API Well Number: 43047555210000

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

FORM 3

AMENDED REPORT ☐

APPLICATION FOR PERMIT TO DRILL

1. WELL NAME and NUMBER
NBU 1022-9E4BS

2. TYPE OF WORK
DRILL NEW WELL ■ REENTER P&A WELL ☐ DEEPEN WELL ☐

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
720 929-6507

8. ADDRESS OF OPERATOR
P.O. Box 173779, Denver, CO, 80217

9. OPERATOR E-MAIL
mike.mcconaughey@anadarko.com

10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)
UTU 01196-B

11. MINERAL OWNERSHIP
FEDERAL ■ INDIAN ☐ STATE ☐ FEE ☐

12. SURFACE OWNERSHIP
FEDERAL ■ INDIAN ☐ STATE ☐ FEE ☐

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 ■ (Submit Commingling Application) NO ☐

19. SLANT
VERTICAL ☐ DIRECTIONAL ■ HORIZONTAL ☐

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	2084 FSL 1387 FWL	NESW	9	10.0 S	22.0 E	S
Top of Uppermost Producing Zone	2258 FNL 693 FWL	SWNW	9	10.0 S	22.0 E	S
At Total Depth	2258 FNL 693 FWL	SWNW	9	10.0 S	22.0 E	S

21. COUNTY
UINTAH

22. DISTANCE TO NEAREST LEASE LINE (Feet)
693

23. NUMBER OF ACRES IN DRILLING UNIT
320

25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)
758

26. PROPOSED DEPTH
MD: 10152 TVD: 10034

27. ELEVATION - GROUND LEVEL
5152

28. BOND NUMBER
WYB000291

29. 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 - 2390	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 - 10152	11.6	HCP-110 LT&C	12.5	Class G	780	3.38	12.0
							Class G	1430	1.31	14.3

ATTACHMENTS

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

- ✔ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
- ✔ COMPLETE DRILLING PLAN
- ☐ AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)
- ☐ FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
- ✔ DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)
- ✔ TOPOGRAPHICAL MAP

NAME Joel Malefyt | **TITLE** Regualtory Analyst | **PHONE** 720 929-6828

SIGNATURE | **DATE** 12/21/2015 | **EMAIL** joel.malefyt@anadarko.com

API NUMBER ASSIGNED
43047555210000

APPROVAL
Permit Manager

RECEIVED: January 13, 2016

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

NBU 1022-9E4BS

Surface:	2084 FSL / 1387 FWL	NESW
BHL:	2258 FNL / 693 FWL	SWNW

Section 9 T10S R22E

Unitah County, Utah
Mineral Lease: UTU-01196B

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:

Formation	Depth	Resource
Uinta	0 - Surface	
Green River	1,145'	
Birds Nest	1,473'	Water
Mahogany	1,938'	Water
Wasatch	4,310'	Gas
Mesaverde	6,788'	Gas
Sego	8,899'	Gas
Castlegate	8,981'	Gas
Blackhawk	9,434'	Gas
TVD =	10,034'	
TD =	10,152'	

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.

RECEIVED: December 21, 2015

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 10034' TVD, approximately equals 6,422 psi (0.64 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,200 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 Wasatch Formation/Mesaverde Group

Maximum anticipated bottom hole pressure calculated at 8899' TVD, approximately equals 5,428 psi (0.61 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 3,494 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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

8. Anticipated Starting Dates:

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

9. Variances:

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

10. Other Information:

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

RECEIVED: December 21, 2015

KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP

Blackhawk Drilling Program

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	August 25, 2015
WELL NAME	**NBU 1022-9E4BS**	TD	10,034' TVD 10,152' MD
FIELD	Natural Buttes	COUNTY Uintah STATE Utah	FINISHED ELEVATION 5,152'
SURFACE LOCATION	NESW 2084 FSL 1387 FWL Sec 9 T 10S R 22E		
	Latitude: 39.961959 Longitude: -109.449270		NAD 83
BTM HOLE LOCATION	SWNW 2258 FNL 693 FWL Sec 9 T 10S R 22E		
	Latitude: 39.964541 Longitude: -109.451755		NAD 83
OBJECTIVE ZONE(S)	BLACKHAWK (Part of the Mesaverde Group)		
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept.		

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
		200'	12-1/4	8-5/8", 28#, IJ-55, LTC	Air mist
			11.00'	8-5/8", 28#, IJ-55, LTC	Air mist
			7-7/8"	4-1/2" 11.6# HCP-110 LTC csg	Water / Fresh Water Mud 8.3-12.5 ppg

All water flows encountered while drilling will be reported to the appropriate agencies.

Green River @ 1,145'
Top of Birds Nest @ 1,473'
Mahogany @ 1,938'

Preset f/ GL @ 2,390' TVD

Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.

Wasatch @ 4,310'

Mud logging program TBD
Cased hole logging program from TD - surf csg

Mesaverde @ 6,788' TVD

Sego @ 8,899' TVD

Castlegate @ 8,981' TVD

Blackhawk 9,434' TVD

Max anticipated Mud required 12.5 ppg

TD @ 10,034' TVD 10,152' MD

RECEIVED: December 21, 2015

KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP

Blackhawk Drilling Program

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION LTC	TENSION DQX
CONDUCTOR	14"	0-40'									
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,390	28.00	IJ-55	LTC	2.25	1.68	5.94	N/A
PRODUCTION								10,690	8,650	279,000	
	4-1/2"	0	to	10,152'	11.60	HCP-110	LTC	1.19	1.33	2.40	

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	180	60%	15.80		1.15
Option 1			+ 0.25 pps flocele					
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
			+ 2% CaCl + 0.25 pps flocele					
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**					
Option 2	LEAD	1,890'	Premium cmt + 16% Gel + 10 pps gilsonite	230	35%	12.00		2.86
			+ 0.25 pps Flocele + 3% salt BWOC + GR 3 pps					
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
			+ 0.25 pps flocele					
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	3,802'	13.5ppg yield 1.29, 65:35 Poz:G	780	35%	13.50		1.29
			+ .3% Dispersant + .1% Extender					
			+ .05% High-Temp Retarder					
	TAIL	6,350'	14.5ppg yield 1.37, 50:50 Poz:G	1,430	35%	14.50		1.37
			+ 35% BWOC Silica + .2% Extender					
			+ .3% FLAC + .3% High-Temp Retarder					

*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: _____ **DATE:** _____

Zach Haynes/Eric Giles

DRILLING SUPERINTENDENT: _____ **DATE:** _____

Lovel Young

RECEIVED: December 21, 2015

KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP

Wasatch/Mesaverde Drilling Program

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	August 25, 2015
WELL NAME	**NBU 1022-9E4BS**	TD	8,899' TVD 9,017' MD
FIELD	Natural Buttes	COUNTY Uintah STATE Utah	FINISHED ELEVATION 5,152'
SURFACE LOCATION	NESW 2084 FSL 1387 FWL Sec 9 T 10S R 22E		
	Latitude: 39.961959 Longitude: -109.449270		NAD 83
BTM HOLE LOCATION	SWNW 2258 FNL 693 FWL Sec 9 T 10S R 22E		
	Latitude: 39.964541 Longitude: -109.451755		NAD 83
OBJECTIVE ZONE(S)	Wasatch Formation/Mesaverde Group		
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept.		

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'	14"		
		200'	12-1/4	8-5/8", 28#, IJ-55, LTC	Air mist
			11.00'	8-5/8", 28#, IJ-55, LTC	Air mist
			7-7/8"	4-1/2" 11.6# I-80 LTC csg	Water / Fresh Water Mud 8.3-12.0 ppg

All water flows encountered while drilling will be reported to the appropriate agencies.

Green River @ 1,145'
Top of Birds Nest @ 1,473'
Mahogany @ 1,938'

Preset f/ GL @ 2,390' TVD

Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.

Wasatch @ 4,310'

Mud logging program TBD
Cased hole logging program from TD - surf csg

Mesaverde @ 6,788' TVD

Sego @ 8,899' TVD

Max anticipated Mud required 12.0 ppg

TD @ 8,899' TVD 9,017' MD

KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP

Wasatch/Mesaverde Drilling Program

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION	LTC	DQX
CONDUCTOR	14"	0-40'								
						3,390	1,880	348,000	N/A	
SURFACE	8-5/8"	0 to 2,390	28.00	IJ-55	LTC	2.25	1.68	5.94	N/A	
PRODUCTION						7,780	6,350	223,000		
	4-1/2"	0 to 9,017'	11.60	I-80	LTC	0.86	1.14	2.20		

Surface Casing:

(Burst Assumptions: TD = 12.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

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

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.61 psi/ft = bottomhole gradient

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

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1			+ 0.25 pps flocele					
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
			+ 2% CaCl + 0.25 pps flocele					
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**					
Option 2	LEAD	1,890'	Premium cmt + 16% Gel + 10 pps gilsonite	230	35%	12.00		2.86
			+ 0.25 pps Flocele + 3% salt BWOC + GR 3 pps					
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
			+ 0.25 pps Flocele + 3% salt BWOC + GR 3 pps					
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	3,807'	12.5ppg yield 1.45, 75:25 Poz:G	700	35%	12.50		1.45
			+ .2% Dispersant + .5% Extender					
			+ .43% Mid-Temp Retarder					
	TAIL	5,210'	14.5ppg yield 1.34, 50:50 Poz:G	1,200	35%	14.50		1.34
			+ 35% BWOC Silica + .3% FLAC					
			+ .17% Mid Temp Retarder					

*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: _____ **DATE:** _____

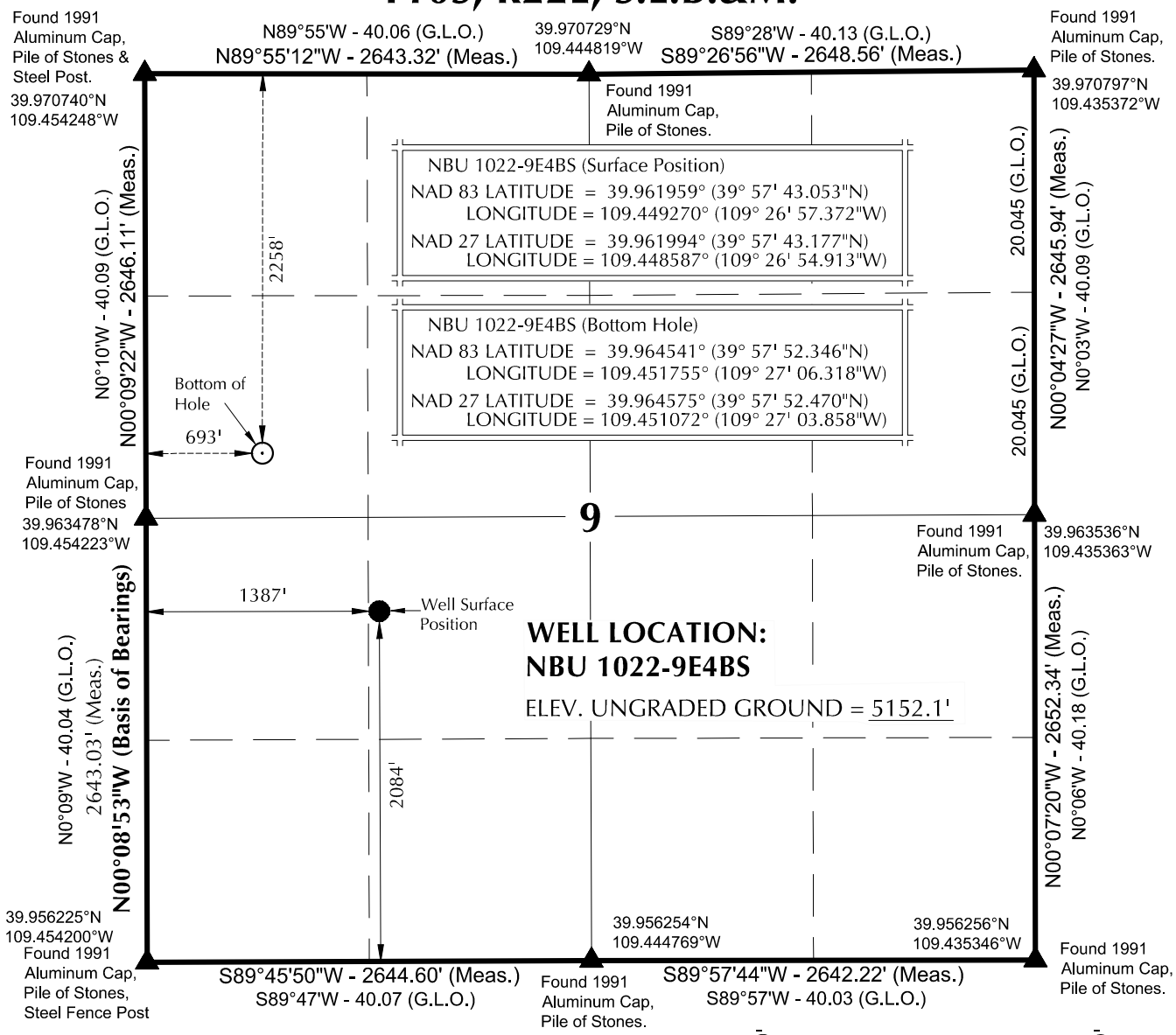
Zach Haynes/Eric Giles

DRILLING SUPERINTENDENT: _____ **DATE:** _____

Lovel Young

RECEIVED: December 21, 2015

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



NOTES:

▲ = Section Corners Located

1. Well footages are measured at right angles to the Section Lines. G.L.O. distances are shown in feet or chains.
2. 1 chain = 66 feet.
3. The Bottom of hole bears N36°32'15"W 1170.52' from the Surface Position.
4. NAD 83 Latitude & Longitude are (CORS 96)(EPOCH:2002).
5. Bearings and Distances are based upon a Local Cartesian Grid, oriented to Geodetic North at the North 1/4 Corner of Section 8, T10S, R22E, S.L.B.&M. The Grid having a mean project height of 5300'. Lineal units used are U.S. Survey Foot.
6. Basis of elevation is Tri-Sta "Two Water" located in Lot 4 of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.

N

1000' 500' 0' 1000'

SCALE

SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

7-21-15

PROFESSIONAL LAND SURVEYOR No.6028691 JOHN R LAUGHE STATE OF UTAH

PROFESSIONAL LAND SURVEYOR
REGISTRATION No. 6028691
STATE OF UTAH

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

WELL PAD - NBU 1022-9K

NBU 1022-9E4BS
WELL PLAT
2258' FNL, 693' FWL (Bottom Hole)
SW ¼ NW ¼ OF SECTION 9, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

609 CONSULTING, LLC
1095 Saberton Ave.
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

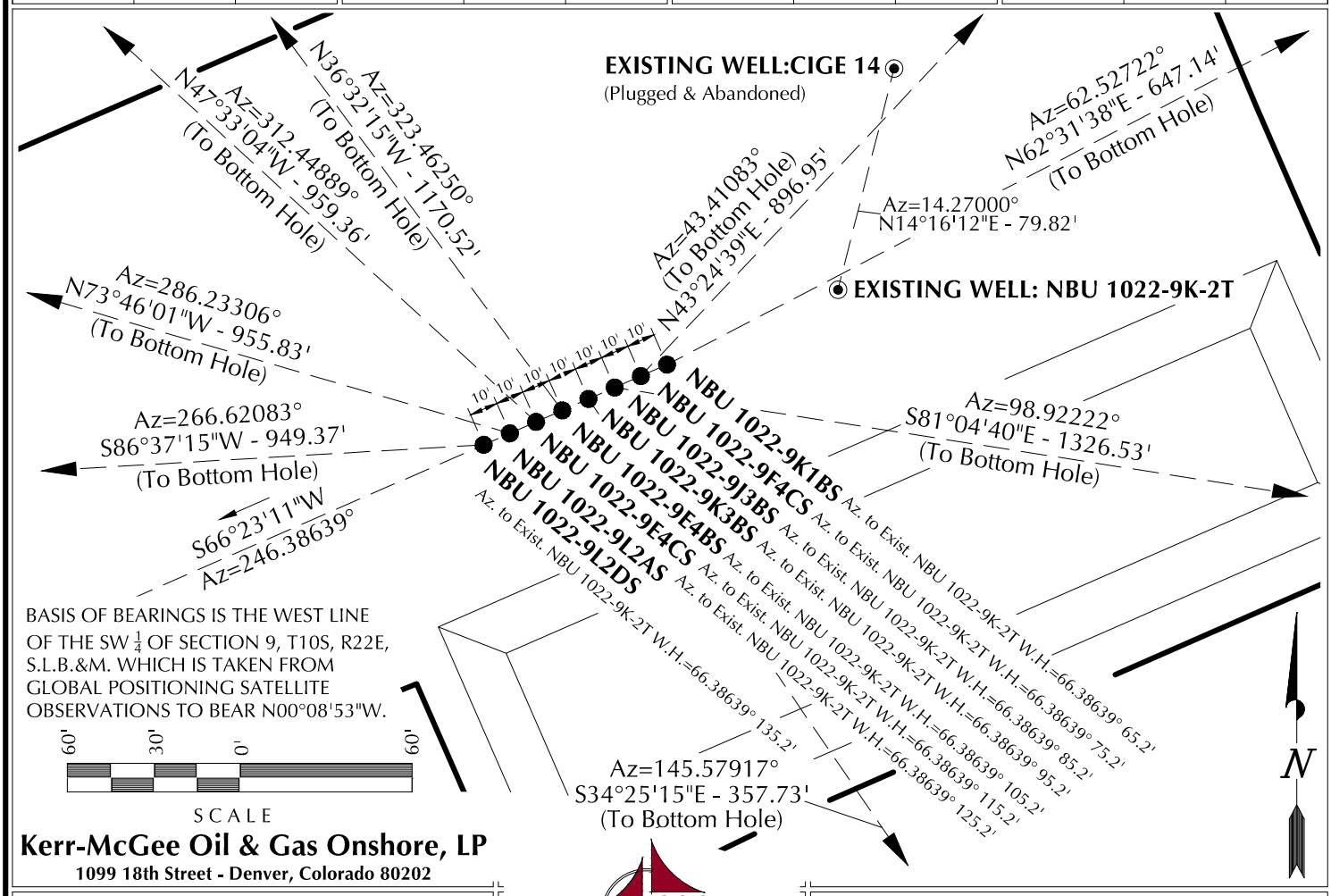
DATE SURVEYED: 6-8-15	SURVEYED BY: A.F.	SHEET NO: 5
DATE DRAWN: 6-8-15	DRAWN BY: M.W.W.	
SCALE: 1" = 1000'	Date Last Revised: 7-20-15 M.W.W.	5 OF 20

