

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

FORM 3

AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL		1. WELL NAME and NUMBER NBU 1022-511BS
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>		3. FIELD OR WILDCAT NATURAL BUTTES
4. TYPE OF WELL Gas Well Coalbed Methane Well: NO		5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. OPERATOR PHONE 720 929-6515
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217		9. OPERATOR E-MAIL julie.jacobson@anadarko.com
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) UTU-01191	11. MINERAL OWNERSHIP FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>	
12. SURFACE OWNERSHIP FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		13. NAME OF SURFACE OWNER (if box 12 = 'fee')
14. SURFACE OWNER PHONE (if box 12 = 'fee')		15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')
16. SURFACE OWNER E-MAIL (if box 12 = 'fee')		17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')
18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		19. SLANT VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	1947 FSL 175 FEL	NESE	5	10.0 S	22.0 E	S
Top of Uppermost Producing Zone	2543 FSL 517 FEL	NESE	5	10.0 S	22.0 E	S
At Total Depth	2543 FSL 517 FEL	NESE	5	10.0 S	22.0 E	S

21. COUNTY UINTAH	22. DISTANCE TO NEAREST LEASE LINE (Feet) 91	23. NUMBER OF ACRES IN DRILLING UNIT 1042
24. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 304	25. PROPOSED DEPTH MD: 10183 TVD: 10098	
26. ELEVATION - GROUND LEVEL 5062	27. BOND NUMBER WYB000291	28. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE 43-8496

Hole, Casing, and Cement Information

String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
Surf	11	8.625	0 - 2380	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 - 10183	11.6	HCP-110 LT&C	12.5	Premium Lite High Strength	300	3.38	12.0
							50/50 Poz	1500	1.31	14.3

ATTACHMENTS

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

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

NAME Gina Becker	TITLE Regulatory Analyst II	PHONE 720 929-6086
SIGNATURE	DATE 02/06/2013	EMAIL gina.becker@anadarko.com
API NUMBER ASSIGNED 43047535710000	APPROVAL  Permit Manager	

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

NBU 1022-5I1BS		
Surface:	1947 FSL / 175 FEL	NESE
BHL:	2543 FSL / 517 FEL	NESE

Section 5 T10S R22E

Unitah County, Utah
Mineral Lease: UTU-01191

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	1,146'	
Birds Nest	1,386'	Water
Mahogany	1,925'	Water
Wasatch	4,336'	Gas
Mesaverde	6,861'	Gas
Sego	8,988'	Gas
Castlegate	9,067'	Gas
Blackhawk	9,498'	Gas
TVD =	10,098'	
TD =	10,183'	

- 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 10098' TVD, approximately equals
6,463 psi (0.64 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,227 psi (bottom hole pressure
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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

7.b Wasach Formation/Mesaverde Group

Maximum anticipated bottom hole pressure calculated at 8988' TVD, approximately equals
5,483 psi (0.61 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 3,529 psi (bottom hole pressure
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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

8. Anticipated Starting Dates:

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

9. Variances:

Please refer to the 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

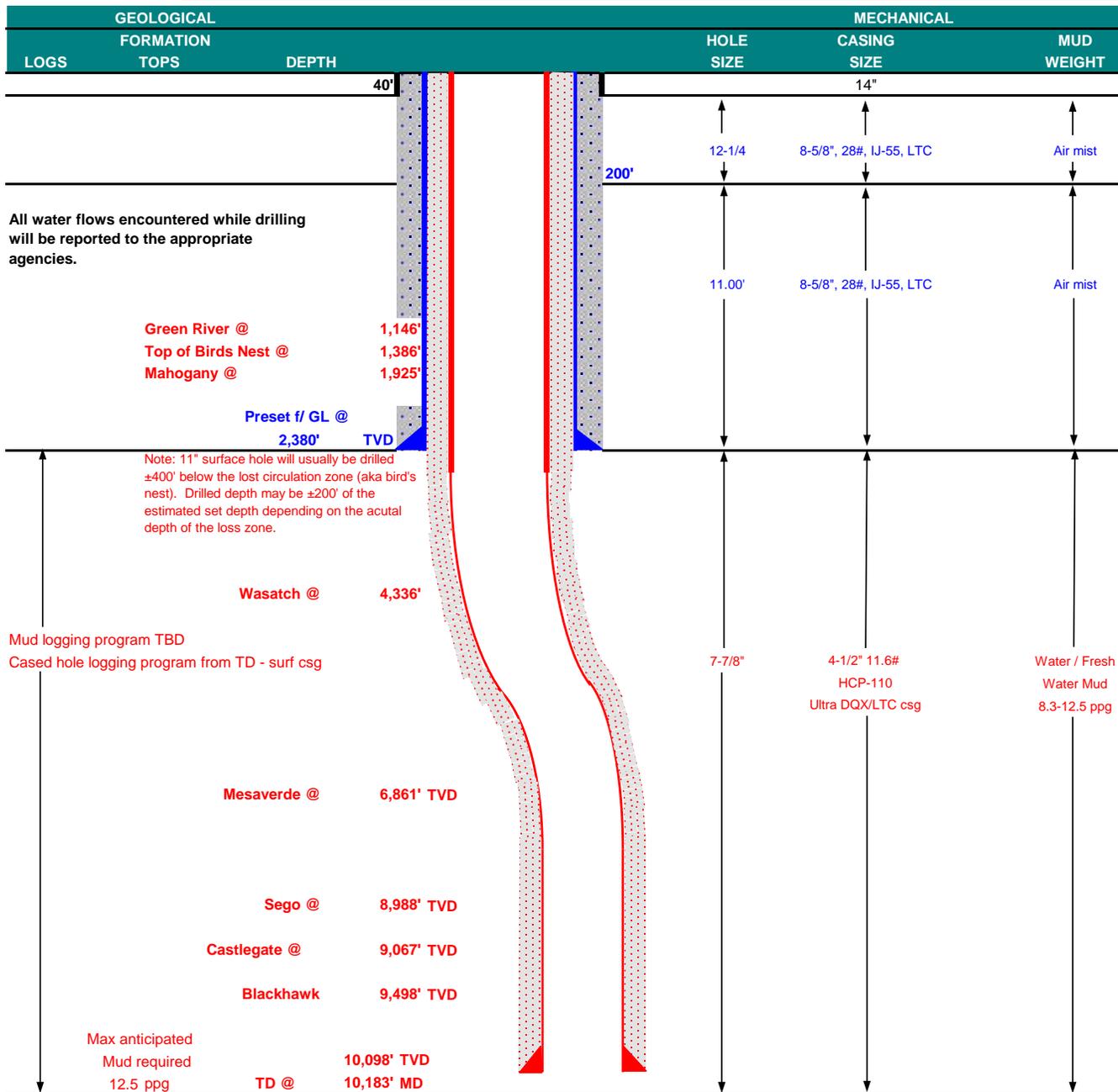
12/21/2012

RECEIVED: February 04, 2013



KERR-McGEE OIL & GAS ONSHORE LP
Blackhawk Drilling Program

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	December 21, 2012	
WELL NAME	NBU 1022-511BS		TD	10,098'	10,183' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
SURFACE LOCATION	NESE	1947 FSL	175 FEL	Sec 5 T 10S R 22E	FINISHED ELEVATION 5,062'
	Latitude:	39.976083	Longitude:	-109.45489	NAD 83
BTM HOLE LOCATION	NESE	2543 FSL	517 FEL	Sec 5 T 10S R 22E	
	Latitude:	39.977717	Longitude:	-109.456114	NAD 83
OBJECTIVE ZONE(S)	BLACKHAWK (Part of the Mesaverde Group)				
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept.				





KERR-McGEE OIL & GAS ONSHORE LP
Blackhawk Drilling Program

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	LTC	DQX
								TENSION	
CONDUCTOR	14"	0-40'							
SURFACE	8-5/8"	0 to 2,380	28.00	IJ-55	LTC	3,390	1,880	348,000	N/A
						10,690	8,650	279,000	367,174
PRODUCTION	4-1/2"	0 to 5,000	11.60	HCP-110	DQX	1.19	1.32		3.84
						1.19	1.32	5.74	

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
NOTE: If well will circulate water to surface, option 2 will be utilized							
SURFACE Option 2	LEAD	1,880'	Premium cmt + 16% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOC + GR 3 pps	230	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	3,833'	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	300	35%	12.00	3.38
	TAIL	6,350'	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	1,500	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

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	LTC	DQX
								TENSION	
CONDUCTOR	14"	0-40'							
SURFACE	8-5/8"	0 to 2,380	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	1.13		3.11
						7,780	6,350	223,000	
	4-1/2"	5,000 to 9,073'	11.60	I-80	LTC	1.11	1.13	5.78	

Surface Casing:

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

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.61 psi/ft = bottomhole gradient
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
Option 1 TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
NOTE: If well will circulate water to surface, option 2 will be utilized						
SURFACE LEAD	1,880'	Premium cmt + 16% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOC + GR 3 pps	230	35%	12.00	2.86
TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps Flocele + 3% salt BWOC + GR 3 pps	150	35%	15.80	1.15
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION LEAD	3,833'	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	300	35%	12.00	3.38
TAIL	5,240'	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

*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
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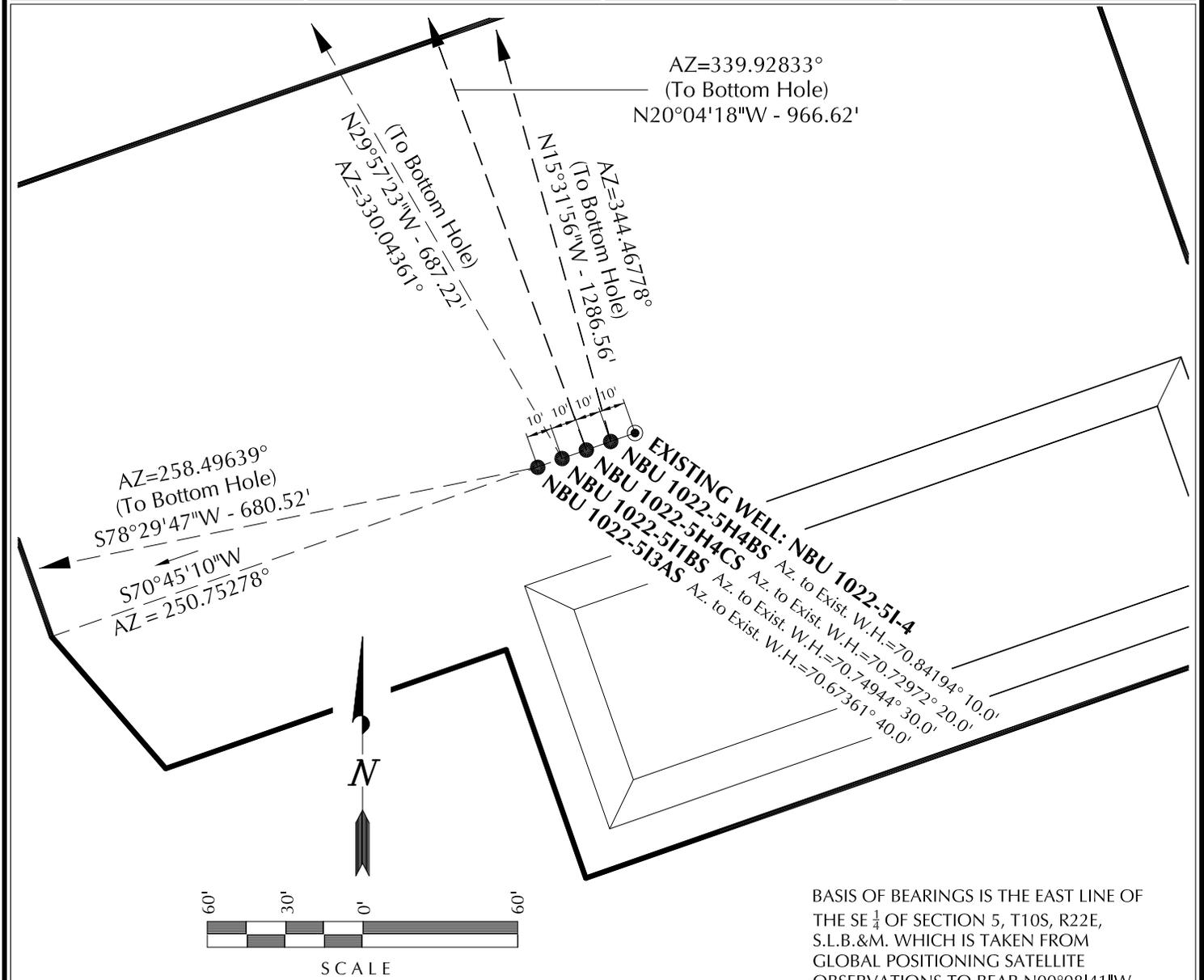
ADDITIONAL INFORMATION

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DRILLING ENGINEER: _____ **DATE:** _____
Nick Spence / John Tuckwiller / Brian Cocchiere / Tyler Elliott
DRILLING SUPERINTENDENT: _____ **DATE:** _____
Kenny Gathings/ Lovel Young

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 1022-5H4BS	39°58'33.965"	109°27'17.362"	39°58'34.090"	109°27'14.900"	1954' FSL 156' FEL	39°58'46.212"	109°27'21.785"	39°58'46.337"	109°27'19.322"	2097' FNL 492' FEL
NBU 1022-5H4CS	39°58'33.932"	109°27'17.483"	39°58'34.057"	109°27'15.021"	1950' FSL 166' FEL	39°58'42.903"	109°27'21.742"	39°58'43.028"	109°27'19.280"	2432' FNL 493' FEL
NBU 1022-5I1BS	39°58'33.900"	109°27'17.604"	39°58'34.025"	109°27'15.143"	1947' FSL 175' FEL	39°58'39.783"	109°27'22.011"	39°58'39.908"	109°27'19.548"	2543' FSL 517' FEL
NBU 1022-5I3AS	39°58'33.867"	109°27'17.726"	39°58'33.991"	109°27'15.264"	1944' FSL 185' FEL	39°58'32.526"	109°27'26.290"	39°58'32.651"	109°27'23.827"	1809' FSL 852' FEL
NBU 1022-5I-4	39°58'33.998"	109°27'17.241"	39°58'34.122"	109°27'14.779"	1957' FSL 147' FEL	39°58'33.998"	109°27'17.241"	39°58'34.122"	109°27'14.779"	

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 1022-5H4BS	1239.6'	-344.5'	NBU 1022-5H4CS	907.9'	-331.7'	NBU 1022-5I1BS	595.4'	-343.2'	NBU 1022-5I3AS	-135.7'	-666.8'



BASIS OF BEARINGS IS THE EAST LINE OF THE SE ¼ OF SECTION 5, T10S, R22E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°08'41"W.

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

WELL PAD - NBU 1022-5I

WELL PAD INTERFERENCE PLAT
WELLS - NBU 1022-5H4BS, NBU 1022-5H4CS,
NBU 1022-5I1BS & NBU 1022-5I3AS
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

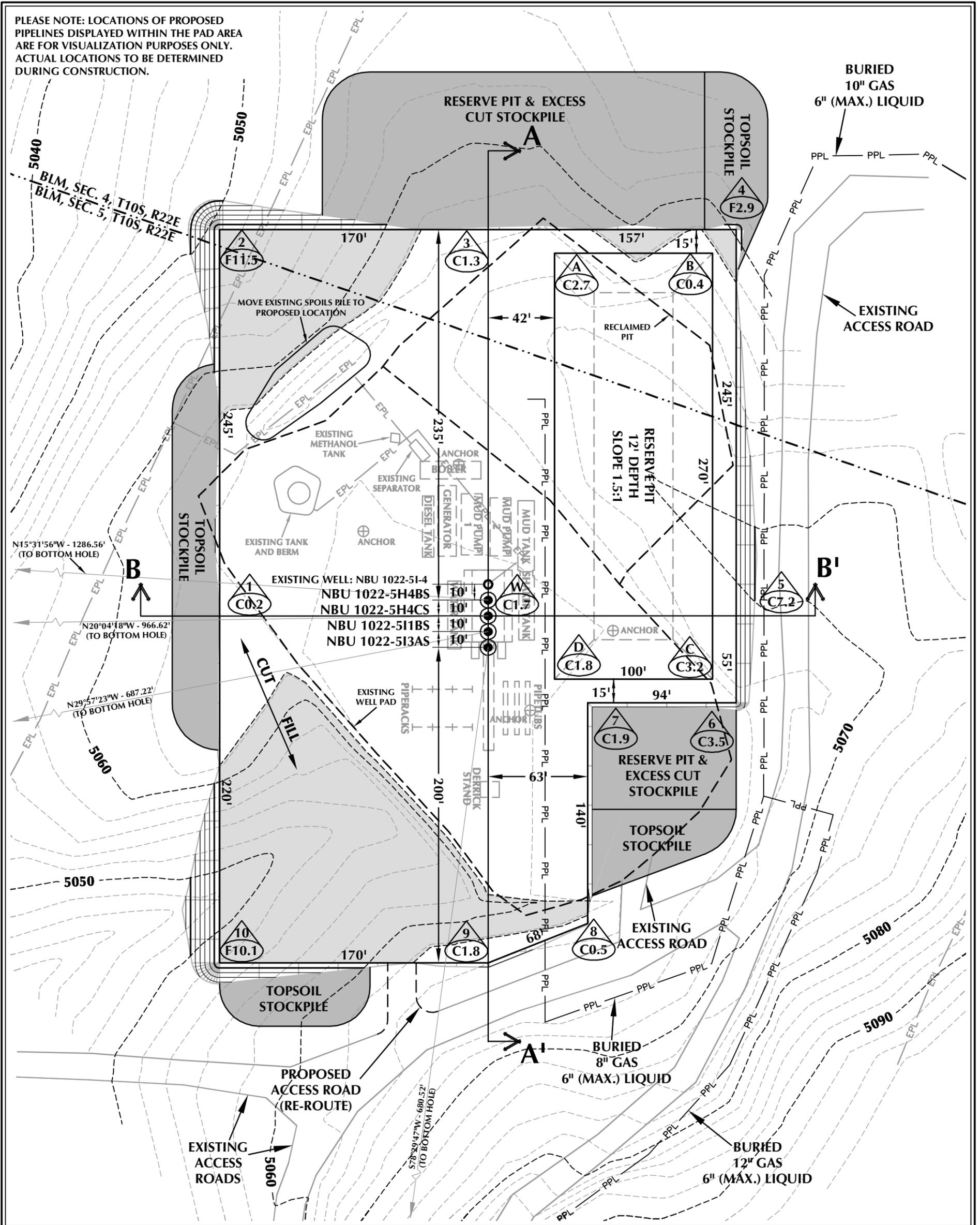
TIMBERLINE

(435) 789-1365

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

DATE SURVEYED: 8-8-12	SURVEYED BY: J.W.	SHEET NO: 5
DATE DRAWN: 8-16-12	DRAWN BY: J.G.C.	
SCALE: 1" = 60'		5 OF 16

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 1022-51 DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5063.9'
 FINISHED GRADE ELEVATION = 5062.2'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.33 ACRES
 TOTAL DISTURBANCE AREA = 4.38 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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

WELL PAD - NBU 1022-51

WELL PAD - LOCATION LAYOUT
 NBU 1022-5H4BS, NBU 1022-5H4CS,
 NBU 1022-511BS & NBU 1022-513AS
 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
 Fax 307-674-0182

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 10,475 C.Y.
 TOTAL FILL FOR WELL PAD = 8,818 C.Y.
 TOPSOIL @ 6" DEPTH = 1,677 C.Y.
 EXCESS MATERIAL = 1,657 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT
 +/- 9,230 C.Y.
 RESERVE PIT CAPACITY (2' OF FREEBOARD)
 +/- 35,180 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

