

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

FORM 3

AMENDED REPORT

<b>APPLICATION FOR PERMIT TO DRILL</b>		<b>1. WELL NAME and NUMBER</b> NBU 1022-5B1BS
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>		<b>3. FIELD OR WILDCAT</b> NATURAL BUTTES
<b>4. TYPE OF WELL</b> Gas Well Coalbed Methane Well: NO		<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> NATURAL BUTTES
<b>6. NAME OF OPERATOR</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. OPERATOR PHONE</b> 720 929-6515
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217		<b>9. OPERATOR E-MAIL</b> julie.jacobson@anadarko.com
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UTU-01191-A	<b>11. MINERAL OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>	
<b>12. SURFACE OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>
<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>		<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>
<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>		<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>
<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		<b>19. SLANT</b> 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	1081 FNL 1942 FEL	NWNE	5	10.0 S	22.0 E	S
Top of Uppermost Producing Zone	247 FNL 1804 FEL	NWNE	5	10.0 S	22.0 E	S
At Total Depth	247 FNL 1804 FEL	NWNE	5	10.0 S	22.0 E	S

<b>21. COUNTY</b> UINTAH	<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 247	<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 1363
<b>24. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 348	<b>25. PROPOSED DEPTH</b> MD: 10384 TVD: 10307	
<b>26. ELEVATION - GROUND LEVEL</b> 5152	<b>27. BOND NUMBER</b> WYB000291	<b>28. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> 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 - 2580	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 - 10384	11.6	HCP-110 LT&C	12.5	Premium Lite High Strength	310	3.38	12.0
							50/50 Poz	1510	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

<b>NAME</b> Gina Becker	<b>TITLE</b> Regulatory Analyst II	<b>PHONE</b> 720 929-6086
<b>SIGNATURE</b>	<b>DATE</b> 02/06/2013	<b>EMAIL</b> gina.becker@anadarko.com
<b>API NUMBER ASSIGNED</b> 43047535880000	<b>APPROVAL</b>   Permit Manager	

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

**NBU 1022-5B1BS**

Surface: 1081 FNL / 1942 FEL      NWNE  
BHL: 247 FNL / 1804 FEL      NWNE

Section 5 T10S R22E

Unitah County, Utah  
Mineral Lease: UTU-01191-A

**ONSHORE ORDER NO. 1****DRILLING PROGRAM**

**1. & 2.a 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	1,328'	
Birds Nest	1,635'	Water
Mahogany	2,130'	Water
Wasatch	4,510'	Gas
Mesaverde	7,024'	Gas
Sego	9,187'	Gas
Castlegate	9,261'	Gas
Blackhawk	9,707'	Gas
TVD =	10,307'	
TD =	10,384'	

- 2.b** Kerr McGee Oil & Gas Onshore LP (Kerr McGee) may elect to drill to (i) the Blackhawk formation (part of the Mesaverde Group), (ii) to a shallower depth within the Mesaverde Group, or (iii) to the Wasatch Formation. If Kerr McGee drills to the Blackhawk formation, please refer to Blackhawk as the bottom formation. The attached Blackhawk Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the deeper formation.

If Kerr-McGee drills to a shallower depth in the Mesaverde Group or to the Wasatch Formation, please refer to the attached Wasatch/Mesaverde Drilling Program which includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the shallower formations.

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

Please refer to the Standard Operating Practices on file with the BLM Vernal Field Office.

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

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

**5. Drilling Fluids Program:**

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

**6. Evaluation Program:**

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

**7. Abnormal Conditions:****7.a Blackhawk (Part of Mesaverde Group)**

Maximum anticipated bottom hole pressure calculated at 10307' TVD, approximately equals  
6,596 psi (0.64 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,314 psi (bottom hole pressure  
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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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))

**7.b Wasach Formation/Mesaverde Group**

Maximum anticipated bottom hole pressure calculated at 9187' TVD, approximately equals  
5,604 psi (0.61 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 3,607 psi (bottom hole pressure  
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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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 Standard Operating Practices on file with the BLM Vernal Field Office.

**10. Other Information:**

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program





**KERR-McGEE OIL & GAS ONSHORE LP**  
**Blackhawk Drilling Program**

**CASING PROGRAM**

							DESIGN FACTORS		
	SIZE	INTERVAL	WT.	GR.	CPLG.	BURST	COLLAPSE	LTC	DQX
								TENSION	
CONDUCTOR	14"	0-40'							
SURFACE	8-5/8"	0 to 2,580	28.00	IJ-55	LTC	3,390	1,880	348,000	N/A
						2.09	1.56	5.50	N/A
PRODUCTION	4-1/2"	0 to 5,000	11.60	HCP-110	DQX	10,690	8,650	279,000	367,174
						1.19	1.29		3.77
	4-1/2"	5,000 to 10,384'	11.60	HCP-110	LTC	1.19	1.29	5.52	

**Surface casing:**

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe  
Fracture at surface shoe with 0.1 psi/ft gas gradient above

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

**Production casing:**

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.64 psi/ft = bottomhole gradient

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

**CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE Option 1	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>							
SURFACE Option 2	LEAD	2,080'	Premium cmt + 16% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOC + GR 3 pps	250	35%	12.00	2.86
	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	4,004'	Premium Lite II +0.25 pps celloflake + .4% FL-52 + .3% R-3 + .5 lbs/sk Kol-Seal + 6%Bentonite II + 1.2% Sodium Metasilicate + .05 lbs/sk Static Free	310	35%	12.00	3.38
	TAIL	6,380'	50/50 Poz/G + 10% salt + .05 lbs/sk Static Free + 1.2% Sodium Metasilicate + .5 % EC-1 +.002 gps FP-6L + 2% Bentonite II	1,510	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.

If extreme mud losses are observed OR cement doesn't reach surface on a well on the pad, a DV Tool may be used. With Cement Baskets above and Below it.

**DRILLING ENGINEER:**

Nick Spence / John Tuckwiller / Brian Cocchiere / Tyler Elliott

**DATE:**

**DRILLING SUPERINTENDENT:**

Kenny Gathings / Lovel Young

**DATE:**





**KERR-McGEE OIL & GAS ONSHORE LP**  
**Wasatch/Mesaverde Drilling Program**

**CASING PROGRAM**

							DESIGN FACTORS			
	SIZE	INTERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	LTC	DQX
		TENSION								
CONDUCTOR	14"	0-40'								
SURFACE	8-5/8"	0	to 2,580	28.00	IJ-55	LTC	3,390	1,880	348,000	N/A
							7,780	6,350		267,035
PRODUCTION	4-1/2"	0	to 5,000	11.60	I-80	DQX	1.11	1.11		3.04
							7,780	6,350	223,000	
	4-1/2"	5,000	to 9,264'	11.60	I-80	LTC	1.11	1.11	5.52	

**Surface Casing:**

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TAIL	5,260'	50/50 Poz/G + 10% salt + .05 lbs/sk Static Free + 1.2% Sodium Metasilicate + .5 % EC-1 +.002 gps FP-6L + 2% Bentonite II	1,240	35%	14.30	1.31

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**DRILLING ENGINEER:**

Nick Spence / John Tuckwiller / Brian Cocchiere / Tyler Elliott

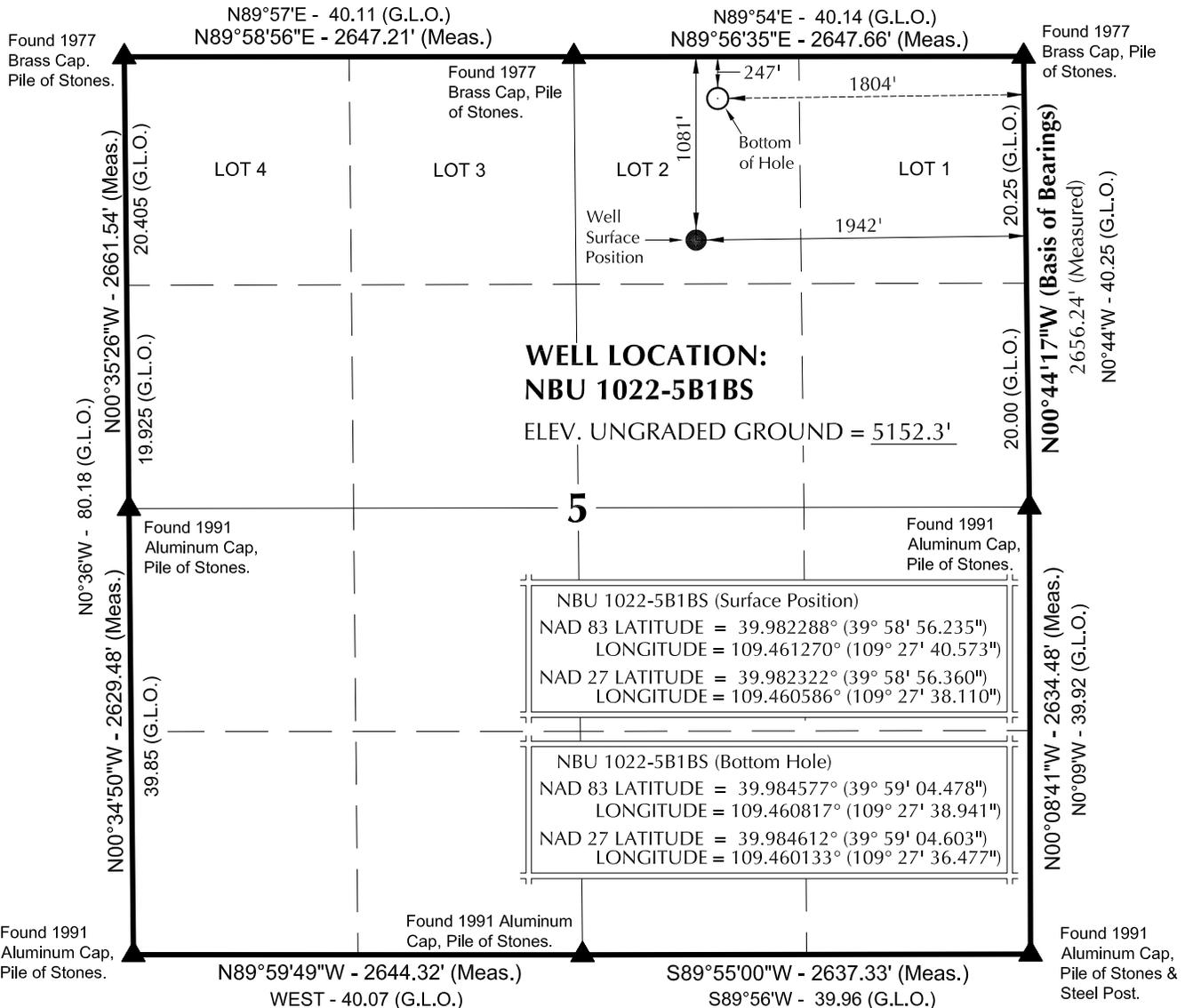
**DATE:**

**DRILLING SUPERINTENDENT:**

Kenny Gathings / Lovel Young

**DATE:**

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



**NOTES:**

- ▲ = Section Corners Located
- 1. Well footages are measured at right angles to the Section Lines. G.L.O. distances are shown in feet or chains.
- 2. 1 chain = 66 feet.
- 3. The Bottom of hole bears N08°39'41"E 843.90' from the Surface Position.
- 4. NAD 83 Latitude & Longitude are (CORSS 96)(EPOCH:2002).
- 5. Bearings and Distances are based upon a Local Cartesian Grid, oriented to Geodetic North at the North 1/4 Corner of Section 8, T10S, R22E, S.L.B.&M. The Grid having a mean project height of 5300'. Lineal units used are U.S. Survey Foot.
- 6. Basis of elevation is Tri-Sta "Two Water" located in Lot 4 of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.



**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.

9-5-12  
 JOHN R. HAUGH  
 PROFESSIONAL LAND SURVEYOR  
 REGISTRATION No. 6028691  
 STATE OF UTAH

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



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

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

DATE SURVEYED: 8-23-12	SURVEYED BY: J.W.	SHEET NO: <b>3</b>
DATE DRAWN: 8-23-12	DRAWN BY: J.G.C.	
SCALE: 1" = 1000'		3 OF 17

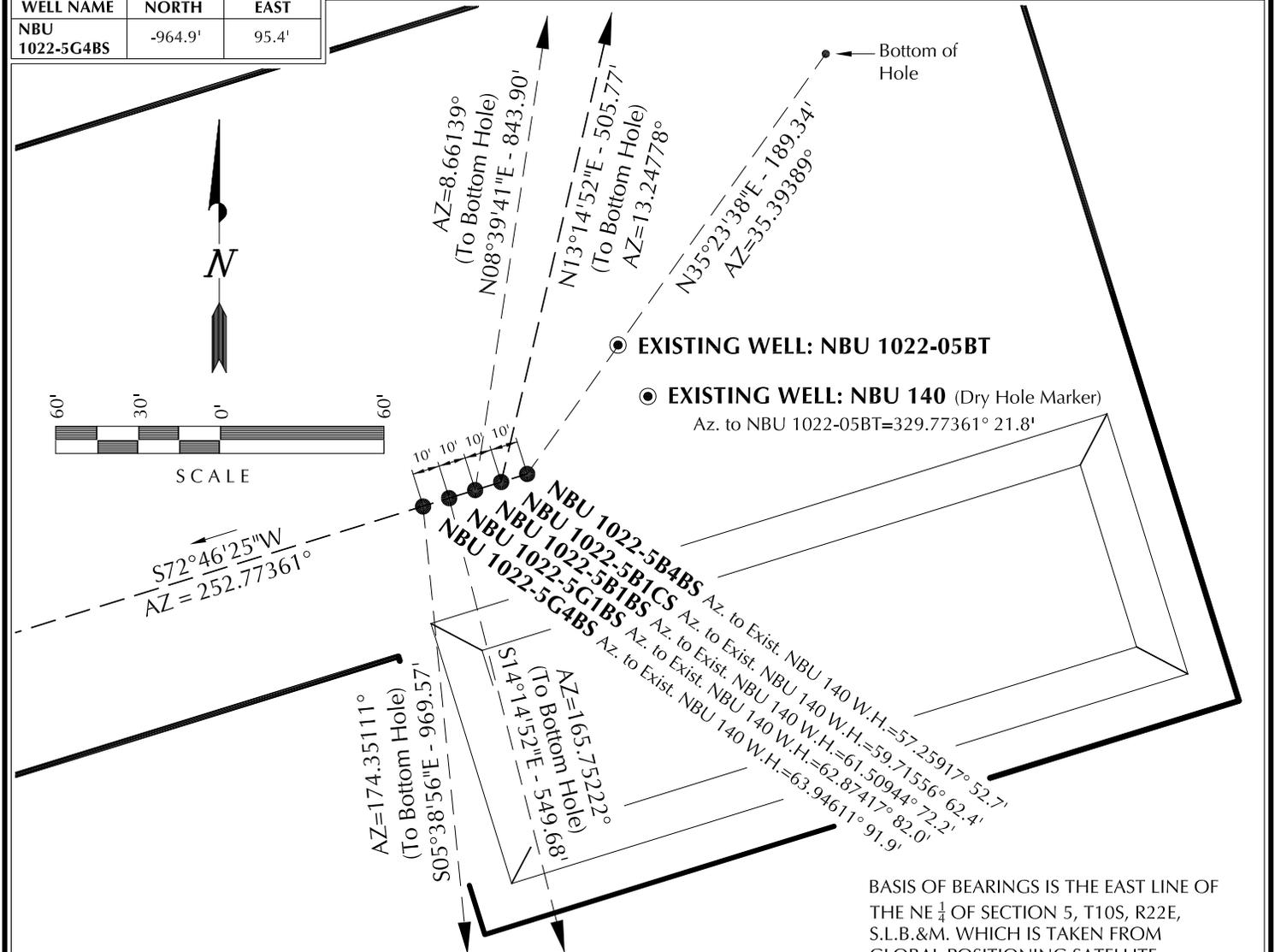
**WELL PAD: NBU 1022-5B**

**NBU 1022-5B1BS**  
**WELL PLAT**  
 247' FNL, 1804' FEL (Bottom Hole)  
 LOT 2 OF SECTION 5, T10S, R22E,  
 S.L.B.&M., UINTAH COUNTY, UTAH.

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 1022-5B4BS	39°58'56.294"	109°27'40.328"	39°58'56.419"	109°27'37.864"	1075' FNL 1923' FEL	39°58'57.819"	109°27'38.919"	39°58'57.944"	109°27'36.456"	921' FNL 1811' FEL
NBU 1022-5B1CS	39°58'56.265"	109°27'40.451"	39°58'56.390"	109°27'37.987"	1078' FNL 1932' FEL	39°59'01.129"	109°27'38.962"	39°59'01.254"	109°27'36.498"	586' FNL 1810' FEL
NBU 1022-5B1BS	39°58'56.235"	109°27'40.573"	39°58'56.360"	109°27'38.110"	1081' FNL 1942' FEL	39°59'04.478"	109°27'38.941"	39°59'04.603"	109°27'36.477"	247' FNL 1804' FEL
NBU 1022-5G1BS	39°58'56.206"	109°27'40.696"	39°58'56.331"	109°27'38.232"	1084' FNL 1951' FEL	39°58'50.942"	109°27'38.959"	39°58'51.067"	109°27'36.495"	1617' FNL 1823' FEL
NBU 1022-5G4BS	39°58'56.177"	109°27'40.819"	39°58'56.302"	109°27'38.355"	1087' FNL 1961' FEL	39°58'46.644"	109°27'39.593"	39°58'46.769"	109°27'37.130"	2052' FNL 1878' FEL
NBU 140	39°58'56.576"	109°27'39.759"	39°58'56.701"	109°27'37.296"	1047' FNL 1878' FEL					
NBU 1022-05BT	39°58'56.762"	109°27'39.899"	39°58'56.887"	109°27'37.436"	1028' FNL 1889' FEL					

RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 1022-5B4BS	154.3'	109.7'	NBU 1022-5B1CS	492.3'	115.9'	NBU 1022-5B1BS	834.3'	127.1'	NBU 1022-5G1BS	-532.8'	135.3'
NBU 1022-5G4BS	-964.9'	95.4'									



BASIS OF BEARINGS IS THE EAST LINE OF THE NE ¼ OF SECTION 5, T10S, R22E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°44'17\"/>

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



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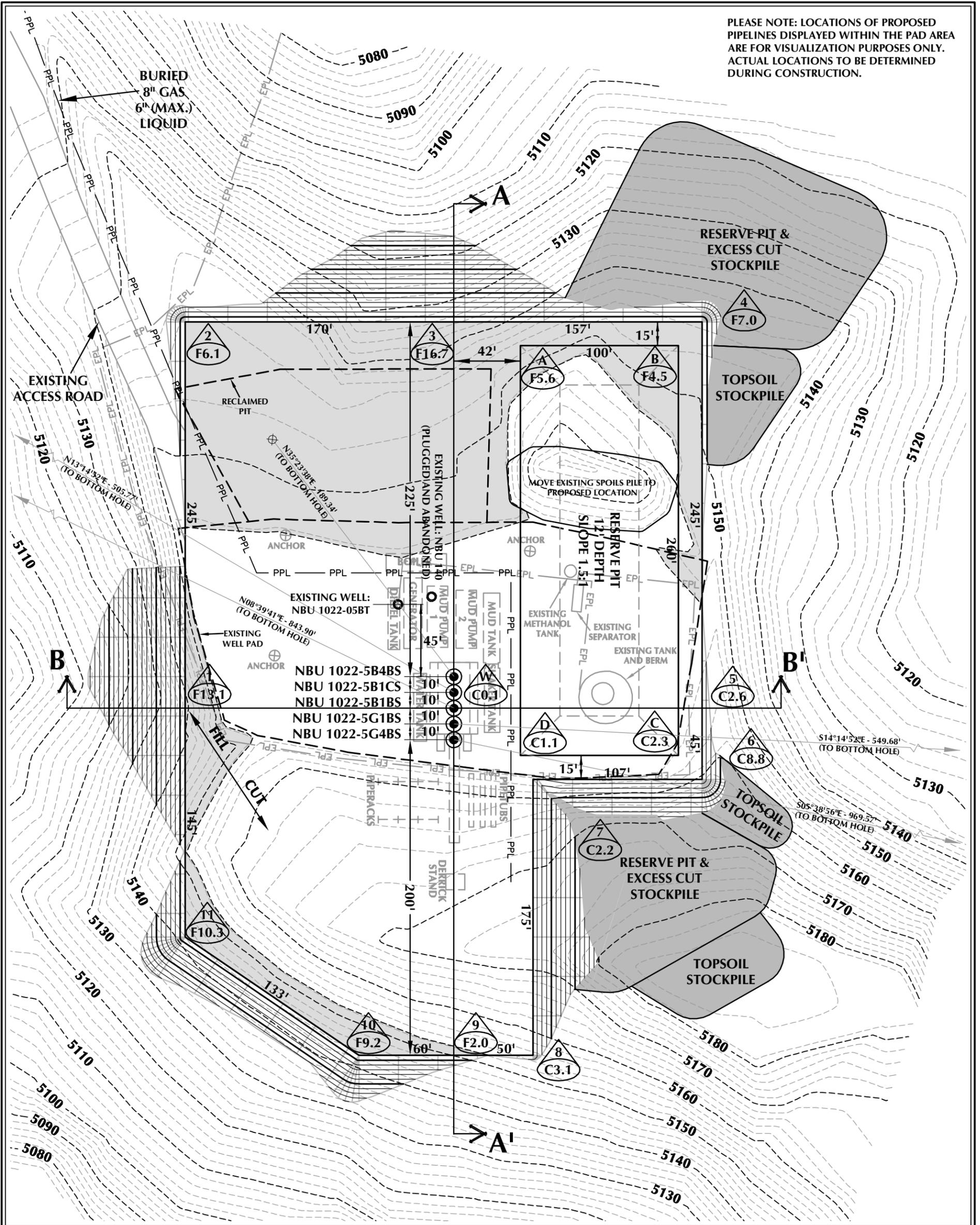
**TIMBERLINE** (435) 789-1365  
ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 8-23-12	SURVEYED BY: J.W.	SHEET NO: <b>6</b> 6 OF 17
DATE DRAWN: 8-23-12	DRAWN BY: J.G.C.	
SCALE: 1" = 60'		Date Last Revised:

**WELL PAD - NBU 1022-5B**

**WELL PAD INTERFERENCE PLAT**  
WELLS - NBU 1022-5B4BS,  
NBU 1022-5B1CS, NBU 1022-5B1BS,  
NBU 1022-5G1BS & NBU 1022-5G4BS  
LOCATED IN SECTION 5, T10S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH.

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



**WELL PAD - NBU 1022-5B DESIGN SUMMARY**

EXISTING GRADE @ CENTER OF WELL PAD = 5152.3'  
 FINISHED GRADE ELEVATION = 5152.2'  
 CUT SLOPES = 1.5:1  
 FILL SLOPES = 1.5:1  
 TOTAL WELL PAD AREA = 3.68 ACRES  
 TOTAL DISTURBANCE AREA = 4.54 ACRES  
 SHRINKAGE FACTOR = 1.10  
 SWELL FACTOR = 1.00

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

**WELL PAD - NBU 1022-5B**  
 WELL PAD - LOCATION LAYOUT  
 NBU 1022-5B4BS,  
 NBU 1022-5B1CS, NBU 1022-5B1BS,  
 NBU 1022-5G1BS & NBU 1022-5G4BS  
 LOCATED IN SECTION 5, T10S, R22E,  
 S.L.B.&M., UTAH COUNTY, UTAH



**CONSULTING, LLC**  
 2155 North Main Street  
 Sheridan, WY 82801  
 Phone 307-674-0609  
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**WELL PAD QUANTITIES**

TOTAL CUT FOR WELL PAD = 15,970 C.Y.  
 TOTAL FILL FOR WELL PAD = 13,518 C.Y.  
 TOPSOIL @ 6" DEPTH = 2,125 C.Y.  
 EXCESS MATERIAL = 2,452 C.Y.

**RESERVE PIT QUANTITIES**

TOTAL CUT FOR RESERVE PIT  
 +/- 8,870 C.Y.  
 RESERVE PIT CAPACITY (2' OF FREEBOARD)  
 +/- 33,770 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

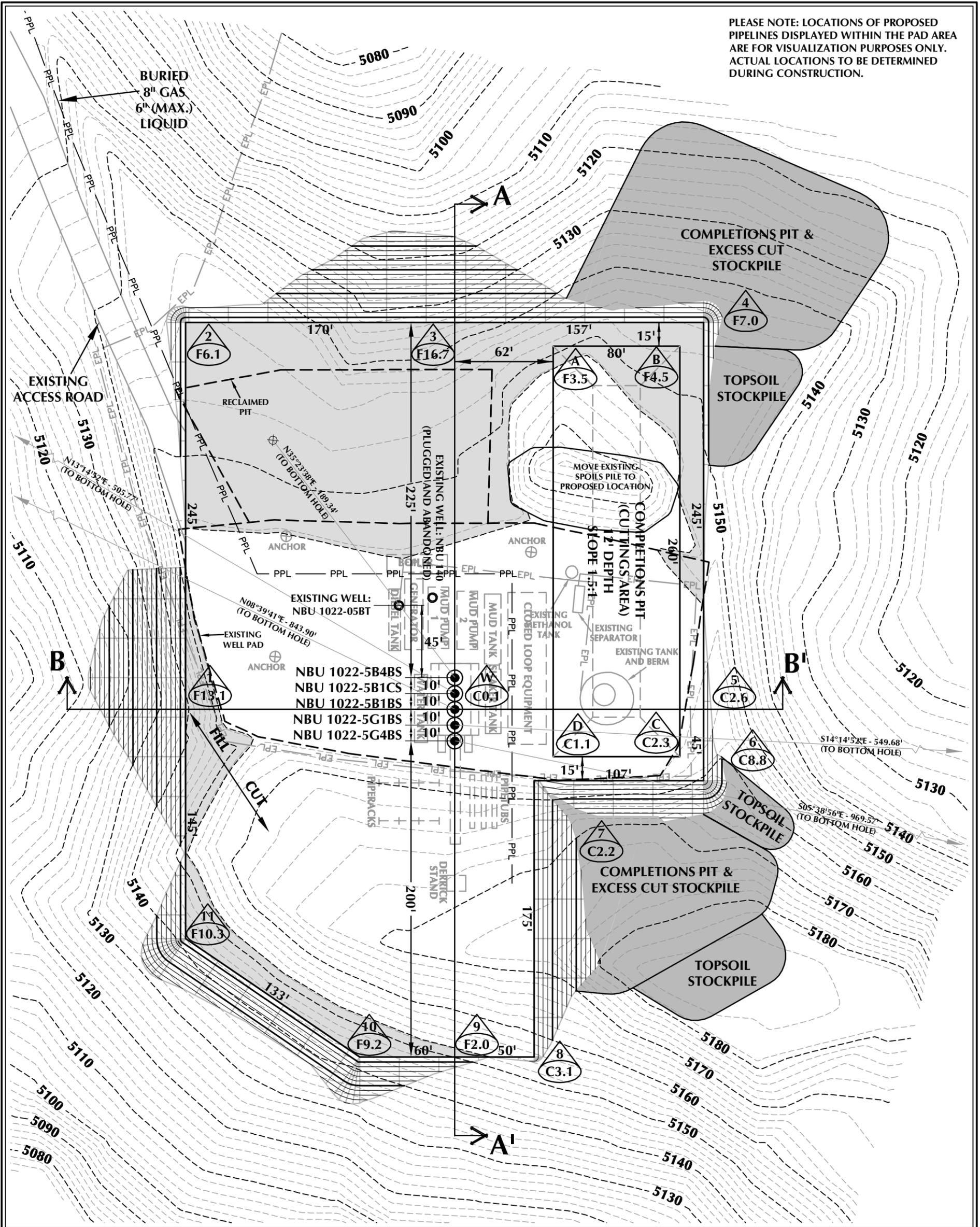


HORIZONTAL 0 30' 60' 1" = 60'  
 2' CONTOURS

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

SCALE: 1"=60' DATE: 9/4/12 SHEET NO:  
 REVISED: **7** 7 OF 17

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



**WELL PAD - NBU 1022-5B (CLOSED LOOP) DESIGN SUMMARY**

EXISTING GRADE @ CENTER OF WELL PAD = 5152.3'  
 FINISHED GRADE ELEVATION = 5152.2'  
 CUT SLOPES = 1.5:1  
 FILL SLOPES = 1.5:1  
 TOTAL WELL PAD AREA = 3.68 ACRES  
 TOTAL DISTURBANCE AREA = 4.54 ACRES  
 SHRINKAGE FACTOR = 1.10  
 SWELL FACTOR = 1.00

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

**WELL PAD - NBU 1022-5B**  
 WELL PAD - LOCATION LAYOUT  
 NBU 1022-5B4BS,  
 NBU 1022-5B1CS, NBU 1022-5B1BS,  
 NBU 1022-5G1BS & NBU 1022-5G4BS  
 LOCATED IN SECTION 5, 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 QUANTITIES**

TOTAL CUT FOR WELL PAD = 15,970 C.Y.  
 TOTAL FILL FOR WELL PAD = 13,518 C.Y.  
 TOPSOIL @ 6" DEPTH = 2,125 C.Y.  
 EXCESS MATERIAL = 2,452 C.Y.

