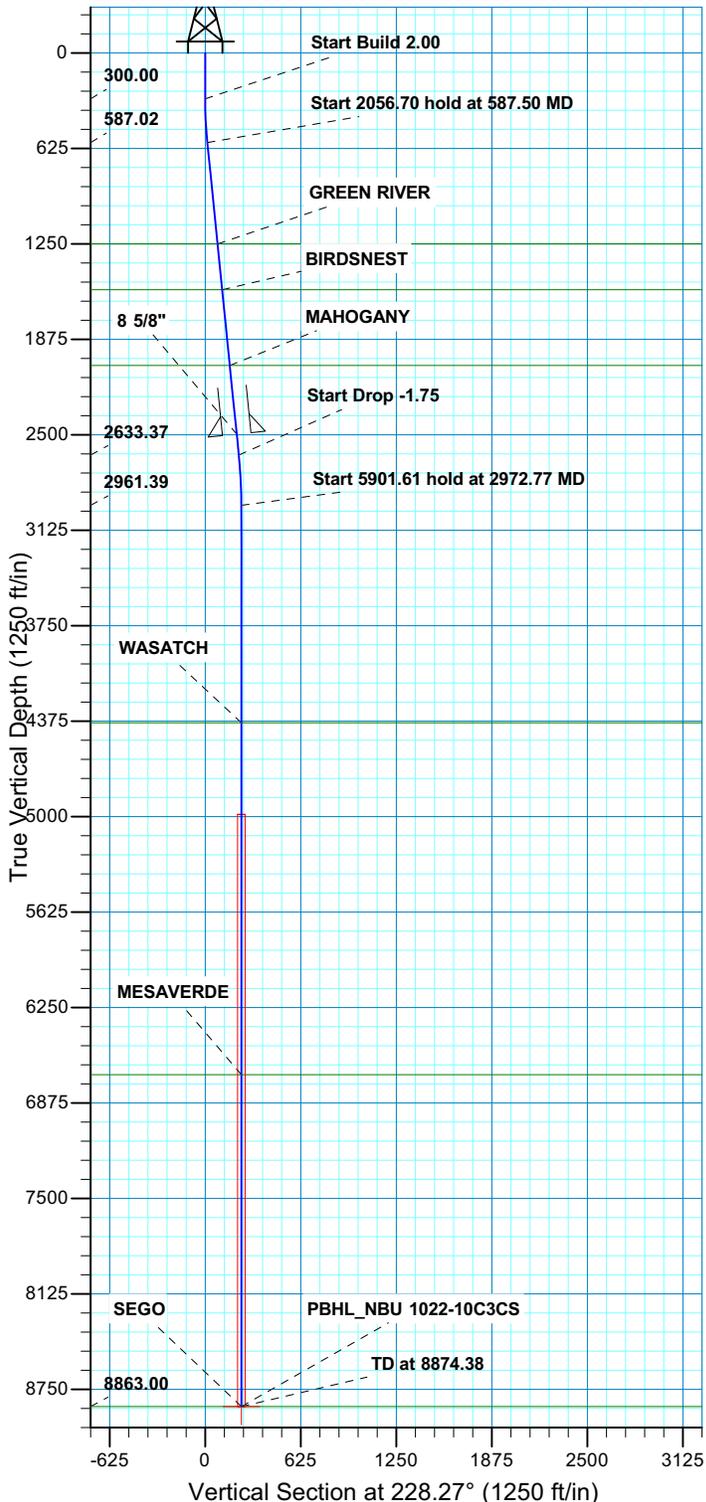
Site: NBU 1022-10C PAD
Well: NBU 1022-10C3CS
Wellbore: OH
Design: PLAN #1 PERMIT



WELL DETAILS: NBU 1022-10C3CS						
GL 5303 & KB 4 @ 5307.00ft (ASSUMED)						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	14518361.77	2080712.41	39.968249	-109.428605	
DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude
PBHL	8863.00	-157.70	-176.84	14518200.97	2080538.37	39.967816
						Longitude
						-109.429236
						Shape
						Circle (Radius: 25.00)
						- plan hits target center

Azimuths to True North
Magnetic North: 10.90°

Magnetic Field
Strength: 52212.9snT
Dip Angle: 65.83°
Date: 07/09/2012
Model: IGRF2010



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
587.50	5.75	228.27	587.02	-9.59	-10.76	2.00	228.27	14.41	
2644.20	5.75	228.27	2633.37	-146.74	-164.54	0.00	0.00	220.47	
2972.77	0.00	0.00	2961.39	-157.70	-176.84	1.75	180.00	236.94	
8874.38	0.00	0.00	8863.00	-157.70	-176.84	0.00	0.00	236.94	PBHL_NBU 1022-10C3CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N			FORMATION TOP DETAILS		
Geodetic System: Universal Transverse Mercator (US Survey Feet)	TVDPath	MDPath	Formation		
Datum: NAD 1927 (NADCON CONUS)	1251.00	1254.84	GREEN RIVER		
Ellipsoid: Clarke 1866	1551.00	1556.36	BIRDSNEST		
Zone: Zone 12N (114 W to 108 W)	2047.00	2054.87	MAHOAGANY		
Location: SECTION 10 T10S R22E	4386.00	4397.38	WASATCH		
System Datum: Mean Sea Level	6690.00	6701.38	MESAVERDE		
	8863.00	8874.38	SEGO		

CASING DETAILS			
TVD	MD	Name	Size
2497.00	2507.14	8 5/8"	8.625

From: Jeff Conley
To: Hill, Brad; Mason, Diana
CC: Bonner, Ed; Davis, Jim; Garrison, LaVonne; danielle.piernot@anadarko.com
Date: 8/21/2012 3:02 PM
Subject: Anadarko APD Approvals

Greetings,

The following wells have been approved by SITLA:

Arch and Paleo Clearance granted on:

NBU 1022-10A1BS (4304752994)

NBU 1022-10A4CS (4304752995)

NBU 1022-10B3DS (4304752996)

NBU 1022-10C2CS (4304752997)

NBU 1022-10C4CS (4304752998)

NBU 1022-10C3CS (4304752999)

Thanks,

Jeff Conley
SITLA Resource Specialist
(801)-538-5157
jconley@utah.gov

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 1022-10A4CS 4304752			
String	Surf	Prod		
Casing Size(")	8.625	4.500		
Setting Depth (TVD)	2220	8516		
Previous Shoe Setting Depth (TVD)	40	2220		
Max Mud Weight (ppg)	8.3	12.0		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	7780		
Operators Max Anticipated Pressure (psi)	5195	11.7		

Calculations	Surf String	8.625	"
Max BHP (psi)	.052*Setting Depth*MW=	958	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	692	NO <input type="checkbox"/> air/mist system, air bowl
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	470	YES <input type="checkbox"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	470	NO <input type="checkbox"/> Reasonable depth in area
Required Casing/BOPE Test Pressure=		2220	psi
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient

Calculations	Prod String	4.500	"
Max BHP (psi)	.052*Setting Depth*MW=	5314	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4292	YES <input type="checkbox"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3440	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)=	3929	NO <input type="checkbox"/> Reasonable
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2220	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
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient

43047529950000 NBU 10922-10A4CS

Casing Schematic

Surface

20° max incl. KOP 300'

8-5/8"
MW 8.3
Frac 19.3

✓ Stip emts.

rtm to vert. 4401'

4-1/2"
MW 12.

Uinter

to 0' @ 87% w/p tail 3149'

* Proposed to 0'

to 184' @ 0% w/p tail 999'

TOC @ 659'

TOC @ 1000' Green River

994' 1220' Brocks Nest

1555' tail

1770' Mahogany

* St. PV ✓

Surface
2220. MD
2144. TVD

3000' ± BMSW

3674' tail

4104' Wasatch

6409' Mesaverde

8516' Sejo

Production
8683. MD
8516. TVD

190 NL

775 EL

~~1044~~

206

1234 FNL ✓

569 FEL ✓

OR

NE NE Sec 10 - 9 S - 22 E

Well name:	43047529950000 NBU 10922-10A4CS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Surface	Project ID:	43-047-52995
Location:	UINTAH COUNTY		

Design parameters:

Collapse

Mud weight: 8.300 ppg
 Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

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

Cement top: 994 ft

Burst

Max anticipated surface pressure: 1,887 psi
 Internal gradient: 0.120 psi/ft
 Calculated BHP 2,144 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: 1,941 ft

Directional Info - Build & Drop

Kick-off point 300 ft
 Departure at shoe: 487 ft
 Maximum dogleg: 2 °/100ft
 Inclination at shoe: 20 °

Re subsequent strings:

Next setting depth: 8,516 ft
 Next mud weight: 12.000 ppg
 Next setting BHP: 5,309 psi
 Fracture mud wt: 19.250 ppg
 Fracture depth: 2,144 ft
 Injection pressure: 2,144 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	2220	8.625	28.00	I-55	LT&C	2144	2220	7.892	87912

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	925	1880	2.033	2144	3390	1.58	60	348	5.80 J

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

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

Date: November 5, 2012
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2144 ft, a mud weight of 8.3 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:	43047529950000 NBU 10922-10A4CS	
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.	
String type:	Production	Project ID: 43-047-52995
Location:	UINTAH COUNTY	

Design parameters:

Collapse

Mud weight: 12.000 ppg
Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 3,435 psi
Internal gradient: 0.220 psi/ft
Calculated BHP: 5,309 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Tension:

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

Tension is based on air weight.
Neutral point: 7,155 ft

Estimated cost: 180,616 (\$)

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 193 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,000 ft

Cement top: 659 ft

Directional well information:

Kick-off point: 300 ft
Departure at shoe: 1064 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 (\$)
2	5000	4.5	11.60	I-80	DQX	4833	5000	3.875	132000
1	3683	4.5	11.60	I-80	LT&C	8516	8683	3.875	48616

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
2	3013	6010	1.995	4498	7780	1.73	98.8	267	2.70 J
1	5309	6360	1.198	5309	7780	1.47	42.7	212	4.96 J

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

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

Date: November 5, 2012
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 8516 ft, a mud weight of 12 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 1022-10A4CS
API Number 43047529950000 **APD No** 6459 **Field/Unit** NATURAL BUTTES
Location: 1/4,1/4 NENE **Sec** 10 **Tw** 10.0S **Rng** 22.0E 190 FNL 775 FEL
GPS Coord (UTM) 634976 4425642 **Surface Owner**

Participants

Danielle Piernot, Doyle Holmes, Charles Chase, (Anadarko); Jeff Conley, Jim Davis, (SITLA); Mitch Batty, Wes Wood, (Timberline); David Hackford, (DOGM).

Regional/Local Setting & Topography

The general area is in the southeast portion of the Natural Buttes Unit, which contains the White River and rugged drainages that drain into the White River. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. The White River is 1760 feet to the east. 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 44.5 air miles to the northwest. Access from Vernal is approximately 56 road miles following Utah State, Uintah County and oilfield development roads to the location.

Both the surface and minerals are owned by SITLA.

Surface Use Plan

Current Surface Use

Grazing
Wildlfe Habitat
Existing Well Pad

New Road Miles	Well Pad	Src Const Material	Surface Formation
0	Width 291 Length 350	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate? Y

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

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

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

Soil Type and Characteristics

Rocky sandy clay loam.

Erosion Issues N**Sedimentation Issues** N**Site Stability Issues** N**Drainage Diversion Required?** N**Berm Required?** N**Erosion Sedimentation Control Required?** N**Paleo Survey Run?** Y **Paleo Potential Observed?** N **Cultural Survey Run?** Y **Cultural Resources?** N**Reserve Pit****Site-Specific Factors****Site Ranking**

Distance to Groundwater (feet)	75 to 100	10
Distance to Surface Water (feet)	>1000	0
Dist. Nearest Municipal Well (ft)	>5280	0
Distance to Other Wells (feet)		20
Native Soil Type	Mod permeability	10
Fluid Type	Fresh Water	5
Drill Cuttings	Normal Rock	0
Annual Precipitation (inches)		0
Affected Populations		
Presence Nearby Utility Conduits	Not Present	0
Final Score		45

1 Sensitivity Level

Characteristics / Requirements

Reserve pit will be located on the north side of the location and will be 235' long and 80' wide and 12' deep. It will be lined with a plastic liner and also a felt sub-liner. The east side of pit will be in cut, and the west side will be in as much as 5.2' of fill.

Closed Loop Mud Required? N **Liner Required?** Y **Liner Thickness** 30 **Pit Underlayment Required?** Y**Other Observations / Comments**David Hackford
Evaluator8/7/2012
Date / Time

**Application for Permit to Drill
Statement of Basis
Utah Division of Oil, Gas and Mining**

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
6459	43047529950000	SITLA	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		Surface Owner-APD		
Well Name	NBU 1022-10A4CS		Unit		
Field	NATURAL BUTTES		Type of Work		
Location	NENE 10 10S 22E S 190 FNL (UTM) 634981E 4425635N		775 FEL GPS Coord		

Geologic Statement of Basis

Kerr McGee proposes to set 2,220' 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 3,000'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the proposed location. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. 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

11/1/2012
Date / Time

Surface Statement of Basis

The general area is in the southeast portion of the Natural Buttes Unit, which contains the White River and rugged drainages that drain into the White River. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. An occasional pond has been constructed to supply water for livestock and antelope.

The pad of the existing NBU 1022-10A4CS producing gas well is proposed to be enlarged for an additional 2 wells. They are the NBU 1022-10A1BS, and the NBU 1022-10A4CS. There is also a PA'd well on this location. It is the NBU 117. Bitter Creek, which is an ephemeral drainage, enters the White River 1760' to the east. The existing pad shows no stability problems. It is expected that the location including the reserve pit should be stable and it is the only suitable site in the area.

Both the surface and minerals are owned by SITLA. Jim Davis and Jeff Conley of SITLA attended the presite and were agreeable to the modifications. They had no additional concerns regarding the proposal.

Utah Division of Wildlife Resources personnel were invited to the presite, but did not attend.