API Well Number: 43047555210000

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27			NAD83		NAD27		
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES
NBU 1022-9K1BS	39°57'43.212"N 39.962003°N	109°26'56.902"W 109.449139°W	39°57'43.336"N 39.962038°N	109°26'54.442"W 109.448456°W	2100' FSL 1424' FWL	39°57'46.160"N 39.962822°N	109°26'49.529"W 109.447091°W	39°57'46.284"N 39.962857°N	109°26'47.070"W 109.446408°W	2396' FSL 1999' FWL
NBU 1022-9F4CS	39°57'43.172"N 39.961992°N	109°26'57.020"W 109.449172°W	39°57'43.296"N 39.962027°N	109°26'54.560"W 109.448489°W	2096' FSL 1415' FWL	39°57'49.608"N 39.963780°N	109°26'49.104"W 109.446973°W	39°57'49.733"N 39.963815°N	109°26'46.644"W 109.446290°W	2533' FNL 2033' FWL
NBU 1022-9J3BS	39°57'43.132"N 39.961981°N	109°26'57.137"W 109.449205°W	39°57'43.257"N 39.962016°N	109°26'54.677"W 109.448521°W	2092' FSL 1406' FWL	39°57'41.097"N 39.961416°N	109°26'40.312"W 109.444531°W	39°57'41.221"N 39.961450°N	109°26'37.853"W 109.443848°W	1881' FSL 2572' FEL
NBU 1022-9K3BS	39°57'43.093"N 39.961970°N	109°26'57.255"W 109.449237°W	39°57'43.217"N 39.962005°N	109°26'54.795"W 109.448554°W	2088' FSL 1397' FWL	39°57'40.177"N 39.961160°N	109°26'54.659"W 109.448516°W	39°57'40.301"N 39.961195°N	109°26'52.200"W 109.447833°W	1792' FSL 1598' FWL
NBU 1022-9E4BS	39°57'43.053"N 39.961959°N	109°26'57.372"W 109.449270°W	39°57'43.177"N 39.961994°N	109°26'54.913"W 109.448587°W	2084' FSL 1387' FWL	39°57'52.346"N 39.964541°N	109°27'06.318"W 109.451755°W	39°57'52.470"N 39.964575°N	109°27'03.858"W 109.451072°W	2258' FNL 693' FWL
NBU 1022-9E4CS	39°57'43.014"N 39.961948°N	109°26'57.490"W 109.449303°W	39°57'43.138"N 39.961983°N	109°26'55.030"W 109.448620°W	2080' FSL 1378' FWL	39°57'49.412"N 39.963726°N	109°27'06.578"W 109.451827°W	39°57'49.536"N 39.963760°N	109°27'04.118"W 109.451144°W	2555' FNL 672' FWL
NBU 1022-9L2AS	39°57'42.974"N 39.961937°N	109°26'57.608"W 109.449335°W	39°57'43.098"N 39.961972°N	109°26'55.148"W 109.448652°W	2076' FSL 1369' FWL	39°57'45.615"N 39.962671°N	109°27'09.390"W 109.452608°W	39°57'45.740"N 39.962705°N	109°27'06.930"W 109.451925°W	2347' FSL 452' FWL
NBU 1022-9L2DS	39°57'42.935"N 39.961926°N	109°26'57.725"W 109.449368°W	39°57'43.059"N 39.961961°N	109°26'55.266"W 109.448685°W	2072' FSL 1360' FWL	39°57'42.383"N 39.961773°N	109°27'09.894"W 109.452748°W	39°57'42.507"N 39.961808°N	109°27'07.433"W 109.452065°W	2020' FSL 412' FWL
NBU 1022-9K-2T	39°57'43.469"N 39.962075°N	109°26'56.135"W 109.448926°W	39°57'43.594"N 39.962109°N	109°26'53.675"W 109.448243°W	2126' FSL 1484' FWL					
CIGE 14	39°57'44.234"N 39.962287°N	109°26'55.882"W 109.448856°W	39°57'44.358"N 39.962322°N	109°26'53.422"W 109.448173°W	2203' FSL 1504' 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 1022-9K1BS	298.5'	574.2'	NBU 1022-9F4CS	651.6'	616.4'	NBU 1022-9J3BS	-205.7'	1310.5'	NBU 1022-9K3BS	-295.1'	202.2'
WELL NAME	**NORTH**	**EAST**	**WELL NAME**	**NORTH**	**EAST**	**WELL NAME**	**NORTH**	**EAST**	**WELL NAME**	**NORTH**	**EAST**
NBU 1022-9E4BS	940.5'	-696.9'	NBU 1022-9E4CS	647.5'	-707.9'	NBU 1022-9L2AS	267.2'	-917.7'	NBU 1022-9L2DS	-56.0'	-947.7'



BASIS OF BEARINGS IS THE WEST LINE OF THE SW $\frac{1}{4}$ OF SECTION 9, T10S, R22E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°08'53"W.

60' 30' 0' 60'

SCALE

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

WELL PAD - NBU 1022-9K

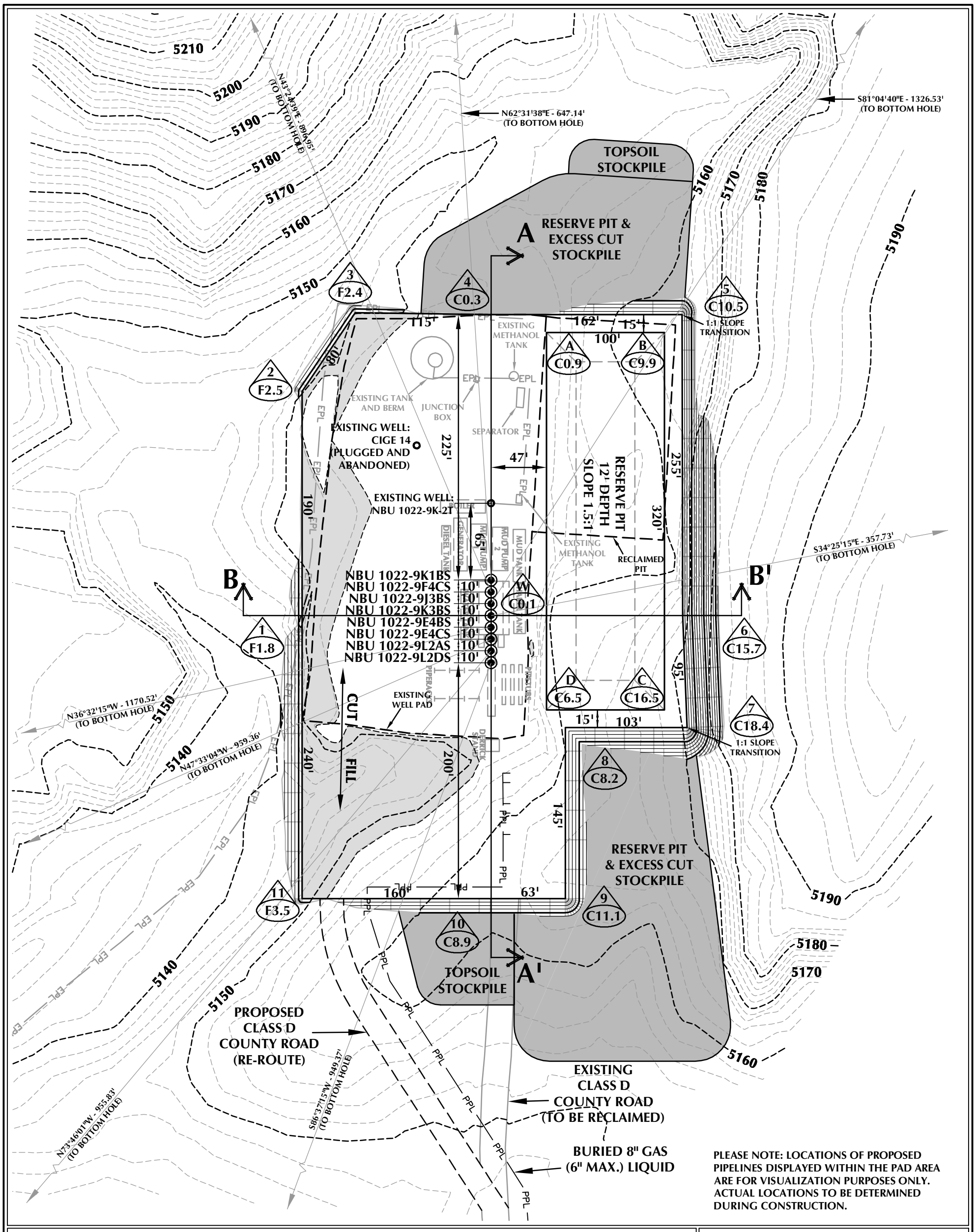
WELL PAD INTERFERENCE PLAT
WELLS - NBU 1022-9K1BS, NBU 1022-9F4CS, NBU 1022-9J3BS, NBU 1022-9K3BS, NBU 1022-9E4BS, NBU 1022-9E4CS, NBU 1022-9L2AS & NBU 1022-9L2DS LOCATED IN SECTION 9, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

609 CONSULTING, LLC
1095 Saberton Ave.
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

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

DATE SURVEYED: 6-8-15	SURVEYED BY: A.F.	SHEET NO:
DATE DRAWN: 6-8-15	DRAWN BY: M.W.W.	9
SCALE: 1" = 60'	Date Last Revised:	9 OF 20

RECEIVED: December 21, 2015



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

WELL PAD - NBU 1022-9K DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5152.2'
FINISHED GRADE ELEVATION = 5152.1'
CUT SLOPES = 1.5:1; EXCEPT AS NOTED
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.82 ACRES
TOTAL DISTURBANCE AREA = 5.37 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

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

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 19,584 C.Y.
TOTAL FILL FOR WELL PAD = 3,613 C.Y.
TOPSOIL @ 6" DEPTH = 1,929 C.Y.
EXCESS MATERIAL = 15,971 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT +/- 11,060 C.Y.
RESERVE PIT CAPACITY (2' OF FREEBOARD) +/- 42,220 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

HORIZONTAL 0 40' 80' 1" = 80'
2' CONTOURS

WELL PAD - NBU 1022-9K

WELL PAD - LOCATION LAYOUT
NBU 1022-9K1BS, NBU 1022-9F4CS, NBU 1022-9J3BS, NBU 1022-9K3BS, NBU 1022-9E4BS, NBU 1022-9E4CS, NBU 1022-9L2AS & NBU 1022-9L2DS
LOCATED IN SECTION 9, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
1095 Saberton Avenue
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

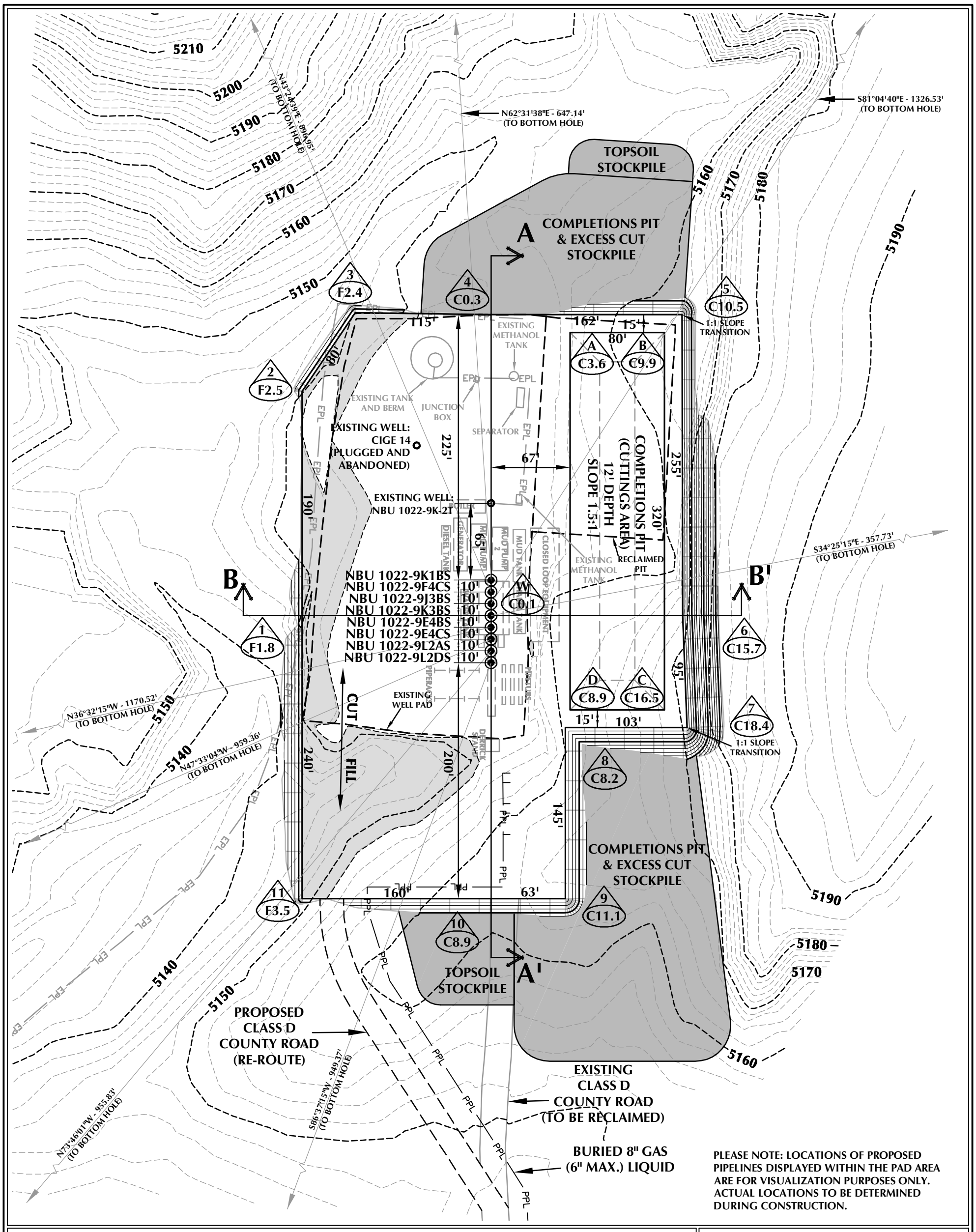
TIMBERLINE ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078
(435) 789-1365

SCALE: 1"=80' | DATE: 6/15/15 | SHEET NO: 10 (10 OF 20)
REVISED:

K:\ANADARKO\2013\013_55_NBU_1022-9_FOCUS\DWGS\NBU 1022-9K\NBU 1022-9K.dwg, 7/29/2015 9:59:36 AM, andy

RECEIVED: December 21, 2015

API Well Number: 43047555210000



WELL PAD - NBU 1022-9K (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5152.2'
FINISHED GRADE ELEVATION = 5152.1'
CUT SLOPES = 1.5:1; EXCEPT AS NOTED
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.82 ACRES
TOTAL DISTURBANCE AREA = 5.37 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

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

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 19,584 C.Y.
TOTAL FILL FOR WELL PAD = 3,613 C.Y.
TOPSOIL @ 6" DEPTH = 1,929 C.Y.
EXCESS MATERIAL = 15,971 C.Y.

COMPLETIONS PIT QUANTITIES

TOTAL CUT FOR COMPLETIONS PIT
+/- 8,370 C.Y.
COMPLETIONS PIT CAPACITY
(2' OF FREEBOARD)
+/- 31,560 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

HORIZONTAL 0 40' 80' 1" = 80'
2' CONTOURS

WELL PAD - NBU 1022-9K

WELL PAD - LOCATION LAYOUT
NBU 1022-9K1BS, NBU 1022-9F4CS,
NBU 1022-9J3BS, NBU 1022-9K3BS,
NBU 1022-9E4BS, NBU 1022-9E4CS,
NBU 1022-9L2AS & NBU 1022-9L2DS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

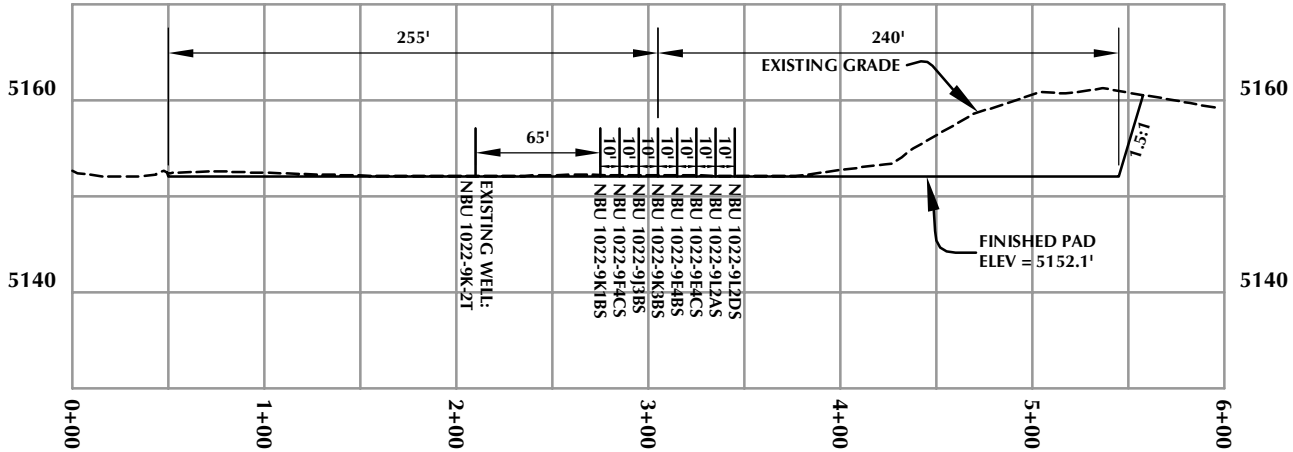
609 CONSULTING, LLC
1095 Saberton Avenue
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

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

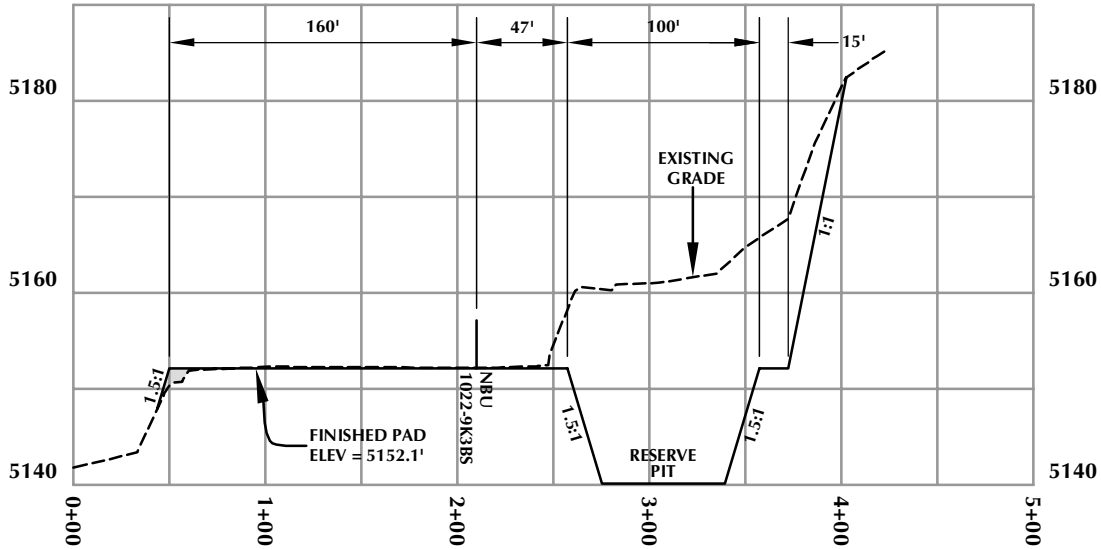
SCALE: 1"=80' | DATE: 7/13/15 | SHEET NO: 10B
REVISED:
10B OF 20

K:\ANADARKO\2013\13_55_NBU_1022-9_FOCUS\DWGS\NBU 1022-9K\NBU 1022-9K.dwg, 7/29/2015 10:02:11 AM, andy

RECEIVED: December 21, 2015



CROSS SECTION A-A'



CROSS SECTION B-B'

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

WELL PAD - NBU 1022-9K

WELL PAD - CROSS SECTIONS
NBU 1022-9K1BS, NBU 1022-9F4CS,
NBU 1022-9J3BS, NBU 1022-9K3BS,
NBU 1022-9E4BS, NBU 1022-9E4CS,
NBU 1022-9L2AS & NBU 1022-9L2DS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

