

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 921-29D1BS
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 720 929-6100
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217		9. OPERATOR E-MAIL Andy.Lytle@anadarko.com
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) UTU 0581	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	700 FNL 2541 FWL	NENW	29	9.0 S	21.0 E	S
Top of Uppermost Producing Zone	167 FNL 739 FWL	NWNW	29	9.0 S	21.0 E	S
At Total Depth	167 FNL 739 FWL	NWNW	29	9.0 S	21.0 E	S

21. COUNTY UINTAH	22. DISTANCE TO NEAREST LEASE LINE (Feet) 167	23. NUMBER OF ACRES IN DRILLING UNIT 2400
24. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 701	25. PROPOSED DEPTH MD: 11653 TVD: 11277	
26. ELEVATION - GROUND LEVEL 4887	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 - 2860	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 - 11653	11.6	HCP-110 LT&C	12.5	Premium Lite High Strength	350	3.38	12.0
							50/50 Poz	1700	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 Joel Malefyt	TITLE Regulatory Analyst	PHONE 720 929-6828
SIGNATURE	DATE 11/14/2014	EMAIL joel.malefyt@anadarko.com
API NUMBER ASSIGNED 43047549320000	APPROVAL  Permit Manager	

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

NBU 921-29D1BS

Surface:	700 FNL / 2541 FWL	NENW
BHL:	167 FNL / 739 FWL	NWNW

Section 29 T9S R21E

Unitah County, Utah
Mineral Lease: USA UTU 000581

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	1,633'	
Birds Nest	1,895'	Water
Mahogany	2,407'	Water
Wasatch	4,966'	Gas
Mesaverde	8,001'	Gas
Sego	10,243'	Gas
Castlegate	10,307'	Gas
Blackhawk	10,677'	Gas
TVD =	11,277'	
TD =	11,653'	

- 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

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 11277' TVD, approximately equals
7,217 psi (0.64 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,721 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 10243' TVD, approximately equals
6,248 psi (0.61 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,022 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. Variations:

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

10. Other Information:

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



KERR-McGEE OIL & GAS ONSHORE LP
Blackhawk Drilling Program

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	LTC	DQX
								TENSION	
CONDUCTOR	14"	0-40'							
						3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,860	28.00	IJ-55	LTC	1.88	1.40	4.96	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	1.18		3.36
	4-1/2"	5,000 to 11,653'	11.60	HCP-110	LTC	1.19	1.18	4.47	

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	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
Option 1	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
SURFACE	Option 2	NOTE: If well will circulate water to surface, option 2 will be utilized					
	LEAD	2,360'	Premium cmt + 16% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOC + GR 3 pps	290	35%	12.00	2.86
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,463'	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	350	35%	12.00	3.38
	TAIL	7,190'	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	1,700	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:

Matt Stiasny/Paul Wages

DATE:

DRILLING SUPERINTENDENT:

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 2,860	28.00	IJ-55	LTC	3,390	1,880	348,000	N/A
						1.88	1.40	4.96	N/A
PRODUCTION	4-1/2"	0 to 5,000	11.60	I-80	DQX	7,780	6,350		267,035
						1.11	0.99		2.65
						10,690	8,650	223,000	
	4-1/2"	5,000 to 10,619'	11.60	HCP-110	LTC	1.53	1.35	4.19	

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
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Production casing:

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

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE Option 1	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
NOTE: If well will circulate water to surface, option 2 will be utilized							
SURFACE Option 2	LEAD	2,360'	Premium cmt + 16% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOOC + GR 3 pps	290	35%	12.00	2.86
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps Flocele + 3% salt BWOOC + 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	4,459'	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	350	35%	12.00	3.38
	TAIL	6,160'	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	1,450	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

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DRILLING ENGINEER: _____
Matt Stiasny/Paul Wages

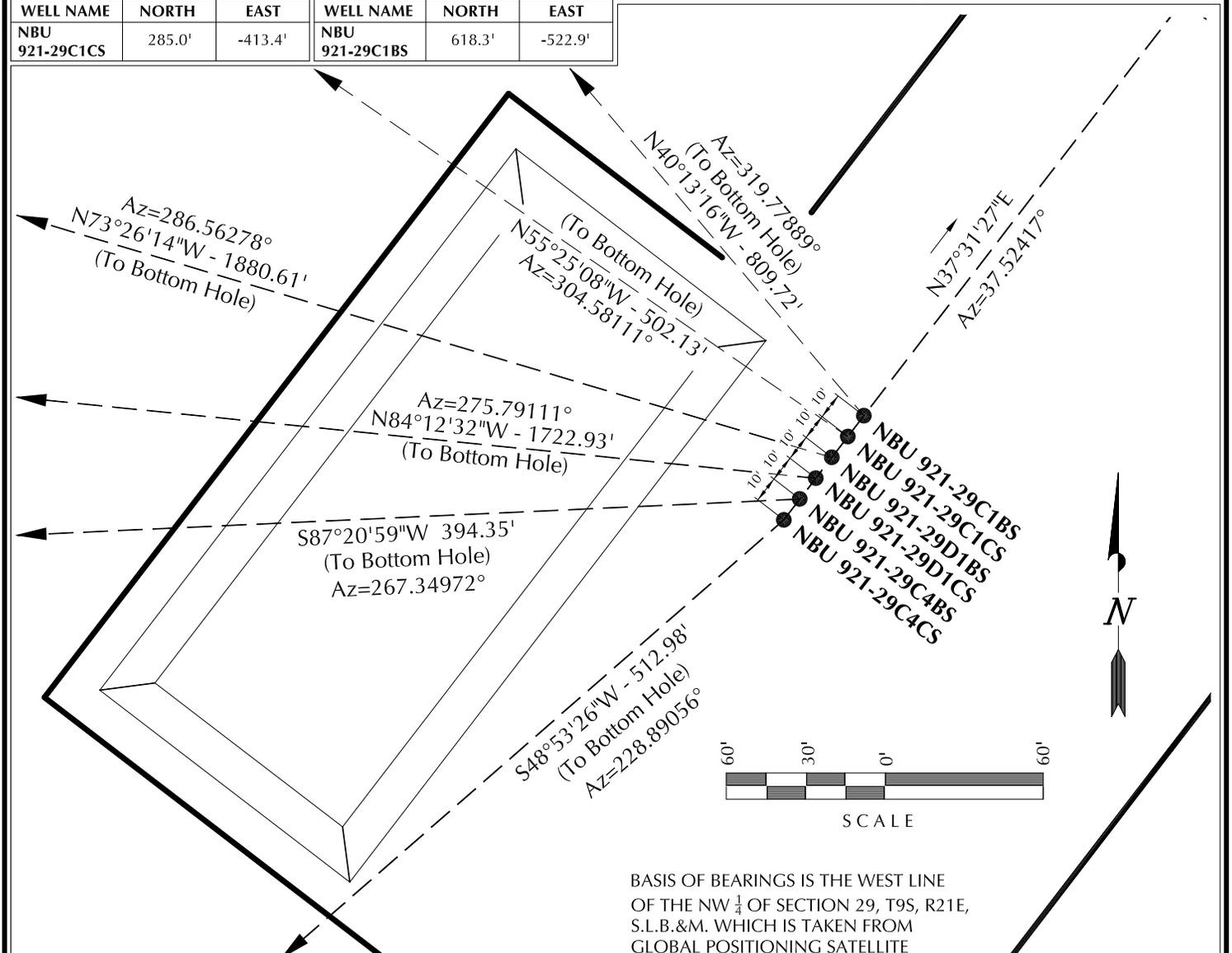
DATE: _____

DRILLING SUPERINTENDENT: _____
Level Young

DATE: _____

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 921-29C4CS	40°00'44.154"N 40.012265°N	109°34'33.529"W 109.575980°W	40°00'44.281"N 40.012300°N	109°34'31.046"W 109.575291°W	724' FNL 2523' FWL	40°00'40.816"N 40.011338°N	109°34'38.489"W 109.577358°W	40°00'40.943"N 40.011373°N	109°34'36.007"W 109.576669°W	1062' FNL 2136' FWL
NBU 921-29C4BS	40°00'44.232"N 40.012287°N	109°34'33.450"W 109.575958°W	40°00'44.359"N 40.012322°N	109°34'30.968"W 109.575269°W	716' FNL 2529' FWL	40°00'44.047"N 40.012235°N	109°34'38.511"W 109.577364°W	40°00'44.174"N 40.012271°N	109°34'36.028"W 109.576675°W	735' FNL 2135' FWL
NBU 921-29D1CS	40°00'44.311"N 40.012309°N	109°34'33.372"W 109.575937°W	40°00'44.438"N 40.012344°N	109°34'30.890"W 109.575247°W	708' FNL 2535' FWL	40°00'46.006"N 40.012780°N	109°34'55.400"W 109.582055°W	40°00'46.133"N 40.012815°N	109°34'52.917"W 109.581366°W	537' FNL 821' FWL
NBU 921-29D1BS	40°00'44.389"N 40.012330°N	109°34'33.294"W 109.575915°W	40°00'44.515"N 40.012365°N	109°34'30.811"W 109.575225°W	700' FNL 2541' FWL	40°00'49.662"N 40.013795°N	109°34'56.464"W 109.582351°W	40°00'49.789"N 40.013830°N	109°34'53.980"W 109.581661°W	167' FNL 739' FWL
NBU 921-29C1CS	40°00'44.467"N 40.012352°N	109°34'33.216"W 109.575893°W	40°00'44.594"N 40.012387°N	109°34'30.734"W 109.575204°W	692' FNL 2547' FWL	40°00'47.278"N 40.013133°N	109°34'38.533"W 109.577370°W	40°00'47.405"N 40.013168°N	109°34'36.050"W 109.576681°W	408' FNL 2134' FWL
NBU 921-29C1BS	40°00'44.545"N 40.012374°N	109°34'33.137"W 109.575871°W	40°00'44.672"N 40.012409°N	109°34'30.655"W 109.575182°W	684' FNL 2553' FWL	40°00'50.647"N 40.014069°N	109°34'39.865"W 109.577740°W	40°00'50.774"N 40.014104°N	109°34'37.383"W 109.577051°W	67' FNL 2031' FWL

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 921-29C4CS	-337.3'	-386.5'	NBU 921-29C4BS	-18.2'	-393.9'	NBU 921-29D1CS	173.8'	-1714.1'	NBU 921-29D1BS	536.1'	-1802.6'
NBU 921-29C1CS	285.0'	-413.4'	NBU 921-29C1BS	618.3'	-522.9'						



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

WELL PAD - NBU 921-29C

WELL PAD INTERFERENCE PLAT
WELLS - NBU 921-29C4CS, NBU 921-29C4BS, NBU 921-29D1CS, NBU 921-29D1BS, NBU 921-29C1CS & NBU 921-29C1BS LOCATED IN SECTION 29, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.

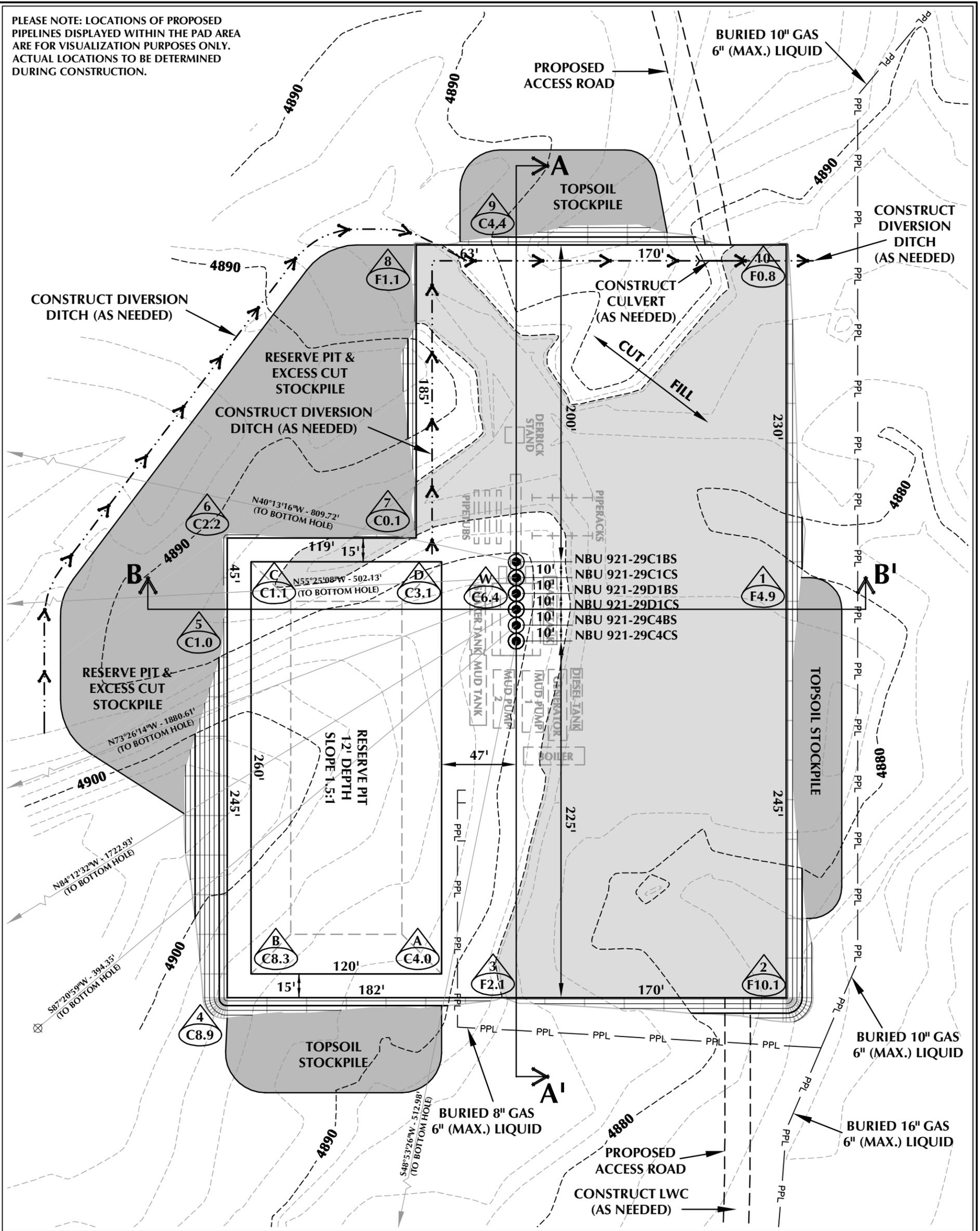
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CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