David Hackford
Onsite Evaluator

8/7/2012
Date / Time

Conditions of Approval / Application for Permit to Drill

Category	Condition
----------	-----------

API Well Number: 43047529950000

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

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

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 7/19/2012

API NO. ASSIGNED: 43047529950000

WELL NAME: NBU 1022-10A4CS

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

PHONE NUMBER: 720 929-6156

CONTACT: Danielle Piernot

PROPOSED LOCATION: NENE 10 100S 220E

Permit Tech Review:

SURFACE: 0190 FNL 0775 FEL

Engineering Review:

BOTTOM: 1235 FNL 0570 FEL

Geology Review:

COUNTY: UINTAH

LATITUDE: 39.97010

LONGITUDE: -109.41941

UTM SURF EASTINGS: 634981.00

NORTHINGS: 4425635.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: UO 01197-A

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

Commingling Approved

LOCATION AND SITING:

- R649-2-3.
- Unit: NATURAL BUTTES
- R649-3-2. General
- R649-3-3. Exception
- Drilling Unit
- Board Cause No: Cause 173-14
- Effective Date: 12/2/1999
- Siting: Suspends General Siting
- R649-3-11. Directional Drill

Comments: Presite Completed

Stipulations: 3 - Commingling - dducet
 5 - Statement of Basis - bhll
 15 - Directional - dmason
 17 - Oil Shale 190-5(b) - dmason
 25 - Surface Casing - hmadonald



GARY R. HERBERT
Governor

GREGORY S. BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: NBU 1022-10A4CS

API Well Number: 43047529950000

Lease Number: UO 01197-A

Surface Owner: STATE

Approval Date: 11/8/2012

Issued to:

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

Authority:

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

Duration:

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

Commingle:

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

General:

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

Conditions of Approval:

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

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

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

Surface casing shall be cemented to the surface.

Additional Approvals:

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

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

Notification Requirements:

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

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

Contact Information:

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

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

Reporting Requirements:

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

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

plugging

Approved By:

A handwritten signature in black ink, appearing to read "J. Rogers", written in a cursive style.

For John Rogers
Associate Director, Oil & Gas

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS 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: UO 01197-A
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 1022-10A4CS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0190 FNL 0775 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 10 Township: 10.0S Range: 22.0E Meridian: S		9. API NUMBER: 43047529950000
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 checked="" type="checkbox"/> SPUD REPORT Date of Spud: 6/24/2013	<input type="checkbox"/> CASING REPAIR	
<input type="checkbox"/> DRILLING REPORT Report Date:	<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"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Spud well 06/24/2013 @ 14:00. MIRU Triple A Bucket Rig, drill 20" conductor hole to 40', run 14", 36.7# schedule 10 conductor pipe, cement with 28 sacks ready mix. Anticipated surface spud date and surface casing cement 07/01/2013.		
		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY June 26, 2013
NAME (PLEASE PRINT) Doreen Green	PHONE NUMBER 435 781-9758	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 6/26/2013	

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: UO 01197-A
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 1022-10A4CS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0190 FNL 0775 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 10 Township: 10.0S Range: 22.0E Meridian: S	9. API NUMBER: 43047529950000
5. 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 checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 7/12/2013	<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 style="width: 100px;" type="text"/>

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

The Operator is currently fishing on the NBU 1022-10A4CS well 2 of 2 on the NBU 1022-10A pad. ProPetro 12 was drilling the surface portion of the hole when the drillpipe parted. After the casing parted, 16 joints of drillpipe released from saver sub and fell downhole. Currently the top of 1st fish which is our BHA and has a length of 412ft is at 1,060ft. Our 2nd fish which is drillpipe and has a length of 487ft has top of fish at 606ft. We are still attempting to retrieve both the fish but if unsuccessful we would like to move forward and set a cement plug to sidetrack off of. The procedure for plugging the well is formulated by the current state of the well and is attached. After plugging the well, we would then move the rig to the NBU 921-20N pad in order to drill those 5 wells and then return to the NBU 1022-10A4CS to sidetrack

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

Date: July 12, 2013

By: *Derek Duff*

NAME (PLEASE PRINT) Teena Paulo	PHONE NUMBER 720 929-6236	TITLE Staff Regulatory Specialist
SIGNATURE N/A	DATE 7/12/2013	



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Sundry Conditions of Approval Well Number 43047529950000

Cmt to 100' above upper fish - ~500'(top of fish reported @ 606') to allow for fall back.

HSadik-Macdonald for Dustin Doucet

NBU 1022-10A4CS Plug Procedure

**2 Fish in Hole: 1st Fish is 412ft BHA Comprised of Circulating Bit, Mud Motor, Slot and Shock subs, 10 Drill Collars. Top of 1st fish is at 1,060ft. 2nd fish comprised of 16 joints of drillpipe which has a length of 487ft. Top of 2nd fish is 606ft.

1. Notify the proper regulatory agencies of proposed operations
2. Document all procedures and verify proper equipment is on location before commencing operations.
3. Notify ProPetro proposed cementing operations to include +/-500' of Class G cement pumped at 17.5 ppg with a yield of 0.94ft³/sack for a kick off plug.
4. Hold PJSM and discuss all operations to include pumping cement, and testing lines
5. RU cementing head and lines and pressure test..
6. Set a 17.5 ppg plug with 30% excess at 600ft to 100ft for a total of 500ft of fill.
7. Slowly pull out of the plug at 1-2 minutes per joint.
8. Pull out of hole and LD drill pipe.
9. RD cementers.
10. Move off well and MOB to NBU 921-20N pad.
11. Create sidetrack procedure and new directional plan and sundry well.
12. Return to perform sidetrack once the 5 wells on the NBU 921-20N pad are complete.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197-A	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
8. WELL NAME and NUMBER: NBU 1022-10A4CS	
9. API NUMBER: 43047529950000	
9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
COUNTY: UINTAH	
STATE: UTAH	

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. TYPE OF WELL Gas Well
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779
PHONE NUMBER: 720 929-6511
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0190 FNL 0775 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 10 Township: 10.0S Range: 22.0E Meridian: S

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: 8/5/2013	<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.

Drilled to 2,330 ft. in July 2013

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

FOR RECORD ONLY

August 05, 2013

NAME (PLEASE PRINT) Teena Paulo	PHONE NUMBER 720 929-6236	TITLE Staff Regulatory Specialist
SIGNATURE N/A	DATE 8/5/2013	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197-A	
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	
8. WELL NAME and NUMBER: NBU 1022-10A4CS	
9. API NUMBER: 43047529950000	
9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
1. TYPE OF WELL Gas Well	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 PHONE NUMBER: 720 929-6511	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0190 FNL 0775 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 10 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: 9/3/2013	<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.

No activity for the month of August 2013. Well TD at 2,330 ft.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 October 01, 2013

NAME (PLEASE PRINT) Matthew P Wold	PHONE NUMBER 720 929-6993	TITLE Regulatory Analyst I
SIGNATURE N/A	DATE 9/3/2013	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197-A	
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	
8. WELL NAME and NUMBER: NBU 1022-10A4CS	
9. API NUMBER: 43047529950000	
9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	
PHONE NUMBER: 720 929-6511	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0190 FNL 0775 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 10 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: 10/4/2013	<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.

No new activity since last report. Well TD 2,350 ft.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 October 08, 2013

NAME (PLEASE PRINT) Teena Paulo	PHONE NUMBER 720 929-6236	TITLE Staff Regulatory Specialist
SIGNATURE N/A	DATE 10/4/2013	

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# SST 8 Submitted By
JOSH SHEPPARD Phone Number 435- 828-0987
Well Name/Number NBU 1022-10A4CS
Qtr/Qtr NW /-NW 4 Section 10 Township 10S Range
22E NE NE
Lease Serial Number UO 01197-#
API Number 4304752995

Casing – Time casing run starts, not cementing times.

- Production Casing
- Other

Date/Time _____ AM PM

BOPE

- Initial BOPE test at surface casing point
- Other

Date/Time 10/9/2013 18:00 AM PM

Rig Move

Location To: _____

Date/Time _____ AM PM

Remarks BOP TEST / TIME IS ESTIMATED

RECEIVED
OCT 08 2013
DIV. OF OIL, GAS & MINING

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# SST 8 Submitted By
JOSH SHEPPARD Phone Number 435- 828-0987
Well Name/Number NBU 1022-10A4CS
Qtr/Qtr NW /-NW 4 Section 10 Township 10S Range
22E NE NE
Lease Serial Number UO 01197-#
API Number 4304752995

Casing – Time casing run starts, not cementing times.

- Production Casing
- Other

Date/Time _____ AM PM

BOPE

- Initial BOPE test at surface casing point
- Other

Date/Time 10/9/2013 18:00 AM PM

Rig Move

Location To: _____

Date/Time _____ AM PM

Remarks BOP TEST / TIME IS ESTIMATED

RECEIVED
OCT 08 2013
DIV. OF OIL, GAS & MINING

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# SST 8 Submitted By
DALTON KING Phone Number 435- 828-0987
Well Name/Number NBU 1022-10A4CS
Qtr/Qtr NW / NW Section 10 Township 10S Range 22E
Lease Serial Number UO 01197-~~1~~
API Number 4304752995

Casing – Time casing run starts, not cementing times.

- Production Casing
- Other

Date/Time 10/14/2013 08:00 AM PM

BOPE

- Initial BOPE test at surface casing point
- Other

Date/Time _____ AM PM

Rig Move

Location To: NBU 1022-03C4CS

Date/Time 10/15/2012 07:00 AM PM

Remarks TIME IS ESTIMATED

RECEIVED
OCT 13 2013
DIV. OF OIL, GAS & MINING

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197-A	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
8. WELL NAME and NUMBER: NBU 1022-10A4CS	
9. API NUMBER: 43047529950000	
9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
COUNTY: UINTAH	
STATE: UTAH	

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. TYPE OF WELL Gas Well	3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	PHONE NUMBER: 720 929-6511
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0190 FNL 0775 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 10 Township: 10.0S Range: 22.0E Meridian: S	

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: 11/26/2013	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input checked="" type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 11/26/2013. 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

November 27, 2013

NAME (PLEASE PRINT) Teena Paulo	PHONE NUMBER 720 929-6236	TITLE Staff Regulatory Specialist
SIGNATURE N/A	DATE 11/27/2013	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
		5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01197-A
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 1022-10A4CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		9. API NUMBER: 43047529950000
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: 0190 FNL 0775 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 10 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 checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 11/29/2013 <input type="checkbox"/> SPUD REPORT Date of Spud: <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 checked="" type="checkbox"/> OTHER	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. FINISHED DRILLING TO 8710 ON 10/13/2013. CEMENTED PRODUCTION CASING. RELEASED SST 8 RIG ON 10/15/2013. DETAILS OF CASING AND CEMENT WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES. THE PIT ON THIS LOCATION WILL BE REFURBISHED AND UTILIZED AS PART OF THE ACTS SYSTEM.		
		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 09, 2014
NAME (PLEASE PRINT) Teena Paulo	PHONE NUMBER 720 929-6236	TITLE Staff Regulatory Specialist
SIGNATURE N/A		DATE 11/26/2013

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

1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: UT ST UO 01197-A ST
b. TYPE OF WORK: NEW WELL <input checked="" type="checkbox"/> HORIZ. LATS <input type="checkbox"/> DEEP-EN <input type="checkbox"/> RE-ENTRY <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER _____		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
2. NAME OF OPERATOR: KERR-MCGEE OIL AND GAS ONSHORE LP		7. UNIT or CA AGREEMENT NAME UTU63047A
3. ADDRESS OF OPERATOR: P.O. Box 173779 CITY Denver STATE Co ZIP 82017 PHONE NUMBER: 720-929-6000		8. WELL NAME and NUMBER: NBU 1022-10A4CS
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: NENE 190 FNL 775 FEL AT TOP PRODUCING INTERVAL REPORTED BELOW: NENE 1225 FNL 557 FEL AT TOTAL DEPTH: NENE 1225 FNL 546 FEL		9. API NUMBER: 43-047-52995
		10. FIELD AND POOL, OR WILDCAT Natural Buttes
		11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENE 10 10S 22E SLB
		12. COUNTY: UINTAH 13. STATE: UTAH

14. DATE SPUDDED: 6/24/2013	15. DATE T. D. REACHED: 10/13/2013	16. DATE COMPLETED: 11/26/2013	ABANDONED <input type="checkbox"/> READY TO PRODUCE <input checked="" type="checkbox"/>	17. ELEVATIONS (DF, RKB, RT, GL): 5086 RKB
18. TOTAL DEPTH: MD 8710 TVD 8551	19. PLUG BACK T.D.: MD 8640 TVD 8482	20. IF MULTIPLE COMPLETIONS, HOW MANY? *		21. DEPTH BRIDGE PLUG SET: MD TVD
22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) CBL/GR/CCL/TEMP			23. WAS WELL CORED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit analysis) WAS DST RUN? <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit report) DIRECTIONAL SURVEY? <input type="checkbox"/> YES <input checked="" type="checkbox"/> (Submit copy)	

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

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20	14 STL	36.7	0	40		28			
11	8.63 J-55	28	24	2319		825		0	
7.875	4.5 I-80	11.6	24	8688		1395		1360	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2.375	8109							

26. PRODUCING INTERVALS					27. PERFORATION RECORD				
FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS	
(A) MESAVERDE	6593	8592			6,593 8,592	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"/>

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

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
6593-8592	PUMP 10,048 BBL SLICKWATER and 197,150 LBS 30/50 SAND
	8 STAGES

29. ENCLOSED ATTACHMENTS: <input type="checkbox"/> ELECTRICAL/MECHANICAL LOGS <input type="checkbox"/> SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION <input type="checkbox"/> GEOLOGICAL REPORT <input type="checkbox"/> CORE ANALYSIS <input type="checkbox"/> DST REPORT <input type="checkbox"/> OTHER:	30. WELL STATUS: PRODUCING
---	--------------------------------------

31. INITIAL PRODUCTION

INTERVAL A (As shown in Item #26)

DATE FIRST PRODUCED: 11/26/2013	TEST DATE: 12/4/2013	HOURS TESTED: 24	TEST PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 2076	WATER - BBL: 0	PROD. METHOD: Flowing			
CHOKER SIZE: 20/64	TBG. PRESS. 1735	CSG. PRESS. 2384	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR RATES: →	OIL - BBL: 0	GAS - MCF: 2076	WATER - BBL: 0	INTERVAL STATUS Producing

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:			
CHOKER SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR 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:			
CHOKER SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR 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:			
CHOKER SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR 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	953
				BIRD'S NEST	1332
				MAHOGANY	1858
				WASATCH	4282
				MESAVERDE	6580