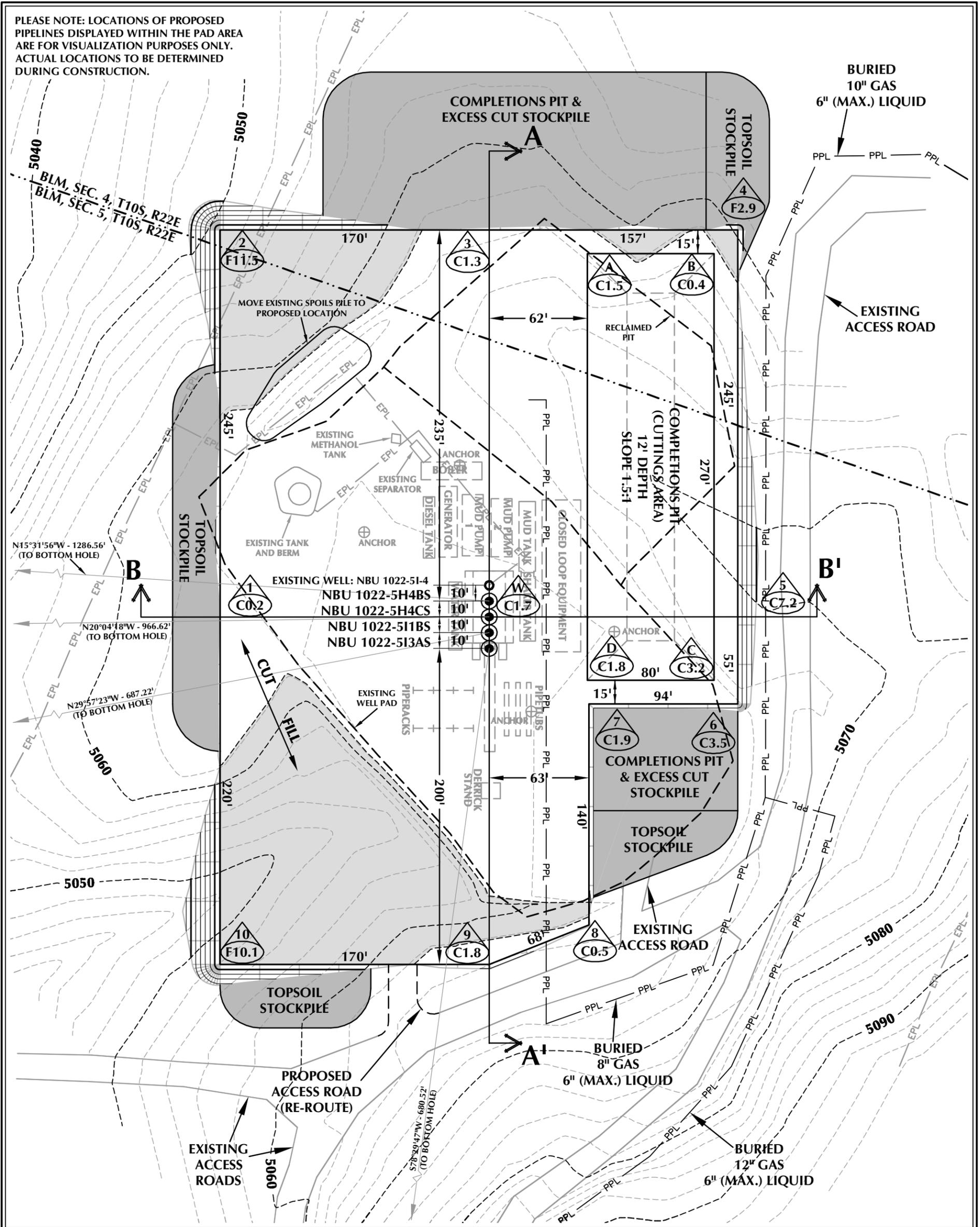


HORIZONTAL 0 30' 60' 1" = 60'
 2' CONTOURS

SCALE: 1"=60' DATE: 9/4/12 SHEET NO:
 REVISED: APF 11/15/12 **6** 6 OF 16

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

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 1022-51 (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5063.9'
 FINISHED GRADE ELEVATION = 5062.2'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.33 ACRES
 TOTAL DISTURBANCE AREA = 4.38 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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

WELL PAD - NBU 1022-51

WELL PAD - LOCATION LAYOUT
 NBU 1022-5H4BS, NBU 1022-5H4CS,
 NBU 1022-511BS & NBU 1022-513AS
 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
 Fax 307-674-0182

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 10,475 C.Y.
 TOTAL FILL FOR WELL PAD = 8,818 C.Y.
 TOPSOIL @ 6" DEPTH = 1,677 C.Y.
 EXCESS MATERIAL = 1,657 C.Y.

COMPLETIONS PIT QUANTITIES

TOTAL CUT FOR COMPLETIONS PIT
 +/- 6,990 C.Y.
 COMPLETIONS PIT CAPACITY
 (2' OF FREEBOARD)
 +/- 26,310 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



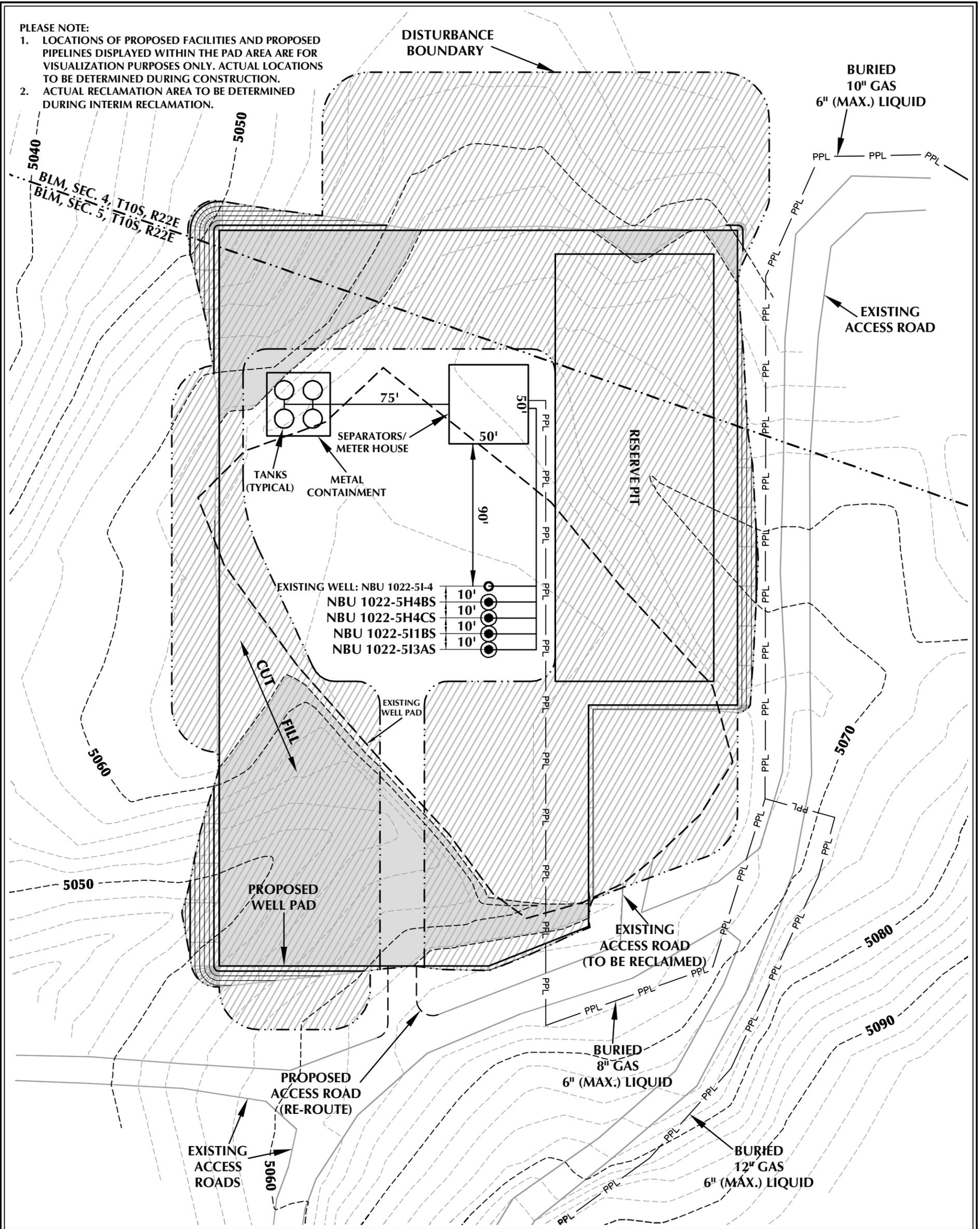
HORIZONTAL 0 30' 60' 1" = 60'
 2' CONTOURS

SCALE: 1"=60' DATE: 10/29/12 SHEET NO:
 REVISED: APF 11/15/12 **6B** 6B OF 16

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

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 1022-51 DESIGN SUMMARY

TOTAL DISTURBANCE AREA = 4.38 ACRES (INCLUDING EXISTING)
 RECLAMATION AREA = 3.44 ACRES
 TOTAL WELL PAD AREA AFTER RECLAMATION = 0.94 ACRES

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

WELL PAD - NBU 1022-51

WELL PAD - RECLAMATION LAYOUT
 NBU 1022-5H4BS, NBU 1022-5H4CS,
 NBU 1022-511BS & NBU 1022-513AS
 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
 Fax 307-674-0182

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

(435) 789-1365

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



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

SCALE: 1"=60' **DATE:** 9/4/12 **SHEET NO:**
REVISED: **APF** **11/15/12** **8** **8 OF 16**

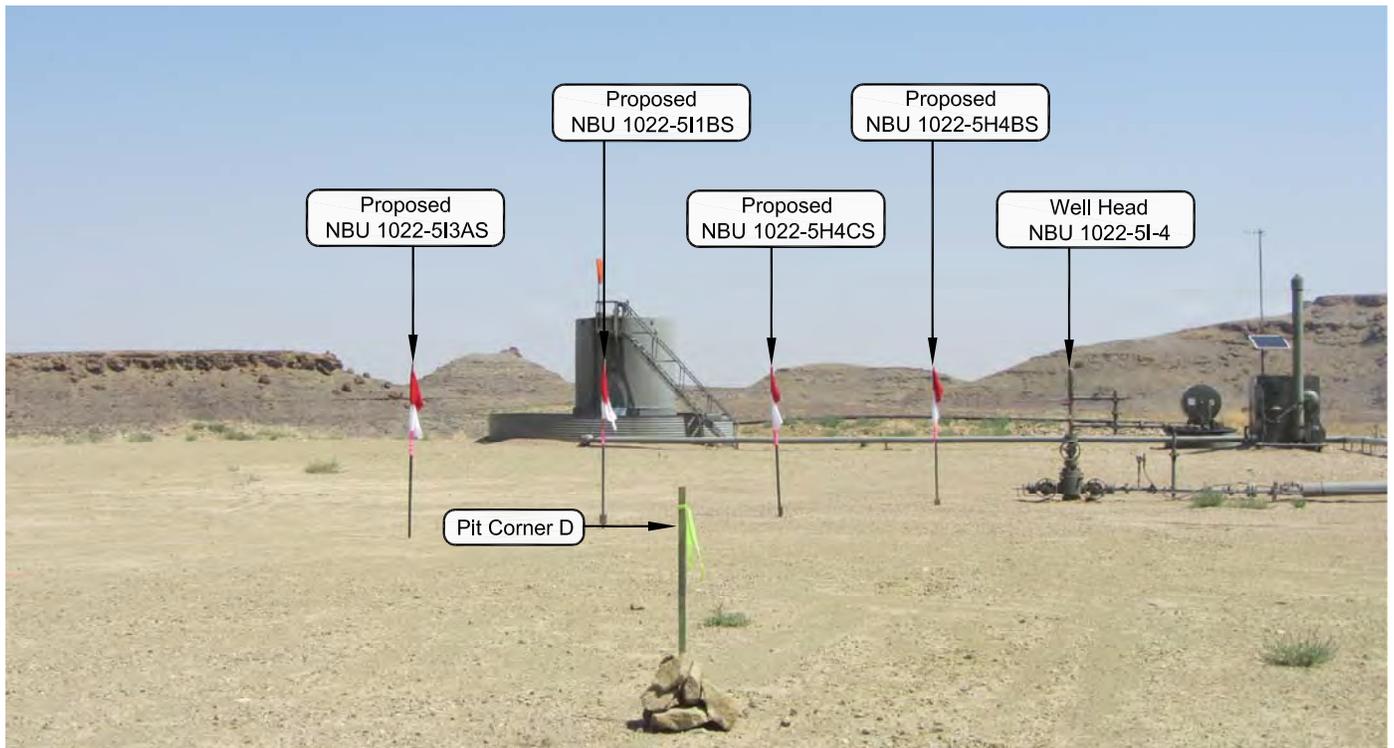


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHEASTERLY

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

WELL PAD - NBU 1022-5I

LOCATION PHOTOS

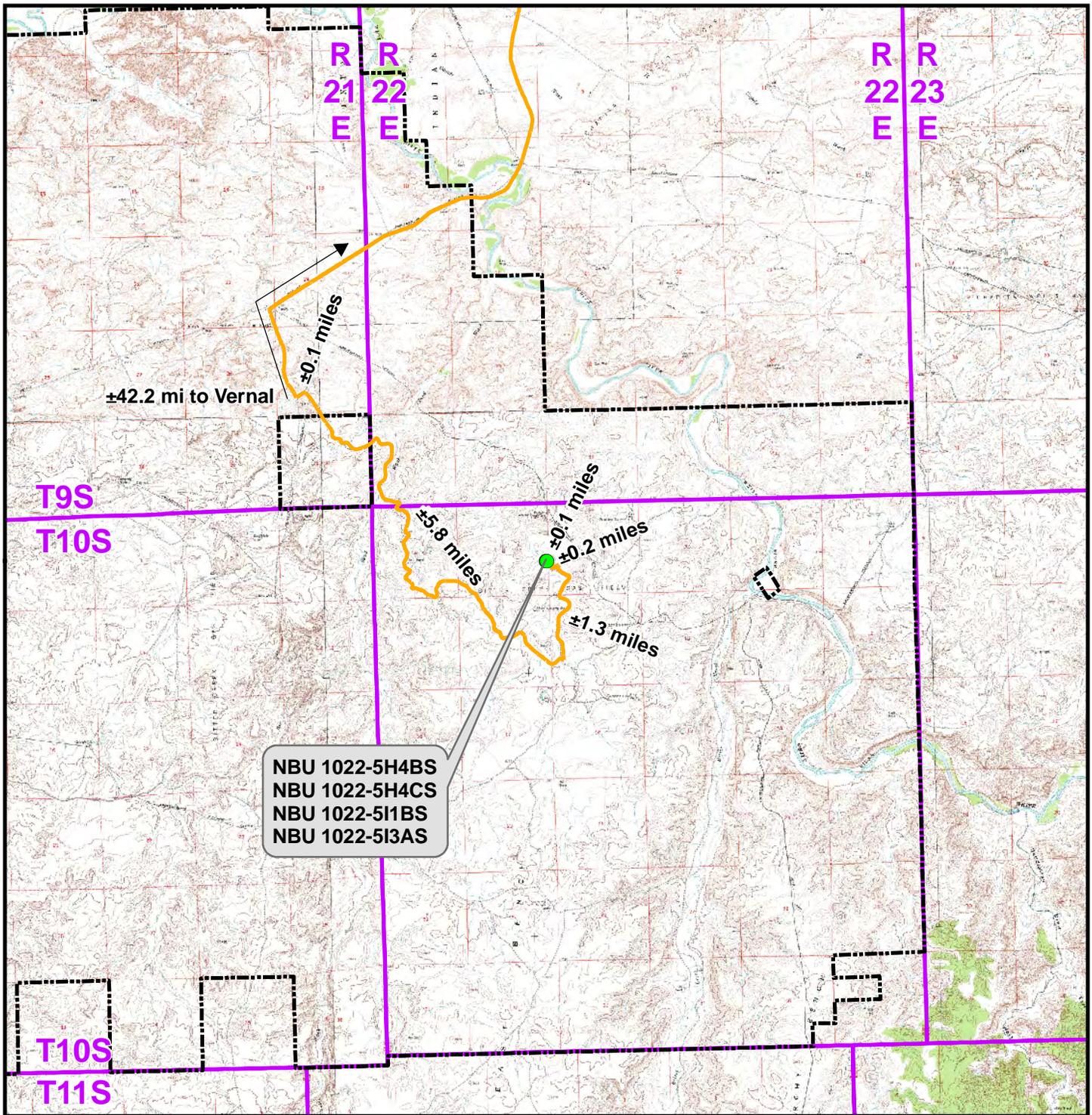
**NBU 1022-5H4BS, NBU 1022-5H4CS,
 NBU 1022-5I1BS & NBU 1022-5I3AS
 LOCATED IN SECTION 5, T10S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH.**



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

DATE PHOTOS TAKEN: 8-8-12	PHOTOS TAKEN BY: J.W.	SHEET NO: 9 9 OF 16
DATE DRAWN: 8-16-12	DRAWN BY: J.G.C.	
Date Last Revised:		



File: K:\ANADARKO\2012\2012_53_NBU_1022-5_FOCUS\GIS\Maps_ABCDENBU_1022-5I_A.mxd, 9/10/2012 1:58:16 PM

Legend

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

Distance From Well Pad - NBU 1022-5I To Unit Boundary: ±8,629ft

WELL PAD - NBU 1022-5I

TOPO A
 NBU 1022-5H4BS, NBU 1022-5H4CS,
 NBU 1022-5I1BS & NBU 1022-5I3AS
 LOCATED IN SECTION 5, T10S, R22E
 S.L.B.&M., UINTAH COUNTY, UTAH

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

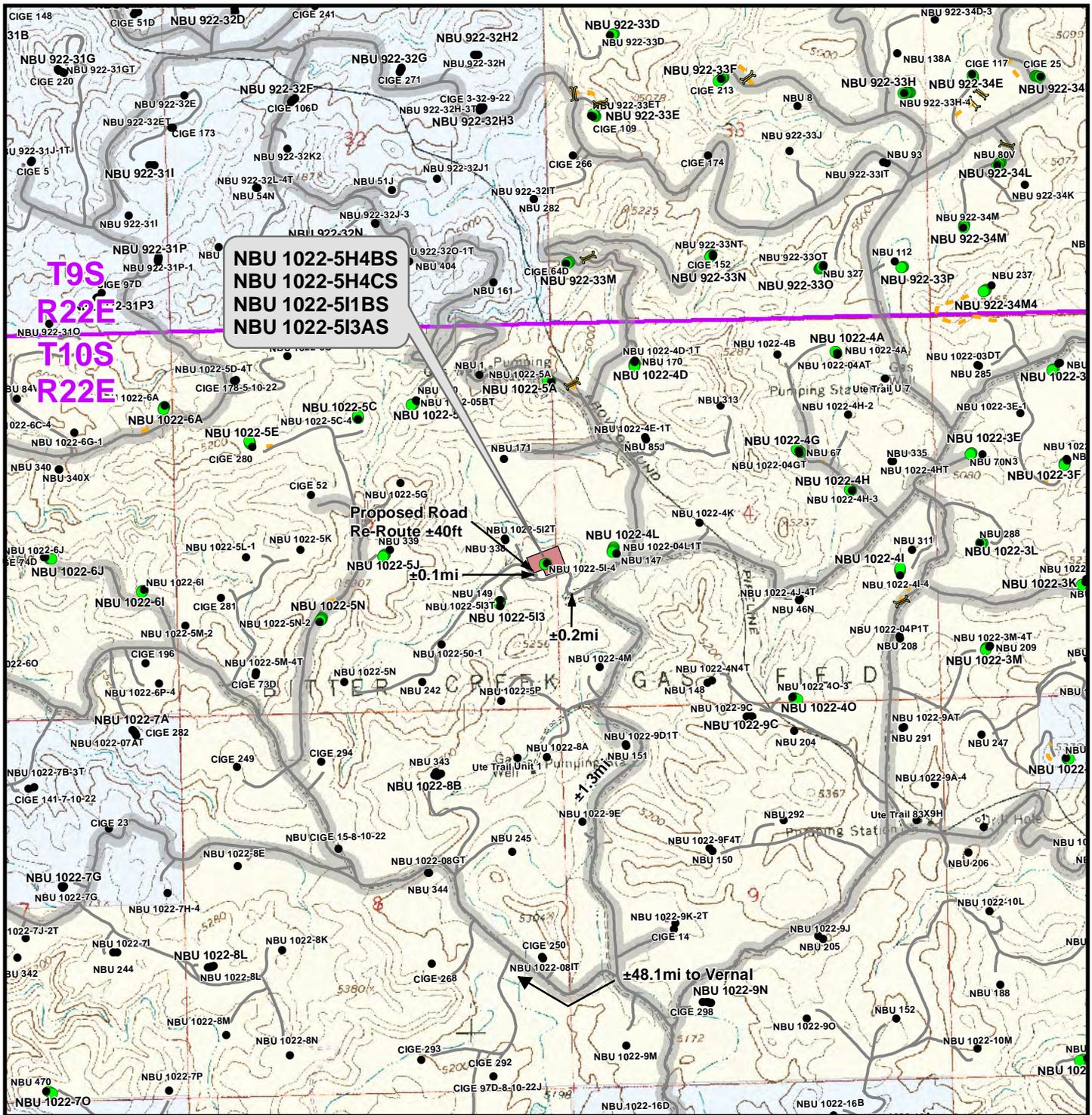
1099 18th Street
 Denver, Colorado 80202