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

DATE SURVEYED: 3-27-14	SURVEYED BY: J.W.	SHEET NO: 7
DATE DRAWN: 4-10-14	DRAWN BY: J.G.C.	
SCALE: 1" = 60'		7 OF 18

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 921-29C DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4893.0'
 FINISHED GRADE ELEVATION = 4886.6'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.64 ACRES
 TOTAL DISTURBANCE AREA = 4.90 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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

WELL PAD - NBU 921-29C
 WELL PAD - LOCATION LAYOUT
 NBU 921-29C4CS, NBU 921-29C4BS,
 NBU 921-29D1CS, NBU 921-29D1BS,
 NBU 921-29C1CS & NBU 921-29C1BS
 LOCATED IN SECTION 29, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH



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

WELL PAD QUANTITIES

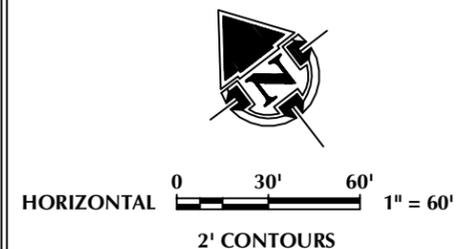
TOTAL CUT FOR WELL PAD = 15,990 C.Y.
 TOTAL FILL FOR WELL PAD = 14,795 C.Y.
 TOPSOIL @ 6" DEPTH = 2,940 C.Y.
 EXCESS MATERIAL = 1,195 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT
 +/- 11,020 C.Y.
 RESERVE PIT CAPACITY (2' OF FREEBOARD)
 +/- 42,290 BARRELS

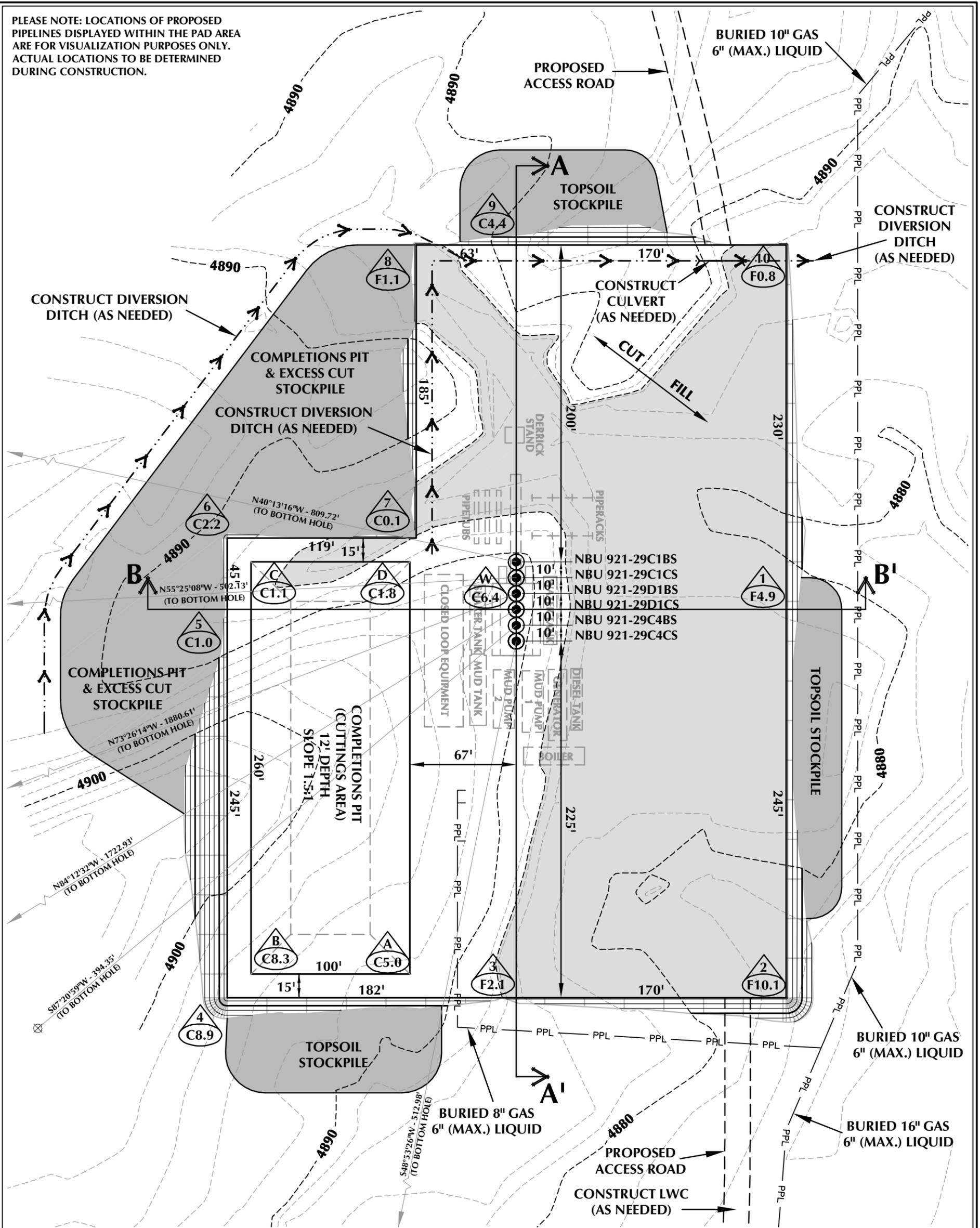
WELL PAD LEGEND

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



SCALE: 1"=60' DATE: 5/16/14 SHEET NO:
 REVISED: RCM 7/2/14 **8** 8 OF 18

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 921-29C (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4893.0'
 FINISHED GRADE ELEVATION = 4886.6'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.64 ACRES
 TOTAL DISTURBANCE AREA = 4.90 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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

WELL PAD - NBU 921-29C
 WELL PAD - LOCATION LAYOUT
 NBU 921-29C4CS, NBU 921-29C4BS,
 NBU 921-29D1CS, NBU 921-29D1BS,
 NBU 921-29C1CS & NBU 921-29C1BS
 LOCATED IN SECTION 29, T9S, R21E,
 S.L.B.&M., UTAH COUNTY, UTAH



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

WELL PAD QUANTITIES

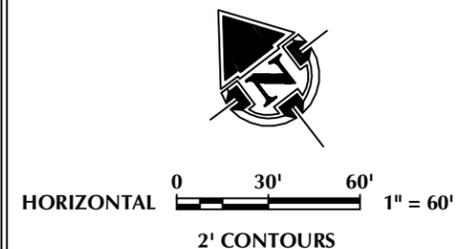
TOTAL CUT FOR WELL PAD = 15,990 C.Y.
 TOTAL FILL FOR WELL PAD = 14,795 C.Y.
 TOPSOIL @ 6" DEPTH = 2,940 C.Y.
 EXCESS MATERIAL = 1,195 C.Y.

COMPLETIONS PIT QUANTITIES

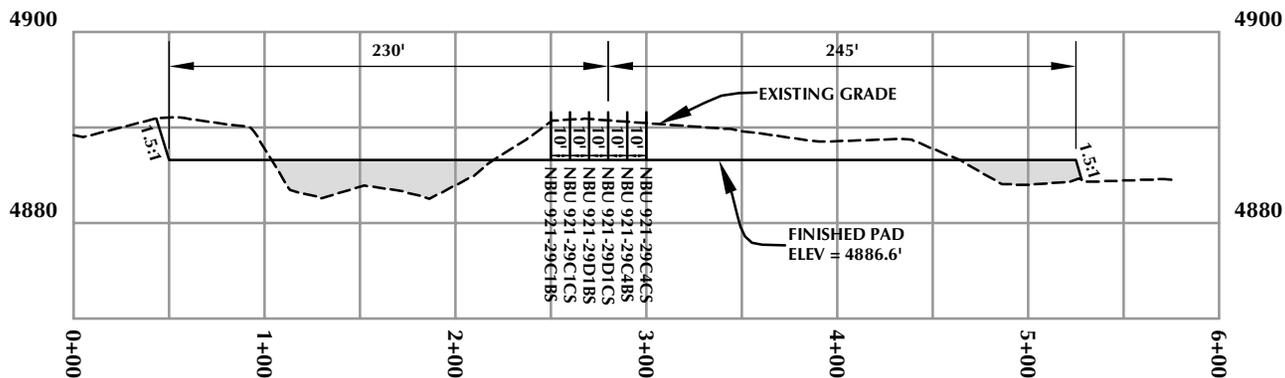
TOTAL CUT FOR COMPLETIONS PIT
 +/- 8,870 C.Y.
 COMPLETIONS PIT CAPACITY
 (2' OF FREEBOARD)
 +/- 33,770 BARRELS

WELL PAD LEGEND

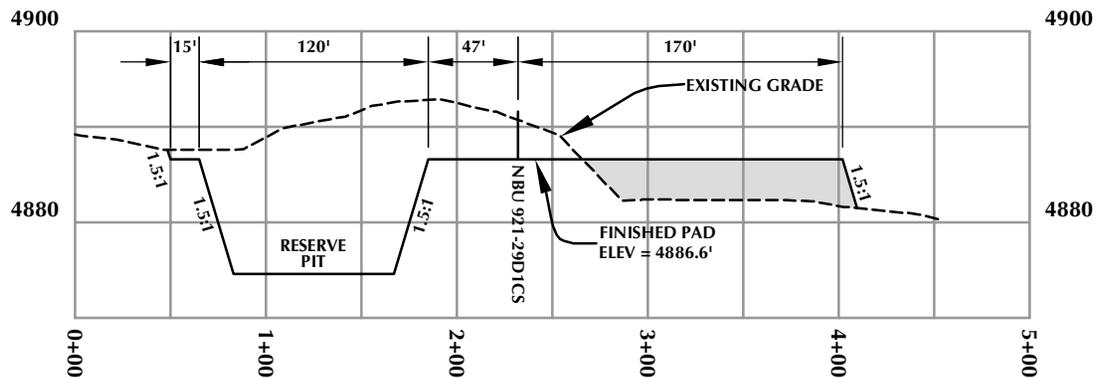
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL - PROPOSED PIPELINE
- EPL - EXISTING PIPELINE



SCALE: 1"=60' DATE: 7/2/14 SHEET NO:
 REVISED: **8B** 8B OF 18



CROSS SECTION A-A'



CROSS SECTION B-B'

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

WELL PAD - NBU 921-29C

WELL PAD - CROSS SECTIONS
NBU 921-29C4CS, NBU 921-29C4BS,
NBU 921-29D1CS, NBU 921-29D1BS,
NBU 921-29C1CS & NBU 921-29C1BS
LOCATED IN SECTION 29, T9S, R21E,
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



SCALE: 1"=100'

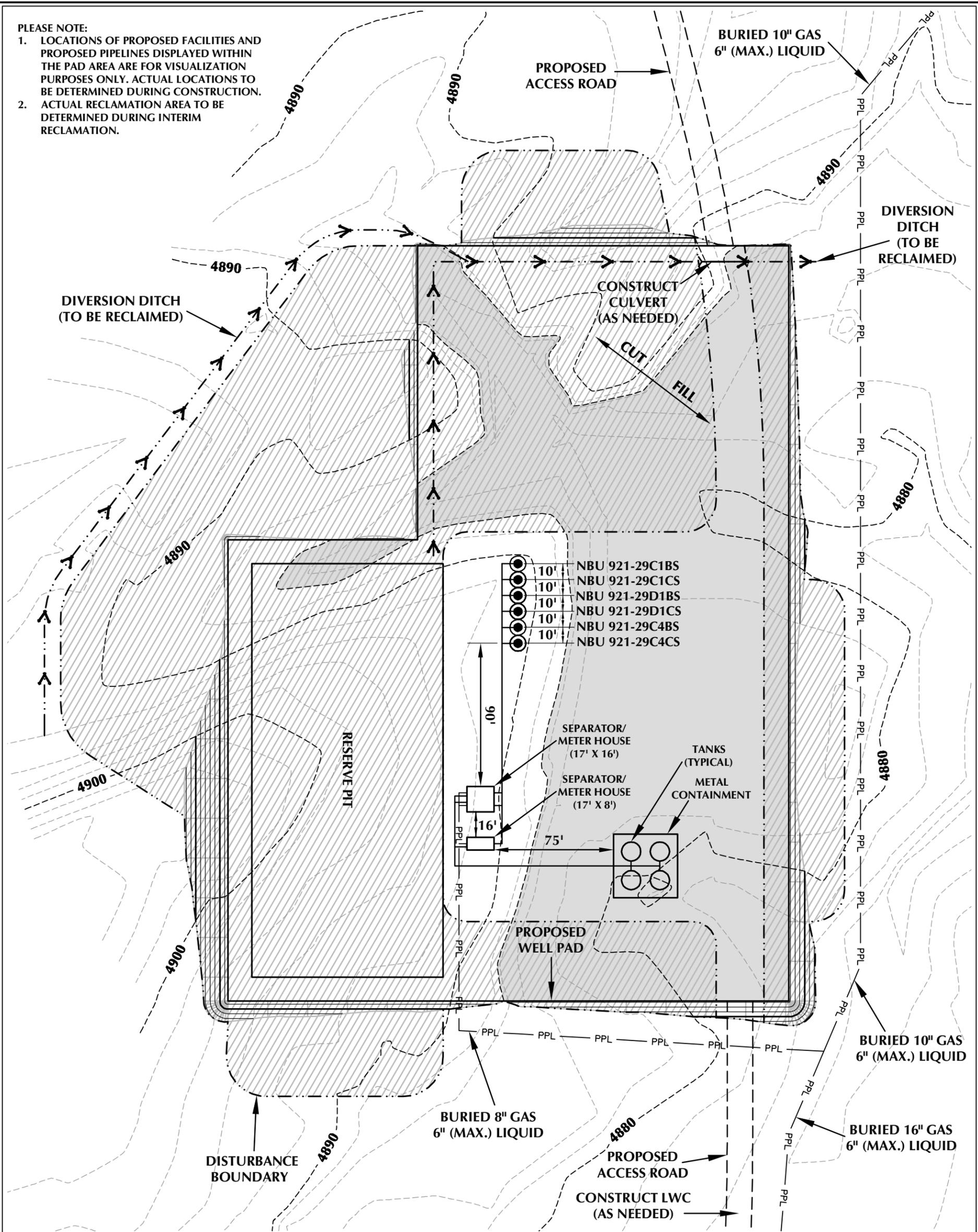
DATE: 5/16/14

SHEET NO:

9 9 OF 18

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 921-29C RECLAMATION DESIGN SUMMARY

TOTAL DISTURBANCE AREA = 4.90 ACRES
 RECLAMATION AREA = 3.60 ACRES
 TOTAL WELL PAD AREA AFTER RECLAMATION = 1.30 ACRES

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

WELL PAD - NBU 921-29C

WELL PAD - RECLAMATION LAYOUT
 NBU 921-29C4CS, NBU 921-29C4BS,
 NBU 921-29D1CS, NBU 921-29D1BS,
 NBU 921-29C1CS & NBU 921-29C1BS
 LOCATED IN SECTION 29, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH



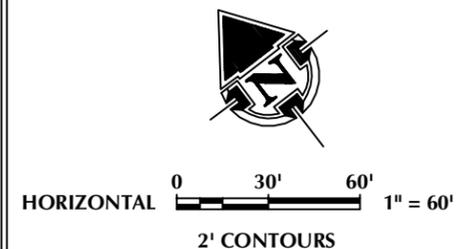
CONSULTING, LLC
 2155 North Main Street
 Sheridan, WY 82801
 Phone 307-674-0609
 Fax 307-674-0182

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

(435) 789-1365

WELL PAD LEGEND

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



SCALE: 1"=60'	DATE: 5/16/14	SHEET NO:
REVISED:	RCM 7/2/14	10 10 OF 18

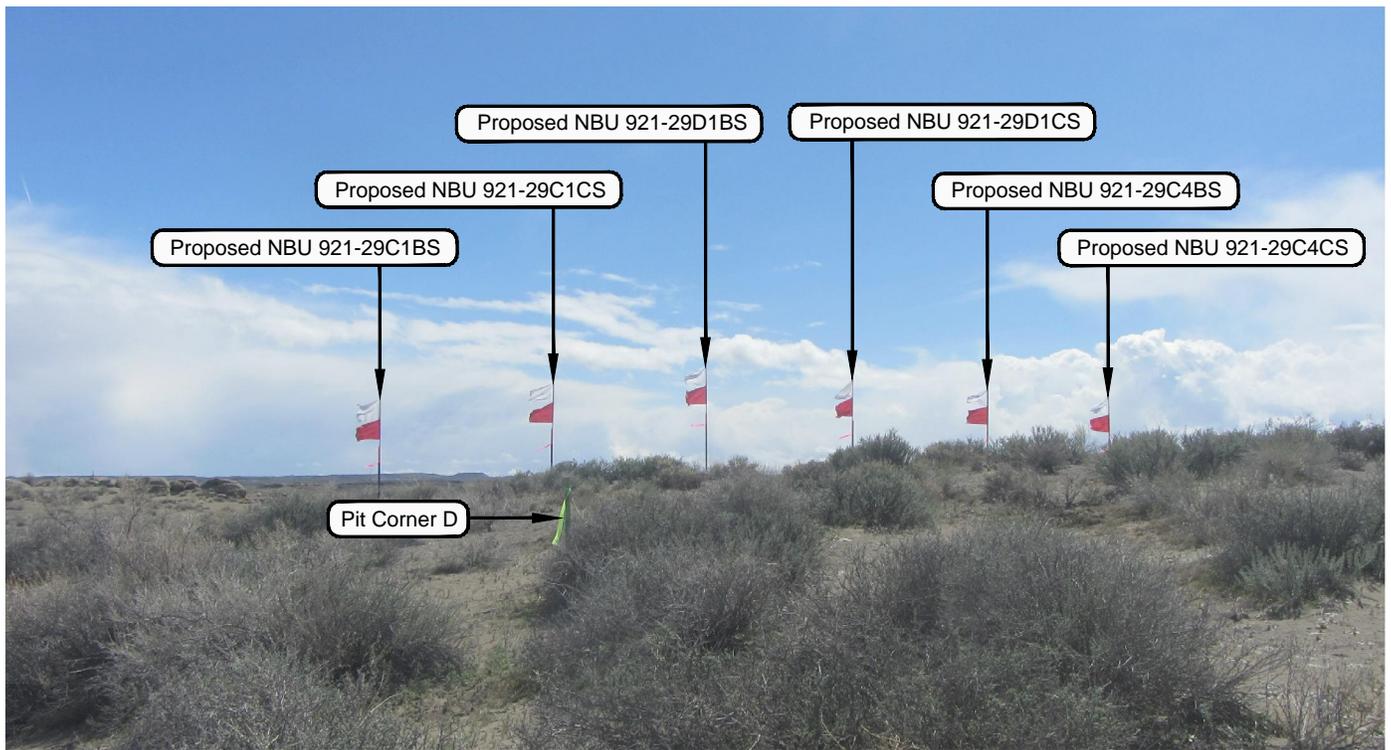


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: SOUTHEASTERLY



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 921-29C

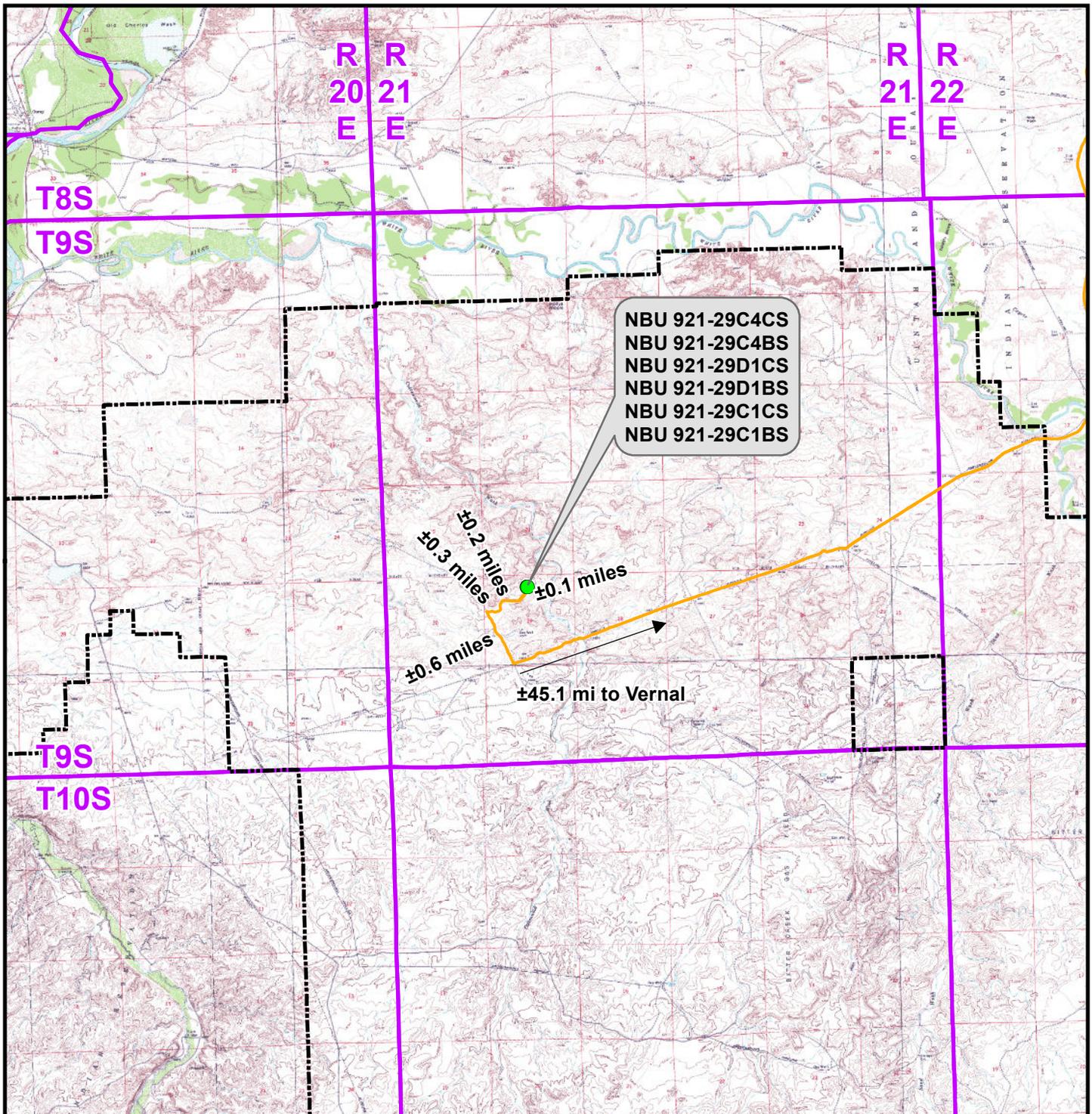
LOCATION PHOTOS
 NBU 921-29C4CS, NBU 921-29C4BS,
 NBU 921-29D1CS, NBU 921-29D1BS,
 NBU 921-29C1CS & NBU 921-29C1BS
 LOCATED IN SECTION 29, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH.



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

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

DATE PHOTOS TAKEN: 3-27-14	PHOTOS TAKEN BY: J.W.	SHEET NO: 11
DATE DRAWN: 4-10-14	DRAWN BY: J.G.C.	
Date Last Revised:		11 OF 18



K:\ANADARKO\2014\2014_06_NBU_921-29_FOCUS\GIS\Maps_ABCDENBU_921-29C_A.mxd/5/15/2014 4:56:25 PM

Legend Distance From Well Pad - NBU 921-29C To Unit Boundary: ±16,570ft

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

WELL PAD - NBU 921-29C

TOPO A
 NBU 921-29C4CS, NBU 921-29C4BS,
 NBU 921-29D1CS, NBU 921-29D1BS,
 NBU 921-29C1CS & NBU 921-29C1BS
 LOCATED IN SECTION 29, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

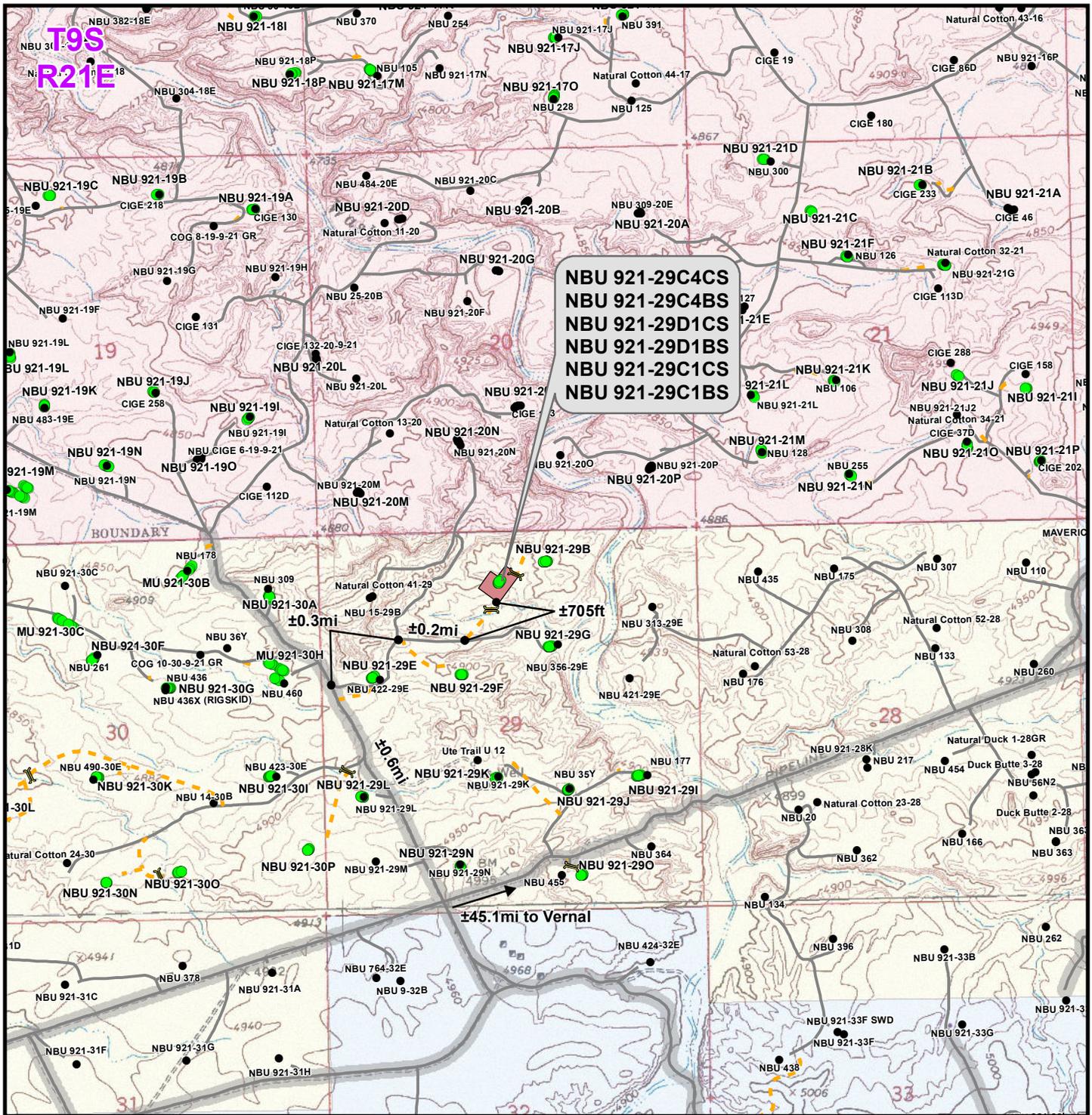
1099 18th Street
 Denver, Colorado 80202