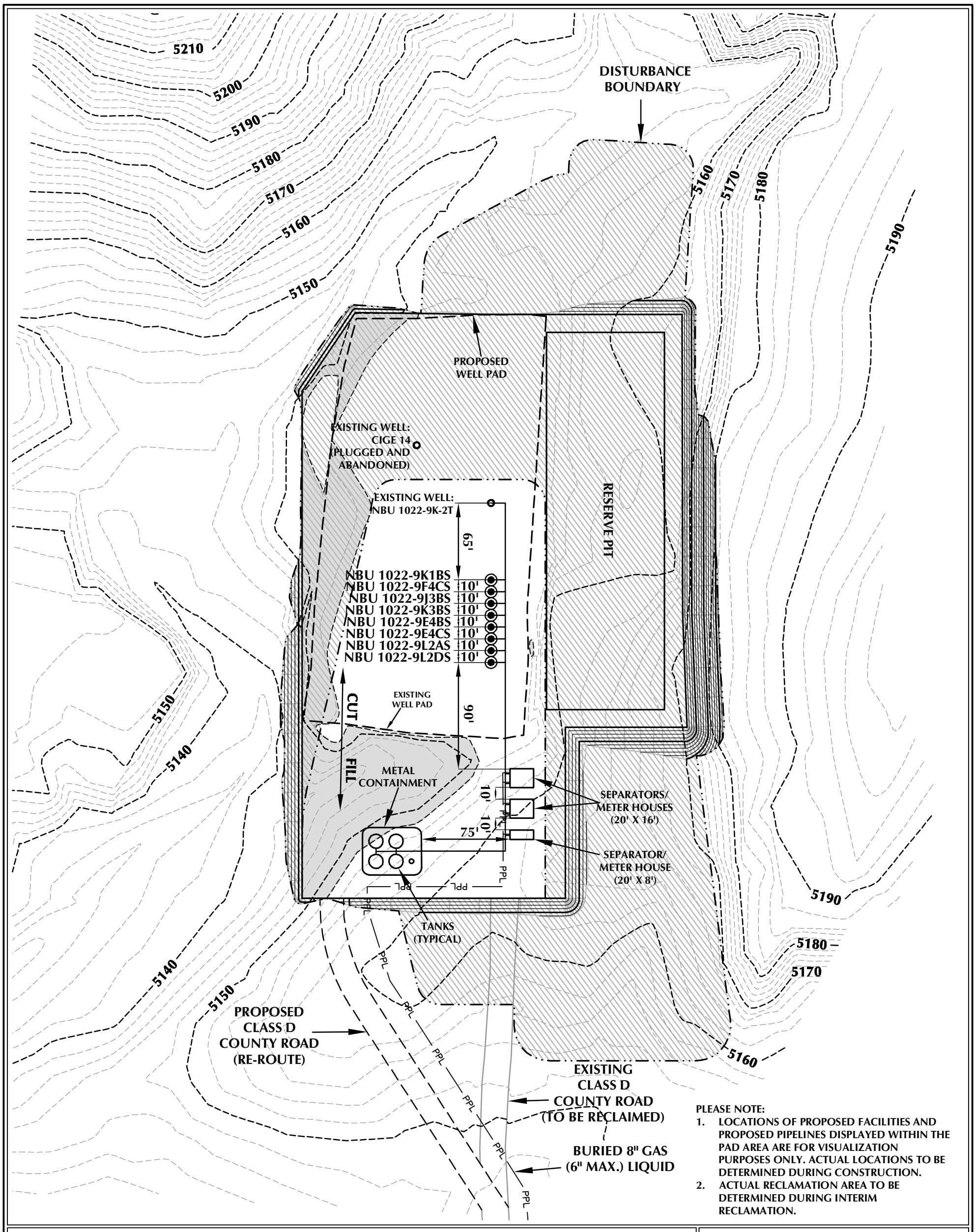
609
CONSULTING, LLC
1095 Saberton Avenue
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

HORIZONTAL 0 50' 100' 1" = 100'
VERTICAL 0 10' 20' 1" = 20'

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

SCALE: 1"=100' | DATE: 6/15/15 | SHEET NO: 11
REVISED:
11 OF 20

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\DWGS\NBU 1022-9K\NBU 1022-9K.dwg, 7/29/2015 9:55:19 AM, andy



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

WELL PAD - NBU 1022-9K RECLAMATION DESIGN SUMMARY

TOTAL DISTURBANCE AREA = 5.37 ACRES
RECLAMATION AREA = 3.89 ACRES
TOTAL WELL PAD AREA AFTER RECLAMATION = 1.48 ACRES

WELL PAD LEGEND

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

HORIZONTAL 0 40' 80' 1" = 80'

2' CONTOURS

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

WELL PAD - NBU 1022-9K

WELL PAD - RECLAMATION LAYOUT
NBU 1022-9K1BS, NBU 1022-9F4CS,
NBU 1022-9J3BS, NBU 1022-9K3BS,
NBU 1022-9E4BS, NBU 1022-9E4CS,
NBU 1022-9L2AS & NBU 1022-9L2DS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
1095 Saberton Avenue
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"=80' | DATE: 6/15/15 | SHEET NO: 12 12 OF 20
REVISED:

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\DWGS\NBU 1022-9K\NBU 1022-9K.dwg, 7/29/2015 10:12:38 AM, andy

RECEIVED: December 21, 2015

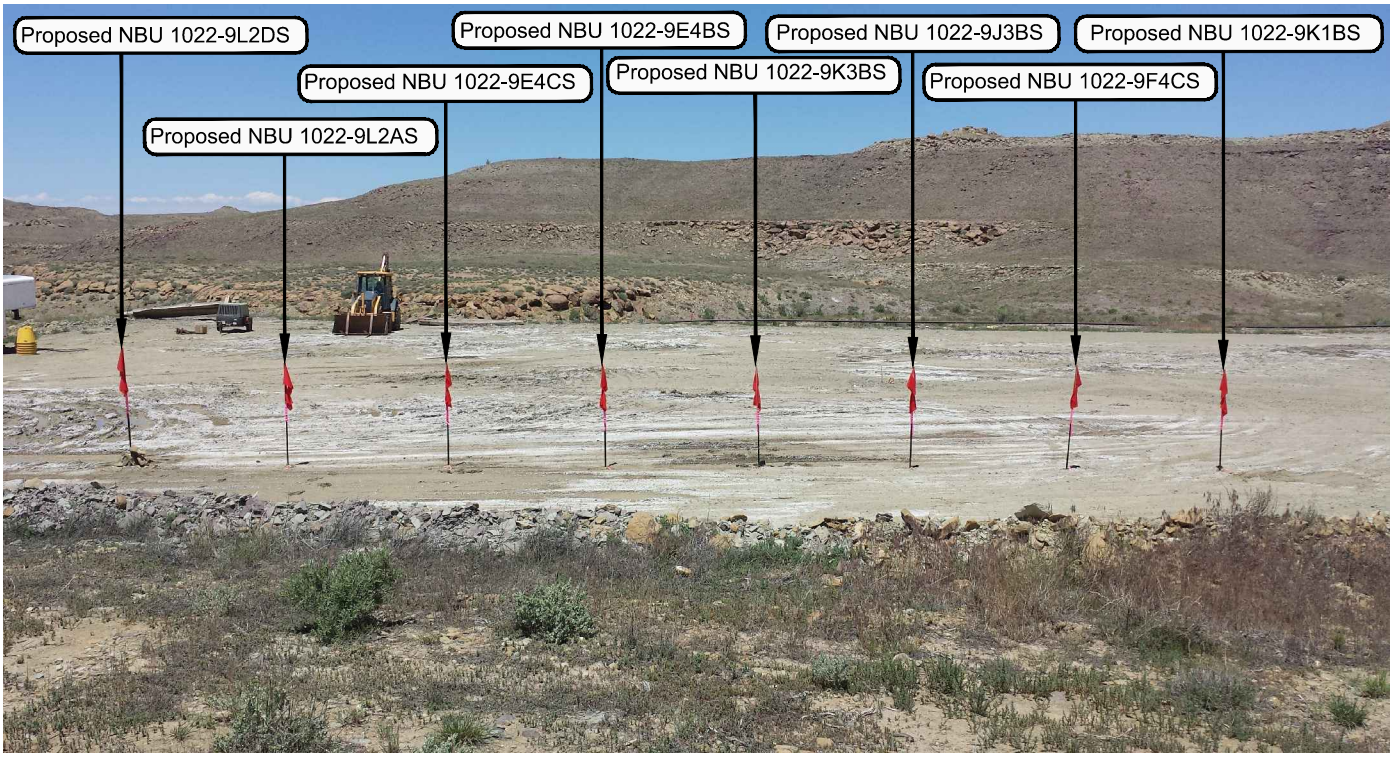


PHOTO VIEW: FROM CORNER #6 TO LOCATION STAKE **CAMERA ANGLE: NORTHWESTERLY**

PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD RE-ROUTE **CAMERA ANGLE: NORTHEASTERLY**

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

WELL PAD - NBU 1022-9K

LOCATION PHOTOS
NBU 1022-9K1BS, NBU 1022-9F4CS, NBU 1022-9J3BS, NBU 1022-9K3BS, NBU 1022-9E4BS, NBU 1022-9E4CS, NBU 1022-9L2AS & NBU 1022-9L2DS LOCATED IN SECTION 9, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

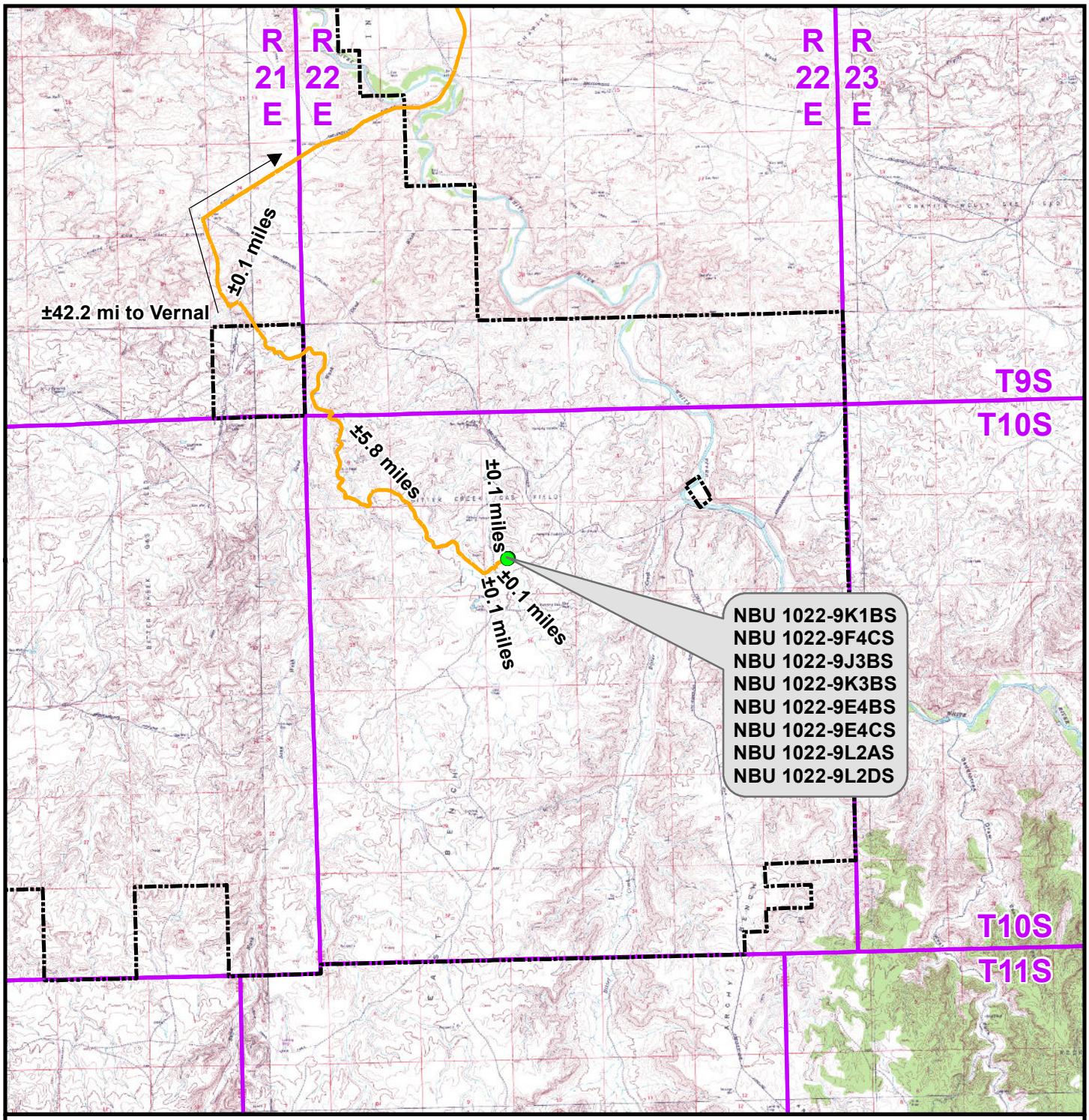
609 CONSULTING, LLC
1095 Saberton Ave.
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

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

DATE PHOTOS TAKEN: 6-8-15	PHOTOS TAKEN BY: A.F.	SHEET NO: 13
DATE DRAWN: 6-8-15	DRAWN BY: M.W.W.	
Date Last Revised:		13 OF 20

RECEIVED: December 21, 2015

API Well Number: 43047555210000



Legend

Distance From Well Pad - NBU 1022-9K To Unit Boundary: ±11,065ft

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

WELL PAD - NBU 1022-9K

TOPO A
NBU 1022-9K1BS, NBU 1022-9F4CS, NBU 1022-9J3BS, NBU 1022-9K3BS, NBU 1022-9E4BS, NBU 1022-9E4CS, NBU 1022-9L2AS & NBU 1022-9L2DS
LOCATED IN SECTION 9, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
1095 Saberton Avenue
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

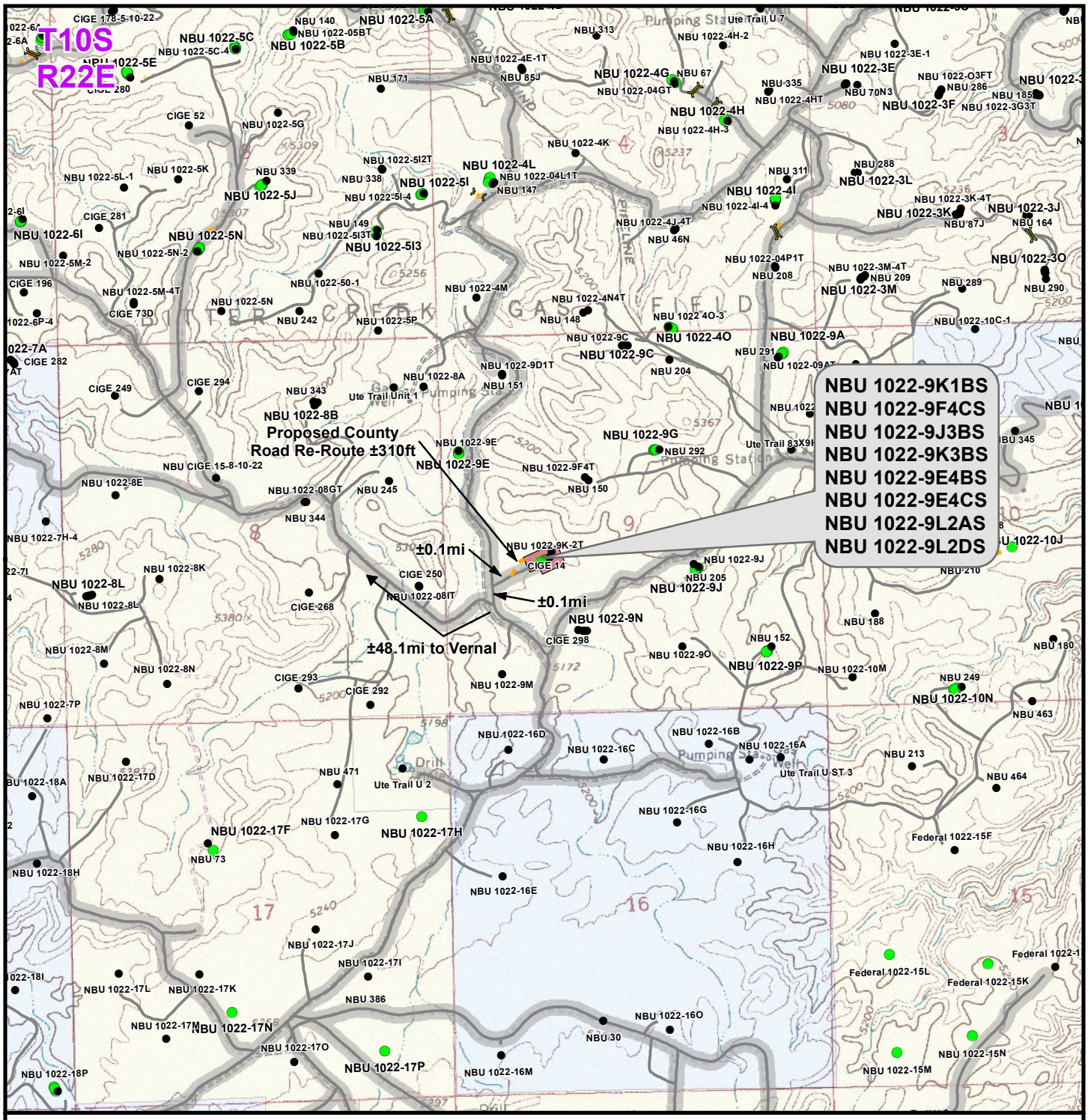
N

SCALE: 1:100,000	NAD83 USP Central	SHEET NO: 14
DRAWN: TL	DATE: 15 June 2015	14 OF 20
REVISED:	DATE:	

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\GIS\Maps_ABCDE\NBU 1022-9K\NBU 1022-9K_A.mxd6/16/2015 10:23:20 AM

RECEIVED: December 21, 2015

API Well Number: 43047555210000



K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\GIS\Maps_ABCDE\NBU 1022-9K\NBU 1022-9K_B.mxd6/16/2015 10:22:30 AM

WELL PAD - NBU 1022-9K

TOPO B

NBU 1022-9K1BS, NBU 1022-9F4CS, NBU 1022-9J3BS, NBU 1022-9K3BS, NBU 1022-9E4BS, NBU 1022-9E4CS, NBU 1022-9L2AS & NBU 1022-9L2DS
LOCATED IN SECTION 9, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