**COMPLETIONS PIT QUANTITIES**

TOTAL CUT FOR COMPLETIONS PIT  
 +/- 6,720 C.Y.  
 COMPLETIONS PIT CAPACITY  
 (2' OF FREEBOARD)  
 +/- 25,260 BARRELS

**WELL PAD LEGEND**

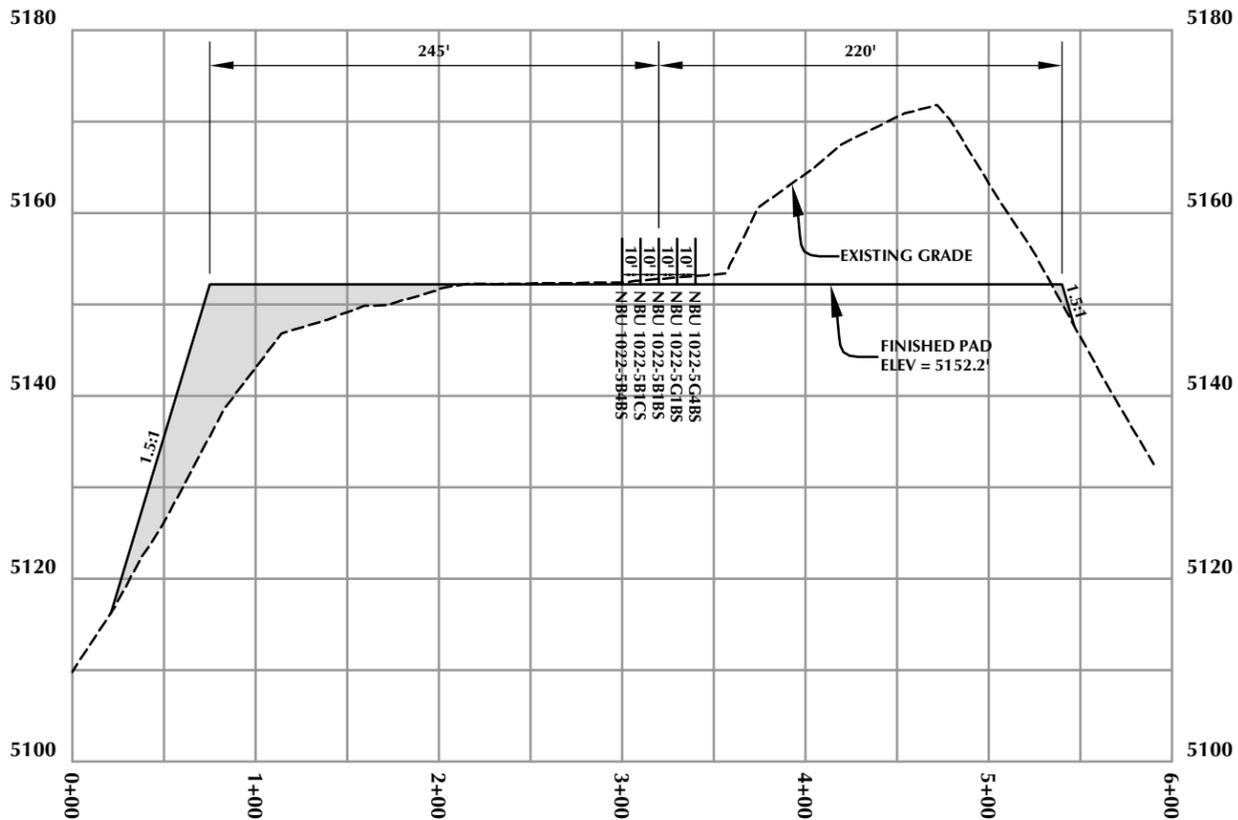
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PROPOSED PIPELINE
- EXISTING PIPELINE



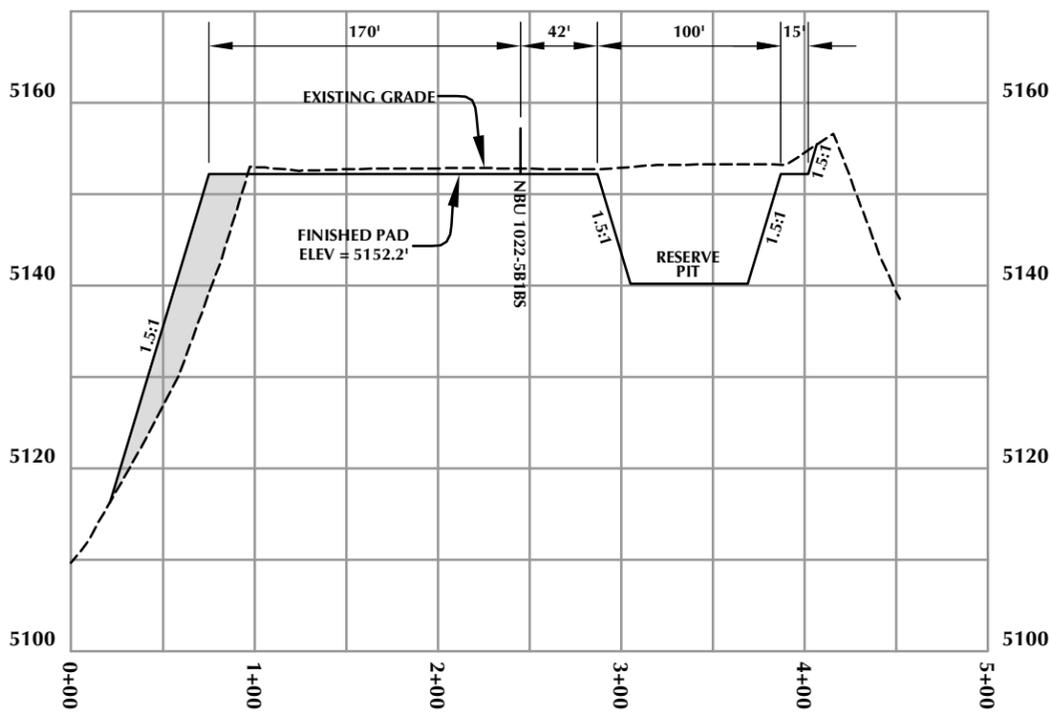
HORIZONTAL 0 30' 60' 1" = 60'  
 2' CONTOURS

SCALE: 1"=60' DATE: 10/26/12 SHEET NO:  
 REVISED: **7B** 7B OF 17

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 209 NORTH 300 WEST - VERNAL, UTAH 84078



**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

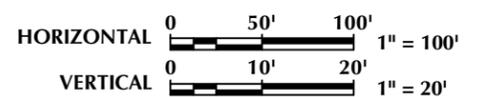
**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 1022-5B

WELL PAD - CROSS SECTIONS  
NBU 1022-5B4BS,  
NBU 1022-5B1CS, NBU 1022-5B1BS,  
NBU 1022-5G1BS & NBU 1022-5G4BS  
LOCATED IN SECTION 5, T10S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH



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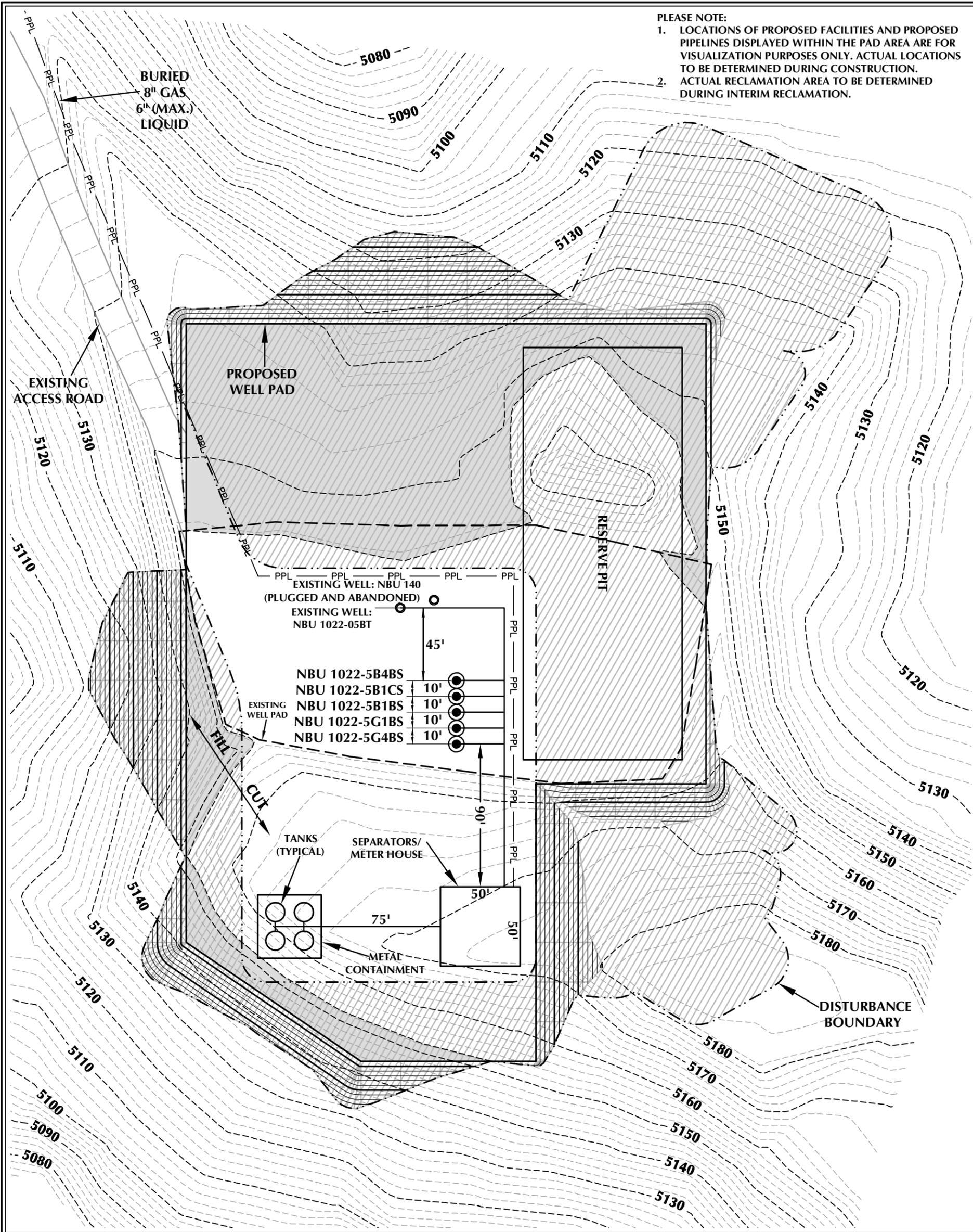


**TIMBERLINE** (435) 789-1365  
ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

Scale: 1"=100'	Date: 9/4/12	SHEET NO:
REVISED:		<b>8</b> 8 OF 17

PLEASE NOTE:

1. LOCATIONS OF PROPOSED FACILITIES AND PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.
2. ACTUAL RECLAMATION AREA TO BE DETERMINED DURING INTERIM RECLAMATION.



**WELL PAD - NBU 1022-5B DESIGN SUMMARY**

TOTAL DISTURBANCE AREA = 4.54 ACRES (INCLUDING EXISTING)  
 RECLAMATION AREA = 3.35 ACRES  
 TOTAL WELL PAD AREA AFTER RECLAMATION = 1.19 ACRES

**WELL PAD LEGEND**

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PROPOSED PIPELINE
- EXISTING PIPELINE
- RECLAMATION AREA



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

**Kerr-McGee Oil & Gas Onshore, LP**  
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WELL PAD - NBU 1022-5B

WELL PAD - RECLAMATION LAYOUT  
 NBU 1022-5B4BS,  
 NBU 1022-5B1CS, NBU 1022-5B1BS,  
 NBU 1022-5G1BS & NBU 1022-5G4BS  
 LOCATED IN SECTION 5, 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

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

(435) 789-1365

SCALE: 1"=60' DATE: 9/4/12 SHEET NO:

REVISED: **9** 9 OF 17

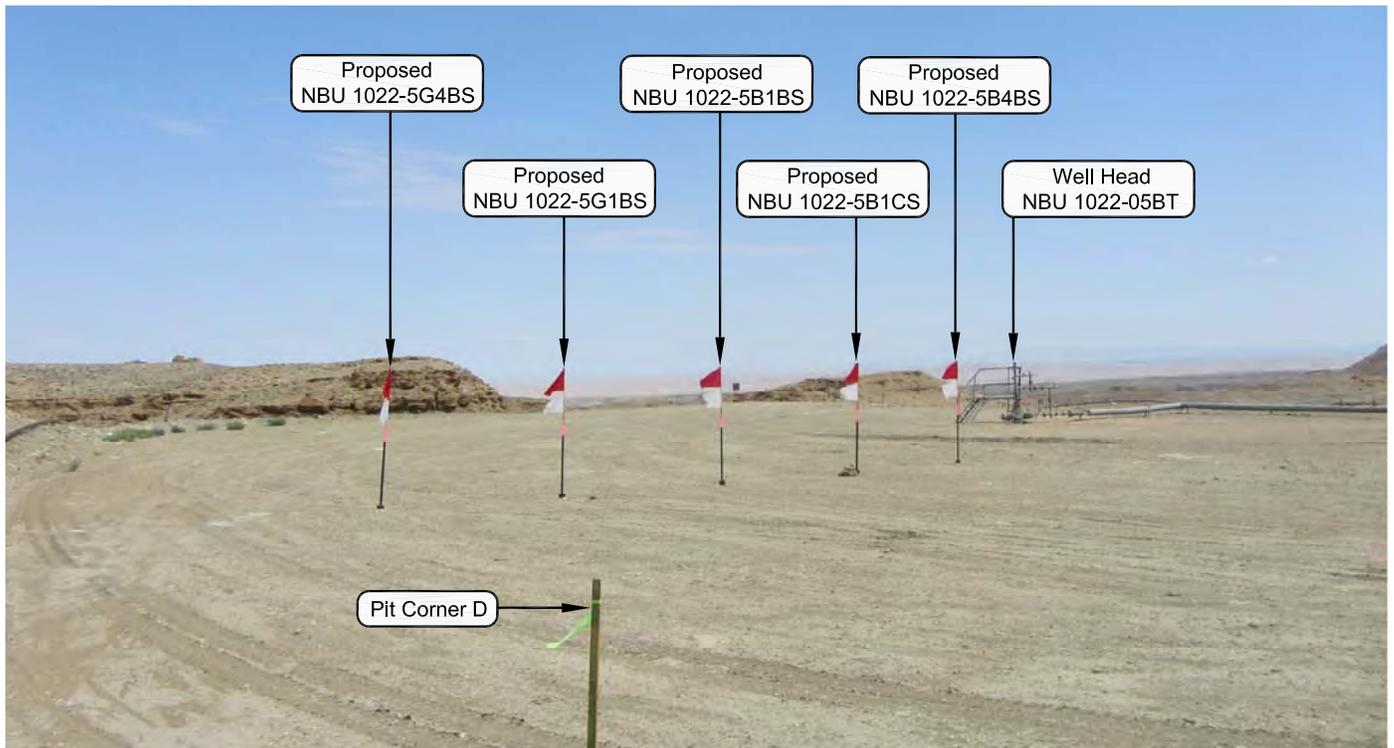


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: SOUTHWESTERLY

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

**WELL PAD - NBU 1022-5B**

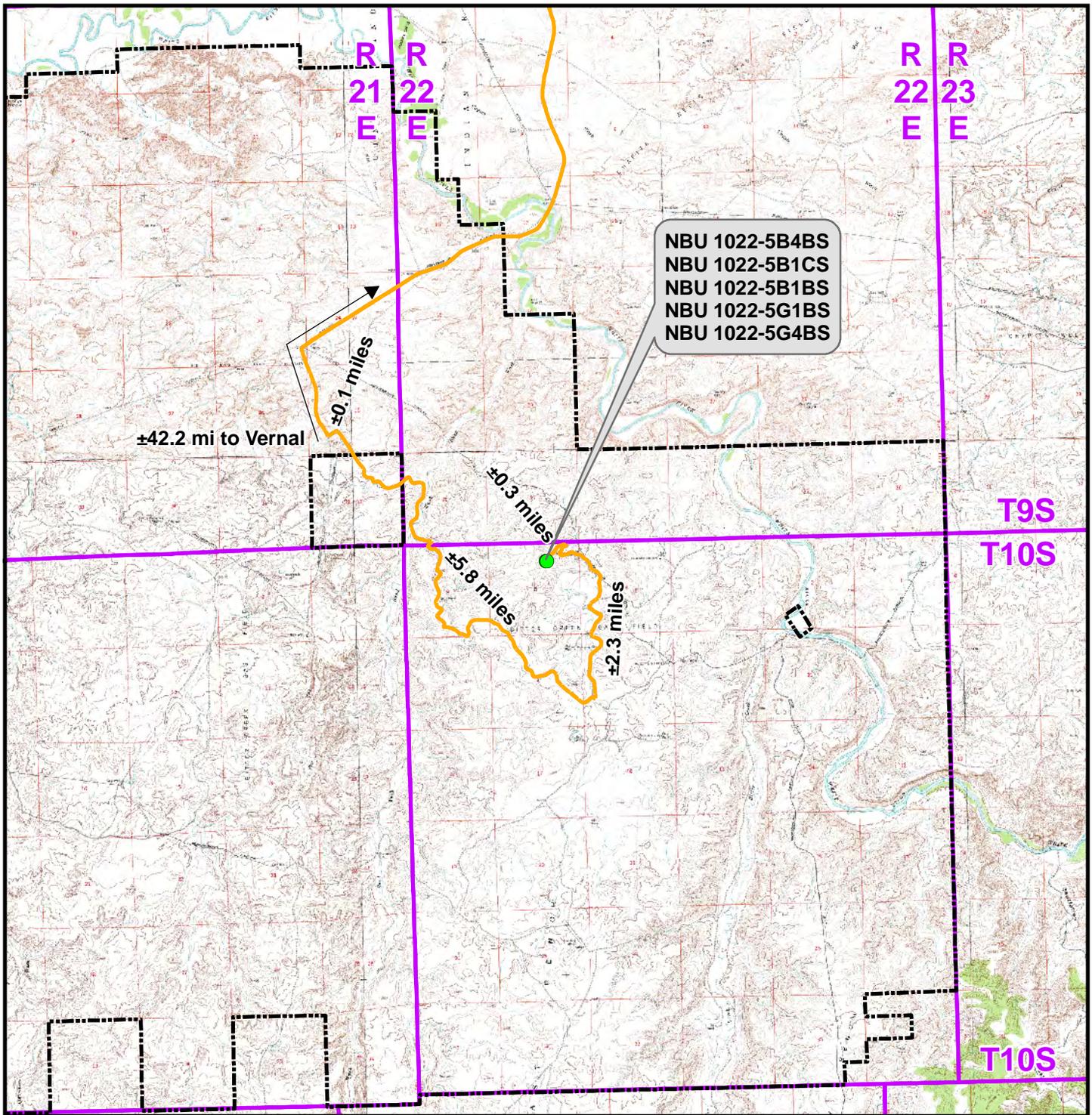
**LOCATION PHOTOS**  
 NBU 1022-5B4BS,  
 NBU 1022-5B1CS, NBU 1022-5B1BS,  
 NBU 1022-5G1BS & NBU 1022-5G4BS  
 LOCATED IN SECTION 5, T10S, R22E,  
 S.L.B.&M., Uintah County, Utah.



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

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

DATE PHOTOS TAKEN: 8-23-12	PHOTOS TAKEN BY: J.W.	SHEET NO: <b>10</b>
DATE DRAWN: 8-23-12	DRAWN BY: J.G.C.	
Date Last Revised:		10 OF 17



File: K:\ANADARKO\2012\2012\_53\_NBU\_1022-5\_FOCUS\GIS\Maps\_ABCDENBU\_1022-5B\NBU\_1022-5B\_A.mxd, 9/3/2012 10:16:47 AM

**Legend**

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

Distance From Well Pad - NBU 1022-5B To Unit Boundary: ±6,646ft

**WELL PAD - NBU 1022-5B**

**TOPO A**  
**NBU 1022-5B4BS,**  
**NBU 1022-5B1CS, NBU 1022-5B1BS,**  
**NBU 1022-5G1BS & NBU 1022-5G4BS**  
**LOCATED IN SECTION 5, T10S, R22E**  
**S.L.B.&M., UINTAH COUNTY, UTAH**

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

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



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 2155 North Main Street  
 Sheridan, Wyoming 82801  
 Phone 307-674-0609  
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SCALE: 1:100,000

NAD83 USP Central

SHEET NO:

DRAWN: TL

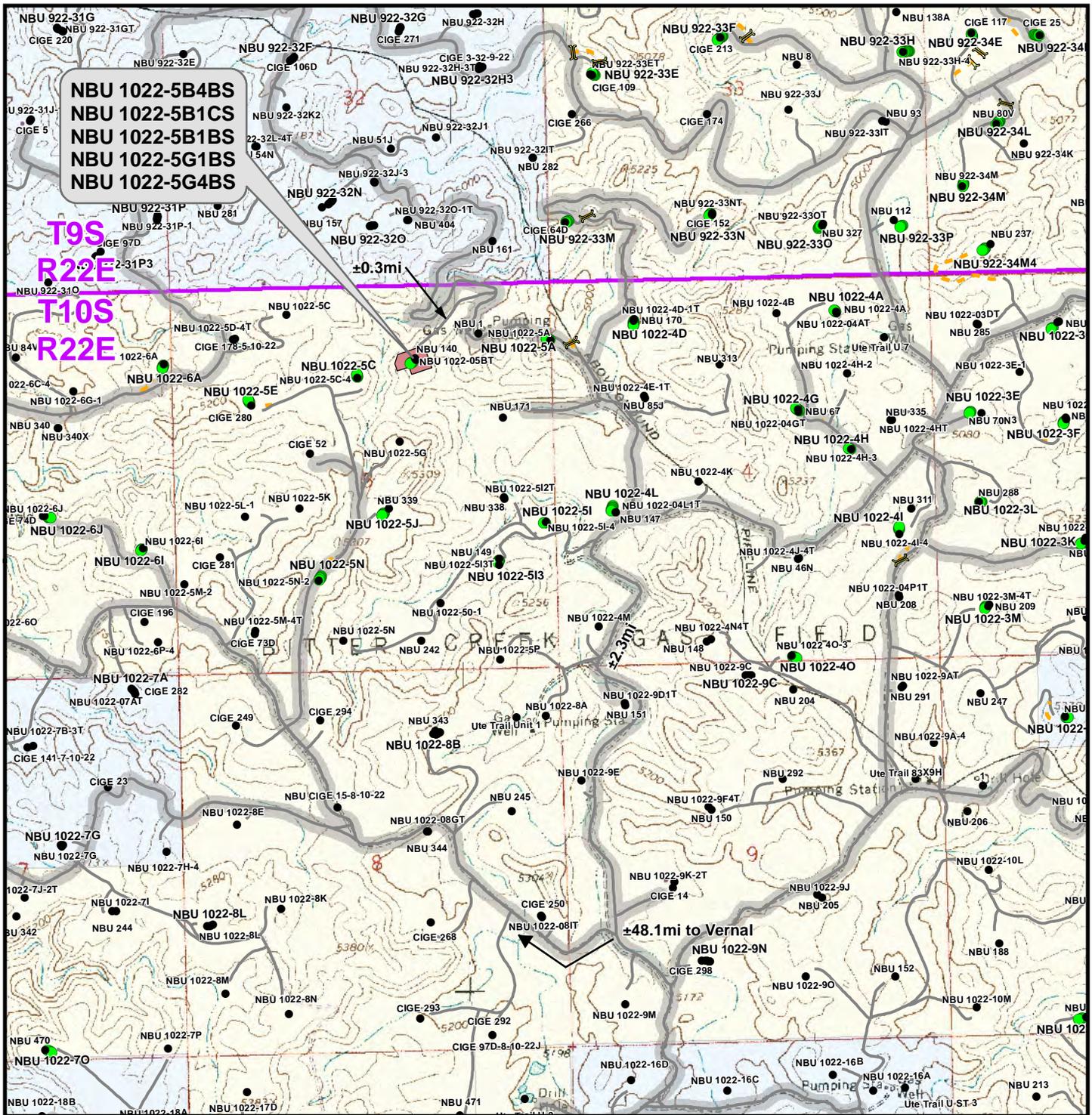
DATE: 4 Sept 2012

**11**

REVISED:

DATE:

11 OF 17



**NBU 1022-5B4BS  
NBU 1022-5B1CS  
NBU 1022-5B1BS  
NBU 1022-5G1BS  
NBU 1022-5G4BS**

**T9S  
R22E  
T10S  
R22E**

±0.3mi

±48.1mi to Vernal

File: K:\ANADARKO\2012\2012\_53\_NBU\_1022-5\_FOCUS\GIS\Maps\_ABCDENBU\_1022-5B\_B.mxd, 10/29/2012 6:54:48 PM

**Legend**

- Well - Proposed
- Well - Existing
- Well Pad
- Road - Existing
- - - Road - Proposed
- ▬ County Road
- 🚧 Culvert/LWC - Proposed
- Bureau of Land Management
- Indian Reservation
- State
- Private

Total Proposed Road Length: ±0ft

**WELL PAD - NBU 1022-5B**

**TOPO B  
NBU 1022-5B4BS,  
NBU 1022-5B1CS, NBU 1022-5B1BS,  
NBU 1022-5G1BS & NBU 1022-5G4BS  
LOCATED IN SECTION 5, T10S, R22E  
S.L.B.&M., UINTAH COUNTY, UTAH**

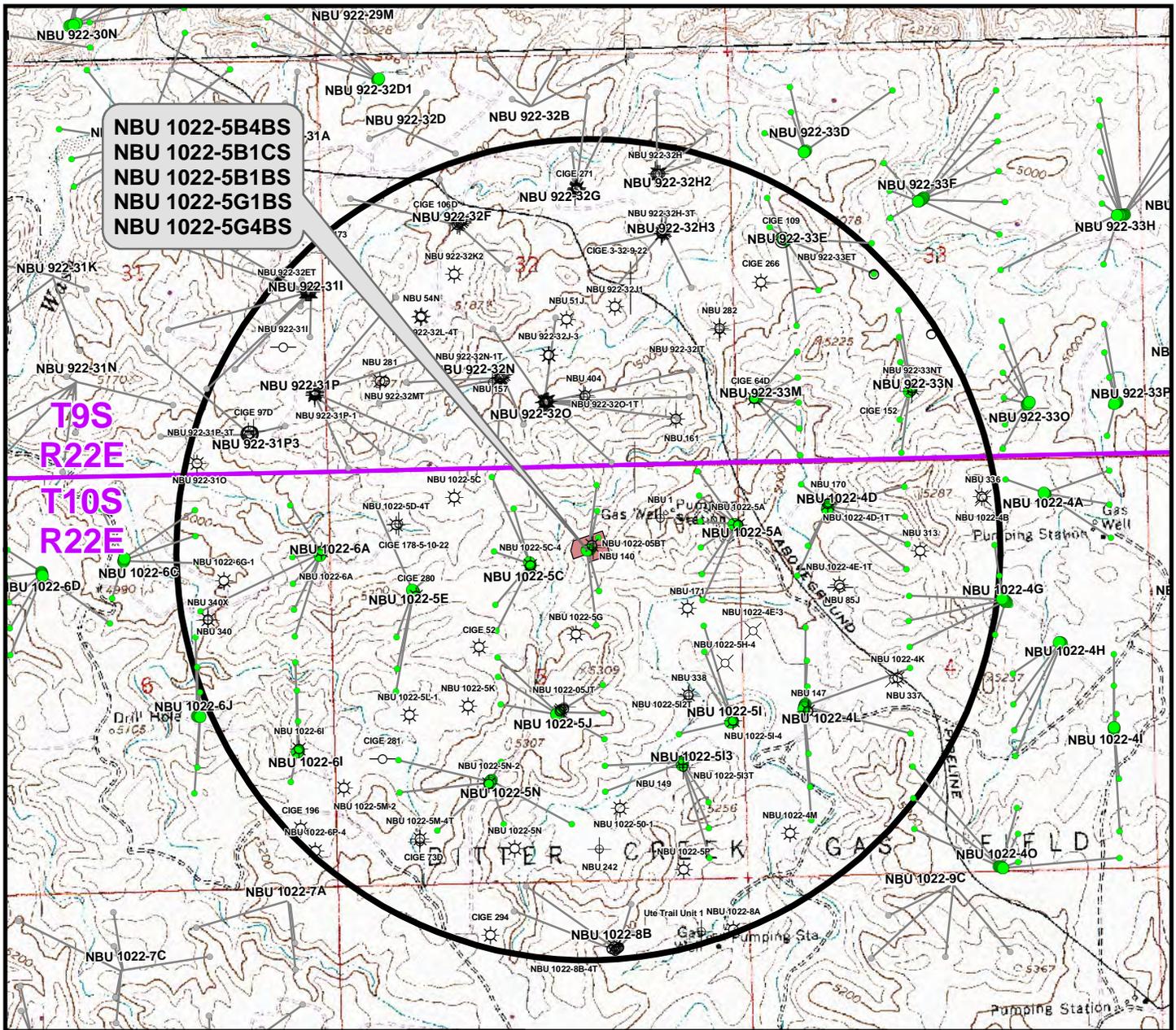
**Kerr-McGee Oil &  
Gas Onshore L.P.**

**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:	<b>12</b>
DRAWN: TL	DATE: 29 Oct 2012	12 OF 17	
REVISED:	DATE:		



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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 1022-5B4BS	NBU 1022-05BT	131ft
NBU 1022-5B1CS	NBU 1022-05BT	448ft
NBU 1022-5B1BS	NBU 922-3204DS BH	348ft
NBU 1022-5G1BS	NBU 140	573ft
NBU 1022-5G4BS	NBU 1022-5G	288ft

**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
- ⊖ Preliminary Location

**WELL PAD - NBU 1022-5B**

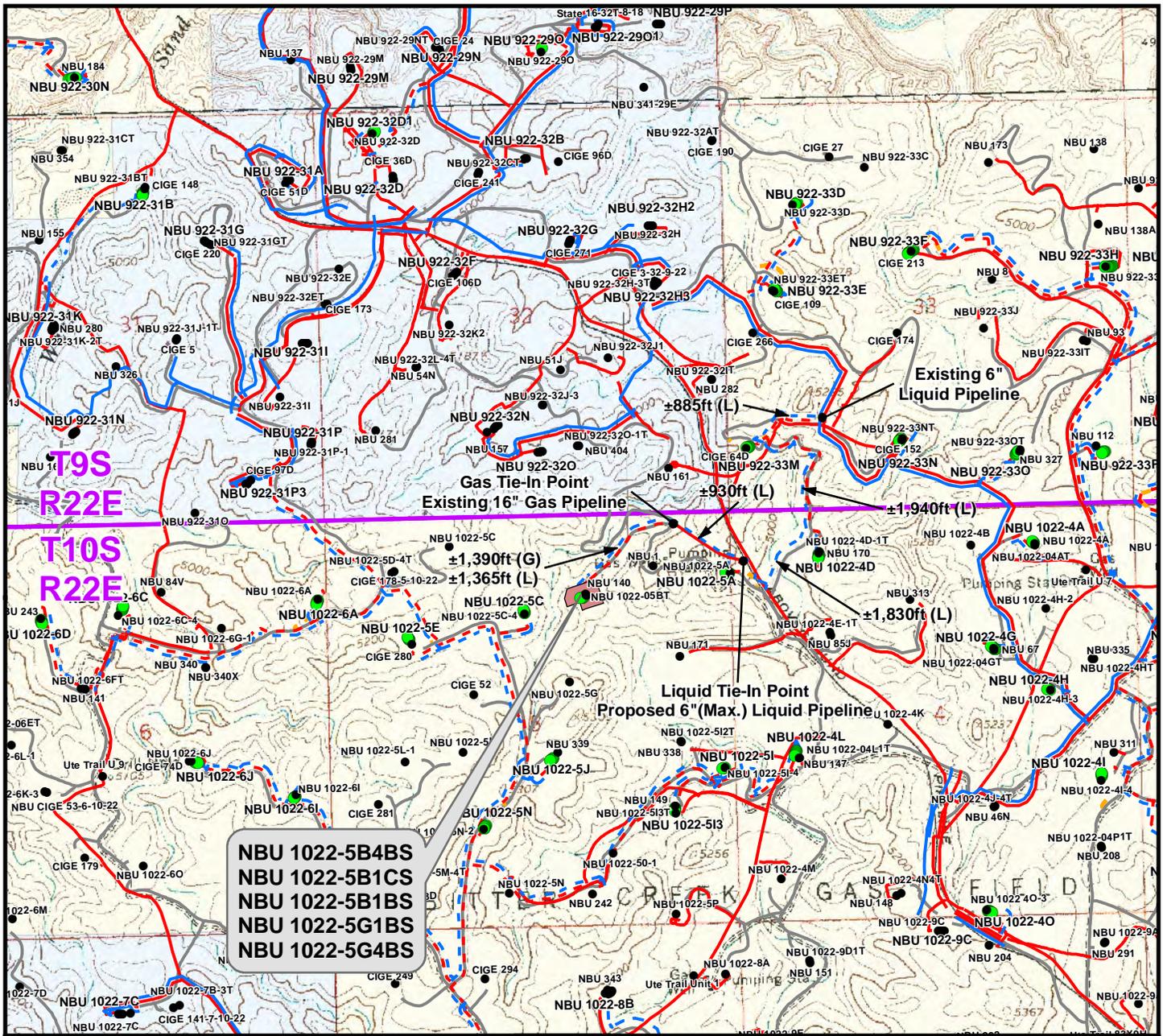
TOPO C  
 NBU 1022-5B4BS,  
 NBU 1022-5B1CS, NBU 1022-5B1BS,  
 NBU 1022-5G1BS & NBU 1022-5G4BS  
 LOCATED IN SECTION 5, T10S, R22E  
 S.L.B.&M., UINTAH COUNTY, UTAH

**Kerr-McGee Oil &  
 Gas Onshore L.P.**  
 1099 18th Street  
 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	<b>13</b>
DRAWN: TL	DATE: 29 Oct 2012	
REVISED:	DATE:	



**NBU 1022-5B4BS**  
**NBU 1022-5B1CS**  
**NBU 1022-5B1BS**  
**NBU 1022-5G1BS**  
**NBU 1022-5G4BS**

Proposed Liquid Pipeline	Length
Buried 6" (Max.) (Separator to Edge of Pad)	±475ft
Buried 6" (Max.) (Edge of Pad to 5A Intersection)	±2,295ft
<b>TOTAL PROPOSED BURIED LIQUID PIPELINE =</b>	<b>±2,770ft</b>

Proposed Gas Pipeline	Length
Buried 8" (Meter House to Edge of Pad)	±475ft
Buried 8" (Edge of Pad to Existing 16" Gas Pipeline)	±1,390ft
<b>TOTAL PROPOSED BURIED GAS PIPELINE =</b>	<b>±1,865ft</b>