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



SCALE: 1:100,000	NAD83 USP Central	12 12 OF 18
DRAWN: TL	DATE: 16 May 2014	
REVISED:	DATE:	



K:\ANADARKO\2014\2014_06_NBU_921-29_FOCUS\GIS\Maps_ABCDENBU 921-29C\NBU 921-29C_B.mxd/7/9/2014 9:49:23 AM

Legend

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

Total Proposed Road Length: ±705ft

WELL PAD - NBU 921-29C

TOPO B
 NBU 921-29C4CS, NBU 921-29C4BS,
 NBU 921-29D1CS, NBU 921-29D1BS,
 NBU 921-29C1CS & NBU 921-29C1BS
 LOCATED IN SECTION 29, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH

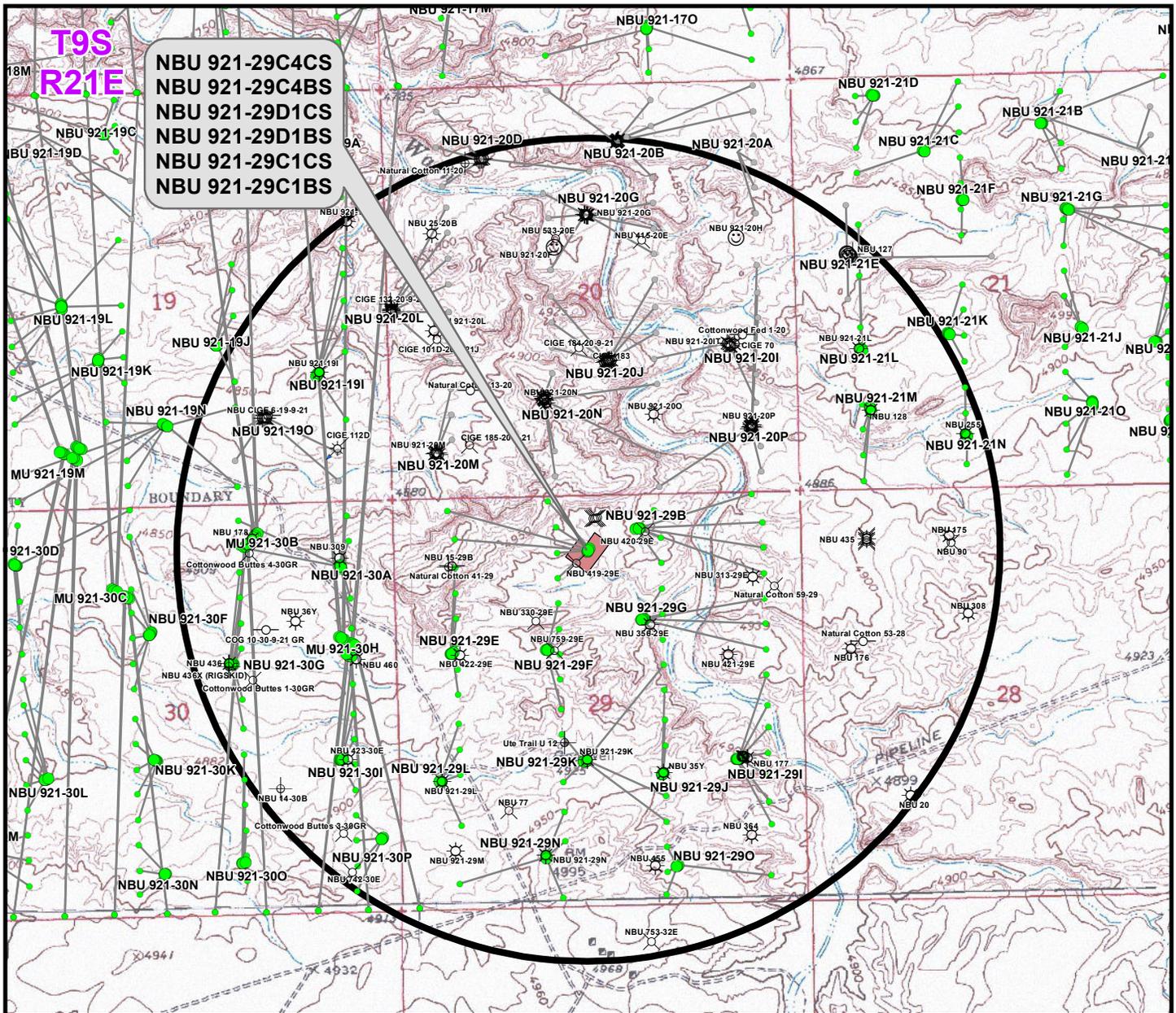
**Kerr-McGee Oil &
 Gas Onshore L.P.**
 1099 18th Street
 Denver, Colorado 80202



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: 16 May 2014	13
REVISED: TL	DATE: 2 July 2014	13 OF 18



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 921-29C4CS	NBU 356-29E	±1,306ft
NBU 921-29C4BS	NBU 921-20N4CS BH	±984ft
NBU 921-29D1CS	NBU 15-29B	±332ft
NBU 921-29D1BS	NBU 15-29B	±701ft
NBU 921-29C1CS	NBU 921-20N4CS BH	±657ft
NBU 921-29C1BS	NBU 921-20N4CS BH	±332ft

Legend

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

WELL PAD - NBU 921-29C

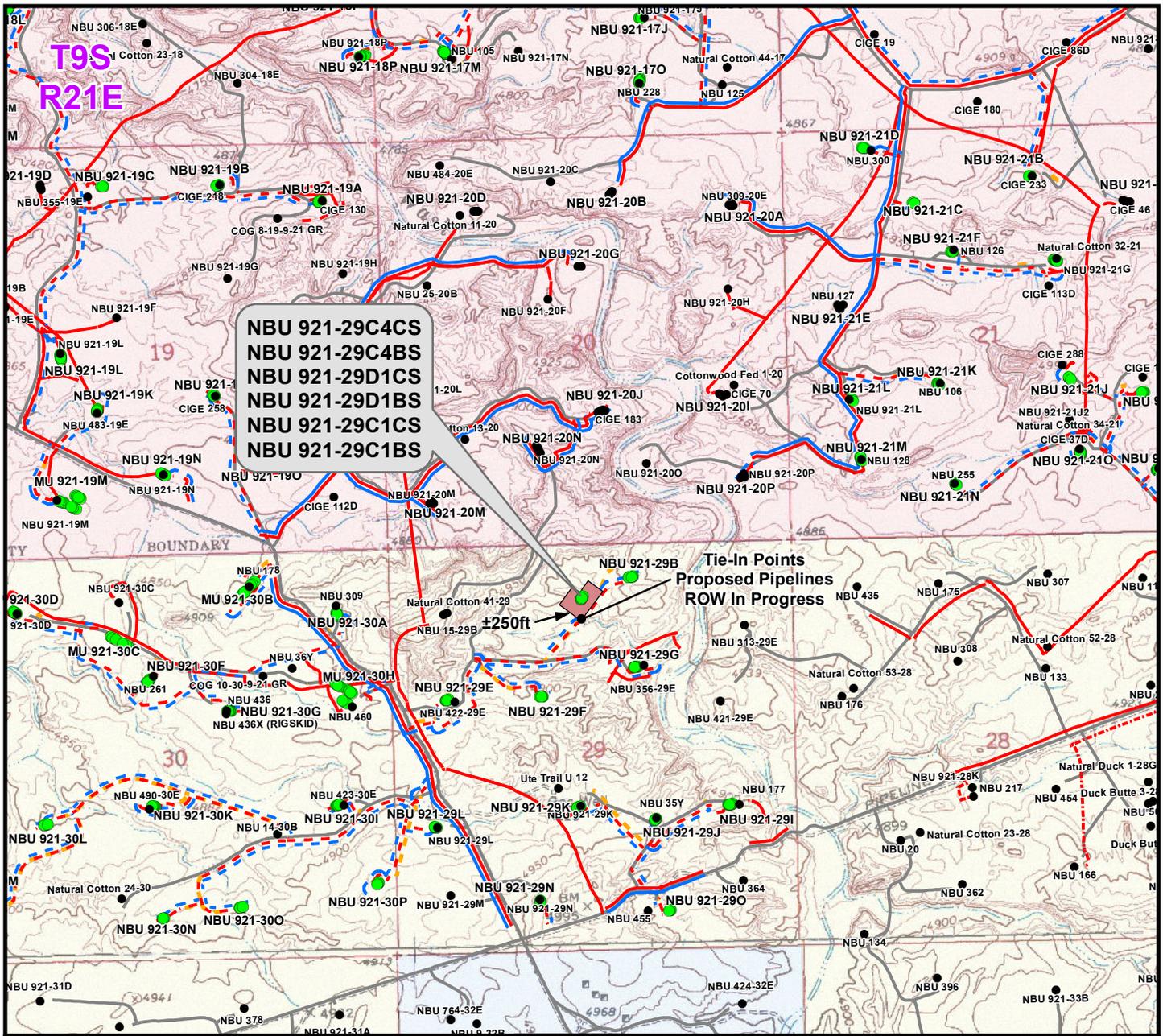
TOPO C
 NBU 921-29C4CS, NBU 921-29C4BS,
 NBU 921-29D1CS, NBU 921-29D1BS,
 NBU 921-29C1CS & NBU 921-29C1BS
 LOCATED IN SECTION 29, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH

**Kerr-McGee Oil &
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 Denver, Colorado 80202



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

SCALE: 1" = 2,000ft	NAD83 USP Central	14 14 OF 18
DRAWN: TL	DATE: 2 July 2014	
REVISED:	DATE:	



Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Buried 6" (Max.) (Separator to Edge of Pad)	±140ft	Buried 8" (Meter House to Edge of Pad)	±140ft
Buried 6" (Max.) (Edge of Pad to Proposed 6" (Max.) Liquid Pipeline ROW In Progress)	±250ft	Buried 8" (Edge of Pad to Proposed 16" Gas Pipeline ROW In Progress)	±250ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±390ft	TOTAL PROPOSED BURIED GAS PIPELINE =	±390ft

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

WELL PAD - NBU 921-29C

TOPO D
 NBU 921-29C4CS, NBU 921-29C4BS,
 NBU 921-29D1CS, NBU 921-29D1BS,
 NBU 921-29C1CS & NBU 921-29C1BS
 LOCATED IN SECTION 29, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH

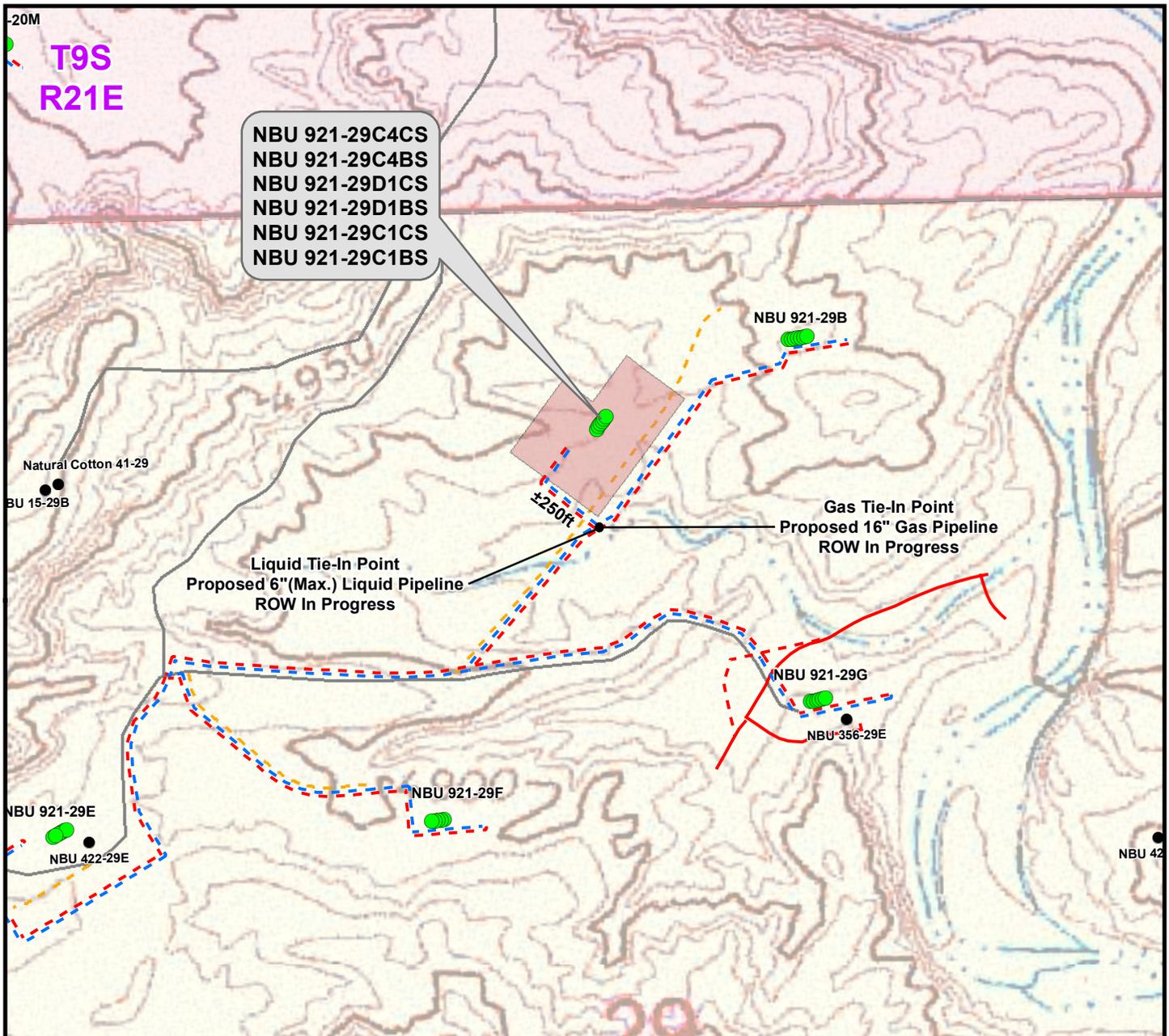
Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
 Denver, Colorado 80202