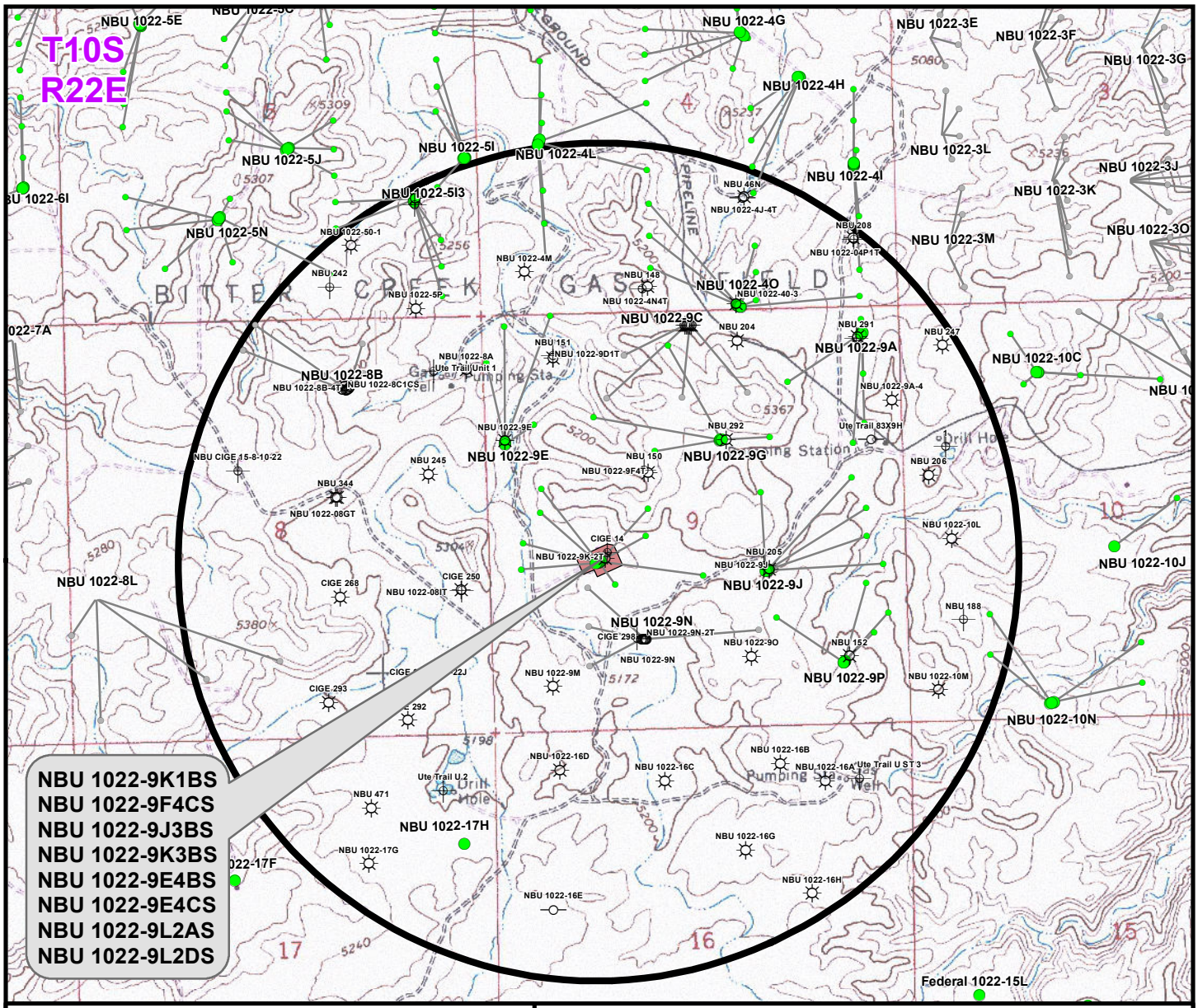
609 CONSULTING, LLC
1095 Saberton Avenue
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 15
DRAWN: TL	DATE: 15 June 2015	15 OF 20
REVISED:	DATE:	

RECEIVED: December 21, 2015

API Well Number: 43047555210000



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

Proposed Well	Nearest Well Bore	Footage
NBU 1022-9K1BS	CIGE 14	±532ft
NBU 1022-9F4CS	NBU 1022-9F4T	±448ft
NBU 1022-9J3BS	NBU 205	±771ft
NBU 1022-9K3BS	NBU 1022-9L4AS BH	±349ft
NBU 1022-9E4BS	NBU 1022-9E	±758ft
NBU 1022-9E4CS	CIGE 14	±984ft
NBU 1022-9L2AS	NBU 1022-08IT	±981ft
NBU 1022-9L2DS	CIGE 250	±796ft

Legend

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

WELL PAD - NBU 1022-9K

TOPO C
NBU 1022-9K1BS, NBU 1022-9F4CS, NBU 1022-9J3BS, NBU 1022-9K3BS, NBU 1022-9E4BS, NBU 1022-9E4CS, NBU 1022-9L2AS & NBU 1022-9L2DS
LOCATED IN SECTION 9, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

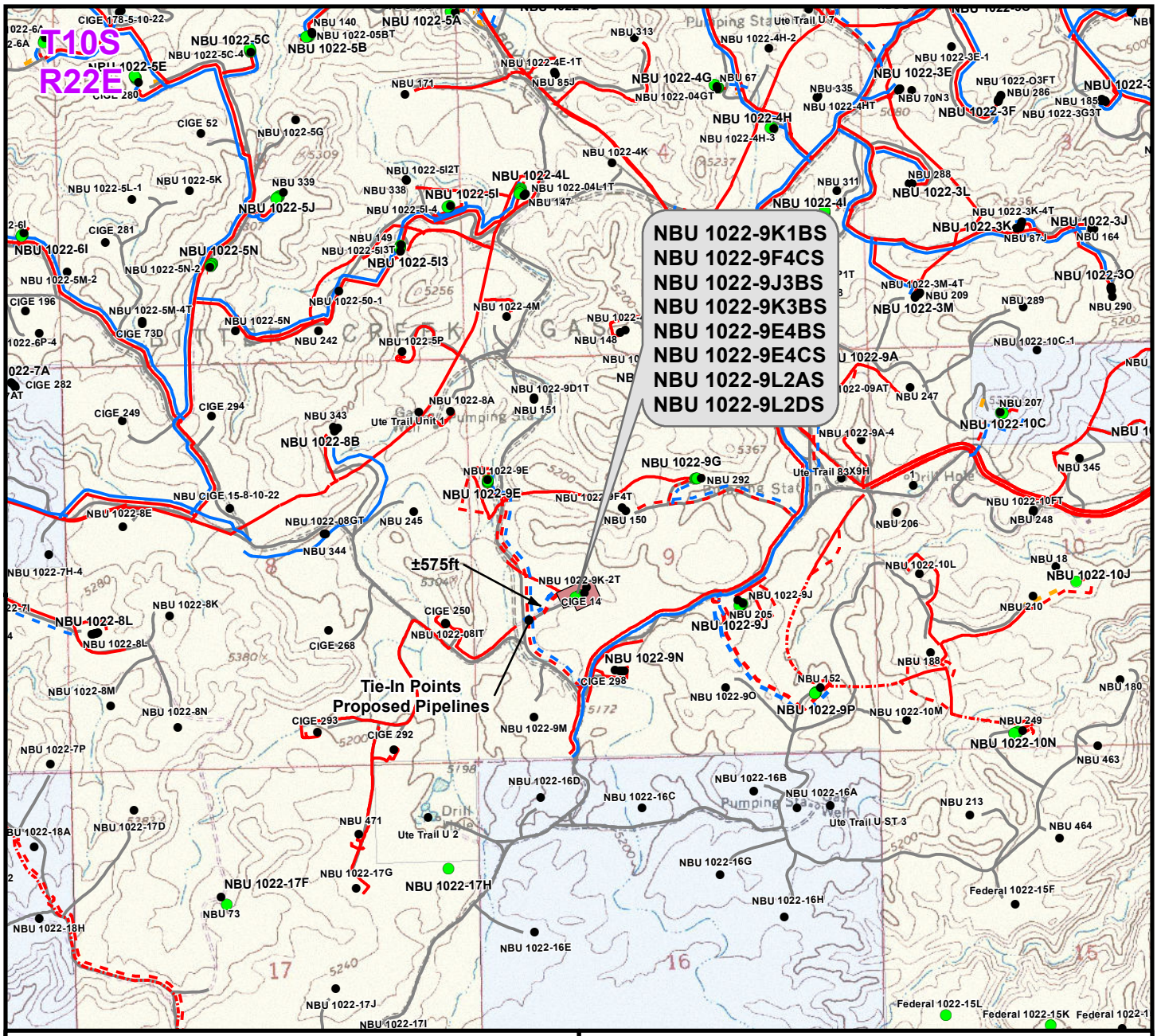
609 CONSULTING, LLC
1095 Saberton Avenue
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

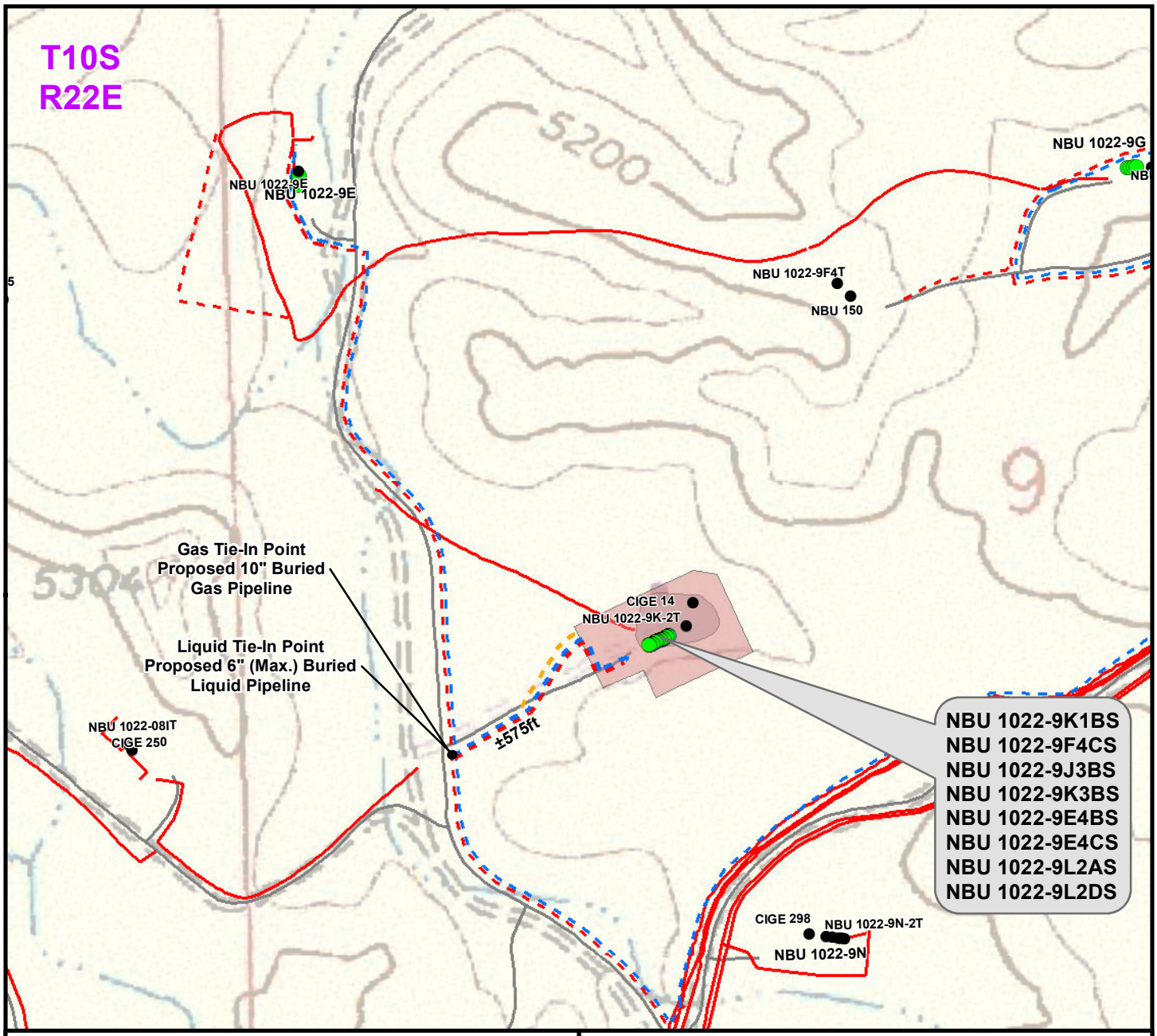
SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 16
DRAWN: TL	DATE: 13 July 2015	16 OF 20
REVISED:	DATE:	

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\GIS\Maps_ABCDE\NBU 1022-9K\NBU 1022-9K_C.mxd7/27/2015 2:02:46 PM

RECEIVED: December 21, 2015


T10S
R22E
NBU 1022-9K1BS
NBU 1022-9F4CS
NBU 1022-9J3BS
NBU 1022-9K3BS
NBU 1022-9E4BS
NBU 1022-9E4CS
NBU 1022-9L2AS
NBU 1022-9L2DS
±575ft
Tie-In Points
Proposed Pipelines
NBU 1022-9K-2T
CIGE 14
NBU 1022-9G
NBU 1022-9E
NBU 1022-9J
NBU 1022-9N
NBU 1022-9P
NBU 1022-9M
NBU 1022-9O
NBU 1022-8A
NBU 1022-8B
NBU 1022-4L
NBU 1022-5I
NBU 1022-5J
NBU 1022-5N
NBU 1022-5I3
NBU 1022-4G
NBU 1022-4H
NBU 1022-3E
NBU 1022-3F
NBU 1022-3L
NBU 1022-3K
NBU 1022-3J
NBU 1022-3O
NBU 1022-3M
NBU 1022-10C
NBU 1022-10J
NBU 1022-10N
NBU 1022-8L
NBU 1022-17F
NBU 1022-17H
NBU 1022-16D
NBU 1022-16C
NBU 1022-16B
NBU 1022-16A
NBU 1022-16G
NBU 1022-16H
NBU 1022-16E
NBU 1022-17J
NBU 1022-17I
NBU 1022-17D
NBU 1022-18A
NBU 1022-18H
NBU 1022-7P
NBU 1022-8M
NBU 1022-8N
NBU 1022-8K
NBU 1022-7H-4
NBU 1022-6I
NBU 1022-5M-2
NBU 1022-5M-4T
NBU 1022-5L-1
NBU 1022-5K
NBU 1022-5C
NBU 1022-5E
NBU 1022-5B
NBU 1022-5A
NBU 1022-5G
NBU 1022-5I2T
NBU 1022-5I-4
NBU 1022-50-1
NBU 1022-5P
NBU 1022-4M
NBU 1022-4K
NBU 1022-4E-1T
NBU 1022-04GT
NBU 1022-4H-2
NBU 1022-4H-3
NBU 1022-3E-1
NBU 1022-O3FT
NBU 1022-3G3T
NBU 1022-3K-4T
NBU 1022-3M-4T
NBU 1022-10C-1
NBU 1022-10FT
NBU 1022-10L
NBU 1022-10M
NBU 1022-9A
NBU 1022-9A-4
NBU 1022-9D1T
NBU 1022-08GT
NBU 1022-08IT
NBU 1022-9F4T
NBU 1022-16E
Ute Trail Unit 1
Ute Trail 83X9H
Ute Trail U 2
Ute Trail U-ST 3
Federal 1022-15F
Federal 1022-15L
Federal 1022-15K
CIGE 178-5-10-22
CIGE 280
CIGE 52
CIGE 281
CIGE 196
CIGE 73D
CIGE 282
CIGE 249
CIGE 294
CIGE 250
CIGE 268
CIGE 298
CIGE 293
CIGE 292
NBU CIGE 15-8-10-22
NBU 140
NBU 1022-05BT
NBU 171
NBU 85J
NBU 313
NBU 67
NBU 335
NBU 70N3
NBU 185
NBU 286
NBU 288
NBU 311
NBU 87J
NBU 164
NBU 209
NBU 289
NBU 290
NBU 247
NBU 207
NBU 345
NBU 206
NBU 248
NBU 18
NBU 210
NBU 188
NBU 152
NBU 180
NBU 249
NBU 463
NBU 213
NBU 464
NBU 471
NBU 73
NBU 339
NBU 338
NBU 149
NBU 242
NBU 343
NBU 151
NBU 148
NBU 147
NBU 292
NBU 150
NBU 245
NBU 344
NBU 205
NBU 1022-04L1T
NBU 1022-5I3T
NBU 1022-8E
NBU 1022-7H-4
NBU 1022-8L
NBU 1022-8M
NBU 1022-8N
NBU 1022-7P
NBU 1022-18A
NBU 1022-18H
NBU 1022-17D
NBU 1022-17F
NBU 1022-17G
NBU 1022-17H
NBU 1022-17J
NBU 1022-17I
NBU 1022-16D
NBU 1022-16C
NBU 1022-16B
NBU 1022-16A
NBU 1022-16G
NBU 1022-16H
NBU 1022-16E
NBU 1022-6P-4
NBU 1022-7A
NBU 1022-8K
NBU 1022-8L
NBU 1022-8M
NBU 1022-8N
NBU 1022-7P
NBU 1022-18A
NBU 1022-18H
NBU 1022-17D
NBU 1022-17F
NBU 1022-17G
NBU 1022-17H
NBU 1022-17J
NBU 1022-17I
NBU 1022-16D
NBU 1022-16C
NBU 1022-16B
NBU 1022-16A
NBU 1022-16G
NBU 1022-16H
NBU 1022-16E
NBU 1022-10C-1
NBU 1022-10FT
NBU 1022-10L
NBU 1022-10M
NBU 1022-10N
NBU 1022-9A
NBU 1022-9A-4
NBU 1022-9D1T
NBU 1022-08GT
NBU 1022-08IT
NBU 1022-9F4T
NBU 1022-9E
NBU 1022-9G

API Well Number: 43047555210000



Proposed Liquid Pipeline	Length
Buried 6"(Max.) (Separator to Edge of Pad)	±230ft
Buried 6"(Max.) (Edge of Pad to Proposed 6" (Max.) Liquid Pipeline)	±575ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±805ft

Proposed Gas Pipeline	Length
Buried 8" (Meter House to Edge of Pad)	±230ft
Buried 8" (Edge of Pad to Proposed 10" Gas Pipeline)	±575ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±805ft

Legend

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

WELL PAD - NBU 1022-9K

TOPO D2 (PAD & PIPELINE DETAIL)
NBU 1022-9K1BS, NBU 1022-9F4CS,
NBU 1022-9J3BS, NBU 1022-9K3BS,
NBU 1022-9E4BS, NBU 1022-9E4CS,
NBU 1022-9L2AS & NBU 1022-9L2DS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
1095 Saberton Avenue
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

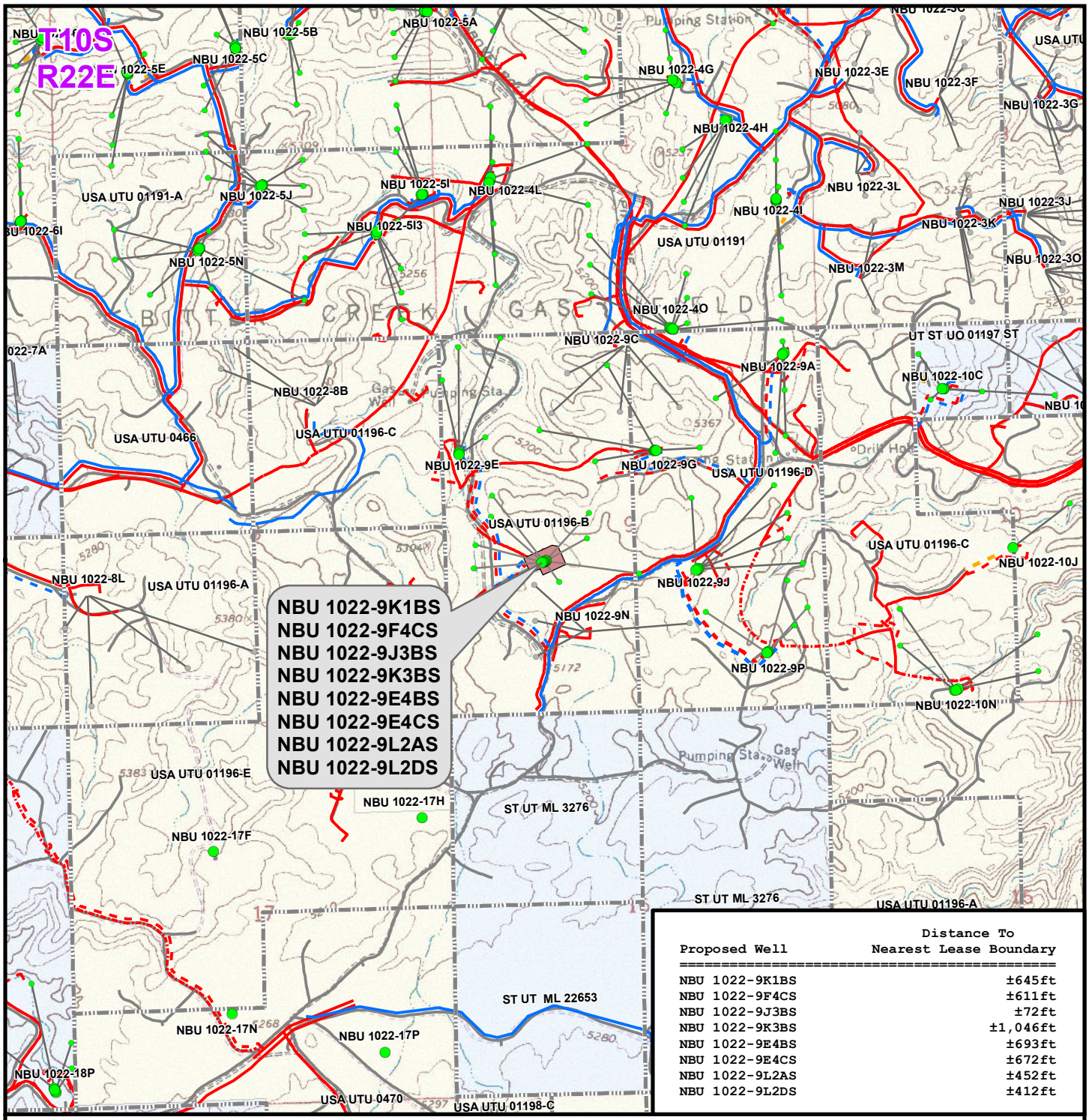
N

SCALE: 1" = 500ft	NAD83 USP Central	SHEET NO: 18
DRAWN: TL	DATE: 15 June 2015	18 OF 20
REVISED:	DATE:	