**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 1022-5B**

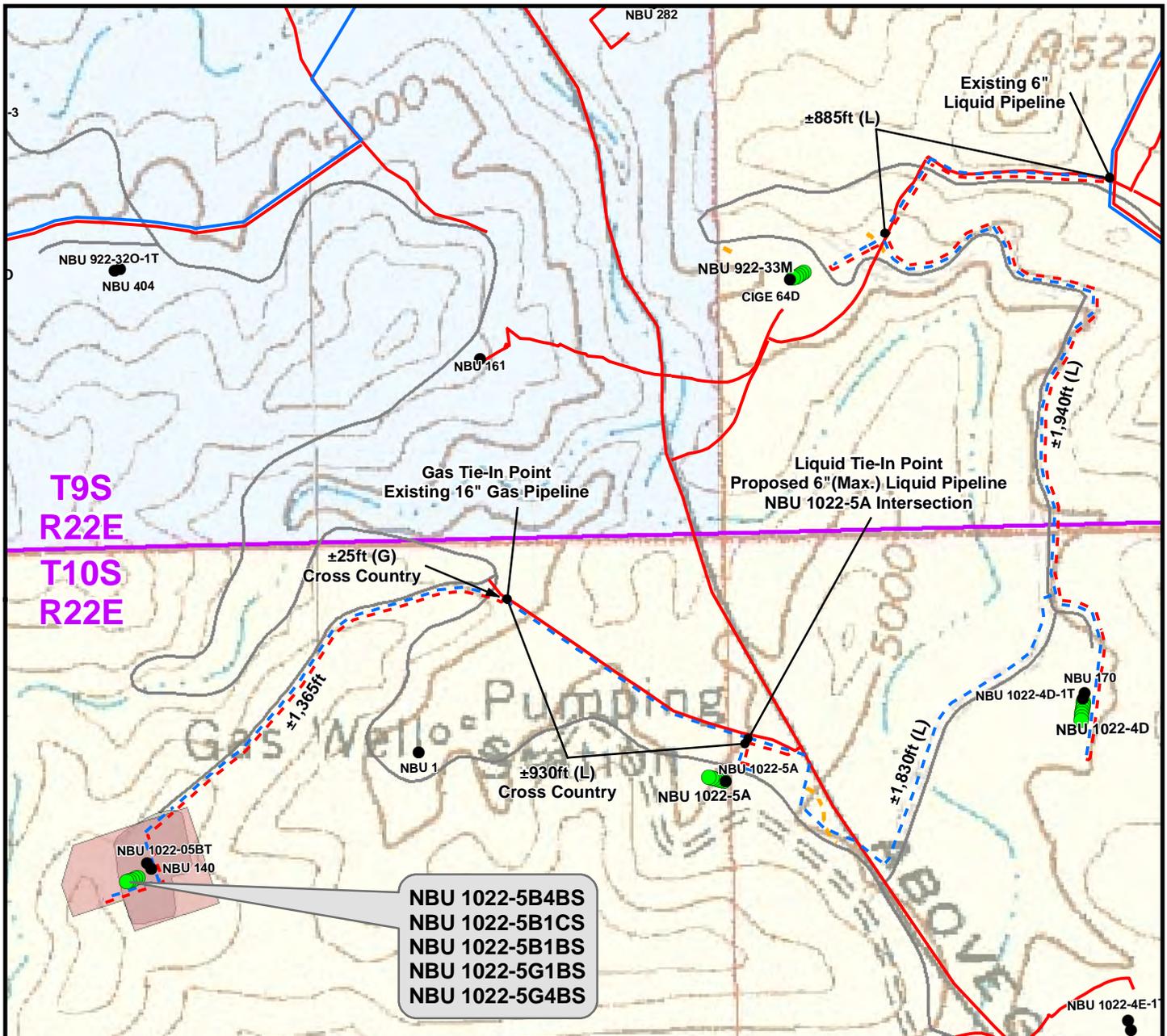
**TOPO D**  
**NBU 1022-5B4BS,**  
**NBU 1022-5B1CS, NBU 1022-5B1BS,**  
**NBU 1022-5G1BS & NBU 1022-5G4BS**  
**LOCATED IN SECTION 5, T10S, R22E**  
**S.L.B.&M., UINTAH COUNTY, UTAH**

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



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 Fax 307-674-0182

SCALE: 1" = 2,000ft	NAD83 USP Central	<b>SHEET NO:</b> <b>14</b>
DRAWN: TL	DATE: 29 Oct 2012	
REVISED:	DATE:	14 OF 17



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Proposed Liquid Pipeline	Length
----- Buried 6" (Max.) (Separator to Edge of Pad)	±475ft
Buried 6" (Max.) (Edge of Pad to 5A Intersection)	±2,295ft
<b>TOTAL PROPOSED BURIED LIQUID PIPELINE =</b>	<b>±2,770ft</b>

Proposed Gas Pipeline	Length
----- Buried 8" (Meter House to Edge of Pad)	±475ft
Buried 8" (Edge of Pad to Existing 16" Gas Pipeline)	±1,390ft
<b>TOTAL PROPOSED BURIED GAS PIPELINE =</b>	<b>±1,865ft</b>

**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 1022-5B**

**TOPO D2 (PAD & PIPELINE DETAIL)**  
**NBU 1022-5B4BS,**  
**NBU 1022-5B1CS, NBU 1022-5B1BS,**  
**NBU 1022-5G1BS & NBU 1022-5G4BS**  
**LOCATED IN SECTION 5, T10S, R22E**  
**S.L.B.&M., UINTAH COUNTY, UTAH**

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

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



**CONSULTING, LLC**

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



SCALE: 1" = 500ft

NAD83 USP Central

SHEET NO:

DRAWN: TL

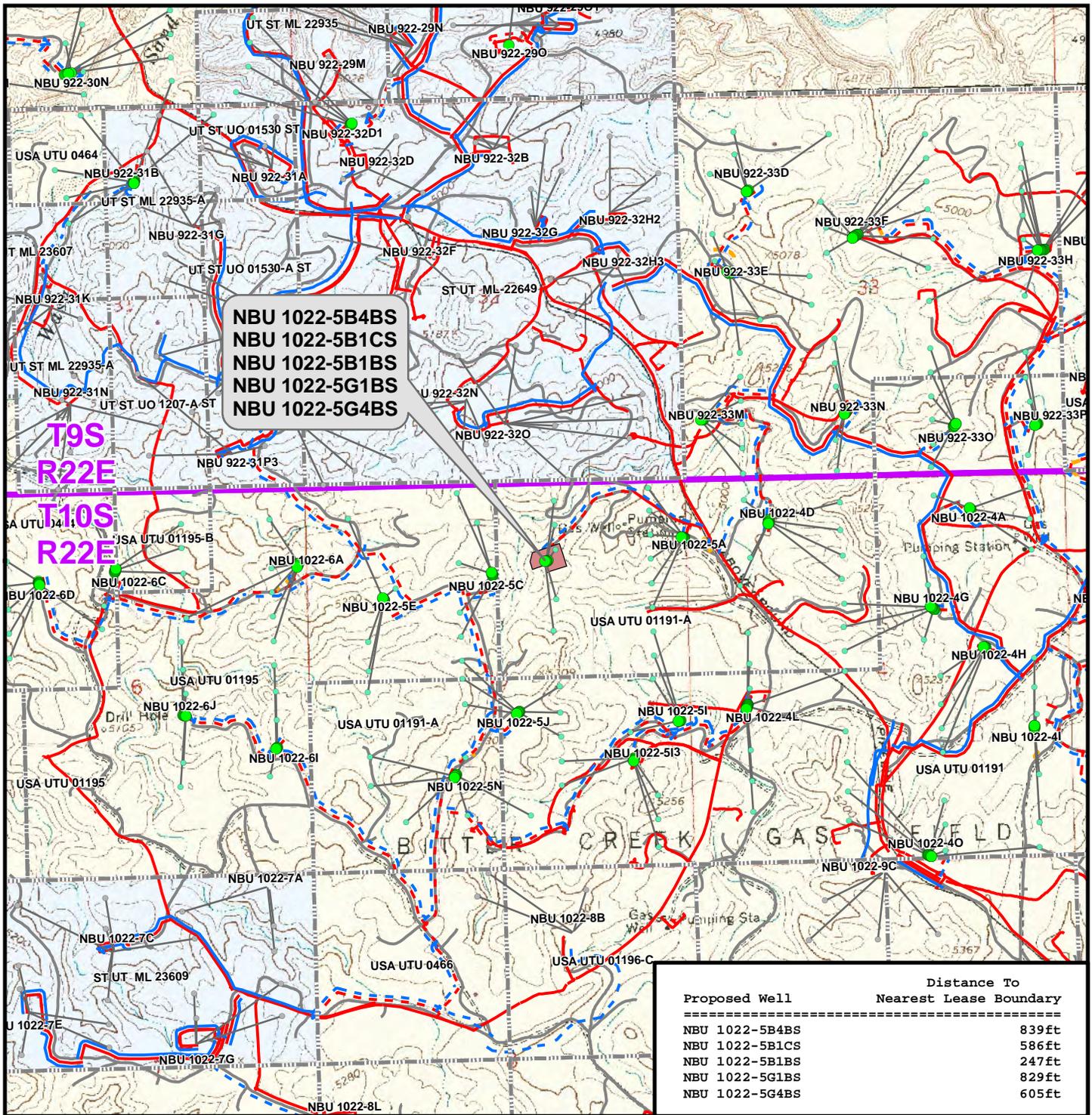
DATE: 29 Oct 2012

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REVISED:

DATE:

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**NBU 1022-5B4BS  
NBU 1022-5B1CS  
NBU 1022-5B1BS  
NBU 1022-5G1BS  
NBU 1022-5G4BS**

Proposed Well	Distance To Nearest Lease Boundary
NBU 1022-5B4BS	839ft
NBU 1022-5B1CS	586ft
NBU 1022-5B1BS	247ft
NBU 1022-5G1BS	829ft
NBU 1022-5G4BS	605ft

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**Legend**

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

**WELL PAD - NBU 1022-5B**

TOPO E  
NBU 1022-5B4BS,  
NBU 1022-5B1CS, NBU 1022-5B1BS,  
NBU 1022-5G1BS & NBU 1022-5G4BS  
LOCATED IN SECTION 5, T10S, R22E  
S.L.B.&M., UINTAH COUNTY, UTAH

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Gas Onshore L.P.**

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Denver, Colorado 80202

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N

SCALE: 1" = 2,000ft	NAD83 USP Central	<b>16</b>
DRAWN: TL	DATE: 29 Oct 2012	
REVISED:	DATE:	

SHEET NO:  
16 OF 17

**Kerr-McGee Oil & Gas Onshore, LP  
WELL PAD – NBU 1022-5B  
WELLS - NBU 1022-5B4BS,  
NBU 1022-5B1CS, NBU 1022-5B1BS,  
NBU 1022-5G1BS & NBU 1022-5G4BS  
Section 5, 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 18.7 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 0.1 miles to a second Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the second Class D County Road approximately 5.8 miles to a third Class D County Road to the north. Exit left and proceed in a northerly direction along the third Class D County Road approximately 2.3 miles to a service road to the southwest. Exit left and proceed in a southwesterly direction along the service road approximately 0.3 miles to the proposed well location.

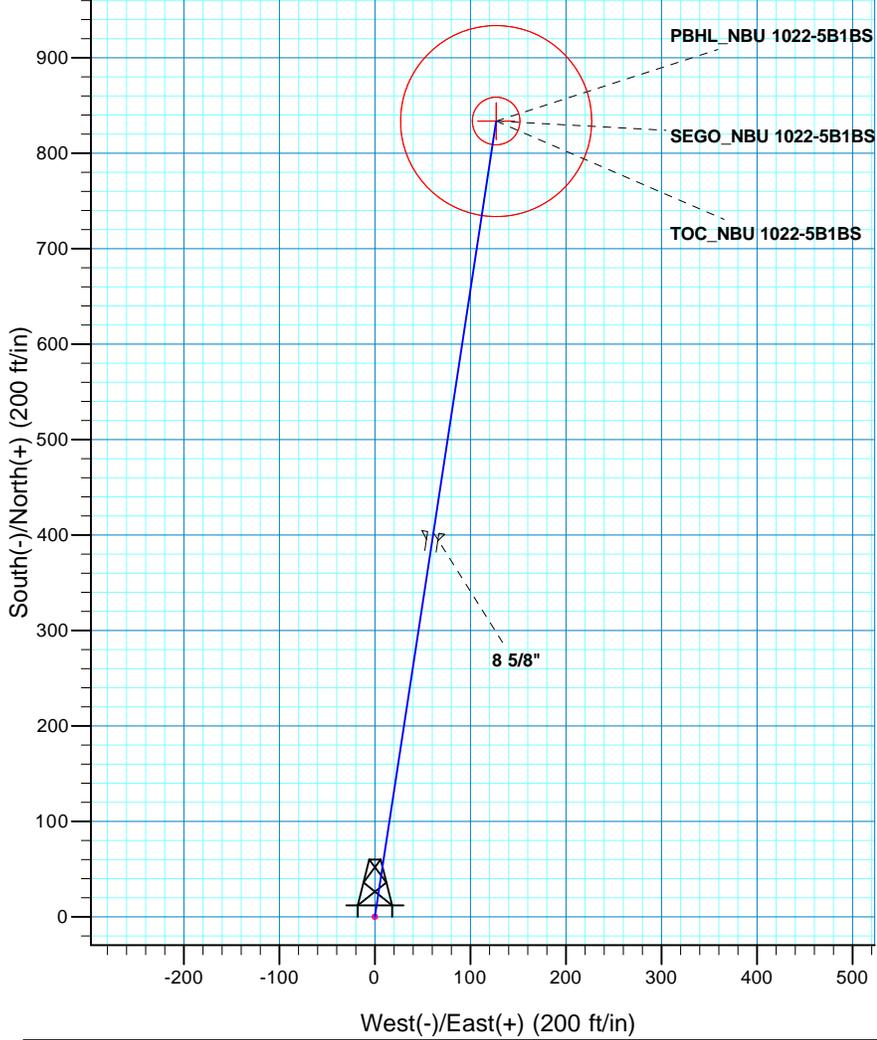
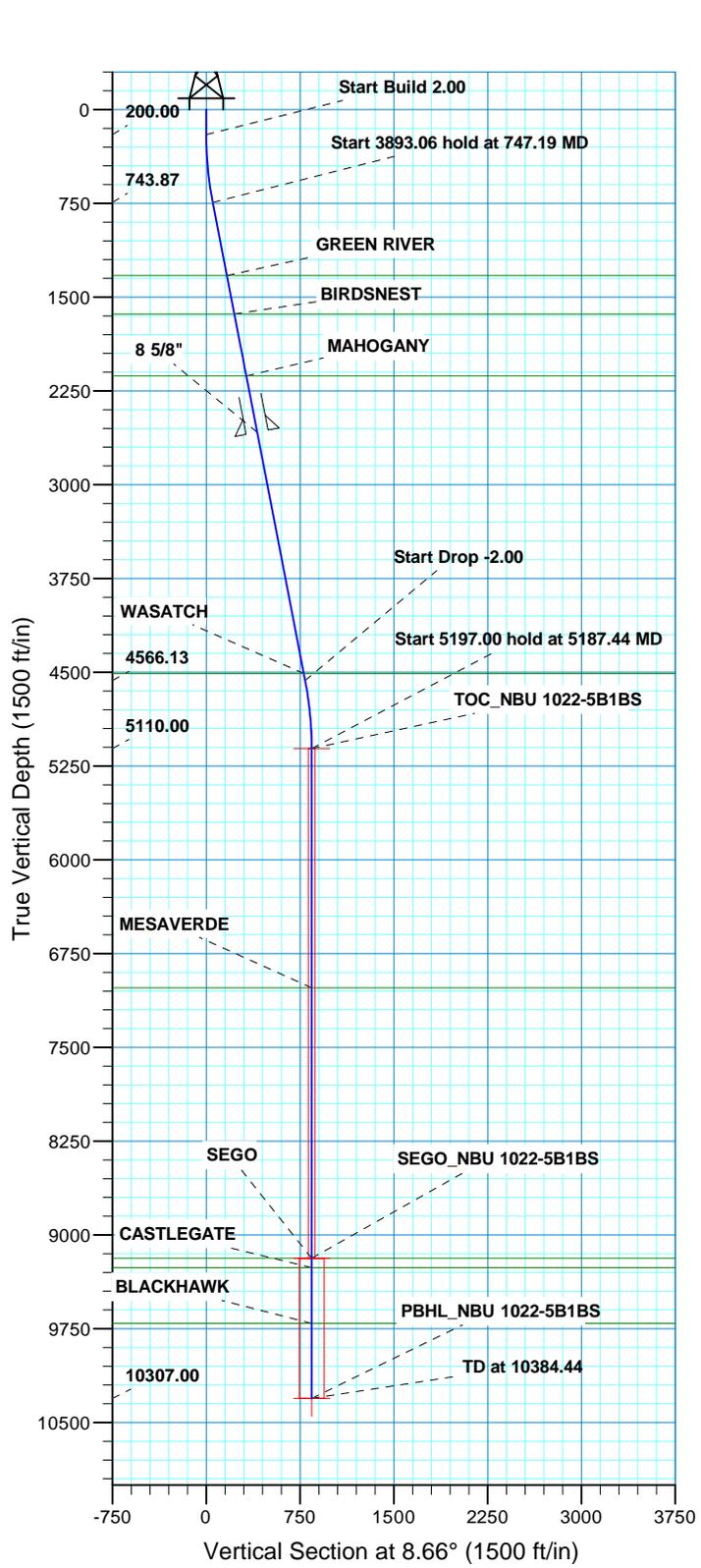
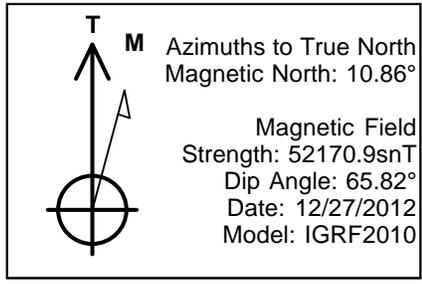
Total distance from Vernal, Utah to the proposed well location is approximately 50.7 miles in a southerly direction.



Site: NBU 1022-5B PAD  
Well: NBU 1022-5B1BS  
Wellbore: OH  
Design: PLAN #1 PERMIT



WELL DETAILS: NBU 1022-5B1BS								
GL 5152 & KB 4 @ 5156.00ft (ASSUMED)								
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude			
0.00	0.00	14523330.48	2071662.73	39.982323	-109.460586			
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
TOC	5110.00	833.68	126.92	14524166.22	2071775.24	39.984612	-109.460133	Point
SEGO	9187.00	833.68	126.92	14524166.22	2071775.24	39.984612	-109.460133	Circle (Radius: 25.00)
PBHL	10307.00	833.68	126.92	14524166.22	2071775.24	39.984612	-109.460133	Circle (Radius: 100.00)



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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
747.19	10.94	8.66	743.87	51.51	7.84	2.00	8.66	52.10	
4640.25	10.94	8.66	4566.13	782.17	119.08	0.00	0.00	791.19	
5187.44	0.00	0.00	5110.00	833.68	126.92	2.00	180.00	843.29	TOC_NBU 1022-5B1BS
10384.44	0.00	0.00	10307.00	833.68	126.92	0.00	0.00	843.29	PBHL_NBU 1022-5B1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N			
Geodetic System:	Universal Transverse Mercator (US Survey Feet)	TVDPath	1328.00
Datum:	NAD 1927 (NADCON CONUS)	MDPath	1342.14
Ellipsoid:	Clarke 1866		1654.83
Zone:	Zone 12N (114 W to 108 W)		2130.00
Location:	SECTION5 T10S R22E		4510.00
System Datum:	Mean Sea Level		7024.00
			9187.00
			9261.00
			9707.00

FORMATION TOP DETAILS			
Formation	GREEN RIVER	TVDPath	1328.00
	BIRDSNEST	MDPath	1654.83
	MAHOGANY		2130.00
	WASATCH		4510.00
	MESAVERDE		7024.00
	SEGO		9187.00
	CASTLEGATE		9261.00
	BLACKHAWK		9707.00

CASING DETAILS			
TVD	MD	Name	Size
2580.00	2617.33	8 5/8"	8.625

RECEIVED :



# Scientific Drilling

## **US ROCKIES REGION PLANNING**

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

**NBU 1022-5B PAD**

**NBU 1022-5B1BS**

**OH**

**Plan: PLAN #1 PERMIT**

## **Standard Planning Report**

**27 December, 2012**





<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-5B1BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5152 & KB 4 @ 5156.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5152 & KB 4 @ 5156.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-5B PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-5B1BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PERMIT		

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

<b>Site</b>	NBU 1022-5B PAD, SECTION 5 T10S R22E				
<b>Site Position:</b>	<b>Northing:</b>	14,523,336.64 usft	<b>Latitude:</b>	39.982339	
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,071,681.68 usft	<b>Longitude:</b>	-109.460518
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.99 °

<b>Well</b>	NBU 1022-5B1BS, 1081 FNL 1942 FEL					
<b>Well Position</b>	<b>+N/-S</b>	-5.83 ft	<b>Northing:</b>	14,523,330.48 usft	<b>Latitude:</b>	39.982323
	<b>+E/-W</b>	-19.05 ft	<b>Easting:</b>	2,071,662.73 usft	<b>Longitude:</b>	-109.460586
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	5,152.00 ft	

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	12/27/12	10.86	65.82	52,171

<b>Design</b>	PLAN #1 PERMIT			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	8.66

<b>Plan Sections</b>										
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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
747.19	10.94	8.66	743.87	51.51	7.84	2.00	2.00	0.00	8.66	
4,640.25	10.94	8.66	4,566.13	782.17	119.08	0.00	0.00	0.00	0.00	
5,187.44	0.00	0.00	5,110.00	833.68	126.92	2.00	-2.00	0.00	180.00	TOC_NBU 1022-5B1I
10,384.44	0.00	0.00	10,307.00	833.68	126.92	0.00	0.00	0.00	0.00	PBHL_NBU 1022-5B'



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-5B1BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5152 & KB 4 @ 5156.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5152 & KB 4 @ 5156.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-5B PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-5B1BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PERMIT		

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
<b>Start Build 2.00</b>										
300.00	2.00	8.66	299.98	1.73	0.26	1.75	2.00	2.00	2.00	0.00
400.00	4.00	8.66	399.84	6.90	1.05	6.98	2.00	2.00	2.00	0.00
500.00	6.00	8.66	499.45	15.51	2.36	15.69	2.00	2.00	2.00	0.00
600.00	8.00	8.66	598.70	27.56	4.20	27.88	2.00	2.00	2.00	0.00
700.00	10.00	8.66	697.47	43.03	6.55	43.52	2.00	2.00	2.00	0.00
747.19	10.94	8.66	743.87	51.51	7.84	52.10	2.00	2.00	2.00	0.00
<b>Start 3893.06 hold at 747.19 MD</b>										
800.00	10.94	8.66	795.72	61.42	9.35	62.13	0.00	0.00	0.00	0.00
900.00	10.94	8.66	893.90	80.19	12.21	81.11	0.00	0.00	0.00	0.00
1,000.00	10.94	8.66	992.08	98.95	15.07	100.09	0.00	0.00	0.00	0.00
1,100.00	10.94	8.66	1,090.26	117.72	17.92	119.08	0.00	0.00	0.00	0.00
1,200.00	10.94	8.66	1,188.44	136.49	20.78	138.06	0.00	0.00	0.00	0.00
1,300.00	10.94	8.66	1,286.63	155.26	23.64	157.05	0.00	0.00	0.00	0.00
1,342.14	10.94	8.66	1,328.00	163.17	24.84	165.05	0.00	0.00	0.00	0.00
<b>GREEN RIVER</b>										
1,400.00	10.94	8.66	1,384.81	174.03	26.49	176.03	0.00	0.00	0.00	0.00
1,500.00	10.94	8.66	1,482.99	192.80	29.35	195.02	0.00	0.00	0.00	0.00
1,600.00	10.94	8.66	1,581.17	211.57	32.21	214.00	0.00	0.00	0.00	0.00
1,654.83	10.94	8.66	1,635.00	221.86	33.78	224.41	0.00	0.00	0.00	0.00
<b>BIRDSNEST</b>										
1,700.00	10.94	8.66	1,679.35	230.33	35.07	232.99	0.00	0.00	0.00	0.00
1,800.00	10.94	8.66	1,777.53	249.10	37.92	251.97	0.00	0.00	0.00	0.00
1,900.00	10.94	8.66	1,875.71	267.87	40.78	270.96	0.00	0.00	0.00	0.00
2,000.00	10.94	8.66	1,973.89	286.64	43.64	289.94	0.00	0.00	0.00	0.00
2,100.00	10.94	8.66	2,072.08	305.41	46.50	308.93	0.00	0.00	0.00	0.00
2,159.00	10.94	8.66	2,130.00	316.48	48.18	320.13	0.00	0.00	0.00	0.00
<b>MAHOGANY</b>										
2,200.00	10.94	8.66	2,170.26	324.18	49.35	327.91	0.00	0.00	0.00	0.00
2,300.00	10.94	8.66	2,268.44	342.94	52.21	346.90	0.00	0.00	0.00	0.00
2,400.00	10.94	8.66	2,366.62	361.71	55.07	365.88	0.00	0.00	0.00	0.00
2,500.00	10.94	8.66	2,464.80	380.48	57.93	384.87	0.00	0.00	0.00	0.00
2,600.00	10.94	8.66	2,562.98	399.25	60.78	403.85	0.00	0.00	0.00	0.00
2,617.33	10.94	8.66	2,580.00	402.50	61.28	407.14	0.00	0.00	0.00	0.00
<b>8 5/8"</b>										
2,700.00	10.94	8.66	2,661.16	418.02	63.64	422.83	0.00	0.00	0.00	0.00
2,800.00	10.94	8.66	2,759.35	436.79	66.50	441.82	0.00	0.00	0.00	0.00
2,900.00	10.94	8.66	2,857.53	455.56	69.36	460.80	0.00	0.00	0.00	0.00
3,000.00	10.94	8.66	2,955.71	474.32	72.21	479.79	0.00	0.00	0.00	0.00
3,100.00	10.94	8.66	3,053.89	493.09	75.07	498.77	0.00	0.00	0.00	0.00
3,200.00	10.94	8.66	3,152.07	511.86	77.93	517.76	0.00	0.00	0.00	0.00
3,300.00	10.94	8.66	3,250.25	530.63	80.79	536.74	0.00	0.00	0.00	0.00
3,400.00	10.94	8.66	3,348.43	549.40	83.64	555.73	0.00	0.00	0.00	0.00
3,500.00	10.94	8.66	3,446.62	568.17	86.50	574.71	0.00	0.00	0.00	0.00
3,600.00	10.94	8.66	3,544.80	586.93	89.36	593.70	0.00	0.00	0.00	0.00
3,700.00	10.94	8.66	3,642.98	605.70	92.21	612.68	0.00	0.00	0.00	0.00
3,800.00	10.94	8.66	3,741.16	624.47	95.07	631.67	0.00	0.00	0.00	0.00
3,900.00	10.94	8.66	3,839.34	643.24	97.93	650.65	0.00	0.00	0.00	0.00
4,000.00	10.94	8.66	3,937.52	662.01	100.79	669.64	0.00	0.00	0.00	0.00
4,100.00	10.94	8.66	4,035.70	680.78	103.64	688.62	0.00	0.00	0.00	0.00



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<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5152 & KB 4 @ 5156.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-5B PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-5B1BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PERMIT		

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)	
4,200.00	10.94	8.66	4,133.88	699.54	106.50	707.61	0.00	0.00	0.00	
4,300.00	10.94	8.66	4,232.07	718.31	109.36	726.59	0.00	0.00	0.00	
4,400.00	10.94	8.66	4,330.25	737.08	112.22	745.58	0.00	0.00	0.00	
4,500.00	10.94	8.66	4,428.43	755.85	115.07	764.56	0.00	0.00	0.00	
4,583.08	10.94	8.66	4,510.00	771.44	117.45	780.33	0.00	0.00	0.00	
<b>WASATCH</b>										
4,600.00	10.94	8.66	4,526.61	774.62	117.93	783.54	0.00	0.00	0.00	
4,640.25	10.94	8.66	4,566.13	782.17	119.08	791.19	0.00	0.00	0.00	
<b>Start Drop -2.00</b>										
4,700.00	9.75	8.66	4,624.91	792.78	120.70	801.92	2.00	-2.00	0.00	
4,800.00	7.75	8.66	4,723.74	807.82	122.99	817.13	2.00	-2.00	0.00	
4,900.00	5.75	8.66	4,823.04	819.44	124.75	828.88	2.00	-2.00	0.00	
5,000.00	3.75	8.66	4,922.69	827.62	126.00	837.16	2.00	-2.00	0.00	
5,100.00	1.75	8.66	5,022.57	832.36	126.72	841.95	2.00	-2.00	0.00	
5,187.44	0.00	0.00	5,110.00	833.68	126.92	843.29	2.00	-2.00	0.00	
<b>Start 5197.00 hold at 5187.44 MD - TOC_NBU 1022-5B1BS</b>										
5,200.00	0.00	0.00	5,122.56	833.68	126.92	843.29	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,222.56	833.68	126.92	843.29	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,322.56	833.68	126.92	843.29	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,422.56	833.68	126.92	843.29	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,522.56	833.68	126.92	843.29	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,622.56	833.68	126.92	843.29	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,722.56	833.68	126.92	843.29	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,822.56	833.68	126.92	843.29	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,922.56	833.68	126.92	843.29	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,022.56	833.68	126.92	843.29	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,122.56	833.68	126.92	843.29	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,222.56	833.68	126.92	843.29	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,322.56	833.68	126.92	843.29	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,422.56	833.68	126.92	843.29	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,522.56	833.68	126.92	843.29	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,622.56	833.68	126.92	843.29	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,722.56	833.68	126.92	843.29	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,822.56	833.68	126.92	843.29	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,922.56	833.68	126.92	843.29	0.00	0.00	0.00	
7,100.00	0.00	0.00	7,022.56	833.68	126.92	843.29	0.00	0.00	0.00	
7,101.44	0.00	0.00	7,024.00	833.68	126.92	843.29	0.00	0.00	0.00	
<b>MESAVERDE</b>										
7,200.00	0.00	0.00	7,122.56	833.68	126.92	843.29	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,222.56	833.68	126.92	843.29	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,322.56	833.68	126.92	843.29	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,422.56	833.68	126.92	843.29	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,522.56	833.68	126.92	843.29	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,622.56	833.68	126.92	843.29	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,722.56	833.68	126.92	843.29	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,822.56	833.68	126.92	843.29	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,922.56	833.68	126.92	843.29	0.00	0.00	0.00	
8,100.00	0.00	0.00	8,022.56	833.68	126.92	843.29	0.00	0.00	0.00	
8,200.00	0.00	0.00	8,122.56	833.68	126.92	843.29	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,222.56	833.68	126.92	843.29	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,322.56	833.68	126.92	843.29	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,422.56	833.68	126.92	843.29	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,522.56	833.68	126.92	843.29	0.00	0.00	0.00	



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<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5152 & KB 4 @ 5156.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-5B PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-5B1BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PERMIT		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,700.00	0.00	0.00	8,622.56	833.68	126.92	843.29	0.00	0.00	0.00
8,800.00	0.00	0.00	8,722.56	833.68	126.92	843.29	0.00	0.00	0.00
8,900.00	0.00	0.00	8,822.56	833.68	126.92	843.29	0.00	0.00	0.00
9,000.00	0.00	0.00	8,922.56	833.68	126.92	843.29	0.00	0.00	0.00
9,100.00	0.00	0.00	9,022.56	833.68	126.92	843.29	0.00	0.00	0.00
9,200.00	0.00	0.00	9,122.56	833.68	126.92	843.29	0.00	0.00	0.00
9,264.44	0.00	0.00	9,187.00	833.68	126.92	843.29	0.00	0.00	0.00
<b>SEGO - SEGO_NBU 1022-5B1BS</b>									
9,300.00	0.00	0.00	9,222.56	833.68	126.92	843.29	0.00	0.00	0.00
9,338.44	0.00	0.00	9,261.00	833.68	126.92	843.29	0.00	0.00	0.00
<b>CASTLEGATE</b>									
9,400.00	0.00	0.00	9,322.56	833.68	126.92	843.29	0.00	0.00	0.00
9,500.00	0.00	0.00	9,422.56	833.68	126.92	843.29	0.00	0.00	0.00
9,600.00	0.00	0.00	9,522.56	833.68	126.92	843.29	0.00	0.00	0.00
9,700.00	0.00	0.00	9,622.56	833.68	126.92	843.29	0.00	0.00	0.00
9,784.44	0.00	0.00	9,707.00	833.68	126.92	843.29	0.00	0.00	0.00
<b>BLACKHAWK</b>									
9,800.00	0.00	0.00	9,722.56	833.68	126.92	843.29	0.00	0.00	0.00
9,900.00	0.00	0.00	9,822.56	833.68	126.92	843.29	0.00	0.00	0.00
10,000.00	0.00	0.00	9,922.56	833.68	126.92	843.29	0.00	0.00	0.00
10,100.00	0.00	0.00	10,022.56	833.68	126.92	843.29	0.00	0.00	0.00
10,200.00	0.00	0.00	10,122.56	833.68	126.92	843.29	0.00	0.00	0.00
10,300.00	0.00	0.00	10,222.56	833.68	126.92	843.29	0.00	0.00	0.00
10,384.44	0.00	0.00	10,307.00	833.68	126.92	843.29	0.00	0.00	0.00
<b>TD at 10384.44 - PBHL_NBU 1022-5B1BS</b>									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TOC_NBU 1022-5B1BS - hit/miss target - Shape - plan hits target center - Point	0.00	0.00	5,110.00	833.68	126.92	14,524,166.23	2,071,775.23	39.984612	-109.460133
SEGO_NBU 1022-5B1B - plan hits target center - Circle (radius 25.00)	0.00	0.00	9,187.00	833.68	126.92	14,524,166.23	2,071,775.23	39.984612	-109.460133
PBHL_NBU 1022-5B1B - plan hits target center - Circle (radius 100.00)	0.00	0.00	10,307.00	833.68	126.92	14,524,166.23	2,071,775.23	39.984612	-109.460133

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,617.33	2,580.00	8 5/8"	8.625	11.000



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-5B1BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5152 & KB 4 @ 5156.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5152 & KB 4 @ 5156.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-5B PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-5B1BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PERMIT		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,342.14	1,328.00	GREEN RIVER			
1,654.83	1,635.00	BIRDSNEST			
2,159.00	2,130.00	MAHOGANY			
4,583.08	4,510.00	WASATCH			
7,101.44	7,024.00	MESAVERDE			
9,264.44	9,187.00	SEGO			
9,338.44	9,261.00	CASTLEGATE			
9,784.44	9,707.00	BLACKHAWK			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
200.00	200.00	0.00	0.00	Start Build 2.00	
747.19	743.87	51.51	7.84	Start 3893.06 hold at 747.19 MD	
4,640.25	4,566.13	782.17	119.08	Start Drop -2.00	
5,187.44	5,110.00	833.68	126.92	Start 5197.00 hold at 5187.44 MD	
10,384.44	10,307.00	833.68	126.92	TD at 10384.44	

**Kerr-McGee Oil & Gas Onshore. L.P.****NBU 1022-5B PAD**

<b><u>API #</u></b>	<b><u>NBU 1022-5B1BS</u></b>		
	Surface: 1081 FNL / 1942 FEL	NWNE	Lot 2
	BHL: 247 FNL / 1804 FEL	NWNE	Lot 2
<b><u>API #</u></b>	<b><u>NBU 1022-5B1CS</u></b>		
	Surface: 1078 FNL / 1932 FEL	NWNE	Lot 2
	BHL: 586 FNL / 1810 FEL	NWNE	Lot 2
<b><u>API #</u></b>	<b><u>NBU 1022-5B4BS</u></b>		
	Surface: 1075 FNL / 1923 FEL	NWNE	Lot 2
	BHL: 921 FNL / 1811 FEL	NWNE	Lot 2
<b><u>API #</u></b>	<b><u>NBU 1022-5G1BS</u></b>		
	Surface: 1084 FNL / 1951 FEL	NWNE	Lot 2
	BHL: 1617 FNL / 1823 FEL	SWNE	
<b><u>API #</u></b>	<b><u>NBU 1022-5G4BS</u></b>		
	Surface: 1087 FNL / 1961 FEL	NWNE	Lot 2
	BHL: 2052 FNL / 1878 FEL	SWNE	

This Surface Use Plan of Operations (SUPO) or 13-point plan provides site-specific information for the above-referenced wells.