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

SCALE: 1" = 2,000ft	NAD83 USP Central	15 15 OF 18
DRAWN: TL	DATE: 2 July 2014	
REVISED:	DATE:	

K:\ANADARKO\2014\2014_06_NBU_921-29_FOCUS\GIS\Maps_ABCDENBU_921-29C_D.mxd/7/2014 3:55:21 PM



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Proposed Liquid Pipeline	Length
Buried 6" (Max.) (Separator to Edge of Pad)	±140ft
Buried 6" (Max.) (Edge of Pad to Proposed 6" (Max.) Liquid Pipeline ROW In Progress)	±250ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±390ft

Proposed Gas Pipeline	Length
Buried 8" (Meter House to Edge of Pad)	±140ft
Buried 8" (Edge of Pad to Proposed 16" Gas Pipeline ROW In Progress)	±250ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±390ft

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 921-29C

TOPO D2 (PAD & PIPELINE DETAIL)
 NBU 921-29C4CS, NBU 921-29C4BS,
 NBU 921-29D1CS, NBU 921-29D1BS,
 NBU 921-29C1CS & NBU 921-29C1BS
 LOCATED IN SECTION 29, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

1099 18th Street
 Denver, Colorado 80202



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



SCALE: 1" = 500ft	NAD83 USP Central	16 16 OF 18
DRAWN: TL	DATE: 16 May 2014	
REVISED:	DATE:	

**Kerr-McGee Oil & Gas Onshore, LP
WELL PAD - NBU 921-29C
WELLS – NBU 921-29C4CS, NBU 921-29C4BS,
NBU 921-29D1CS, NBU 921-29D1BS,
NBU 921-29C1CS & NBU 921-29C1BS
SECTION 29, T9S, R21E, S.L.B.&M.
UINTAH COUNTY, UTAH**

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 17.7 miles to a Class D County Road to the southwest. Exit right and proceed in a southwesterly direction along the Class D County Road approximately 3.9 miles to a second Class D County Road to the northwest. Exit right and proceed in a northwesterly direction along the second Class D County Road approximately 0.6 miles to a service road to the east. Exit right and proceed in an easterly, then northerly direction along the service road approximately 0.3 miles to a service road to the east. Exit right and proceed in an easterly direction along the service road approximately 0.2 miles to the proposed access road to the northeast. Follow road flags in a northeasterly direction approximately 705 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 46.3 miles in a southerly direction.

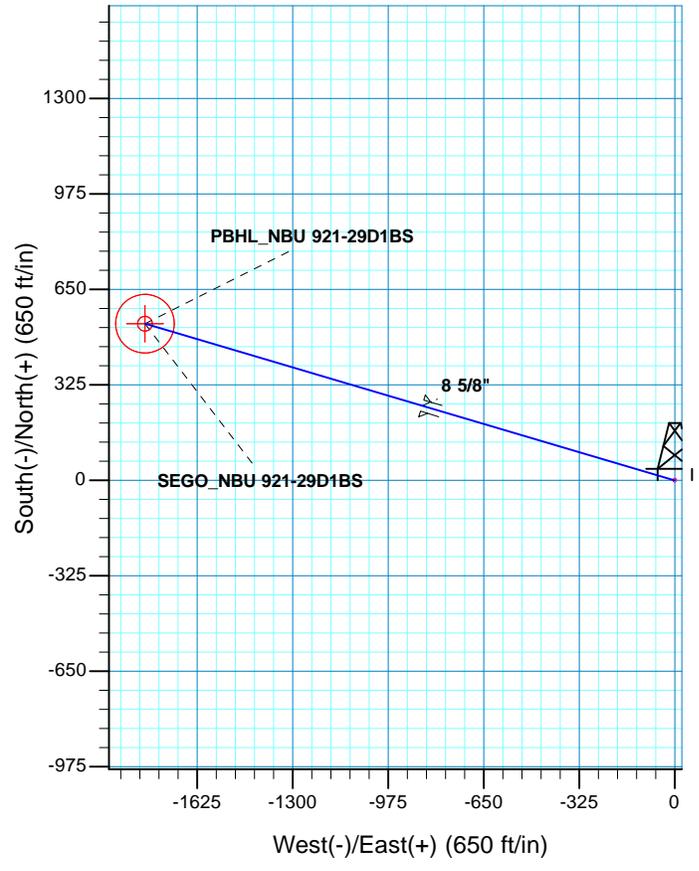
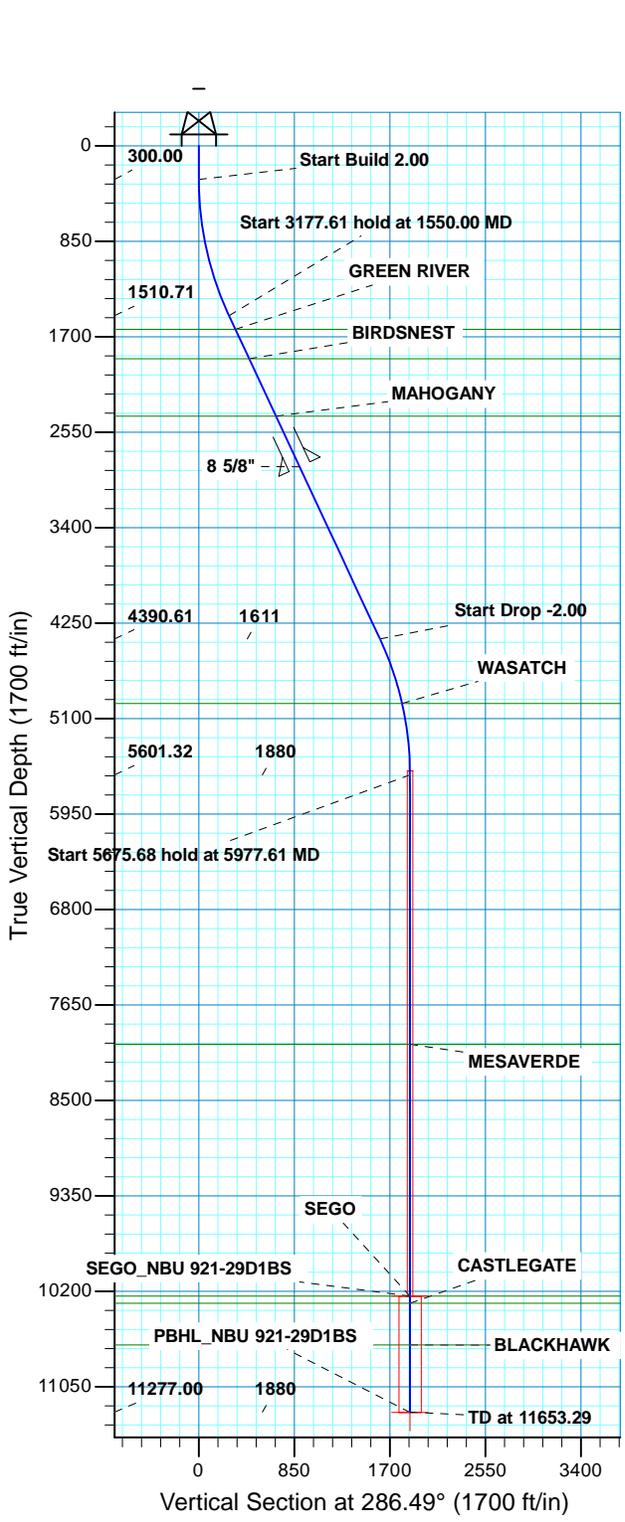


T
M

Azimuths to True North
Magnetic North: 10.83°

Magnetic Field
Strength: 51910.1snT
Dip Angle: 65.78°
Date: 07/24/2014
Model: BGGM2014

WELL DETAILS: NBU 921-29D1BS									
GL 4887 & KB 4 @ 4891.00ft (ASSUMED)									
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude				
0.00	0.00	14533736.64	2039371.97	40.0123652	-109.5752250				
DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
SEGO	10243.00	533.55	-1802.42	14534241.30	2037561.25	40.0138300	-109.5816610	Circle (Radius: 25.00)	
- plan hits target center									
PBHL	11277.00	533.55	-1802.42	14534241.30	2037561.25	40.0138300	-109.5816610	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	
1550.00	25.00	286.49	1510.71	76.19	-257.37	2.00	286.49	268.41	
4727.61	25.00	286.49	4390.61	457.36	-1545.05	0.00	0.00	1611.32	
5977.61	0.00	0.00	5601.32	533.55	-1802.42	2.00	180.00	1879.73	
11653.29	0.00	0.00	11277.00	533.55	-1802.42	0.00	0.00	1879.73	PBHL_NBU 921-29D1BS

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)	1633.00	1684.93	GREEN RIVER			
Ellipsoid: Clarke 1866	1895.00	1974.01	BIRDSNEST			
Zone: Zone 12N (114 W to 108 W)	2407.00	2538.94	MAHOGANY			
Location: SECTION 29 T9S R21E	4966.00	5336.97	WASATCH			
System Datum: Mean Sea Level	8001.00	8377.29	MESAVERDE			
	10243.00	10619.29	SEGO			
	10307.00	10683.29	CASTLEGATE			
	10677.00	11053.29	BLACKHAWK			

CASING DETAILS			
TVD	MD	Name	Size
2857.00	3035.46	8 5/8"	8.625

RECEIVED :



Scientific Drilling

US ROCKIES REGION PLANNING

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

NBU 921-29C PAD

NBU 921-29D1BS

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

25 July, 2014





Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 921-29D1BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4887 & KB 4 @ 4891.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4887 & KB 4 @ 4891.00ft (ASSUMED)
Site:	NBU 921-29C PAD	North Reference:	True
Well:	NBU 921-29D1BS	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 921-29C PAD, SECTION 29 T9S R21E				
Site Position:	Northing:	14,533,752.79 usft	Latitude:	40.0124090	
From: Lat/Long	Easting:	2,039,383.75 usft	Longitude:	-109.5751820	
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.92 °

Well	NBU 921-29D1BS, 700 FNL 2541 FWL					
Well Position	+N/-S	-15.95 ft	Northing:	14,533,736.65 usft	Latitude:	40.0123652
	+E/-W	-12.04 ft	Easting:	2,039,371.97 usft	Longitude:	-109.5752250
Position Uncertainty	0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,887.00 ft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	07/24/14	10.83	65.78	51,910

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	286.49

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	
1,550.00	25.00	286.49	1,510.71	76.19	-257.37	2.00	2.00	0.00	286.49	
4,727.61	25.00	286.49	4,390.61	457.36	-1,545.05	0.00	0.00	0.00	0.00	
5,977.61	0.00	0.00	5,601.32	533.55	-1,802.42	2.00	-2.00	0.00	180.00	
11,653.29	0.00	0.00	11,277.00	533.55	-1,802.42	0.00	0.00	0.00	0.00	PBHL_NBU 921-29D