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



SCALE: 1:100,000	NAD83 USP Central	10 10 OF 16
DRAWN: TL	DATE: 4 Sept 2012	
REVISED:	DATE:	



File: K:\ANADARKO\2012\2012_53_NBU_1022-5\NBU 1022-5I\NBU 1022-5I_B.mxd, 10/29/2012 5:55:30 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 Re-Route Length: ±40ft

WELL PAD - NBU 1022-5I

TOPO B
 NBU 1022-5H4BS, NBU 1022-5H4CS,
 NBU 1022-5I1BS & NBU 1022-5I3AS
 LOCATED IN SECTION 5, T10S, R22E
 S.L.B.&M., Uintah County, Utah

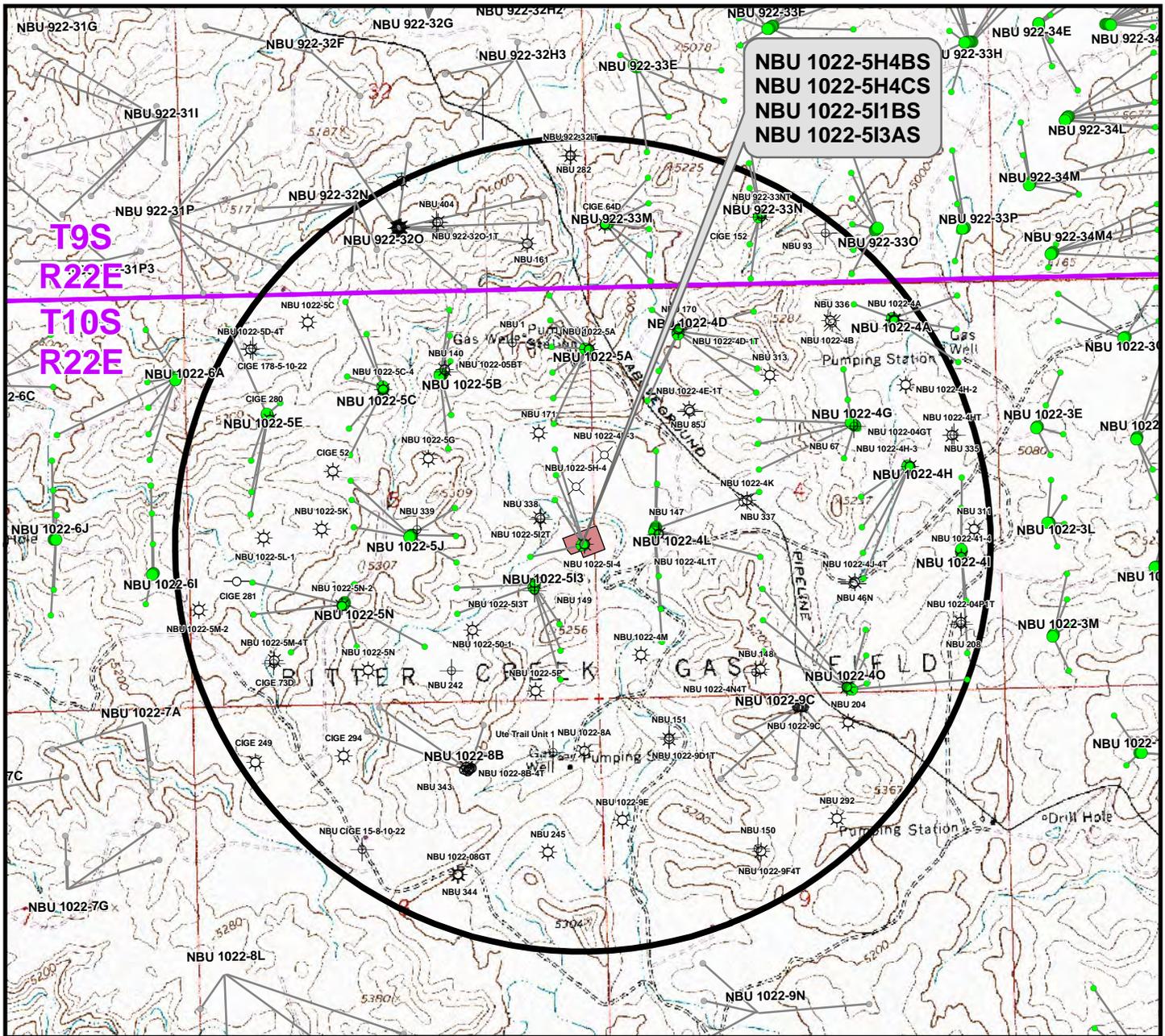
**Kerr-McGee Oil &
 Gas Onshore L.P.**
 1099 18th Street
 Denver, Colorado 80202



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:
DRAWN: TL	DATE: 29 Oct 2012	11
REVISED:	DATE:	



**NBU 1022-5H4BS
NBU 1022-5H4CS
NBU 1022-5I1BS
NBU 1022-5I3AS**

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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 1022-5H4BS	NBU 171	307ft
NBU 1022-5H4CS	NBU 1022-5I2T	587ft
NBU 1022-5I1BS	NBU 1022-5I2T	304ft
NBU 1022-5I3AS	NBU 1022-5I3T	353ft

Legend

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

WELL PAD - NBU 1022-5I

TOPO C
NBU 1022-5H4BS, NBU 1022-5H4CS,
NBU 1022-5I1BS & NBU 1022-5I3AS
LOCATED IN SECTION 5, T10S, R22E
S.L.B.&M., Uintah County, Utah

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

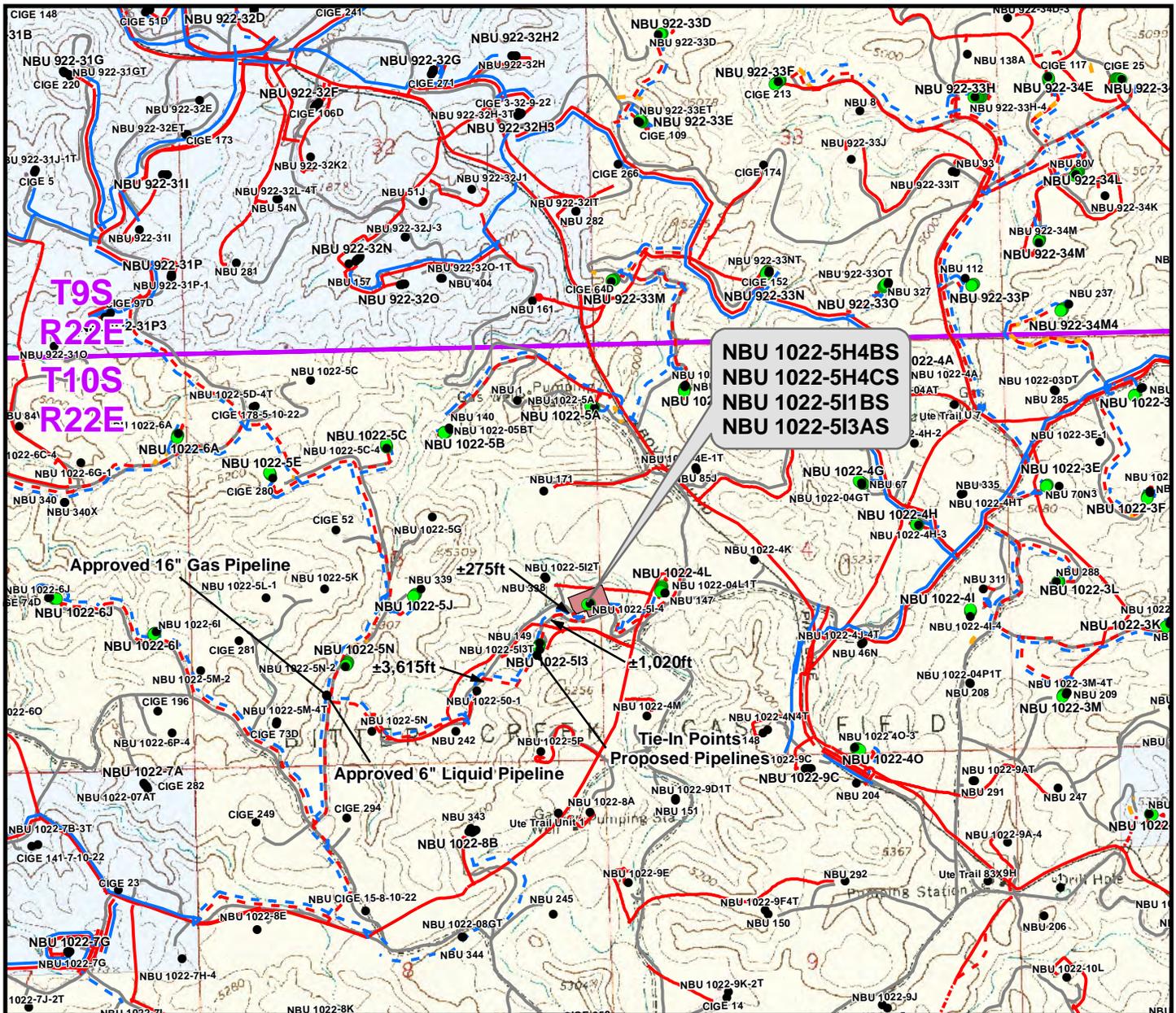
1099 18th Street
Denver, Colorado 80202



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



SCALE: 1" = 2,000ft	NAD83 USP Central	12
DRAWN: TL	DATE: 29 Oct 2012	
REVISED:	DATE:	



**NBU 1022-5H4BS
NBU 1022-5H4CS
NBU 1022-5I1BS
NBU 1022-5I3AS**

Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Buried 6" (Max.) (Separator to Edge of Pad)	±355ft	Buried 8" (Meter House to Edge of Pad)	±355ft
Buried 6" (Max.) (Edge of Pad to 1022-4L Intersection)	±275ft	Buried 8" (Edge of Pad to 1022-4L Intersection)	±275ft
Buried 6" (Max.) (1022-4L Intersection to 5I3 Intersection)	±1,020ft	Buried 12" (1022-4L Intersection to 5I3 Intersection)	±1,020ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±1,650ft	TOTAL PROPOSED BURIED GAS PIPELINE =	±1,650ft

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 1022-5I

TOPO D
NBU 1022-5H4BS, NBU 1022-5H4CS,
NBU 1022-5I1BS & NBU 1022-5I3AS
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

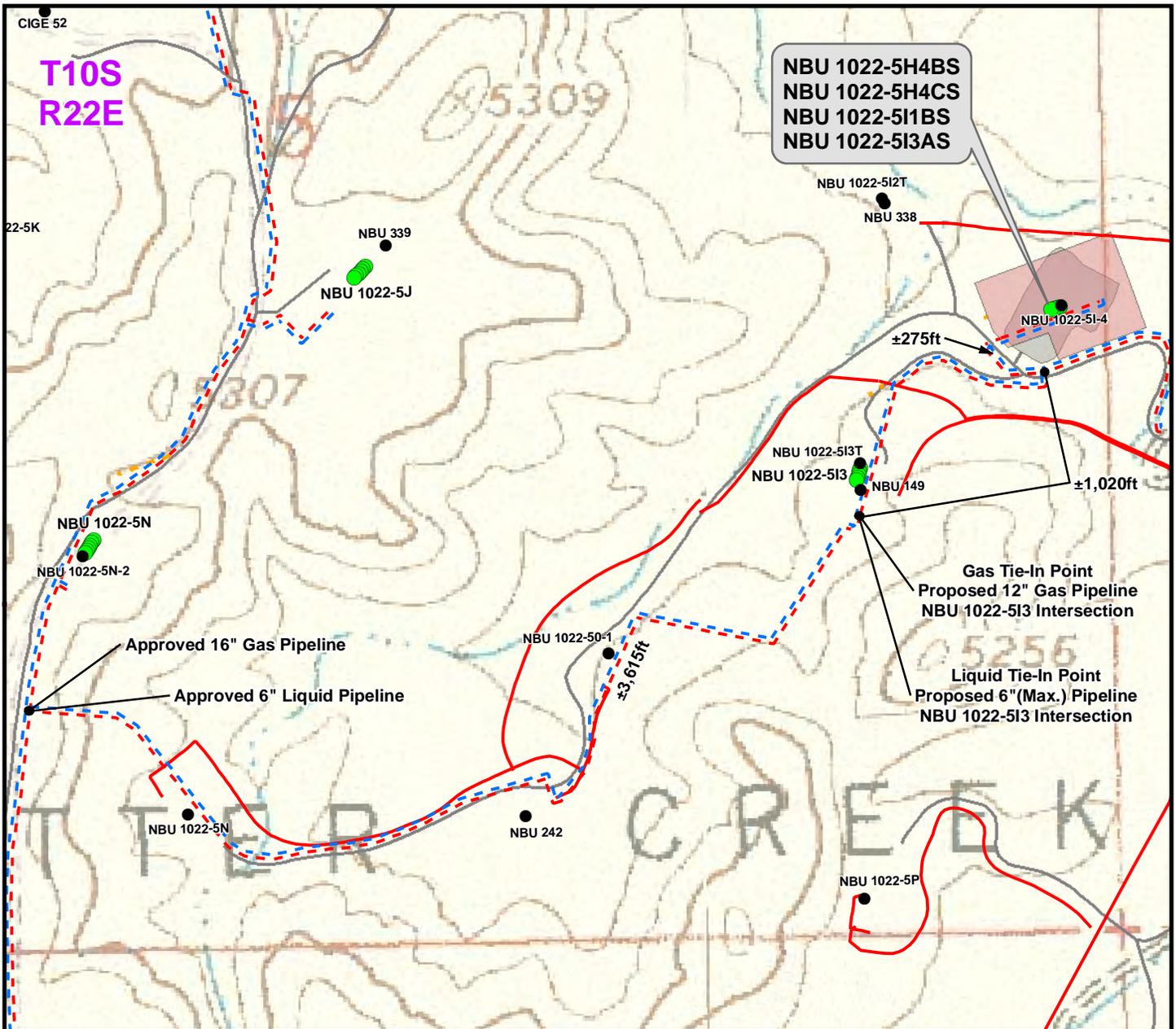
609 CONSULTING, LLC
 2155 North Main Street
 Sheridan, Wyoming 82801
 Phone 307-674-0609
 Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	13
DRAWN: TL	DATE: 29 Oct 2012	
REVISED: KGS	DATE: 15 Nov 2012	

SHEET NO:
13 OF 16

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File: K:\ANADARKO\2012\2012_53_NBU_1022-5\FOCUS\GIS\Maps_ABCDENBU_1022-5\NBU_1022-5I.D2.mxd, 11/15/2012 8:19:28 AM

Proposed Liquid Pipeline	Length
Buried 6" (Max.) (Separator to Edge of Pad)	±355ft
Buried 6" (Max.) (Edge of Pad to 1022-4L Intersection)	±275ft
Buried 6" (Max.) (1022-4L Intersection to 5I3 Intersection)	±1,020ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±1,650ft

Proposed Gas Pipeline	Length
Buried 8" (Meter House to Edge of Pad)	±355ft
Buried 8" (Edge of Pad to 1022-4L Intersection)	±275ft
Buried 12" (1022-4L Intersection to 5I3 Intersection)	±1,020ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±1,650ft

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 1022-5I

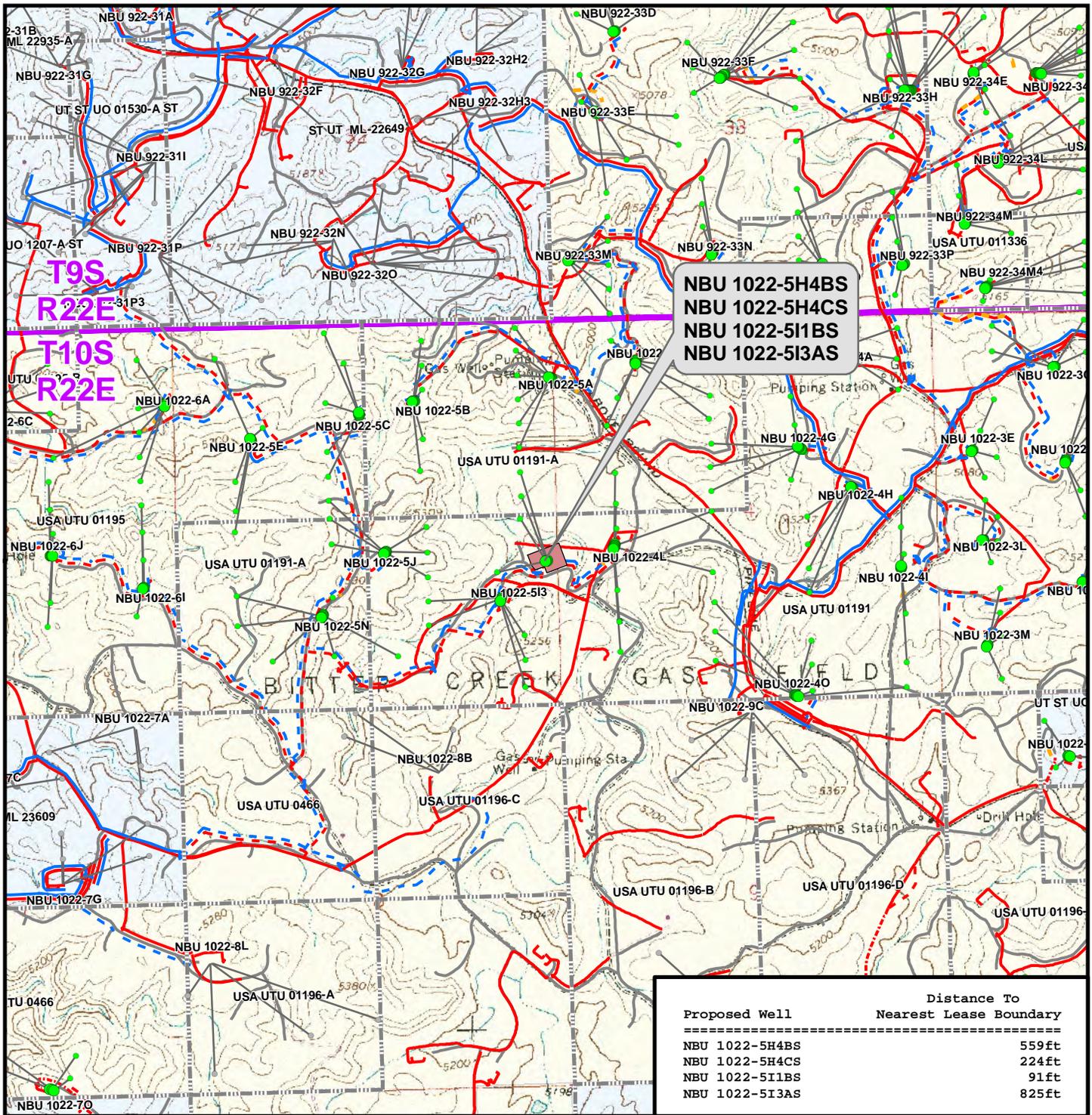
TOPO D2 (PAD & PIPELINE DETAIL)
 NBU 1022-5H4BS, NBU 1022-5H4CS,
 NBU 1022-5I1BS & NBU 1022-5I3AS
 LOCATED IN SECTION 5, T10S, R22E
 S.L.B.&M., UINTAH COUNTY, UTAH