35. ADDITIONAL REMARKS (Include plugging procedures)

The first 210 ft. of the surface hole was drilled with a 12 1/4 in. bit. The remainder of surface hole was drilled with an 11 in. bit. DQX csg was run from surface to 5028 ft.; LTC csg was run from 5028 ft. to 8688 ft. 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) Kay Kelly

TITLE Sr Staff Regulatory Specialist

SIGNATURE *Kay Kelly*

DATE 12-19-2013

This report must be submitted within 30 days of

- completing or plugging a new well
- reentering a previously plugged and abandoned well
- drilling horizontal laterals from an existing well bore
- significantly deepening an existing well bore below the previous bottom-hole depth
- recompleting to a different producing formation
- 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 1022-10A4CS BLUE				Spud Date: 7/10/2013				
Project: UTAH-UINTAH			Site: NBU 1022-10A PAD			Rig Name No: PROPETRO 12/12, SST 8/8		
Event: DRILLING			Start Date: 6/17/2013			End Date: 10/15/2013		
Active Datum: RKB @5,086.00usft (above Mean Sea Level)				UWI: NE/NE/0/10/S/22/E/10/0/0/26/PM/N/190/E/0/775/0/0				

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/10/2013	10:30 - 12:00	1.50	MIRU	01	B	P	64	SKID RIG 10' / RIG UP DIVERTER & FLOW LINE. SPOT RIG MAT OVER WELL. SPOT RIG OVER WELL. SET CAT WALK & PIPE RACKS. HOOK UP AND PRIME PUMP.
	12:00 - 12:30	0.50	MIRU	23		P	64	PRE SPUD JOB SAFETY MEETING WITH RIG CREW, PEAK CREW, AND SCIENTIFIC CREW. REVIEW DIRECTIONAL PLANS WITH DIRECTIONAL DRILLERS PRIOR TO SPUD.
	12:30 - 13:00	0.50	DRLSUR	06	A	P	64	PICK UP 12 1/4" BIT & 8" MUD MOTOR. TRIP IN HOLE.
	13:00 - 14:00	1.00	DRLSUR	02	B	P	64	DRILL 12.25" SURFACE HOLE F/ 44'- T/ 210' BIT ROP= 166' @ 166 FPH WOB= 5-15K. RPM= TOP DRIVE~55 / MOTOR ~83 / TOTAL RPM~138 PUMPING 491 GPM @ 120 SPM STAND PIPE PRESSURE ON/OFF BOTTOM = 800/600 TORQUE ON/OFF BOTTOM = 2,700/700 UP/DN/ROT = 22/20/20 PEAK ON LINE MUD WT = 8.4
	14:00 - 14:30	0.50	DRLSUR	06	A	P	230	TRIP OUT OF HOLE. LAY DOWN 12 1/4" BIT
	14:30 - 15:30	1.00	DRLSUR	06	A	P	230	PICK UP 11" BIT & DIRECTIONAL ASSEMBLY, SCRIBE. TRIP IN HOLE
	15:30 - 0:00	8.50	DRLSUR	02	B	P	230	DRILL 11". SURFACE HOLE, F/ 210' - T/ 1,020', 810' @ 95.3 FPH WEIGHT ON BIT 18-25 K. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. PUMPING 491 GALLON PER MINUTE AT 120 STROKES PER MINUTES. PUMP PRESSURE ON/OFF(BOTTOM) 850/600 TORQUE ON OFF = 2,800/900 UP/DOWN/ ROT 60/50/55 K. DRAG 5 K. PEAK ON LINE MUD WT 8.4 SLID 121' = 14.7% 5.0' ABOVE AND 3.0' RIGHT OF THE LINE HOLE ISSUES: NONE
7/11/2013	0:00 - 6:00	6.00	DRLSUR	02	B	P	1100	DRILL 11". SURFACE HOLE, F/ 1,020' - T/ 1,580', 560' @ 93.3 FPH WEIGHT ON BIT 18-25 K. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. PUMPING 491 GALLON PER MINUTE AT 120 STROKES PER MINUTES. PUMP PRESSURE ON/OFF(BOTTOM) 1,110/850 TORQUE ON OFF = 3,000/1,000 UP/DOWN/ ROT 67/52/59 K. DRAG 8 K. PEAK ON LINE MUD WT 8.4 SLID 121' = 26.89% 2.2' ABOVE AND 0.5' RIGHT OF THE LINE HOLE ISSUES: NONE

Operation Summary Report

Well: NBU 1022-10A4CS BLUE		Spud Date: 7/10/2013	
Project: UTAH-UINTAH		Site: NBU 1022-10A PAD	Rig Name No: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start Date: 6/17/2013	End Date: 10/15/2013
Active Datum: RKB @5,086.00usft (above Mean Sea Level)		UWI: NE/NE/0/10/S/22/E/10/0/0/26/PM/N/190/E/0/775/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:00 - 0:00	18.00	DRLSUR	19	A	X	1600	DURING SLIDE, PIPE TORQUED UP CAUSING TOP DRIVE BACKBRAKE TO SLIP. DRILLER PICKED UP AND TORQUE UNSREWED PIPE AT SAVER SUB DROPPING IT DOWN HOLE. CALLED LOVEL. CHANGED OUT SAVER SUB & TRIPPED IN HOLE WITH DRILL PIPE TO 300'. DID NOT TOUCH ANYTHING. CALLED LOVEL. TRIPPED OUT. WAITED ON TOOLS. PICK UP 11" BIT & TRIP IN HOLE. TOOK 10M WEIGHT @ 223'. TRIP OUT. PICK UP 8 1/8" OVERSHOT AND TRIP IN HOLE. NO TAG @ 223'. KEEP GOING, TAG @ 487' AND LATCHED ON PIPE. WORKED PIPE TO 120M. FISH NOT MOVING. CALLED LOVEL AND DISCUSSED. LINED UP WEATHERFORD WIRELINE FOR FREE POINT AND BACK OFF. WAIT ON WIRELINE TRUCK. WEATHERFORD ON LOCATION AT 22:30. RIG UP WIRELINE AND RUN FREE POINT. FOUND PIPE FREE TO 1090', TOP OF DRILL COLLARS. 10' INTO DRILL COLLARS HAD NO MOVEMENT WITH 40,000 LBS OVER PULL.
7/12/2013	0:00 - 4:00	4.00	DRLSUR	19	A	X	1600	PULL WIRELINE FREE POINT OUT OF HOLE. RIG UP BACK-OFF SHOT AND RUN IN HOLE TO 1,090'. SET OFF CHARGE - NO BACK OFF. PULL WIRE LINE. WORK PIPE TO 120M - NO MOVEMENT. RIG UP SECOND SHOT AND RUN IN HOLE TO 1,090'. SET OFF CHARGE - NO BACK OFF. PULL WIRE LINE. WORK PIPE TO 120 K - NO PIPE MOVEMENT. RIG UP THIRD SHOT AND RUN IN HOLE TO 1,060'. SET OFF CHARGE - NO BACK OFF. PULL WIRE LINE. WORK PIPE TO 120K - NO PIPE MOVEMENT.
	4:00 - 9:00	5.00	DRLSUR	21	D	X	1600	WAIT ON WEATHERFORD DRILL COLLAR SEVERING CHARGE, ORDERED AT 02:00.
	9:00 - 11:00	2.00	DRLSUR	19	A	X	1600	CHARGE ON LOCATION @ 09:00. RIG UP CHARGE AND TRIP IN HOLE WITH WIRELINE TO 1,060'. SHOT WOULD NOT FIRE. PULL WIRE LINE OUT OF HOLE. REWIRED CHARGE. TRIP DRILL COLLAR SEVERING CHARGE BACK IN HOLE TO 1060'. SHOT PIPE INTO. PULL WIRE LINE OUT OFF HOLE.
	11:00 - 12:30	1.50	DRLSUR	19	A	X	1600	TRIP OUT OF HOLE. LAY DOWN DRILL PIPE, OVERSHOT & FISH. RECOVERED 22 JOINTS DRILL PIPE - 1 WITH BROKEN PIN & 1 WITH SHOT BOX END.
	12:30 - 14:00	1.50	DRLSUR	19	A	X	1600	RIG UP & RUN WEATHERFORD 3 1/8" COLLAR LOCATOR. FOUND TOP OF FISH 2 AT 607'. PULL WIRE LINE OUT OF HOLE AND RIG DOWN WEATHERFORD.
	14:00 - 17:30	3.50	DRLSUR	19	A	X	1600	PICK UP OVERSHOT ON DRILL PIPE AND TRIP IN HOLE TO 607'. SET DOWN OVER FISH - WORK PIPE FREE. TRIP OUT AND LAY DOWN FISH. RECOVERED 16 JTS DRILL PIPE.
	17:30 - 20:00	2.50	DRLSUR	19	A	X	1600	UNLOAD FISHING TOOLS FROM COWEE FISHING SERVICES & 6" DRILL COLLARS FROM PRO PETRO. STRAP & PICTURE ALL TOOLS & EQUIPMENT.

Operation Summary Report

Well: NBU 1022-10A4CS BLUE

Spud Date: 7/10/2013

Project: UTAH-UINTAH

Site: NBU 1022-10A PAD

Rig Name No: PROPETRO 12/12, SST 8/8

Event: DRILLING

Start Date: 6/17/2013

End Date: 10/15/2013

Active Datum: RKB @5,086.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/10/0/0/26/PM/N/190/E/0/775/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	20:00 - 0:00	4.00	DRLSUR	19	A	X	1600	PRE JOB SAFETY MEETIG. PICK UP SKIRTED MILL & BUMPER SUB AND TRIP IN HOLE. START WASHING TIGHT HOLE @ 223'. WASH & REAM SKIRTED MILL TOWARDS BOTTOM.
7/13/2013	0:00 - 4:30	4.50	DRLSUR	19	A	X	1600	TRIP IN HOLE WITH SKIRTED MILL / WASH & REAM FROM 223' TO 960'
	4:30 - 7:00	2.50	DRLSUR	06	J	X	1600	TRIP OUT WITH SKIRTED MILL / COULD NOT GET TO BOTTOM
	7:00 - 8:30	1.50	DRLSUR	06	J	X	1600	TRIP IN WITH JUNK MILL TO 1,060'
	8:30 - 12:30	4.00	DRLSUR	19	A	X	1600	MILL ON 4.5" DRILL PIPE. 1060 TO 1064'
	12:30 - 13:30	1.00	DRLSUR	06	J	X	1600	TRIP OUT OF HOLE / LAY DOWN MILL
	13:30 - 16:00	2.50	DRLSUR	06	J	X	1600	PICK UP OVERSHOT, JARS, ENERGIZER AND TRIP IN HOLE
	16:00 - 16:30	0.50	DRLSUR	19	A	X	1600	WORK OVERSHOT OVER FISH & JAR OFF THREE TIMES
	16:30 - 20:00	3.50	DRLSUR	06	J	X	1600	TRIP OUT OF HOLE WITH OVERSHOT / RECOVERED 1 JOINT OF DRILL PIPE
	20:00 - 22:00	2.00	DRLSUR	21	D	X	1600	WAIT ON GRAPPLE FOR OVERSHOT
	22:00 - 0:00	2.00	DRLSUR	06	J	X	1600	REDRESS OVERSHOT WITH 6 1/8" GRAPPLE AND TRIP IN HOLE
7/14/2013	0:00 - 3:00	3.00	DRLSUR	19	A	X	1600	WORK OVERSHOT DOWN OVER FISH / JAR UP AND WORK FISH LOOSE
	3:00 - 8:00	5.00	DRLSUR	06	G	X	1600	TRIP OUT OF HOLE / HOLE TIGHT FOR 300' / RECOVERED ALL BHA / BREAK AND LAY DOWN SRING FOR INSPECTION.
	8:00 - 11:00	3.00	DRLSUR	06	F	X	1600	PICK UP 9" MAGNET & JUNK BASKET AND TRIP IN HOLE FOR CLEAN OUT RUN / WASHED 38' TO BOTTOM / WORK BASKET & MAGNET
	11:00 - 13:30	2.50	DRLSUR	06	F	X	1600	TRIP OUT WITH MAGNET & JUNK BASKET. RECOVERED 20 PLUS LARGE PIECES OF METAL
	13:30 - 14:00	0.50	DRLSUR	07	A	X	1600	RIG SERVICE / GREASE & CHECK OILS IN TOP DRIVE
	14:00 - 17:30	3.50	DRLSUR	06	A	X	1600	PICK UP NEW BHA
	17:30 - 19:00	1.50	DRLSUR	21	D	X	1600	WAIT ON DRILL PIPE INSPECTION
	19:00 - 22:30	3.50	DRLSUR	06	A	X	1600	PJSM, TRIP IN HOLE
	22:30 - 0:00	1.50	DRLSUR	02	B	P	1600	DRILL 11". SURFACE HOLE, F/ 1,580' - T/ 1,595', 15' @ 10 FPH WEIGHT ON BIT 18-20 K. ROTARY RPM 45, MOTOR RPM 83, TOTAL RPM 138. PUMPING 491 GALLON PER MINUTE AT 120 STROKES PER MINUTES. PUMP PRESSURE ON/OFF(BOTTOM) 970/770 TORQUE ON OFF = 3,000/1,000 UP/DOWN/ ROT 70/50/61 K. DRAG 9 K. PEAK ON LINE MUD WT 8.4 SLID 15' = 100% 2.2' ABOVE AND 0.5' RIGHT OF THE LINE HOLE ISSUES: LOST CIRCULATION @ 1,580'