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 921-29D1BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4887 & KB 4 @ 4891.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4887 & KB 4 @ 4891.00ft (ASSUMED)
Site:	NBU 921-29C PAD	North Reference:	True
Well:	NBU 921-29D1BS	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	286.49	399.98	0.50	-1.67	1.75	2.00	2.00	2.00	0.00
500.00	4.00	286.49	499.84	1.98	-6.69	6.98	2.00	2.00	2.00	0.00
600.00	6.00	286.49	599.45	4.45	-15.05	15.69	2.00	2.00	2.00	0.00
700.00	8.00	286.49	698.70	7.91	-26.73	27.88	2.00	2.00	2.00	0.00
800.00	10.00	286.49	797.47	12.35	-41.73	43.52	2.00	2.00	2.00	0.00
900.00	12.00	286.49	895.62	17.77	-60.03	62.60	2.00	2.00	2.00	0.00
1,000.00	14.00	286.49	993.06	24.15	-81.60	85.10	2.00	2.00	2.00	0.00
1,100.00	16.00	286.49	1,089.64	31.50	-106.41	110.98	2.00	2.00	2.00	0.00
1,200.00	18.00	286.49	1,185.27	39.80	-134.45	140.21	2.00	2.00	2.00	0.00
1,300.00	20.00	286.49	1,279.82	49.04	-165.66	172.77	2.00	2.00	2.00	0.00
1,400.00	22.00	286.49	1,373.17	59.21	-200.02	208.60	2.00	2.00	2.00	0.00
1,500.00	24.00	286.49	1,465.21	70.30	-237.49	247.67	2.00	2.00	2.00	0.00
1,550.00	25.00	286.49	1,510.71	76.19	-257.37	268.41	2.00	2.00	2.00	0.00
Start 3177.61 hold at 1550.00 MD										
1,600.00	25.00	286.49	1,556.03	82.18	-277.63	289.54	0.00	0.00	0.00	0.00
1,684.93	25.00	286.49	1,633.00	92.37	-312.05	325.43	0.00	0.00	0.00	0.00
GREEN RIVER										
1,700.00	25.00	286.49	1,646.66	94.18	-318.15	331.80	0.00	0.00	0.00	0.00
1,800.00	25.00	286.49	1,737.29	106.18	-358.68	374.06	0.00	0.00	0.00	0.00
1,900.00	25.00	286.49	1,827.92	118.17	-399.20	416.32	0.00	0.00	0.00	0.00
1,974.01	25.00	286.49	1,895.00	127.05	-429.20	447.60	0.00	0.00	0.00	0.00
BIRDSNEST										
2,000.00	25.00	286.49	1,918.55	130.17	-439.73	458.59	0.00	0.00	0.00	0.00
2,100.00	25.00	286.49	2,009.18	142.16	-480.25	500.85	0.00	0.00	0.00	0.00
2,200.00	25.00	286.49	2,099.81	154.16	-520.77	543.11	0.00	0.00	0.00	0.00
2,300.00	25.00	286.49	2,190.44	166.15	-561.30	585.37	0.00	0.00	0.00	0.00
2,400.00	25.00	286.49	2,281.07	178.15	-601.82	627.63	0.00	0.00	0.00	0.00
2,500.00	25.00	286.49	2,371.70	190.15	-642.34	669.90	0.00	0.00	0.00	0.00
2,538.94	25.00	286.49	2,407.00	194.82	-658.13	686.35	0.00	0.00	0.00	0.00
MAHOGANY										
2,600.00	25.00	286.49	2,462.34	202.14	-682.87	712.16	0.00	0.00	0.00	0.00
2,700.00	25.00	286.49	2,552.97	214.14	-723.39	754.42	0.00	0.00	0.00	0.00
2,800.00	25.00	286.49	2,643.60	226.13	-763.91	796.68	0.00	0.00	0.00	0.00
2,900.00	25.00	286.49	2,734.23	238.13	-804.44	838.94	0.00	0.00	0.00	0.00
3,000.00	25.00	286.49	2,824.86	250.12	-844.96	881.20	0.00	0.00	0.00	0.00
3,035.46	25.00	286.49	2,857.00	254.38	-859.33	896.19	0.00	0.00	0.00	0.00
8 5/8"										
3,100.00	25.00	286.49	2,915.49	262.12	-885.49	923.47	0.00	0.00	0.00	0.00
3,200.00	25.00	286.49	3,006.12	274.12	-926.01	965.73	0.00	0.00	0.00	0.00
3,300.00	25.00	286.49	3,096.75	286.11	-966.53	1,007.99	0.00	0.00	0.00	0.00
3,400.00	25.00	286.49	3,187.38	298.11	-1,007.06	1,050.25	0.00	0.00	0.00	0.00
3,500.00	25.00	286.49	3,278.01	310.10	-1,047.58	1,092.51	0.00	0.00	0.00	0.00
3,600.00	25.00	286.49	3,368.64	322.10	-1,088.10	1,134.78	0.00	0.00	0.00	0.00
3,700.00	25.00	286.49	3,459.27	334.09	-1,128.63	1,177.04	0.00	0.00	0.00	0.00
3,800.00	25.00	286.49	3,549.90	346.09	-1,169.15	1,219.30	0.00	0.00	0.00	0.00
3,900.00	25.00	286.49	3,640.54	358.09	-1,209.67	1,261.56	0.00	0.00	0.00	0.00
4,000.00	25.00	286.49	3,731.17	370.08	-1,250.20	1,303.82	0.00	0.00	0.00	0.00
4,100.00	25.00	286.49	3,821.80	382.08	-1,290.72	1,346.09	0.00	0.00	0.00	0.00



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 921-29D1BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4887 & KB 4 @ 4891.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4887 & KB 4 @ 4891.00ft (ASSUMED)
Site:	NBU 921-29C PAD	North Reference:	True
Well:	NBU 921-29D1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,200.00	25.00	286.49	3,912.43	394.07	-1,331.25	1,388.35	0.00	0.00	0.00	
4,300.00	25.00	286.49	4,003.06	406.07	-1,371.77	1,430.61	0.00	0.00	0.00	
4,400.00	25.00	286.49	4,093.69	418.06	-1,412.29	1,472.87	0.00	0.00	0.00	
4,500.00	25.00	286.49	4,184.32	430.06	-1,452.82	1,515.13	0.00	0.00	0.00	
4,600.00	25.00	286.49	4,274.95	442.06	-1,493.34	1,557.39	0.00	0.00	0.00	
4,700.00	25.00	286.49	4,365.58	454.05	-1,533.86	1,599.66	0.00	0.00	0.00	
4,727.61	25.00	286.49	4,390.61	457.36	-1,545.05	1,611.32	0.00	0.00	0.00	
Start Drop -2.00										
4,800.00	23.55	286.49	4,456.59	465.81	-1,573.59	1,641.09	2.00	-2.00	0.00	
4,900.00	21.55	286.49	4,548.94	476.70	-1,610.36	1,679.44	2.00	-2.00	0.00	
5,000.00	19.55	286.49	4,642.57	486.66	-1,644.02	1,714.54	2.00	-2.00	0.00	
5,100.00	17.55	286.49	4,737.37	495.69	-1,674.53	1,746.36	2.00	-2.00	0.00	
5,200.00	15.55	286.49	4,833.22	503.78	-1,701.85	1,774.84	2.00	-2.00	0.00	
5,300.00	13.55	286.49	4,930.01	510.91	-1,725.94	1,799.97	2.00	-2.00	0.00	
5,336.97	12.81	286.49	4,966.00	513.30	-1,734.02	1,808.40	2.00	-2.00	0.00	
WASATCH										
5,400.00	11.55	286.49	5,027.61	517.08	-1,746.78	1,821.70	2.00	-2.00	0.00	
5,500.00	9.55	286.49	5,125.92	522.27	-1,764.33	1,840.01	2.00	-2.00	0.00	
5,600.00	7.55	286.49	5,224.80	526.50	-1,778.59	1,854.88	2.00	-2.00	0.00	
5,700.00	5.55	286.49	5,324.14	529.73	-1,789.53	1,866.29	2.00	-2.00	0.00	
5,800.00	3.55	286.49	5,423.82	531.99	-1,797.14	1,874.23	2.00	-2.00	0.00	
5,900.00	1.55	286.49	5,523.72	533.25	-1,801.41	1,878.68	2.00	-2.00	0.00	
5,977.61	0.00	0.00	5,601.32	533.55	-1,802.42	1,879.73	2.00	-2.00	0.00	
Start 5675.68 hold at 5977.61 MD										
6,000.00	0.00	0.00	5,623.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
6,100.00	0.00	0.00	5,723.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
6,200.00	0.00	0.00	5,823.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
6,300.00	0.00	0.00	5,923.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,023.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,123.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,223.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,323.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,423.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,523.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,623.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
7,100.00	0.00	0.00	6,723.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
7,200.00	0.00	0.00	6,823.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
7,300.00	0.00	0.00	6,923.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,023.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,123.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,223.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,323.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,423.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,523.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,623.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
8,100.00	0.00	0.00	7,723.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
8,200.00	0.00	0.00	7,823.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
8,300.00	0.00	0.00	7,923.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
8,377.29	0.00	0.00	8,001.00	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
MESAVERDE										
8,400.00	0.00	0.00	8,023.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,123.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,223.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00	



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 921-29D1BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4887 & KB 4 @ 4891.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4887 & KB 4 @ 4891.00ft (ASSUMED)
Site:	NBU 921-29C PAD	North Reference:	True
Well:	NBU 921-29D1BS	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)
8,700.00	0.00	0.00	8,323.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
8,800.00	0.00	0.00	8,423.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
8,900.00	0.00	0.00	8,523.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
9,000.00	0.00	0.00	8,623.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
9,100.00	0.00	0.00	8,723.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
9,200.00	0.00	0.00	8,823.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
9,300.00	0.00	0.00	8,923.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
9,400.00	0.00	0.00	9,023.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
9,500.00	0.00	0.00	9,123.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
9,600.00	0.00	0.00	9,223.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
9,700.00	0.00	0.00	9,323.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
9,800.00	0.00	0.00	9,423.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
9,900.00	0.00	0.00	9,523.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
10,000.00	0.00	0.00	9,623.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
10,100.00	0.00	0.00	9,723.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
10,200.00	0.00	0.00	9,823.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
10,300.00	0.00	0.00	9,923.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
10,400.00	0.00	0.00	10,023.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
10,500.00	0.00	0.00	10,123.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
10,600.00	0.00	0.00	10,223.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
10,619.29	0.00	0.00	10,243.00	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
SEGO - SEGO_NBU 921-29D1BS									
10,683.29	0.00	0.00	10,307.00	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
CASTLEGATE									
10,700.00	0.00	0.00	10,323.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
10,800.00	0.00	0.00	10,423.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
10,900.00	0.00	0.00	10,523.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
11,000.00	0.00	0.00	10,623.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
11,053.29	0.00	0.00	10,677.00	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
BLACKHAWK									
11,100.00	0.00	0.00	10,723.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
11,200.00	0.00	0.00	10,823.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
11,300.00	0.00	0.00	10,923.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
11,400.00	0.00	0.00	11,023.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
11,500.00	0.00	0.00	11,123.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
11,600.00	0.00	0.00	11,223.71	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
11,653.29	0.00	0.00	11,277.00	533.55	-1,802.42	1,879.73	0.00	0.00	0.00
TD at 11653.29 - PBHL_NBU 921-29D1BS									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SEGO_NBU 921-29D1B - hit/miss target - Shape	0.00	0.00	10,243.00	533.55	-1,802.42	14,534,241.30	2,037,561.25	40.0138300	-109.5816610
- plan hits target center - Circle (radius 25.00)									
PBHL_NBU 921-29D1B: - plan hits target center - Circle (radius 100.00)	0.00	0.00	11,277.00	533.55	-1,802.42	14,534,241.30	2,037,561.25	40.0138300	-109.5816610

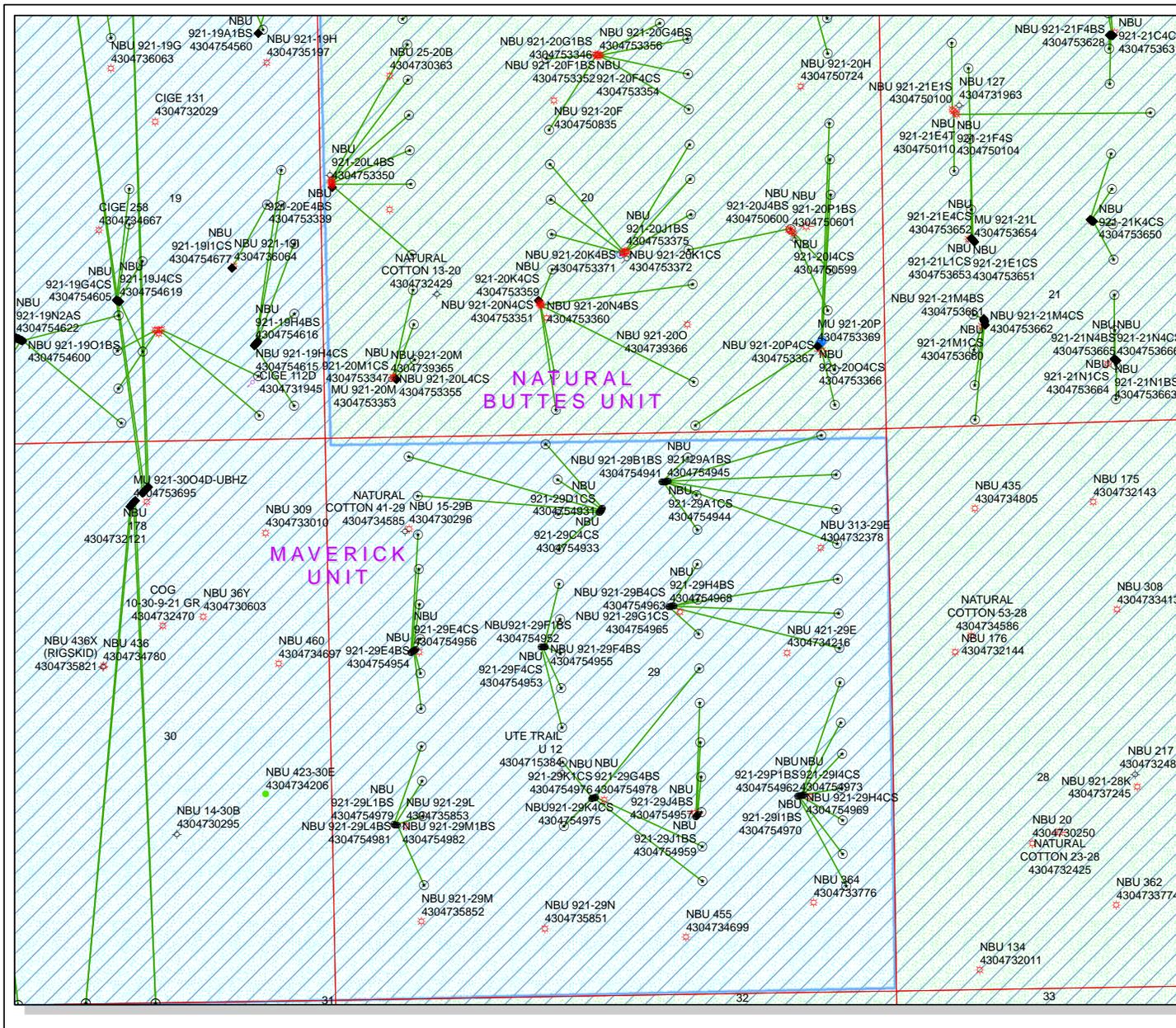


Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 921-29D1BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4887 & KB 4 @ 4891.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4887 & KB 4 @ 4891.00ft (ASSUMED)
Site:	NBU 921-29C PAD	North Reference:	True
Well:	NBU 921-29D1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
3,035.46	2,857.00	8 5/8"	8.625	11.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,684.93	1,633.00	GREEN RIVER			
1,974.01	1,895.00	BIRDSNEST			
2,538.94	2,407.00	MAHOGANY			
5,336.97	4,966.00	WASATCH			
8,377.29	8,001.00	MESAVERDE			
10,619.29	10,243.00	SEGO			
10,683.29	10,307.00	CASTLEGATE			
11,053.29	10,677.00	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	
1,550.00	1,510.71	76.19	-257.37	Start 3177.61 hold at 1550.00 MD	
4,727.61	4,390.61	457.36	-1,545.05	Start Drop -2.00	
5,977.61	5,601.32	533.55	-1,802.42	Start 5675.68 hold at 5977.61 MD	
11,653.29	11,277.00	533.55	-1,802.42	TD at 11653.29	



API Number: 4304754932

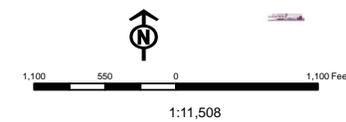
Well Name: NBU 921-29D1BS

Township: T09.0S Range: R21.0E Section: 29 Meridian: S

Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared: 11/20/2014
Map Produced by Diana Mason

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



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
440 West 200 South, Suite 500
Salt Lake City, UT 84101

IN REPLY REFER TO:
3160
(UT-922)

November 25, 2014

Memorandum

To: Assistant Field Office Manager Minerals,
Vernal Field Office

From: Michael Coulthard, Petroleum Engineer

Subject: 2014 Plan of Development Natural Buttes Unit
Uintah County, Utah.