**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" = 500ft	NAD83 USP Central	SHEET NO:	14
DRAWN: TL	DATE: 29 Oct 2012	14 OF 16	
REVISED: KGS	DATE: 15 Nov 2012		



**NBU 1022-5H4BS
NBU 1022-5H4CS
NBU 1022-5I1BS
NBU 1022-5I3AS**

Proposed Well	Distance To Nearest Lease Boundary
NBU 1022-5H4BS	559ft
NBU 1022-5H4CS	224ft
NBU 1022-5I1BS	91ft
NBU 1022-5I3AS	825ft

Legend

- Well - Proposed (Green dot)
- Bottom Hole - Proposed (Green circle)
- Bottom Hole - Existing (Grey circle)
- Well Path (Grey line)
- Well Pad (Red shaded area)
- Lease Boundary (Black dashed line)
- Gas Pipeline - Proposed (Red dashed line)
- Gas Pipeline - To Be Upgraded (Red dotted line)
- Gas Pipeline - Existing (Red solid line)
- Liquid Pipeline - Proposed (Blue dashed line)
- Liquid Pipeline - Existing (Blue solid line)
- Road - Proposed (Yellow dashed line)
- Road - Existing (Grey solid line)
- Bureau of Land Management (Yellow shaded area)
- Indian Reservation (Red shaded area)
- State (Blue shaded area)
- Private (White shaded area)

WELL PAD - NBU 1022-5I

TOPO E
NBU 1022-5H4BS, NBU 1022-5H4CS,
NBU 1022-5I1BS & NBU 1022-5I3AS
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
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 Fax 307-674-0182

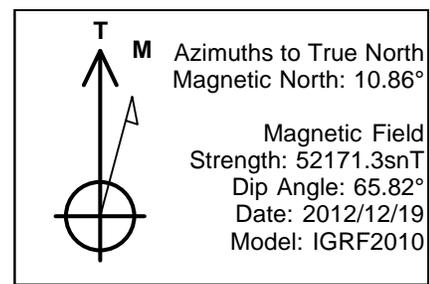
SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 15 15 OF 16
DRAWN: TL	DATE: 29 Oct 2012	
REVISED: KGS	DATE: 15 Nov 2012	

File: K:\ANADARKO\2012\2012_53_NBU_1022-5_FOCUS\GIS\Maps_ABCDENBU_1022-5I_NBU_1022-5I_E.mxd, 10/29/2012 6:13:16 PM

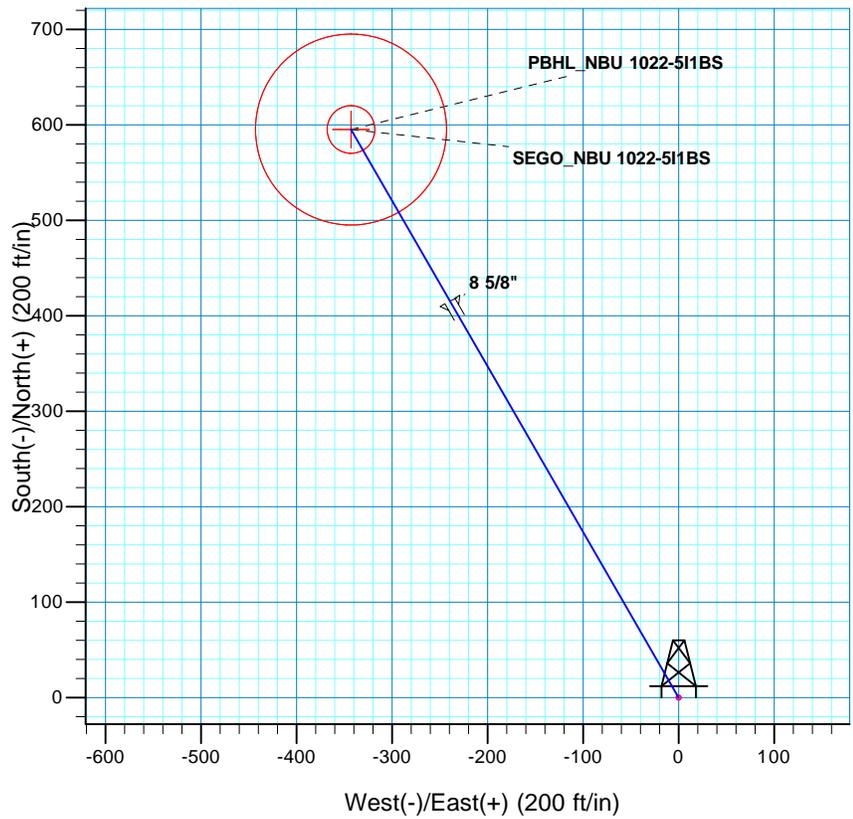
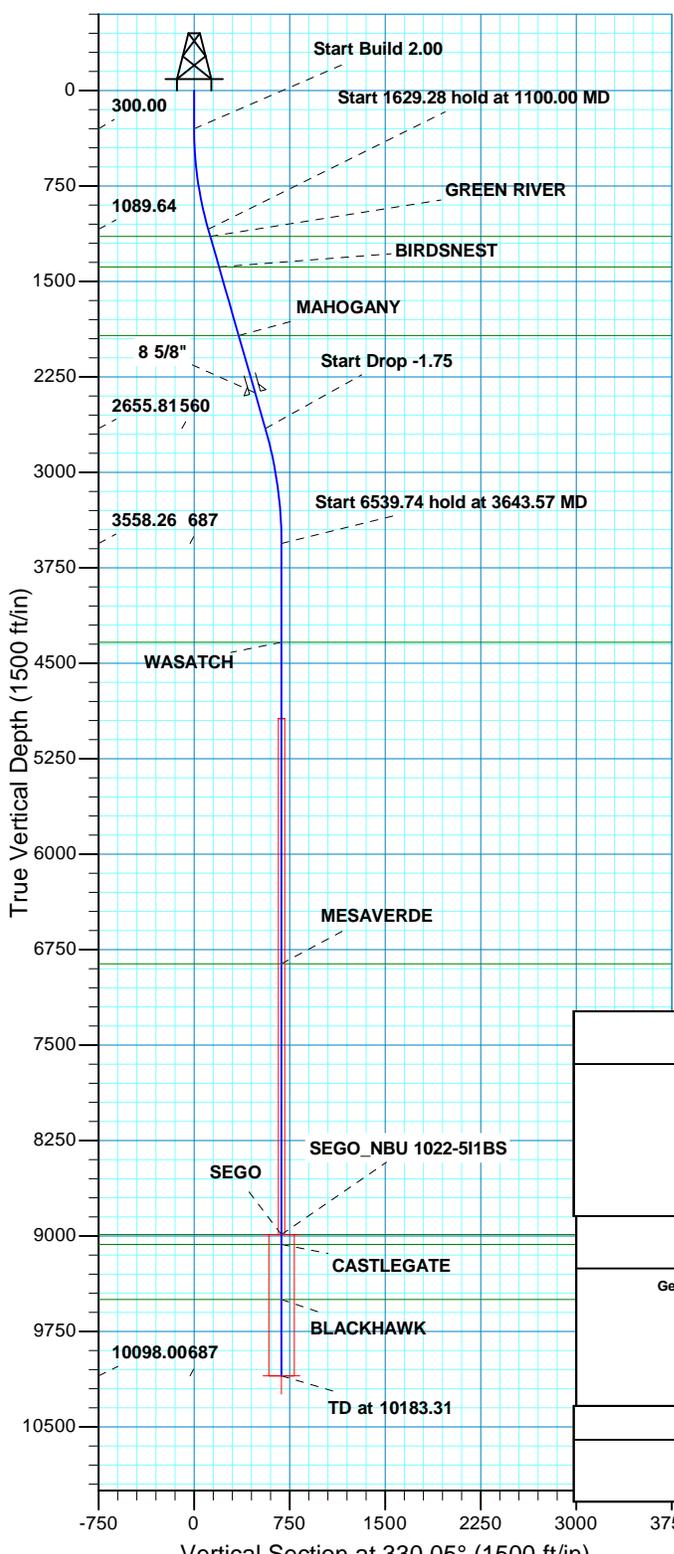
**Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – NBU 1022-5I
WELLS - NBU 1022-5H4BS, NBU 1022-5H4CS,
NBU 1022-5I1BS & NBU 1022-5I3AS
Section 5, T10S, R22E, S.L.B.&M.**

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 1.3 miles to a service road to the west. Exit left and proceed in a westerly direction approximately 0.2 miles to second service road to the northwest. Exit right and proceed in a northwesterly direction approximately 0.1 miles to the proposed access road to the northeast. Follow road flags in a northeasterly direction approximately 40 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 49.7 miles in a southerly direction.



WELL DETAILS: NBU 1022-5I1BS								
GL 5062 & KB 4 @ 5066.00ft (ASSUMED)								
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude			
0.00	0.00	14521101.78	2073489.11	39.9761176	-109.4542062			
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	8988.00	595.16	-342.95	14521690.90	2073135.90	39.9777517	-109.4554301	Circle (Radius: 25.00)
- plan hits target center								
PBHL	10098.00	595.16	-342.95	14521690.90	2073135.90	39.9777517	-109.4554301	Circle (Radius: 100.00)
- plan hits target center								



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1100.00	16.00	330.05	1089.64	96.16	-55.41	2.00	330.05	110.98	
2729.28	16.00	330.05	2655.81	485.27	-279.63	0.00	0.00	560.07	
3643.57	0.00	0.00	3558.26	595.16	-342.95	1.75	180.00	686.90	
10183.31	0.00	0.00	10098.00	595.16	-342.95	0.00	0.00	686.90	PBHL_NBU 1022-5I1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N			FORMATION TOP DETAILS		
Geodetic System: Universal Transverse Mercator (US Survey Feet)			TVDPath	MDPath	Formation
Datum: NAD 1927 (NADCON CONUS)			1146.00	1158.63	GREEN RIVER
Ellipsoid: Clarke 1866			1386.00	1408.30	BIRDSNEST
Zone: Zone 12N (114 W to 108 W)			1925.00	1969.02	MAHOGANY
Location: SECTION 5 T10S R22E			4336.00	4421.31	WASATCH
System Datum: Mean Sea Level			6861.00	6946.31	MESAVERDE
			8988.00	9073.31	SEGO
			9067.00	9152.31	CASTLEGATE
			9498.00	9583.31	BLACKHAWK

CASING DETAILS			
TVD	MD	Name	Size
2375.00	2437.16	8 5/8"	8.625

RECEIVED :



Scientific Drilling

US ROCKIES REGION PLANNING

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

NBU 1022-5I PAD

NBU 1022-5I1BS

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

19 December, 2012





Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-5I1BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5062 & KB 4 @ 5066.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5062 & KB 4 @ 5066.00ft (ASSUMED)
Site:	NBU 1022-5I PAD	North Reference:	True
Well:	NBU 1022-5I1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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

Site	NBU 1022-5I PAD, SECTION 5 T10S R22E				
Site Position:	Northing:	14,521,098.34 usft	Latitude:	39.9761086	
From: Lat/Long	Easting:	2,073,479.64 usft	Longitude:	-109.4542402	
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.99 °

Well	NBU 1022-5I1BS, 1947 FSL 175 FEL					
Well Position	+N/-S	3.28 ft	Northing:	14,521,101.78 usft	Latitude:	39.9761176
	+E/-W	9.53 ft	Easting:	2,073,489.11 usft	Longitude:	-109.4542062
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,062.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2012/12/19	10.86	65.82	52,171

Design	PLAN #1 PRELIMINARY			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	330.05

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	16.00	330.05	1,089.64	96.16	-55.41	2.00	2.00	0.00	330.05	
2,729.28	16.00	330.05	2,655.81	485.27	-279.63	0.00	0.00	0.00	0.00	
3,643.57	0.00	0.00	3,558.26	595.16	-342.95	1.75	-1.75	0.00	180.00	
10,183.31	0.00	0.00	10,098.00	595.16	-342.95	0.00	0.00	0.00	0.00	PBHL_NBU 1022-5I1



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-51BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5062 & KB 4 @ 5066.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5062 & KB 4 @ 5066.00ft (ASSUMED)
Site:	NBU 1022-51 PAD	North Reference:	True
Well:	NBU 1022-51BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00										
400.00	2.00	330.05	399.98	1.51	-0.87	1.75	2.00	2.00	2.00	0.00
500.00	4.00	330.05	499.84	6.05	-3.48	6.98	2.00	2.00	2.00	0.00
600.00	6.00	330.05	599.45	13.60	-7.84	15.69	2.00	2.00	2.00	0.00
700.00	8.00	330.05	698.70	24.16	-13.92	27.88	2.00	2.00	2.00	0.00
800.00	10.00	330.05	797.47	37.71	-21.73	43.52	2.00	2.00	2.00	0.00
900.00	12.00	330.05	895.62	54.24	-31.26	62.60	2.00	2.00	2.00	0.00
1,000.00	14.00	330.05	993.06	73.73	-42.49	85.10	2.00	2.00	2.00	0.00
1,100.00	16.00	330.05	1,089.64	96.16	-55.41	110.98	2.00	2.00	2.00	0.00
Start 1629.28 hold at 1100.00 MD										
1,158.63	16.00	330.05	1,146.00	110.16	-63.48	127.14	0.00	0.00	0.00	0.00
GREEN RIVER										
1,200.00	16.00	330.05	1,185.77	120.04	-69.17	138.54	0.00	0.00	0.00	0.00
1,300.00	16.00	330.05	1,281.90	143.92	-82.93	166.10	0.00	0.00	0.00	0.00
1,400.00	16.00	330.05	1,378.02	167.80	-96.69	193.67	0.00	0.00	0.00	0.00
1,408.30	16.00	330.05	1,386.00	169.79	-97.84	195.96	0.00	0.00	0.00	0.00
BIRDSNEST										
1,500.00	16.00	330.05	1,474.15	191.69	-110.45	221.23	0.00	0.00	0.00	0.00
1,600.00	16.00	330.05	1,570.27	215.57	-124.22	248.80	0.00	0.00	0.00	0.00
1,700.00	16.00	330.05	1,666.40	239.45	-137.98	276.36	0.00	0.00	0.00	0.00
1,800.00	16.00	330.05	1,762.53	263.33	-151.74	303.92	0.00	0.00	0.00	0.00
1,900.00	16.00	330.05	1,858.65	287.22	-165.50	331.49	0.00	0.00	0.00	0.00
1,969.02	16.00	330.05	1,925.00	303.70	-175.00	350.51	0.00	0.00	0.00	0.00
MAHOGANY										
2,000.00	16.00	330.05	1,954.78	311.10	-179.26	359.05	0.00	0.00	0.00	0.00
2,100.00	16.00	330.05	2,050.90	334.98	-193.03	386.61	0.00	0.00	0.00	0.00
2,200.00	16.00	330.05	2,147.03	358.86	-206.79	414.18	0.00	0.00	0.00	0.00
2,300.00	16.00	330.05	2,243.16	382.75	-220.55	441.74	0.00	0.00	0.00	0.00
2,400.00	16.00	330.05	2,339.28	406.63	-234.31	469.31	0.00	0.00	0.00	0.00
2,437.16	16.00	330.05	2,375.00	415.50	-239.42	479.55	0.00	0.00	0.00	0.00
8 5/8"										
2,500.00	16.00	330.05	2,435.41	430.51	-248.07	496.87	0.00	0.00	0.00	0.00
2,600.00	16.00	330.05	2,531.54	454.39	-261.83	524.43	0.00	0.00	0.00	0.00
2,700.00	16.00	330.05	2,627.66	478.28	-275.60	552.00	0.00	0.00	0.00	0.00
2,729.28	16.00	330.05	2,655.81	485.27	-279.63	560.07	0.00	0.00	0.00	0.00
Start Drop -1.75										
2,800.00	14.76	330.05	2,723.99	501.52	-288.99	578.82	1.75	-1.75	0.00	0.00
2,900.00	13.01	330.05	2,821.07	522.32	-300.97	602.83	1.75	-1.75	0.00	0.00
3,000.00	11.26	330.05	2,918.83	540.53	-311.47	623.85	1.75	-1.75	0.00	0.00
3,100.00	9.51	330.05	3,017.18	556.15	-320.47	641.88	1.75	-1.75	0.00	0.00
3,200.00	7.76	330.05	3,116.05	569.17	-327.97	656.90	1.75	-1.75	0.00	0.00
3,300.00	6.01	330.05	3,215.32	579.56	-333.96	668.89	1.75	-1.75	0.00	0.00
3,400.00	4.26	330.05	3,314.92	587.31	-338.43	677.84	1.75	-1.75	0.00	0.00
3,500.00	2.51	330.05	3,414.74	592.43	-341.38	683.75	1.75	-1.75	0.00	0.00
3,600.00	0.76	330.05	3,514.69	594.91	-342.80	686.61	1.75	-1.75	0.00	0.00
3,643.57	0.00	0.00	3,558.26	595.16	-342.95	686.90	1.75	-1.75	0.00	0.00
Start 6539.74 hold at 3643.57 MD										
3,700.00	0.00	0.00	3,614.69	595.16	-342.95	686.90	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,714.69	595.16	-342.95	686.90	0.00	0.00	0.00	0.00