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\GIS\Maps_ABCDE\NBU 1022-9K\NBU 1022-9K_D2.mxd7/27/2015 12:03:27 PM

RECEIVED: December 21, 2015

API Well Number: 43047555210000



Proposed Well	Distance To Nearest Lease Boundary
NBU 1022-9K1BS	±645ft
NBU 1022-9F4CS	±611ft
NBU 1022-9J3BS	±72ft
NBU 1022-9K3BS	±1,046ft
NBU 1022-9E4BS	±693ft
NBU 1022-9E4CS	±672ft
NBU 1022-9L2AS	±452ft
NBU 1022-9L2DS	±412ft

Legend

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

WELL PAD - NBU 1022-9K

TOPO E

NBU 1022-9K1BS, NBU 1022-9F4CS, NBU 1022-9J3BS, NBU 1022-9K3BS, NBU 1022-9E4BS, NBU 1022-9E4CS, NBU 1022-9L2AS & NBU 1022-9L2DS LOCATED IN SECTION 9, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
1095 Saberton Avenue
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 19
DRAWN: TL	DATE: 13 July 2015	19 OF 20
REVISED:	DATE:	

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\GIS\Maps_ABCDE\NBU 1022-9K\NBU 1022-9K_E.mxd7/27/2015 2:03:31 PM

RECEIVED: December 21, 2015

Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – NBU 1022-9K
WELLS - NBU 1022-9K1BS, NBU 1022-9F4CS, NBU 1022-9J3BS, NBU 1022-9K3BS, NBU 1022-9E4BS, NBU 1022-9E4CS, NBU 1022-9L2AS & NBU 1022-9L2DS
Section 9, T10S, R22E, 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 18.7 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the Class D County Road approximately 0.1 miles to a second Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the second Class D County Road approximately 5.8 miles to a third Class D County Road to the north. Exit left and proceed in a northerly direction along the third Class D County Road approximately 0.1 miles to a service road to the northeast. Exit right and proceed in a northeasterly direction along the service road approximately 0.1 miles to the proposed access road. Follow road flags in a northeasterly direction approximately 310 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 48.4 miles in a southerly direction.

RECEIVED: December 21, 2015

API Well Number: 43047555210000

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9K PAD
Well: NBU 1022-9E4BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Scientific Drilling

Anadarko Petroleum Corporation

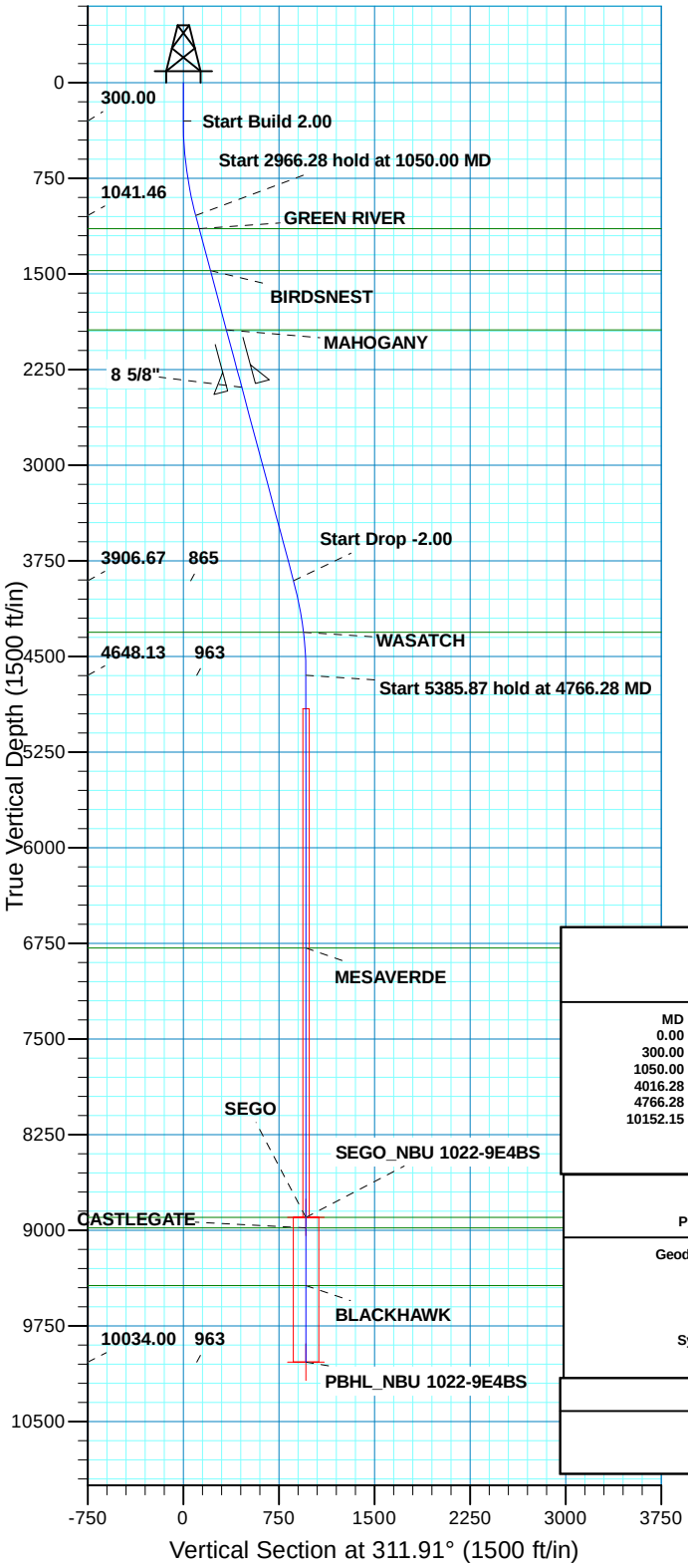
WELL DETAILS: NBU 1022-9E4BS

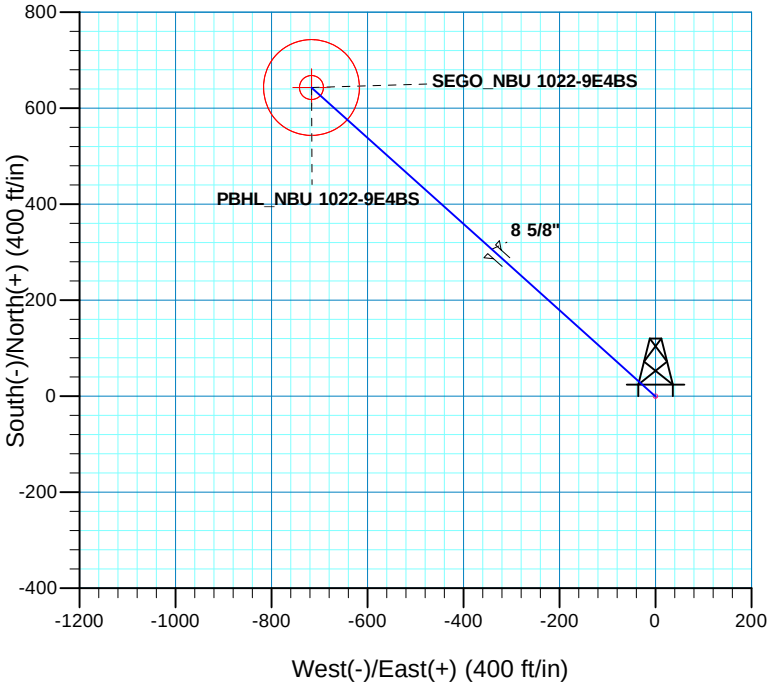
GL 5152 & KB 4 @ 5156.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14515985.94	2075152.95	39.9619940	-109.4485870

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	8899.00	643.21	-716.64	14516616.58	2074425.23	39.9637600	-109.4511440	Circle (Radius: 25.00)
- plan hits target center								
PBHL	10034.00	643.21	-716.64	14516616.58	2074425.23	39.9637600	-109.4511440	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	
1050.00	15.00	311.91	1041.46	65.20	-72.65	2.00	311.91	97.62	
4016.28	15.00	311.91	3906.67	578.01	-644.00	0.00	0.00	865.35	
4766.28	0.00	0.00	4648.13	643.21	-716.64	2.00	180.00	962.96	
10152.15	0.00	0.00	10034.00	643.21	-716.64	0.00	0.00	962.96	PBHL_NBU 1022-9E4BS

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

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1145.00	1157.19	GREEN RIVER
1473.00	1496.76	BIRDSNEST
1938.00	1978.16	MAHOGANY
4310.00	4427.36	WASATCH
6787.00	6905.15	MESAVERDE
8899.00	9017.15	SEGO
8981.00	9099.15	CASTLEGATE
9434.00	9552.15	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2388.00	2444.04	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 1022-9E4BS/OH)

Created By: RobertScott Date: 17:11, August 06 2015

RECEIVED:

API Well Number: 43047555210000

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N
NBU 1022-9K PAD
NBU 1022-9E4BS

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

12 August, 2015

RECEIVED: December 21, 2015

Anadarko Petroleum Corporation

Planning Report

Scientific Drilling

Database:	Denver Sales	**Local Co-ordinate Reference:**	Well NBU 1022-9E4BS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5152 & KB 4 @ 5156.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5152 & KB 4 @ 5156.00ft (ASSUMED)
Site:	NBU 1022-9K PAD	**North Reference:**	True
Well:	NBU 1022-9E4BS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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

Map System:	Universal Transverse Mercator (US Survey Feet)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site NBU 1022-9K PAD, SECTION 9 T10S R22E

Site Position:		**Northing:**	14,516,002.60 usft	**Latitude:**	39.9620380
From:	Lat/Long	**Easting:**	2,075,189.38 usft	**Longitude:**	-109.4484560
Position Uncertainty:	3.28 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	1.00 °

Well NBU 1022-9E4BS, 2084 FSL 1387 FWL

Well Position	**+N/-S**	-16.03 ft	**Northing:**	14,515,985.94 usft	**Latitude:**	39.9619940
	+E/-W	-36.72 ft	**Easting:**	2,075,152.95 usft	**Longitude:**	-109.4485870
Position Uncertainty		3.28 ft	**Wellhead Elevation:**	0.00 ft	**Ground Level:**	5,152.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	8/6/2015	10.66	65.73	51,761

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	323.47

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	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	
1,050.00	15.00	323.47	1,041.46	78.43	-58.11	2.00	2.00	0.00	323.47	
4,815.93	15.00	323.47	4,679.07	861.60	-638.35	0.00	0.00	0.00	0.00	
5,565.93	0.00	0.00	5,420.53	940.04	-696.46	2.00	-2.00	0.00	180.00	
10,179.40	0.00	0.00	10,034.00	940.04	-696.46	0.00	0.00	0.00	0.00	PBHL_NBU 1022-9E4

RECEIVED: December 21, 2015

Anadarko Petroleum Corporation

Planning Report

Scientific Drilling

Database:	Denver Sales	**Local Co-ordinate Reference:**	Well NBU 1022-9E4BS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5152 & KB 4 @ 5156.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5152 & KB 4 @ 5156.00ft (ASSUMED)
Site:	NBU 1022-9K PAD	**North Reference:**	True
Well:	NBU 1022-9E4BS	**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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
400.00	2.00	323.47	399.98	1.40	-1.04	1.75	2.00	2.00	0.00
500.00	4.00	323.47	499.84	5.61	-4.15	6.98	2.00	2.00	0.00
600.00	6.00	323.47	599.45	12.61	-9.34	15.69	2.00	2.00	0.00
700.00	8.00	323.47	698.70	22.40	-16.60	27.88	2.00	2.00	0.00
800.00	10.00	323.47	797.47	34.97	-25.91	43.52	2.00	2.00	0.00
900.00	12.00	323.47	895.62	50.30	-37.27	62.60	2.00	2.00	0.00
1,000.00	14.00	323.47	993.06	68.38	-50.66	85.10	2.00	2.00	0.00
1,050.00	15.00	323.47	1,041.46	78.43	-58.11	97.62	2.00	2.00	0.00
Start 2966.28 hold at 1050.00 MD									
1,100.00	15.00	323.47	1,089.76	88.83	-65.81	110.56	0.00	0.00	0.00
1,157.19	15.00	323.47	1,145.00	100.73	-74.63	125.36	0.00	0.00	0.00
GREEN RIVER									
1,200.00	15.00	323.47	1,186.35	109.63	-81.22	136.44	0.00	0.00	0.00
1,300.00	15.00	323.47	1,282.94	130.42	-96.63	162.32	0.00	0.00	0.00
1,400.00	15.00	323.47	1,379.54	151.22	-112.04	188.20	0.00	0.00	0.00
1,496.76	15.00	323.47	1,473.00	171.34	-126.94	213.25	0.00	0.00	0.00
BIRDSNEST									
1,500.00	15.00	323.47	1,476.13	172.02	-127.44	214.08	0.00	0.00	0.00
1,600.00	15.00	323.47	1,572.72	192.81	-142.85	239.97	0.00	0.00	0.00
1,700.00	15.00	323.47	1,669.31	213.61	-158.26	265.85	0.00	0.00	0.00
1,800.00	15.00	323.47	1,765.91	234.41	-173.67	291.73	0.00	0.00	0.00
1,900.00	15.00	323.47	1,862.50	255.20	-189.07	317.61	0.00	0.00	0.00
1,978.16	15.00	323.47	1,938.00	271.46	-201.12	337.84	0.00	0.00	0.00
MAHOGANY									
2,000.00	15.00	323.47	1,959.09	276.00	-204.48	343.49	0.00	0.00	0.00
2,100.00	15.00	323.47	2,055.68	296.79	-219.89	369.38	0.00	0.00	0.00
2,200.00	15.00	323.47	2,152.28	317.59	-235.30	395.26	0.00	0.00	0.00
2,300.00	15.00	323.47	2,248.87	338.39	-250.70	421.14	0.00	0.00	0.00
2,400.00	15.00	323.47	2,345.46	359.18	-266.11	447.02	0.00	0.00	0.00
2,444.04	15.00	323.47	2,388.00	368.34	-272.90	458.42	0.00	0.00	0.00
8 5/8"									
2,500.00	15.00	323.47	2,442.05	379.98	-281.52	472.90	0.00	0.00	0.00
2,600.00	15.00	323.47	2,538.65	400.78	-296.93	498.78	0.00	0.00	0.00
2,700.00	15.00	323.47	2,635.24	421.57	-312.33	524.67	0.00	0.00	0.00
2,800.00	15.00	323.47	2,731.83	442.37	-327.74	550.55	0.00	0.00	0.00
2,900.00	15.00	323.47	2,828.42	463.16	-343.15	576.43	0.00	0.00	0.00
3,000.00	15.00	323.47	2,925.02	483.96	-358.56	602.31	0.00	0.00	0.00
3,100.00	15.00	323.47	3,021.61	504.76	-373.96	628.19	0.00	0.00	0.00
3,200.00	15.00	323.47	3,118.20	525.55	-389.37	654.08	0.00	0.00	0.00
3,300.00	15.00	323.47	3,214.80	546.35	-404.78	679.96	0.00	0.00	0.00
3,400.00	15.00	323.47	3,311.39	567.15	-420.19	705.84	0.00	0.00	0.00
3,500.00	15.00	323.47	3,407.98	587.94	-435.59	731.72	0.00	0.00	0.00
3,600.00	15.00	323.47	3,504.57	608.74	-451.00	757.60	0.00	0.00	0.00
3,700.00	15.00	323.47	3,601.17	629.53	-466.41	783.49	0.00	0.00	0.00
3,800.00	15.00	323.47	3,697.76	650.33	-481.82	809.37	0.00	0.00	0.00
3,900.00	15.00	323.47	3,794.35	671.13	-497.22	835.25	0.00	0.00	0.00
4,000.00	15.00	323.47	3,890.94	691.92	-512.63	861.13	0.00	0.00	0.00
4,016.28	15.00	323.47	3,906.67	695.31	-515.14	865.35	0.00	0.00	0.00

RECEIVED: December 21, 2015

Anadarko Petroleum Corporation

Planning Report

Scientific Drilling

Database:	Denver Sales	**Local Co-ordinate Reference:**	Well NBU 1022-9E4BS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5152 & KB 4 @ 5156.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5152 & KB 4 @ 5156.00ft (ASSUMED)
Site:	NBU 1022-9K PAD	**North Reference:**	True
Well:	NBU 1022-9E4BS	**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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Start Drop -2.00									
4,100.00	15.00	323.47	3,987.54	712.72	-528.04	887.01	0.00	0.00	0.00
4,200.00	15.00	323.47	4,084.13	733.51	-543.45	912.90	0.00	0.00	0.00
4,300.00	15.00	323.47	4,180.72	754.31	-558.85	938.78	0.00	0.00	0.00
4,400.00	15.00	323.47	4,277.31	775.11	-574.26	964.66	0.00	0.00	0.00
4,433.84	15.00	323.47	4,310.00	782.14	-579.47	973.42	0.00	0.00	0.00
WASATCH									
4,500.00	15.00	323.47	4,373.91	795.90	-589.67	990.54	0.00	0.00	0.00
4,600.00	15.00	323.47	4,470.50	816.70	-605.08	1,016.42	0.00	0.00	0.00
4,700.00	15.00	323.47	4,567.09	837.50	-620.48	1,042.30	0.00	0.00	0.00
4,766.28	15.00	323.47	4,631.11	851.28	-630.70	1,059.46	0.00	0.00	0.00
Start 5385.87 hold at 4766.28 MD									
4,800.00	15.00	323.47	4,663.68	858.29	-635.89	1,068.19	0.00	0.00	0.00
4,815.93	15.00	323.47	4,679.07	861.60	-638.35	1,072.31	0.00	0.00	0.00
4,900.00	13.32	323.47	4,760.58	878.13	-650.59	1,092.87	2.00	-2.00	0.00
5,000.00	11.32	323.47	4,858.28	895.27	-663.29	1,114.21	2.00	-2.00	0.00
5,100.00	9.32	323.47	4,956.65	909.66	-673.95	1,132.12	2.00	-2.00	0.00
5,200.00	7.32	323.47	5,055.60	921.29	-682.56	1,146.59	2.00	-2.00	0.00
5,300.00	5.32	323.47	5,154.98	930.13	-689.11	1,157.59	2.00	-2.00	0.00
5,400.00	3.32	323.47	5,254.70	936.18	-693.60	1,165.12	2.00	-2.00	0.00
5,500.00	1.32	323.47	5,354.61	939.43	-696.00	1,169.17	2.00	-2.00	0.00
5,565.93	0.00	0.00	5,420.53	940.04	-696.46	1,169.92	2.00	-2.00	0.00
5,600.00	0.00	0.00	5,454.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
5,700.00	0.00	0.00	5,554.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
5,800.00	0.00	0.00	5,654.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
5,900.00	0.00	0.00	5,754.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
6,000.00	0.00	0.00	5,854.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
6,100.00	0.00	0.00	5,954.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
6,200.00	0.00	0.00	6,054.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
6,300.00	0.00	0.00	6,154.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
6,400.00	0.00	0.00	6,254.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
6,500.00	0.00	0.00	6,354.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
6,600.00	0.00	0.00	6,454.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
6,700.00	0.00	0.00	6,554.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
6,800.00	0.00	0.00	6,654.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
6,900.00	0.00	0.00	6,754.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
6,932.40	0.00	0.00	6,787.00	940.04	-696.46	1,169.92	0.00	0.00	0.00
MESAVERDE									
7,000.00	0.00	0.00	6,854.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
7,100.00	0.00	0.00	6,954.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
7,200.00	0.00	0.00	7,054.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
7,300.00	0.00	0.00	7,154.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
7,400.00	0.00	0.00	7,254.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
7,500.00	0.00	0.00	7,354.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
7,600.00	0.00	0.00	7,454.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
7,700.00	0.00	0.00	7,554.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
7,800.00	0.00	0.00	7,654.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
7,900.00	0.00	0.00	7,754.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
8,000.00	0.00	0.00	7,854.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
8,100.00	0.00	0.00	7,954.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
8,200.00	0.00	0.00	8,054.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
8,300.00	0.00	0.00	8,154.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
8,400.00	0.00	0.00	8,254.60	940.04	-696.46	1,169.92	0.00	0.00	0.00