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.

An on-site meeting was held on October 10-11, 2012. Present were:

- Dave Gordon, Lynn Dehner, Aaron Roe and Melissa Wardle - BLM;
- Mitch Batty - Timberline Engineering & Land Surveying, Inc.;
- Jacob Dunham - 609 Consulting, LLC.;
- Alan Rabinoff - ICF International;
- Gina Becker, Tony Kazeck, Casey McKee, Charles Chase and Randy Townley- Kerr-McGee

**A. Existing Roads:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Please refer to Topo B for existing roads.

**B. New or Reconstructed Access Roads:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**The following segments are "on-lease"**

No new access road is proposed. Please refer to Topo Map B.

**C. Location of Existing Wells:**

Please refer to Topo C for existing wells.

**D. Location of Existing and/or Proposed Facilities:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

This pad will expand the existing pad for the NBU 1022-05BT and the NBU 140. The NBU 1022-05BT is a producing gas well and the NBU 140 is a Plugged and Abandoned well according to Utah Division of Oil, Gas and Mining (UDOGM) records on December 11, 2012. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

**GAS GATHERING**

*Please refer to Exhibit A and Topo D2- Pad and Pipeline Detail.*

The total gas gathering pipeline distance from the meter to the tie in point is  $\pm 1,865'$  and the individual segments are broken up as follows:

**The following segments are "onlease", no ROW needed.**

- $\pm 475'$  (0.1 miles) – Section 5 T10S R22E (NW/4 NE/4) – On-lease UTU01191-A, BLM surface, New 8" buried gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 1,390'$  (0.3 miles) – Section 5 T10S R22E (NE/4) – On-lease UTU01191-A, BLM surface, New 8" buried gas gathering pipeline from the edge of the pad to tie-in to the existing 16" gas pipeline to the northeast in the NE/4 NE/4. 25 feet of this pipeline segment will travel cross county. Please refer to Exhibit A, Line 11 and 10.

**LIQUID GATHERING**

*Please refer to Exhibit B and Topo D2- Pad and Pipeline Detail.*

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

**The following segments are "onlease", no ROW needed.**

- $\pm 475'$  (0.1 miles) – Section 5 T10S R22E (NW/4 NE/4) – On-lease UTU01191-A, BLM surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer

- to Topo D2 - Pad and Pipeline Detail.
- ±2,295' (0.4 miles) – Section 5 T10S R22E (NE/4) – On-lease UTU01191-A, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad to tie-in to the 1022-5A intersection. 955 feet of this pipeline segment will travel cross county. Please refer to Topo D2 and Exhibit B, Line 14 and Line 13.
- ±1,830' (0.3 miles) – Section 4 T10S R22E (NW/4) – On-lease UTU01191-A, BLM surface, New 6" buried liquid gathering pipeline from the 1022-5A intersection, around the northeast corner of the well pad to tie-in to the proposed 6" liquid pipeline to the northeast at the NBU 1022-4D intersection. 370 feet of this pipeline segment will travel cross county. This pipeline will be used concurrently with the NBU 1022-5A Pad. Please refer to Exhibit B, Line 11 and Line 10.

### Pipeline Gathering Construction

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

#### **The Anadarko Completions Transportation System (ACTS) information:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Please refer to Exhibit C for ACTS Lines

#### **E. Location and Types of Water Supply:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Water will be hauled to location over the roads marked on Maps A and B.

#### **F. Construction Materials:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

#### **G. Methods for Handling Waste:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

#### **Materials Management**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

#### **H. Ancillary Facilities:**

No additional ancillary facilities are planned for this location.

#### **I. Well Site Layout:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**J. Plans for Surface Reclamation:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Interim Reclamation**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Final Reclamation**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Measures Common to Interim and Final Reclamation**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Weed Control**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Monitoring**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**K. Surface/Mineral Ownership:**

United States of America  
Bureau of Land Management  
170 South 500 East  
Vernal, UT 84078  
(435)781-4400

**L. Other Information:**

**Cultural and Paleontological Resources**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Resource Reports:**

A Class I literature survey report was completed on October 31, 2012 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 12-311.

A paleontological reconnaissance survey was completed October 24-26, 2012 by SWCA Environmental Consultants. For additional details please refer to report UT12-14314-194.

NBU 1022-5B1BS/ 1022-5B1CS/ 1022-5B4BS  
NBU 1022-5G1BS/ 1022-5G4BS

Surface Use Plan of Operations  
5 of 6

Biological field survey was completed October 18-November 9, 2012 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-859.

**Proposed Action Annual Emissions Tables:**

Please refer to the Appendix in the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

NBU 1022-5B1BS/ 1022-5B1CS/ 1022-5B4BS  
NBU 1022-5G1BS/ 1022-5G4BS

Surface Use Plan of Operations  
6 of 6

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

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

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

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

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

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

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

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



Gina T. Becker

December 17, 2012

Date

# 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)

February 26, 2013

Memorandum

To: Assistant Field Office Manager Minerals,  
Vernal Field Office

From: Michael Coulthard, Petroleum Engineer

Subject: 2013 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 2013 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
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(Proposed PZ WASATCH-MESA VERDE)

**NBU 1022-5A PAD**

43-047-53530	NBU 1022-5A1BS	Sec 05 T10S R22E 0808 FNL 0014 FEL
	BHL	Sec 05 T10S R22E 0100 FNL 0497 FEL

43-047-53531	NBU 1022-5A4BS	Sec 05 T10S R22E 0794 FNL 0062 FEL
	BHL	Sec 05 T10S R22E 0756 FNL 0492 FEL

43-047-53532	NBU 1022-5A1CS	Sec 05 T10S R22E 0805 FNL 0024 FEL
	BHL	Sec 05 T10S R22E 0420 FNL 0492 FEL

43-047-53589	NBU 1022-5H1CS	Sec 05 T10S R22E 0802 FNL 0033 FEL
	BHL	Sec 05 T10S R22E 1761 FNL 0492 FEL

43-047-53590	NBU 1022-5H1BS	Sec 05 T10S R22E 0799 FNL 0043 FEL
	BHL	Sec 05 T10S R22E 1426 FNL 0492 FEL

43-047-53591	NBU 1022-5A4CS	Sec 05 T10S R22E 0797 FNL 0053 FEL
	BHL	Sec 05 T10S R22E 1091 FNL 0492 FEL

**NBU 1022-5J PAD**

43-047-53563	NBU 1022-5J1BS	Sec 05 T10S R22E 2136 FSL 2386 FEL
	BHL	Sec 05 T10S R22E 2464 FSL 1817 FEL

43-047-53564	NBU 1022-5F4CS	Sec 05 T10S R22E 2115 FSL 2408 FEL
	BHL	Sec 05 T10S R22E 2439 FNL 2143 FWL

43-047-53598	NBU 1022-5K1CS	Sec 05 T10S R22E 2102 FSL 2423 FEL
	BHL	Sec 05 T10S R22E 2246 FSL 2160 FWL

43-047-53599	NBU 1022-5K1BS	Sec 05 T10S R22E 2109 FSL 2415 FEL
	BHL	Sec 05 T10S R22E 2604 FSL 2144 FWL

RECEIVED: February 26, 2013

API #	WELL NAME			LOCATION						
(Proposed PZ WASATCH-MESA VERDE)										
<b>NBU 1022-5J PAD</b>										
43-047-53600	NBU 1022-5J4BS	Sec	05	T10S	R22E	2122	FSL	2400	FEL	
	BHL	Sec	05	T10S	R22E	1765	FSL	1816	FEL	
43-047-53601	NBU 1022-5J1CS	Sec	05	T10S	R22E	2129	FSL	2393	FEL	
	BHL	Sec	05	T10S	R22E	2101	FSL	1816	FEL	
<b>NBU 1022-5I3 PAD</b>										
43-047-53565	NBU 1022-5P4CS	Sec	05	T10S	R22E	1410	FSL	0824	FEL	
	BHL	Sec	05	T10S	R22E	0205	FSL	0499	FEL	
43-047-53566	NBU 1022-5P4BS	Sec	05	T10S	R22E	1420	FSL	0821	FEL	
	BHL	Sec	05	T10S	R22E	0586	FSL	0494	FEL	
43-047-53567	NBU 1022-5P1CS	Sec	05	T10S	R22E	1429	FSL	0818	FEL	
	BHL	Sec	05	T10S	R22E	0921	FSL	0494	FEL	
43-047-53568	NBU 1022-5O1BS	Sec	05	T10S	R22E	1439	FSL	0815	FEL	
	BHL	Sec	05	T10S	R22E	1093	FSL	1818	FEL	
43-047-53569	NBU 1022-5J4CS	Sec	05	T10S	R22E	1448	FSL	0812	FEL	
	BHL	Sec	05	T10S	R22E	1429	FSL	1817	FEL	
<b>NBU 1022-5I PAD</b>										
43-047-53570	NBU 1022-5I3AS	Sec	05	T10S	R22E	1944	FSL	0185	FEL	
	BHL	Sec	05	T10S	R22E	1809	FSL	0852	FEL	
43-047-53571	NBU 1022-5I1BS	Sec	05	T10S	R22E	1947	FSL	0175	FEL	
	BHL	Sec	05	T10S	R22E	2543	FSL	0517	FEL	
43-047-53572	NBU 1022-5H4CS	Sec	05	T10S	R22E	1950	FSL	0166	FEL	
	BHL	Sec	05	T10S	R22E	2432	FNL	0493	FEL	
43-047-53573	NBU 1022-5H4BS	Sec	05	T10S	R22E	1954	FSL	0156	FEL	
	BHL	Sec	05	T10S	R22E	2097	FNL	0492	FEL	
<b>NBU 1022-5E PAD</b>										
43-047-53575	NBU 1022-5E4CS	Sec	05	T10S	R22E	1568	FNL	1089	FWL	
	BHL	Sec	05	T10S	R22E	2555	FNL	0846	FWL	
43-047-53576	NBU 1022-5E4BS	Sec	05	T10S	R22E	1559	FNL	1085	FWL	
	BHL	Sec	05	T10S	R22E	2150	FNL	0854	FWL	
43-047-53577	NBU 1022-5E1AS	Sec	05	T10S	R22E	1550	FNL	1080	FWL	
	BHL	Sec	05	T10S	R22E	1410	FNL	1260	FWL	
43-047-53578	NBU 1022-5D2DS	Sec	05	T10S	R22E	1542	FNL	1075	FWL	
	BHL	Sec	05	T10S	R22E	0435	FNL	0628	FWL	
<b>NBU 1022-5C Pad</b>										
43-047-53579	NBU 1022-5F4BS	Sec	05	T10S	R22E	1261	FNL	2602	FWL	
	BHL	Sec	05	T10S	R22E	2102	FNL	2143	FWL	
43-047-53580	NBU 1022-5F1CS	Sec	05	T10S	R22E	1251	FNL	2600	FWL	
	BHL	Sec	05	T10S	R22E	1766	FNL	2142	FWL	
43-047-53581	NBU 1022-5C4BS	Sec	05	T10S	R22E	1241	FNL	2597	FWL	
	BHL	Sec	05	T10S	R22E	1081	FNL	2140	FWL	
43-047-53582	NBU 1022-5C1DS	Sec	05	T10S	R22E	1222	FNL	2593	FWL	
	BHL	Sec	05	T10S	R22E	0532	FNL	2413	FWL	
43-047-53583	NBU 1022-5C1BS	Sec	05	T10S	R22E	1232	FNL	2595	FWL	
	BHL	Sec	05	T10S	R22E	0115	FNL	2150	FWL	

API #	WELL NAME	LOCATION									
(Proposed PZ WASATCH-MESA VERDE)											
<b>NBU 1022-5B PAD</b>											
43-047-53584	NBU 1022-5G4BS	Sec 05	T10S	R22E	1087	FNL	1961	FEL			
	BHL	Sec 05	T10S	R22E	2052	FNL	1878	FEL			
43-047-53585	NBU 1022-5G1BS	Sec 05	T10S	R22E	1084	FNL	1951	FEL			
	BHL	Sec 05	T10S	R22E	1617	FNL	1823	FEL			
43-047-53586	NBU 1022-5B4BS	Sec 05	T10S	R22E	1075	FNL	1923	FEL			
	BHL	Sec 05	T10S	R22E	0921	FNL	1811	FEL			
43-047-53587	NBU 1022-5B1CS	Sec 05	T10S	R22E	1078	FNL	1932	FEL			
	BHL	Sec 05	T10S	R22E	0586	FNL	1810	FEL			
43-047-53588	NBU 1022-5B1BS	Sec 05	T10S	R22E	1081	FNL	1942	FEL			
	BHL	Sec 05	T10S	R22E	0247	FNL	1804	FEL			
<b>NBU 1022-5N PAD</b>											
43-047-53592	NBU 1022-5O3AS	Sec 05	T10S	R22E	1269	FSL	2004	FWL			
	BHL	Sec 05	T10S	R22E	0680	FSL	2260	FEL			
43-047-53593	NBU 1022-5N1CS	Sec 05	T10S	R22E	1260	FSL	1999	FWL			
	BHL	Sec 05	T10S	R22E	0701	FSL	2151	FWL			
43-047-53594	NBU 1022-5M4AS	Sec 05	T10S	R22E	1235	FSL	1982	FWL			
	BHL	Sec 05	T10S	R22E	0638	FSL	1295	FWL			
43-047-53595	NBU 1022-5M1BS	Sec 05	T10S	R22E	1243	FSL	1988	FWL			
	BHL	Sec 05	T10S	R22E	1141	FSL	0825	FWL			
43-047-53596	NBU 1022-5L4CS	Sec 05	T10S	R22E	1252	FSL	1993	FWL			
	BHL	Sec 05	T10S	R22E	1557	FSL	0826	FWL			
43-047-53597	NBU 1022-5K4CS	Sec 05	T10S	R22E	1277	FSL	2009	FWL			
	BHL	Sec 05	T10S	R22E	1508	FSL	2148	FWL			
<b>NBU 921-21B PAD</b>											
43-047-53604	NBU 921-21A1BS	Sec 21	T09S	R21E	0651	FNL	2056	FEL			
	BHL	Sec 21	T09S	R21E	0085	FNL	0495	FEL			
43-047-53608	NBU 921-21B4CS	Sec 21	T09S	R21E	0650	FNL	2086	FEL			
	BHL	Sec 21	T09S	R21E	1243	FNL	1822	FEL			
43-047-53609	NBU 921-21B1BS	Sec 21	T09S	R21E	0650	FNL	2066	FEL			
	BHL	Sec 21	T09S	R21E	0249	FNL	1822	FEL			
43-047-53622	NBU 921-21B4BS	Sec 21	T09S	R21E	0650	FNL	2076	FEL			
	BHL	Sec 21	T09S	R21E	0911	FNL	1822	FEL			
<b>NBU 921-21C PAD</b>											
43-047-53605	NBU 921-21C4BS	Sec 21	T09S	R21E	0978	FNL	1707	FWL			
	BHL	Sec 21	T09S	R21E	0745	FNL	2153	FWL			
43-047-53606	NBU 921-21C1CS	Sec 21	T09S	R21E	0975	FNL	1698	FWL			
	BHL	Sec 21	T09S	R21E	0414	FNL	2152	FWL			
43-047-53607	NBU 921-21C1BS	Sec 21	T09S	R21E	0972	FNL	1688	FWL			
	BHL	Sec 21	T09S	R21E	0084	FNL	2152	FWL			
43-047-53613	NBU 921-21D4CS	Sec 21	T09S	R21E	0969	FNL	1679	FWL			
	BHL	Sec 21	T09S	R21E	1240	FNL	0826	FWL			

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
<b>NBU 921-21D PAD</b>		
43-047-53610	NBU 921-21D1CS	Sec 21 T09S R21E 0243 FNL 1065 FWL
	BHL	Sec 21 T09S R21E 0578 FNL 0826 FWL
43-047-53611	NBU 921-21D1BS	Sec 21 T09S R21E 0240 FNL 1056 FWL
	BHL	Sec 21 T09S R21E 0248 FNL 0826 FWL
43-047-53623	NBU 921-21D4BS	Sec 21 T09S R21E 0246 FNL 1075 FWL
	BHL	Sec 21 T09S R21E 0929 FNL 0826 FWL
<b>NBU 921-21G PAD</b>		
43-047-53624	NBU 921-21H1CS	Sec 21 T09S R21E 1766 FNL 1748 FEL
	BHL	Sec 21 T09S R21E 1743 FNL 0495 FEL
43-047-53625	NBU 921-21G4BS	Sec 21 T09S R21E 1760 FNL 1768 FEL
	BHL	Sec 21 T09S R21E 2237 FNL 1823 FEL
43-047-53626	NBU 921-21G1CS	Sec 21 T09S R21E 1757 FNL 1777 FEL
	BHL	Sec 21 T09S R21E 1906 FNL 1822 FEL
43-047-53627	NBU 921-21G1BS	Sec 21 T09S R21E 1754 FNL 1787 FEL
	BHL	Sec 21 T09S R21E 1574 FNL 1822 FEL
<b>NBU 921-21F PAD</b>		
43-047-53628	NBU 921-21F4BS	Sec 21 T09S R21E 1613 FNL 2171 FWL
	BHL	Sec 21 T09S R21E 2070 FNL 2154 FWL
43-047-53629	NBU 921-21F1CS	Sec 21 T09S R21E 1612 FNL 2161 FWL
	BHL	Sec 21 T09S R21E 1739 FNL 2153 FWL
43-047-53630	NBU 921-21F1BS	Sec 21 T09S R21E 1615 FNL 2181 FWL
	BHL	Sec 21 T09S R21E 1407 FNL 2153 FWL
43-047-53631	NBU 921-21C4CS	Sec 21 T09S R21E 1616 FNL 2191 FWL
	BHL	Sec 21 T09S R21E 1076 FNL 2153 FWL

Michael L. Coulthard

Digitally signed by Michael L. Coulthard  
 DN: cn=Michael L. Coulthard, o=Bureau of Land  
 Management, ou=Branch of Minerals,  
 email=Michael\_Coulthard@blm.gov, c=US  
 Date: 2013.02.26 08:11:16 -0700

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

MCoulthard:mc:2-26-13

RECEIVED: February 26, 2013

API NUMBER	WELL NAME	SURFACE LOCATION
43-047-53530	NBU 1022-5A1BS	Sec 05 T10S R22E 0808 FNL 0014 FEL
43-047-53531	NBU 1022-5A4BS	Sec 05 T10S R22E 0794 FNL 0062 FEL
43-047-53532	NBU 1022-5A1CS	Sec 05 T10S R22E 0805 FNL 0024 FEL
43-047-53563	NBU 1022-5J1BS	Sec 05 T10S R22E 2136 FSL 2386 FEL
43-047-53564	NBU 1022-5F4CS	Sec 05 T10S R22E 2115 FSL 2408 FEL
43-047-53565	NBU 1022-5P4CS	Sec 05 T10S R22E 1410 FSL 0824 FEL
43-047-53566	NBU 1022-5P4BS	Sec 05 T10S R22E 1420 FSL 0821 FEL
43-047-53567	NBU 1022-5P1CS	Sec 05 T10S R22E 1429 FSL 0818 FEL
43-047-53568	NBU 1022-5O1BS	Sec 05 T10S R22E 1439 FSL 0815 FEL
43-047-53569	NBU 1022-5J4CS	Sec 05 T10S R22E 1448 FSL 0812 FEL
43-047-53570	NBU 1022-5I3AS	Sec 05 T10S R22E 1944 FSL 0185 FEL
43-047-53571	NBU 1022-5I1BS	Sec 05 T10S R22E 1947 FSL 0175 FEL
43-047-53572	NBU 1022-5H4CS	Sec 05 T10S R22E 1950 FSL 0166 FEL
43-047-53573	NBU 1022-5H4BS	Sec 05 T10S R22E 1954 FSL 0156 FEL
43-047-53575	NBU 1022-5E4CS	Sec 05 T10S R22E 1568 FNL 1089 FWL
43-047-53576	NBU 1022-5E4BS	Sec 05 T10S R22E 1559 FNL 1085 FWL
43-047-53577	NBU 1022-5E1AS	Sec 05 T10S R22E 1550 FNL 1080 FWL
43-047-53578	NBU 1022-5D2DS	Sec 05 T10S R22E 1542 FNL 1075 FWL
43-047-53579	NBU 1022-5F4BS	Sec 05 T10S R22E 1261 FNL 2602 FWL
43-047-53580	NBU 1022-5F1CS	Sec 05 T10S R22E 1251 FNL 2600 FWL
43-047-53581	NBU 1022-5C4BS	Sec 05 T10S R22E 1241 FNL 2597 FWL
43-047-53582	NBU 1022-5C1DS	Sec 05 T10S R22E 1222 FNL 2593 FWL
43-047-53583	NBU 1022-5C1BS	Sec 05 T10S R22E 1232 FNL 2595 FWL
43-047-53584	NBU 1022-5G4BS	Sec 05 T10S R22E 1087 FNL 1961 FEL
43-047-53585	NBU 1022-5G1BS	Sec 05 T10S R22E 1084 FNL 1951 FEL
43-047-53586	NBU 1022-5B4BS	Sec 05 T10S R22E 1075 FNL 1923 FEL
43-047-53587	NBU 1022-5B1CS	Sec 05 T10S R22E 1078 FNL 1932 FEL
43-047-53588	NBU 1022-5B1BS	Sec 05 T10S R22E 1081 FNL 1942 FEL
43-047-53589	NBU 1022-5H1CS	Sec 05 T10S R22E 0802 FNL 0033 FEL
43-047-53590	NBU 1022-5H1BS	Sec 05 T10S R22E 0799 FNL 0043 FEL
43-047-53591	NBU 1022-5A4CS	Sec 05 T10S R22E 0797 FNL 0053 FEL
43-047-53592	NBU 1022-5O3AS	Sec 05 T10S R22E 1269 FSL 2004 FWL
43-047-53593	NBU 1022-5N1CS	Sec 05 T10S R22E 1260 FSL 1999 FWL
43-047-53594	NBU 1022-5M4AS	Sec 05 T10S R22E 1235 FSL 1982 FWL
43-047-53595	NBU 1022-5M1BS	Sec 05 T10S R22E 1243 FSL 1988 FWL
43-047-53596	NBU 1022-5L4CS	Sec 05 T10S R22E 1252 FSL 1993 FWL
43-047-53597	NBU 1022-5K4CS	Sec 05 T10S R22E 1277 FSL 2009 FWL
43-047-53598	NBU 1022-5K1CS	Sec 05 T10S R22E 2102 FSL 2423 FEL
43-047-53599	NBU 1022-5K1BS	Sec 05 T10S R22E 2109 FSL 2415 FEL
43-047-53600	NBU 1022-5J4BS	Sec 05 T10S R22E 2122 FSL 2400 FEL
43-047-53601	NBU 1022-5J1CS	Sec 05 T10S R22E 2129 FSL 2393 FEL
43-047-53604	NBU 921-21A1BS	Sec 21 T09S R21E 0651 FNL 2056 FEL
43-047-53605	NBU 921-21C4BS	Sec 21 T09S R21E 0978 FNL 1707 FWL
43-047-53606	NBU 921-21C1CS	Sec 21 T09S R21E 0975 FNL 1698 FWL
43-047-53607	NBU 921-21C1BS	Sec 21 T09S R21E 0972 FNL 1688 FWL

API NUMBER	WELL NAME	SURFACE LOCATION
43-047-53608	NBU 921-21B4CS	Sec 21 T09S R21E 0650 FNL 2086 FEL
43-047-53609	NBU 921-21B1BS	Sec 21 T09S R21E 0650 FNL 2066 FEL
43-047-53610	NBU 921-21D1CS	Sec 21 T09S R21E 0243 FNL 1065 FWL
43-047-53611	NBU 921-21D1BS	Sec 21 T09S R21E 0240 FNL 1056 FWL
43-047-53613	NBU 921-21D4CS	Sec 21 T09S R21E 0969 FNL 1679 FWL
43-047-53622	NBU 921-21B4BS	Sec 21 T09S R21E 0650 FNL 2076 FEL
43-047-53623	NBU 921-21D4BS	Sec 21 T09S R21E 0246 FNL 1075 FWL
43-047-53624	NBU 921-21H1CS	Sec 21 T09S R21E 1766 FNL 1748 FEL
43-047-53625	NBU 921-21G4BS	Sec 21 T09S R21E 1760 FNL 1768 FEL
43-047-53626	NBU 921-21G1CS	Sec 21 T09S R21E 1757 FNL 1777 FEL
43-047-53627	NBU 921-21G1BS	Sec 21 T09S R21E 1754 FNL 1787 FEL
43-047-53628	NBU 921-21F4BS	Sec 21 T09S R21E 1613 FNL 2171 FWL
43-047-53629	NBU 921-21F1CS	Sec 21 T09S R21E 1612 FNL 2161 FWL
43-047-53630	NBU 921-21F1BS	Sec 21 T09S R21E 1615 FNL 2181 FWL
43-047-53631	NBU 921-21C4CS	Sec 21 T09S R21E 1616 FNL 2191 FWL



## WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 2/6/2013

API NO. ASSIGNED: 43047535880000

WELL NAME: NBU 1022-5B1BS

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

PHONE NUMBER: 720 929-6086

CONTACT: Gina Becker

PROPOSED LOCATION: NWNE 05 100S 220E

Permit Tech Review: 

SURFACE: 1081 FNL 1942 FEL

Engineering Review: 

BOTTOM: 0247 FNL 1804 FEL

Geology Review: 

COUNTY: UINTAH

LATITUDE: 39.98226

LONGITUDE: -109.46121

UTM SURF EASTINGS: 631387.00

NORTHINGS: 4426922.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-01191-A

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

SURFACE OWNER: 1 - Federal

COALBED METHANE: NO

## RECEIVED AND/OR REVIEWED:

- PLAT
- Bond: FEDERAL - WYB000291
- Potash
- Oil Shale 190-5
- Oil Shale 190-3
- Oil Shale 190-13
- Water Permit: 43-8496
- RDCC Review:
- Fee Surface Agreement
- Intent to Commingle

Commingle Approved

## LOCATION AND SITING:

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

Comments: Presite Completed

Stipulations: 3 - Commingle - ddoucet  
 4 - Federal Approval - dmason  
 15 - Directional - dmason  
 17 - Oil Shale 190-5(b) - dmason



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 1022-5B1BS  
**API Well Number:** 43047535880000  
**Lease Number:** UTU-01191-A  
**Surface Owner:** FEDERAL  
**Approval Date:** 3/12/2013

### 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:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

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.