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-5I1BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5062 & KB 4 @ 5066.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5062 & KB 4 @ 5066.00ft (ASSUMED)
Site:	NBU 1022-5I PAD	North Reference:	True
Well:	NBU 1022-5I1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,900.00	0.00	0.00	3,814.69	595.16	-342.95	686.90	0.00	0.00	0.00
4,000.00	0.00	0.00	3,914.69	595.16	-342.95	686.90	0.00	0.00	0.00
4,100.00	0.00	0.00	4,014.69	595.16	-342.95	686.90	0.00	0.00	0.00
4,200.00	0.00	0.00	4,114.69	595.16	-342.95	686.90	0.00	0.00	0.00
4,300.00	0.00	0.00	4,214.69	595.16	-342.95	686.90	0.00	0.00	0.00
4,400.00	0.00	0.00	4,314.69	595.16	-342.95	686.90	0.00	0.00	0.00
4,421.31	0.00	0.00	4,336.00	595.16	-342.95	686.90	0.00	0.00	0.00
WASATCH									
4,500.00	0.00	0.00	4,414.69	595.16	-342.95	686.90	0.00	0.00	0.00
4,600.00	0.00	0.00	4,514.69	595.16	-342.95	686.90	0.00	0.00	0.00
4,700.00	0.00	0.00	4,614.69	595.16	-342.95	686.90	0.00	0.00	0.00
4,800.00	0.00	0.00	4,714.69	595.16	-342.95	686.90	0.00	0.00	0.00
4,900.00	0.00	0.00	4,814.69	595.16	-342.95	686.90	0.00	0.00	0.00
5,000.00	0.00	0.00	4,914.69	595.16	-342.95	686.90	0.00	0.00	0.00
5,100.00	0.00	0.00	5,014.69	595.16	-342.95	686.90	0.00	0.00	0.00
5,200.00	0.00	0.00	5,114.69	595.16	-342.95	686.90	0.00	0.00	0.00
5,300.00	0.00	0.00	5,214.69	595.16	-342.95	686.90	0.00	0.00	0.00
5,400.00	0.00	0.00	5,314.69	595.16	-342.95	686.90	0.00	0.00	0.00
5,500.00	0.00	0.00	5,414.69	595.16	-342.95	686.90	0.00	0.00	0.00
5,600.00	0.00	0.00	5,514.69	595.16	-342.95	686.90	0.00	0.00	0.00
5,700.00	0.00	0.00	5,614.69	595.16	-342.95	686.90	0.00	0.00	0.00
5,800.00	0.00	0.00	5,714.69	595.16	-342.95	686.90	0.00	0.00	0.00
5,900.00	0.00	0.00	5,814.69	595.16	-342.95	686.90	0.00	0.00	0.00
6,000.00	0.00	0.00	5,914.69	595.16	-342.95	686.90	0.00	0.00	0.00
6,100.00	0.00	0.00	6,014.69	595.16	-342.95	686.90	0.00	0.00	0.00
6,200.00	0.00	0.00	6,114.69	595.16	-342.95	686.90	0.00	0.00	0.00
6,300.00	0.00	0.00	6,214.69	595.16	-342.95	686.90	0.00	0.00	0.00
6,400.00	0.00	0.00	6,314.69	595.16	-342.95	686.90	0.00	0.00	0.00
6,500.00	0.00	0.00	6,414.69	595.16	-342.95	686.90	0.00	0.00	0.00
6,600.00	0.00	0.00	6,514.69	595.16	-342.95	686.90	0.00	0.00	0.00
6,700.00	0.00	0.00	6,614.69	595.16	-342.95	686.90	0.00	0.00	0.00
6,800.00	0.00	0.00	6,714.69	595.16	-342.95	686.90	0.00	0.00	0.00
6,900.00	0.00	0.00	6,814.69	595.16	-342.95	686.90	0.00	0.00	0.00
6,946.31	0.00	0.00	6,861.00	595.16	-342.95	686.90	0.00	0.00	0.00
MESAVERDE									
7,000.00	0.00	0.00	6,914.69	595.16	-342.95	686.90	0.00	0.00	0.00
7,100.00	0.00	0.00	7,014.69	595.16	-342.95	686.90	0.00	0.00	0.00
7,200.00	0.00	0.00	7,114.69	595.16	-342.95	686.90	0.00	0.00	0.00
7,300.00	0.00	0.00	7,214.69	595.16	-342.95	686.90	0.00	0.00	0.00
7,400.00	0.00	0.00	7,314.69	595.16	-342.95	686.90	0.00	0.00	0.00
7,500.00	0.00	0.00	7,414.69	595.16	-342.95	686.90	0.00	0.00	0.00
7,600.00	0.00	0.00	7,514.69	595.16	-342.95	686.90	0.00	0.00	0.00
7,700.00	0.00	0.00	7,614.69	595.16	-342.95	686.90	0.00	0.00	0.00
7,800.00	0.00	0.00	7,714.69	595.16	-342.95	686.90	0.00	0.00	0.00
7,900.00	0.00	0.00	7,814.69	595.16	-342.95	686.90	0.00	0.00	0.00
8,000.00	0.00	0.00	7,914.69	595.16	-342.95	686.90	0.00	0.00	0.00
8,100.00	0.00	0.00	8,014.69	595.16	-342.95	686.90	0.00	0.00	0.00
8,200.00	0.00	0.00	8,114.69	595.16	-342.95	686.90	0.00	0.00	0.00
8,300.00	0.00	0.00	8,214.69	595.16	-342.95	686.90	0.00	0.00	0.00
8,400.00	0.00	0.00	8,314.69	595.16	-342.95	686.90	0.00	0.00	0.00
8,500.00	0.00	0.00	8,414.69	595.16	-342.95	686.90	0.00	0.00	0.00
8,600.00	0.00	0.00	8,514.69	595.16	-342.95	686.90	0.00	0.00	0.00
8,700.00	0.00	0.00	8,614.69	595.16	-342.95	686.90	0.00	0.00	0.00
8,800.00	0.00	0.00	8,714.69	595.16	-342.95	686.90	0.00	0.00	0.00



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-51BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5062 & KB 4 @ 5066.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5062 & KB 4 @ 5066.00ft (ASSUMED)
Site:	NBU 1022-51 PAD	North Reference:	True
Well:	NBU 1022-51BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
8,900.00	0.00	0.00	8,814.69	595.16	-342.95	686.90	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,914.69	595.16	-342.95	686.90	0.00	0.00	0.00	
9,073.31	0.00	0.00	8,988.00	595.16	-342.95	686.90	0.00	0.00	0.00	
SEGO - SEGO_NBU 1022-51BS										
9,100.00	0.00	0.00	9,014.69	595.16	-342.95	686.90	0.00	0.00	0.00	
9,152.31	0.00	0.00	9,067.00	595.16	-342.95	686.90	0.00	0.00	0.00	
CASTLEGATE										
9,200.00	0.00	0.00	9,114.69	595.16	-342.95	686.90	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,214.69	595.16	-342.95	686.90	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,314.69	595.16	-342.95	686.90	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,414.69	595.16	-342.95	686.90	0.00	0.00	0.00	
9,583.31	0.00	0.00	9,498.00	595.16	-342.95	686.90	0.00	0.00	0.00	
BLACKHAWK										
9,600.00	0.00	0.00	9,514.69	595.16	-342.95	686.90	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,614.69	595.16	-342.95	686.90	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,714.69	595.16	-342.95	686.90	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,814.69	595.16	-342.95	686.90	0.00	0.00	0.00	
10,000.00	0.00	0.00	9,914.69	595.16	-342.95	686.90	0.00	0.00	0.00	
10,100.00	0.00	0.00	10,014.69	595.16	-342.95	686.90	0.00	0.00	0.00	
10,183.31	0.00	0.00	10,098.00	595.16	-342.95	686.90	0.00	0.00	0.00	
TD at 10183.31 - PBHL_NBU 1022-51BS										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SEGO_NBU 1022-51BS - hit/miss target - Shape - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,988.00	595.16	-342.95	14,521,690.91	2,073,135.90	39.9777517	-109.4554301
PBHL_NBU 1022-51BS - plan hits target center - Circle (radius 100.00)	0.00	0.00	10,098.00	595.16	-342.95	14,521,690.91	2,073,135.90	39.9777517	-109.4554301

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,437.16	2,375.00	8 5/8"	8.625	11.000	



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-511BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5062 & KB 4 @ 5066.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5062 & KB 4 @ 5066.00ft (ASSUMED)
Site:	NBU 1022-51 PAD	North Reference:	True
Well:	NBU 1022-511BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,158.63	1,146.00	GREEN RIVER			
1,408.30	1,386.00	BIRDSNEST			
1,969.02	1,925.00	MAHOGANY			
4,421.31	4,336.00	WASATCH			
6,946.31	6,861.00	MESAVERDE			
9,073.31	8,988.00	SEGO			
9,152.31	9,067.00	CASTLEGATE			
9,583.31	9,498.00	BLACKHAWK			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
300.00	300.00	0.00	0.00	Start Build 2.00	
1,100.00	1,089.64	96.16	-55.41	Start 1629.28 hold at 1100.00 MD	
2,729.28	2,655.81	485.27	-279.63	Start Drop -1.75	
3,643.57	3,558.26	595.16	-342.95	Start 6539.74 hold at 3643.57 MD	
10,183.31	10,098.00	595.16	-342.95	TD at 10183.31	

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

<u>API #</u>	<u>NBU 1022-5H4BS</u>	
	Surface: 1954 FSL / 156 FEL	NESE
	BHL: 2097 FNL / 492 FEL	SENE
<u>API #</u>	<u>NBU 1022-5H4CS</u>	
	Surface: 1950 FSL / 166 FEL	NESE
	BHL: 2432 FNL / 493 FEL	SENE
<u>API #</u>	<u>NBU 1022-5I1BS</u>	
	Surface: 1947 FSL / 175 FEL	NESE
	BHL: 2543 FSL / 517 FEL	NESE
<u>API #</u>	<u>NBU 1022-5I3AS</u>	
	Surface: 1944 FSL / 185 FEL	NESE
	BHL: 1809 FSL / 852 FEL	NESE

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"

±40' (0.01 miles) – Section 5 T10S R22E (NE/4 SE/4) – On-lease UTU01191, County Road Re-Route from the edge of pad to the existing road to the southeast.

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 1022-5I-4, which is a producing gas 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 ±5265' and the individual segments are broken up as follows:

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

- ±355' (0.07 miles) – Section 5 T10S R22E (NE/4 SE/4) – On-lease UTU01191, 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.
- ±275' (0.05 miles) – Section 5 T10S R22E (NE/4 SE/4) – On-lease UTU01191, BLM surface, New 8" buried gas gathering pipeline from the edge of the pad to tie-in to the proposed 12" gas pipeline at the 1022-4L intersection. Please refer to Exhibit A, Line 6.
- ±1,020' (0.2 miles) – Section 5 T10S R22E (SE/4) – On-lease UTU01191, BLM surface, New 12" buried gas gathering pipeline from the 1022-4L intersection to tie-in to the 1022-5I3 Pad intersection. Please refer to Exhibit A, Line 5.
- ±3,615' (0.7 miles) – Section 5 T10S R22E (S/2) – On-lease UTU01191 & UTU01191A, BLM surface, New 12" buried gas gathering pipeline from the 1022-5I3 intersection traveling west to tie-in to the approved 16" pipeline in the SE/4 SW/4. 1,345 feet of this pipeline segment will be cross country. This pipeline will be used concurrently with the NBU 1022-4L and NBU 1022-5I3 Pads. Please refer to Exhibit A, Line 4, 3, 2 and 1.

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 ±5265' and the individual segments are broken up as follows:

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

- ±355' (0.07 miles) – Section 5 T10S R22E (NE/4 SE/4) – On-lease UTU01191, 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.
- ±275' (0.05 miles) – Section 5 T10S R22E (NE/4 SE/4) – On-lease UTU01191, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad to tie-in to the proposed 6" liquid pipeline at the 1022-4L intersection. Please refer to Exhibit B, Line 6.
- ±1,020' (0.2 miles) – Section 5 T10S R22E (SE/4) – On-lease UTU01191, BLM surface, New 6" buried liquid gathering pipeline from the 1022-4L intersection to tie-in to the 1022-5I3 Pad intersection. Please refer to Exhibit B, Line 5.
- ±3,615' (0.7 miles) – Section 5 T10S R22E (S/2) – On-lease UTU01191 & UTU01191A, BLM surface, New 6" buried liquid gathering pipeline from the 1022-5I3 intersection traveling west to tie-in to the approved 6" pipeline in the SE/4 SW/4. 1,345 feet of this pipeline segment will be cross country. This pipeline will be used concurrently with the NBU 1022-4L and NBU 1022-5I3 Pads. Please refer to Exhibit B, Line 4, 3, 2 and 1.

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.

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 1022-5H4BS/ 1022-5H4CS/ 1022-5I1BS
NBU 1022-5I3AS

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.

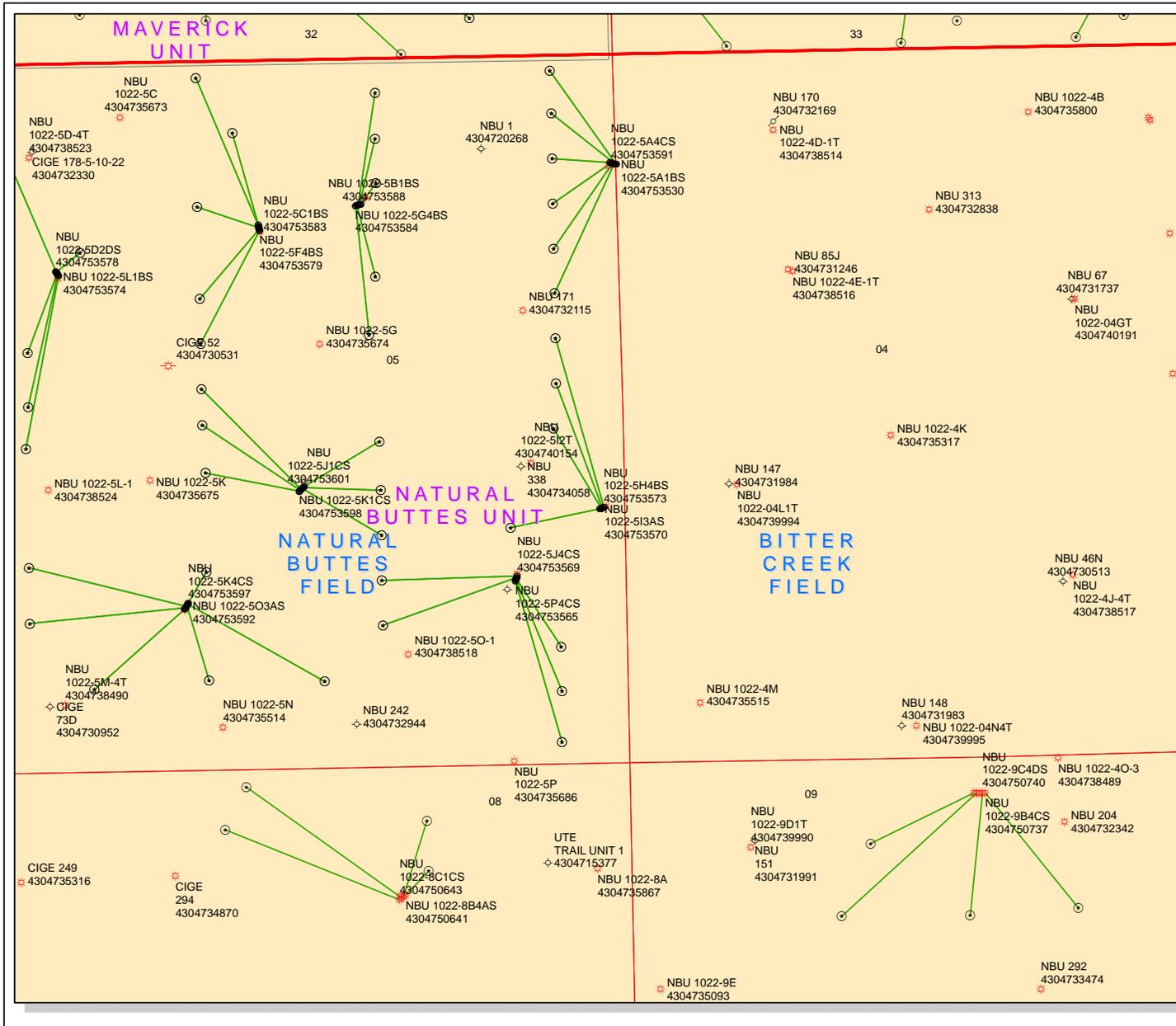
I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan 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 18, 2012

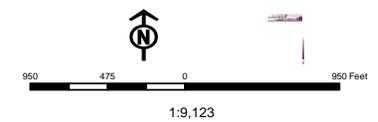
Date



API Number: 4304753571
Well Name: NBU 1022-511BS
Township T10.0S Range R22.0E Section 05
Meridian: SLBM
 Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
 Map Produced by Diana Mason

- Units**
- ACTIVE
 - EXPLORATORY
 - GAS STORAGE
 - NF PP OIL
 - NF SECONDARY
 - PI OIL
 - PP GAS
 - PP GEOTHERMAL
 - PP OIL
 - SECONDARY
 - TERMINATED
- Fields**
- Unknown
 - ABANDONED
 - ACTIVE
 - COMBINED
 - INACTIVE
 - STORAGE
 - TERMINATED



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:

3160

(UT-922)

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)										
NBU 1022-5J PAD										
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	
NBU 1022-5I3 PAD										
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	
NBU 1022-5I PAD										
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	
NBU 1022-5E PAD										
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	
NBU 1022-5C Pad										
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)											
NBU 1022-5B PAD											
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			
NBU 1022-5N PAD											
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			
NBU 921-21B PAD											
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			
NBU 921-21C PAD											
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)		
NBU 921-21D PAD		
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
NBU 921-21G PAD		
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
NBU 921-21F PAD		
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: 43047535710000

WELL NAME: NBU 1022-511BS

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

PHONE NUMBER: 720 929-6086

CONTACT: Gina Becker

PROPOSED LOCATION: NESE 05 100S 220E

Permit Tech Review:

SURFACE: 1947 FSL 0175 FEL

Engineering Review:

BOTTOM: 2543 FSL 0517 FEL

Geology Review:

COUNTY: UINTAH

LATITUDE: 39.97596

LONGITUDE: -109.45489

UTM SURF EASTINGS: 631939.00

NORTHINGS: 4426232.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-01191

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 1022-511BS
API Well Number: 43047535710000
Lease Number: UTU-01191
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. UTU01191
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 1022-511BS
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. 43-047-53571
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NESE 1947FSL 175FEL 39.976083 N Lat, 109.454890 W Lon At proposed prod. zone NESE 2543FSL 517FEL 39.977717 N Lat, 109.456114 W Lon		10. Field and Pool, or Exploratory NATURAL BUTTES
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 50 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) 91	16. No. of Acres in Lease 1041.70	12. County or Parish UINTAH
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 304	19. Proposed Depth 10183 MD 10098 TVD	13. State UT
21. Elevations (Show whether DF, KB, RT, GL, etc.) 5062 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 21 2013

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

- | | |
|--|--|
| <ul style="list-style-type: none"> 1. Well plat certified by a registered surveyor. 2. A Drilling Plan. 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | <ul style="list-style-type: none"> 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). 5. Operator certification 6. Such other site specific information and/or plans as may be required by the authorized officer. |
|--|--|

DIV. OF OIL, GAS & MINING

25. Signature (Electronic Submission)	Name (Printed/Typed) GINA T BECKER Ph: 720-929-6086	Date 12/27/2012
Title REGULATORY ANALYST II		
Approved by (Signature) 	Name (Printed/Typed) Jerry Kenczka	Date JUN 18 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 #171747 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

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

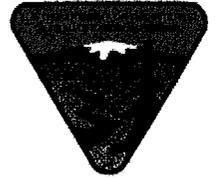


**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE**

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, LP
Well No: NBU 1022-511BS
API No: 43-047-53571

Location: NESE, Sec. 5, T10S, R22E
Lease No: UTU-01191
Agreement: Natural Butte

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: blm_ut_vn_opreport@blm.gov
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_x 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_x 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 will be reported as quickly as possible to the BLM and affected livestock operators. Operators will develop and employ prevention measures to avoid damaging fences, gates, and cattle guards, including upgrading cattle guard 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 will be braced and tied off per the BLM guidance. Where the fence is crossed by a road, the fence will be braced and a cattle guard and gate installed per BLM guidance.

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

SITE SPECIFIC DOWNHOLE COAs:

- Gamma Ray Log shall be run from Total Depth to Surface.
- CBL will be run from TD to TOC.
- Kerr-McGee Oil & Gas Onshore L.P.. shall adhere to all referenced requirements in the SOP (version: "Standard Operating Practice Agreement for the Greater Natural Buttes Field", Oct 21, 2012). The operator shall also comply with applicable laws and regulations; with lease terms Onshore Oil and Gas Orders, NTL's; and with other orders and instructions of the, authorized officer.

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 in CD (compact disc) format to the Vernal BLM Field Office. 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.
- 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 (¼ ¼, 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
5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-01191	
SUNDRY NOTICES AND REPORTS ON WELLS	
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	
1. TYPE OF WELL Gas Well	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	8. WELL NAME and NUMBER: NBU 1022-511BS
PHONE NUMBER: 720 929-6100	9. API NUMBER: 43047535710000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1947 FSL 0175 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESE Section: 05 Township: 10.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
	COUNTY: UINTAH
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 3/12/2014	<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 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 checked="" 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.

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the Utah Division of Oil, Gas and Mining

Date: February 12, 2014

By:

NAME (PLEASE PRINT) Teena Paulo	PHONE NUMBER 720 929-6236	TITLE Staff Regulatory Specialist
SIGNATURE N/A	DATE 2/5/2014	



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047535710000

API: 43047535710000

Well Name: NBU 1022-511BS

Location: 1947 FSL 0175 FEL QTR NESE SEC 05 TWNP 100S RNG 220E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 3/12/2013

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? Yes No
- Has the approved source of water for drilling changed? Yes No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes No
- Is bonding still in place, which covers this proposed well? Yes No

Signature: Teena Paulo

Date: 2/5/2014

Title: Staff Regulatory Specialist Representing: KERR-MCGEE OIL & GAS ONSHORE, L.P.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-01191
1. TYPE OF WELL Gas Well	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	8. WELL NAME and NUMBER: NBU 1022-511BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1947 FSL 0175 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESE Section: 05 Township: 10.0S Range: 22.0E Meridian: S	9. API NUMBER: 43047535710000
PHONE NUMBER: 720 929-6100	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
	COUNTY: Uintah
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 3/14/2014	<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.