Operation Summary Report

Well: NBU 1022-10A4CS BLUE

Spud Date: 7/10/2013

Project: UTAH-UINTAH

Site: NBU 1022-10A PAD

Rig Name No: PROPETRO 12/12, SST 8/8

Event: DRILLING

Start Date: 6/17/2013

End Date: 10/15/2013

Active Datum: RKB @5,086.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/10/0/0/26/PM/N/190/E/0/775/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/15/2013	0:00 - 6:00	6.00	DRLSUR	02	B	P	1615	DRILL 11". SURFACE HOLE, F/ 1,595' - T/ 1,910', 315' @ 52.5 FPH WEIGHT ON BIT 18-25 K. ROTARY RPM 45, MOTOR RPM 83, TOTAL RPM 138. PUMPING 491 GALLON PER MINUTE AT 120 STROKES PER MINUTES. PUMP PRESSURE ON/OFF(BOTTOM) 1,100/900 TORQUE ON OFF = 3,000/1,000 UP/DOWN/ ROT 75/55/66 K. DRAG 9 K. PEAK ON LINE MUD WT 8.4 SLID 85' = 25.76% 3.5' BELOW AND 7.5' LEFT OF THE LINE HOLE ISSUES: LOST CIRCULATION @ 1,580'
	6:00 - 14:00	8.00	DRLSUR	02	B	P	1930	DRILL 11". SURFACE HOLE, F/ 1,910' - T/ 2,330', 420' @ 52.5 FPH WEIGHT ON BIT 18-25 K. ROTARY RPM 45, MOTOR RPM 83, TOTAL RPM 138. PUMPING 491 GALLON PER MINUTE AT 120 STROKES PER MINUTES. PUMP PRESSURE ON/OFF(BOTTOM) 1,120/950 TORQUE ON OFF = 3,000/1,000 UP/DOWN/ ROT 91/59/73 K. DRAG 18 K. PEAK ON LINE MUD WT 8.4 SLID 369' = 87.85% 17.0' BELOW AND 1.5' LEFT OF THE LINE HOLE ISSUES: LOST CIRCULATION @ 1,580'
	14:00 - 16:00	2.00	DRLSUR	05	C	P	2350	CIRCULATE AND CONDITION HOLE / PUMPING 491 GPM @ 120 SPM / RETURNS CLEAN COMING OVER SHAKERS / MUD TANKS FULL / 1 - 400 BBL UPRIGHT STORAGE TANKS 1/2 FULL / 5 - 400 BBL UPRIGHT STORAGE TANKS EMPTY
	16:00 - 20:30	4.50	DRLSUR	06	D	P	2350	LAY DOWN DRILL PIPE & BHA
	20:30 - 22:00	1.50	CSGSUR	12	A	P	2350	PRE JOB SAFETY MEETING WITH PRO PETRO RIG CREW. MOVE DRILL PIPE. MOVE PRO PETRO TRUCKS. MOVE PIPE RACKS AND CATWALK. RIG UP TO RUN SURFACE CASING. CLEAR UNRELATED TOOLS.
	22:00 - 0:00	2.00	CSGSUR	12	C	P	2350	RAN 52 JOINTS (2,298.67') OF 8-5/8", 28#, J-55, LT&C CASING WITH TOPCO FLOAT GUIDE SHOE AND BAFFLE PLATE LOCATED 1 JOINT ABOVE SHOE. 5 CENTRALIZERS SPACED 10' ABOVE SHOE, 2ND & 3RD COLLARS AND EVERY THIRD COLLAR TO 1,941'. LANDED CASING SHOE @ 2,298' KB. BAFFLE PLATE @ 2,252' KB.
7/16/2013	0:00 - 1:00	1.00	CSGSUR	12	C	P	2350	FINISH RUNNING CASING RAN 52 JOINTS (2,298.67') OF 8-5/8", 28#, J-55, LT&C CASING WITH TOPCO FLOAT GUIDE SHOE AND BAFFLE PLATE LOCATED 1 JOINT ABOVE SHOE. 5 CENTRALIZERS SPACED 10' ABOVE SHOE, 2ND & 3RD COLLARS AND EVERY THIRD COLLAR TO 1,941'. LANDED CASING SHOE @ 2,298' KB. BAFFLE PLATE @ 2,252' KB.

Operation Summary Report

Well: NBU 1022-10A4CS BLUE

Spud Date: 7/10/2013

Project: UTAH-UINTAH

Site: NBU 1022-10A PAD

Rig Name No: PROPETRO 12/12, SST 8/8

Event: DRILLING

Start Date: 6/17/2013

End Date: 10/15/2013

Active Datum: RKB @5,086.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/10/0/0/26/PM/N/190/E/0/775/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	1:00 - 3:30	2.50	CSGSUR	12	E	P	2350	<p>PRE JOB SAFETY MEETING WITH PRO PETRO CEMENTERS.</p> <p>RAN 200' OF 1". PIPE DOWN BACK-SIDE OF CASING.</p> <p>PRESSURE TEST LINES TO 1500 PSI.</p> <p>PUMP 160 BBLS OF FRESH WATER CLEARING SHOE.</p> <p>MIX AND PUMP 20 BBLS OF GEL WATER FLUSH AHEAD OF CEMENT.</p> <p>MIX AND PUMP 300 SX OF PREMIUM CEMENT WITH 2% CACL2 & 0.25 LB/SX FLOCELE. 61.4 BBLS OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX.</p> <p>DROP PLUG ON FLY.</p> <p>DISPLACE WITH 140.5 BBLS OF FRESH WATER. NO RETURNS THROUGH OUT JOB.</p> <p>FINAL LIFT OF 203 PSI AT 4 BBL/MINUTE. DID NOT BUMPED PLUG .</p> <p>TESTED FLOAT AND FLOAT HELD.</p> <p>RELEASE RIG @ 03:30, 7/16/2013</p> <p>TOP JOB # 1: PUMP CEMENT DOWN ONE INCH PIPE WITH 150 SX PREMIUM CEMENT WITH 4% CACL2, 3% GR-3, & .25 LB/SX FLOCELE, 30.7 BBLS OF SLURRY MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. NO CEMENT RETURNS TO SURFACE. WAIT ON CEMENT 2 HOURS.</p> <p>TOP JOB # 2: CEMENT DOWN BACKSIDE WITH 325 SX PREMIUM CEMENT WITH 4% CACL2, 2% GR-3, & .25 LB/SX FLOCELE. 66.5 BBLS OF SLURRY MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. 2 BBLS CEMENT RETURNS TO SURFACE. CEMENT FALLING BACK.</p> <p>RIG DOWN PRO PETRO CEMENTERS.</p> <p>CEMENT JOB FINISHED @ 06:30 7/16/2013</p> <p>NOTE: TOPPED OFF CEMENT WITH 1 1/2 YARDS READY MIX ON 7/25/2013</p>
10/9/2013	18:00 - 20:00	2.00	MIRU3	08	A	Z	2350	<p>*** WE HAD AN SST LOADER BROKEN DOWN ALL DAY IN THE WAY FOR SETTING MATS AND SKID RAILS. HAD TO HAVE IT DRUG OUT AND LOADED UP TO START PREPPING TO SKID.</p>
	20:00 - 23:30	3.50	MIRU3	01	B	P	2350	<p>PREP TO SKID THE RIG:</p> <p>WE HAD A VERY SMALL LOCATION AND HAD TO BRING MATS AND SKID RAILS FROM ANOTHER LOCATION, ALSO HAD TO WORK AROUND A PIPELINE RISER THAT WAS IN THE TRAVEL PATH BY THE CATWALK..</p>
	23:30 - 0:00	0.50	MIRU3	01	C	P	2350	<p>SKID THE RIG TO THE NBU 1022-1A4CS AND CENTER THE RIG OVER THE WELLBORE</p>
10/10/2013	0:00 - 0:30	0.50	MIRU3	01	C	P	2350	<p>FINISH SKIDING THE RIG</p>
	0:30 - 2:30	2.00	MIRU3	01	B	P	2350	<p>RIG UP THE CATWALK, STAIRS, MUD LINE</p>
	2:30 - 4:30	2.00	PRSPD	14	A	P	2350	<p>NIPPLE UP THE BOP , CHOKE AND FLOW LINE</p>

Operation Summary Report

Well: NBU 1022-10A4CS BLUE		Spud Date: 7/10/2013	
Project: UTAH-UINTAH		Site: NBU 1022-10A PAD	Rig Name No: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start Date: 6/17/2013	End Date: 10/15/2013
Active Datum: RKB @5,086.00usft (above Mean Sea Level)		UWI: NE/NE/0/10/S/22/E/10/0/0/26/PM/N/190/E/0/775/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	4:30 - 8:00	3.50	PRSPD	15	A	P	2350	HELD A SAFETY MEETING WITH A-1 TESTER, FILL THE TRUCK WITH WATER, RIGGED UP TESTER TESTING CASING AND CHOKE TO 1500 PSI FOR 30 MINUTES. TEST ANNULAR TO 2500 PSI FOR 10 MIN AND 250 PSI FOR 5 MINUTES. TEST I-BOP VALVE, FLOOR VALVE, DART VALVE, PIPE AND BLIND RAMS, INSIDE AND OUTSIDE KILL LINE VALVES INSIDE OUTSIDE CHOKE LINE VALVE, HCR VALVE, CHOKE LINE, CHOKE MANIFOLD VALVES TO 5000 PSI FOR 10 MINUTES AND 250 PSI FOR 5 MINUTES.
	8:00 - 9:30	1.50	PRSPD	07	C	P	2350	CHANGE OUT THE WASHPIPE AND PACKING
	9:30 - 10:00	0.50	PRSPD	14	B	P	2350	INSTALL THE WEAR BUSHING
	10:00 - 14:00	4.00	PRSPD	06	A	P	2350	PICK UP AND SCRIBE THE DIRECTIONAL BHA TRIP IN THE HOLE AND TAG @ 2317'
	14:00 - 14:30	0.50	PRSPD	07	A	P	2350	RIG SERVICE
	14:30 - 16:00	1.50	DRLPRC	02	F	P	2350	DRILLED THE SHOE TRACK PUMP 80 STK PUMP RATE 336 MOTOR RPM 94 ROTARY 40 WEIGHT ON BIT 10-12K
	16:00 - 0:00	8.00	DRLPRC	02	B	P	2350	DRILL SLIDE F/ 2350' - 3384' (1034' @ 129.25' / HR) WEIGHT ON BIT 18-20 K. AVERAGE WOB 20K ROTARY RPM 65, MUD MOTOR RPM 145. STROKES PER MINUTE 124 GALLONS PER MINUTE 520 OFF/ON PSI 1250 / 1650 DIFFERENTIAL 400 TORQUE HIGH/LOW 7000/9000 OFF BOTTOM TORQUE 6000 STRING WEIGHT UP/DOWN/ROT 105/85/95. DRAG 10 K BOS DEWATER AS NEEDED WT 8.7 VIS 31. ///// DRILLING WITH FLOWZAN MUD CHEM ///// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 60 BBL. FLUID FOR HOLE VOLUME 30 BARRELS LOSSES @ 4 BBL/HR NO FLARE BIT POSITION: MD: 3384' Low 8.29' Right 9.98' Proposal Footage Feet% Total: 1034' Slide: 291'=28.1 % Rotate: 743'= 71.9% Time/Min/Hrs%:1600 Hrs-2400 Hrs = 8.0 Hrs. Total Drilling: 6.25 hrs: Total Conn/Ream/Rig Time: 1.75 hrs= 21.9% Slide: 2.92 hrs= 46.7 % Rotate: 3.33 hrs= 52.3 %

Operation Summary Report

Well: NBU 1022-10A4CS BLUE		Spud Date: 7/10/2013	
Project: UTAH-UINTAH	Site: NBU 1022-10A PAD	Rig Name No: PROPETRO 12/12, SST 8/8	
Event: DRILLING	Start Date: 6/17/2013	End Date: 10/15/2013	
Active Datum: RKB @5,086.00usft (above Mean Sea Level)		UWI: NE/NE/0/10/S/22/E/10/0/0/26/PM/N/190/E/0/775/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/11/2013	0:00 - 5:00	5.00	DRLPRC	02	B	P	3384	DRILL SLIDE F/ 3384' - 4050' (666' @ 133.2' / HR) WEIGHT ON BIT 18-20 K. AVERAGE WOB 20K ROTARY RPM 65, MUD MOTOR RPM 145. STROKES PER MINUTE 124 GALLONS PER MINUTE 520 OFF/ON PSI 1250 / 1650 DIFFERENTIAL 400 TORQUE HIGH/LOW 8000/10000 OFF BOTTOM TORQUE 7000 STRING WEIGHT UP/DOWN/ROT 105/85/95. DRAG 10 K BOS DEWATER AS NEEDED WT 8.7 VIS 31. ///// DRILLING WITH FLOWZAN MUD CHEM ///// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 40 BBL. FLUID FOR HOLE VOLUME 30 BARRELS LOSSES @ 6 BBL/HR NO FLARE BIT POSITION: MD: 4050' Low 16.91' Right 3.97' Proposal Footage Feet% Total: 666' Slide:167=25 % Rotate: 499'= 75% Time/Min/Hrs%:0000 Hrs-0500 Hrs = 5.0 Hrs. Total Drilling: 4.33 hrs: Total Conn/Ream/Rig Time: .67 hrs= 13.4% Slide: 2.17 hrs= 50 % Rotate: 2.17 hrs= 50 %

Operation Summary Report

Well: NBU 1022-10A4CS BLUE		Spud Date: 7/10/2013	
Project: UTAH-UINTAH		Site: NBU 1022-10A PAD	Rig Name No: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start Date: 6/17/2013	End Date: 10/15/2013
Active Datum: RKB @5,086.00usft (above Mean Sea Level)		UWI: NE/NE/0/10/S/22/E/10/0/0/26/PM/N/190/E/0/775/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	5:00 - 15:00	10.00	DRLPRC	02	B	P	4050	DRILL SLIDE F/ 4050' - 5383' (1333' @ 133.3' / HR) WEIGHT ON BIT 18-20 K. AVERAGE WOB 20K ROTARY RPM 60 - 70, MUD MOTOR RPM 145. STROKES PER MINUTE 124 GALLONS PER MINUTE 520 OFF/ON PSI 1550 / 2050 DIFFERENTIAL 500 TORQUE HIGH/LOW 8000/10000 OFF BOTTOM TORQUE 7000 STRING WEIGHT UP/DOWN/ROT 105/85/95. DRAG 10 K BOS DEWATER AS NEEDED WT 8.7 VIS 31. ///// DRILLING WITH FLOWZAN MUD CHEM ///// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 40 BBL. FLUID FOR HOLE VOLUME 30 BARRELS LOSSES @ 6 BBL/HR NO FLARE BIT POSITION: MD: 5383' East 2.55' South 2.56' PBHL Footage Feet% Total: 1333' Slide: 105= 8% Rotate: 1228'= 92% Time/Min/Hrs%:0500 Hrs-1530 Hrs = 10.5 Hrs. Total Drilling: 8.75 hrs: Total Conn/Ream/Rig Time: 1.75 hrs= 16.6% Slide: 1.83 hrs= 20.9 % Rotate: 6.91 hrs= 79.1 % Projection to Bit from Last Survey MD: 5383' East 2.55' Right 2.56' PBHL
	15:00 - 15:30	0.50	DRLPRC	07	A	P	5383	RIG SERVICE