**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 at 801-538-5284

(please leave a voicemail message if not available)

OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at <http://oilgas.ogm.utah.gov>

**Reporting Requirements:**

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

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

**Approved By:**



For John Rogers  
Associate Director, Oil & Gas

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**RECEIVED**

FORM APPROVED  
OMB No. 1004-0136  
Expires July 31, 2010

JAN 08 2013

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

**BLM**

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU01191A
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator KERR-MCGEE OIL & GAS ONSHORE		7. If Unit or CA Agreement, Name and No. UTU63047A
Contact: GINA T BECKER Email: GINA.BECKER@ANADARKO.COM		8. Lease Name and Well No. NBU 1022-5B1BS
3a. Address P.O. BOX 173779 DENVER, CO 80202-3779	3b. Phone No. (include area code) Ph: 720-929-6086 Fx: 720-929-7086	9. API Well No. 43 047 53588
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NWNE Lot 2 1081FNL 1942FEL 39.982288 N Lat, 109.461270 W Lon At proposed prod. zone NWNE Lot 2 247FNL 1804FEL 39.984577 N Lat, 109.460817 W Lon		10. Field and Pool, or Exploratory NATURAL BUTTES
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 51 MILES SOUTHEAST OF VERNAL, UTAH		11. Sec., T., R., M., or Blk. and Survey or Area Sec 5 T10S R22E Mer SLB
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 247	16. No. of Acres in Lease 1363.20	12. County or Parish UINTAH
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 348	19. Proposed Depth 10384 MD 10307 TVD	13. State UT
21. Elevations (Show whether DF, KB, RT, GL, etc.) 5152 GL	22. Approximate date work will start 06/01/2012	17. Spacing Unit dedicated to this well
		20. BLM/BIA Bond No. on file WYB000291
		23. Estimated duration 60-90 DAYS

**RECEIVED**

24. Attachments

JUN 20 2013

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an **ONSHORE OIL & GAS MINING** (Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature (Electronic Submission)	Name (Printed/Typed) GINA T BECKER Ph: 720-929-6086	Date 01/03/2013
--	--	--------------------

Title  
REGULATORY ANALYST II

Approved by (Signature) 	Name (Printed/Typed) Jerry Kenczka	Date JUN 13 2013
Title Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

**CONDITIONS OF APPROVAL ATTACHED**

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Additional Operator Remarks (see next page)

Electronic Submission #176080 verified by the BLM Well Information System  
For KERR-MCGEE OIL & GAS ONSHORE, sent to the Vernal  
Committed to AFMSS for processing by ROBIN R. HANSEN on 01/14/2013

**NOTICE OF APPROVAL**

**UDOGM**

**\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\***

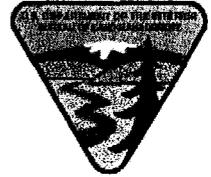


UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
VERNAL FIELD OFFICE

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



**CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL**

Company: KERR MCGEE OIL & GAS ONSHORE Location: LOT 2, Sec. 5, T10S, R22E  
Well No: NBU 1022-5B1BS Lease No: UTU-01191A  
API No: 43-047-53588 Agreement:

**OFFICE NUMBER: (435) 781-4400**

**OFFICE FAX NUMBER: (435) 781-3420**

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR  
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

**NOTIFICATION REQUIREMENTS**

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <a href="mailto:blm_ut_vn_opreport@blm.gov">blm_ut_vn_opreport@blm.gov</a>
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

**SURFACE USE PROGRAM  
CONDITIONS OF APPROVAL (COAs)**

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.
- Mitigation measures can be found in Appendix B, Table B-2, of the GNB ROD (BLM 2012b) under the following sections of the table:
  - Air Quality
  - Soils
  - Vegetation: *Sclerocactus wetlandicus*
  - Wildlife: Colorado River Fish

Where populations or individuals of *Sclerocactus wetlandicus* are located within 300 feet of the proposed edge of project ROWs, the following actions will be taken to minimize impacts:

- Silt fencing will be used to protect cacti that are within 300 feet and downslope or downwind of surface disturbance. Fencing is intended to prevent sedimentation or dust deposition and will be evaluated for effectiveness by a qualified botanist.
- A qualified botanist will be on site to monitor surface-disturbing activities when cacti are within 300 feet of any surface disturbance.
- Dust abatement (consisting of water only) will occur during construction where plants are closer than 300 feet from surface-disturbing activities.
- Cacti within 300 feet of proposed surface disturbance will be flagged immediately prior to surface-disturbing activities and flags will be removed immediately after surface-disturbing activities are completed. Leaving cacti flagged for as short a time as possible will minimize drawing attention to the cacti location and reduce potential for theft.
- Pipelines will be sited to maximize distance from adjacent cacti locations.
- Project personnel associated with construction activities will be instructed to drive at a speed limit of 15 miles per hour on unpaved roads and remain in existing roadway ROWs at all times.

For permanent surface pipelines, KMG will adhere to existing cacti survey/buffer guidelines of 300 feet, or amended guidelines if developed by the BLM and USFWS. In areas where avoidance by 300 feet is not feasible and populations or individuals of *Sclerocactus wetlandicus* are within 50 feet of proposed project components, the following actions will be taken to minimize impacts:

- Prior to construction, flag individual cactus. Once pipe installation is complete, remove the flagging.
- Prior to construction, install protective fencing around the cacti if they are down gradient of the surface pipe. Once pipe installation is complete, remove the protective fencing.
- A qualified botanist will be present during construction to monitor surface line installation.

The following considerations are required for those wells where KMG deems completion fluid recycling is appropriate based on new well density and topography:

- Temporary lines associated with recycling of completion water will be sited in existing ROWs. The pressure in the lines is less than 50 pounds per square inch and the lines are constructed of rigid aluminum; therefore, virtually no movement will occur during operation.
- If surface water completion lines are placed within the footprint of a road disturbance where vegetation does not grow, *Sclerocactus wetlandicus* surveys will not be necessary.
- A qualified botanist will survey a 50-foot-wide corridor along roads where temporary lines are planned to ensure *Sclerocactus wetlandicus* is not present.
- If cacti are present within the 50-foot-wide survey corridor and avoidance is necessary (to ensure the line is more than 50 feet away from identified cactus), the new alignment will, if possible, be such that the cacti are topographically higher than the re-aligned line so a potential spill from the line will not impact the identified cacti.
- If it is not possible to re-align the surface lines to avoid individuals or populations of the *Sclerocactus wetlandicus* that are within 50 feet of surface disturbance, the following actions will be taken to minimize impacts:
  - Prior to construction, KMG will flag individual cacti. Once pipe installation is complete, remove the flagging.
  - Prior to construction, KMG will install protective fencing around the cacti if they are down gradient of the surface pipe. Once pipe installation is complete, remove the protective fencing.
  - A qualified botanist will be present during construction to monitor surface line installation.

Avoidance of cactus by 300 feet will take priority in the expansion of pads within the cactus core conservation areas. When the 300-foot buffer cannot be avoided in pad expansion, KMG will notify the USFWS and work with the BLM to determine pad expansion that places a priority on avoiding cactus impacts.

KMG will follow existing ROWs and/or roads in constructing new buried pipelines within the cactus core conservation areas. For instance, where a new buried pipeline is unable to follow an existing ROW and/or road and exceeds 600 feet in length, KMG will work with the USFWS and the BLM to determine a route that places a priority on avoiding cactus impacts.

Maintenance activities on pipelines within cactus core conservation areas will avoid impacts to cactus, to the extent possible.

- All vehicles and equipment shall be cleaned either through power-washing, or other approved method, if the vehicles or equipment were previously operated outside the Uinta Basin, to prevent weed seed introduction.
- All disturbance areas shall be monitored for noxious weeds annually, for a minimum of three growing seasons following completion of project or until desirable vegetation is established

- Noxious and invasive weeds will be controlled throughout the area of project disturbance.
- Noxious weeds will be inventoried and reported to BLM in the annual reclamation report. Where an integrated pest management program is applicable, coordination has been undertaken with the state and local management program (if existing). A copy of the pest management plan will be submitted for each project.
- A pesticide use permit (PUP) will be obtained for the project, if applicable.
- Bird exclusion netting will be installed over reserve pits containing water that are left open for more than 30 days to reduce possibility of exposure to hazardous chemicals (BLM 2012b).
- KMG will install bird-excluding devices that prevent the perching and entry of migratory birds on or into its new fired vessel exhaust stacks (BLM 2012b).
- Tree removal within pinyon-juniper habitat will occur outside of the nesting season for migratory birds (approximately 4/1 to 7/31 (BLM 2012b).
- Damage to livestock and livestock facilities would be reported as quickly as possible to the BLM and affected livestock operators. Operators would develop and employ prevention measures to avoid damaging fences, gates, and cattleguards, including upgrading cattleguard gate widths and load-bearing requirements and fencing all open pits and cellars.
- If partial or complete removal of a fence cannot be avoided, the fence would be braced and tied off per the BLM guidance. Where the fence is crossed by a road, the fence would be braced and a cattleguard and gate installed per BLM guidance.
- On well pads 1022-6C, 1022-6D, 1022-5A, and 1022-5B: Construction and development activities will be prohibited from 3/1 through 8/15, pending the results of a preconstruction nest occupancy survey (BLM 2012b; BLM 2008a).

**DOWNHOLE PROGRAM  
CONDITIONS OF APPROVAL (COAs)**

**SITE SPECIFIC DOWNHOLE COAs:**

- Cement for the 4.5 inch casing shall be brought up to a minimum of 200 feet above the surface casing shoe.
- A CBL shall be run from TD to TOC in the Production Casing.
- Variances shall be granted as requested in the APD under Section 9 of the Drilling Program.

**All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to.** The following items are emphasized:

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each

encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well by CD (compact disc). This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

## **OPERATING REQUIREMENT REMINDERS:**

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at [www.ONRR.gov](http://www.ONRR.gov).
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid,

and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-01191-A
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
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.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>1. TYPE OF WELL</b> Gas Well		<b>8. WELL NAME and NUMBER:</b> NBU 1022-5B1BS
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>9. API NUMBER:</b> 43047535880000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6511	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1081 FNL 1942 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNE Section: 05 Township: 10.0S Range: 22.0E Meridian: S		<b>COUNTY:</b> UINTAH
		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 12/19/2013  <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"/> APD EXTENSION  <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> OTHER: <input style="width: 100px; height: 15px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
Spud well 12/19/2013 @ 11:00. Drill 24" conductor hole to 40', run 14" X .250 wall conductor pipe, cement with 81 sacks ready mix. Anticipated surface spud date and surface casing cement 01/01/2014.		
<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY December 23, 2013</b>		
<b>NAME (PLEASE PRINT)</b> Doreen Green	<b>PHONE NUMBER</b> 435 781-9758	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A		<b>DATE</b> 12/23/2013

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-01191-A	
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>	
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.	
<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>	
<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES	
<b>8. WELL NAME and NUMBER:</b> NBU 1022-5B1BS	
<b>9. API NUMBER:</b> 43047535880000	
<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES	
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>	
<b>1. TYPE OF WELL</b> Gas Well	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6100
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1081 FNL 1942 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNE Section: 05 Township: 10.0S Range: 22.0E Meridian: S	<b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH

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: 4/2/2014	<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 2,740 ft. in Quarter 1 of 2014.

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

**FOR RECORD ONLY**

April 08, 2014

<b>NAME (PLEASE PRINT)</b> Kay E. Kelly	<b>PHONE NUMBER</b> 720 929 6582	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/2/2014	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-01191-A	
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>	
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.	
<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>	
<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES	
<b>8. WELL NAME and NUMBER:</b> NBU 1022-5B1BS	
<b>9. API NUMBER:</b> 43047535880000	
<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES	
<b>1. TYPE OF WELL</b> Gas Well	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 <span style="float: right;"><b>PHONE NUMBER:</b> 720 929-6111</span>	
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1081 FNL 1942 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNE Section: 05 Township: 10.0S Range: 22.0E Meridian: S	
<b>COUNTY:</b> UINTAH	
<b>STATE:</b> 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: 6/24/2014	<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 Quarter 2 of 2014. Well drilled to 2,740 ft. Thank you.

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**  
**FOR RECORD ONLY**  
 June 25, 2014

<b>NAME (PLEASE PRINT)</b> Kay E. Kelly	<b>PHONE NUMBER</b> 720 929 6582	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 6/24/2014	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9  5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-01191-A
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<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  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
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1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 1022-5B1BS
-----------------------------	--

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047535880000
--	----------------------------------

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6100	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
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4. LOCATION OF WELL FOOTAGES AT SURFACE: 1081 FNL 1942 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 05 Township: 10.0S Range: 22.0E Meridian: S	COUNTY: UINTAH  STATE: UTAH
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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: 8/4/2014  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER	<input checked="" type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION  OTHER: <input style="width: 100px;" type="text"/>

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

The operator requests to repair a surface casing leak on the referenced Federal well. Please see the attached Procedure. Thank you.

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

Date: August 15, 2014

By: *David K. Quist*

NAME (PLEASE PRINT) Matthew P Wold	PHONE NUMBER 720 929-6993	TITLE Regulatory Analyst I
SIGNATURE N/A		DATE 8/4/2014

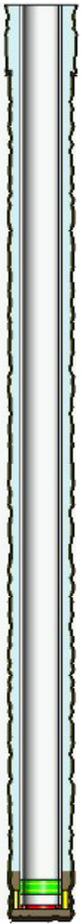


**REPAIR SURFACE CASING LEAK -  
WASH OVER SURFACE CSG**

**NBU 1022-5B1BS  
1081 FNL & 1942 FEL  
NW/NE - Section 5 – T10S – R22E  
Uintah County, UT  
API# 4304753588**

**DEPTHS & TUBULARS**

Surface Casing	Drift inches	Collapse Psi	Burst Psi	Capacities		
				Gal./ft.	Cuft/ft.	Bbl./ft.
85/8" 28# J-55 LTC @ 2709'	7.892	2680	3390	2.6223	0.3506	0.0624



<u>HOLE SECTIONS</u>		<u>Size</u>	<u>Top</u>	<u>Btm</u>	<u>ID Date</u>
SURFACE		12.25	18	224	01/05/2014
SURFACE		11.00	224	2754	01/08/2014

<u>TUBULARS</u>		<u>Tool Type</u>	<u>Joints</u>	<u>Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Thread</u>	<u>Top D</u>	<u>Bottom D</u>
<b>SURFACE CASING</b>									
		Casing	60	8.63	28.00	J55	LT&C	18	2677
		Baffle	1	8.63		J55		2677	2678
		Casing	1	8.63	28.00	J55	LT&C	2678	2722
		Casing Shoe	1	8.63		J55		2722	2723

<u>CEMENT JOBS</u>		<u>Stage</u>	<u>Sacks</u>	<u>Cement Jobs</u>	<u>Top D</u>	<u>Btm D</u>	<u>chl</u>
<b>SURFACE CASING</b>							
		PRIM CMT 1ST STAGE	400	TOP OUT TOP OUT	18	719	No
		PRIM CMT 1ST STAGE	400	TOP OUT TOP OUT	719	1219	No
		PRIM CMT 1ST STAGE	400	TOP OUT TOP OUT	1219	1719	No
		PRIM CMT 1ST STAGE	300	TAIL PRIMARY CEMENT	1719	2649	No

<u>PERFORATIONS</u>		<u>Zone</u>	<u>Top</u>	<u>Btm</u>	<u>Date</u>	<u>Reason</u>	<u>Comments</u>
<u>Formation</u>							



## **HISTORY/ DRILLING TIME SUMMARY**

**1/5/2014:** Spud well. Pick up 12 ¼" drill bit, drill 12.25" hole 44' to 201'. Make up Baker Hughes 11" bit, drill 11" surface hole from 210' to 300'.

**1/6/2014:** Drill 11" surface hole from 300' to 1930'

**1/7/2014:** Drill 11" surface hole 1930' to 2740'. Circulate and condition hole, volume is clean. Trip out of hole.

Run 61 joints of 8 5/8" 28# J-55 LTC casing. Run 1 Centralizer on first 3 joints and every other joint for 2 joints for a total of 5 centralizers. Set flat shoe @ 2709' KB. Set top of baffle plate @ 2663. Run 200' of 1" pipe down backside of casing. Pump 125 bbls of water ahead clearing shoe. Mix and pump 20 bbls of gel water flush ahead of cement. Mix and pump 300 sx of premium tail cement with 2% CaCl<sub>2</sub> & 0.25 lb/sx flocele. 61.4 bbl of slurry mixed @ 15.8 PPG with yield of 1.15 CF/SX. Displace with 166.1 bbls of fresh water, no return.

**1/8/2014:** Release rig

Top Job 1: Pump 150 sx of premium cement down one inch pipe with 4% CaCl<sub>2</sub> & .25 lb/sx. No return

Top Job 2: Pump 150 sx of premium cement down one inch pipe with 4% CaCl<sub>2</sub> & .25 lb/sx. No return

Top Job 3: Pump 225 sx of premium cement down one inch pipe with 4% CaCl<sub>2</sub> & .25 Cement stayed at surface.

**1/17/2014:** Pioneer Energy service run a Caliper log. Drilling engineer said log look good

**7/26/2014:** Attempt pressure up against blinds through kill line, no test. Pick up packer & trip in hole to 2487', attempt test, no test. Trip out of hole to 1243', attempt test no test.

**8/9/2014:** Pick up packer and set ~1400' and pressure test, bottom hold, top did not hold. Continue isolation leak as per 1<sup>st</sup> procedure. Set packer at 50' and test hold below and failed above. Set packer at 30' and test failed below and above.

## **PROCEDURE**

- 1) ND BOP AND CSG HEAD.
- 2) ATTEMP TO PULL 1 INCH OF STAINLESS STEEL CONDUCTOR PIPE TBG. CUT CONDUCTOR PIPE OFF.
- 3) R/U SWIVEL AND P/U:
  - 11 ¾ WASH OVER SHOE
  - 1 JOINT OF 11 ¾ WASH OVER PIPE
  - 41/2 X/O DRILL COLLARS



- 4) WASH OVER TO 50'
- 5) POOH. LD WASH PIPE AND SHOE
- 6) RIH WITH WIRELINE AND CHEM CUT CSG ~45'.
- 7) PULL OUT PARTED CSG
- 8) P/U
  - 8 5/8 5K OD CSG PATCH
  - 1 NEW JOINT OF 8 5/8 28# J-55 LTC SURFACE CSG
- 9) RIH AND SLIPOVER CSG PATCH 3'.
- 10) POOH, NU CSG HEAD
- 11) PRESSURE TEST CASING TO 1500 PSI FOR 10 MINUTES. IF IT DOES NOT HOLD CONTACT ENGINEER FOR FURTHER INSTRUCTIONS.

**CONTACT INFORMATION**

<b>Completion Superintendent</b>	<b>Jeff Samuels</b>	<b>435-781-7046</b>
<b>Completion Supervisor</b>	<b>Brad Burman</b>	<b>435-828-8006</b>
<b>Production Engineer</b>	<b>Ronald Trigo</b>	<b>352-213-6630</b>
<b>WHEATHERFORD</b>	<b>Tracy Nielson</b>	<b>435-828-7794</b>
<b>PROPETRO</b>	<b>Gregg</b>	<b>435-828-1799</b>
<b>CAMERON</b>	<b>Office</b>	<b>435-781-0434</b>
<b>CUTTERS WIRELINE</b>	<b>Chance</b>	<b>435-828-8626</b>
<b>IOC</b>		<b>435-781-9751</b>

BLM - Vernal Field Office - Notification Form

Operator KERR MCGEE OIL AND GAS Rig  
Name/# SST 57 Submitted By STUART  
NEILSON Phone Number 435-828-0985  
Well Name/Number NBU 1022-5B1BS  
Qtr/Qtr NW/NE Section 5 Township 10S Range  
22E  
Lease Serial Number UTU-01191A

API Number 43-047-53588

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

Date/Time \_\_\_\_\_ AM  PM

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

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

Date/Time \_\_\_\_\_ AM  PM

BOPE

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

Date/Time 8/27/14 0600 AM  PM

☒

Remarks TIME IS ESTIMATED, THIS WELL IS  
THE ONE ON THE 5B PAD THAT DID NOT PSI  
TEST ON SURFACE, WE PUT A LINER  
PATCH ON & TESTED IT SO WE SHOULD BE  
GOOD TO GO, BUT WILL TEST AS  
NORMAL

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BLM - Vernal Field Office - Notification Form

Operator KERR MCGEE OIL AND GAS Rig  
Name/# \_SST 57 Submitted By CORY SIMS  
Phone Number 435-828-0985  
Well Name/Number NBU 1022-5B1BS  
Qtr/Qtr NW/NE Section 5 Township 10S Range  
22E  
Lease Serial Number UTU-01191A\_\_\_\_\_

API Number 43-047-53588

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

Date/Time \_\_\_\_\_ AM  PM

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

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

Date/Time 8/31/2014 1600 AM

PM

BOPE

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

Date/Time AM  PM

Remarks TIME IS

ESTIMATED

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STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-01191-A
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.		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>1. TYPE OF WELL</b> Gas Well		<b>8. WELL NAME and NUMBER:</b> NBU 1022-5B1BS
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>9. API NUMBER:</b> 43047535880000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6111	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1081 FNL 1942 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNE Section: 05 Township: 10.0S Range: 22.0E Meridian: S		<b>COUNTY:</b> UINTAH
		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 9/12/2014	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION  OTHER: <input style="width: 100px;" type="text"/>
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
Started completing the well. Well TD at 9,290 ft. Thank you.		
<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY September 15, 2014</b>		
<b>NAME (PLEASE PRINT)</b> Kay E. Kelly	<b>PHONE NUMBER</b> 720 929 6582	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A		<b>DATE</b> 9/12/2014

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-01191-A	
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>	
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.	
<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>	
<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES	
<b>8. WELL NAME and NUMBER:</b> NBU 1022-5B1BS	
<b>9. API NUMBER:</b> 43047535880000	
<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES	
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>	
<b>1. TYPE OF WELL</b> Gas Well	<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	
<b>PHONE NUMBER:</b> 720 929-6100	
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1081 FNL 1942 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNE Section: 05 Township: 10.0S Range: 22.0E Meridian: S	
<b>COUNTY:</b> UINTAH	
<b>STATE:</b> UTAH	

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 checked="" type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 8/17/2014	<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 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 casing repair on the subject well has been completed, please see the attached operations summary report.

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

**FOR RECORD ONLY**

September 29, 2014

<b>NAME (PLEASE PRINT)</b> Doreen Green	<b>PHONE NUMBER</b> 435 781-9758	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A	<b>DATE</b> 9/26/2014	

US ROCKIES REGION  
**Operation Summary Report**

Well: NBU 1022-5B1BS				Spud Date: 1/5/2014				
Project: UTAH-UINTAH			Site: NBU 1022-5B PAD			Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3, ROCKY MOUNTAIN WELL SERVICE 3/3		
Event: COMPLETION			Start Date: 8/9/2014		End Date:			
Active Datum: RKB @5,170.00usft (above Mean Sea Level)			UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/9/2014	7:00 - 7:15	0.25	SUBSPR	48		P		SAFETY = JSA.
	7:15 - 10:30	3.25	SUBSPR	30		P		ROAD RIG TO LOCATION. MIRU.
	10:30 - 13:00	2.50	SUBSPR	46	E	S		W/O BOP & SPOOL PIECE TO TIE INTO 11"X5K WELLHEAD.
	13:00 - 19:00	6.00	SUBSPR	31	C	P		NDWH. NUBOP. P/U 8-5/8" TENSION PACKER. STRIP PACKER IN THE HOLE. TALLY + P/U & RIH W/ 30JTS 2-3/8" L-80 TBNG. LOAD CSNG W/ 121BBLS FRESH WATER.
<p>NOTE: ALL SETTINGS FIGURED W/ CORRECTED K.B. DEPTH.  TEST CSNG AS FOLLOWS:</p> <p>SET PCKR @ 972'. TEST BELOW PCKR GOOD @1500# (LOST 5# IN 10MIN). TEST ABOVE PCKR BAD @1500# (LOST 1000# IN 3MIN).</p> <p>SET PCKR @495'. TEST BELOW PCKR GOOD @1500# (LOST 5# IN 10MIN). DID NOT TEST ABOVE PCKR.</p> <p>SET PCKR @241'. TEST BELOW PCKR GOOD @1500# (LOST 5# IN 10 MIN). DID NOT TEST ABOVE PCKR</p> <p>SET PCKR @114'. TEST BELOW PCKR GOOD @1500# (LOST 5# IN 10 MIN). DID NOT TEST ABOVE PCKR.</p> <p>SET PCKR @83'. TEST BELOW PCKR GOOD @1500# (LOST 0# IN 10 MIN). DID NOT TEST ABOVE PCKR.</p> <p>SET PCKR @32'. TEST BELOW PCKR BAD @1500# (LOST 500# IN 3MIN). TEST ABOVE PCKR BAD @1000# (LOST 500# IN 5MIN).</p> <p>SET PCKR @47'. TEST BELOW PCKR BAD @ 1500# (LOST 500# IN 3MIN). DID NOT TEST ABOVE PCKR.</p> <p>SET PCKR @57'. TEST BELOW PCKR BAD @1500# (LOST 500# IN 3MIN). DID NOT TEST ABOVE PCKR.</p> <p>SET PCKR @72'. TEST BELOW PCKR GOOD @ 1500# (LOST 0# IN 10MIN). DID NOT TEST ABOVE THE PCKR.</p> <p>RELEASE PCKR. SWIFN. SDFN. WAIT ON ORDERS.</p>								
8/11/2014	7:00 - 7:15	0.25	SUBSPR	48		P		SAFETY = JSA.

US ROCKIES REGION  
Operation Summary Report

Well: NBU 1022-5B1BS		Spud Date: 1/5/2014	
Project: UTAH-UINTAH		Site: NBU 1022-5B PAD	Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3, ROCKY MOUNTAIN WELL SERVICE 3/3
Event: COMPLETION		Start Date: 8/9/2014	End Date:
Active Datum: RKB @5,170.00usft (above Mean Sea Level)		UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:15 - 8:30	1.25	SUBSPR	30		P		0# ON WELL. NDBOP. STRIP OUT PCKR. L/D PCKR. MIRU WELDER. CUT 8-5/8" CSNG BELOW THE WELL HEAD. REMOVE WELLHEAD.
	8:30 - 11:30	3.00	SUBSPR	46	F	Z		W/O WEATHERFORD FISHING TOOLS. TOOLS WERE SCHEDULED TO BE ON LOCATION @ 08:00 HRS.
	11:30 - 14:00	2.50	SUBSPR	30		P		MIRU FISHERMAN. R/U POWER SWIVEL. MAKE UP WASH PIPE & WASH OVER SHOE AS FOLLOWS:  X/O SUB 4-1/2"XH X 2-7/8" IF = .8' X/O SUB 4-1/2" XH X 6-5/8" REG= 2.00' TOP BUSHING 6-5/8" REG X 10-3/4" WP =2.00' 1JT 10-3/4" WASH PIPE =31.20' WASH SHOE 10-3/4" KUTRITE O.D.=12-1/4" I.D.= 9-5/8" LENGTH = 3.20' TOTAL ASSEMBLY LENGTH = 39.30'
	14:00 - 18:00	4.00	SUBSPR	44	D	P		BEGIN WASHING OVER 8-5/8" CSNG. HAD TROUBLE GETTING INSIDE THE CONDUCTOR DUE TO 1" CMT STRING PROTRUDING FROM INSIDE CONDUCTOR. SHAVING THE 1" CMT PIPE WHILE WASHING OVER. MILLING +/- 3' PER / HR. WASH OVER TOTAL OF 11' OF CSNG. POOH. SDFN SAFETY = JSA.
8/12/2014	7:00 - 7:15	0.25	SUBSPR	48		P		L/D WASHOVER SHOE. P/U & INSTALL 10-3/4" X 9.60' WASHPIPE PUP JT. RE-INSTALL WASHOVER SHOE.
	7:15 - 8:30	1.25	SUBSPR	30		P		
	8:30 - 18:30	10.00	SUBSPR	44	D	P		BREAK CIRC W/ WATER. BEGIN WASHING OVER 8-5/8" SURFACE CSNG. WASH DOWN TO TOTAL DEPTH OF 19' AND GET STUCK ON 1" PIPE USED FOR TOP OFF JOB. POOH SLOWLY & RETREIVE 14.5' OF 1" ON OUTSIDE OF WASH SHOE. CONT WASHING OVER CSNG. WASH OVER SUSPECTED COLLAR @ 38'.  TOTAL FOOTAGE MADE TODAY = 28' TOTAL DEPTH WASHED OVER = 39'
8/13/2014	7:00 - 7:15	0.25	SUBSPR	48		P		CIRC HOLE CLEAN. POOH W/ TOOLS. SDFN. SAFETY = JSA.
	7:15 - 14:00	6.75	SUBSPR	30		P		CONT W/O CSNG W/ 12-1/4" OD SHOE & WASH PIPE. T/U ON 1" PIPE @17'. MILL / PUSH PIPE TO 33'. QUIT MAKING HOLE. SPEAK W/ SUPERVISOR & DECIDE TO RIH W/ 12-1/4" OD MILL W/ WIDER CUTRITE ON BOTTOM OF SHOE ( 1-1/8") WIDE. T/U @ 33'. WASH DOWN TO 35'. MILLING VERY HARD, TORQUE WAS TOO HIGH FOR EQUIPMENT. SPEAK W/ SUPERVISION & DECIDE TO TRY & BACK OFF 8-5/8" CSNG.

US ROCKIES REGION  
Operation Summary Report

Well: NBU 1022-5B1BS

Spud Date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig Name No: ROCKY MOUNTAIN WELL SERVICE  
3/3, ROCKY MOUNTAIN WELL SERVICE 3/3

Event: COMPLETION

Start Date: 8/9/2014

End Date:

Active Datum: RKB @5,170.00usft (above Mean Sea  
Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	14:00 - 17:00	3.00	SUBSPR	30		P		L/D 8-5/8" WASH PIPE & POWER SWIVEL. R/D POWER SWIVEL. P/U 8-5/8" OVER SHOT, X/O'S. MAKE UP TOOLS. LATCH ONTO 8-5/8" CSNG. MIRU WIRELINE. RIH W/ STRING SHOT. TRY TO APPLY LEFT HAND TORQUE INTO STRING & TOOLS BACKED OFF @ SURFACE. RDMO WIRELINE. MAKE PLANS TO EITHER TORQUE PIPE PROPERLY IN THE AM OR POSSIBLY MAKE AN INTERNAL CUT. SDFN.
8/14/2014	7:00 - 7:15	0.25	SUBSPR	48		P		SAFETY = JSA.
	7:15 - 8:15	1.00	SUBSPR	30		P		RELEASE OVERSHOT. L/D TOOLS.
	8:15 - 14:30	6.25	SUBSPR	31	B	P		R/U POWER SWIVEL. P/U & RIH W/ 8-5/8" INTERNAL CSNG CUTTER. CUT CSNG @41'. POOH W/ CUTTER. L/D CUTTER & TOOLS. R/D POWER SWIVEL.  P/U COLLAR, JARS, INTENSIFIER & 8-5/8" SPEAR. SPEAR INTO CSNG. JAR ON CSNG FOR +/- 1.5HRS. CSNG POPPED FREE. JARRING @ 35000#. SET SLIPS & SAFETY CLAMP AROUND CSNG. RELEASE SPEAR. L/D TOOLS. BREAK DOWN TOOLS. POOH W/ 39' OF CSNG W/ COLLAR INTACT & 2' CSNG STUB.  NOTE: NO OBVIOUS CSNG FAILURE. THERE IS AN INDENTATION @ 23' THAT IS A POSSIBLE HOLE.IT ALSO APPEARS THAT THE 39' SECTION OF CSNG & THE 2' STUMP OF CSNG ARE NOT IN LINE WITH EACH OTHER ABOVE & BELOW THE COLLAR (POSSIBLE BENT JT OR CROSS THREADED CSNG).
	14:30 - 19:00	4.50	SUBSPR	44	D	P		MIRU NEW (LARGER ) POWER SWIVEL. P/U 12-1/4" CONCAVE BLADED MILL, BIT SUB & 2) 6-1/8" COLLARS. RIH & T/U ON TRASH @38'. BREAK CIRC W/ RIG PUMP. MILL UP TRASH &CMT DOWN TO 42'. PUMP SEVERAL POLYMER SWEEPS WHILE MILLING. CIRC HOLE CLEAN. POOH W/ TOOLS. SDFN.
8/15/2014	7:00 - 7:15	0.25	SUBSPR	48		P		SAFETY = JSA.
	7:15 - 8:30	1.25	SUBSPR	30		P		L/D 12-1/4" MILL & COLLARS.
	8:30 - 12:30	4.00	SUBSPR	44	D	P		P/U & RIH W/ 11-1/4" OD WASH SHOE (SMOOTH ID & OD). T/U ON CSNG TOP @ 42'. BREAK CIRC & BEGIN WASHING OVER 8-5/8" CSNG. PUMP SEVERAL POLY SWEEPS TO KEEP HOLE CLEAN WHILE MILLING. WASH DOWN TO 57'. CIRC WELL CLEAN. POOH. L/D SHOE & JT OF WASH PIPE.
	12:30 - 14:30	2.00	SUBSPR	46	E	Z		TRY TO MAKE UP SKIRTED MILL BUT THREADS WERE BAD ON THE TOP SUB. TRY TO REPAIR THREADS BUT HAD NO LUCK. SEND FISHERMAN TO MACHINE SHOP TO HAVE EQUIPMENT REPAIRED. FISHING COMPANY DIDNT HAVE ANY REPLACEMENT EQUIP. CLEAN UP LOCATION. SDFN.
8/16/2014	7:00 - 7:15	0.25	SUBSPR	48		P		SAFETY = JSA.
	7:15 - 9:00	1.75	SUBSPR	44	D	P		P/U & RIH W/ 11-1/4" SKIRTED MILL + 2) 6-1/8" DRILL COLLARS. T/U ON CSNG @ 42'. R/U POWER SWIVEL. BREAK CIRC. MILL 2" OFF OF CSNG TOP TO CLEAN UP FOR PATCH INSTALL. POOH WHILE L/D TOOLS. R/D POWER SWIVEL.