RECEIVED: December 21, 2015

Anadarko Petroleum Corporation

Planning Report

Scientific Drilling

Database:	Denver Sales	**Local Co-ordinate Reference:**	Well NBU 1022-9E4BS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5152 & KB 4 @ 5156.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5152 & KB 4 @ 5156.00ft (ASSUMED)
Site:	NBU 1022-9K PAD	**North Reference:**	True
Well:	NBU 1022-9E4BS	**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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,500.00	0.00	0.00	8,354.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
8,600.00	0.00	0.00	8,454.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
8,700.00	0.00	0.00	8,554.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
8,800.00	0.00	0.00	8,654.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
8,900.00	0.00	0.00	8,754.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
9,000.00	0.00	0.00	8,854.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
9,044.40	0.00	0.00	8,899.00	940.04	-696.46	1,169.92	0.00	0.00	0.00
SEGO - SEGO_NBU 1022-9E4BS									
9,100.00	0.00	0.00	8,954.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
9,126.40	0.00	0.00	8,981.00	940.04	-696.46	1,169.92	0.00	0.00	0.00
CASTLEGATE									
9,200.00	0.00	0.00	9,054.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
9,300.00	0.00	0.00	9,154.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
9,400.00	0.00	0.00	9,254.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
9,500.00	0.00	0.00	9,354.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
9,579.40	0.00	0.00	9,434.00	940.04	-696.46	1,169.92	0.00	0.00	0.00
BLACKHAWK									
9,600.00	0.00	0.00	9,454.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
9,700.00	0.00	0.00	9,554.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
9,800.00	0.00	0.00	9,654.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
9,900.00	0.00	0.00	9,754.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
10,000.00	0.00	0.00	9,854.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
10,100.00	0.00	0.00	9,954.60	940.04	-696.46	1,169.92	0.00	0.00	0.00
10,152.15	0.00	0.00	10,006.75	940.04	-696.46	1,169.92	0.00	0.00	0.00
TD at 10152.15									
10,179.40	0.00	0.00	10,034.00	940.04	-696.46	1,169.92	0.00	0.00	0.00
PBHL_NBU 1022-9E4BS									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SEGO_NBU 1022-9E4B - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,899.00	940.04	-696.46	14,516,913.72	2,074,440.25	39.9645750	-109.4510720
PBHL_NBU 1022-9E4B - plan hits target center - Circle (radius 100.00)	0.00	0.00	10,034.00	940.04	-696.46	14,516,913.72	2,074,440.25	39.9645750	-109.4510720

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,444.04	2,388.00	8 5/8"	8.625	11.000

RECEIVED: December 21, 2015

Anadarko Petroleum Corporation

Planning Report

Scientific Drilling

Database:	Denver Sales	**Local Co-ordinate Reference:**	Well NBU 1022-9E4BS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5152 & KB 4 @ 5156.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5152 & KB 4 @ 5156.00ft (ASSUMED)
Site:	NBU 1022-9K PAD	**North Reference:**	True
Well:	NBU 1022-9E4BS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,157.19	1,145.00	GREEN RIVER			
1,496.76	1,473.00	BIRDSNEST			
1,978.16	1,938.00	MAHOGANY			
4,433.84	4,310.00	WASATCH			
6,932.40	6,787.00	MESAVERDE			
9,044.40	8,899.00	SEGO			
9,126.40	8,981.00	CASTLEGATE			
9,579.40	9,434.00	BLACKHAWK			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
1,050.00	1,041.46	78.43	-58.11	Start 2966.28 hold at 1050.00 MD
4,016.28	3,906.67	695.31	-515.14	Start Drop -2.00
4,766.28	4,631.11	851.28	-630.70	Start 5385.87 hold at 4766.28 MD
10,152.15	10,006.75	940.04	-696.46	TD at 10152.15

RECEIVED: December 21, 2015

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

NBU 1022-9K PAD

API #		NBU 1022-9E4BS		
	Surface:	2084 FSL / 1387 FWL	NESW	Lot
	BHL:	2258 FNL / 693 FWL	SWNW	Lot

API #		NBU 1022-9E4CS		
	Surface:	2080 FSL / 1378 FWL	NESW	Lot
	BHL:	2555 FNL / 672 FWL	NWSW	Lot

API #		NBU 1022-9F4CS		
	Surface:	2096 FSL / 1415 FWL	NESW	Lot
	BHL:	2533 FNL / 2033 FWL	NESW	Lot

API #		NBU 1022-9J3BS		
	Surface:	2092 FSL / 1406 FWL	NESW	Lot
	BHL:	1881 FSL / 2572 FEL	NWSE	Lot

API #		NBU 1022-9K1BS		
	Surface:	2100 FSL / 1424 FWL	NESW	Lot
	BHL:	2396 FSL / 1999 FWL	NWSE	Lot

API #		NBU 1022-9K3BS		
	Surface:	2088 FSL / 1397 FWL	NESW	Lot
	BHL:	1792 FSL / 1598 FWL	NESW	Lot

API #		NBU 1022-9L2AS		
	Surface:	2076 FSL / 1369 FWL	NESW	Lot
	BHL:	2347 FSL / 452 FWL	NWSW	Lot

API #		NBU 1022-9L2DS		
	Surface:	2072 FSL / 1360 FWL	NESW	Lot
	BHL:	2020 FSL / 412 FWL	SENW	Lot

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

RECEIVED: December 21, 2015

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

An on-site meeting was held on July 7, 2015. Present were:

- Christine Cimiluca, Nick Day, Tyler Cox - BLM;
- Mitch Batty - Timberline Engineering & Land Surveying, Inc.;
- Joel Malefyt, Roger Parry, Chantill Recker, Lovel Young, Doyle Holmes, Kelly Reyos - Kerr-McGee

A. Existing Roads:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

Please refer to Topo B for existing roads.

B. New or Reconstructed Access Roads:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

The following segments are "on-lease"

±310' (0.05 miles) – Section 9 T10S R22E (NW/4 SW/4) – On-lease UTU 01196B, from the edge of pad to the intersection in NW/4 SW/4. Please refer to Topo B.

C. Location of Existing Wells:

Please refer to Topo C for exiting wells.

D. Location of Existing and/or Proposed Facilities:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

This pad will expand the existing pad for the NBU 1022-9K-2T, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on August 20, 2015. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

GAS GATHERING

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

The total gas gathering pipeline distance from the meter to the tie in point is ±805' and the individual segments are broken up as follows:

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

RECEIVED: December 21, 2015

±230' (0.04 miles) – Section 9 T10S R22E (NW/4 SW/4) – On-lease UTU 01196B, BLM surface, New 8"(ma buried gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

±575' (0.1 miles) – Section 9 T10S R22E (NW/4 SW/4) – On-lease UTU 01196B, BLM surface, New 8" (ma buried gas gathering pipeline from the edge of the pad to proposed 10"(max) gas pipeline. Please refer to Topo D2 - Pad and Pipeline Detail.

LIQUID GATHERING

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

The total liquid gathering pipeline distance from the separator to the tie in point is ±805' and the individual segments are broken up as follows:

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

±230' (0.04 miles) – Section 9 T10S R22E (NW/4 SW/4) – On-lease UTU 01196B, BLM surface, New 6"(ma buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

±575' (0.1 miles) – Section 9 T10S R22E (NW/4 SW/4) – On-lease UTU 01196B, BLM surface, New 6"(max buried liquid gathering pipeline from the edge of pad to proposed 6"(max) liquid pipeline. Please refer to Topo D2 - Pad and Pipeline Detail.

Pipeline Gathering Construction

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

The Anadarko Completions Transportation System (ACTS) information:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

Please refer to Exhibit C for ACTS Lines

E. Location and Types of Water Supply:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

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

F. Construction Materials:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

G. Methods for Handling Waste:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

RECEIVED: December 21, 2015

Materials Management

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

H. Ancillary Facilities:

No additional ancillary facilities are planned for this location.

I. Well Site Layout:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

J. Plans for Surface Reclamation:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

Interim Reclamation

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

Final Reclamation

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

Measures Common to Interim and Final Reclamation

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

Weed Control

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

Monitoring

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

K. Surface/Mineral Ownership:

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

L. Other Information:

Cultural and Paleontological Resources

RECEIVED: December 21, 2015

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

Resource Reports:

A Class I literature survey was completed on July 15, 2015 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 15-063.

A paleontological reconnaissance survey was completed on July 23, 2015 by SWCA Environmental Consultants. For additional details please refer to report UT15-14314-21.

Biological field survey was completed on July 10, 2014 by SWCA Environmental Consultants. . For additional details please refer to report for the NBU 1022-9K pad expansion

Proposed Action Annual Emissions Tables:

Please refer to the Appendix in the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

RECEIVED: December 21, 2015

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

Joel Malefyt
Regulatory Analyst
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6828

Scott Rovira
General Manager, Drilling
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6243

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

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

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

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

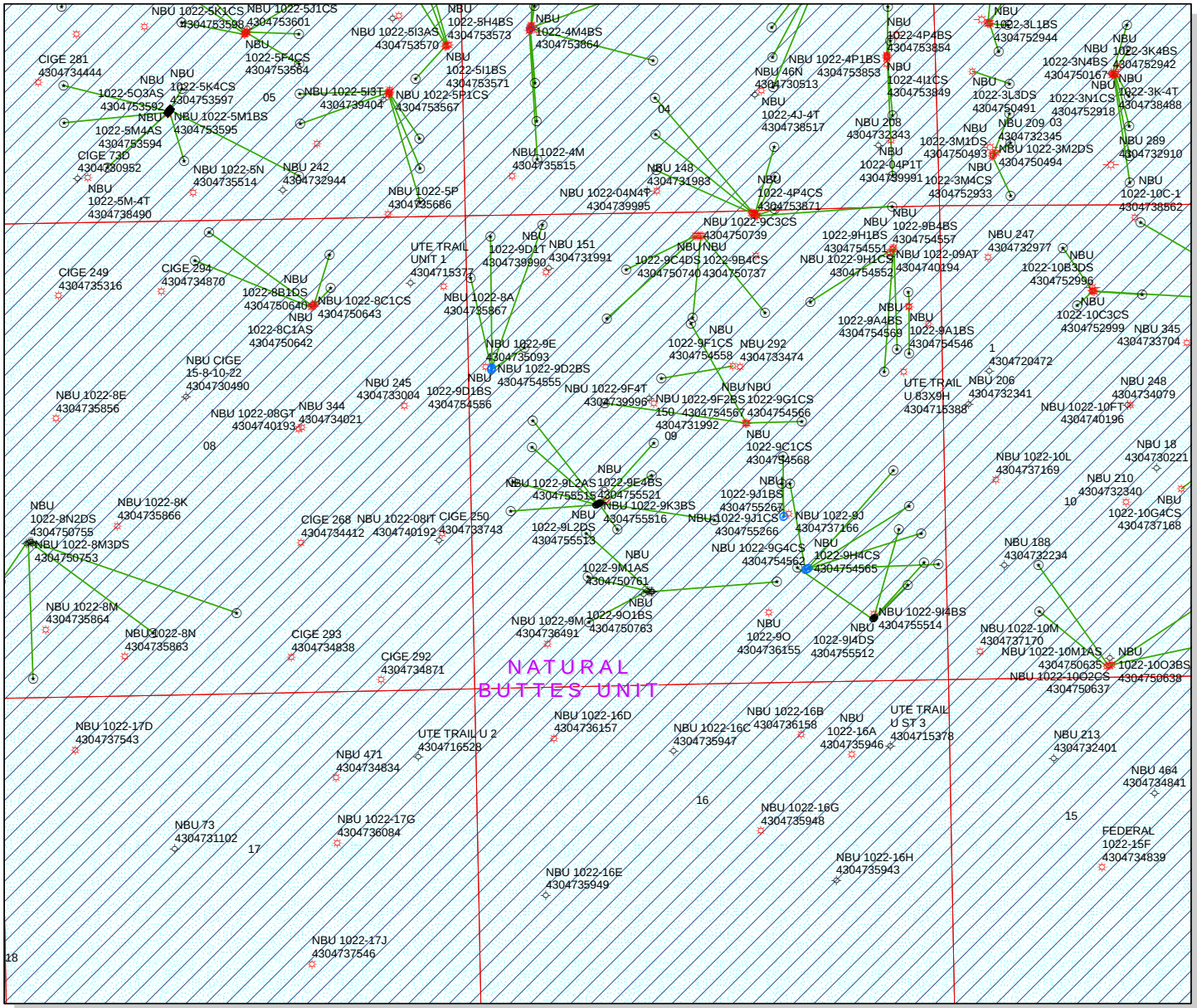
I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan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

RECEIVED: December 21, 2015

Joel Malefyt

August 21, 2015
Date

API Well Number: 43047555210000



API Number: 4304755521

Well Name: NBU 1022-9E4BS

Township: T10.0S Range: R22.0E Section: 09 Meridian: S

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

Map Prepared: 12/24/2015
Map Produced by Diana Mason

Wells Query

Status

- APD - Aproved Permit
- DRL - Spuded (Drilling Commenced)
- GIW - Gas Injection
- GS - Gas Storage
- LOC - New Location
- OPS - Operation Suspended
- PA - Plugged Abandoned
- PGW - Producing Gas Well
- POW - Producing Oil Well
- SGW - Shut-in Gas Well
- SOW - Shut-in Oil Well
- TA - Temp. Abandoned
- TW - Test Well
- WDW - Water Disposal
- WIW - Water Injection Well
- WSW - Water Supply Well

Units

STATUS

- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Fields

STATUS

- Unknown
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- STORAGE
- TERMINATED

1,400 700 0 1,400 Feet

1:13,809

RECEIVED: December 24, 2015

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)

January 12, 2016

Memorandum

To: Assistant Field Office Manager Minerals, Vernal Field Office

From: Michael Coulthard, Petroleum Engineer

Subject: 2016 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 2016 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
PAD NBU 1022-9P		
43-047-55510	NBU 1022-9P1BS	Sec 09 T10S R22E 0762 FSL 0809 FEL BHL Sec 09 T10S R22E 1113 FSL 0434 FEL
43-047-55511	NBU 1022-9J4CS	Sec 09 T10S R22E 0742 FSL 0831 FEL BHL Sec 09 T10S R22E 1330 FSL 1659 FEL
43-047-55512	NBU 1022-9I4DS	Sec 09 T10S R22E 0756 FSL 0816 FEL BHL Sec 09 T10S R22E 1363 FSL 0248 FEL
43-047-55514	NBU 1022-9I4BS	Sec 09 T10S R22E 0749 FSL 0823 FEL BHL Sec 09 T10S R22E 1740 FSL 0517 FEL
PAD NBU 1022-9K		
43-047-55513	NBU 1022-9L2DS	Sec 09 T10S R22E 2072 FSL 1360 FWL BHL Sec 09 T10S R22E 2020 FSL 0412 FWL
43-047-55515	NBU 1022-9L2AS	Sec 09 T10S R22E 2076 FSL 1369 FWL BHL Sec 09 T10S R22E 2347 FSL 0452 FWL
43-047-55516	NBU 1022-9K3BS	Sec 09 T10S R22E 2088 FSL 1397 FWL BHL Sec 09 T10S R22E 1792 FSL 1598 FWL
43-047-55517	NBU 1022-9K1BS	Sec 09 T10S R22E 2100 FSL 1424 FWL BHL Sec 09 T10S R22E 2396 FSL 1999 FWL
43-047-55518	NBU 1022-9J3BS	Sec 09 T10S R22E 2092 FSL 1406 FWL BHL Sec 09 T10S R22E 1881 FSL 2572 FEL

RECEIVED: January 12, 2016

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
PAD NBU 1022-99K		
43-047-55519	NBU 1022-9F4CS	Sec 09 T10S R22E 2096 FSL 1415 FWL
		BHL Sec 09 T10S R22E 2533 FNL 2033 FWL
43-047-55520	NBU 1022-9E4CS	Sec 09 T10S R22E 2080 FSL 1378 FWL
		BHL Sec 09 T10S R22E 2555 FNL 0672 FWL
43-047-55521	NBU 1022-9E4BS	Sec 09 T10S R22E 2084 FSL 1387 FWL
		BHL Sec 09 T10S R22E 2258 FNL 0693 FWL