Operation Summary Report

Well: NBU 1022-10A4CS BLUE		Spud Date: 7/10/2013	
Project: UTAH-UINTAH		Site: NBU 1022-10A PAD	Rig Name No: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start Date: 6/17/2013	End Date: 10/15/2013
Active Datum: RKB @5,086.00usft (above Mean Sea Level)		UWI: NE/NE/0/10/S/22/E/10/0/0/26/PM/N/190/E/0/775/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	15:30 - 0:00	8.50	DRLPRV	02	B	P		DRILL SLIDE F/ 5383' -6280 (897' @ 105.5' / HR) WEIGHT ON BIT 18-20 K. AVERAGE WOB 20K ROTARY RPM 60 - 70, MUD MOTOR RPM 145. STROKES PER MINUTE 124 GALLONS PER MINUTE 520 OFF/ON PSI 1700 / 2100 DIFFERENTIAL 400 TORQUE HIGH/LOW 11000/14000 OFF BOTTOM TORQUE 10000 STRING WEIGHT UP/DOWN/ROT 175/110/130. DRAG 45 K BOS DEWATER AS NEEDED WT 9.0 VIS 34. ///// DRILLING WITH FLOWZAN MUD CHEM ///// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 50 BBL. FLUID FOR HOLE VOLUME 30 BARRELS LOSSES @ 4 BBL/HR NO FLARE BIT POSITION: MD: 6280' West 10.85' South 0.74' PBHL Footage Feet% Total: 897' Slide: 48=5.4 % Rotate: 849'= 94.6% Time/Min/Hrs%:1530 Hrs-2400 Hrs = 8.5 Hrs. Total Drilling: 6.80 hrs: Total Conn/Ream/Rig Time: 1.7 hrs= 16.6% Slide: 1.55 hrs= 22.8 % Rotate: 5.25 hrs= 77.2 %

Operation Summary Report

Well: NBU 1022-10A4CS BLUE		Spud Date: 7/10/2013	
Project: UTAH-UINTAH	Site: NBU 1022-10A PAD	Rig Name No: PROPETRO 12/12, SST 8/8	
Event: DRILLING	Start Date: 6/17/2013	End Date: 10/15/2013	
Active Datum: RKB @5,086.00usft (above Mean Sea Level)		UWI: NE/NE/0/10/S/22/E/10/0/0/26/PM/N/190/E/0/775/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/12/2013	0:00 - 5:00	5.00	DRLPRV	02	B	P	6280	DRILL SLIDE F/ 6280' - 6700' (420' @ 84' / HR) WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 60 - 70, MUD MOTOR RPM 145. STROKES PER MINUTE 124 GALLONS PER MINUTE 520 OFF/ON PSI 1700 / 2100 DIFFERENTIAL 400 TORQUE HIGH/LOW 11000/14000 OFF BOTTOM TORQUE 10000 STRING WEIGHT UP/DOWN/ROT 175/110/130. DRAG 45 K BOS DEWATER AS NEEDED WT 9.0 VIS 34. ///// DRILLING WITH FLOWZAN MUD CHEM ///// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 25 BBL. FLUID FOR HOLE VOLUME 50 BARRELS LOSSES @ 10 BBL/HR NO FLARE BIT POSITION: MD: 6700' West 12.8' North 3.52' PBHL Footage Feet% Total: 420' Slide: 24 =5.7 % Rotate: 396' = 94.3% Time/Min/Hrs%:0000 Hrs-0500 Hrs = 5.0 Hrs. Total Drilling: 4.42 hrs: Total Conn/Ream/Rig Time: .58 hrs= 11.6% Slide: 1.17 hrs= 26.5 % Rotate: 3.25 hrs= 73.5 % Projection to Bit from Last Survey MD: 6700' West 12.8' North 3.52' PBHL

Operation Summary Report

Well: NBU 1022-10A4CS BLUE		Spud Date: 7/10/2013	
Project: UTAH-UINTAH		Site: NBU 1022-10A PAD	Rig Name No: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start Date: 6/17/2013	End Date: 10/15/2013
Active Datum: RKB @5,086.00usft (above Mean Sea Level)		UWI: NE/NE/0/10/S/22/E/10/0/0/26/PM/N/190/E/0/775/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	5:00 - 16:00	11.00	DRLPRV	02	B	P	6280	DRILL SLIDE F/ 6700' - 7666' (966' @ 87.8' / HR) WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 60 - 70, MUD MOTOR RPM 145. STROKES PER MINUTE 124 GALLONS PER MINUTE 520 OFF/ON PSI 1700 / 2100 DIFFERENTIAL 400 TORQUE HIGH/LOW 18000/13000 OFF BOTTOM TORQUE 10000 STRING WEIGHT UP/DOWN/ROT 190/130/145. DRAG 45 K BOS DEWATER AS NEEDED WT 9.0 VIS 34. ///// DRILLING WITH FLOWZAN MUD CHEM ///// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 60 BBL. FLUID FOR HOLE VOLUME 85 BARRELS LOSSES @ 8 BBL/HR NO FLARE TOOK 260 BBL. OF 12.0 MUD TO BLEND FOR LIGHT MUD UP (SAVED 3 HOURS WORK) BIT POSITION: MD: 7666' West 5.91' North 17.77' PBHL Footage Feet% Total: 966' Slide: 54 =5.6 % Rotate: 912' = 94.4% Time/Min/Hrs%:0500 Hrs-1630 Hrs = 11.5 Hrs. Total Drilling: 10.08 hrs: Total Conn/Ream/Rig Time: 1.42 hrs= 12.3% Slide: 2.5 hrs= 24.8 % Rotate: 7.58 hrs= 75.2 % Projection to Bit from Last Survey MD: 7666' West 5.91' North 17.77' PBHL RIG SERVICE
	16:00 - 16:30	0.50	DRLPRV	07	A	P		

Operation Summary Report

Well: NBU 1022-10A4CS BLUE		Spud Date: 7/10/2013	
Project: UTAH-UINTAH		Site: NBU 1022-10A PAD	Rig Name No: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start Date: 6/17/2013	End Date: 10/15/2013
Active Datum: RKB @5,086.00usft (above Mean Sea Level)		UWI: NE/NE/0/10/S/22/E/10/0/0/26/PM/N/190/E/0/775/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	16:30 - 0:00	7.50	DRLPRV	02	B	P	6700	DRILL SLIDE F/ 7666' - 8332' (666' @ 88.8' / HR) WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 60 - 70, MUD MOTOR RPM 145 / 129 STROKES PER MINUTE 124 / 110 GALLONS PER MINUTE 520 / 460 OFF/ON PSI 1700 / 2100 /// 2200 / 2600 DIFFERENTIAL 400 TORQUE HIGH/LOW 18000/13000 // 16000 / 14000 OFF BOTTOM TORQUE 12000 STRING WEIGHT UP/DOWN/ROT 200/130/155. DRAG 45 K BOS DEWATER AS NEEDED WT 9.0 VIS 34. ///// DRILLING WITH FLOWZAN MUD CHEM ///// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 40 BBL. FLUID FOR HOLE VOLUME 30 BARRELS LOSSES @ 5 BBL/HR 3'-8' FLARE AFTER LIGHT MUD UP LIGHT MUD UP TO 9.9 @ 7860' HEAVY MUD UP TO 11.5 @ 8237' LOST APP. 80 BBL. ON HEAVY MUD UP BIT POSITION: MD: 8332' West 2.63' North 12.01' PBHL Footage Feet% Total: 666' Slide: 0 =0 % Rotate: 666'= 100% Time/Min/Hrs%:1630 Hrs 2400 Hrs = 7.5 Hrs. Total Drilling: 7.0 hrs: Total Conn/Ream/Rig Time: .50 hrs= 6.6% Slide: 0 hrs= 0 % Rotate: 7.0 hrs= 100 % Projection to Bit from Last Survey MD: 8332' West 2.63' North 12.01' PBHL

Operation Summary Report

Well: NBU 1022-10A4CS BLUE		Spud Date: 7/10/2013	
Project: UTAH-UINTAH		Site: NBU 1022-10A PAD	Rig Name No: PROPETRO 12/12, SST 8/8
Event: DRILLING		Start Date: 6/17/2013	End Date: 10/15/2013
Active Datum: RKB @5,086.00usft (above Mean Sea Level)		UWI: NE/NE/0/10/S/22/E/10/0/0/26/PM/N/190/E/0/775/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/13/2013	0:00 - 6:00	6.00	DRLPRV	02	B	P	8332	DRILL SLIDE F/ 8332' - 8710' (378' @ 63' / HR) WEIGHT ON BIT 18-22 K. AVERAGE WOB 20K ROTARY RPM 60 - 70, MUD MOTOR RPM 129 STROKES PER MINUTE 110 GALLONS PER MINUTE 460 OFF/ON PSI 2200 / 2600 DIFFERENTIAL 400 TORQUE HIGH/LOW 16000 / 14000 OFF BOTTOM TORQUE 12000 STRING WEIGHT UP/DOWN/ROT 200/130/155. DRAG 45 K BOS DEWATER AS NEEDED WT 9.0 VIS 34. ///// DRILLING WITH FLOWZAN MUD CHEM ///// PUMP LCM SWEEPS TO HELP WITH LOSSES. USED 20 BBL. FLUID FOR HOLE VOLUME 15 BARRELS LOSSES @ 2 BBL/HR NO FLARE HEAVY MUD UP TO 11.5 @ 8237' LOST APP. 80 BBL. ON HEAVY MUD UP BIT POSITION: MD: 8710' West 1.29' North 3.76' PBHL Footage Feet% Total: 378' Slide: 0 =0 % Rotate: 378'= 100% Time/Min/Hrs%:0000 Hrs 0600 Hrs = 6.0 Hrs. Total Drilling: 5.42 hrs: Total Conn/Ream/Rig Time: .58 hrs= 9.6% Slide: 0 hrs= 0 % Rotate: 5.42 hrs= 100 % Projection to Bit from Last Survey MD: 8710' West 1.29' North 3.76' PBHL
	6:00 - 8:00	2.00	DRLPRV	05	C	P	8710	CIRCULATE AND CONDITION THE MUD FOR A THRU-BIT LOGGING RUN
	8:00 - 15:30	7.50	DRLPRV	06	A	P	8710	TRIPPED OUT OF THE HOLE AND LAYED DOWN THE DIRECTIONAL ASSEMBLY WE HAD TO BACKREAM SEVERAL SPOTS FROM 4800' - 4100'
	15:30 - 18:00	2.50	EVALPR	06	B	P	8710	PICKED UP THE THRU-BIT LOGGING BHA AND TRIPPED IN THE HOLE 2254'
	18:00 - 19:30	1.50	EVALPR	09	A	P	8710	SLIP AND CUT 192' OF DRILLING LINE
	19:30 - 22:30	3.00	EVALPR	06	B	P	8710	TRIP IN THE HOLE WITH THE THRU-BIT LOGGING ASSEMBLY
	22:30 - 0:00	1.50	EVALPR	05	C	P	8710	CIRCULATE THE GAS UP AND CONDITION THE HOLE FOR LOGGING. 8' FLARE ON BOTTOMS UP.

Operation Summary Report

Well: NBU 1022-10A4CS BLUE

Spud Date: 7/10/2013

Project: UTAH-UINTAH

Site: NBU 1022-10A PAD

Rig Name No: PROPETRO 12/12, SST 8/8

Event: DRILLING

Start Date: 6/17/2013

End Date: 10/15/2013

Active Datum: RKB @5,086.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/10/0/0/26/PM/N/190/E/0/775/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/14/2013	0:00 - 3:00	3.00	EVALPR	11	D	P	8710	WE HELD A SAFETY MEETING WITH THU-BIT LOGGING BROKE THE TOP DRIVE OFF, RIGGED UP THE PUMPING T AND RAN IN TO DEPLOY THE TOOLS. CIRCULATED AT 3 BBL./ MIN. WHILE DEPLOYING THE TOOL AND ATTEMPTED TO ROTATE INTERMITTENTLY. WE COULD NOT ROCK THE PIPE WITH THE ROTARY TABLE DUE TO TOURQUE (APPROX. 17-18K). DEPLOYED THE TOOL AND PULLED THE WIRELINE. BIT WAS @ 8630'
	3:00 - 4:00	1.00	EVALPR	22	A	X	8710	*** WORKING STUCK PIPE AND CIRCULATING WE COULD NOT WORK THE DOWN DUE TO THE LOGGING TOOL BEING DEPLOYED. CALLED KENNY AND LOVEL JOHN TUCKWILLER SAID TO SKIP THE LOGS AND RUN CASING
	4:00 - 7:00	3.00	EVALPR	11	D	P	8710	RIGGED UP THRU-BIT AND WENT IN TO RETRIEVE THE LOGGING TOOLS
	7:00 - 10:00	3.00	DRLPRV	05	C	P	8710	WORKED THE PIPE DOWN A FEW TIMES AND FREED IT UP, CIRCULATED THE HOLE WHILE WE FINISHED RIGGING DOWN AND MOVING THE LOGGING TRUCK. HELD A SAFETY MEETING AND RIGGED UP KIMZEY'S LAYDOWN TRUCK. WE HAD SOME SLOUGHING SHALE 1/8 - 1/2" GRAVEL SIZE RETURNED OVER THE SHAKERS AND CIRCULATED TO CLEAN IT UP.
	10:00 - 19:00	9.00	DRLPRV	06	A	P	8710	PUMPED OUT 6 STANDS AND PROCEEDED LAYING DOWN DRILL PIPE
	19:00 - 19:30	0.50	DRLPRV	14	B	P	8710	PULL THE WEAR BUSHING
	19:30 - 0:00	4.50	CSGPRO	12	C	P	8710	HOLD A SAFETY MEETING WITH KIMZEY CASING RIG UP THE CASING CREW AND SET LATDOWN TRUCK TO RUN CASING MIDNIGHT CASING DEPTH 3832'
10/15/2013	0:00 - 2:30	2.50	CSGPRO	12	C	P	8710	FINISH RUNNING 198 TOTAL JTS. OF CASING (83 JOINTS OF 4.5"/11.6# / I-80/ LTC + 1 MARKER) + (113 JTS. OF 4.5"/ 11.6# / I-80/ DQX + 1-DQX CROSS OVER). LANDED @ 8687.65', FLOAT COLLAR @ 8640.34', MESA VERDE MARKER @ 6548.45', CROSS OVER JT. @ 5006.53
	2:30 - 4:00	1.50	CSGPRO	05	D	P	8710	CIRCULATED THE CASING ON BOTTOM PUMP 80 STROKES 335 GPM 530 PSI NO FLARE ON BOTTOMS UP RIG DOWN KIMZEY CASING SAFETY MEETING WITH BJ CEMENTERS