US ROCKIES REGION  
Operation Summary Report

Well: NBU 1022-5B1BS

Spud Date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig Name No: ROCKY MOUNTAIN WELL SERVICE  
3/3, ROCKY MOUNTAIN WELL SERVICE 3/3

Event: COMPLETION

Start Date: 8/9/2014

End Date:

Active Datum: RKB @5,170.00usft (above Mean Sea  
Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	9:00 - 11:15	2.25	SUBSPR	30		P		<p>P/U JT OF 8-5/8" K-55 28# LTC CSNG &amp; 8-5/8" 5K LOGAN CSNG PATCH. MIRU WF CSNG CREW W/ POWER TONGS. MAKE UP CSNG &amp; PATCH TO PROPER TORQUE. RIH W/ ASSEMBLY. T/U ON CSNG TOP @ 42'. ROTATE PATCH OVER CSNG. INSTALL PATCH. PULL 8-5/8" CSNG INTO 50,000# TENSION TO ENSURE GRAPPLE WAS HOLDING PROPERLY (PULL TEST GOOD). RDMO CSG CREW.</p> <p>CSNG &amp; PATCH INSTALLED AS FOLLOWS:</p> <p>1JT 8-5/8" K-55 28# LTC CSNG = 43.50' LOGAN 8-5/8" 5K EXTERNAL CSNG PATCH.=47.59'. TOTAL SWALLOW =2.75'. OD= 10.06" TOP OF PATCH @ 44.50' FROM SURFACE</p>
	11:15 - 12:15	1.00	SUBSPR	52		P		MIRU CAMERON PRESSURE TEST TRUCK. PRESSURE TEST 8-5/8" CSNG GOOD @ 1500 PSI. LOST 18PSI IN 30 MINUTES. CHARTS WILL BE ELECTRONICALLY SENT TO DRILLING SUPERVISION. RDMO TEST TRUCK.
	12:15 - 15:00	2.75	SUBSPR	51	B	P		MIRU ROUSTABOUT CREW. TOP OFF SURFACE PIPE / CONDUCTOR VOID W/ 26SX NEAT "G" CMT.
	15:00 - 16:00	1.00	SUBSPR	30		P		MIRU WELDER. CUT SURFACE CSNG. INSTALL WELLHEAD. P/T WELLHEAD SEAL GOOD @ 1000#. SDFN.
8/17/2014	7:00 - 7:15	0.25	SUBSPR	48		P		SAFETY = JSA.
	7:15 - 8:30	1.25	SUBSPR	30		P		NUBOP. FUNCTION TEST BOP. R/U FLOOR & TBG EQUIP. PREP TO P/U PIPE.
	8:30 - 9:30	1.00	SUBSPR	46	F	Z		WAITING ON TBNG TRAILER. WINCH TRUCK BROKE DOWN. HAD TO SEND ANOTHER TRUCK.
	9:30 - 15:20	5.83	SUBSPR	31	I	P		<p>SPOT IN PIPE TRAILER. P/U &amp; RIH W/ 7-7/8" MILL, BIT SUB, X/O &amp; 2-3/8" L-80 TBNG. T/U ON TRASH @ 1745' W/ 55JTS TBNG. INSTALL WASHINGTON RUBBER. R/U POWER SWIVEL &amp; PUMP LINES. BREAK REVERSE CIRC. WASH DOWN 10' OF FILL &amp; FALL THRU.</p> <p>RETURNS WERE METAL SHAVINGS &amp; CRUSHED CMT.</p> <p>HANG BACK POWER SWIVEL. CONT RIH W/ TBNG. T/U ON FILL AGAIN @2586' W/ 81JTS TBNG + BHA. P/U POWER SWIVEL. BREAK REVERSE CIRC AGAIN. WASH DOWN FILL TO 2591'. RETURNS MOSTLY CMT &amp; METAL SHAVINGS. START SEEING CHUNKS OF RUBBER FROM SUSPECTED WIPER PLUG FROM CMT JOB. MILL STARTED PLUGGING. BREAK CONV CIRC W/ LARGE POLYMER SWEEP. PUMP 210 BBLs TOTAL INCLUDING SWEEP UNTIL RETURNS WERE CLEAN.</p> <p>R/D POWER SWIVEL. POOH WHILE L/D 81JTS TBNG. L/D BHA.</p>

US ROCKIES REGION  
**Operation Summary Report**

Well: NBU 1022-5B1BS				Spud Date: 1/5/2014				
Project: UTAH-UINTAH			Site: NBU 1022-5B PAD			Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3, ROCKY MOUNTAIN WELL SERVICE 3/3		
Event: COMPLETION			Start Date: 8/9/2014		End Date:			
Active Datum: RKB @5,170.00usft (above Mean Sea Level)			UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	15:20 - 15:40	0.33	SUBSPR	52		P		LOAD TBNG W/ FRESH WATER. SHUT IN BOP'S. PRESSURE TEST 8-5/8" SURFACE CSNG GOOD @ 1500# FOR 15MIN W/ 0# PRESSURE LOSS. BLEED OFF PRESSURE.
	15:40 - 16:30	0.83	SUBSPR	30		P		R/D FLOOR & TBNG EQUIP. NDBOP. INSTALL WELLHEAD COVER. BREAK DOWN PUMP & LINES. PREP FOR RIG MOVE IN AM. SDFN

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-01191-A
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  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.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> NBU 1022-5B1BS
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047535880000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6100  <b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1081 FNL 1942 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNE Section: 05 Township: 10.0S Range: 22.0E Meridian: S	<b>COUNTY:</b> UINTAH  <b>STATE:</b> 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: 12/17/2014	<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 WELL IS TD AT 9,290'. WAITING ON COMPLETION OPERATIONS TO BEGIN. THANK YOU.

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**  
**FOR RECORD ONLY**  
 December 19, 2014

<b>NAME (PLEASE PRINT)</b> Kay E. Kelly	<b>PHONE NUMBER</b> 720 929 6582	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 12/17/2014	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-01191-A
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.		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>1. TYPE OF WELL</b> Gas Well		<b>8. WELL NAME and NUMBER:</b> NBU 1022-5B1BS
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>9. API NUMBER:</b> 43047535880000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6100	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1081 FNL 1942 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNE Section: 05 Township: 10.0S Range: 22.0E Meridian: S		<b>COUNTY:</b> UINTAH
		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 2/6/2015  <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 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"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> OTHER <input type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
The NBU 1022-5B1BS was placed on production 02/06/2015 after a new well completion. Producing from the MESAVERDE.		
<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY February 17, 2015</b>		
<b>NAME (PLEASE PRINT)</b> Doreen Green	<b>PHONE NUMBER</b> 435 781-9758	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A		<b>DATE</b> 2/10/2015

Form 3160-4  
(August 2007)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

5. Lease Serial No.  
UTU01191A

1a. Type of Well  Oil Well  Gas Well  Dry  Other  
 b. Type of Completion  New Well  Work Over  Deepen  Plug Back  Diff. Resvr.  
 Other \_\_\_\_\_

6. If Indian, Allottee or Tribe Name \_\_\_\_\_

7. Unit or CA Agreement Name and No.  
UTU63047A

2. Name of Operator  
KERR-MCGEE OIL AND GAS ONSHORE  
Contact: JENNIFER THOMAS  
Email: jennifer.thomas@anadarko.com

8. Lease Name and Well No.  
NBU 1022-5B1BS

3. Address P.O. BOX 173779  
DENVER, CO 80217

3a. Phone No. (include area code)  
Ph: 720-929-6808

9. API Well No.  
43-047-53588

4. Location of Well (Report location clearly and in accordance with Federal requirements)\*  
 At surface NWNE 1081FNL 1942FEL 39.982288 N Lat, 109.461270 W Lon  
 At top prod interval reported below NWNE 239FNL 1822FEL  
 At total depth NWNE 244FNL 1812FEL 39.984577 N Lat, 109.460817 W Lon

10. Field and Pool, or Exploratory  
NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey  
or Area Sec 5 T10S R22E Mer SLB

12. County or Parish  
UINTAH

13. State  
UT

14. Date Spudded  
12/19/2013

15. Date T.D. Reached  
08/31/2014

16. Date Completed  
 D & A  Ready to Prod.  
02/06/2015

17. Elevations (DF, KB, RT, GL)\*  
5170 KB

18. Total Depth: MD 9290  
TVD 9182

19. Plug Back T.D.: MD 9233  
TVD 9125

20. Depth Bridge Plug Set: MD  
TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)  
RADIAL CEMENT BOND GAMMA RAY CCL TEMP

22. Was well cored?  No  Yes (Submit analysis)  
 Was DST run?  No  Yes (Submit analysis)  
 Directional Survey?  No  Yes (Submit analysis)

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
24.000	14.000 STL	36.7	0	40		81			
11.000	8.625 J55	28.0	18	2723		900		0	
7.875	4.500 I-80	11.6	18	9281		1645		936	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	8713							

25. Producing Intervals

26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) MESA VERDE	7154	9290	7161 TO 9167	0.410	192	OPEN
B)						
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
7161 TO 9167	PUMP 10774 BBLs SLICKWATER, 48 BBLs HCL ACID (12.5%-18%), 227476 LBS 30/50 MESH SAND

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
02/06/2015	02/24/2015	24	→	4.0	1866.0	485.0			FLOWS FROM WELL
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
20/64	SI 1207	1632.0	→	4	1866	485		PGW	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
	SI		→						

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #293691 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

**\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\***

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

29. Disposition of Gas(Sold, used for fuel, vented, etc.)  
SOLD

30. 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.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
				GREEN RIVER	1312
				BIRD'S NEST	1635
				MAHOGANY	2192
				WASATCH	4653
				MESA VERDE	7154

32. Additional remarks (include plugging procedure):

Note there was a casing patch installed on the surface casing. Verbal approval for the repair was given by Robin Hansen on 8/11/2014. See the Completions Operation Summary for details of the casing patch. 08/09 - 08/17/2014

33. Circle enclosed attachments:

- 1. Electrical/Mechanical Logs (1 full set req'd)
- 2. Geologic Report
- 3. DST Report
- 4. Directional Survey
- 5. Sundry Notice for plugging and cement verification
- 6. Core Analysis
- 7 Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

**Electronic Submission #293691 Verified by the BLM Well Information System.  
For KERR-MCGEE OIL AND GAS ONSHORE, sent to the Vernal**

Name (please print) JENNIFER THOMAS Title REGULATORY SPECIALIST III

Signature (Electronic Submission) Date 03/03/2015

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**\*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\***

## US ROCKIES REGION

## Operation Summary Report

US ROCKIES REGION									
Operation Summary Report									
Well: NBU 1022-5B1BS YELLOW					Spud date: 1/5/2014				
Project: UTAH-UINTAH			Site: NBU 1022-5B PAD			Rig name no.: PROPETRO 12/12, SST 57/57			
Event: DRILLING			Start date: 1/5/2014			End date: 9/1/2014			
Active datum: RKB @5,170.00usft (above Mean Sea Level)				UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation	
1/5/2014	15:00 - 19:30	4.50	MIRU	01	C	P	58	<p>PRE SPUD JOB SAFETY MEETING SKID RIG 20'. RIG UP SET MATTING BOARD, SET RIG IN PLACE, CATWALK, PIPE RACKS, PLACE BOTTOM HOLE ASSEMBLY.</p> <p>PRE SPUD JOB SAFETY MEETING REVIEW DIRECTIONAL PLANS AND PLATS AND VERIFY LAT/LONGS AND WELL ORDER VERIFY DIRECTIONAL DRILLERS PLAN IS THE MOST RECENT AND APPROVED VERSION REFERENCE WELLBORE DIAGRAMS FOR EXACT CASING DESIGN AND GENERAL OVERVIEW OF WELLBORE. PRIOR TO SPUD. FINISH PICKING UP BHA.</p>	
	19:30 - 21:00	1.50	DRLSUR	02	B	P	58	<p>PICK UP NOV 1.83 DEGREE BENT MOTOR (RUN # 4) .17 REV/GAL PICK UP 12 1/4" DRILL BIT. SPUD @ 1/05/2014 19:30 DRILL 12.25" HOLE 44' TO 210' (166' @ 111 FPH). WEIGHT ON BIT 5-15 K. STROKES PER MINUTE=120, GALLONS PER MINUTE=491. PRESSURE ON/OFF (BOTTOM) 800/600. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROTATE 25/25/25 K. DRAG 0 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER RUNNING VOLUME THROUGH 1 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS.</p>	
	21:00 - 23:00	2.00	DRLSUR	06	A	P	224	<p>PRE JOB SAFETY MEETING, CIRC 15 MINUTES AND, TRIP OUT TO CHANGE ASSEMBLY. BREAK 12 1/4" BIT. MAKE UP BAKER HUGHES 11" BIT. PICK UP 8" DIRECTIONAL ASSEMBLY SCIBE MOTOR. INSTALL EM TOOL, TRIP IN HOLE.</p>	

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-5B1BS YELLOW

Spud date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig name no.: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start date: 1/5/2014

End date: 9/1/2014

Active datum: RKB @5,170.00usft (above Mean Sea Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	23:00 - 0:00	1.00	DRLSUR	02	B	P	224	DRILL 11" SURFACE HOLE FROM 210' TO 300' (90' @ 90 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 650/580. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 42/39/40 K. DRAG 2 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 0.1' HIGH & 0.0' RIGHT OF THE LINE WITH 15' OF SLIDE @ 7%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
1/6/2014	0:00 - 4:30	4.50	DRLSUR	02	B	P	314	DRILL 11" SURFACE HOLE FROM 300' TO 650' (350' @ 78 FPH). WEIGHT ON BIT 18-21 K STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 650/580. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 42/39/40 K. DRAG 2 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 0.5' LOW & 1.5' LEFT OF THE LINE WITH 119' OF SLIDE @ 30%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	4:30 - 8:00	3.50	DRLSUR	08	B	X	664	***BOLTS SNAPPED FROM CHAIN DRIVE ON MUD PUMP. CHANGE OUT BOLTS. TRIP OUT WHILE FIXING PUMP. STILL PERFORMING CEMENT TOP JOB ON PREVIOUS WELL.**** CONDUCT PRE TOUR SAFETY MEETING.
	8:00 - 17:30	9.50	DRLSUR	02	B	P	664	DRILL 11" SURFACE HOLE FROM 650' TO 1490' (840' @ 89 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1250/910. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 61/45/53 K. DRAG 8 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 0.6' LOW & 0.6' RIGHT OF THE LINE WITH 157' OF SLIDE @ 19%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-5B1BS YELLOW

Spud date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig name no.: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start date: 1/5/2014

End date: 9/1/2014

Active datum: RKB @5,170.00usft (above Mean Sea Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	17:30 - 18:00	0.50	DRLSUR	23		P	1504	CONDUCT PRE TOUR SAFETY MEETING. TOPIC: DRILLING AHEAD.
	18:00 - 0:00	6.00	DRLSUR	02	B	P	1504	DRILL 11" SURFACE HOLE FROM 1490' TO 1930' (440' @ 73 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1200/1000. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 70/50/60 K. DRAG 10 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 3' HIGH & 1.5' RIGHT OF THE LINE WITH 24' OF SLIDE @ 5%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
1/7/2014	0:00 - 5:30	5.50	DRLSUR	02	B	P	1944	DRILL 11" SURFACE HOLE FROM 1930' TO 2360' (430' @ 78 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1400/1200. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 84/60/70 K. DRAG 14 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 0.1' HIGH & 3.5' LEFT OF THE LINE WITH 65' OF SLIDE @ 18%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	5:30 - 6:00	0.50	DRLSUR	23		P	2374	CONDUCT PRE TOUR SAFETY MEETING. TOPIC: FORK LIFT SAFETY.
	6:00 - 12:00	6.00	DRLSUR	02	B	P	2374	DRILL 11" SURFACE HOLE FROM 2360' TO 2740' (380' @ 63 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1400/1200. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 84/60/70 K. DRAG 14 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 4.8' LOW & 6.4' LEFT OF THE LINE WITH 80' OF SLIDE @ 19%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

US ROCKIES REGION  
**Operation Summary Report**

Well: NBU 1022-5B1BS YELLOW		Spud date: 1/5/2014	
Project: UTAH-UINTAH		Site: NBU 1022-5B PAD	Rig name no.: PROPETRO 12/12, SST 57/57
Event: DRILLING		Start date: 1/5/2014	End date: 9/1/2014
Active datum: RKB @5,170.00usft (above Mean Sea Level)		UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	12:00 - 14:00	2.00	DRLSUR	05	C	P	2754	CIRCULATE AND CONDITION HOLE, VOLUME IS CLEAN COMING OVER SHAKERS, 4-400 BBL UPRIGHT'S FULL AND 2-400 BBL UPRIGHTS EMPTY, 1,000 BBLs OF FRESH WATER ON LOCATION FOR CEMENT JOB.
	14:00 - 20:00	6.00	DRLSUR	06	A	P	2754	PRE JOB SAFETY MEETING, TRIP OUT OF HOLE, LAY DOWN DRILL STRING, BOTTOM HOLE ASSEMBLY, LAY DOWN DIRECTIONAL TOOLS, MOTOR, AND, BIT. CLEAR TOOL AREA. SPOT SURFACE CASING FOR 8 5/8" CASING RUN.
	20:00 - 22:00	2.00	CSGSUR	12	C	P	2754	RUN 61 JOINTS OF 8-5/8". 28# J-55 LTC CASING. RAN 1 CENTRALIZER ON FIRST THREE JOINTS, AND EVERY OTHER JOINT FOR 2 JOINTS FOR A TOTAL OF 5 CENTRALIZERS. RUN A TOTAL OF 61 JOINTS. RUN CASING TO BOTTOM WITH NO PROBLEMS. SET FLOAT SHOE @ 2709' KB. SET TOP OF BAFFLE PLATE @ 2663'.

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-5B1BS YELLOW

Spud date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig name no.: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start date: 1/5/2014

End date: 9/1/2014

Active datum: RKB @5,170.00usft (above Mean Sea Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	22:00 - 0:00	2.00	CSGSUR	12	E	P	2754	<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 2,000 PSI.</p> <p>PUMP 125 BBLS OF WATER AHEAD CLEARING SHOE.</p> <p>MIX AND PUMP 20 BBLS OF GEL WATER FLUSH AHEAD OF CEMENT.</p> <p>MIX &amp; PUMP 300 SX OF PREMIUM TAIL CEMENT WITH 2% CACL2 &amp; 0.25 LB/SX FLOCELE. 61.4 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX.</p> <p>DROP PLUG ON FLY.</p> <p>DISPLACE WITH 166.1 BBLS OF FRESH WATER. NO RETURNS THROUGH OUT JOB.</p> <p>FINAL LIFT OF 250 PSI AT 3.5 BBL/MINUTE.</p> <p>BUMPED PLUG @ 550 PSI. HELD @ 550 PSI FOR 5 MINUTES WITHOUT BLEED OFF.</p> <p>TESTED FLOAT AND FLOAT HELD.</p> <p>SHUT DOWN AND WASH UP.</p> <p>RELEASE RIG @ 1/08/2014 00:00</p> <p>TOP JOB # 1: PUMP CEMENT DOWN ONE INCH PIPE WITH 150 SX (30.7 BBLS) PREMIUM CEMENT WITH 4% CACL2 &amp; .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 3.5 HOURS ON CEMENT.</p> <p>TOP JOB # 2 : PUMP CEMENT DOWN BACKSIDE W/ 225 SX (46 BBLS) SAME CEMENT, 0 BBLS CEMENT RETURNS TO SURFACE. CEMENT FELL BACK 30'. WAIT 2.5 HOURS ON CEMENT.</p> <p>TOP JOB # 3: PUMP CEMENT DOWN BACKSIDE W/ 225 SX (46 BBLS) SAME CEMENT, 3 BBLS CEMENT RETURNS TO SURFACE. CEMENT STAYED AT SURFACE'.</p> <p>RIG DOWN CEMENTERS.</p> <p>(CEMENT JOB FINISHED @ 1/08/2014 08:00)</p>
8/6/2014	4:00 - 5:00	1.00	MIRU3	01	C	P	2754	SKID RIG 10' TO THE NBU 1022-5B1BS
	5:00 - 6:00	1.00	PRPSPD	14	A	P	2754	N/U BOPE
	6:00 - 11:00	5.00	PRPSPD	15	A	P	2754	<p>HOLD SAFETY MEETING, RUN TEST ASSY, TEST BOPE WITH A-1 TESTERS - TEST ANNULAR TO 250 PSI LOW/ 5 MIN 2500 PSI HIGH 10 MIN, PIPE &amp; BLIND RAMS, FLOOR VALVES, IBOP, HCR VALVE, KILL LINE VALVES, CHOKE MANIFOLD TO 250 PSI LOW/ 5 MIN - 5000 PSI HIGH 10 MIN, HOLD ACCUMULATOR FUNCTION TEST, CAMERON HEAD WAS NOT TIGHT, HAD TO TIGHTEN, CASING DID NOT TEST</p>
	11:00 - 21:00	10.00	PRPSPD	15	A	X	2754	<p>***REPLACE O-RINGS ON QUICK CONNECT, ATTEMP PRESSURE UP AGAINST BLINDS THROUGH KILL LINE, NO TEST, PICK UP PACKER &amp; TRIP IN HOLE TO 2487' ATTEMP TEST- NO TEST, TRIP OUT OF HOLE TO 1243' ATTEMP TEST- NO TEST, TRIP OUT OF HOLE AND LAY DOWN PACKER</p>

US ROCKIES REGION  
Operation Summary Report

Well: NBU 1022-5B1BS YELLOW

Spud date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig name no.: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start date: 1/5/2014

End date: 9/1/2014

Active datum: RKB @5,170.00usft (above Mean Sea Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	21:00 - 0:00	3.00	PRPSPD	14	A	P	2754	NIPPLE DOWN , RELEASE RIG @ MIDNIGHT 00:00 07/26/2014
8/7/2014	6:00 - 18:00	12.00	RIGINS	01	G	P	2754	RIG DOWN & PREPARE FOR TRUCKS - RIG DOWN RIG FLOOR & LAY OUT TOP DRIVE @ 1000 HRS - LAY DOWN DERRICK @ 1300 HRS - UNSTRING DRILLING LINE - RIG DOWN ALL ELECTRICAL LINES & MUD LINES - CLEAN TOP DRIVE & MUD PUMPS
	18:00 - 0:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
8/8/2014	0:00 - 6:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
	6:00 - 13:00	7.00	RIGINS	01	A	P	2754	RIG DOWN - TAKE DERRICK & DRAWWORKS OFF FLOOR - UNSTACK SUBS - MOVE PUMPS & SCATTER RIG 1 BED TRUCK, 2 HAUL TRUCKS, 1 FORKLIFT, 1 CRANE WITH RIGGER & 1 PUSHER
	13:00 - 18:00	5.00	RIGINS	08	A	P	2754	INSPECT & REPAIR RIG - BEGIN INSTALLING NEW LIGHTS, SHAKERS, HPU UNIT, TUGGERS - CAT III INSPECTIONS ON SLB, DERRICK - TEAR DOWN PUMPS & DRAWWORKS AND REPAIR AS NEEDED INSPECT CROWN & BLOCKS
	18:00 - 0:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
8/9/2014	0:00 - 6:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
	6:00 - 18:00	12.00	RIGINS	08	A	P	2754	INSPECT & REPAIR RIG - BEGIN INSTALLING NEW LIGHTS, SHAKERS, HPU UNIT, TUGGERS - CAT III INSPECTIONS ON SUB, DERRICK - TEAR DOWN PUMPS & DRAWWORKS AND REPAIR AS NEEDED INSPECT CROWN & BLOCKS
	18:00 - 0:00	6.00	RIGINS	21	C	P	2754	RIG UP WORKOVER RIG WAIT ON DAYLIGHT
8/10/2014	0:00 - 6:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
	6:00 - 18:00	12.00	RIGINS	08	A	P	2754	INSPECT & REPAIR RIG - BEGIN INSTALLING NEW LIGHTS, SHAKERS, HPU UNIT, TUGGERS - CAT III INSPECTIONS ON SUB, DERRICK - TEAR DOWN PUMPS & DRAWWORKS AND REPAIR AS NEEDED INSPECT CROWN & BLOCKS
	18:00 - 0:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
8/11/2014	0:00 - 6:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
	6:00 - 18:00	12.00	RIGINS	08	A	P	2754	CONTINUE WITH CAT 3 INSPECTION ON RIG - INSPECT AND PAINT DERRICK - BEGIN WASHOVER OPERATIONS WITH WORKOVER RIG
	18:00 - 0:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
8/12/2014	0:00 - 6:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
	6:00 - 18:00	12.00	RIGINS	08	A	P	2754	CONTINUE WITH CAT 3 INSPECTION ON RIG - INSPECT, REPAIR AND PAINT DERRICK - CONTINUE WASHOVER OPERATIONS WITH WORKOVER RIG
	18:00 - 0:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
8/13/2014	0:00 - 6:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
	6:00 - 18:00	12.00	RIGINS	08	A	P	2754	CONTINUE WITH CAT 3 INSPECTION ON RIG - INSPECT, REPAIR AND PAINT DERRICK - CONTINUE WASHOVER OPERATIONS WITH WORKOVER RIG
	18:00 - 0:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
8/14/2014	0:00 - 6:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT

US ROCKIES REGION  
Operation Summary Report

Well: NBU 1022-5B1BS YELLOW

Spud date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig name no.: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start date: 1/5/2014

End date: 9/1/2014

Active datum: RKB @5,170.00usft (above Mean Sea Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:00 - 18:00	12.00	RIGINS	08	A	P	2754	CONTINUE WITH CAT 3 INSPECTION ON RIG - INSPECT, REPAIR AND PAINT DERRICK - CONTINUE WASHOVER OPERATIONS WITH WORKOVER RIG
	18:00 - 0:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
8/15/2014	0:00 - 6:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
	6:00 - 18:00	12.00	RIGINS	08	A	P	2754	CONTINUE WITH CAT 3 INSPECTION ON RIG - INSPECT, FINISH REPAIRING DERRICK - CONTINUE WASHOVER OPERATIONS WITH WORKOVER RIG
	18:00 - 0:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
8/16/2014	0:00 - 6:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
	6:00 - 18:00	12.00	RIGINS	08	A	P	2754	CONTINUE WITH CAT 3 INSPECTION ON RIG - INSPECT, FINISH REPAIRING DERRICK - DRESS FISH TOP, SET PATCH, LAND CASING, PSI TEST, CEMENT, WELD ON WELLHEAD
	18:00 - 0:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
8/17/2014	0:00 - 6:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
	6:00 - 18:00	12.00	RIGINS	08	A	P	2754	CONTINUE WITH CAT 3 INSPECTION ON RIG - INSPECT, FINISH REPAIRING DERRICK, WORKING ON SUBS, PUMPS AND DRAWWORKS - MILL OUT JUNK, RIG DOWN WORKOVER RIG
	18:00 - 0:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
8/18/2014	0:00 - 6:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
	6:00 - 18:00	12.00	RIGINS	08	A	P	2754	CONTINUE WITH CAT 3 INSPECTION ON RIG - INSPECT, FINISH REPAIRING DERRICK, WORKING ON SUBS, PUMPS AND DRAWWORKS - MOVE OUT WORKOVER RIG
	18:00 - 0:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
8/19/2014	0:00 - 6:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
	6:00 - 18:00	12.00	RIGINS	08	A	P	2754	CONTINUE WITH CAT 3 INSPECTION ON RIG - INSPECT, FINISH REPAIRING DERRICK, WORKING ON SUBS, PUMPS AND DRAWWORKS
	18:00 - 0:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
8/20/2014	0:00 - 6:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
	6:00 - 18:00	12.00	RIGINS	08	A	P	2754	CONTINUE WITH CAT 3 INSPECTION ON RIG - WORKING ON SUBS, PUMPS AND DRAWWORKS
	18:00 - 0:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
8/21/2014	0:00 - 6:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
	6:00 - 18:00	12.00	RIGINS	08	A	P	2754	CONTINUE WITH CAT 3 INSPECTION ON RIG - WORKING ON SUBS, PUMPS AND DRAWWORKS
	18:00 - 0:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
8/22/2014	0:00 - 6:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
	6:00 - 18:00	12.00	RIGINS	08	A	P	2754	CONTINUE WITH CAT 3 INSPECTION ON RIG - WORKING ON SUBS, PUMPS AND DRAWWORKS
	18:00 - 0:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
8/23/2014	0:00 - 6:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
	6:00 - 18:00	12.00	RIGINS	08	A	P	2754	CONTINUE WITH CAT 3 INSPECTION ON RIG - WORKING ON SUBS, PUMPS AND DRAWWORKS ,INSTALL CROWN SHIVES ON DERRICK,FASTLINE,STRING UP BLOCKS
	18:00 - 0:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT
8/24/2014	0:00 - 6:00	6.00	RIGINS	21	C	P	2754	WAIT ON DAYLIGHT

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-5B1BS YELLOW

Spud date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig name no.: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start date: 1/5/2014

End date: 9/1/2014

Active datum: RKB @5,170.00usft (above Mean Sea Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:00 - 11:00	5.00	RIGINS	08	A	P	2754	CONTINUE WITH CAT 3 INSPECTION ON RIG - WORKING ON SUBS, PUMPS AND DRAWWORKS
	11:00 - 18:00	7.00	MIRU3	01	B	P	2754	HAUL PUMPS TO LOC, SET IN & RIG UP BACKYARD, SET MATS, RAILS, STACK, SUBS, RIG UP WITH RW JONES, 1 BED TRUCK, 2 HAUL TRUCK, TRUCKS HERE @ 11:00, HAUL TRUCKS LEFT @ 13:00, CRANE & TRUCK DONE FOR THE DAY 18:00
	18:00 - 0:00	6.00	MIRU3	01	B	P	2754	WAIT ON DAYLIGHT
8/25/2014	0:00 - 6:00	6.00	MIRU3	21	C	P	2754	WAIT ON DAYLIGHT
	6:00 - 18:00	12.00	MIRU3	01	B	P	2754	HPJSM WITH RIG & R W JONES TRUCKING, RIG UP BACKYARD, HOOK UP DRAG CHAIN, SET DRAWWORKS, UNLOAD & LOAD HWDP, SET DRAWTOOL @ 15:00, CRANE & BED TRUCK START @ 14:00, BED TRUCK DONE @ 15:00, CRANE RELEASED @ 17:00, RAISE DERRICK @ 19:00
	18:00 - 0:00	6.00	MIRU3	01	B	P	2754	RIG UP FLOOR & OUT BUILDINGS
8/26/2014	0:00 - 6:00	6.00	MIRU3	01	B	P	2754	RIG UP FLOOR & OUT BUILDINGS
	6:00 - 8:00	2.00	MIRU3	01	B	P	2754	RAISE TOP DRIVE
	8:00 - 16:00	8.00	MIRU3	08	B	Z	2754	REPAIR RIG, REPLACE MAIN HYD HOSES ON TOP DRIVE, WIRE SWITCHES UP ON HPU, MAKE FLOOR PLATES FOR AROUND TUGGERS
	16:00 - 18:00	2.00	MIRU3	21	E	Z	2754	TOP-DRIVE, WAIT ON TEC TO PROGRAM TOPDRIVE
	18:00 - 22:00	4.00	PRSPD	14	A	P	2754	NIPPLE UP BOPE
	22:00 - 0:00	2.00	PRSPD	15	A	P	2754	HOLD SAFETY MEETING, RUN TEST ASSY, TEST BOPE WITH A-1 TESTERS - TEST ANNULAR TO 250 PSI LOW/ 5 MIN 2500 PSI HIGH 10 MIN, PIPE & BLIND RAMS, FLOOR VALVES, IBOP, HCR VALVE, KILL LINE VALVES, CHOKE MANIFOLD TO 250 PSI LOW/ 5 MIN - 5000 PSI HIGH 10 MIN, HOLD ACCUMULATOR FUNCTION TEST, TEST CSG 1500 PSI - 30 MIN, RIG DOWN
8/27/2014	0:00 - 2:00	2.00	PRSPD	15	A	P	2754	HOLD SAFETY MEETING, RUN TEST ASSY, TEST BOPE WITH A-1 TESTERS - TEST ANNULAR TO 250 PSI LOW/ 5 MIN 2500 PSI HIGH 10 MIN, PIPE & BLIND RAMS, FLOOR VALVES, IBOP, HCR VALVE, KILL LINE VALVES, CHOKE MANIFOLD TO 250 PSI LOW/ 5 MIN - 5000 PSI HIGH 10 MIN, HOLD ACCUMULATOR FUNCTION TEST, TEST CSG 1500 PSI - 30 MIN, RIG DOWN
	2:00 - 2:30	0.50	PRSPD	14	B	P	2754	INSTALL WEAR BUSHING
	2:30 - 6:30	4.00	PRSPD	06	F	P	2754	TRIP IN W/ CLEANOUT BIT, JUNK SUB & P/U D/P
	6:30 - 10:00	3.50	PRSPD	08	A	Z	2754	*** REPAIR RIG - RE-ALIGN HIGH DRUM CLUTCH
	10:00 - 11:00	1.00	PRSPD	06	F	P	2754	CONTINUE PICKING UP DRILL PIPE
	11:00 - 13:30	2.50	DRLPRC	02	F	P	2754	DRILL OUT CEMENT AND BAFFLE PLATE TO 2667' - ROP SLOWED TO 5 MIN/FT
	13:30 - 15:30	2.00	DRLPRC	06	A	P	2754	TRIP OUT & CLEAN OUT JUNK BASKET & BIT - BIT HAD A CHUNK OF IRON WEDGED BETWEEN CONES AND JUNK BASKET WAS ABOUT A 1/3 OF THE WAY FULL
	15:30 - 17:00	1.50	DRLPRC	06	J	P	2754	TRIP IN W/ CLEANOUT BIT, JUNK SUB TO 2667'
	17:00 - 20:00	3.00	DRLPRC	02	F	P	2754	DRILL OUT CEMENT FROM 2667' TO 2754'