Pursuant to email between Diana Mason, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2014 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
PAD NBU 921-29C		
43-047-54931	NBU 921-29D1CS	Sec 29 T09S R21E 0708 FNL 2535 FWL BHL Sec 29 T09S R21E 0537 FNL 0821 FWL
43-047-54932	NBU 921-29D1BS	Sec 29 T09S R21E 0700 FNL 2541 FWL BHL Sec 29 T09S R21E 0167 FNL 0739 FWL
43-047-54933	NBU 921-29C4CS	Sec 29 T09S R21E 0724 FNL 2523 FWL BHL Sec 29 T09S R21E 1062 FNL 2136 FWL
43-047-54934	NBU 921-29C4BS	Sec 29 T09S R21E 0716 FNL 2529 FWL BHL Sec 29 T09S R21E 0735 FNL 2135 FWL
43-047-54935	NBU 921-29C1CS	Sec 29 T09S R21E 0692 FNL 2547 FWL BHL Sec 29 T09S R21E 0408 FNL 2134 FWL
43-047-54936	NBU 921-29C1BS	Sec 29 T09S R21E 0684 FNL 2553 FWL BHL Sec 29 T09S R21E 0067 FNL 2031 FWL
PAD NBU 921-29B		
43-047-54939	NBU 921-29B4BS	Sec 29 T09S R21E 0448 FNL 2118 FEL BHL Sec 29 T09S R21E 0900 FNL 1807 FEL
43-047-54940	NBU 921-29B1CS	Sec 29 T09S R21E 0446 FNL 2109 FEL BHL Sec 29 T09S R21E 0573 FNL 1806 FEL
43-047-54941	NBU 921-29B1BS	Sec 29 T09S R21E 0449 FNL 2128 FEL BHL Sec 29 T09S R21E 0217 FNL 1878 FEL
43-047-54942	NBU 921-29A4CS	Sec 29 T09S R21E 0445 FNL 2099 FEL BHL Sec 29 T09S R21E 1061 FNL 0490 FEL
43-047-54943	NBU 921-29A4BS	Sec 29 T09S R21E 0444 FNL 2089 FEL BHL Sec 29 T09S R21E 0734 FNL 0490 FEL

RECEIVED: November 28, 2014

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
PAD NBU 921-29B		
43-047-54944	NBU 921-29A1CS	Sec 29 T09S R21E 0441 FNL 2069 FEL BHL Sec 29 T09S R21E 0408 FNL 0489 FEL
43-047-54945	NBU 921-29A1BS	Sec 29 T09S R21E 0442 FNL 2079 FEL BHL Sec 29 T09S R21E 0034 FNL 0619 FEL
PAD NBU 921-29E		
43-047-54946	NBU 921-29D4BS	Sec 29 T09S R21E 2010 FNL 0734 FWL BHL Sec 29 T09S R21E 0901 FNL 0818 FWL
43-047-54947	NBU 921-29D4CS	Sec 29 T09S R21E 2005 FNL 0742 FWL BHL Sec 29 T09S R21E 1228 FNL 0819 FWL
43-047-54949	NBU 921-29E1BS	Sec 29 T09S R21E 2000 FNL 0751 FWL BHL Sec 29 T09S R21E 1556 FNL 0820 FWL
43-047-54950	NBU 921-29E1CS	Sec 29 T09S R21E 1985 FNL 0777 FWL BHL Sec 29 T09S R21E 1883 FNL 0820 FWL
43-047-54954	NBU 921-29E4BS	Sec 29 T09S R21E 1990 FNL 0768 FWL BHL Sec 29 T09S R21E 2210 FNL 0820 FWL
43-047-54956	NBU 921-29E4CS	Sec 29 T09S R21E 1995 FNL 0760 FWL BHL Sec 29 T09S R21E 2538 FNL 0821 FWL
PAD NBU 921-29F		
43-047-54948	NBU 921-29F1CS	Sec 29 T09S R21E 1980 FNL 1990 FWL BHL Sec 29 T09S R21E 1717 FNL 2139 FWL
43-047-54951	NBU 921-29K1BS	Sec 29 T09S R21E 1982 FNL 1960 FWL BHL Sec 29 T09S R21E 2537 FSL 2142 FWL
43-047-54952	NBU921-29F1BS	Sec 29 T09S R21E 1981 FNL 1980 FWL BHL Sec 29 T09S R21E 1390 FNL 2137 FWL
43-047-54953	NBU 921-29F4CS	Sec 29 T09S R21E 1982 FNL 1970 FWL BHL Sec 29 T09S R21E 2371 FNL 2141 FWL
43-047-54955	NBU 921-29F4BS	Sec 29 T09S R21E 1980 FNL 2000 FWL BHL Sec 29 T09S R21E 2044 FNL 2140 FWL
PAD NBU 921-29J		
43-047-54957	NBU 921-29J4BS	Sec 29 T09S R21E 1689 FSL 1850 FEL BHL Sec 29 T09S R21E 1717 FSL 1816 FEL
43-047-54958	NBU 921-29J1CS	Sec 29 T09S R21E 1681 FSL 1856 FEL BHL Sec 29 T09S R21E 2044 FSL 1815 FEL
43-047-54959	NBU 921-29J1BS	Sec 29 T09S R21E 1674 FSL 1863 FEL BHL Sec 29 T09S R21E 2371 FSL 1814 FEL
43-047-54960	NBU 921-29G4CS	Sec 29 T09S R21E 1666 FSL 1870 FEL BHL Sec 29 T09S R21E 2535 FNL 1813 FEL
PAD NBU 921-29I		
43-047-54961	NBU 921-29P1CS	Sec 29 T09S R21E 1848 FSL 0907 FEL BHL Sec 29 T09S R21E 0998 FSL 0468 FEL
43-047-54962	NBU 921-29P1BS	Sec 29 T09S R21E 1850 FSL 0897 FEL BHL Sec 29 T09S R21E 1291 FSL 0495 FEL
43-047-54969	NBU 921-29H4CS	Sec 29 T09S R21E 1854 FSL 0877 FEL BHL Sec 29 T09S R21E 2369 FNL 0491 FEL
43-047-54970	NBU 921-29I1BS	Sec 29 T09S R21E 1856 FSL 0868 FEL BHL Sec 29 T09S R21E 2535 FSL 0491 FEL
43-047-54971	NBU 921-29I1CS	Sec 29 T09S R21E 1858 FSL 0858 FEL BHL Sec 29 T09S R21E 2244 FSL 0483 FEL

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
PAD NBU 921-29I		
43-047-54972	NBU 921-29I4BS	Sec 29 T09S R21E 1860 FSL 0848 FEL BHL Sec 29 T09S R21E 1920 FSL 0494 FEL
43-047-54973	NBU 921-29I4CS	Sec 29 T09S R21E 1852 FSL 0887 FEL BHL Sec 29 T09S R21E 1618 FSL 0489 FEL
PAD NBU 921-29G		
43-047-54963	NBU 921-29B4CS	Sec 29 T09S R21E 1619 FNL 2069 FEL BHL Sec 29 T09S R21E 1227 FNL 1809 FEL
43-047-54964	NBU 921-29G1BS	Sec 29 T09S R21E 1616 FNL 2050 FEL BHL Sec 29 T09S R21E 1554 FNL 1809 FEL
43-047-54965	NBU 921-29G1CS	Sec 29 T09S R21E 1623 FNL 2089 FEL BHL Sec 29 T09S R21E 1881 FNL 1811 FEL
43-047-54966	NBU 921-29H1BS	Sec 29 T09S R21E 1614 FNL 2040 FEL BHL Sec 29 T09S R21E 1388 FNL 0490 FEL
43-047-54967	NBU 921-29H1CS	Sec 29 T09S R21E 1618 FNL 2059 FEL BHL Sec 29 T09S R21E 1715 FNL 0490 FEL
43-047-54968	NBU 921-29H4BS	Sec 29 T09S R21E 1621 FNL 2079 FEL BHL Sec 29 T09S R21E 2042 FNL 0491 FEL
PAD NBU 921-29K		
43-047-54974	NBU 921-29O1BS	Sec 29 T09S R21E 1862 FSL 2432 FWL BHL Sec 29 T09S R21E 1063 FSL 1818 FEL
43-047-54975	NBU921-29K4CS	Sec 29 T09S R21E 1856 FSL 2413 FWL BHL Sec 29 T09S R21E 1598 FSL 2145 FWL
43-047-54976	NBU 921-29K1CS	Sec 29 T09S R21E 1859 FSL 2422 FWL BHL Sec 29 T09S R21E 2210 FSL 2143 FWL
43-047-54977	NBU 921-29J4CS	Sec 29 T09S R21E 1869 FSL 2450 FWL BHL Sec 29 T09S R21E 1390 FSL 1817 FEL
43-047-54978	NBU 921-29G4BS	Sec 29 T09S R21E 1865 FSL 2441 FWL BHL Sec 29 T09S R21E 2208 FNL 1811 FEL
PAD NBU 921-29L		
43-047-54979	NBU 921-29L1BS	Sec 29 T09S R21E 1643 FSL 0551 FWL BHL Sec 29 T09S R21E 2374 FSL 0821 FWL
43-047-54980	NBU 921-29L1CS	Sec 29 T09S R21E 1641 FSL 0561 FWL BHL Sec 29 T09S R21E 2046 FSL 0822 FWL
43-047-54981	NBU 921-29L4BS	Sec 29 T09S R21E 1639 FSL 0571 FWL BHL Sec 29 T09S R21E 1719 FSL 0822 FWL
43-047-54982	NBU 921-29M1BS	Sec 29 T09S R21E 1636 FSL 0581 FWL BHL Sec 29 T09S R21E 1064 FSL 0823 FWL
PAD NBU 921-30A		
43-047-54986	NBU 921-30H1CS	Sec 30 T09S R21E 0865 FNL 0646 FEL BHL Sec 30 T09S R21E 1649 FNL 0536 FEL
43-047-54987	NBU 921-30H1BS	Sec 30 T09S R21E 0874 FNL 0643 FEL BHL Sec 30 T09S R21E 1267 FNL 0535 FEL
43-047-54988	NBU 92130B1CS	Sec 30 T09S R21E 0856 FNL 0651 FEL BHL Sec 30 T09S R21E 0572 FNL 1954 FEL
43-047-54989	NBU 921-30B1BS	Sec 30 T09S R21E 0846 FNL 0654 FEL BHL Sec 30 T09S R21E 0231 FNL 1954 FEL

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
PAD NBU 921-30A		
43-047-54990	NBU 921-30A1CS	Sec 30 T09S R21E 0837 FNL 0658 FEL BHL Sec 30 T09S R21E 0524 FNL 0540 FEL
43-047-54991	NBU 921-30A1BS	Sec 30 T09S R21E 0828 FNL 0662 FEL BHL Sec 30 T09S R21E 0194 FNL 0560 FEL
PAD NBU 921-290		
43-047-54992	NBU 921-29P4BS	Sec 29 T09S R21E 0496 FSL 1679 FEL BHL Sec 29 T09S R21E 0337 FSL 0485 FEL
43-047-54993	NBU 921-29O4CS	Sec 29 T09S R21E 0493 FSL 1689 FEL BHL Sec 29 T09S R21E 0120 FSL 1842 FEL
43-047-54994	NBU 921-29O4BS	Sec 29 T09S R21E 0486 FSL 1708 FEL BHL Sec 29 T09S R21E 0409 FSL 1820 FEL
43-047-54995	NBU 921-29O1CS	Sec 29 T09S R21E 0489 FSL 1698 FEL BHL Sec 29 T09S R21E 0736 FSL 1819 FEL
PAD NBU 921-29N		
43-047-54996	NBU 921-29N4CS	Sec 29 T09S R21E 0623 FSL 1903 FWL BHL Sec 29 T09S R21E 0104 FSL 2111 FWL
43-047-54997	NBU 921-29N1CS	Sec 29 T09S R21E 0643 FSL 1901 FWL BHL Sec 29 T09S R21E 0834 FSL 2152 FWL
43-047-54998	NBU 921-29N1BS	Sec 29 T09S R21E 0653 FSL 1900 FWL BHL Sec 29 T09S R21E 1214 FSL 2153 FWL
43-047-54999	NBU 921-29M4BS	Sec 29 T09S R21E 0633 FSL 1902 FWL BHL Sec 29 T09S R21E 0320 FSL 0782 FWL
PAD NBU 921-30D		
43-047-55003	NBU 921-30C1BS	Sec 30 T09S R21E 0730 FNL 0847 FWL BHL Sec 30 T09S R21E 0059 FNL 2323 FWL
43-047-55004	NBU 921-30D1BS	Sec 30 T09S R21E 0707 FNL 0814 FWL BHL Sec 30 T09S R21E 0210 FNL 0875 FWL
43-047-55005	NBU 921-30D1CS	Sec 30 T09S R21E 0713 FNL 0822 FWL BHL Sec 30 T09S R21E 0521 FNL 0874 FWL
43-047-55006	NBU 921-30D4CS	Sec 30 T09S R21E 0724 FNL 0838 FWL BHL Sec 30 T09S R21E 1190 FNL 0871 FWL
43-047-55007	NBU 921-30E1BS	Sec 30 T09S R21E 0702 FNL 0806 FWL BHL Sec 30 T09S R21E 1523 FNL 0862 FWL
43-047-55008	NBU 921-30E1CS	Sec 30 T09S R21E 0719 FNL 0830 FWL BHL Sec 30 T09S R21E 1872 FNL 0885 FWL

This office has no objection to permitting the wells at this time.