Operation Summary Report

Well: NBU 1022-10A4CS BLUE				Spud Date: 7/10/2013				
Project: UTAH-UINTAH			Site: NBU 1022-10A PAD			Rig Name No: PROPETRO 12/12, SST 8/8		
Event: DRILLING			Start Date: 6/17/2013		End Date: 10/15/2013			
Active Datum: RKB @5,086.00usft (above Mean Sea Level)				UWI: NE/NE/0/10/S/22/E/10/0/0/26/PM/N/190/E/0/775/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	4:00 - 7:00	3.00	CSGPRO	12	E	P	8710	PRESSURE TEST TO 4700 PSI. PUMP 25 BBLS OF FRESH WATER. PUMP 165 BBLS (410 SX) OF PREMIUM LITE II LEAD CEMENT, 12.0 PPG 2.26 YLD, .05 LB/SACK OF STATIC FREE + .2%BWOC R-3 +.25 LBS/SACK CELLO FLAKE + 5 LBS/SACK KOL-SEAL + .6% BWOC FL-52 + .4%BWOC SODIUM METASILICATE + 6% BWOC BENTONITE + %FRESH WATER . FOLLOWED BY 231 BBLS (985 SX) OF 14.3# 1.32 YD 5.92 GAL/SK. POZ 50/50 TAIL CEMENT + 2% BWOC BENTONITEII + .005 LB/SACK STATIC FREE + 10% BWOW SODIUM CHLORIDE + .55%BWOC R-3 + .002GPS FP-6L + 58.8% FRESH WATER . SHUT DOWN AND FLUSH LINES. DROP PLUG AND DISPLACE W/ 134 BBLS OF FRESH WATER TREATED WITH CLAYFIX AND MAGNACIDE. FULL RETURNS WITH 22 BBLS OF WATER AND NO CEMENT. LIFT PSI OF 2420 / BUMP PLUG 2950 PSI. . PRESSURE HELD 5 MINS. FLOAT HELD. FLOW BACK 1.5 BBLS. EST. TOC FOR LEAD 70', EST TOC FOR TAIL 3760'. RIG DOWN CEMENTERS.
	7:00 - 8:00	1.00	CSGPRO	14	B	P	8710	SET THE PACK OFF
	8:00 - 9:00	1.00	RDMO	14	A	P	8710	NIPPLE DOWN THE BOP, CHOKE AND FLOW LINE
	9:00 - 12:00	3.00	RDMO	01	E	P	8710	RIG DOWN AND CLEAN THE MUD TANKS RIG RELEASED @12:00

US ROCKIES REGION

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 1022-10A4CS BLUE	Wellbore No.	OH
Well Name	NBU 1022-10A4CS	Wellbore Name	NBU 1022-10A4CS
Report No.	1	Report Date	11/18/2013
Project	UTAH-JINTAH	Site	NBU 1022-10A PAD
Rig Name/No.		Event	COMPLETION
Start Date	11/11/2013	End Date	11/26/2013
Spud Date	7/10/2013	Active Datum	RKB @5.086.00usft (above Mean Sea Level)
UWI	NE/NE/010/S/22/E/10/0/0/26/PMN/190/E/0/775/0/0		

1.3 General

Contractor		Job Method		Supervisor	
Perforated Assembly		Conveyed Method			

1.4 Initial Conditions

Fluid Type		Fluid Density		Gross Interval	6,593.0 (usft)-8,592.0 (usft)	Start Date/Time	11/19/2013 12:00AM
Surface Press		Estimate Res Press		No. of Intervals	45	End Date/Time	11/19/2013 12:00AM
TVD Fluid Top		Fluid Head		Total Shots	192	Net Perforation Interval	62.00 (usft)
Hydrostatic Press		Press Difference		Avg Shot Density	3.10 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL					Final Press Date	

1.5 Summary

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
11/19/2013 12:00AM	MESAVERDE/			6,593.0	6,596.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N

US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
11/19/2013 12:00AM	MESAVERDE/			6,833.0	6,836.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
11/19/2013 12:00AM	MESAVERDE/			6,861.0	6,862.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/2013 12:00AM	MESAVERDE/			6,870.0	6,871.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/2013 12:00AM	MESAVERDE/			6,928.0	6,930.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/2013 12:00AM	MESAVERDE/			6,934.0	6,936.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/2013 12:00AM	MESAVERDE/			7,056.0	7,058.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/2013 12:00AM	MESAVERDE/			7,118.0	7,119.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/2013 12:00AM	MESAVERDE/			7,140.0	7,141.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/2013 12:00AM	MESAVERDE/			7,153.0	7,154.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/2013 12:00AM	MESAVERDE/			7,168.0	7,169.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/2013 12:00AM	MESAVERDE/			7,224.0	7,225.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/2013 12:00AM	MESAVERDE/			7,236.0	7,237.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/2013 12:00AM	MESAVERDE/			7,246.0	7,248.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/2013 12:00AM	MESAVERDE/			7,324.0	7,325.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
11/19/201 3 12:00AM	MESAVEERDE/			7,347.0	7,348.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			7,384.0	7,385.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			7,414.0	7,415.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			7,442.0	7,444.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			7,484.0	7,486.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			7,551.0	7,552.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			7,580.0	7,581.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			7,601.0	7,602.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			7,730.0	7,731.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			7,754.0	7,756.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			7,792.0	7,794.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			7,860.0	7,861.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			7,880.0	7,881.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			7,969.0	7,970.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

RECEIVED: Dec. 19, 2013

US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
11/19/201 3 12:00AM	MESAVEERDE/			8,017.0	8,018.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			8,048.0	8,049.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			8,065.0	8,066.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			8,078.0	8,079.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			8,100.0	8,101.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			8,135.0	8,136.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			8,193.0	8,194.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			8,218.0	8,220.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			8,274.0	8,276.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			8,319.0	8,321.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			8,435.0	8,436.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			8,472.0	8,473.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			8,544.0	8,545.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVEERDE/			8,560.0	8,561.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

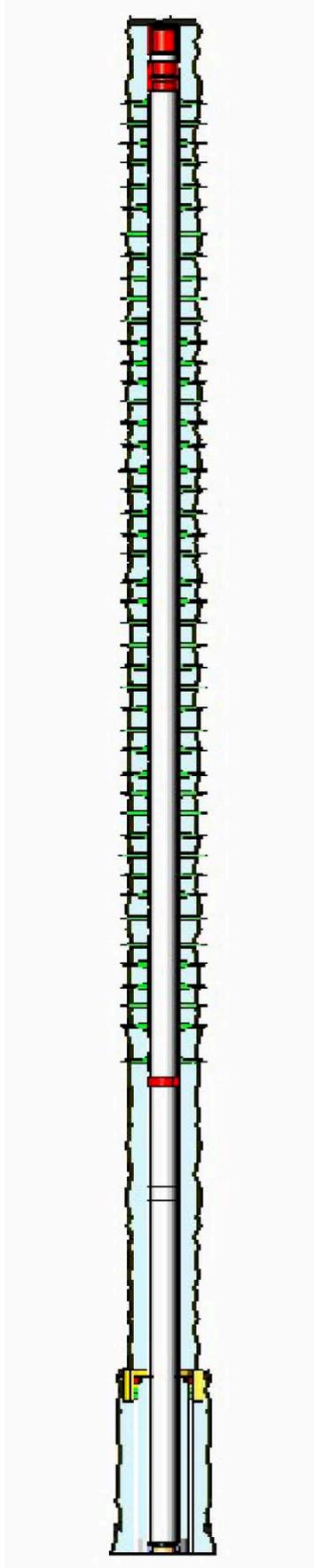
US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
11/19/201 3 12:00AM	MESAVERDE/			8,569.0	8,571.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
11/19/201 3 12:00AM	MESAVERDE/			8,590.0	8,592.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

3 Plots

3.1 Wellbore Schematic



RECEIVED: Dec. 19, 2013

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-10A4CS BLUE			Spud Date: 7/10/2013		
Project: UTAH-UINTAH		Site: NBU 1022-10A PAD		Rig Name No: GWS 1/1	
Event: COMPLETION		Start Date: 11/11/2013		End Date: 11/26/2013	
Active Datum: RKB @5,086.00usft (above Mean Sea Level)			UWI: NE/NE/0/10/S/22/E/10/0/0/26/PM/N/190/E/0/775/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/31/2013	-							
11/11/2013	8:00 - 9:00	1.00	SUBSPR	52	B	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -71 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. PRESSURE TEST 8 5/8 X 4 1/2 TO 526 PSI HELD FOR 5 MIN LOST -26 PSI, BLED PSI OFF, REINSTALLED POP OFF SWIFN 50 # PRESSURE ON SURFACE CASING FILLED SURFACE WITH 1 BBL H2O
11/18/2013	8:30 - 10:00	1.50	SUBSPR	37		P		PERF STG 1)PU 3 1/8 EXP GUN, 19 GM, .40 HOLE SIZE. RIH PERFWELL, AS PER PERF DESIGN. POOH. SWIFW
11/19/2013	7:45 - 8:00	0.25	FRAC	48		P		HSM,JSA
	8:08 - 8:23	0.25	FRAC	36	H	P		PRESSURE TEST FRAC LINES TO 8005PSI HELD FOR 15 MINUTES LOST 154 PSI, SET POP OFF TO 6800 PSI
	8:45 - 17:00	8.25	FRAC	36	H	P		REFER TO STIMULATION PJR FOR FLUID, SAND AND CHEMICAL VOLUMES, ALL STAGES WERE PERFORATED ACCORDING TO PERF RECORD IN OPEN WELLS, ALL STAGES WERE STIMULATED TO VENDOR POST JOB REPORT. ALL PLUGS ARE HALIBURTON 8K CBPS FRAC STG #1] WHP=1501#, BRK DN PERFS=3164#, @=3.8 BPM, INTIAL ISIP=2329#, FG=.71, FINAL ISIP=2329#, FG=.74, SET PLUG & PERFORATE STG #2 FRAC STG #2] WHP=820#, BRK DN PERFS=2717#, @=3.5 BPM, INTIAL ISIP=2193#, FG=.71, FINAL ISIP=2584#, FG=.75, SET PLUG & PERFORATE STG #3 FRAC STG #3] WHP=1361#, BRK DN PERFS=2128#, @=3.8 BPM, INTIAL ISIP=1605#, FG=.64, FINAL ISIP=2767#, FG=.79, SET PLUG & PERFORATE STG #4
11/20/2013	6:15 - 6:30	0.25	FRAC	48		P		SWIFN W/O FRAC HSM,JSA

Operation Summary Report

Well: NBU 1022-10A4CS BLUE

Spud Date: 7/10/2013

Project: UTAH-UINTAH

Site: NBU 1022-10A PAD

Rig Name No: GWS 1/1

Event: COMPLETION

Start Date: 11/11/2013

End Date: 11/26/2013

Active Datum: RKB @5,086.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/10/0/0/26/PM/N/190/E/0/775/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:30 - 15:30	9.00	FRAC	36	H	P		FRAC STG #4] WHP=1648#, BRK DN PERFS=2212#, @=3.9 BPM, INTIAL ISIP=1845#, FG=.68, FINAL ISIP=2206#, FG=.73, SET PLUG PERFORATE STG #5 FRAC STG #5] WHP=1611#, BRK DN PERFS=2202#, @=3.3 BPM, INTIAL ISIP=1847#, FG=.69, FINAL ISIP=2494#, FG=.78, SET PLUG AND PERFORATE STG #6 FRAC STG #6] WHP=1319#, BRK DN PERFS=2109#, @=4.3 BPM, INTIAL ISIP=1838#, FG=.69, FINAL ISIP=2537#, FG=.79, SET PLUG AND PERFORATE STG #7 FRAC STG #7] WHP=1575#, BRK DN PERFS=2851#, @=19.0 BPM, INTIAL ISIP=1787#, FG=.70, FINAL ISIP=2194#, FG=.75, SET PLUG AND PERFORATE STG #8 FRAC STG #8] WHP=1472#, BRK DN PERFS=1506#, @=3.4 BPM, INTIAL ISIP=1506#, FG=.66, FINAL ISIP=2025#, FG=.74, SET TOP KILL TOTAL BBLS=10,048 TOTAL SAND=197,150 LBS
11/25/2013	6:45 - 7:00	0.25	DRLOUT	48		P		HSM. PINTCH POINTS.
	7:00 - 10:30	3.50	DRLOUT	30	F	X		OPEN WELL 100 PSI. BLEED WELL OFF T/ PIT. ND WH. NUBOP. WELL STARTED FLOWING. SWI. HOOK UP FLOW LINES T/ PIT. ATTM T/ BLEED WELL OFF. WELL STARTED FLOWING HARDER. SWI. CALL CASEHOLE SOLUTIONS WL T/ SET CBP.
	10:30 - 15:00	4.50	DRLOUT	34	I	P		WAIT FOR CASEHOLE SOLUTIONS WL T/ COME F/ VERNAL. MIRU CASEHOLE. PU 4 1/2 8K HAL CBP. RIH SET CBP @ 6481'. BLOW WELL DOWN T/ PIT. RDMO CASEHOLE WL.
	15:00 - 18:00	3.00	DRLOUT	31	I	P		PREP & TALLY NEW 2 3/8 SPLIT STRING TBG. PU 3 7/8 BIT, X-DART, BOPS & 1.875 XN-NIP. RIH W/ 150 JTS 2 3/8 J-55. EOT @ 4700'. WINTERIZE WELL HEAD. SWIFN.
11/26/2013	6:45 - 7:00	0.25	DRLOUT	48		P		HSM. PRESSURE KICKS.
	7:00 - 8:30	1.50	DRLOUT	31	I	P		OPEN WELL 0 PSI. CONT RIH W/ TBG F/ 4700'. TAG SAND @ 6471' = 10' SAND.