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-5B1BS YELLOW

Spud date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig name no.: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start date: 1/5/2014

End date: 9/1/2014

Active datum: RKB @5,170.00usft (above Mean Sea Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	20:00 - 20:30	0.50	DRLPRC	02	D	P	2754	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 2754' TO / 2770' = 16' @ 32' PER HOUR WEIGHT ON BIT = 20-27K STROKES PER MINUTE 1 PUMP @ 105 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 72 TOP DRIVE RPM = 50-60 TOTAL RPM = 72-132 FT/LBS TORQUE = 4-6K STAND PIPE PRESSURE ON BOTTOM = 775 STAND PIPE PRESSURE OFF BOTTOM = 700 STRING WEIGHT UP/DOWN/ROTATING = 110K / 101K / 95K HOLE IN GOOD CONDITION BOS - DEWATERING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 8.5 PPG VISCOSITY = 28 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	20:30 - 21:30	1.00	DRLPRC	06	A	P	2770	TRIP OUT, LD JUNK BASKET AND CONE BIT. CLEAN OUT JUNK BASKET - HAD 3 SMALL PIECES OF MFTAL
	21:30 - 23:00	1.50	DRLPRC	06	A	P	2770	PU DIRECTIONAL TOOLS AND PDC BIT. SCRIBE AND ORIENT.
	23:00 - 0:00	1.00	DRLPRC	06	A	P	2770	TIH WITH NEW BHA
8/28/2014	0:00 - 0:30	0.50	DRLPRC	06	A	P	2770	FINISH TRIPPING IN HOLE TO 2770'
	0:30 - 11:00	10.50	DRLPRC	02	D	P	2770	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 2770' TO / 4074' = 1304' @ 124.2' PER HOUR WEIGHT ON BIT = 20-25K STROKES PER MINUTE 2 PUMPS @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83 TOP DRIVE RPM = 60-70 TOTAL RPM = 83-153 FT/LBS TORQUE = 8-12K STAND PIPE PRESSURE ON BOTTOM = 1600 STAND PIPE PRESSURE OFF BOTTOM = 1300 STRING WEIGHT UP/DOWN/ROTATING = 129K / 113K / 103K HOLE IN GOOD CONDITION BOS - DEWATERING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 8.6 PPG VISCOSITY = 28 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	11:00 - 11:30	0.50	DRLPRC	07	A	P	4074	LUBRICATE RIG

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-5B1BS YELLOW

Spud date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig name no.: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start date: 1/5/2014

End date: 9/1/2014

Active datum: RKB @5,170.00usft (above Mean Sea Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	11:30 - 18:00	6.50	DRLPRV	02	B	P	4074	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 4074' TO / 5122' = 1048' @ 161.2' PER HOUR WEIGHT ON BIT = 20-25K STROKES PER MINUTE 2 PUMPS @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83 TOP DRIVE RPM = 60-70 TOTAL RPM = 83-153 FT/LBS TORQUE = 8-14K STAND PIPE PRESSURE ON BOTTOM = 1600 STAND PIPE PRESSURE OFF BOTTOM = 1300 STRING WEIGHT UP/DOWN/ROTATING = 165K / 120K / 140K HOLE IN GOOD CONDITION BOS - DEWATERING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 8.6 PPG VISCOSITY = 28 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	18:00 - 0:00	6.00	DRLPRV	02	B	P	5122	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 5122' TO / 5992' = 870' @ 145' PER HOUR WEIGHT ON BIT = 20-25K STROKES PER MINUTE 2 PUMPS @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83 TOP DRIVE RPM = 55-65 TOTAL RPM = 83-148 FT/LBS TORQUE = 10-16K STAND PIPE PRESSURE ON BOTTOM = 1750 STAND PIPE PRESSURE OFF BOTTOM = 1450 STRING WEIGHT UP/DOWN/ROTATING = 21CK / 135K / 168K HOLE IN GOOD CONDITION BOS - CONVENTIONAL CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 8.7 PPG VISCOSITY = 31 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-5B1BS YELLOW

Spud date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig name no.: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start date: 1/5/2014

End date: 9/1/2014

Active datum: RKB @5,170.00usft (above Mean Sea Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
8/29/2014	0:00 - 8:00	8.00	DRLPRV	02	B	P	5992	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 5992' TO / 6742' = 750' @ 93.8' PER HOUR WEIGHT ON BIT = 20-25K STROKES PER MINUTE 2 PUMPS @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83 TOP DRIVE RPM = 55-65 TOTAL RPM = 83-148 FT/LBS TORQUE = 11-17K STAND PIPE PRESSURE ON BOTTOM = 1800 STAND PIPE PRESSURE OFF BOTTOM = 1500 STRING WEIGHT UP/DOWN/ROTATING = 21CK / 135K / 168K HOLE IN GOOD CONDITION BOS - CONVENTIONAL CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 8.9 PPG VISCOSITY = 31 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	8:00 - 15:00	7.00	DRLPRV	02	B	P	6742	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 6742' TO / 7218' = 476' @ 68' PER HOUR WEIGHT ON BIT = 20-25K STROKES PER MINUTE 2 PUMPS @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83 TOP DRIVE RPM = 55-65 TOTAL RPM = 83-148 FT/LBS TORQUE = 11-17K STAND PIPE PRESSURE ON BOTTOM = 1800 STAND PIPE PRESSURE OFF BOTTOM = 1500 STRING WEIGHT UP/DOWN/ROTATING = 25CK / 153K / 183K HOLE IN GOOD CONDITION BOS - CONVENTIONAL CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 8.9 PPG VISCOSITY = 31 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	15:00 - 15:30	0.50	DRLPRV	07	A	P	7218	LUBRICATE RIG

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-5B1BS YELLOW

Spud date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig name no.: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start date: 1/5/2014

End date: 9/1/2014

Active datum: RKB @5,170.00usft (above Mean Sea Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

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	7218	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 7218' TO / 7777' = 559' @ 66' PER HOUR WEIGHT ON BIT = 20-25K STROKES PER MINUTE 2 PUMPS @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83 TOP DRIVE RPM = 55-65 TOTAL RPM = 83-148 FT/LBS TORQUE = 13-18K STAND PIPE PRESSURE ON BOTTOM = 2000 STAND PIPE PRESSURE OFF BOTTOM = 1750 STRING WEIGHT UP/DOWN/ROTATING = 25CK / 145K / 192K HOLE IN GOOD CONDITION BOS - CONVENTIONAL CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 9.0 PPG VISCOSITY = 31 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
8/30/2014	0:00 - 8:00	8.00	DRLPRV	02	B	P	7777	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 7777' TO / 8266' = 489' @ 61.1' PER HOUR WEIGHT ON BIT = 20-25K STROKES PER MINUTE 2 PUMPS @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83 TOP DRIVE RPM = 55-65 TOTAL RPM = 83-148 FT/LBS TORQUE = 14-21K STAND PIPE PRESSURE ON BOTTOM = 2150 STAND PIPE PRESSURE OFF BOTTOM = 1900 STRING WEIGHT UP/DOWN/ROTATING = 25CK / 145K / 192K HOLE IN GOOD CONDITION BOS - CONVENTIONAL CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 9.0 PPG VISCOSITY = 32 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-5B1BS YELLOW

Spud date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig name no.: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start date: 1/5/2014

End date: 9/1/2014

Active datum: RKB @5,170.00usft (above Mean Sea Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	8:00 - 14:00	6.00	DRLPRV	02	B	P	8266	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 8266' TO / 8647' = 381' @ 63.5' PER HOUR WEIGHT ON BIT = 20-25K STROKES PER MINUTE 2 PUMPS @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83 TOP DRIVE RPM = 55-65 TOTAL RPM = 83-148 FT/LBS TORQUE = 14-21K STAND PIPE PRESSURE ON BOTTOM = 2150 STAND PIPE PRESSURE OFF BOTTOM = 1900 STRING WEIGHT UP/DOWN/ROTATING = 265K / 165K / 205K HOLE IN GOOD CONDITION BOS - CONVENTIONAL CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 9.0 PPG VISCOSITY = 32 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	14:00 - 14:30	0.50	DRLPRV	07	A	P	8647	LUBRICATE RIG
	14:30 - 0:00	9.50	DRLPRV	02	B	P	8647	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 8647' TO / 9150' = 503' @ 53' PER HOUR WEIGHT ON BIT = 20-25K STROKES PER MINUTE 1 PUMPS @ 105 GALLONS PER MINUTE = 515 MUD MOTOR RPM = 73 TOP DRIVE RPM = 55-65 TOTAL RPM = 73-188 FT/LBS TORQUE = 14-21K STAND PIPE PRESSURE ON BOTTOM = 2400 STAND PIPE PRESSURE OFF BOTTOM = 2100 STRING WEIGHT UP/DOWN/ROTATING = 27CK / 160K / 207K HOLE IN GOOD CONDITION BOS - CONVENTIONAL CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 11.7 PPG VISCOSITY = 38 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-5B1BS YELLOW

Spud date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig name no.: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start date: 1/5/2014

End date: 9/1/2014

Active datum: RKB @5,170.00usft (above Mean Sea Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
8/31/2014	0:00 - 3:00	3.00	DRLPRV	02	B	P	9150	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 9150' TO / 9290' = 140' @ 47' PER HOUR WEIGHT ON BIT = 20-25K STROKES PER MINUTE 1 PUMPS @ 105 GALLONS PER MINUTE = 515 MUD MOTOR RPM = 73 TOP DRIVE RPM = 55-65 TOTAL RPM = 73-188 FT/LBS TORQUE = 14-21K STAND PIPE PRESSURE ON BOTTOM = 2600 STAND PIPE PRESSURE OFF BOTTOM = 2200 STRING WEIGHT UP/DOWN/ROTATING = 27CK / 160K / 207K HOLE IN GOOD CONDITION BOS - CONVENTIONAL CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 11.8 PPG VISCOSITY = 38 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	3:00 - 4:00	1.00	DRLPRV	05	C	P	9290	CIRCULATE HOLE CLEAN AT TD
	4:00 - 5:00	1.00	DRLPRV	06	E	P	9290	10 STAND WIPER TRIP. PULL 310K OFF BOTTOM. NO TIGHT SPOTS
	5:00 - 6:30	1.50	DRLPRV	05	C	P	9290	CIRCULATE HOLE CLEAN AFTER WIPER TRIP. SEND HIGH VIS SWEEP.
	6:30 - 14:30	8.00	DRLPRV	06	D	P	9290	PULL 5 STANDS. RU WYOMING CASERS LD MACHINE. LDDP, HWDP, AND DIRECTIONAL BHA
	14:30 - 15:00	0.50	DRLPRV	14	B	P	9290	PULL WEAR BUSHING
	15:00 - 16:00	1.00	CSGPRO	12	A	P	9290	RU WYOMING CASERS POWER TONGS, HOSES, TORQUE TURN AND RIG FLOOR
	16:00 - 0:00	8.00	CSGPRO	12	C	P	9290	RUN 97 JTS + 2 MARKER JTS 4 1/2", 11.6# 180, LT&C CASING + 112 JTS + CROSSOVER + PUP JT, 4 1/2", 11.6#, 180, DQX CASING, SET @ 9280.93', PLUG BACK @ 9235.36', RAN 15 CENT'S TOP OF MESEVERDE MK JT 7102.76' PROBLEMS WITH DQX PIPE SHOULDERING UP. ABOUT 50% OF ALL DQX HAD TO BE BACKED OUT AT LEAST ONCE AND RE-MADE UP.
9/1/2014	0:00 - 1:00	1.00	CSGPRO	12	B	P	9290	CIRCULATE CASING. RU CEMENTERS
	1:00 - 3:30	2.50	CSGPRO	12	E	P	9290	CEMENT W/ BJ - HOLD SAFETY MEETING - TEST LINES TO 5000 PSI - PUMP 25 BBLS WATER SPACER - 184 BBLS LEAD CEMENT 521 SKS @ 12.5 PPG W/ 1.98 YIELD, MIX & PUMP 269 BBLS TAIL CEMENT 1124 SKS @ 14.3 PPG W/ 1.34 YIELD - WASH UP LINES - DISPLACE W/ 143 BBLS WATER - BUMP PLUG TO 3200 PSI - 2400 PSI FINAL LIFT PRESSURE PRIOR TO BUMP PLUG / FLOAT HELD / FULL RETURNS THROUGH JOB / 5 BBLS OF PREFLUSH BACK TO SURFACE - PUMPED 30% EXCESS ON LEAD & 25% EXCESS ON TAIL CEMENT. EST TOP OF TAIL IS 4000'
	3:30 - 4:00	0.50	CSGPRO	12	B	P	9290	RD CEMENTERS LINES, STANDPIPE, CEMENT HEAD, AND TRUCKS

## US ROCKIES REGION

## Operation Summary Report

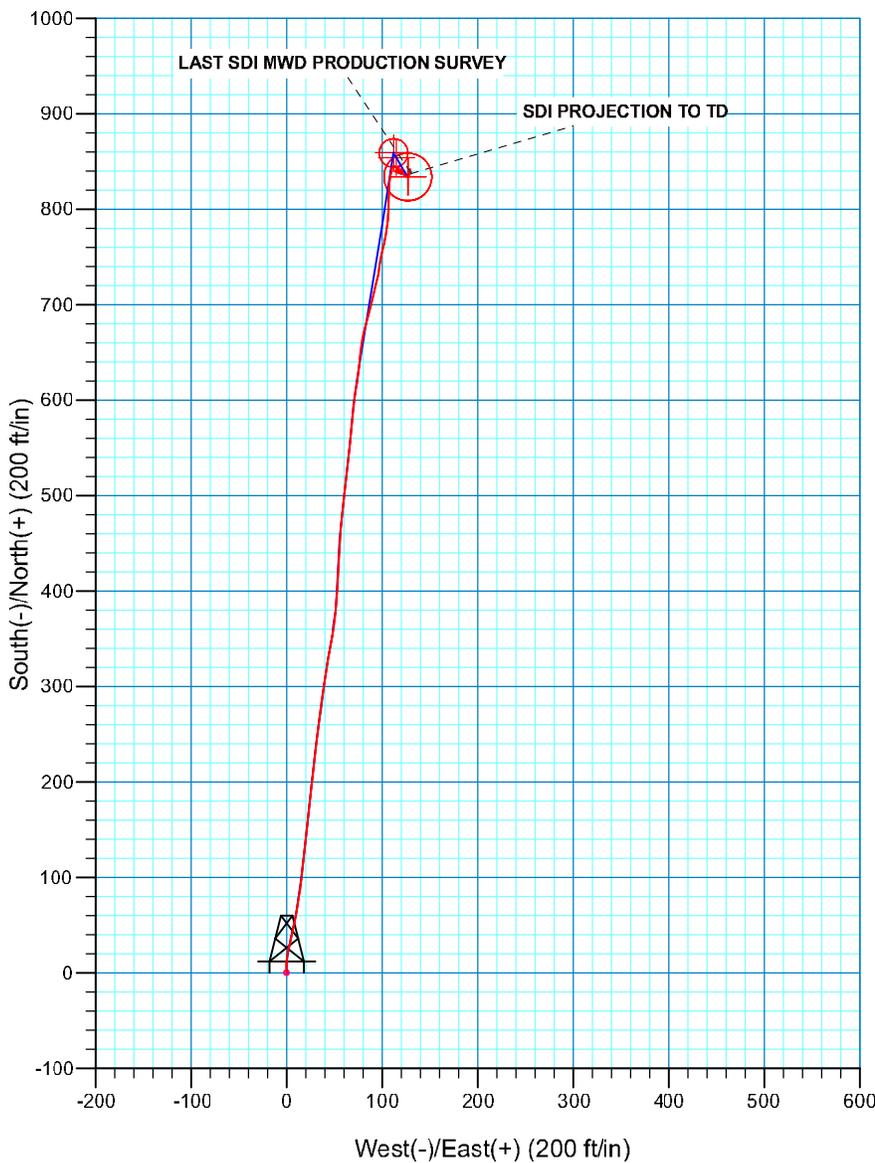
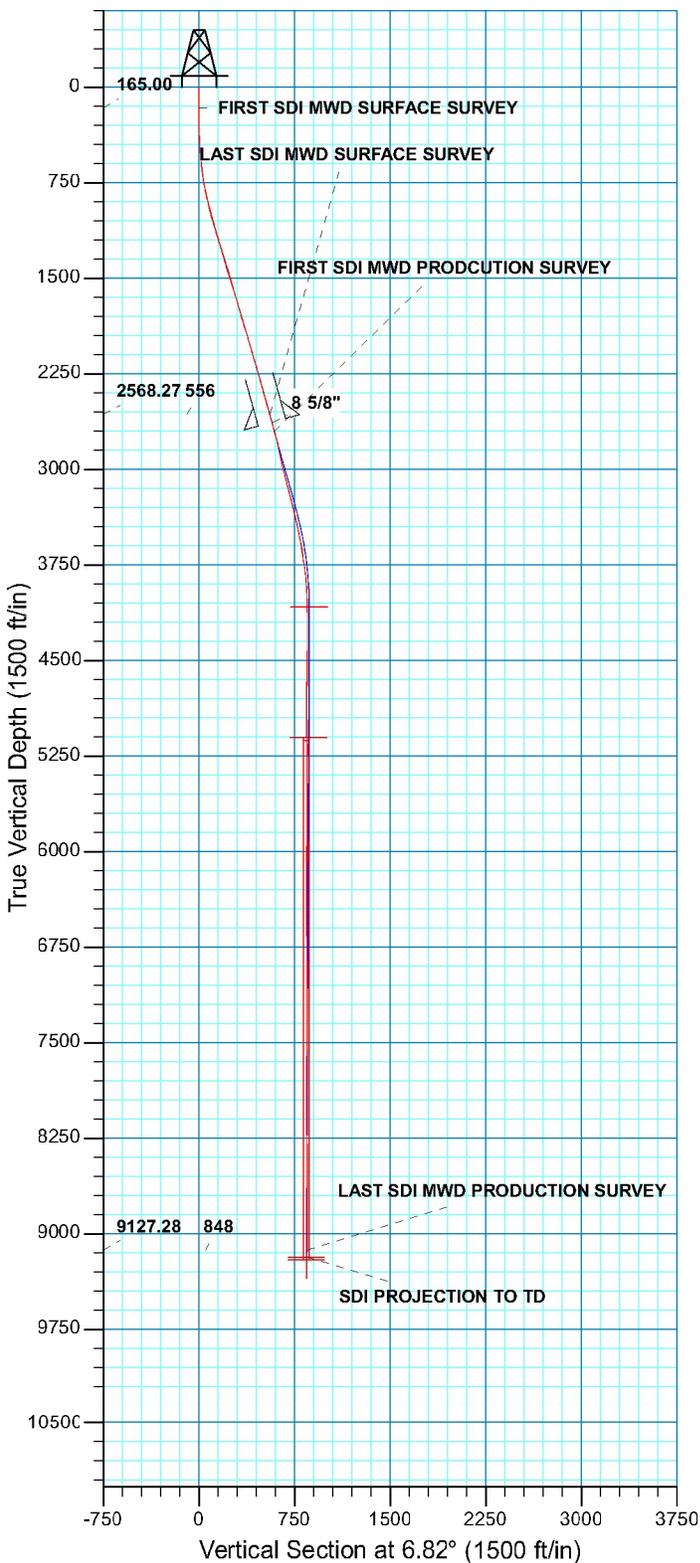
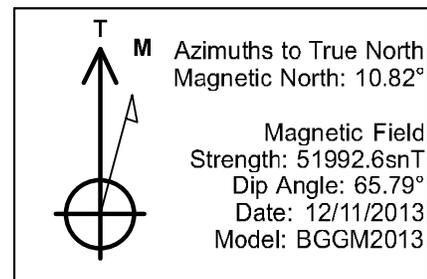
Well: NBU 1022-5B1BS YELLOW				Spud date: 1/5/2014				
Project: UTAH-UINTAH			Site: NBU 1022-5B PAD			Rig name no.: PROPETRO 12/12, SST 57/57		
Event: DRILLING			Start date: 1/5/2014		End date: 9/1/2014			
Active datum: RKB @5,170.00usft (above Mean Sea Level)				UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	4:00 - 5:00	1.00	CSGPRO	14	B	P	9290	LD LANDING JT, SET PACKOFF AND TEST WITH CAMERON
	5:00 - 6:00	1.00	RDMO	01	E	P	9290	NIPPLE DOWN BOP & CLEAN MUD TANKS - RIG RELEASED @ 0600 HRS ON 9/1/2014



WELL DETAILS: NBU 1022-5B1BS

GL 5152 & KB 18 @ 5170.00ft (SST 57)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14523330.21	2071662.65	39.9823220	-109.4605860



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: SECTION5 T10S R22E  
 System Datum: Mean Sea Level



**Scientific Drilling**

## **US ROCKIES REGION PLANNING**

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

NBU 1022-5B PAD

NBU 1022-5B1BS

OH

Design: OH

## **Standard Survey Report**

04 September, 2014





Survey Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-5B1BS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 5152 & KB 18 @ 5170.00ft (SST 57)
<b>Site:</b>	NBU 1022-5B PAD	<b>MD Reference:</b>	GL 5152 & KB 18 @ 5170.00ft (SST 57)
<b>Well:</b>	NBU 1022-5B1BS	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales

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

<b>Site</b>	NBU 1022-5B PAD, SECTION 5 T10S R22E				
<b>Site Position:</b>		<b>Northing:</b>	14,523,336.64 usft	<b>Latitude:</b>	39.9823387
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,071,681.68 usft	<b>Longitude:</b>	-109.4605177
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.99 °

<b>Well</b>	NBU 1022-5B1BS, 1081 FNL 1942 FEL					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,523,330.21 usft	<b>Latitude:</b>	39.9823220
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,071,662.65 usft	<b>Longitude:</b>	-109.4605860
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	5,152.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2013	12/11/2013	10.82	65.79	51,993

<b>Design</b>	OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	6.82	

<b>Survey Program</b>	Date 9/4/2014				
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
14.00	2,643.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
2,781.00	9,290.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
14.00	0.00	0.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	
165.00	0.35	28.22	165.00	0.41	0.22	0.43	0.23	0.23	0.00	
<b>FIRST SDI MWD SURFACE SURVEY</b>										
221.00	0.62	21.98	221.00	0.84	0.41	0.88	0.49	0.48	-11.14	
309.00	1.23	358.16	308.99	2.22	0.56	2.27	0.81	0.69	-27.07	
393.00	2.37	349.19	392.94	4.83	0.21	4.82	1.39	1.36	-10.68	
483.00	3.72	1.05	482.81	9.58	-0.09	9.50	1.65	1.50	13.18	
573.00	5.36	9.32	572.53	16.65	0.64	16.60	1.96	1.82	9.19	
663.00	7.56	10.81	661.95	26.61	2.44	26.71	2.45	2.44	1.66	



## Survey Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-5B1BS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 5152 & KB 18 @ 5170.00ft (SST 57)
<b>Site:</b>	NBU 1022-5B PAD	<b>MD Reference:</b>	GL 5152 & KB 18 @ 5170.00ft (SST 57)
<b>Well:</b>	NBU 1022-5B1BS	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
753.00	9.58	13.54	750.94	39.71	5.30	40.06	2.29	2.24	3.03	
843.00	12.13	11.69	839.33	56.25	8.97	56.92	2.86	2.83	-2.06	
933.00	13.75	8.37	927.04	76.09	12.44	77.03	1.98	1.80	-3.69	
1,023.00	15.48	6.77	1,014.12	98.61	15.42	99.74	1.97	1.92	-1.78	
1,113.00	16.27	5.37	1,100.69	123.08	18.01	124.35	0.98	0.88	-1.56	
1,203.00	16.28	7.04	1,187.09	148.16	20.74	149.57	0.52	0.01	1.86	
1,293.00	16.57	6.69	1,273.41	173.42	23.78	175.02	0.34	0.32	-0.39	
1,383.00	17.06	5.72	1,359.56	199.31	26.59	201.05	0.63	0.54	-1.08	
1,473.00	17.15	5.63	1,445.58	225.65	29.21	227.52	0.10	0.10	-0.10	
1,563.00	16.62	8.09	1,531.70	251.60	32.32	253.65	0.99	-0.59	2.73	
1,653.00	16.88	8.27	1,617.89	277.27	36.01	279.58	0.29	0.29	0.20	
1,743.00	17.14	7.67	1,703.95	303.34	39.66	305.91	0.35	0.29	-0.67	
1,833.00	16.53	9.58	1,790.09	329.11	43.56	331.96	0.91	-0.68	2.12	
1,923.00	17.32	9.23	1,876.19	354.96	47.84	358.13	0.89	0.88	-0.39	
2,013.00	15.56	5.81	1,962.51	380.19	51.21	383.59	2.23	-1.96	-3.80	
2,103.00	15.39	3.08	2,049.25	404.13	53.08	407.57	0.83	-0.19	-3.03	
2,193.00	16.34	2.39	2,135.82	428.70	54.25	432.11	1.08	1.06	-0.77	
2,283.00	16.80	3.87	2,222.08	454.33	55.65	457.72	0.69	0.51	1.64	
2,373.00	16.44	6.86	2,308.33	479.95	58.05	483.45	1.03	-0.40	3.32	
2,463.00	15.65	6.68	2,394.82	504.65	60.98	508.32	0.88	-0.88	-0.20	
2,553.00	15.48	6.07	2,481.52	528.65	63.67	532.47	0.26	-0.19	-0.68	
2,643.00	15.39	5.45	2,568.27	552.49	66.07	556.42	0.21	-0.10	-0.69	
<b>LAST SDI MWD SURFACE SURVEY</b>										
2,781.00	14.39	5.87	2,701.64	587.77	69.56	591.88	0.73	-0.72	0.30	
<b>FIRST SDI MWD PRODCUTION SURVEY</b>										
2,876.00	12.93	9.71	2,793.95	609.99	72.56	614.30	1.81	-1.54	4.04	
2,971.00	12.41	5.40	2,886.64	630.63	75.32	635.12	1.14	-0.55	-4.54	
3,067.00	14.35	6.87	2,980.03	652.72	77.71	657.33	2.05	2.02	1.53	
3,162.00	14.60	14.19	3,072.02	676.02	82.05	680.98	1.94	0.26	7.71	
3,257.00	14.28	14.77	3,164.02	698.95	87.98	704.45	0.37	-0.34	0.61	
3,352.00	13.54	13.49	3,256.23	721.10	93.56	727.10	0.84	-0.78	-1.35	
3,447.00	13.01	8.61	3,348.70	742.48	97.75	748.84	1.30	-0.56	-5.14	
3,543.00	13.45	13.05	3,442.15	764.04	101.89	770.74	1.15	0.46	4.63	
3,638.00	12.19	6.67	3,534.78	784.77	105.55	791.75	1.99	-1.33	-6.72	
3,733.00	9.32	0.62	3,628.11	802.43	106.80	809.43	3.24	-3.02	-6.37	
3,828.00	7.65	1.80	3,722.07	816.44	107.08	823.38	1.77	-1.76	1.24	
3,924.00	5.89	5.58	3,817.39	827.73	107.76	834.67	1.89	-1.83	3.94	
4,019.00	4.48	14.55	3,912.00	836.18	109.17	843.22	1.71	-1.48	9.44	
4,114.00	2.11	5.05	4,006.84	841.51	110.25	848.65	2.55	-2.49	-10.00	
4,209.00	0.96	19.77	4,101.81	844.00	110.68	851.17	1.27	-1.21	15.49	
4,305.00	0.78	71.29	4,197.80	844.97	111.57	852.24	0.81	-0.19	53.67	
4,400.00	0.53	96.63	4,292.79	845.12	112.62	852.52	0.40	-0.26	26.67	
4,495.00	0.86	129.77	4,387.78	844.62	113.60	852.13	0.53	0.35	34.88	



## Survey Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-5B1BS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 5152 & KB 18 @ 5170.00ft (SST 57)
<b>Site:</b>	NBU 1022-5B PAD	<b>MD Reference:</b>	GL 5152 & KB 18 @ 5170.00ft (SST 57)
<b>Well:</b>	NBU 1022-5B1BS	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,591.00	1.14	143.11	4,483.77	843.39	114.73	851.05	0.38	0.29	13.90	
4,686.00	1.58	141.99	4,578.74	841.61	116.10	849.44	0.46	0.46	-1.18	
4,781.00	1.32	133.32	4,673.71	839.82	117.71	847.86	0.36	-0.27	-9.13	
4,877.00	1.55	144.33	4,769.68	838.01	119.27	846.24	0.37	0.24	11.47	
4,972.00	0.20	325.20	4,864.67	837.10	119.92	845.42	1.84	-1.42	-188.56	
5,067.00	0.60	253.82	4,959.67	837.10	119.35	845.35	0.60	0.42	-75.14	
5,162.00	1.23	345.01	5,054.66	837.95	118.61	846.10	1.45	0.66	95.99	
5,258.00	1.46	343.84	5,150.63	840.12	118.00	848.18	0.24	0.24	-1.22	
5,353.00	1.07	344.57	5,245.61	842.13	117.43	850.12	0.41	-0.41	0.77	
5,448.00	0.41	22.81	5,340.60	843.30	117.32	851.27	0.83	-0.69	40.25	
5,543.00	0.13	350.14	5,435.60	843.72	117.44	851.70	0.32	-0.29	-34.39	
5,639.00	0.44	247.46	5,531.60	843.69	117.08	851.62	0.51	0.32	-106.96	
5,734.00	0.35	250.27	5,626.60	843.45	116.47	851.31	0.10	-0.09	2.96	
5,829.00	0.75	212.70	5,721.59	842.83	115.86	850.62	0.55	0.42	-39.55	
5,925.00	0.79	212.65	5,817.58	841.74	115.16	849.46	0.04	0.04	-0.05	
6,020.00	1.23	198.32	5,912.57	840.22	114.49	847.87	0.53	0.46	-15.08	
6,115.00	0.44	40.21	6,007.56	839.53	114.40	847.18	1.73	-0.83	-166.43	
6,210.00	0.35	103.49	6,102.56	839.74	114.92	847.45	0.44	-0.09	66.61	
6,306.00	0.26	125.64	6,198.56	839.55	115.38	847.31	0.15	-0.09	23.07	
6,401.00	0.65	141.32	6,293.56	839.00	115.90	846.83	0.43	0.41	16.51	
6,496.00	0.70	90.57	6,388.55	838.58	116.81	846.51	0.61	0.05	-53.42	
6,591.00	0.76	111.47	6,483.54	838.34	117.98	846.42	0.29	0.06	22.00	
6,687.00	0.62	107.7	6,579.54	837.95	119.07	846.16	0.15	-0.15	-3.92	
6,782.00	0.76	136.25	6,674.53	837.34	119.99	845.66	0.39	0.15	30.04	
6,877.00	1.21	359.40	6,769.52	837.89	120.42	846.26	1.94	0.47	-144.05	
6,973.00	1.13	347.23	6,865.50	839.82	120.20	848.15	0.27	-0.08	-12.68	
7,068.00	0.44	1.71	6,960.49	841.10	120.00	849.40	0.75	-0.73	15.24	
7,163.00	0.35	11.14	7,055.49	841.75	120.07	850.05	0.12	-0.09	9.93	
7,258.00	0.09	307.13	7,150.49	842.08	120.06	850.38	0.34	-0.27	-67.38	
7,353.00	0.09	316.10	7,245.49	842.18	119.95	850.46	0.01	0.00	9.44	
7,449.00	0.44	130.47	7,341.49	841.99	120.18	850.31	0.55	0.36	181.64	
7,544.00	0.69	161.17	7,436.49	841.21	120.64	849.59	0.40	0.26	32.32	
7,640.00	0.88	153.76	7,532.48	840.01	121.16	848.45	0.22	0.20	-7.72	
7,735.00	1.19	159.23	7,627.46	838.43	121.83	846.96	0.34	0.33	5.76	
7,830.00	1.93	147.88	7,722.43	836.15	123.03	844.85	0.84	0.78	-11.95	
7,925.00	0.97	114.92	7,817.40	834.46	124.61	843.35	1.30	-1.01	-34.69	
8,021.00	1.67	82.05	7,913.37	834.31	126.73	843.46	1.05	0.73	-34.24	
8,116.00	0.88	19.91	8,008.35	835.19	128.35	844.52	1.56	-0.83	-65.41	
8,211.00	0.88	345.89	8,103.34	836.58	128.42	845.91	0.54	0.00	-35.81	
8,306.00	1.04	11.07	8,198.33	838.13	128.41	847.45	0.47	0.17	26.51	
8,402.00	0.88	10.68	8,294.31	839.71	128.71	849.06	0.17	-0.17	-0.41	
8,497.00	0.53	32.12	8,389.31	840.80	129.08	850.18	0.46	-0.37	22.57	
8,592.00	0.26	46.71	8,484.30	841.32	129.47	850.74	0.30	-0.28	15.36	
8,687.00	0.49	307.88	8,579.30	841.72	129.31	851.12	0.62	0.24	-104.03	