Michael Coulthard

Digitally signed by Michael Coulthard
 DN: cn=Michael Coulthard, o=Bureau of Land Management,
 ou=Division of Minerals, email=mcoulth@blm.gov, c=US
 Date: 2014.11.25 12:00:46 -0700

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

MCoulthard:mc:11-25-14

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/14/2014

API NO. ASSIGNED: 43047549320000

WELL NAME: NBU 921-29D1BS

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

PHONE NUMBER: 720 929-6828

CONTACT: Joel Malefyt

PROPOSED LOCATION: NENW 29 090S 210E

Permit Tech Review:

SURFACE: 0700 FNL 2541 FWL

Engineering Review:

BOTTOM: 0167 FNL 0739 FWL

Geology Review:

COUNTY: UINTAH

LATITUDE: 40.01229

LONGITUDE: -109.57576

UTM SURF EASTINGS: 621553.00

NORTHINGS: 4430092.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU 0581

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

Commingling Approved

LOCATION AND SITING:

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

Comments: Presite Completed

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



GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. HAZA
Division Director

Permit To Drill

Well Name: NBU 921-29D1BS
API Well Number: 43047549320000
Lease Number: UTU 0581
Surface Owner: FEDERAL
Approval Date: 12/17/2014

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

AUG 20 2014

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

BLM Vernal UT

5. Lease Serial No.
UTU0581

Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.
UTU63047A

8. Lease Name and Well No.
NBU 921-29D1BS

9. API Well No.

10. Field and Pool, or Exploratory
NATURAL BUTTES
4304754932

11. Sec., T., R., M., or Blk. and Survey or Area
Sec 29 T9S R21E Mer SLB

12. County or Parish
UINTAH

13. State
UT

17. Spacing Unit dedicated to this well

20. BLM/BIA Bond No. on file
WYB000291

23. Estimated duration
60-90 DAYS

1a. Type of Work: DRILL REENTER

1b. Type of Well: Oil Well Gas Well Other Single Zone Multiple Zone

2. Name of Operator
KERR-MCGEE OIL & GAS ONSHORE
Contact: JOEL MALEFYT
Email: JOEL.MALEFYT@ANADARKO.COM

3a. Address
P.O. BOX 173779
DENVER, CO 80202-3779

3b. Phone No. (include area code)
Ph: 720-929-6828
Fx: 720-929-7828

4. Location of Well (Report location clearly and in accordance with any State requirements. *)
At surface NENW 700FNL 2541FWL 40.012330 N Lat, 109.575915 W Lon
At proposed prod. zone NWNW 167FNL 739FWL 40.013795 N Lat, 109.582351 W Lon

14. Distance in miles and direction from nearest town or post office*
46.3 MILES SOUTH OF VERNAL, UT

15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
167

16. No. of Acres in Lease
2400.00

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.
701

19. Proposed Depth
11653 MD
11277 TVD

21. Elevations (Show whether DF, KB, RT, GL, etc.)
4887 GL

22. Approximate date work will start
01/01/2015

24. Attachments

RECEIVED

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

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

FEB 09 2015

DIV. OF OIL GAS & MINING

25. Signature (Electronic Submission)
Name (Printed/Typed) JOEL MALEFYT Ph: 720-929-6828
Date 08/14/2014

Title REGULATORY ANALYST

Approved by (Signature)
Name (Printed/Typed) Jerry Kenczka
Date FEB 02 2015

Title Assistant Field Manager
Office VERNAL FIELD OFFICE
Lands & Mineral Resources

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.

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 #257101 verified by the BLM Well Information System
For KERR-MCGEE OIL & GAS ONSHORE, sent to the Vernal
Committed to AFMSS for processing by JEANNE NEWMAN on 08/20/2014 ()

NOTICE OF APPROVAL

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

14JEN 0211AE

NOS 6/3/2014



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
Well No: NBU 921-29D1BS
API No: 43-047-54932

Location: NENW, Sec. 29, T9S, R21E
Lease No: UTU-0581
Agreement:

OFFICE NUMBER: (435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

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

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

NOTIFICATION REQUIREMENTS

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: 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.

NBU 921-29C Well Pad: NBU 921-29C1BS, NBU 921-29C1CS, NBU 921-29D1BS, NBU 921-29D1CS, NBU 921-29C4BS, NBU 921-29C4CS:

- Paleontological monitoring by a BLM permitted paleontologist is required during all ground-disturbing activities for proposed development areas found to have scientifically important fossils or in locations of high fossil potential (BLM 2012b).

Raptor management will be guided by the use of "Best Management Practices for Raptors and Their Associated Habitats in Utah" (BLM 2008 Appendix A) and "Fluid Minerals Best Management Practices" (BLM 2008 Appendix R), utilizing seasonal and spatial buffers, as well as mitigation, to maintain and enhance raptor nesting and foraging habitat, while allowing other resource uses.

- Construction and development activities will be seasonally limited from 1/1 through 8/31, for Golden Eagles, pending the results of a preconstruction nest occupancy survey (BLM 2008).
- Construction and development activities will be seasonally limited for Prairie Falcon from 4/1 through 8/31, pending the results of a preconstruction nest occupancy survey (BLM 2008).
- Raptor perch avoidance devices will be installed on all new power lines and existing lines that present a potential hazard to raptors (BLM 2008).
- 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).

Generic COAs for all locations within the Greater Natural Buttes EIS (MAY 2012)

- A Class III archeological survey has been conducted on all federal and/or Indian Trust lands in the GNBPA. All personnel would refrain from collecting artifacts and from disturbing any significant cultural resources in the area. KMG would be responsible for informing all persons in the area who are associated with this Project that they may be subject to prosecution for knowingly disturbing

historic or archaeological sites or for collecting artifacts. All vehicular traffic, personnel movement, construction, and restoration activities would be confined to the areas examined, as referenced in the archaeological report, and to the existing roadways and/or evaluated access routes. If historic or archaeological materials were to be uncovered during construction, KMG would immediately stop surface disturbing activities that might further disturb such materials and contact the appropriate Authorized Officer (AO).

- If blasting operations are scheduled to occur within 2 miles of an active gilsonite mine, the mine operator would be notified at least 48 hours prior to blasting to coordinate activities for mine worker safety.
- KMG would conduct a paleontological survey on all of its federal locations. All personnel would refrain from collecting fossils and from disturbing any significant fossil in the GNBPA.
- An infiltration gallery will be constructed in a USFWS-approved location. An infiltration gallery is basically a pit or trench dug within a floodplain to a depth below the water table. Water is drawn from the pit rather than from the river directly. If this is not possible, KMG will limit pumping within the river to off-channel locations that do not connect to the river during high spring flows.
- If water cannot be drawn using the measures below, and the pump head will be located in the river channel where larval fish are known to occur, the following measures will apply (BLM 2012b):
- KMG will avoid pumping from low-flow or no-flow areas as these habitats tend to concentrate larval fishes;
 - KMG will avoid pumping to the greatest extent possible, during that period of the year when larval fish may be present (approximately April 1 to August 31);
 - KMG will avoid pumping, to the greatest extent possible, during the midnight hours (10:00 pm to 2:00am) as larval drift studies indicate that is a period of greatest daily activity. Dusk is the preferred pumping time as larval drift abundance is lowest.
 - KMG will screen all pump intakes with 3/32-inch mesh material..
- Damage to livestock and livestock facilities would be reported as quickly as possible to the BLM and affected livestock operators. Operators would develop and employ prevention measures to avoid damaging fences, gates, and cattleguards, including upgrading cattleguard gate widths and load-bearing requirements and fencing all open pits and cellars
- If partial or complete removal of a fence cannot be avoided, the fence would be braced and tied off per the BLM guidance. Where the fence is crossed by a road, the fence would be braced and a cattleguard and gate installed per BLM guidance.
- Speed limits would be followed and signs would be erected in lambing/calving areas, shipping pastures, or adjacent to working corrals to warn vehicle operators. (April 1 to June 1)
- In accordance with the procedures described in its Pesticide/ Herbicide Use Plan, KMG would monitor for the growth of invasive species resulting from surface disturbance caused by Project activities and would control weeds caused by Project activities.
- KMG would use its best efforts to control noxious weeds along access road authorizations, pipeline route authorizations, well sites, or other proposed facilities by spraying or mechanical removal. A list of noxious weeds would be obtained from the BLM or the appropriate County Extension Office. On BLM-administered land, a Pesticide Use Proposal would be submitted and approved prior to the application of herbicides or other pesticides or possibly hazardous chemicals.
- KMG would conduct pre-disturbance weed inventories to identify locations of noxious and invasive weed species.

- A 1- or 2-year rest period or mechanical control would be required prior to reseeded on areas treated with herbicide spraying.
- An integrated weed management plan will be developed, and include the following components:
- Surveying for special status plant species before treating an area,
- Considering effects to special status species when designing herbicide treatment programs,
- Using drift reduction agents to reduce the risk of drift hazard, and
- Using selective herbicide and a wick to backpack sprayer to minimize risks to special plants.
- Dirt ramps would be built and maintained at an angle not to exceed 45 degrees every 150 to 200 feet along open pipeline trenches to reduce habitat fragmentation and increase accessibility of small animals (mammals, reptiles, amphibians) to adjacent habitats.
- On level or gently sloping ground (5 percent slope or less), surface pipelines (4 inches or greater in diameter) would be elevated a minimum of 6 inches above the ground to allow passage of small animals beneath the pipe. This ground clearance would be achieved by placing the pipeline on blocks at intervals of 150 or 200 feet or as appropriate.
- 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.

KMG will install bird-excluding devices that prevent the perching and entry of migratory birds on or into its new fired vessel exhaust stacks.

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

SITE SPECIFIC DOWNHOLE COAs:

t9S..r21E..s29 Pad B 921-29B: nmWI NBU: #WI 921-29A1BS 921-29A1CS 921-29A4BS 921-29A4CS 921-29B1BS 921-29B1CS 921-29B4BS
t9S..r21E..s29 Pad C 921-29C: nmWI NBU: #WI 921-29C1BS 921-29C1CS 921-29C4BS 921-29C4CS 921-29D1BS 921-29D1CS
t9S..r21E..s29 Pad F 921-29F: nmWI NBU: #WI 921-29F1BS 921-29F1CS 921-29F4BS 921-29F4CS 921-29K1BS
t9S..r21E..s29 Pad G 921-29G: nmWI NBU: #WI 921-29B4CS 921-29G1BS 921-29G1CS 921-29H1BS 921-29H1CS 921-29H4BS

TD_below_11000'

apd_coa Downhole _Anad(_Kerr)

- Surface casing cement shall be brought to surface.
- Production casing cement shall be brought 200' up and into the surface casing.
- For the drilling of the surface hole section, operator is required to install a bowl diverter system or rotating head which is connected and discharges to a panic or choke bleed line. The surface hole section of the subject well is deeper than 2,000 ft.
- Operator downhole program is for one of two TD proposals, either formation Wasatch-Mesaverde or Blackhawk. COA covering BOPE applies for well if operator drilling program is 'Blackhawk Drilling Program'.

Require usage of a modified 5m stack. The 5M BOPE (minimum) shall be a modified 5m BOPE stack to include a third (3) pipe ram and one (1) remote kill line.

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.

- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well by CD (compact disc). This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

OPERATING REQUIREMENT REMINDERS:

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

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

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0581	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
8. WELL NAME and NUMBER: NBU 921-29D1BS	
9. API NUMBER: 43047549320000	
9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
COUNTY: Uintah	
STATE: UTAH	

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

1. TYPE OF WELL Gas Well	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6507
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0700 FNL 2541 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENW Section: 29 Township: 09.0S Range: 21.0E Meridian: S	

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: 11/30/2015	<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 Director of
Oil, Gas and Mining

Date: _____
By:

NAME (PLEASE PRINT) Jennifer Thomas	PHONE NUMBER 720 929-6808	TITLE Regulatory Specialist
SIGNATURE N/A	DATE 11/30/2015	



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 43047549320000

API: 43047549320000

Well Name: NBU 921-29D1BS

Location: 0700 FNL 2541 FWL QTR NENW SEC 29 TWNP 090S RNG 210E MER S

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

Date Original Permit Issued: 12/17/2014

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: Jennifer Thomas

Date: 11/30/2015

Title: 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.	
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TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 11/3/2016	<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
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	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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Approved by the
November 03, 2016
Oil, Gas and Mining

Date: _____
By: 

NAME (PLEASE PRINT) Joel Malefy	PHONE NUMBER 720 929-6828	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 11/3/2016	



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 43047549320000

API: 43047549320000

Well Name: NBU 921-29D1BS

Location: 0700 FNL 2541 FWL QTR NENW SEC 29 TWNP 090S RNG 210E MER S

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- Is bonding still in place, which covers this proposed well? Yes No

Signature: Joel Malefyt

Date: 11/3/2016

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