Operation Summary Report

Well: NBU 1022-10A4CS BLUE		Spud Date: 7/10/2013	
Project: UTAH-UINTAH		Site: NBU 1022-10A PAD	Rig Name No: GWS 1/1
Event: COMPLETION		Start Date: 11/11/2013	End Date: 11/26/2013
Active Datum: RKB @5,086.00usft (above Mean Sea Level)		UWI: NE/NE/0/10/S/22/E/10/0/0/26/PM/N/190/E/0/775/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	8:30 - 9:30	1.00	DRLOUT	47	B	P		RU DRL EQUIP. FILL TBG & CSG W/ 80 BBLS T-MAC. PSI TEST BOP T/ 3000 PSI. GOOD TEST. BLEED OFF PSI.
	9:30 - 15:45	6.25	DRLOUT	44	C	P		BRK CONV CIRC. BEG DRL OUT. 1st CBP) TAG SAND @ 6471' = 10' SAND. DRL OUT CBP @ 6481' IN 5 MIN. 0 PSI INCR. CONT RIH. 2nd CBP)NO SAND ON THIS PLUG. DRL OUT CBP @ 6542' IN 5 MIN. 300 PSI INCR. CONT RIH. 3rd CBP)TAG SAND @ 6836' = 15' SAND. DRL OUT CBP @ 6851' IN 8 MIN. 0 PSI INCR. CONT RIH. 4th CBP)TAG SAND @ 7059' = 20' SAND. DRL OUT CBP @ 7079' IN 8 MIN. 100 PSI INCR. CONT RIH. 5th CBP)TAG SAND @ 7254' = 10' SAND. DRL OUT CBP @ 7264' IN 8 MIN. 100 PSI INCR. CONT RIH. 6th CBP)TAG SAND @ 7501' = 15' SAND. DRL OUT CBP @ 7516' IN 8 MIN. 400 PSI INCR. CONT RIH. 7th CBP)TAG SAND @ 7795' = 15' SAND. DRL OUT CBP @ 7807' IN 8 MIN. 700 PSI INCR. CONT RIH. 8th CBP)TAG SAND @ 8096' = 20' SAND. DRL OUT CBP @ 8116' IN 8 MIN. 0 PSI INCR. CONT RIH. 9th CBP)TAG SAND @ 8331' = 20' SAND. DRL OUT CBP @ 8351' IN 10 MIN. 400 PSI INCR. CONT RIH. TAG SAND @ 8600'. C/O 40' SAND T/ PBSD @ 8640'. CIRC WELL. RD DRL EQUIP.
	15:45 - 18:00	2.25	DRLOUT	31	I	P		POOH, LD 17 JTS 23/8 L-80 TBG. PU 4 1/16 TBG HNGR. LAND TBG W/ KB =====> 24.00 41/16 TBG HNGR =====> .83 105 JTS L-80, 23/8 =====> 3332.73 6x23/8 L-80 PUP JT =====> 6.14 150 JTS J-55, 23/8 =====> 4742.65 1.875 XN-NIP =====> 2.20 EOT @ 8108' 60 JTS L-80 SENT BACK T/ CTAP. ND BOP. NUWH. DROP BALL. PUMP BIT OFF W/ 1900 PSI. TEST HAL 9000 LINES T/ 3000 PSI. GOOD TEST. BLEED OFF PSI. OPEN WELL. SICP 2100 PSI. FTP 50 PSI. UNLOAD TBG. TURN WELL OVER T/ FBC. RACK OUT RIG EQUIP. TOTAL LOAD PUMP = 10,048 BBLS TOTAL RIG RECOVERD = 1854 BBLS TOTAL LEFT T/ RECOVER = 8194 BBLS

Anadarko Petroleum Corporation



Project: Uintah Co., UT (UTM)
Site: Sec 10-T10S-R22E
Well: NBU 1022-10A4CS
Wellbore: Original Hole
Final Surveys
Rig: SST 8

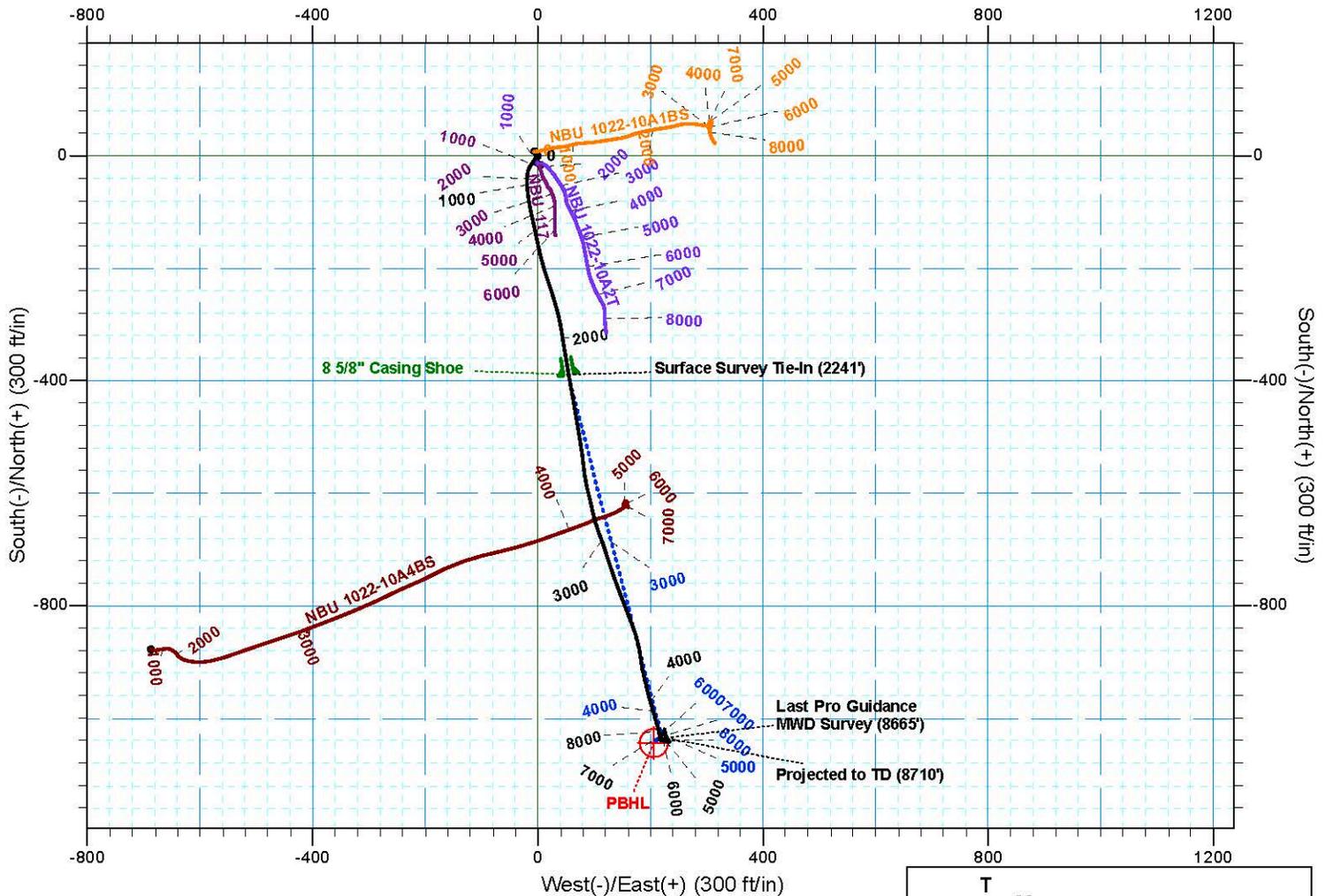
Surface Location:
 SHL 190' FNL & 775' FEL Sec 10-T10S-R22E
 Universal Transverse Mercator (US Survey Feet)
 Zone 12N (114 W to 108 W)
Elevation: 5063' GL + 24' KB @ 5087.00ft (SST 8)
 Northing: 14519158.15 Easting: 2083468.63 Latitude: 39.970222 Longitude: -109.418738

SECTION DETAILS
 Plan 2

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Annotation
2241.00	20.75	170.12	2187.26	-388.64	54.86	0.00	0.00	-388.64	Survey Tie-In/Begin Turn at 2241' MD, 2187' TVD
2332.48	20.75	165.47	2272.81	-420.30	61.71	1.80	-92.17	-420.30	Begin Hold at 2332' MD, 2273' TVD
3521.98	20.75	165.47	3385.15	-828.25	167.43	0.00	0.00	-828.25	Begin Drop at 3522' MD, 3385' TVD
4674.76	0.00	0.00	4512.89	-1028.12	219.22	1.80	180.00	-1028.12	Begin Hold at 4675' MD, 4513' TVD
5824.76	0.00	0.00	5662.89	-1028.12	219.22	0.00	0.00	-1028.12	Begin Build at 5825' MD, 5663' TVD
5931.42	0.32	219.52	5769.56	-1028.35	219.04	0.30	219.52	-1028.35	Begin Hold at 5931' MD, 5770' TVD
8677.94	0.52	219.52	8516.00	-1043.82	206.27	0.01	0.00	-1043.82	PBHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
PBHL	8516.00	-1043.82	206.27	39.967356	-109.418002



Azimuth Corrections

To convert a Magnetic Direction to a True Direction, Add 10.74° East
 To convert a True Direction to a Grid Direction, Subtract 1.02°
 To convert a Magnetic Direction to a Grid Direction, Add 9.73°

Azimuths to True North
 Magnetic North: 10.74°

Magnetic Field
 Strength: 52094.8snT
 Dip Angle: 65.80°
 Date: 10/01/2013
 Model: IGRF2010

Created By: Bob Hays Date: 13:14, November 04 2013

Anadarko Petroleum Corporation



Project: Uintah Co., UT (UTM)
 Site: Sec 10-T10S-R22E
 Well: NBU 1022-10A4CS
 Wellbore: Original Hole
 Final Surveys
 Rig: SST 8

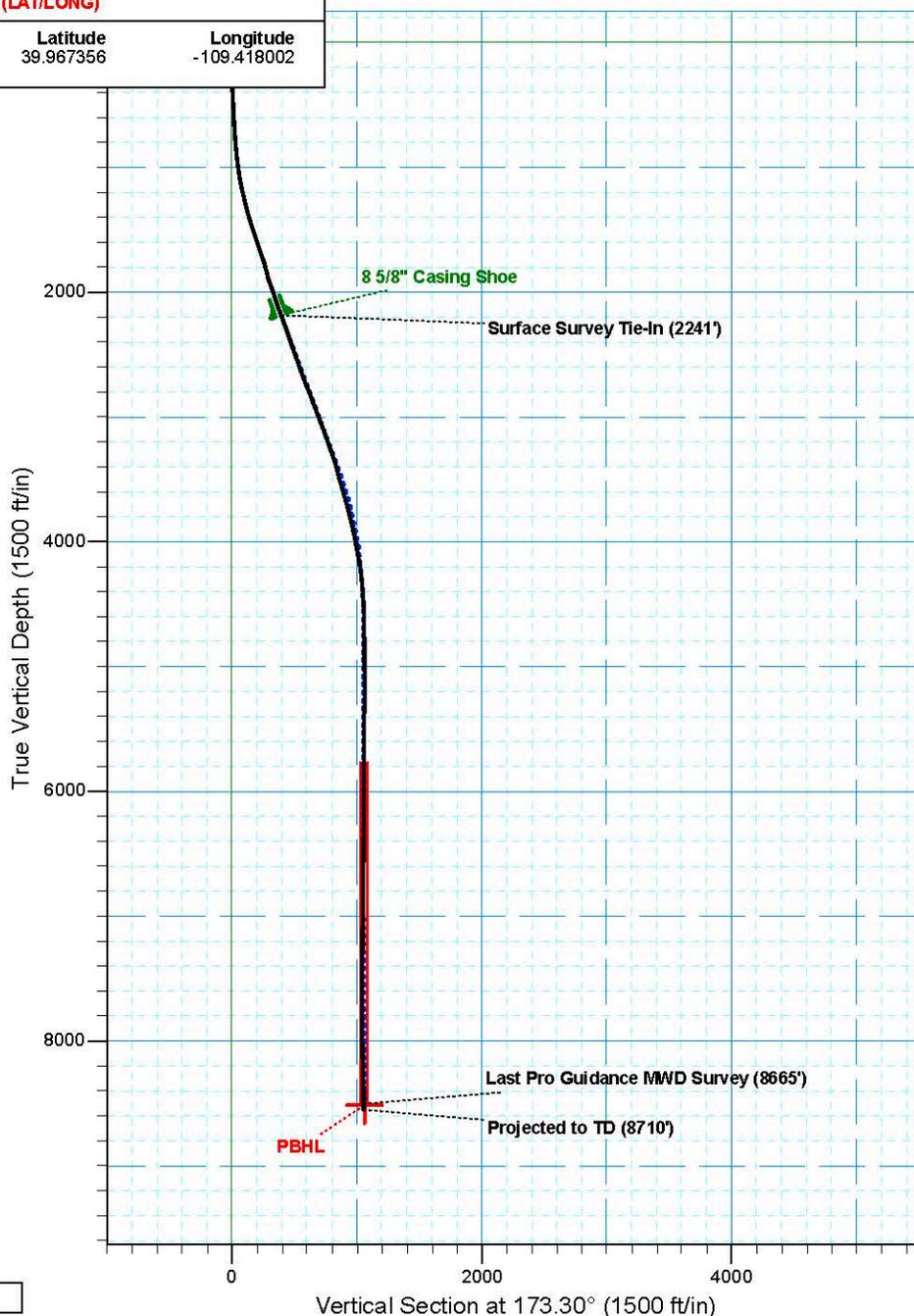
Surface Location:
 SHL 190' FNL & 775' FEL Sec 10-T10S-R22E
 Universal Transverse Mercator (US Survey Feet)
 Zone 12N (114 W to 108 W)
 Elevation: 5063' GL + 24' KB @ 5087.00ft (SST 8)
 Northing: 14519158.15 Easting: 2083468.63 Latitude: 39.970222 Longitude: -109.418738