Spud well 03/14/2014 @ 12:30. 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 03/23/2014.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 March 27, 2014**

NAME (PLEASE PRINT) Doreen Green	PHONE NUMBER 435 781-9758	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 3/17/2014	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-01191
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SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047535710000
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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: 1947 FSL 0175 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESE Section: 05 Township: 10.0S Range: 22.0E Meridian: S	COUNTY: UINTAH STATE: UTAH
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<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: 7/1/2014	<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
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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 TD 2,474 ft.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 July 01, 2014

NAME (PLEASE PRINT) Kay E. Kelly	PHONE NUMBER 720 929 6582	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 7/1/2014	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-01191
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
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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
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1947 FSL 0175 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESE Section: 05 Township: 10.0S Range: 22.0E Meridian: S	COUNTY: UINTAH STATE: UTAH

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<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 9/11/2014	<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
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	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

STARTING COMPLETING THE WELL. THE WELL TD AT 9,050 ft. THANK YOU.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 September 12, 2014**

NAME (PLEASE PRINT) Kay E. Kelly	PHONE NUMBER 720 929 6582	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 9/11/2014	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-01191
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<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: 12/16/2014	<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
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	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

THE WELL IS TD AT 9,050'. WAITING ON COMPLETION OPERATIONS TO BEGIN. THANK YOU.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 December 17, 2014

NAME (PLEASE PRINT) Kay E. Kelly	PHONE NUMBER 720 929 6582	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 12/16/2014	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-01191
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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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
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1947 FSL 0175 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESE Section: 05 Township: 10.0S Range: 22.0E Meridian: S	COUNTY: UINTAH	
	STATE: UTAH	
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 2/27/2015 <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"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input checked="" type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> OTHER	
	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
<p>The NBU 1022-511BS was placed on production 02/27/2015 after a new well completion. Producing from the MESAVERDE.</p> <div style="text-align: right; margin-top: 20px;"> <p>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY March 02, 2015</p> </div>		
NAME (PLEASE PRINT) Doreen Green	PHONE NUMBER 435 781-9758	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 3/2/2015	

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.
UTU01191

1a. Type of Well Oil Well Gas Well Dry Other

b. Type of Completion New Well Work Over Deepen Plug Back Diff. Resvr.
Other _____

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

3. Address: P.O. BOX 173779
DENVER, CO 80217
3a. Phone No. (include area code)
Ph: 720-929-6808

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
At surface NESE 1947FSL 175FEL 39.976083 N Lat, 109.454890 W Lon
At top prod interval reported below NESE 2552FSL 522FEL
At total depth NESE 2547FSL 507FEL 39.977717 N Lat, 109.456114 W Lon

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.
UTU63047A

8. Lease Name and Well No.
NBU 1022-511BS

9. API Well No. 43-047-53571

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
03/14/2014

15. Date T.D. Reached
07/13/2014

16. Date Completed
 D & A Ready to Prod.
02/27/2015

17. Elevations (DF, KB, RT, GL)*
5080 KB

18. Total Depth: MD 9050
TVD 8989

19. Plug Back T.D.: MD 8984
TVD 8923

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	2446		650		0	
7.875	4.500 I-80	11.6	18	9031		1605		1290	

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	8455							

25. Producing Intervals

26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) MESA VERDE	6794	9050	6934 TO 8890	0.410	192	OPEN
B)						
C)						
D)						

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

Depth Interval	Amount and Type of Material
6934 TO 8890	PUMP 11240 BBLS SLICKWATER, 48 BBLS HCL ACID (12.5%-18%), 233793 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
02/27/2015	03/14/2015	24	→	10.0	1892.0	360.0			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 1179	1674.0	→	10	1892	360		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 #296524 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

<p>30. Summary of Porous Zones (Include Aquifers):</p> <p>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.</p>	<p>31. Formation (Log) Markers</p>
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Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
				GREEN RIVER	1201
				BIRD'S NEST	1501
				MAHOGANY	1991
				WASATCH	4431
				MESA VERDE	6794

32. Additional remarks (include plugging procedure):

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 #296524 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 03/27/2015

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.

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US ROCKIES REGION
Operation Summary Report

US ROCKIES REGION									
Operation Summary Report									
Well: NBU 1022-51BS YELLOW					Spud date: 3/25/2014				
Project: UTAH-UINTAH			Site: NBU 1022-5I PAD			Rig name no.: PROPETRO 12/12, SST 57/57			
Event: DRILLING			Start date: 3/25/2014			End date: 7/15/2014			
Active datum: RKB @5,080.00usft (above Mean Sea Level)					UWI: NE/SE/0/10/S/22/E/5/0/0/26/PM/S/1947/E/0/175/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation	
3/25/2014	13:00 - 14:00	1.00	MIRU	01	C	P	58	PRE JOB SAFETY MEETING. SKID RIG 20'. RIG UP SET MATTING BOARD, SET RIG IN PLACE, CATWALK, PIPE RACKS, PLACE BOTTOM HOLE ASSEMBLY.	
	14:00 - 15:00	1.00	MIRU	01	C	P	58	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.	
	15:00 - 16:30	1.50	DRLSUR	02	B	P	58	PICK UP NOV 1.83 DEGREE BENT MOTOR (RUN # 4) .17 REV/GAL PICK UP 12 1/4" DRILL BIT. SPUD @ 3/25/2014 15:00. 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 2 CENTRIFUGE DE WATERING AND RUNNING VOLUME OVER BOTH SHAKERS.	
	16:30 - 18:30	2.00	DRLSUR	06	A	P	224	CONDUCT PRE JOB SAFETY MEETING. CIRCULATE 15 MINUTES AND TRIP OUT OF THE HOLE. BREAK 12 1/4" BIT. MAKE UP BAKER HUGHES 11" BIT. PICK UP 11" BHA DIRECTIONAL ASSEMBLY AND SCRIBE MOTOR. INSTALL EM TOOL AND TRIP IN HOLE.	

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-51BS YELLOW

Spud date: 3/25/2014

Project: UTAH-UINTAH

Site: NBU 1022-5I PAD

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

Event: DRILLING

Start date: 3/25/2014

End date: 7/15/2014

Active datum: RKB @5,080.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/5/0/0/26/PM/S/1947/E/0/175/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	18:30 - 0:00	5.50	DRLSUR	02	B	P	224	DRILL 11" SURFACE HOLE FROM 210' TO 1000' (790' @ 144 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120, GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1,420/1,200. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 82/60/70 K. DRAG 12 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 16' HIGH & 0.2' LEFT OF THE LINE WITH 74' OF SLIDE @ 9%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
3/26/2014	0:00 - 5:30	5.50	DRLSUR	02	B	P	1014	DRILL 11" SURFACE HOLE FROM 1000' TO 1600' (600' @ 109 FPH). WEIGHT ON BIT 18-21 K STROKES PER MINUTE=120, GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1150/950. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 65/52/58 K. DRAG 12 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 9.2' HIGH & 1.2' LEFT OF THE LINE WITH 42' 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.
	5:30 - 6:00	0.50	DRLSUR	23		P	1614	CONDUCT PRE TOUR SAFETY MEETING. TOPIC: MAKING CONNECTIONS.
	6:00 - 15:30	9.50	DRLSUR	02	B	P	1614	DRILL 11" SURFACE HOLE FROM 1600' TO 2460' (860' @ 109 FPH). TD WELL AT 2460'. WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120, GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1150/950. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 65/52/58 K. DRAG 12 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 9.2' HIGH & 1.2' LEFT OF THE LINE WITH 42' 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.

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-51BS YELLOW

Spud date: 3/25/2014

Project: UTAH-UINTAH

Site: NBU 1022-5I PAD

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

Event: DRILLING

Start date: 3/25/2014

End date: 7/15/2014

Active datum: RKB @5,080.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/5/0/0/26/PM/S/1947/E/0/175/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	15:30 - 17:30	2.00	DRLSUR	05	C	P	2474	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.
	17:30 - 18:00	0.50	DRLSUR	23		P	2474	CONDUCT PRE TOUR SAFETY MEETING. TOPIC: LAYING DOWN DRILL PIPE AND RUNNING CASING.
	18:00 - 22:30	4.50	DRLSUR	06	A	P	2474	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.
	22:30 - 0:00	1.50	CSGSUR	12	C	P	2474	RUN 55 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 CASING TO BOTTOM WITH NO PROBLEMS. SET FLOAT SHOE @ 2,427' KB. SET TOP OF BAFFLE PLATE @ 2,381'.
3/27/2014	0:00 - 1:30	1.50	CSGSUR	12	C	P	2474	RUN 55 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 CASING TO BOTTOM WITH NO PROBLEMS. SET FLOAT SHOE @ 2,427' KB. SET TOP OF BAFFLE PLATE @ 2,381'.

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-51BS YELLOW

Spud date: 3/25/2014

Project: UTAH-UINTAH

Site: NBU 1022-5I PAD

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

Event: DRILLING

Start date: 3/25/2014

End date: 7/15/2014

Active datum: RKB @5,080.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/5/0/0/26/PM/S/1947/E/0/175/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	1:30 - 6:00	4.50	CSGSUR	12	E	P	2474	<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 2,500 PSI.</p> <p>PUMP 170 BBLS OF WATER AHEAD CLEARING SHOE.</p> <p>MIX AND PUMP 20 BBLS OF GEL WATER FLUSH AHEAD OF CEMENT.</p> <p>MIX & PUMP 300 SX OF PREMIUM TAIL CEMENT WITH 2% CACL2 & 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 149 BBLS OF FRESH WATER. NO RETURNS THROUGH OUT JOB.</p> <p>FINAL LIFT OF 310 PSI AT 3.5 BBL/MINUTE.</p> <p>BUMPED PLUG @ 700 PSI. HELD @ 700 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 @ 03/27/2014 0600</p> <p>TOP JOB # 1: PUMP CEMENT DOWN ONE INCH PIPE WITH 150 SX (30.7 BBLS) PREMIUM CEMENT WITH 4% CACL2 & .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 SHUT DOWN AND WASH UP.</p> <p>WAIT 3.5 HOURS ON CEMENT.</p> <p>TOP JOB # 2 : PUMP CEMENT DOWN BACKSIDE W/ 200 SX (40.9 BBLS) PREMIUM CEMENT WITH 4% CACL2 & .25 LB/SX FLOCELE. 30.7 BBLS OF SLURRY MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. 1 BBL CEMENT RETURNS TO SURFACE. CEMENT STAYED AT SURFACE.</p> <p>RIG DOWN CEMENTERS.</p> <p>(CEMENT JOB FINISHED @ 03/27/2014 06:00)</p>
7/9/2014	14:30 - 15:30	1.00	MIRU3	01	C	P	2474	SKID RIG
	15:30 - 16:00	0.50	PRPSPD	14	A	P	2474	NU BOP
	16:00 - 19:30	3.50	PRPSPD	15	A	P	2474	<p>HOLD SAFETY MEETING, RUN TEST ASSY, TEST BOP 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, TEST BOP'S, 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</p>
	19:30 - 20:00	0.50	PRPSPD	14	B	P	2474	INSTALL WEAR BUSHING
	20:00 - 20:30	0.50	PRPSPD	06	A	P	2474	PU DIRECTIONAL BHA, SCRIBE, INSTALL MWD TOOL
	20:30 - 21:30	1.00	PRPSPD	06	A	P	2474	TIH WITH NEW BHA. TAG CEMENT @ 2329'
	21:30 - 22:30	1.00	DRLPRC	02	F	P	2474	DRILL FLOAT EQUIPMENT AND CEMENT, CLEAN OUT RAT HOLE. 420 GPM, 30 RPM, 5-10 WOB

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-51BS YELLOW

Spud date: 3/25/2014

Project: UTAH-UINTAH

Site: NBU 1022-5I PAD

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

Event: DRILLING

Start date: 3/25/2014

End date: 7/15/2014

Active datum: RKB @5,080.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/5/0/0/26/PM/S/1947/E/0/175/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	22:30 - 0:00	1.50	DRLPRC	02	D	P	2474	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 2474' TO / 2615' = 141' @ 94' PER HOUR WEIGHT ON BIT = 15-24K STROKES PER MINUTE 2 PUMPS @ 60/6C GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83 TOP DRIVE RPM = 55-65 TOTAL RPM = 83-153 FT/LBS TORQUE = 6-8K STAND PIPE PRESSURE ON BOTTOM = 1500 STAND PIPE PRESSURE OFF BOTTOM = 1000 STRING WEIGHT UP/DOWN/ROTATING = 118K / 90K / 101K HOLE IN GOOD CONDITION BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 8.9 PPG VISCOSITY = 29 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
7/10/2014	0:00 - 8:00	8.00	DRLPRC	02	D	P	2615	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 2615' TO / 3428' = 813' @ 102' PER HOUR WEIGHT ON BIT = 21-28K STROKES PER MINUTE 2 PUMPS @ 60/6C GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83 TOP DRIVE RPM = 55-65 TOTAL RPM = 83-153 FT/LBS TORQUE = 6-9K STAND PIPE PRESSURE ON BOTTOM = 1600 STAND PIPE PRESSURE OFF BOTTOM = 1200 STRING WEIGHT UP/DOWN/ROTATING = 12CK / 80K / 106K HOLE IN GOOD CONDITION BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 8.9 PPG VISCOSITY = 27 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-51BS YELLOW

Spud date: 3/25/2014

Project: UTAH-UINTAH

Site: NBU 1022-5I PAD

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

Event: DRILLING

Start date: 3/25/2014

End date: 7/15/2014

Active datum: RKB @5,080.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/5/0/0/26/PM/S/1947/E/0/175/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	8:00 - 12:30	4.50	DRLPRC	02	D	P	3428	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 3428' TO / 3791' = 363' @ 81' PER HOUR WEIGHT ON BIT = 21-28K STROKES PER MINUTE 2 PUMPS @ 60/6C GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83 TOP DRIVE RPM = 55-65 TOTAL RPM = 83-153 FT/LBS TORQUE = 6-9K STAND PIPE PRESSURE ON BOTTOM = 1650 STAND PIPE PRESSURE OFF BOTTOM = 1300 STRING WEIGHT UP/DOWN/ROTATING = 14CK / 85K / 114K HOLE IN GOOD CONDITION BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 8.9 PPG VISCOSITY = 27 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB BIT TRYING TO DROP TO FAST WHILE SLIDING TO HOLD IT UP
	12:30 - 13:30	1.00	DRLPRC	21	E	Z	3791	*** WAIT ON DIRECTIONAL COMPANY TO FIGURE OUT IF TOOL FACE CHANGED
	13:30 - 14:00	0.50	DRLPRC	07	A	P	3791	LUBRICATE RIG
	14:00 - 0:00	10.00	DRLPRC	02	D	P	3791	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 3791' TO / 4557' = 766' @ 77' PER HOUR WEIGHT ON BIT = 21-27K STROKES PER MINUTE 2 PUMPS @ 60/6C GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83 TOP DRIVE RPM = 55-65 TOTAL RPM = 83-153 FT/LBS TORQUE = 8-13K STAND PIPE PRESSURE ON BOTTOM = 1700 STAND PIPE PRESSURE OFF BOTTOM = 1200 STRING WEIGHT UP/DOWN/ROTATING = 175K / 93K / 128K HOLE IN GOOD CONDITION BOS CONVENTIONAL - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 9.0 PPG VISCOSITY = 29 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-51BS YELLOW

Spud date: 3/25/2014

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Site: NBU 1022-5I PAD

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

Event: DRILLING

Start date: 3/25/2014

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Active datum: RKB @5,080.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/5/0/0/26/PM/S/1947/E/0/175/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
7/11/2014	0:00 - 8:00	8.00	DRLPRV	02	B	P	4557	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 4557' TO / 5517' = 960' @ 120' PER HOUR WEIGHT ON BIT = 18-25K STROKES PER MINUTE 2 PUMPS @ 60/6C GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83 TOP DRIVE RPM = 55-65 TOTAL RPM = 83-153 FT/LBS TORQUE = 9-14K STAND PIPE PRESSURE ON BOTTOM = 1900 STAND PIPE PRESSURE OFF BOTTOM = 1400 STRING WEIGHT UP/DOWN/ROTATING = 185K / 115K / 136K HOLE IN GOOD CONDITION BOS CONVENTIONAL - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 9.1 PPG VISCOSITY = 31 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	8:00 - 16:00	8.00	DRLPRV	02	B	P	5517	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 5517' TO / 6267' = 750' @ 94' PER HOUR WEIGHT ON BIT = 18-25K STROKES PER MINUTE 2 PUMPS @ 60/6C GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83 TOP DRIVE RPM = 55-65 TOTAL RPM = 83-153 FT/LBS TORQUE = 11-17K STAND PIPE PRESSURE ON BOTTOM = 1900 STAND PIPE PRESSURE OFF BOTTOM = 1650 STRING WEIGHT UP/DOWN/ROTATING = 21CK / 128K / 160K HOLE IN GOOD CONDITION BOS CONVENTIONAL - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 9.1 PPG VISCOSITY = 31 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	16:00 - 16:30	0.50	DRLPRV	07	A	P	6267	LUBRICATE RIG

US ROCKIES REGION

Operation Summary Report

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

Event: DRILLING

Start date: 3/25/2014

End date: 7/15/2014

Active datum: RKB @5,080.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/5/0/0/26/PM/S/1947/E/0/175/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	16:30 - 0:00	7.50	DRLPRV	02	B	P	6267	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 6267' TO / 6820' = 553' @ 74' PER HOUR WEIGHT ON BIT = 18-27K STROKES PER MINUTE 2 PUMPS @ 60/6C GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83 TOP DRIVE RPM = 55-65 TOTAL RPM = 83-153 FT/LBS TORQUE = 12-19K STAND PIPE PRESSURE ON BOTTOM = 2100 STAND PIPE PRESSURE OFF BOTTOM = 1600 STRING WEIGHT UP/DOWN/ROTATING = 24CK / 125K / 164K HOLE IN GOOD CONDITION BOS CONVENTIONAL - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 9.1 PPG VISCOSITY = 31 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
7/12/2014	0:00 - 8:00	8.00	DRLPRV	02	B	P	6820	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 6820' TO / 7454' = 634' @ 79' PER HOUR WEIGHT ON BIT = 21-27K STROKES PER MINUTE 2 PUMPS @ 60/6C GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83 TOP DRIVE RPM = 55-65 TOTAL RPM = 83-153 FT/LBS TORQUE = 13-19K STAND PIPE PRESSURE ON BOTTOM = 2250 STAND PIPE PRESSURE OFF BOTTOM = 1750 STRING WEIGHT UP/DOWN/ROTATING = 24CK / 140K / 168K HOLE IN GOOD CONDITION BOS CONVENTIONAL - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 9.2 PPG VISCOSITY = 32 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-51BS YELLOW