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

Michael Coulthard

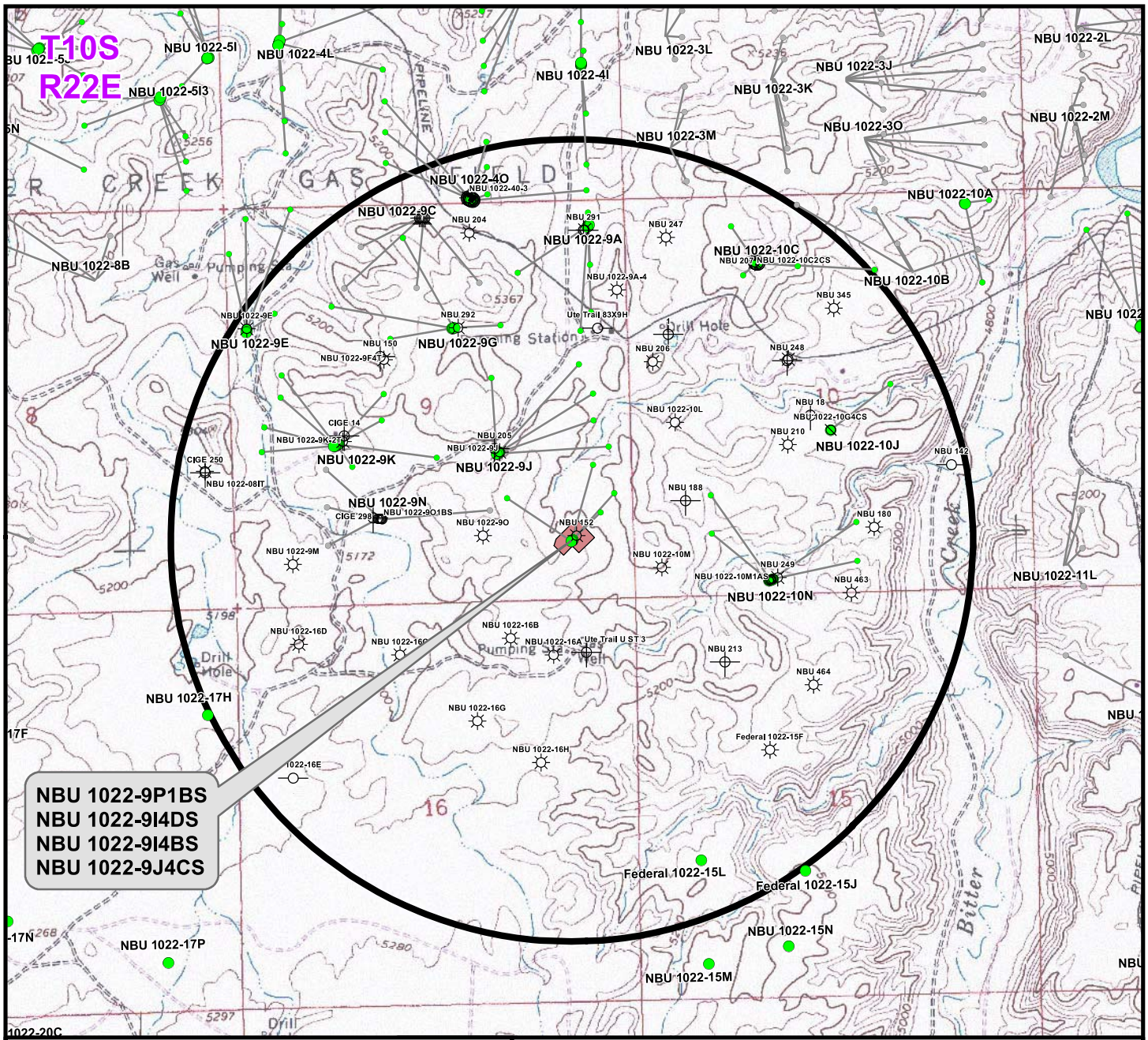
Digitally signed by Michael Coulthard
DN: cn=Michael Coulthard, o=Bureau of Land Management, ou=Division of Minerals, email=mcoultha@blm.gov, c=US
Date: 2016.01.12 14:00:03 -07'00'

bcc: File - Natural Buttes Unit
Division of Oil Gas and Mining
UT920 - Reading File
Agr. Sec. Chron

MCoulthard:mc:1-12-16

RECEIVED: January 12, 2016

API Well Number: 43047555210000



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

Proposed Well	Nearest Well Bore	Footage
NBU 1022-9P1BS	NBU 152	±437ft
NBU 1022-9I4DS	NBU 152	±746ft
NBU 1022-9I4BS	NBU 152	±955ft
NBU 1022-9J4CS	NBU 1022-9O1BS BH	±278ft

Legend

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

WELL PAD - NBU 1022-9P

TOPO C
NBU 1022-9P1BS, NBU 1022-9I4DS, NBU 1022-9I4BS & NBU 1022-9J4CS
LOCATED IN SECTION 9, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
1095 Saberton Avenue
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 12
DRAWN: TL	DATE: 13 July 2015	12 OF 16
REVISED:	DATE:	

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\GIS\Maps_ABCDE\NBU 1022-9P\NBU 1022-9P_C.mxd7/27/2015 2:19:18 PM

RECEIVED: December 21, 2015

API Well Number: 43047552100000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9P PAD
Well: NBU 1022-9P1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

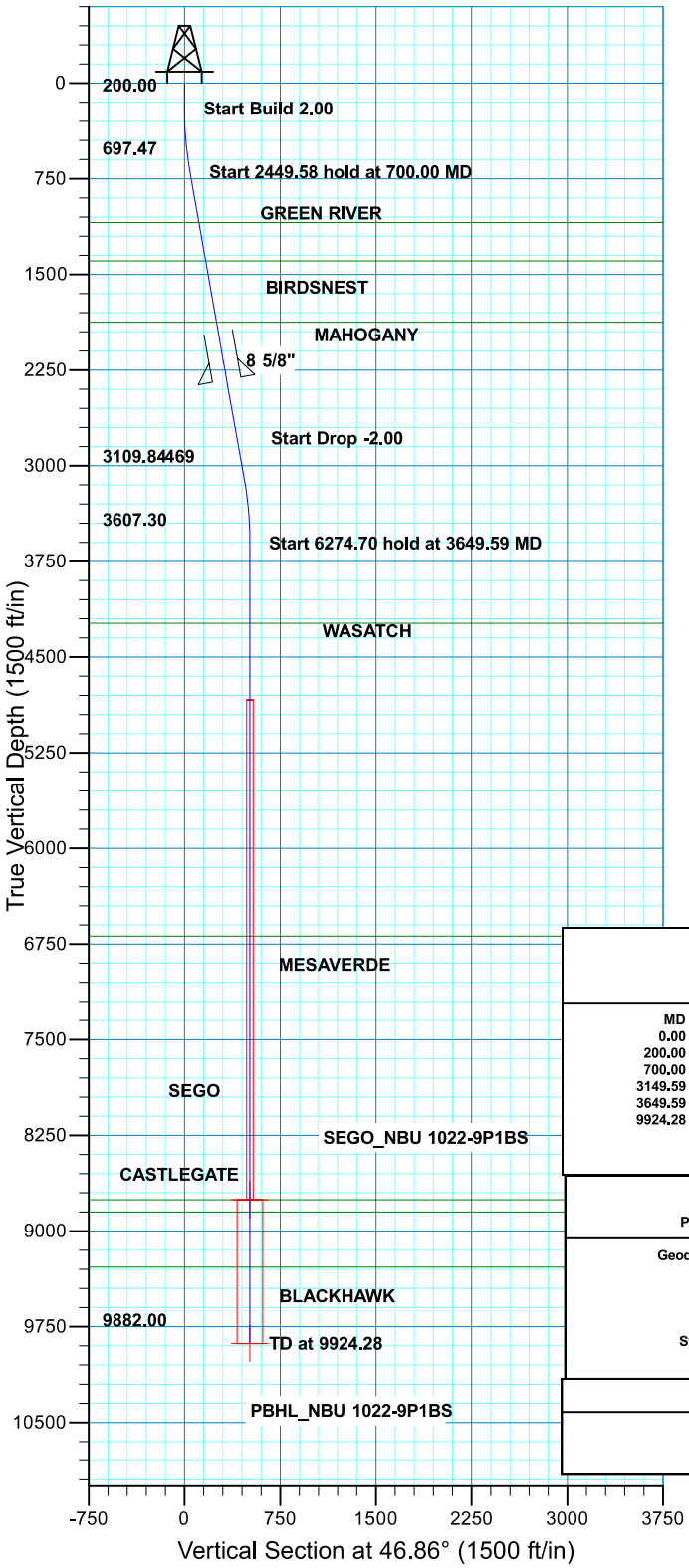
WELL DETAILS: NBU 1022-9P1BS

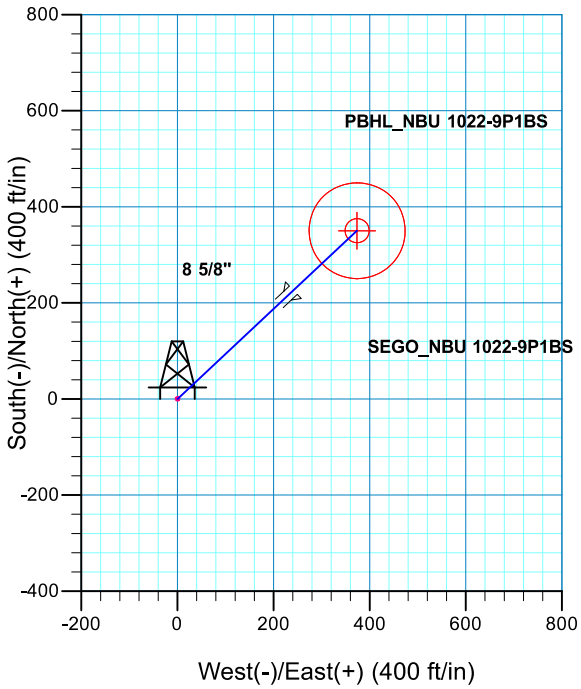
GL 5236 @ 5240.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14514724.96	2078268.34	39.9583830	-109.4375520

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	8755.00	350.37	373.90	14515081.83	2078636.05	39.9593450	-109.4362180	Circle (Radius: 25.00)
- plan hits target center								
PBHL	9882.00	350.37	373.90	14515081.83	2078636.05	39.9593450	-109.4362180	Circle (Radius: 100.00)
- plan hits target center								





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DIeg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
700.00	10.00	46.86	697.47	29.76	31.76	2.00	46.86	43.52	Start 2449.58 hold at 700.00 MD
3149.59	10.00	46.86	3109.84	320.61	342.14	0.00	0.00	468.89	
3649.59	0.00	0.00	3607.30	350.37	373.90	2.00	180.00	512.41	
9924.28	0.00	0.00	9882.00	350.37	373.90	0.00	0.00	512.41	PBHL_NBU 1022-9P1BS

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

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1092.00	1100.62	GREEN RIVER
1394.00	1407.28	BIRDSNEST
1876.00	1896.72	MAHOGANY
4235.00	4277.28	WASATCH
6688.00	6730.28	MESAVERDE
8755.00	8797.28	SEGO
8851.00	8893.28	CASTLEGATE
9282.00	9324.28	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2326.00	2353.66	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 1022-9P1BS/OH)

Created By: Bailey Brook Date: 17:04, August 06 2015

RECEIVED: December 21, 2015

API Well Number: 43047552100000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9P PAD
Well: NBU 1022-9J4CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

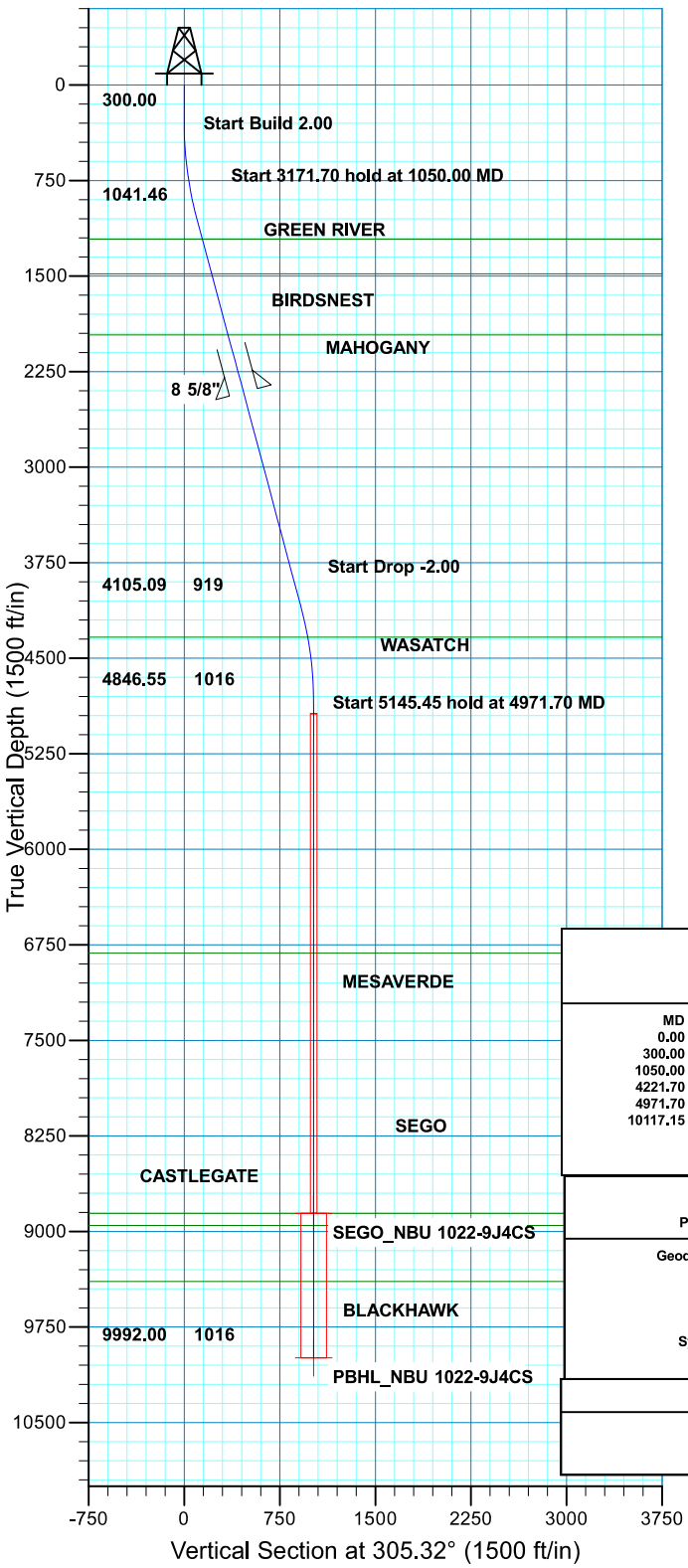
WELL DETAILS: NBU 1022-9J4CS

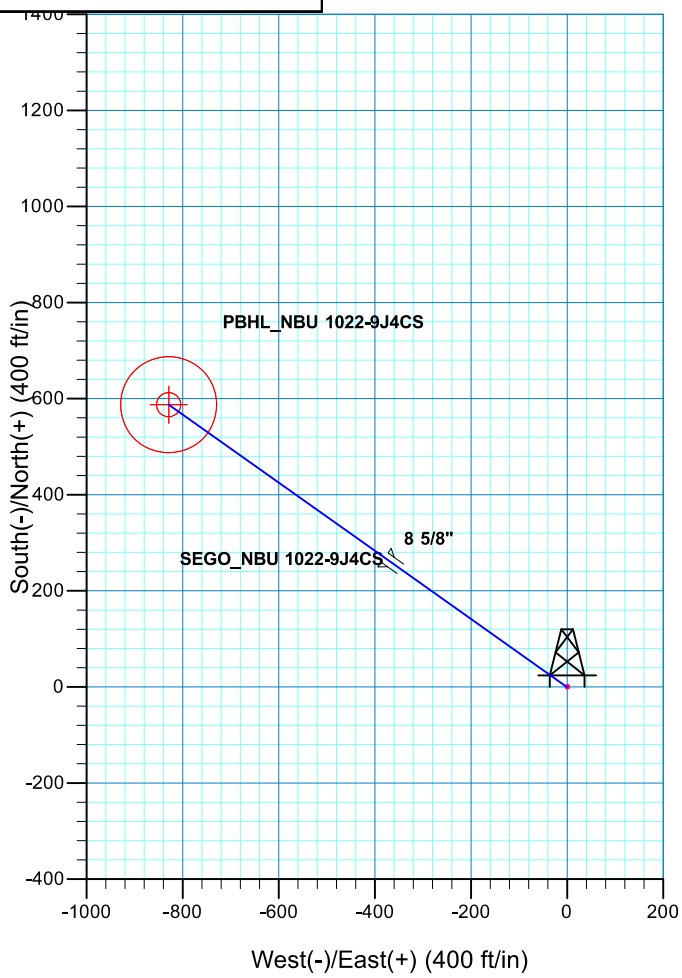
GL 5236 & KB 4 @ 5240.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14514703.82	2078246.85	39.9583260	-109.4376300

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	8858.00	587.49	-829.08	14515276.69	2077407.61	39.9599390	-109.4405880	Circle (Radius: 25.00)
- plan hits target center								
PBHL	9992.00	587.49	-829.08	14515276.69	2077407.61	39.9599390	-109.4405880	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	
1050.00	15.00	305.32	1041.46	56.44	-79.65	2.00	305.32	97.62	
4221.70	15.00	305.32	4105.09	531.05	-749.43	0.00	0.00	918.51	
4971.70	0.00	0.00	4846.55	587.49	-829.08	2.00	180.00	1016.13	
10117.15	0.00	0.00	9992.00	587.49	-829.08	0.00	0.00	1016.13	PBHL_NBU 1022-9J4CS

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

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1209.00	1223.45	GREEN RIVER
1483.00	1507.11	BIRDSNEST
1963.00	2004.05	MAHOGANY
4336.00	4458.41	WASATCH
6815.00	6940.15	MESAVERDE
8858.00	8983.15	SEGO
8953.00	9078.15	CASTLEGATE
9392.00	9517.15	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2413.00	2469.92	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 1022-9J4CS/OH)

Created By: Bailey Brook Date: 16:49, August 06 2015

RECEIVED: December 21, 2015

API Well Number: 43047552100000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9P PAD
Well: NBU 1022-9I4DS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

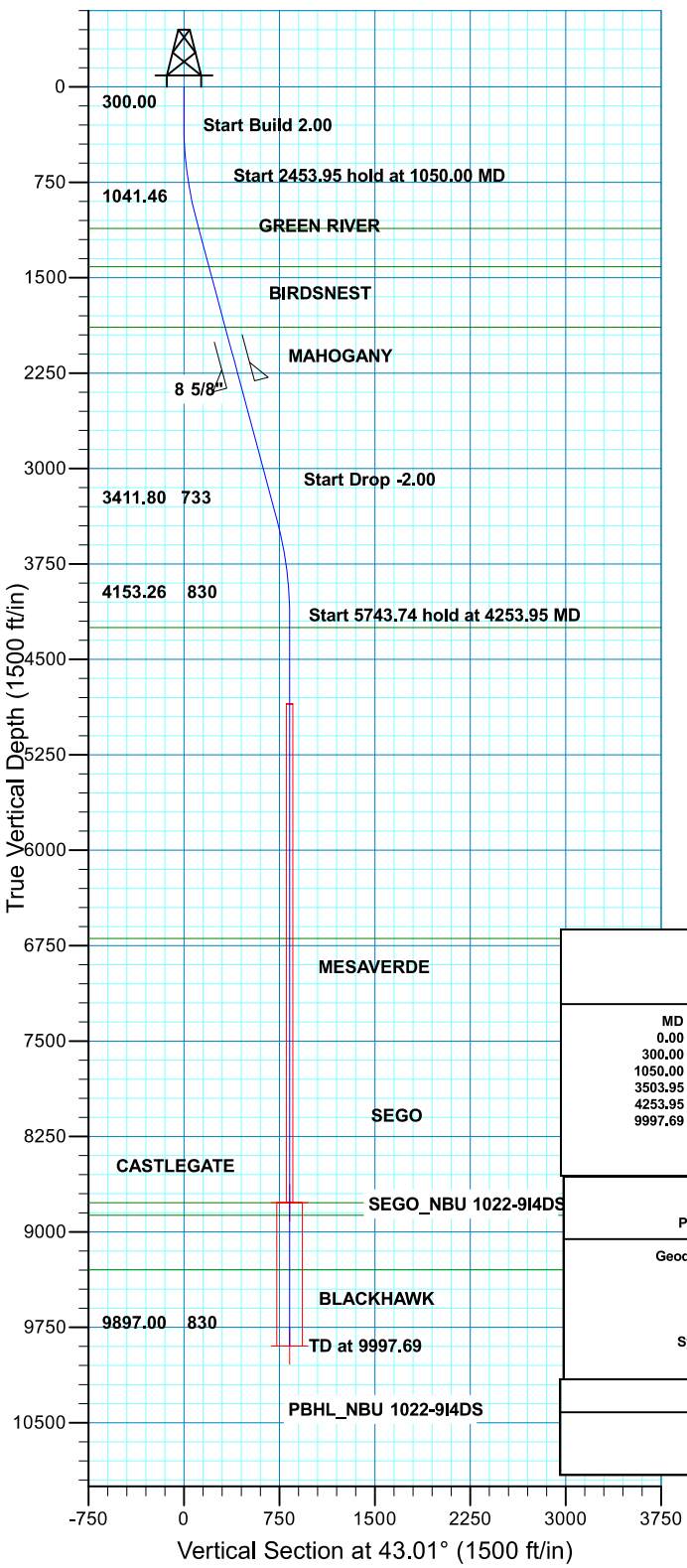
WELL DETAILS: NBU 1022-9I4DS

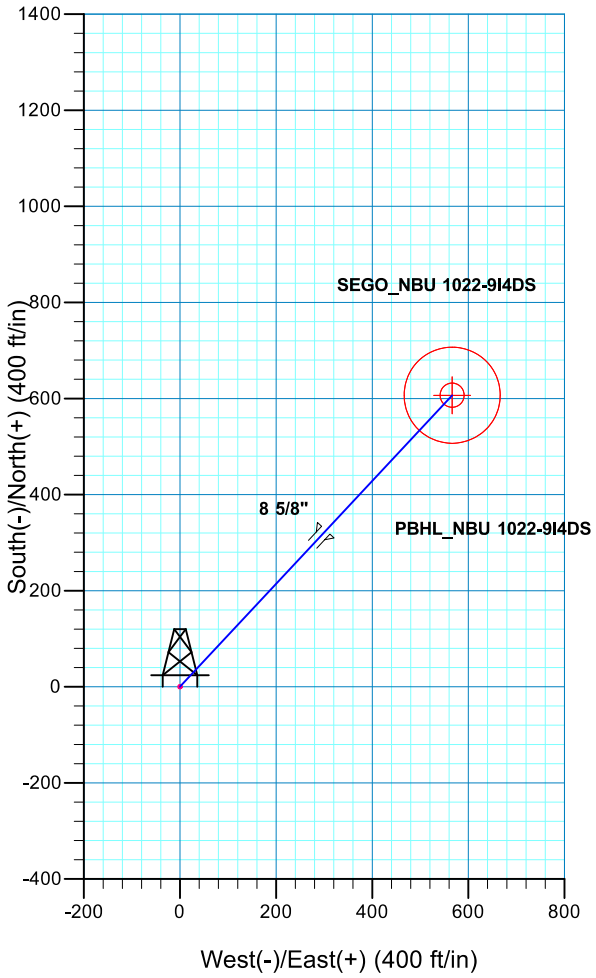
GL 5236 & KB 4 @ 5240.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14514717.91	2078261.18	39.9583640	-109.4375780