Survey Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-5B1BS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 5152 & KB 18 @ 5170.00ft (SST 57)
<b>Site:</b>	NBU 1022-5B PAD	<b>MD Reference:</b>	GL 5152 & KB 18 @ 5170.00ft (SST 57)
<b>Well:</b>	NBU 1022-5B1BS	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,782.00	0.09	325.94	8,674.30	842.03	128.95	851.39	0.43	-0.42	19.01
8,878.00	0.24	140.83	8,770.30	841.94	129.03	851.30	0.34	0.16	182.18
8,973.00	0.48	157.51	8,865.30	841.42	129.31	850.82	0.27	0.25	17.56
9,068.00	0.79	162.82	8,960.29	840.42	129.65	849.87	0.33	0.33	5.59
9,164.00	0.70	162.55	9,056.29	839.23	130.03	848.73	0.09	-0.09	-0.28
9,235.00	0.96	176.12	9,127.28	838.22	130.20	847.75	0.46	0.37	19.11
<b>LAST SDI MWD PRODUCTION SURVEY</b>									
9,290.00	0.96	176.12	9,182.27	837.30	130.26	846.85	0.00	0.00	0.00
<b>SDI PROJECTION TO TD</b>									

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 1022-5B1BS	0.00	0.00	9,187.00	834.06	126.92	14,524,166.34	2,071,775.15	39.9846120	-109.4601330
- hit/miss target									
- Shape									
- actual wellpath misses target center by 6.64ft at 9290.00ft MD (9182.27 TVD, 837.30 N, 130.26 E)									
- Circle (radius 25.00)									

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
165.00	165.00	0.41	0.22	FIRST SDI MWD SURFACE SURVEY
2,643.00	2,568.27	552.49	66.07	LAST SDI MWD SURFACE SURVEY
2,781.00	2,701.64	587.77	69.56	FIRST SDI MWD PRODCUTION SURVEY
9,235.00	9,127.28	838.22	130.20	LAST SDI MWD PRODUCTION SURVEY
9,290.00	9,182.27	837.30	130.26	SDI PROJECTION TO TD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

US ROCKIES REGION  
**Operation Summary Report**

Well: NBU 1022-5B1BS YELLOW

Spud date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig name no.: SWABBCO 6/6, ROCKY MOUNTAIN  
WELL SERVICE 3/3, ROCKY MOUNTAIN WELL  
SERVICE 3/3

Event: COMPLETION

Start date: 10/12/2014

End date: 2/6/2015

Active datum: RKB @5,170.00usft (above Mean Sea  
Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
8/9/2014	7:00 - 7:15	0.25	SUBSPR	48		P		SAFETY = JSA.
	7:15 - 10:30	3.25	SUBSPR	30		P		ROAD RIG TO LOCATION. MIRU.
	10:30 - 13:00	2.50	SUBSPR	46	E	S		W/O BOP & SPOOL PIECE TO TIE INTO 11"X5K WELLHEAD.
	13:00 - 19:00	6.00	SUBSPR	31	C	P		NDWH. NUBOP. P/U 8-5/8" TENSION PACKER. STRIP PACKER IN THE HOLE. TALLY + P/U & RIH W/ 30JTS 2-3/8" L-80 TBNG. LOAD CSNG W/ 121BBLS FRESH WATER.
								NOTE: ALL SETTINGS FIGURED W/ CORRECTED K.B. DEPTH. TEST CSNG AS FOLLOWS:  SET PCKR @ 972'. TEST BELOW PCKR GOOD @1500# (LOST 5# IN 10MIN). TEST ABOVE PCKR BAD @1500# (LOST 1000# IN 3MIN).  SET PCKR @495'. TEST BELOW PCKR GOOD @1500# (LOST 5# IN 10MIN). DID NOT TEST ABOVE PCKR.  SET PCKR @241'. TEST BELOW PCKR GOOD @1500# (LOST 5# IN 10 MIN). DID NOT TEST ABOVE PCKR  SET PCKR @114'. TEST BELOW PCKR GOOD @1500# (LOST 5# IN 10 MIN). DID NOT TEST ABOVE PCKR.  SET PCKR @83'. TEST BELOW PCKR GOOD @1500# (LOST 0# IN 10 MIN). DID NOT TEST ABOVE PCKR.  SET PCKR @32'. TEST BELOW PCKR BAD @1500# (LOST 500# IN 3MIN). TEST ABOVE PCKR BAD @1000# (LOST 500# IN 5MIN).  SET PCKR @47'. TEST BELOW PCKR BAD @ 1500# (LOST 500# IN 3MIN). DID NOT TEST ABOVE PCKR.  SET PCKR @57'. TEST BELOW PCKR BAD @1500# (LOST 500# IN 3MIN). DID NOT TEST ABOVE PCKR.  SET PCKR @72'. TEST BELOW PCKR GOOD @ 1500# (LOST 0# IN 10MIN). DID NOT TEST ABOVE THE PCKR.  RELEASE PCKR. SWIFN. SDFN. WAIT ON ORDERS. SAFETY = JSA.
8/11/2014	7:00 - 7:15	0.25	SUBSPR	48		P		SAFETY = JSA.

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-5B1BS YELLOW

Spud date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig name no.: SWABBCO 6/6, ROCKY MOUNTAIN  
WELL SERVICE 3/3, ROCKY MOUNTAIN WELL  
SERVICE 3/3

Event: COMPLETION

Start date: 10/12/2014

End date: 2/6/2015

Active datum: RKB @5,170.00usft (above Mean Sea  
Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	7:15 - 8:30	1.25	SUBSPR	30		P		0# ON WELL. NDBOP. STRIP OUT PCKR. L/D PCKR. MIRU WELDER. CUT 8-5/8" CSNG BELOW THE WELL HEAD. REMOVE WELLHEAD.
	8:30 - 11:30	3.00	SUBSPR	46	F	Z		W/O WEATHERFORD FISHING TOOLS. TOOLS WERE SCHEDULED TO BE ON LOCATION @ 08:00 HRS.
	11:30 - 14:00	2.50	SUBSPR	30		P		MIRU FISHERMAN. R/U POWER SWIVEL. MAKE UP WASH PIPE & WASH OVER SHOE AS FOLLOWS:  X/O SUB 4-1/2"XH X 2-7/8" IF = .8' X/O SUB 4-1/2" XH X 6-5/8" REG= 2.00' TOP BUSHING 6-5/8" REG X 10-3/4" WP =2.00' 1JT 10-3/4" WASH PIPE =31.20' WASH SHOE 10-3/4" KUTRITE O.D.=12-1/4" I.D.= 9-5/8" LENGTH = 3.20' TOTAL ASSEMBLY LENGTH = 39.30'
	14:00 - 18:00	4.00	SUBSPR	44	D	P		BEGIN WASHING OVER 8-5/8" CSNG. HAD TROUBLE GETTING INSIDE THE CONDUCTOR DUE TO 1" CMT STRING PROTRUDING FROM INSIDE CONDUCTOR. SHAVING THE 1" CMT PIPE WHILE WASHING OVER. MILLING +/- 3' PER / HR. WASH OVER TOTAL OF 11' OF CSNG. POOH. SDFN SAFETY = JSA.
8/12/2014	7:00 - 7:15	0.25	SUBSPR	48		P		L/D WASHOVER SHOE. P/U & INSTALL 10-3/4" X 9.60' WASHPIPE PUP JT. RE-INSTALL WASHOVER SHOE.
	7:15 - 8:30	1.25	SUBSPR	30		P		
	8:30 - 18:30	10.00	SUBSPR	44	D	P		BREAK CIRC W/ WATER. BEGIN WASHING OVER 8-5/8" SURFACE CSNG. WASH DOWN TO TOTAL DEPTH OF 19' AND GET STUCK ON 1" PIPE USED FOR TOP OFF JOB. POOH SLOWLY & RETREIVE 14.5' OF 1" ON OUTSIDE OF WASH SHOE. CONT WASHING OVER CSNG. WASH OVER SUSPECTED COLLAR @ 38'.  TOTAL FOOTAGE MADE TODAY = 28' TOTAL DEPTH WASHED OVER = 39'
8/13/2014	7:00 - 7:15	0.25	SUBSPR	48		P		CIRC HOLE CLEAN. POOH W/ TOOLS. SDFN. SAFETY = JSA.
	7:15 - 14:00	6.75	SUBSPR	30		P		CONT W/O CSNG W/ 12-1/4" OD SHOE & WASH PIPE. T/U ON 1" PIPE @17'. MILL / PUSH PIPE TO 33'. QUIT MAKING HOLE. SPEAK W/ SUPERVISOR & DECIDE TO RIH W/ 12-1/4" OD MILL W/ WIDER CUTRITE ON BOTTOM OF SHOE ( 1-1/8") WIDE. T/U @ 33'. WASH DOWN TO 35'. MILLING VERY HARD, TORQUE WAS TOO HIGH FOR EQUIPMENT. SPEAK W/ SUPERVISION & DECIDE TO TRY & BACK OFF 8-5/8" CSNG.

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-5B1BS YELLOW

Spud date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig name no.: SWABBCO 6/6, ROCKY MOUNTAIN  
WELL SERVICE 3/3, ROCKY MOUNTAIN WELL  
SERVICE 3/3

Event: COMPLETION

Start date: 10/12/2014

End date: 2/6/2015

Active datum: RKB @5,170.00usft (above Mean Sea  
Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	14:00 - 17:00	3.00	SUBSPR	30		P		L/D 8-5/8" WASH PIPE & POWER SWIVEL. R/D POWER SWIVEL. P/U 8-5/8" OVER SHOT, X/O'S. MAKE UP TOOLS. LATCH ONTO 8-5/8" CSNG. MIRU WIRELINE. RIH W/ STRING SHOT. TRY TO APPLY LEFT HAND TORQUE INTO STRING & TOOLS BACKED OFF @ SURFACE. RDMO WIRELINE. MAKE PLANS TO EITHER TORQUE PIPE PROPERLY IN THE AM OR POSSIBLY MAKE AN INTERNAL CUT. SDFN. SAFETY = JSA.
8/14/2014	7:00 - 7:15	0.25	SUBSPR	48		P		RELEASE OVERSHOT. L/D TOOLS.
	7:15 - 8:15	1.00	SUBSPR	30		P		
	8:15 - 14:30	6.25	SUBSPR	31	B	P		R/U POWER SWIVEL. P/U & RIH W/ 8-5/8" INTERNAL CSNG CUTTER. CUT CSNG @41'. POOH W/ CUTTER. L/D CUTTER & TOOLS. R/D POWER SWIVEL.  P/U COLLAR, JARS, INTENSIFIER & 8-5/8" SPEAR. SPEAR INTO CSNG. JAR ON CSNG FOR +/- 1.5HRS. CSNG POPPED FREE. JARRING @ 35000#. SET SLIPS & SAFETY CLAMP AROUND CSNG. RELEASE SPEAR. L/D TOOLS. BREAK DOWN TOOLS. POOH W/ 39' OF CSNG W/ COLLAR INTACT & 2' CSNG STUB.  NOTE: NO OBVIOUS CSNG FAILURE. THERE IS AN INDENTATION @ 23' THAT IS A POSSIBLE HOLE.IT ALSO APPEARS THAT THE 39' SECTION OF CSNG & THE 2' STUMP OF CSNG ARE NOT IN LINE WITH EACH OTHER ABOVE & BELOW THE COLLAR (POSSIBLE BENT JT OR CROSS THREADED CSNG).
	14:30 - 19:00	4.50	SUBSPR	44	D	P		MIRU NEW (LARGER ) POWER SWIVEL. P/U 12-1/4" CONCAVE BLADED MILL, BIT SUB & 2) 6-1/8" COLLARS. RIH & T/U ON TRASH @38'. BREAK CIRC W/ RIG PUMP. MILL UP TRASH &CMT DOWN TO 42'. PUMP SEVERAL POLYMER SWEEPS WHILE MILLING. CIRC HOLE CLEAN. POOH W/ TOOLS. SDFN. SAFETY = JSA.
8/15/2014	7:00 - 7:15	0.25	SUBSPR	48		P		L/D 12-1/4" MILL & COLLARS.
	7:15 - 8:30	1.25	SUBSPR	30		P		
	8:30 - 12:30	4.00	SUBSPR	44	D	P		P/U & RIH W/ 11-1/4" OD WASH SHOE (SMOOTH ID & OD). T/U ON CSNG TOP @ 42'. BREAK CIRC & BEGIN WASHING OVER 8-5/8" CSNG. PUMP SEVERAL POLY SWEEPS TO KEEP HOLE CLEAN WHILE MILLING. WASH DOWN TO 57'. CIRC WELL CLEAN. POOH. L/D SHOE & JT OF WASH PIPE.
	12:30 - 14:30	2.00	SUBSPR	46	E	Z		TRY TO MAKE UP SKIRTED MILL BUT THREADS WERE BAD ON THE TOP SUB. TRY TO REPAIR THREADS BUT HAD NO LUCK. SEND FISHERMAN TO MACHINE SHOP TO HAVE EQUIPMENT REPAIRED. FISHING COMPANY DIDNT HAVE ANY REPLACEMENT EQUIP. CLEAN UP LOCATION. SDFN. SAFETY = JSA.
8/16/2014	7:00 - 7:15	0.25	SUBSPR	48		P		SAFETY = JSA.

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-5B1BS YELLOW

Spud date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig name no.: SWABBCO 6/6, ROCKY MOUNTAIN  
WELL SERVICE 3/3, ROCKY MOUNTAIN WELL  
SERVICE 3/3

Event: COMPLETION

Start date: 10/12/2014

End date: 2/6/2015

Active datum: RKB @5,170.00usft (above Mean Sea  
Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	7:15 - 9:00	1.75	SUBSPR	44	D	P		P/U & RIH W/ 11-1/4" SKIRTED MILL + 2) 6-1/8" DRILL COLLARS. T/U ON CSNG @ 42'. R/U POWER SWIVEL. BREAK CIRC. MILL 2" OFF OF CSNG TOP TO CLEAN UP FOR PATCH INSTALL. POOH WHILE L/D TOOLS. R/D POWER SWIVEL.
	9:00 - 11:15	2.25	SUBSPR	30		P		P/U JT OF 8-5/8" K-55 28# LTC CSNG & 8-5/8" 5K LOGAN CSNG PATCH. MIRU WF CSNG CREW W/ POWER TONGS. MAKE UP CSNG & PATCH TO PROPER TORQUE. RIH W/ ASSEMBLY. T/U ON CSNG TOP @ 42'. ROTATE PATCH OVER CSNG. INSTALL PATCH. PULL 8-5/8" CSNG INTO 50,000# TENSION TO ENSURE GRAPPLE WAS HOLDING PROPERLY (PULL TEST GOOD). RDMO CSG CREW.  CSNG & PATCH INSTALLED AS FOLLOWS:  1JT 8-5/8" K-55 28# LTC CSNG = 43.50' LOGAN 8-5/8" 5K EXTERNAL CSNG PATCH.=47.59". TOTAL SWALLOW =2.75'. OD= 10.06" TOP OF PATCH @ 44.50' FROM SURFACE
	11:15 - 12:15	1.00	SUBSPR	52		P		MIRU CAMERON PRESSURE TEST TRUCK. PRESSURE TEST 8-5/8" CSNG GOOD @ 1500 PSI. LOST 18PSI IN 30 MINUTES. CHARTS WILL BE ELECTRONICALLY SENT TO DRILLING SUPERVISION. RDMO TEST TRUCK.
	12:15 - 15:00	2.75	SUBSPR	51	B	P		MIRU ROUSTABOUT CREW. TOP OFF SURFACE PIPE / CONDUCTOR VOID W/ 26SX NEAT "G" CMT.
	15:00 - 16:00	1.00	SUBSPR	30		P		MIRU WELDER. CUT SURFACE CSNG. INSTALL WELLHEAD. P/T WELLHEAD SEAL GOOD @ 1000#. SDFN.
8/17/2014	7:00 - 7:15	0.25	SUBSPR	48		P		SAFETY = JSA.
	7:15 - 8:30	1.25	SUBSPR	30		P		NUBOP. FUNCTION TEST BOP. R/U FLOOR & TBG EQUIP. PREP TO P/U PIPE.
	8:30 - 9:30	1.00	SUBSPR	46	F	Z		WAITING ON TBNG TRAILER. WINCH TRUCK BROKE DOWN. HAD TO SEND ANOTHER TRUCK.

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-5B1BS YELLOW

Spud date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig name no.: SWABBCO 6/6, ROCKY MOUNTAIN WELL SERVICE 3/3, ROCKY MOUNTAIN WELL SERVICE 3/3

Event: COMPLETION

Start date: 10/12/2014

End date: 2/6/2015

Active datum: RKB @5,170.00usft (above Mean Sea Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	9:30 - 15:20	5.83	SUBSPR	31	I	P		<p>SPOT IN PIPE TRAILER. P/U &amp; RIH W/ 7-7/8" MILL, BIT SUB, X/O &amp; 2-3/8" L-80 TBNG. T/U ON TRASH @ 1745' W/ 55JTS TBNG. INSTALL WASHINGTON RUBBER. R/U POWER SWIVEL &amp; PUMP LINES. BREAK REVERSE CIRC. WASH DOWN 10' OF FILL &amp; FALL THRU.</p> <p>RETURNS WERE METAL SHAVINGS &amp; CRUSHED CMT.</p> <p>HANG BACK POWER SWIVEL. CONT RIH W/ TBNG. T/U ON FILL AGAIN @2586' W/ 81JTS TBNG + BHA. P/U POWER SWIVEL. BREAK REVERSE CIRC AGAIN. WASH DOWN FILL TO 2591'. RETURNS MOSTLY CMT &amp; METAL SHAVINGS. START SEEING CHUNKS OF RUBBER FROM SUSPECTED WIPER PLUG FROM CMT JOB. MILL STARTED PLUGGING. BREAK CONV CIRC W/ LARGE POLYMER SWEEP. PUMP 210 BBLS TOTAL INCLUDING SWEEP UNTIL RETURNS WERE CLEAN.</p> <p>R/D POWER SWIVEL. POOH WHILE L/D 81JTS TBNG. L/D BHA.</p>
	15:20 - 15:40	0.33	SUBSPR	52		P		LOAD TBNG W/ FRESH WATER. SHUT IN BOP'S. PRESSURE TEST 8-5/8" SURFACE CSNG GOOD @ 1500# FOR 15MIN W/ 0# PRESSURE LOSS. BLEED OFF PRESSURE.
	15:40 - 16:30	0.83	SUBSPR	30		P		R/D FLOOR & TBNG EQUIP. NDBOP. INSTALL WELLHEAD COVER. BREAK DOWN PUMP & LINES. PREP FOR RIG MOVE IN AM. SDFN
9/16/2014	-							
10/12/2014	9:00 - 10:00	1.00	SUBSPR	52	B	P		<p>FILL SURFACE CSG. MIRU CAMERON QUICK TEST.\nPRESSURE TEST CSG \n1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -88 PSI.\nNO COMMUNICATION OR MIGRATION WITH SURFACE CSG\nBLEED OFF PSI.\n\nPRESSURE TEST 8 5/8 X 4 1/2 TO 500 PSI HELD FOR 5 MIN\n\nLOST -56 PSI. BLED PSI OFF, REINSTALLED POP OFF SWIFN\n\nNO PRESSURE ON SURFACE CASING\n\nFILLED SURFACE WITH 2 BBLS H2O\n\n</p>
1/17/2015	10:00 - 11:00	1.00	SUBSPR	52	B	P		<p>FILL SURFACE CSG. MIRU CAMERON QUICK TEST.\nPRESSURE TEST CSG \n1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -49 PSI.\nNO COMMUNICATION OR MIGRATION WITH SURFACE CSG\nBLEED OFF PSI.\n\nPRESSURE TEST 8 5/8 X 4 1/2 TO 500 PSI HELD FOR 5 MIN\n\nLOST -56 PSI, BLED PSI OFF, REINSTALLED POP OFF SWIFN\n\nNO PRESSURE ON SURFACE CASING\n\nFILLED SURFACE WITH 2 BBLS H2O\n\nTESTED ON 10-12-14\n</p>
1/23/2015	14:00 - 15:00	1.00	FRAC	37	E	P		PERF STG #1 AS DESIGNED, SWI, SDFWE.
1/26/2015	6:30 - 6:45	0.25	FRAC	48		P		HSM-JSA

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-5B1BS YELLOW

Spud date: 1/5/2014

Project: UTAH-UINTAH

Site: NBU 1022-5B PAD

Rig name no.: SWABBCO 6/6, ROCKY MOUNTAIN  
WELL SERVICE 3/3, ROCKY MOUNTAIN WELL  
SERVICE 3/3

Event: COMPLETION

Start date: 10/12/2014

End date: 2/6/2015

Active datum: RKB @5,170.00usft (above Mean Sea  
Level)

UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:45 - 16:30	9.75	FRAC	36	F	P		FRAC STG #1) WHP 354 PSI, BRK 2830 PSI @ 5.7 BPM. ISIP 2411 PSI, FG. 0.7 ISIP 2190 PSI, FG. 0.68, NPI -221 PSI, X/O TO WL.\n\nSET CBP & PERF STG #2 AS DESIGNED, X/O TO FRAC.\n\nFRAC STG #2) WHP 479 PSI, BRK 3196 PSI @ 6 BPM. ISIP 1585 PSI, FG. 0.62 ISIP 2594 PSI, FG. 0.73, NPI 1009 PSI, X/O TO WL.\n\nSET CBP & PERF STG #3 AS DESIGNED, SWI, SDFN.
1/27/2015	6:30 - 6:45	0.25	FRAC	48		P		HSM-JSA
	6:45 - 16:00	9.25	FRAC	36	H	P		FRAC STG #3) WHP 1409 PSI, BRK 3438 PSI @ 3.6 BPM. ISIP 2354 PSI, FG. 0.71 ISIP 2815 PSI, FG. 0.76, NPI 461 PSI, X/O TO WL.\n\nSET CBP & PERF STG #4 AS DESIGNED, X/O TO FRAC.\n\nFRAC STG #4) WHP 1446 PSI, BRK 2838 PSI @ 3.7 BPM. ISIP 1715 PSI, FG. 0.64 ISIP 2155 PSI, FG. 0.69, NPI 440 PSI, X/O TO WL.\n\nSET CBP & PERF STG #5 AS DESIGNED, SWI, SDFN.\n
1/28/2015	6:30 - 6:45	0.25	FRAC	48		P		HSM-JSA
	6:45 - 17:45	11.00	FRAC	36	F	P		FRAC STG #5) WHP 1365 PSI, BRK 2977 PSI @ 5.8 BPM. ISIP 1688 PSI, FG. 0.64 ISIP 2150 PSI, FG. 0.7, NPI 462 PSI, X/O TO WL.\n\nSET CBP & PERF STG #6 AS DESIGNED, X/O TO FRAC.\n\nFRAC STG #6) WHP 611 PSI, BRK 2969 PSI @ 3.4 BPM. ISIP 1231 PSI, FG. 0.6 ISIP 2300 PSI, FG. 0.73, NPI 1069 PSI, X/O TO WL.\n\nSET CBP & PERF STG #7 AS DESIGNED, SWI, SDFN.
1/29/2015	7:00 - 7:15	0.25	FRAC	48		P		HSM-JSA
	7:15 - 15:30	8.25	FRAC	36	F	P		FRAC STG #7) WHP 1543 PSI, BRK 2878 PSI @ 3.6 BPM. ISIP 1450 PSI, FG. 0.63 ISIP 2165 PSI, FG. 0.73, NPI 715 PSI, X/O TO WL.\n\nSET CBP & PERF STG #8 AS DESIGNED, X/O TO FRAC.\n\nFRAC STG #8) WHP 1381 PSI, BRK 3249 PSI @ 3.8 BPM. ISIP 1745 PSI, FG. 0.68 ISIP 1865 PSI, FG. 0.69, NPI 120 PSI, X/O TO WL.\n\nSET KILL PLUG.\n\nRDMO WL & FRAC EQUIP.\n\nTOTAL FLUID- 10822 BBLS\nTOTAL SAND- 227476 LBS
2/5/2015	7:00 - 7:30	0.50	DRLOUT	48		P		HSM, WATCHING PINCH POINTS.
	7:30 - 10:00	2.50	DRLOUT	30	A	P		3 OF 5, RD OFF BLUE WELL, MOVED OVER & RIGGED UP, ND WH NU BOPS RU FLOOR & TBG EQUIP.
	10:00 - 15:00	5.00	DRLOUT	31	I	P		TALLY & PU 37/8 BIT, POBS & 222 JTS 23/8 P-110 TBG TAG @ 7038 ', RU DRLG EQUIP PREP TO D/O IN AM SWI SDFN.
2/6/2015	7:00 - 7:30	0.50	DRLOUT	48		P		HSM, DRILLING CBPS W/ SWIVEL

US ROCKIES REGION  
**Operation Summary Report**

Well: NBU 1022-5B1BS YELLOW		Spud date: 1/5/2014	
Project: UTAH-UINTAH		Site: NBU 1022-5B PAD	Rig name no.: SWABBCO 6/6, ROCKY MOUNTAIN WELL SERVICE 3/3, ROCKY MOUNTAIN WELL SERVICE 3/3
Event: COMPLETION		Start date: 10/12/2014	End date: 2/6/2015
Active datum: RKB @5,170.00usft (above Mean Sea Level)		UWI: NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	7:30 - 16:00	8.50	DRLOUT	44	C			BROKE CIRC CONV, TEST BOPS TO 3,000 PSI, RIH. SAND TAG 1ST PLUG @ 7073' DRL PLG IN 10 MIN, 100 PSI INCREASE RIH. SAND TAG 2ND PLUG @ 7419' DRL PLG IN 15 MIN, 200 PSI INCREASE RIH. SAND TAG 3RD PLUG @ 7645' DRL PLG IN 15 MIN, 500 PSI INCREASE RIH. SAND TAG 4TH PLUG @ 8008' DRL PLG IN 10 MIN, 200 PSI INCREASE RIH. SAND TAG 5TH PLUG @ 8338' DRL PLG IN 10 MIN, 200 PSI INCREASE RIH. SAND TAG 6TH PLUG @ 8585' DRL PLG IN 10 MIN, 200 PSI INCREASE RIH. SAND TAG 7TH PLUG @ 8742' DRL PLG IN 10 MIN, 200 PSI INCREASE RIH. SAND TAG 8TH PLUG @ 8953' DRL PLG IN 10 MIN, 200 PSI INCREASE RIH. TO 9234' PBTD, CIRC CLN, RD SWIVEL, L/D 17 JTS, LAND TBG, ND BOPS NU WH, TEST FL, PUMPED OFF BIT, TURN WELL TO FB CREW. = 18' HANGER = .83' ( SURFACE OPEN & LOCKED ) JTS 23/8 P-110 = 8692.27' SICIP 2100, FTP 100, POBS W/ 1.875 X/N = 2.20' EOT @ 8713.30' TWTR 10,822 BBLs TWTR 1200 BBLs TWLTR 9,622 BBLs 314 JT HAULED OUT, P-110 274 LANDED TO RETURN

US ROCKIES REGION

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 1022-5B1BS YELLOW	Wellbore No.	00
Well Name	NBU 1022-5B1BS	Wellbore Name	NBU 1022-5B1BS
Report no.	1	Report date	1/22/2015
Project	UTAH-UJINTAH	Site	NBU 1022-5B PAD
Rig Name/No.		Event	COMPLETION
Start date	10/12/2014	End date	2/6/2015
Spud date	1/5/2014	Active datum	RKB @5.170.00usft (above Mean Sea Level)
UWI	NW/NE/0/10/S/22/E/5/0/0/26/PM/N/1081/E/0/1942/0/0		

1.3 General

Contractor		Job method		Supervisor	
Perforated Assembly		Conveyed method			

1.4 Initial Conditions

Fluid type	Fluid density	Gross Interval	7.161.0 (usft)	9.167.0 (usft)	Start Date/Time	1/22/2015 12:00AM
Surface press.	Estimate res press	No. of intervals	58	End Date/Time	1/22/2015 12:00AM	
TVD fluid top	Fluid head	Total shots	192	Net perforation interval	64.00 (usft)	
Hydrostatic press.	Press. difference	Avg. shot density	3.00 (shot/ft)	Final surface pressure		
Balance Cond	NEUTRAL			Final press. date		

1.5 Summary

Fluid density	Shot density (shot/ft)	Shot	3.00	Misfires/ Add. Shot		Diameter (in)	0.410 EXP/	Carr type /Stage No		Carr size (in)	3.125	Phasing (°)	120.00	Charge desc. /Charge manufacturer	19.00 PRODUCTION	Misrun	How Guns Conveyed
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2 Intervals

2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (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	How Guns Conveyed
1/22/2015 12:00AM	M E S A VERDE/			7,161.0	7,162.0	3.00		0.410 EXP/		3.125	120.00	19.00 PRODUCTION				

US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (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	How Guns Conveyed
1/22/2015 12:00AM	M E S A VERDE/			7,263.0	7,264.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			7,283.0	7,284.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			7,319.0	7,320.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			7,358.0	7,360.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			7,398.0	7,400.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			7,469.0	7,470.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			7,496.0	7,497.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			7,517.0	7,518.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			7,546.0	7,547.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			7,591.0	7,592.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			7,606.0	7,607.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			7,613.0	7,615.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			7,708.0	7,709.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			7,721.0	7,722.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			7,800.0	7,801.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			7,825.0	7,826.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			7,849.0	7,851.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			7,976.0	7,978.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,078.0	8,079.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,124.0	8,125.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,155.0	8,156.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,171.0	8,172.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		

US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (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	How Guns Conveyed
1/22/2015 12:00AM	M E S A VERDE/			8,189.0	8,190.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,275.0	8,276.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,289.0	8,290.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,307.0	8,308.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,391.0	8,392.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,406.0	8,407.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,438.0	8,439.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,454.0	8,455.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,470.0	8,471.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,493.0	8,494.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,530.0	8,531.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,561.0	8,562.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,611.0	8,612.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,626.0	8,627.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,662.0	8,663.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,671.0	8,672.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,685.0	8,686.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,701.0	8,702.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,725.0	8,727.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,760.0	8,761.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,780.0	8,781.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,786.0	8,787.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		

US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (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	How Guns Conveyed
1/22/2015 12:00AM	M E S A VERDE/			8,798.0	8,799.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,814.0	8,815.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,853.0	8,854.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,907.0	8,908.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,932.0	8,933.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,976.0	8,977.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			8,986.0	8,987.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			9,041.0	9,042.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			9,059.0	9,060.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			9,116.0	9,117.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			9,134.0	9,135.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			9,146.0	9,147.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
1/22/2015 12:00AM	M E S A VERDE/			9,166.0	9,167.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		

3 Plots