Spud date: 3/25/2014

Project: UTAH-UINTAH

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UWI: NE/SE/O/10/S/22/E/5/O/0/26/PM/S/1947/E/0/175/O/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	8:00 - 12:30	4.50	DRLPRV	02	B	P	7454	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 7454' TO / 7812' = 358' @ 80' PER HOUR WEIGHT ON BIT = 21-27K STROKES PER MINUTE 2 PUMPS @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83 TOP DRIVE RPM = 55-65 TOTAL RPM = 83-153 FT/LBS TORQUE = 13-19K STAND PIPE PRESSURE ON BOTTOM = 2250 STAND PIPE PRESSURE OFF BOTTOM = 1750 STRING WEIGHT UP/DOWN/ROTATING = 26CK / 130K / 180K HOLE IN GOOD CONDITION BOS CONVENTIONAL - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 9.2 PPG VISCOSITY = 32 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB UNABLE TO DRILL AFTER PUTTING IN LAST SLIDE - ACTS LIKE BAD MUD MOTOR
	12:30 - 14:00	1.50	DRLPRV	22	L	X	7812	***PUMP NUT SHELL SWEEPS AROUND AND ATTEMPT TO DRILL - BUILD & PUMP PILL - PREPARE TO TRIP OUT FOR MUD MOTOR
	14:00 - 21:00	7.00	DRLPRV	22	L	X	7812	***TRIP OUT FOR MUD MOTOR - PUMP PILL & TRIP OUT OF HOLE - PULL OFF BTM @ 310K - LAY DOWN MWD TOOLS & MUD MOTOR MUD MOTOR WOULD NOT DRAIN & COULD NOT FEEL THE POWER SECTION ROTATE - BIT IN GOOD SHAPE & WILL RERUN. TAG @ 7776'. WASH DOWN TO 7812'
	21:00 - 0:00	3.00	DRLPRV	02	B	P	7812	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 7812' TO / 7981' = 169' @ 56' PER HOUR WEIGHT ON BIT = 21-27K STROKES PER MINUTE 2 PUMPS @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 100 TOP DRIVE RPM = 40-50 TOTAL RPM = 100-150 FT/LBS TORQUE = 13-17K STAND PIPE PRESSURE ON BOTTOM = 2300 STAND PIPE PRESSURE OFF BOTTOM = 1800 STRING WEIGHT UP/DOWN/ROTATING = 265K / 138K / 189K HOLE IN GOOD CONDITION BOS CONVENTIONAL - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 9.3 PPG VISCOSITY = 32 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-51BS YELLOW		Spud date: 3/25/2014	
Project: UTAH-UINTAH		Site: NBU 1022-5I PAD	Rig name no.: PROPETRO 12/12, SST 57/57
Event: DRILLING		Start date: 3/25/2014	End date: 7/15/2014
Active datum: RKB @5,080.00usft (above Mean Sea Level)		UWI: NE/SE/0/10/S/22/E/5/0/0/26/PM/S/1947/E/0/175/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
7/13/2014	0:00 - 8:00	8.00	DRLPRV	02	B	P	7981	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 7981' TO / 8480' = 499' @ 62.4' PER HOUR WEIGHT ON BIT = 22-27K STROKES PER MINUTE 2 PUMPS @ 60/6C GALLONS PER MINUTE = 590 MUD MOTOR RPM = 100 TOP DRIVE RPM = 40-50 TOTAL RPM = 100-150 FT/LBS TORQUE = 13-18K STAND PIPE PRESSURE ON BOTTOM = 2450 STAND PIPE PRESSURE OFF BOTTOM = 1950 STRING WEIGHT UP/DOWN/ROTATING = 30CK / 160K / 198K HOLE IN GOOD CONDITION BOS CONVENTIONAL - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 11.1 PPG VISCOSITY = 40 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	8:00 - 16:00	8.00	DRLPRV	02	B	P	8480	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 8480' TO / 8934' = 454' @ 56.8' PER HOUR WEIGHT ON BIT = 22-27K STROKES PER MINUTE 1 PUMP @ 105 GALLONS PER MINUTE = 515 MUD MOTOR RPM = 100 TOP DRIVE RPM = 40-50 TOTAL RPM = 100-150 FT/LBS TORQUE = 13-18K STAND PIPE PRESSURE ON BOTTOM = 2550 STAND PIPE PRESSURE OFF BOTTOM = 2300 STRING WEIGHT UP/DOWN/ROTATING = 30CK / 160K / 202K HOLE IN GOOD CONDITION BOS CONVENTIONAL - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 11.6 PPG VISCOSITY = 38 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	16:00 - 16:30	0.50	DRLPRV	07	A	P	8934	LUBRICATE RIG

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-51BS YELLOW

Spud date: 3/25/2014

Project: UTAH-UINTAH

Site: NBU 1022-5I PAD

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

Event: DRILLING

Start date: 3/25/2014

End date: 7/15/2014

Active datum: RKB @5,080.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/5/0/0/26/PM/S/1947/E/0/175/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	16:30 - 19:00	2.50	DRLPRV	02	B	P	8934	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 8934' TO / 9050' = 116' @ 46' PER HOUR WEIGHT ON BIT = 22-27K STROKES PER MINUTE 1 PUMPS @ 100 GALLONS PER MINUTE = 490 MUD MOTOR RPM = 83 TOP DRIVE RPM = 40-50 TOTAL RPM = 83-133 FT/LBS TORQUE = 13-17K STAND PIPE PRESSURE ON BOTTOM = 2600 STAND PIPE PRESSURE OFF BOTTOM = 2100 STRING WEIGHT UP/DOWN/ROTATING = 315K / 160K / 202K HOLE IN GOOD CONDITION BOS CONVENTIONAL - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 11.8 PPG VISCOSITY = 38 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	19:00 - 20:30	1.50	DRLPRV	05	C	P	9050	CIRCULATE @ TD BEFORE WIPER TRIP.
	20:30 - 21:30	1.00	DRLPRV	06	E	P	9050	10 STAND WIPER TRIP. PUMP 6 STANDS OFF BOTTOM. PULL 315K FIRST DRY STAND
	21:30 - 23:00	1.50	DRLPRV	05	C	P	9050	CIRCULATE. PUMP HIGH VIS SWEEP. SWEEP RETURNED MOSTLY FINES WITH A SMALL INCREASE IN CUTTINGS
	23:00 - 0:00	1.00	DRLPRV	06	D	P	9050	RU WYOMING CASERS LD TRUCK AND FLAGPOLE. PUMP OUT 7 STANDS. BEGIN LDDP. PULL 310K
7/14/2014	0:00 - 8:30	8.50	DRLPRV	06	D	P	9050	CONTINUE TO LDDP, HWDP, AND DIRECTIONAL BHA - HOLE IN GOOD SHAPE
	8:30 - 9:30	1.00	DRLPRV	06	J	P	9050	LAY DOWN DIRECTIONAL TOOLS & MWD
	9:30 - 10:00	0.50	CSGPRO	14	B	P	9050	PULL WEAR BUSHING
	10:00 - 11:00	1.00	CSGPRO	12	A	P	9050	RU CASERS LD TRUCK, FLAG POLE AND TROUGH, POWER TONGS, TORQUE TURN, AND FLOOR
	11:00 - 17:00	6.00	CSGPRO	12	C	P	9050	RUN 91 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 @ 9031.02", PLUG BACK @ 8983.9', RAN 15 CENTS - TOP OF MESEVERDE MK JT 6931.31'.
	17:00 - 18:00	1.00	CSGPRO	05	D	P	9050	CIRCULATE / RIG DOWN WYOMING CASING SERVICE CASING TOOLS / RIG UP BAKER CEMENTING EQUIPMENT - CIRCULATE @ 105 SPM = 515 GPM @ 1150 PSI

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-5I1BS YELLOW

Spud date: 3/25/2014

Project: UTAH-UINTAH

Site: NBU 1022-5I PAD

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

Event: DRILLING

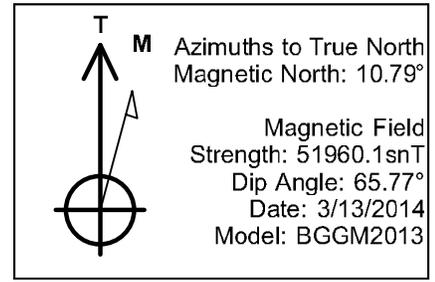
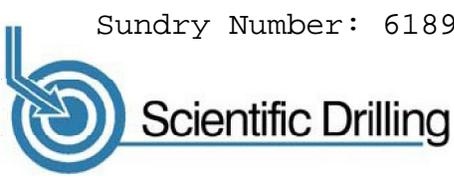
Start date: 3/25/2014

End date: 7/15/2014

Active datum: RKB @5,080.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/5/0/0/26/PM/S/1947/E/0/175/0/0

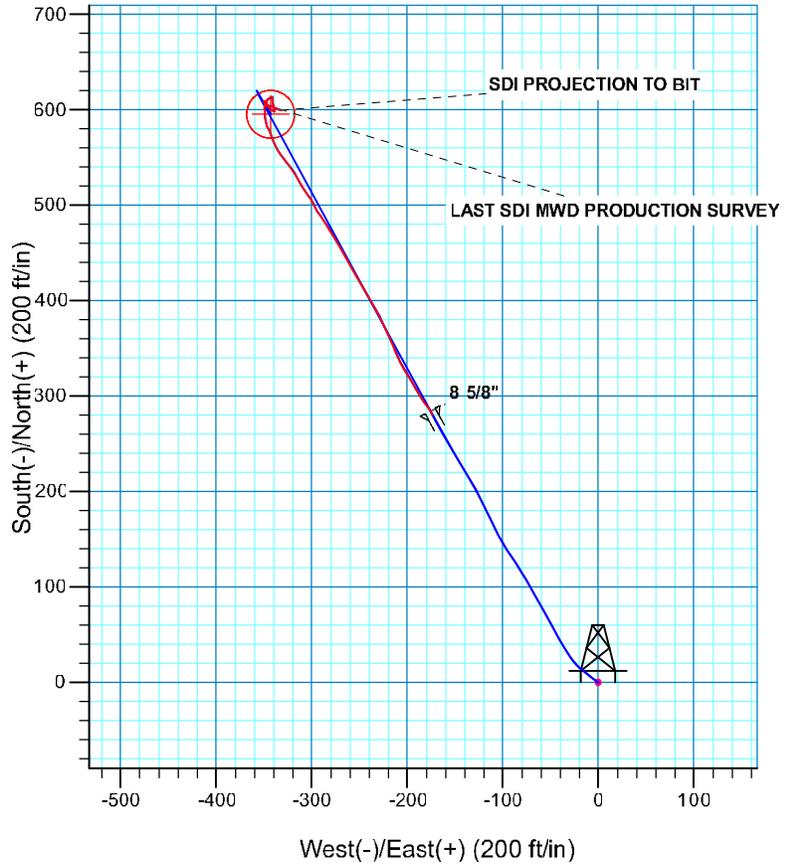
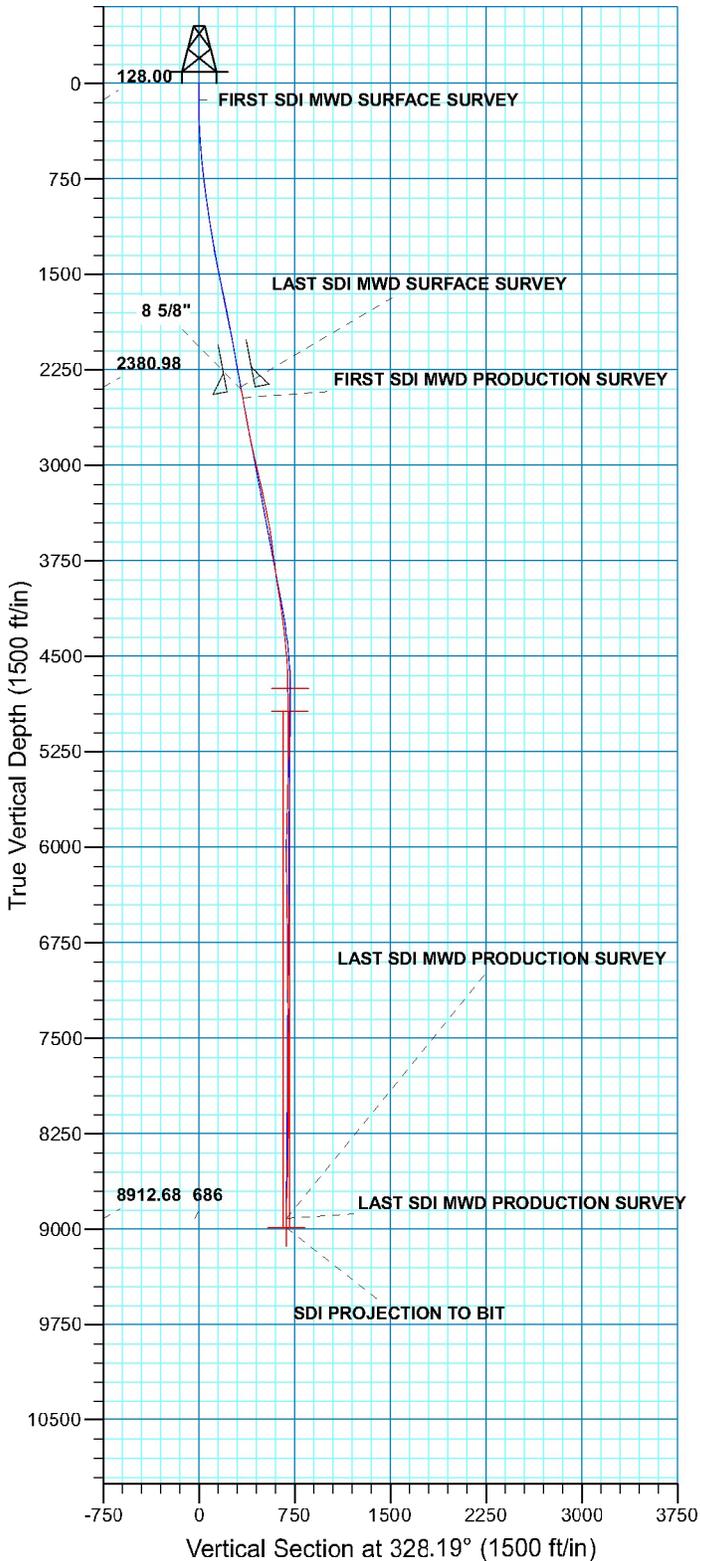
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	18:00 - 21:00	3.00	CSGPRO	12	E	P	9050	CEMENT W/ BAKER - HOLD SAFETY MEETING - TEST LINES TO 4500 PSI - PUMP 25 BBLS WATER SPACER - 178 BBLS LEAD CEMENT 505 SKS @ 12.5 PPG W/ 1.98 YIELD, MIX & PUMP 262 BBLS TAIL CEMENT 1100 SKS @ 14.3 PPG W/ 1.34 YIELD - WASH UP LINES - DISPLACE W/ 140 BBLS WATER - BUMP PLUG TO 3200 PSI - HAD 2550 PSI LIFT PRESSURE PRIOR TO BUMP PLUG / GOOD RETURNS THROUGHOUT JOB - NO CEMENT OR SPACER TO SURFACE - RIG DOWN CEMENTERS PUMPED 35% EXCESS OF HOLE VOLUME ON LEAD & TAIL CEMENT
	21:00 - 21:30	0.50	CSGPRO	12	B	P	9050	RIG DOWN CEMENTERS
	21:30 - 22:00	0.50	CSGPRO	12	B	P	9050	BACK OUT LANDING JT - INSTALL PACK OFF WITH CAMERON HAND - LAY DOWN LANDING JT
	22:00 - 0:00	2.00	RDMO	14	A	P	9050	NIPPLE DOWN BOP - CLEAN MUD TANKS - RELEASE RIG @ 7/15/2014 00:00



WELL DETAILS: NBU 1022-51BS

GL 5062 & KB 18 @ 5080.00ft (SST 57)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14521101.93	2073489.17	39.9761180	-109.4542060





Scientific Drilling

US ROCKIES REGION PLANNING

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

NBU 1022-5I PAD

NBU 1022-5I1BS

OH

Design: OH

Standard Survey Report

15 July, 2014





Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-5I1BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 5062 & KB 18 @ 5080.00ft (SST 57)
Site:	NBU 1022-5I PAD	MD Reference:	GL 5062 & KB 18 @ 5080.00ft (SST 57)
Well:	NBU 1022-5I1BS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales

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

Site	NBU 1022-5I PAD, SECTION 5 T10S R22E				
Site Position:		Northing:	14,521,098.34 usft	Latitude:	39.9761086
From:	Lat/Long	Easting:	2,073,479.64 usft	Longitude:	-109.4542402
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.99 °

Well	NBU 1022-5I1BS, 1947 FSL 175 FEL					
Well Position	+N/-S	0.00 ft	Northing:	14,521,101.93 usft	Latitude:	39.9761180
	+E/-W	0.00 ft	Easting:	2,073,489.16 usft	Longitude:	-109.4542060
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,062.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	3/13/2014	10.79	65.77	51,960

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	328.19	

Survey Program	Date 7/15/2014				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
14.00	2,409.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
2,498.00	9,050.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

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)	
0.00	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	0.00
128.00	0.44	291.51	128.00	0.16	-0.41	0.35	0.39	0.39	0.39	0.00
FIRST SDI MWD SURFACE SURVEY										
212.00	0.20	302.33	212.00	0.36	-0.83	0.74	0.29	-0.29	12.88	
294.00	2.05	306.10	293.98	1.30	-2.14	2.23	2.26	2.26	4.60	
378.00	3.64	308.88	377.87	3.86	-5.43	6.14	1.90	1.89	3.31	
468.00	4.54	307.89	467.64	7.84	-10.46	12.18	1.00	1.00	-1.10	
558.00	5.10	309.35	557.32	12.56	-16.37	19.30	0.64	0.62	1.62	
648.00	5.89	317.88	646.91	18.52	-22.56	27.63	1.26	0.88	9.48	



Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-511BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 5062 & KB 18 @ 5080.00ft (SST 57)
Site:	NBU 1022-51 PAD	MD Reference:	GL 5062 & KB 18 @ 5080.00ft (SST 57)
Well:	NBU 1022-511BS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	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)	
738.00	6.51	324.03	736.38	26.08	-28.65	37.26	1.01	0.69	6.83	
828.00	7.30	327.70	825.73	35.04	-34.70	48.07	1.00	0.88	4.08	
918.00	7.83	330.44	914.95	45.21	-40.78	59.91	0.71	0.59	3.04	
1,008.00	8.44	332.03	1,004.04	56.37	-46.91	72.63	0.72	0.68	1.77	
1,098.00	8.84	330.66	1,093.02	68.23	-53.39	86.13	0.50	0.44	-1.52	
1,188.00	9.18	330.25	1,181.91	80.50	-60.34	100.21	0.38	0.38	-0.46	
1,278.00	9.76	330.09	1,270.68	93.34	-67.71	115.01	0.65	0.64	-0.18	
1,368.00	11.26	330.88	1,359.17	107.63	-75.79	131.41	1.67	1.67	0.88	
1,458.00	12.00	326.00	1,447.32	123.06	-85.30	149.54	1.37	0.82	-5.42	
1,548.00	11.87	326.40	1,535.38	138.53	-95.65	168.14	0.17	-0.14	0.44	
1,638.00	11.78	333.58	1,623.47	154.47	-104.86	186.54	1.64	-0.10	7.98	
1,728.00	12.13	334.75	1,711.52	171.25	-112.98	205.08	0.47	0.39	1.30	
1,818.00	11.12	333.74	1,799.67	187.58	-120.86	223.11	1.14	-1.12	-1.12	
1,908.00	10.46	330.36	1,888.08	202.47	-128.74	239.92	1.02	-0.73	-3.76	
1,998.00	10.11	328.25	1,976.64	216.29	-136.93	255.98	0.57	-0.39	-2.34	
2,088.00	10.20	329.39	2,065.23	229.86	-145.15	271.85	0.24	0.10	1.27	
2,178.00	10.29	330.27	2,153.79	243.70	-153.19	287.85	0.20	0.10	0.98	
2,268.00	10.29	329.48	2,242.35	257.61	-161.26	303.91	0.16	0.00	-0.88	
2,358.00	10.64	331.85	2,330.85	271.86	-169.26	320.24	0.62	0.39	2.63	
2,409.00	10.59	331.25	2,380.98	280.12	-173.74	329.62	0.24	-0.10	-1.18	
LAST SDI MWD SURFACE SURVEY										
2,498.00	9.94	324.03	2,468.56	293.50	-182.19	345.45	1.62	-0.73	-8.11	
FIRST SDI MWD PRODUCTION SURVEY										
2,593.00	11.18	331.10	2,561.95	308.20	-191.45	362.83	1.89	1.31	7.44	
2,688.00	8.97	326.55	2,655.48	322.45	-199.99	379.43	2.47	-2.33	-4.79	
2,783.00	10.02	334.19	2,749.18	336.07	-207.67	395.05	1.72	1.11	8.04	
2,878.00	12.75	338.06	2,842.30	353.24	-215.19	413.60	2.98	2.87	4.07	
2,973.00	14.33	333.93	2,934.66	373.52	-224.27	435.63	1.95	1.66	-4.35	
3,069.00	13.10	330.85	3,027.92	393.70	-234.79	458.32	1.49	-1.28	-3.21	
3,165.00	11.78	328.92	3,121.67	411.59	-245.15	478.99	1.44	-1.38	-2.01	
3,260.00	13.01	329.71	3,214.45	429.13	-255.55	499.38	1.31	1.29	0.83	
3,355.00	12.13	331.73	3,307.18	447.15	-265.67	520.03	1.04	-0.93	2.13	
3,450.00	10.20	327.95	3,400.37	463.08	-274.86	538.40	2.17	-2.03	-3.98	
3,546.00	9.85	329.88	3,494.91	477.38	-283.49	555.11	0.51	-0.36	2.01	
3,641.00	8.35	323.21	3,588.71	489.94	-291.70	570.11	1.93	-1.58	-7.02	
3,736.00	6.60	335.95	3,682.91	500.45	-298.06	582.39	2.53	-1.84	13.41	
3,832.00	8.09	321.71	3,778.13	510.79	-304.49	594.57	2.44	1.55	-14.83	
3,927.00	8.34	333.57	3,872.16	522.21	-311.70	608.07	1.80	0.26	12.48	
4,022.00	7.47	327.16	3,966.26	533.57	-318.12	621.11	1.30	-0.92	-6.75	
4,117.00	9.94	321.18	4,060.16	545.14	-326.61	635.42	2.77	2.60	-6.29	
4,212.00	8.09	327.16	4,153.98	557.15	-335.38	650.24	2.18	-1.95	6.29	
4,308.00	7.39	343.07	4,249.12	568.73	-340.84	662.97	2.34	-0.73	16.57	
4,403.00	6.68	333.14	4,343.40	579.51	-345.11	674.38	1.48	-0.75	-10.45	



Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-511BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 5062 & KB 18 @ 5080.00ft (SST 57)
Site:	NBU 1022-51 PAD	MD Reference:	GL 5062 & KB 18 @ 5080.00ft (SST 57)
Well:	NBU 1022-511BS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	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)	
4,498.00	5.10	351.86	4,437.91	588.62	-348.21	683.75	2.60	-1.66	19.71	
4,593.00	3.96	356.96	4,532.61	596.07	-348.98	690.49	1.27	-1.20	5.37	
4,689.00	3.08	352.65	4,628.43	601.94	-349.49	695.75	0.96	-0.92	-4.49	
4,784.00	1.63	23.07	4,723.35	605.72	-349.28	698.85	1.96	-1.53	32.02	
4,879.00	1.47	35.11	4,818.31	607.96	-348.05	700.10	0.38	-0.17	12.67	
4,975.00	1.11	45.19	4,914.29	609.62	-346.68	700.79	0.44	-0.38	10.50	
5,070.00	1.04	50.57	5,009.27	610.82	-345.37	701.12	0.13	-0.07	5.66	
5,165.00	0.97	62.08	5,104.26	611.74	-343.99	701.18	0.22	-0.07	12.12	
5,260.00	0.84	51.26	5,199.25	612.55	-342.74	701.21	0.23	-0.14	-11.39	
5,355.00	0.88	70.78	5,294.24	613.23	-341.50	701.13	0.31	0.04	20.55	
5,450.00	0.79	191.16	5,389.23	612.83	-340.94	700.49	1.53	-0.09	126.72	
5,545.00	0.94	186.83	5,484.22	611.41	-341.16	699.40	0.17	0.16	-4.56	
5,640.00	0.97	172.30	5,579.21	609.84	-341.15	698.06	0.26	0.03	-15.29	
5,735.00	1.37	172.32	5,674.19	607.92	-340.89	696.29	0.42	0.42	0.02	
5,830.00	1.47	166.55	5,769.16	605.61	-340.45	694.10	0.18	0.11	-6.07	
5,926.00	1.49	165.97	5,865.13	603.20	-339.86	691.74	0.03	0.02	-0.60	
6,021.00	1.49	170.80	5,960.09	600.78	-339.36	689.42	0.13	0.00	5.08	
6,116.00	0.97	174.85	6,055.07	598.76	-339.10	687.57	0.55	-0.55	4.26	
6,212.00	0.26	250.43	6,151.07	597.88	-339.23	686.89	0.98	-0.74	78.73	
6,307.00	1.64	308.05	6,246.05	598.64	-340.50	688.21	1.60	1.45	60.65	
6,402.00	1.36	303.42	6,341.02	600.10	-342.51	690.51	0.32	-0.29	-4.87	
6,498.00	1.14	310.37	6,437.00	601.35	-344.19	692.45	0.28	-0.23	7.24	
6,593.00	0.90	308.76	6,531.98	602.43	-345.49	694.05	0.25	-0.25	-1.69	
6,688.00	0.53	302.90	6,626.97	603.13	-346.44	695.16	0.40	-0.39	-6.17	
6,783.00	0.62	327.16	6,721.97	603.80	-347.09	696.07	0.27	0.09	25.54	
6,878.00	0.53	343.16	6,816.96	604.66	-347.50	697.01	0.19	-0.09	16.84	
6,973.00	0.26	74.39	6,911.96	605.13	-347.42	697.37	0.63	-0.28	96.03	
7,068.00	0.18	97.94	7,006.96	605.17	-347.06	697.21	0.13	-0.08	24.79	
7,163.00	0.59	171.20	7,101.96	604.67	-346.84	696.67	0.59	0.43	77.12	
7,258.00	1.32	349.05	7,196.95	605.26	-346.97	697.24	2.01	0.77	187.21	
7,354.00	1.14	341.40	7,292.93	607.25	-347.49	699.20	0.25	-0.19	-7.97	
7,449.00	0.35	31.85	7,387.92	608.39	-347.63	700.25	1.01	-0.83	53.11	
7,544.00	0.44	92.32	7,482.92	608.62	-347.12	700.18	0.43	0.09	63.65	
7,640.00	0.70	252.63	7,578.92	608.43	-347.31	700.12	1.17	0.27	166.99	
7,735.00	0.18	244.10	7,673.92	608.20	-348.00	700.28	0.55	-0.55	-8.98	
7,831.00	0.57	299.92	7,769.92	608.37	-348.55	700.71	0.51	0.41	58.15	
7,926.00	0.44	300.18	7,864.91	608.79	-349.27	701.45	0.14	-0.14	0.27	
8,021.00	0.20	264.26	7,959.91	608.95	-349.75	701.85	0.32	-0.25	-37.81	
8,116.00	0.24	203.37	8,054.91	608.75	-350.00	701.80	0.24	0.04	-64.09	
8,211.00	0.84	143.56	8,149.91	608.01	-349.66	701.00	0.79	0.63	-62.96	
8,307.00	0.79	138.46	8,245.90	606.95	-348.80	699.64	0.09	-0.05	-5.31	
8,402.00	0.88	145.84	8,340.89	605.86	-347.96	698.27	0.15	0.09	7.77	
8,498.00	0.97	126.15	8,436.87	604.77	-346.89	696.78	0.34	0.09	-20.51	
8,593.00	1.93	99.44	8,531.84	604.03	-344.66	694.98	1.21	1.01	-28.12	



Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-511BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 5062 & KB 18 @ 5080.00ft (SST 57)
Site:	NBU 1022-5I PAD	MD Reference:	GL 5062 & KB 18 @ 5080.00ft (SST 57)
Well:	NBU 1022-511BS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	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)
8,689.00	1.76	120.00	8,627.79	603.03	-341.79	692.61	0.71	-0.18	21.42
8,784.00	1.49	105.50	8,722.76	601.97	-339.34	690.42	0.52	-0.28	-15.26
8,879.00	1.56	107.90	8,817.72	601.24	-336.92	688.53	0.10	0.07	2.53
8,974.00	1.67	111.56	8,912.68	600.33	-334.40	686.43	0.16	0.12	3.85
LAST SDI MWD PRODUCTION SURVEY									
9,050.00	1.67	111.56	8,988.65	599.52	-332.34	684.65	0.00	0.00	0.00
SDI PROJECTION TO BIT									

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 1022-511BS	0.00	0.00	8,988.00	595.12	-342.98	14,521,691.02	2,073,135.92	39.9777520	-109.4554300
- actual wellpath misses target center by 11.49ft at 9049.11ft MD (8987.76 TVD, 599.53 N, -332.36 E)									
- Circle (radius 25.00)									

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
128.00	128.00	0.16	-0.41	FIRST SDI MWD SURFACE SURVEY
2,409.00	2,380.98	280.12	-173.74	LAST SDI MWD SURFACE SURVEY
2,498.00	2,468.56	293.50	-182.19	FIRST SDI MWD PRODUCTION SURVEY
8,974.00	8,912.68	600.33	-334.40	LAST SDI MWD PRODUCTION SURVEY
9,050.00	8,988.65	599.52	-332.34	SDI PROJECTION TO BIT

Checked By: _____ Approved By: _____ Date: _____

US ROCKIES REGION
Operation Summary Report

US ROCKIES REGION								
Operation Summary Report								
Well: NBU 1022-51BS YELLOW					Spud date: 3/25/2014			
Project: UTAH-UINTAH			Site: NBU 1022-5I PAD			Rig name no.:		
Event: COMPLETION			Start date: 9/4/2014		End date: 2/27/2015			
Active datum: RKB @5,080.00usft (above Mean Sea Level)				UWI: NE/SE/0/10/S/22/E/5/0/0/26/PM/S/1947/E/0/175/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
7/28/2014	-							
9/4/2014	10:30 - 11:30	1.00	SUBSPR	52	B	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -78 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. PRESSURE TEST 8 5/8 X 4 1/2 TO 500 PSI HELD FOR 5 MIN LOST -36 PSI, BLED PSI OFF, REINSTALLED POP OFF SWIFN NO PRESSURE ON SURFACE CASING FILLED SURFACE WITH 2 BBLs H2O
2/4/2015	10:00 - 11:00	1.00	SUBSPR	52	B	P		MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -55 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. TESTED SURFACE ON 9-4-14
2/13/2015	7:00 - 8:00	1.00	SUBSPR	37	E	P		PU 3 1/8 EXP GUN, 19 GM, .40 HOLE SIZE. RIH PERFWELL, AS PER PERF DESIGN. POOH. SWIFW
2/16/2015	6:30 - 6:45	0.25	FRAC	48		P		HSM-JSA
	6:45 - 17:30	10.75	FRAC	36	F	P		FRAC STG #1) WHP 1491 PSI, BRK 4758 PSI @ 3.6 BPM. ISIP 2915 PSI, FG. 0.77 ISIP 2615 PSI, FG. 0.74, NPI -300 PSI, SWI, SDFN.
2/17/2015	6:15 - 6:30	0.25	FRAC	48		P		HSM-JSA
	6:30 - 17:30	11.00	FRAC	36	F	P		SET CBP & PERF STG #2 AS DESIGNED, X/O TO FRAC. FRAC STG #2) WHP 156 PSI, BRK 3195 PSI @ 3.8 BPM. ISIP 1950 PSI, FG. 0.67 ISIP 2515 PSI, FG. 0.73, NPI 565 PSI, X/O TO WL. SET CBP & PERF STG #3 AS DESIGNED, X/O FRAC. FRAC STG #3) WHP 1606 PSI, BRK 2433 PSI @ 5.8 BPM. ISIP 1755 PSI, FG. 0.65 ISIP 2430 PSI, FG. 0.73, NPI 675 PSI, X/O TO WL. SET CBP & PERF STG #4 AS DESIGNED, X/O TO FRAC. FRAC STG #4) WHP 1730 PSI, BRK 5612 PSI @ 3.5 BPM. ISIP 1880 PSI, FG. 0.67 ISIP 2080 PSI, FG. 0.7, NPI 200 PSI, X/O TO WL. SET CBP & PERF STG #5 AS DESIGNED, SWI, SDFN.
2/18/2015	6:15 - 6:30	0.25	FRAC	48		P		HSM-JSA
	6:30 - 7:45	1.25	FRAC	36	H	P		FRAC STG #5) WHP 966 PSI, BRK 2175 PSI @ 4 BPM. ISIP 1350 PSI, FG. 0.61 ISIP 2255 PSI, FG. 0.73, NPI 905 PSI, X/O TO WL. SET CBP & PERF STG #6 AS DESIGNED
	7:45 - 8:30	0.75	FRAC	46	E	Z		REPAIR MOTOR ON SAND MOVER
	8:30 - 10:15	1.75	FRAC	36	F	P		SWI, SDFN.
2/19/2015	6:15 - 6:30	0.25	FRAC	48		P		HSM-JSA

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-5I1BS YELLOW

Spud date: 3/25/2014

Project: UTAH-UINTAH

Site: NBU 1022-5I PAD

Rig name no.:

Event: COMPLETION

Start date: 9/4/2014

End date: 2/27/2015

Active datum: RKB @5,080.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/5/0/0/26/PM/S/1947/E/0/175/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:30 - 14:00	7.50	FRAC	36	H	P		FRAC STG #6) WHP 1183 PSI, BRK 2743 PSI @ 3.9 BPM. ISIP 1700 PSI, FG. 0.67 ISIP 2335 PSI, FG. 0.75, NPI 635 PSI, X/O TO WL.\n\nSET CBP & PERF STG #7 AS DESIGNED, X/O TO FRAC.\n\nFRAC STG #7) WHP 1036 PSI, BRK 3170 PSI @ 4.3 BPM. ISIP 1680 PSI, FG. 0.67 ISIP 2330 PSI, FG. 0.76, NPI 650 PSI. X/O TO WL.\n\nSET CBP & PERF STG #8 AS DESIGNED, X/O TO FRAC.\n\nFRAC STG #8) WHP 326 PSI, BRK 1695 PSI @ 3.3 BPM. ISIP 1000 PSI, FG. 0.58 ISIP 2185 PSI, FG. 0.75, NPI 1185 PSI, X/O TO WL.\n\nSET KILL PLUG.\n\nRDMO WL & FRAC EQUIP.\n\nTOTAL FLUID= 11287 BBLS\n\nTOTAL SAND= 233793 LBS
2/26/2015	7:00 - 7:30	0.50	DRLOUT	48		P		HSM, RIGGING UP RIG & EQUIP.
	7:30 - 9:30	2.00	DRLOUT	30	A	P		RIGGED UP, ND WH NU BOPS, RU FLOOR & TBG EQUIP.
	9:30 - 15:00	5.50	DRLOUT	31	I	P		TALLY & PU 37/8 BIT, POBS, 217 JTS 23/8 P-110 TAG UP @ 6879', RU DRLG EQUIP PREP TO D/O IN AM SWI SDFN.
2/27/2015	7:00 - 7:30	0.50	DRLOUT	48		P		HSM, WORKING W/ POWER SWIVEL & PIPE WRANGLER.
	7:30 - 16:00	8.50	DRLOUT	44	C	P		3 OF 4, BROKE CIRC CONV, TEST BOPS TO 3,000 PSI, RIH.\n\nC/O 10' SAND TAG 1ST PLUG @ 6895' DRL PLG IN 10 MIN, 0 PSI INCREASE RIH.\n\nC/O 25' SAND TAG 2ND PLUG @ 7106' DRL PLG IN 10 MIN. 300 PSI INCREASE RIH.\n\nC/O 20' SAND TAG 3RD PLUG @ 7352' DRL PLG IN 10 MIN, 200 PSI INCREASE RIH.\n\nC/O 30' SAND TAG 4TH PLUG @ 7648' DRL PLG IN 10 MIN, 200 PSI INCREASE RIH.\n\nC/O 25' SAND TAG 5TH PLUG @ 7897' DRL PLG IN 10 MIN, 200 PSI INCREASE RIH.\n\nC/O 25' SAND TAG 6TH PLUG @ 8168' DRL PLG IN 10 MIN, 500 PSI INCREASE RIH.\n\nC/O 10' SAND TAG 7TH PLUG @ 8483' DRL PLG IN 10 MIN, 500 PSI INCREASE RIH.\n\nC/O 30' SAND TAG 8TH PLUG @ 8657' DRL PLG IN 5 MIN, 550 PSI INCREASE RIH.\n\nC/O TO 8984', CIRC CLN, RD SWIVEL, L/D 17 JTS, LAND TBG, ND BOPS NU WH, TEST FL, PUMPED OFF BIT, TURN WELL TO FB CREW.RIGGED DOWN MOVE OVER TO 4 OF 4 & SPOT SDFWE.\n\nKB = 18' (SURFACE OPEN & LOCKED)\n\n41/16 HANGER = .83' 266 JTS 23/8 P-110 = 8434.07' (SICP 2000, FTP 2040) POBS W/ 1.875 X/N = 2.20\n\nEOT @ 8455.10\n\nTWTR 11,287 BBLS\n\nTWR 1300 BBLS\n\nTWLTR 9987 BBLS\n\n314 JT HAULED OUT, P-110\n\n266 LANDED\n\n48 TO RETURN\n\n

US ROCKIES REGION

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 1022-51BS YELLOW	Wellbore No.	00
Well Name	NBU 1022-51BS	Wellbore Name	NBU 1022-51BS
Report no.	1	Report date	2/12/2015
Project	UTAH-UINTAH	Site	NBU 1022-51 PAD
Rig Name/No.		Event	COMPLETION
Start date	9/4/2014	End date	2/27/2015
Spud date	3/25/2014	Active datum	RKB @5,080.00usft (above Mean Sea Level)
UWI	NE/SE/0/10/S/22/E/5/0/26/PM/S/1947/E/0/175/0/0		

1.3 General

Contractor		Job method		Supervisor	
Perforated Assembly		Conveyed method			

1.4 Initial Conditions

Fluid type	Fluid density		Gross Interval	6,934.0 (usft)-8,890.0 (usft)	Start Date/Time	2/13/2015 12:00AM
Surface press.	Estimate res press		No. of intervals	59	End Date/Time	2/13/2015 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

Date	2/13/2015 12:00AM	Formation/Reservoir	M E S A VERDE/	CCL@ (usft)		CCL-TS (usft)		MD top (usft)	6,934.0	MD base (usft)	6,936.0	Shot density (shot/ft)	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	2/13/2015 12:00AM	Formation/Reservoir	M E S A VERDE/	CCL@ (usft)		CCL-TS (usft)		MD top (usft)	6,934.0	MD base (usft)	6,936.0	Shot density (shot/ft)	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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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
2/13/2015 12:00AM	M E S A VERDE/			6,962.0	6,964.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			6,978.0	6,979.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			6,990.0	6,991.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,056.0	7,057.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,065.0	7,066.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,204.0	7,205.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,222.0	7,223.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,242.0	7,243.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,270.0	7,271.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,280.0	7,281.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,305.0	7,306.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,326.0	7,328.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,402.0	7,403.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,412.0	7,413.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,437.0	7,438.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,483.0	7,484.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,529.0	7,531.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,599.0	7,600.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,617.0	7,618.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,660.0	7,661.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,680.0	7,681.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,758.0	7,759.0	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
2/13/2015 12:00AM	M E S A VERDE/			7,768.0	7,769.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,796.0	7,797.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,828.0	7,829.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,859.0	7,860.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,878.0	7,879.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,908.0	7,909.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,933.0	7,934.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			7,982.0	7,983.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,012.0	8,013.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,034.0	8,035.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,084.0	8,085.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,128.0	8,129.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,137.0	8,138.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,250.0	8,251.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,287.0	8,288.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,308.0	8,309.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,350.0	8,351.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,390.0	8,391.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,400.0	8,401.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,462.0	8,463.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,467.0	8,468.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,494.0	8,495.0	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
2/13/2015 12:00AM	M E S A VERDE/			8,508.0	8,509.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,522.0	8,523.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,542.0	8,543.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,584.0	8,585.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,602.0	8,604.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,641.0	8,642.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,672.0	8,673.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,679.0	8,680.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,700.0	8,701.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,752.0	8,753.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,800.0	8,801.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,844.0	8,845.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,873.0	8,874.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
2/13/2015 12:00AM	M E S A VERDE/			8,889.0	8,890.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		

3 Plots