SECTION DETAILS Plan 2

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
2241.00	20.75	170.12	2187.26	-388.64	54.86	0.00	0.00	-388.64	Survey Tie-In/Begin Turn at 2241' MD, 2187' TVD
2332.48	20.75	165.47	2272.81	-420.30	61.71	1.80	-92.17	-420.30	Begin Hold at 2332' MD, 2273' TVD
3521.98	20.75	165.47	3385.15	-828.25	167.43	0.00	0.00	-828.25	Begin Drop at 3522' MD, 3385' TVD
4674.76	0.00	0.00	4512.89	-1028.12	219.22	1.80	180.00	-1028.12	Begin Hold at 4675' MD, 4513' TVD
5824.76	0.00	0.00	5662.89	-1028.12	219.22	0.00	0.00	-1028.12	Begin Build at 5825' MD, 5663' TVD
5931.42	0.32	219.52	5769.56	-1028.35	219.04	0.30	219.52	-1028.35	Begin Hold at 5931' MD, 5770' TVD
8677.94	0.52	219.52	8516.00	-1043.82	206.27	0.01	0.00	-1043.82	PBHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
PBHL	8516.00	-1043.82	206.27	39.967356	-109.418002





Anadarko Petroleum Corporation

Uintah Co., UT (UTM)

Sec 10-T10S-R22E

NBU 1022-10A4CS

Original Hole

Design: Final Surveys

Standard Survey Report

04 November, 2013





Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well NBU 1022-10A4CS
Project:	Uintah Co., UT (UTM)	TVD Reference:	5063' GL + 24' KB @ 5087.00ft (SST 8)
Site:	Sec 10-T10S-R22E	MD Reference:	5063' GL + 24' KB @ 5087.00ft (SST 8)
Well:	NBU 1022-10A4CS	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Final Surveys	Database:	EDM 5000.1 Single User Db

Project	Uintah Co., UT (UTM)		
Map System:	Universal Transverse Mercator (US Survey Fee	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	Sec 10-T10S-R22E				
Site Position:		Northing:	14,519,166.44 ft	Latitude:	39.970245
From:	Lat/Long	Easting:	2,083,462.88 ft	Longitude:	-109.418758
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	1.02 °

Well	NBU 1022-10A4CS					
Well Position	+N/-S	0.00 ft	Northing:	14,519,158.15 ft	Latitude:	39.970222
	+E/-W	0.00 ft	Easting:	2,083,468.63 ft	Longitude:	-109.418738
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	5,063.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/01/13	10.74	65.80	52,095

Survey Program	Date 11/04/13				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
180.00	2,241.00	Surface Surveys (Original Hole)	MWD	MWD	
2,387.00	8,665.00	Pro Guidance MWD Surveys (Original Hd	MWD	MWD	
8,710.00	8,710.00	Projected to TD (Original Hole)	MWD	MWD	

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	
180.00	0.53	271.02	180.00	0.01	-0.83	-0.11	0.29	0.29	0.00	
261.00	1.16	252.03	260.99	-0.23	-1.99	0.00	0.84	0.78	-23.44	
346.00	2.02	223.65	345.96	-1.58	-3.84	1.12	1.34	1.01	-33.39	
436.00	3.59	200.12	435.85	-5.37	-5.90	4.65	2.13	1.74	-26.14	
526.00	4.04	214.94	525.65	-10.62	-8.69	9.53	1.20	0.50	16.47	
616.00	4.04	217.49	615.43	-15.73	-12.43	14.18	0.20	0.00	2.83	
706.00	4.04	201.84	705.21	-21.19	-15.54	19.23	1.22	0.00	-17.39	
796.00	5.01	193.06	794.93	-27.96	-17.61	25.72	1.32	1.08	-9.76	
886.00	6.33	184.97	884.48	-36.74	-18.93	34.28	1.71	1.47	-8.99	
976.00	7.91	178.03	973.79	-47.87	-19.15	45.31	2.00	1.76	-7.71	
1,066.00	9.50	174.25	1,062.75	-61.45	-18.19	58.91	1.88	1.77	-4.20	
1,156.00	11.17	170.30	1,151.29	-77.43	-15.98	75.04	2.01	1.86	-4.39	
1,246.00	13.13	169.62	1,239.27	-96.08	-12.66	93.95	2.18	2.18	-0.76	
1,336.00	14.83	168.14	1,326.60	-117.41	-8.46	115.62	1.93	1.89	-1.64	



Professional Directional LTD

Survey Report



Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well NBU 1022-10A4CS
Project:	Uintah Co., UT (UTM)	TVD Reference:	5063' GL + 24' KB @ 5087.00ft (SST 8)
Site:	Sec 10-T10S-R22E	MD Reference:	5063' GL + 24' KB @ 5087.00ft (SST 8)
Well:	NBU 1022-10A4CS	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Final Surveys	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)
1,426.00	16.44	167.92	1,413.27	-141.14	-3.42	139.77	1.79	1.79	-0.24
1,519.00	18.47	167.48	1,501.98	-168.39	2.53	167.53	2.19	2.18	-0.47
1,609.00	20.05	163.62	1,586.94	-197.11	9.97	196.93	2.25	1.76	-4.29
1,699.00	17.76	160.89	1,672.08	-224.89	18.81	225.55	2.73	-2.54	-3.03
1,791.00	16.71	161.33	1,759.95	-250.68	27.64	252.19	1.15	-1.14	0.48
1,881.00	16.80	166.08	1,846.14	-275.56	34.91	277.75	1.52	0.10	5.28
1,971.00	17.85	169.50	1,932.05	-301.75	40.56	304.42	1.62	1.17	3.80
2,061.00	18.47	171.79	2,017.57	-329.42	45.11	332.44	1.05	0.69	2.54
2,151.00	19.35	170.38	2,102.71	-358.23	49.63	361.58	1.10	0.98	-1.57
2,241.00	20.75	170.12	2,187.26	-388.64	54.86	392.39	1.56	1.56	-0.29
Surface Survey Tie-In (2241')									
2,387.00	19.60	170.20	2,324.30	-438.25	63.47	442.67	0.79	-0.79	0.05
2,482.00	18.40	170.80	2,414.12	-468.76	68.58	473.56	1.28	-1.26	0.63
2,577.00	19.20	170.70	2,504.05	-498.97	73.50	504.14	0.84	0.84	-0.11
2,672.00	20.30	171.60	2,593.46	-530.69	78.43	536.22	1.20	1.16	0.95
2,767.00	22.10	172.00	2,682.03	-564.70	83.32	570.56	1.90	1.89	0.42
2,862.00	21.10	166.10	2,770.37	-599.00	89.92	605.40	2.52	-1.05	-6.21
2,958.00	22.20	167.20	2,859.59	-633.46	98.09	640.58	1.22	1.15	1.15
3,053.00	19.40	161.60	2,948.40	-665.94	107.05	673.88	3.61	-2.95	-5.89
3,148.00	19.70	160.30	3,037.92	-695.99	117.43	704.93	0.56	0.32	-1.37
3,244.00	21.70	162.60	3,127.72	-728.16	128.19	738.14	2.25	2.08	2.40
3,339.00	20.70	158.80	3,216.30	-760.57	139.51	771.66	1.79	-1.05	-4.00
3,434.00	19.40	159.10	3,305.54	-790.97	151.22	803.21	1.37	-1.37	0.32
3,529.00	16.70	158.70	3,395.86	-818.43	161.80	831.72	2.85	-2.84	-0.42
3,624.00	14.50	160.90	3,487.35	-842.39	170.65	856.55	2.40	-2.32	2.32
3,720.00	16.60	165.80	3,579.84	-867.04	177.95	881.89	2.58	2.19	5.10
3,815.00	17.20	173.60	3,670.74	-894.16	182.85	909.39	2.47	0.63	8.21
3,910.00	14.60	165.80	3,762.11	-919.74	187.35	935.32	3.54	-2.74	-8.21
4,005.00	13.20	167.40	3,854.33	-941.93	192.66	957.98	1.53	-1.47	1.68
4,101.00	11.00	162.90	3,948.19	-961.38	197.74	977.89	2.49	-2.29	-4.69
4,196.00	10.70	166.30	4,041.49	-978.61	202.49	995.56	0.74	-0.32	3.58
4,291.00	9.50	163.10	4,135.02	-994.68	206.86	1,012.03	1.39	-1.26	-3.37
4,387.00	7.30	163.10	4,229.99	-1,008.10	210.94	1,025.83	2.29	-2.29	0.00
4,481.00	6.40	165.10	4,323.31	-1,018.88	214.02	1,036.89	0.99	-0.96	2.13
4,576.00	4.20	172.80	4,417.90	-1,027.45	215.82	1,045.61	2.43	-2.32	8.11
4,671.00	3.60	168.90	4,512.68	-1,033.83	216.83	1,052.07	0.69	-0.63	-4.11
4,767.00	1.10	198.00	4,608.60	-1,037.66	217.13	1,055.91	2.80	-2.60	30.31
4,862.00	1.70	100.70	4,703.58	-1,038.79	218.23	1,057.16	2.25	0.63	-102.42
4,957.00	1.80	103.30	4,798.53	-1,039.40	221.06	1,058.09	0.13	0.11	2.74
5,052.00	1.90	102.30	4,893.48	-1,040.07	224.06	1,059.11	0.11	0.11	-1.05
5,148.00	1.70	112.70	4,989.44	-1,040.96	226.92	1,060.33	0.40	-0.21	10.83
5,243.00	2.00	105.60	5,084.39	-1,041.95	229.82	1,061.65	0.40	0.32	-7.47
5,338.00	1.30	66.80	5,179.35	-1,041.97	232.41	1,061.98	1.35	-0.74	-40.84
5,433.00	0.70	63.60	5,274.34	-1,041.29	233.92	1,061.47	0.63	-0.63	-3.37



Professional Directional LTD

Survey Report



Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well NBU 1022-10A4CS
Project:	Uintah Co., UT (UTM)	TVD Reference:	5063' GL + 24' KB @ 5087.00ft (SST 8)
Site:	Sec 10-T10S-R22E	MD Reference:	5063' GL + 24' KB @ 5087.00ft (SST 8)
Well:	NBU 1022-10A4CS	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Final Surveys	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)	
5,529.00	0.50	313.30	5,370.33	-1,040.74	234.14	1,060.96	1.03	-0.21	-114.90	
5,624.00	1.30	295.40	5,465.32	-1,040.00	232.86	1,060.07	0.88	0.84	-18.84	
5,719.00	1.60	298.20	5,560.29	-1,038.91	230.72	1,058.73	0.32	0.32	2.95	
5,814.00	1.00	264.40	5,655.27	-1,038.36	228.73	1,057.96	1.00	-0.63	-35.58	
5,909.00	1.50	280.70	5,750.24	-1,038.21	226.68	1,057.57	0.64	0.53	17.16	
6,004.00	1.20	276.70	5,845.22	-1,037.86	224.47	1,056.97	0.33	-0.32	-4.21	
6,098.00	1.00	265.40	5,939.20	-1,037.82	222.68	1,056.71	0.31	-0.21	-12.02	
6,193.00	0.90	260.70	6,034.19	-1,038.00	221.11	1,056.71	0.13	-0.11	-4.95	
6,288.00	0.50	209.40	6,129.18	-1,038.48	220.17	1,057.08	0.74	-0.42	-54.00	
6,384.00	0.80	301.40	6,225.18	-1,038.50	219.40	1,057.01	1.00	0.31	95.83	
6,479.00	1.20	339.20	6,320.16	-1,037.22	218.48	1,055.63	0.79	0.42	39.79	
6,574.00	1.10	339.60	6,415.14	-1,035.44	217.81	1,053.78	0.11	-0.11	0.42	
6,669.00	0.60	331.80	6,510.13	-1,034.15	217.25	1,052.43	0.54	-0.53	-8.21	
6,765.00	0.20	100.70	6,606.13	-1,033.74	217.18	1,052.02	0.77	-0.42	134.27	
6,860.00	0.70	69.10	6,701.13	-1,033.56	217.88	1,051.92	0.57	0.53	-33.26	
6,954.00	1.40	38.30	6,795.11	-1,032.45	219.13	1,050.97	0.93	0.74	-32.77	
7,049.00	1.30	35.20	6,890.09	-1,030.66	220.47	1,049.35	0.13	-0.11	-3.26	
7,145.00	1.30	27.40	6,986.06	-1,028.81	221.60	1,047.64	0.18	0.00	-8.13	
7,240.00	1.00	35.00	7,081.04	-1,027.17	222.57	1,046.12	0.35	-0.32	8.00	
7,335.00	1.00	9.80	7,176.03	-1,025.67	223.19	1,044.71	0.46	0.00	-26.53	
7,431.00	1.00	15.90	7,272.01	-1,024.04	223.56	1,043.13	0.11	0.00	6.35	
7,526.00	0.60	39.80	7,367.00	-1,022.86	224.11	1,042.03	0.54	-0.42	25.16	
7,621.00	0.80	15.20	7,462.00	-1,021.84	224.60	1,041.07	0.38	0.21	-25.89	
7,716.00	0.70	12.80	7,556.99	-1,020.63	224.90	1,039.91	0.11	-0.11	-2.53	
7,811.00	0.30	5.60	7,651.99	-1,019.82	225.06	1,039.12	0.43	-0.42	-7.58	
7,906.00	0.20	100.70	7,746.98	-1,019.60	225.24	1,038.92	0.39	-0.11	100.11	
8,001.00	0.80	185.60	7,841.98	-1,020.30	225.34	1,039.62	0.85	0.63	89.37	
8,096.00	1.00	188.60	7,936.97	-1,021.78	225.15	1,041.07	0.22	0.21	3.16	
8,192.00	1.70	160.70	8,032.94	-1,023.95	225.50	1,043.27	0.98	0.73	-29.06	
8,287.00	1.80	164.80	8,127.90	-1,026.72	226.35	1,046.12	0.17	0.11	4.32	
8,382.00	1.40	166.00	8,222.86	-1,029.28	227.03	1,048.74	0.42	-0.42	1.26	
8,477.00	1.20	162.80	8,317.84	-1,031.36	227.60	1,050.87	0.22	-0.21	-3.37	
8,573.00	1.00	148.50	8,413.82	-1,033.03	228.34	1,052.62	0.35	-0.21	-14.90	
8,665.00	1.00	159.20	8,505.81	-1,034.47	229.04	1,054.13	0.20	0.00	11.63	
Last Pro Guidance MWD Survey (8665')										
8,710.00	1.00	159.20	8,550.80	-1,035.20	229.32	1,054.89	0.00	0.00	0.00	
Projected to TD (8710')										