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	8771.00	607.15	566.45	14515334.89	2078816.91	39.9600310	-109.4355570	Circle (Radius: 25.00)
- plan hits target center								
PBHL	9897.00	607.15	566.45	14515334.89	2078816.91	39.9600310	-109.4355570	Circle (Radius: 100.00)
- plan hits target center								





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DIeg	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	
1050.00	15.00	43.01	1041.46	71.38	66.59	2.00	43.01	97.62	
3503.95	15.00	43.01	3411.80	535.77	499.86	0.00	0.00	732.74	
4253.95	0.00	0.00	4153.26	607.15	566.45	2.00	180.00	830.36	
9997.69	0.00	0.00	9897.00	607.15	566.45	0.00	0.00	830.36	PBHL_NBU 1022-9I4DS

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

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1112.00	1123.03	GREEN RIVER
1414.00	1435.68	BIRDSNEST
1890.00	1928.47	MAHOGANY
4250.00	4350.69	WASATCH
6694.00	6794.69	MESAVERDE
8771.00	8871.69	SEGO
8868.00	8968.69	CASTLEGATE
9297.00	9397.69	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2340.00	2394.35	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 1022-9I4DS/OH)

Created By: Bailey Brook Date: 16:40, August 06 2015

RECEIVED: December 21, 2015

API Well Number: 43047552100000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9P PAD
Well: NBU 1022-9I4BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

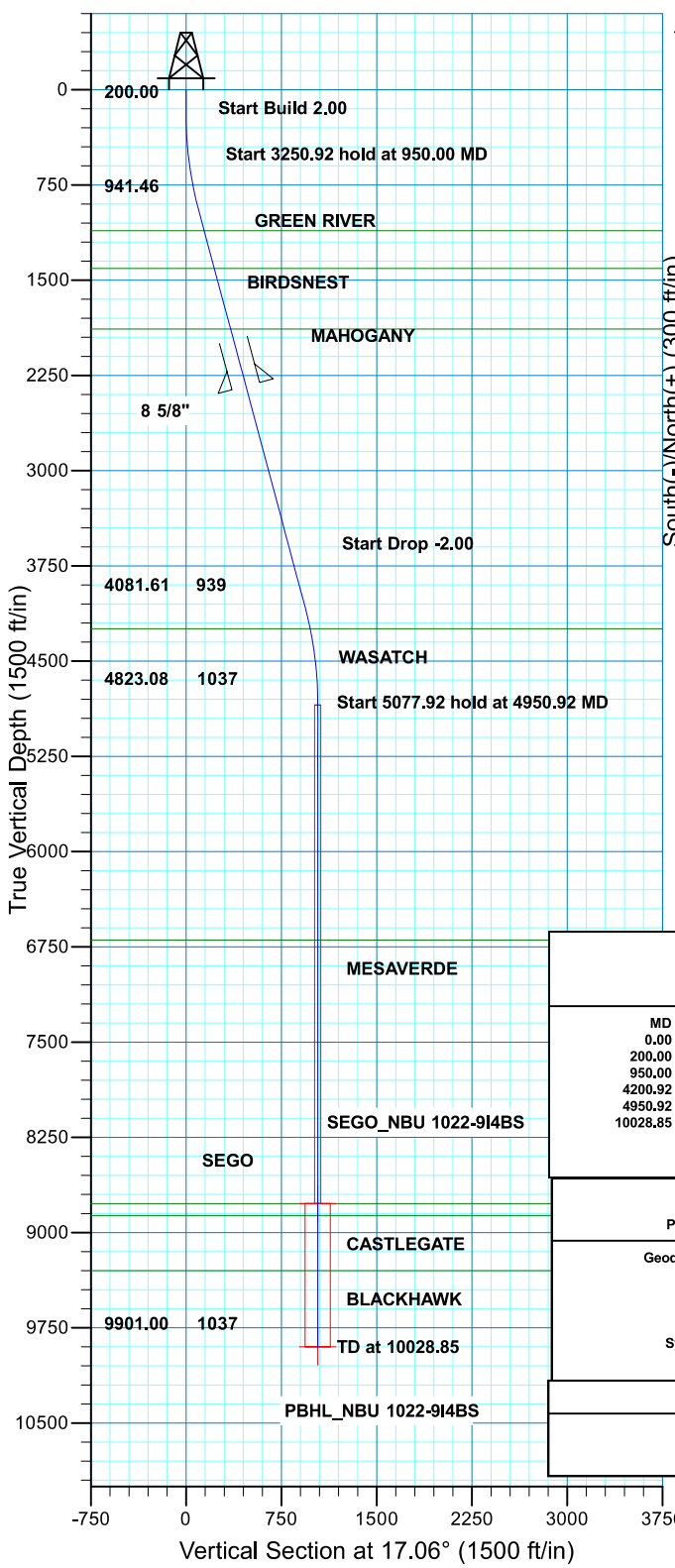
WELL DETAILS: NBU 1022-9I4BS

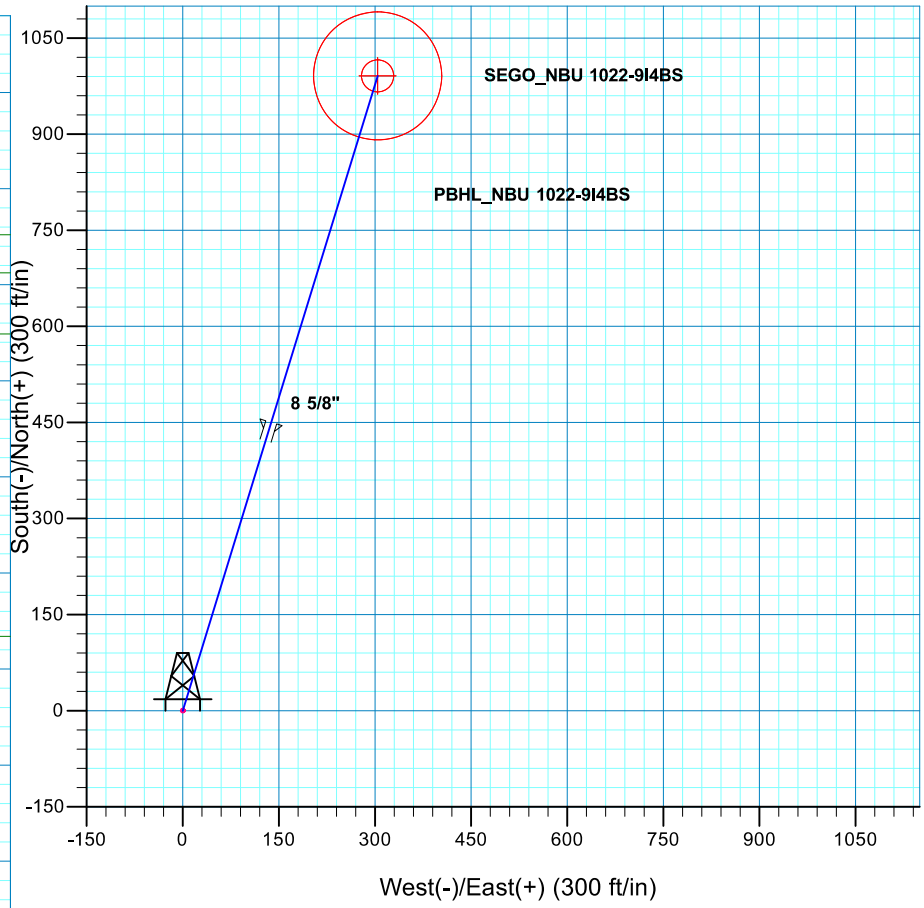
GL 5236 & KB 4 @ 5240.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14514710.86	2078254.01	39.9583450	-109.4376040

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	8773.00	991.02	304.10	14515707.06	2078540.71	39.9610660	-109.4365190	Circle (Radius: 25.00)
- plan hits target center								
PBHL	9901.00	991.02	304.10	14515707.06	2078540.71	39.9610660	-109.4365190	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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
950.00	15.00	17.06	941.46	93.32	28.64	2.00	17.06	97.62	
4200.92	15.00	17.06	4081.61	897.70	275.47	0.00	0.00	939.02	
4950.92	0.00	0.00	4823.08	991.02	304.10	2.00	180.00	1036.63	
10028.85	0.00	0.00	9901.00	991.02	304.10	0.00	0.00	1036.63	PBHL_NBU 1022-9I4BS

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

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	
1110.00	1124.48	GREEN RIVER	
1407.00	1431.96	BIRDSNEST	
1884.00	1925.79	MAHOGANY	
4246.00	4369.87	WASATCH	
6697.00	6824.85	MESAVERDE	
8773.00	8900.85	SEGO	0.00
8865.00	8992.85	CASTLEGATE	0.00
9301.00	9428.85	BLACKHAWK	0.00

CASING DETAILS

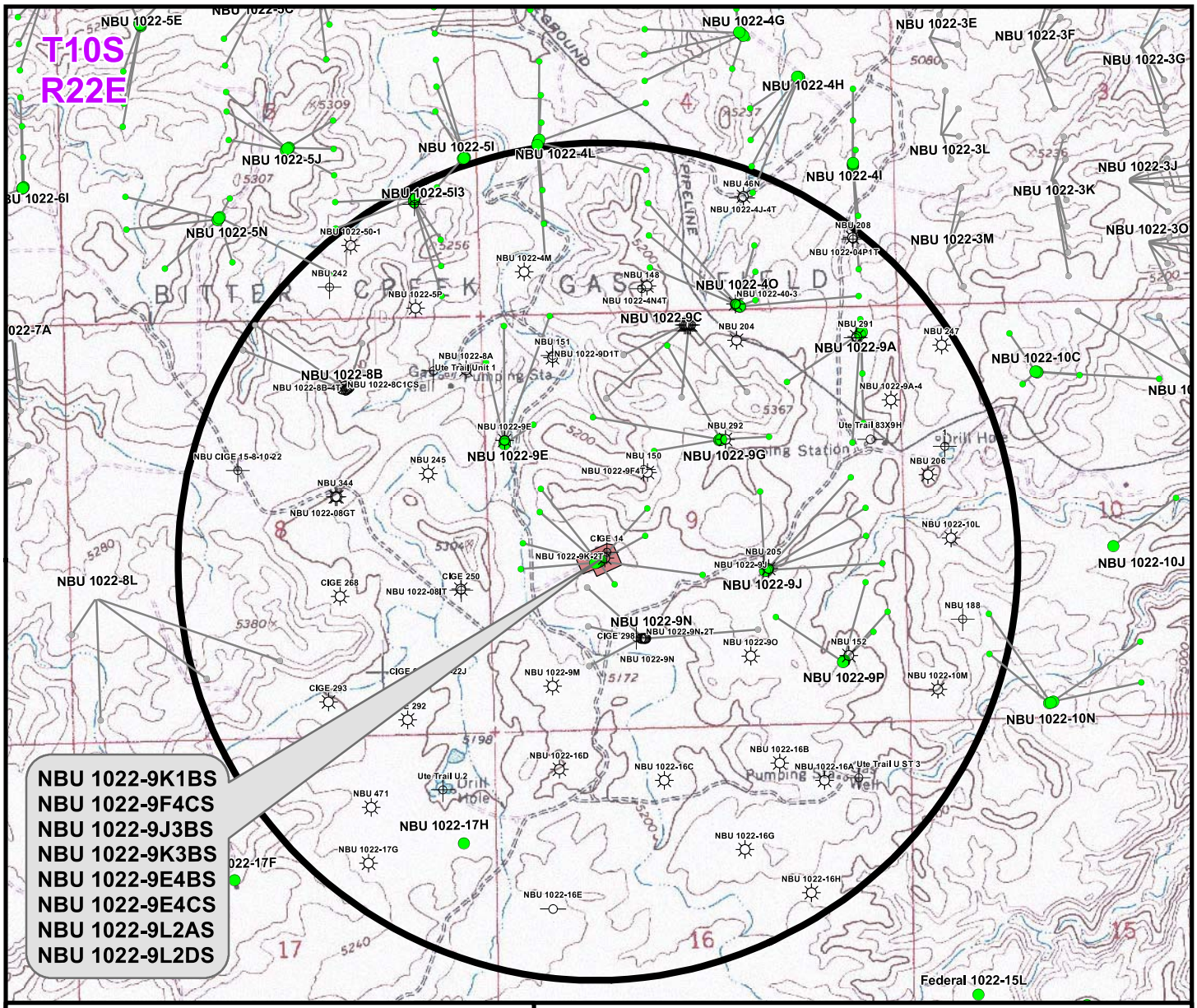
TVD	MD	Name	Size
2334.00	2391.66	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 1022-9I4BS/OH)

Created By: Bailey Brook Date: 17:42, August 06 2015

RECEIVED: December 21, 2015

API Well Number: 43047555210000



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

Proposed Well	Nearest Well Bore	Footage
NBU 1022-9K1BS	CIGE 14	±532ft
NBU 1022-9F4CS	NBU 1022-9F4T	±448ft
NBU 1022-9J3BS	NBU 205	±771ft
NBU 1022-9K3BS	NBU 1022-9L4AS BH	±349ft
NBU 1022-9E4BS	NBU 1022-9E	±758ft
NBU 1022-9E4CS	CIGE 14	±984ft
NBU 1022-9L2AS	NBU 1022-08IT	±981ft
NBU 1022-9L2DS	CIGE 250	±796ft

Legend

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

WELL PAD - NBU 1022-9K

TOPO C
NBU 1022-9K1BS, NBU 1022-9F4CS, NBU 1022-9J3BS, NBU 1022-9K3BS, NBU 1022-9E4BS, NBU 1022-9E4CS, NBU 1022-9L2AS & NBU 1022-9L2DS
LOCATED IN SECTION 9, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
1095 Saberton Avenue
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 16
DRAWN: TL	DATE: 13 July 2015	16 OF 20
REVISED:	DATE:	

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\GIS\Maps_ABCDE\NBU 1022-9K\NBU 1022-9K_C.mxd7/27/2015 2:02:46 PM

RECEIVED: December 21, 2015

API Well Number: 43047552100000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9K PAD
Well: NBU 1022-9L2DS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

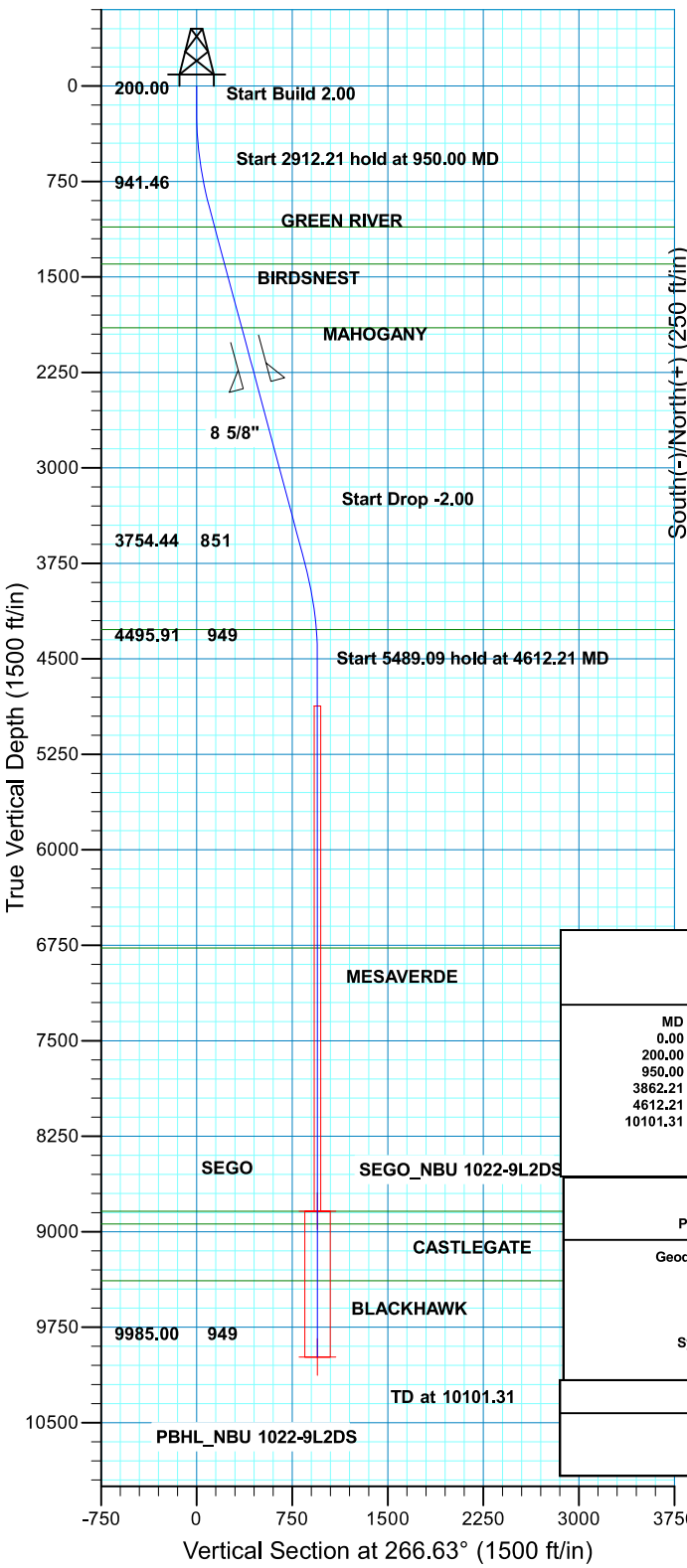
WELL DETAILS: NBU 1022-9L2DS

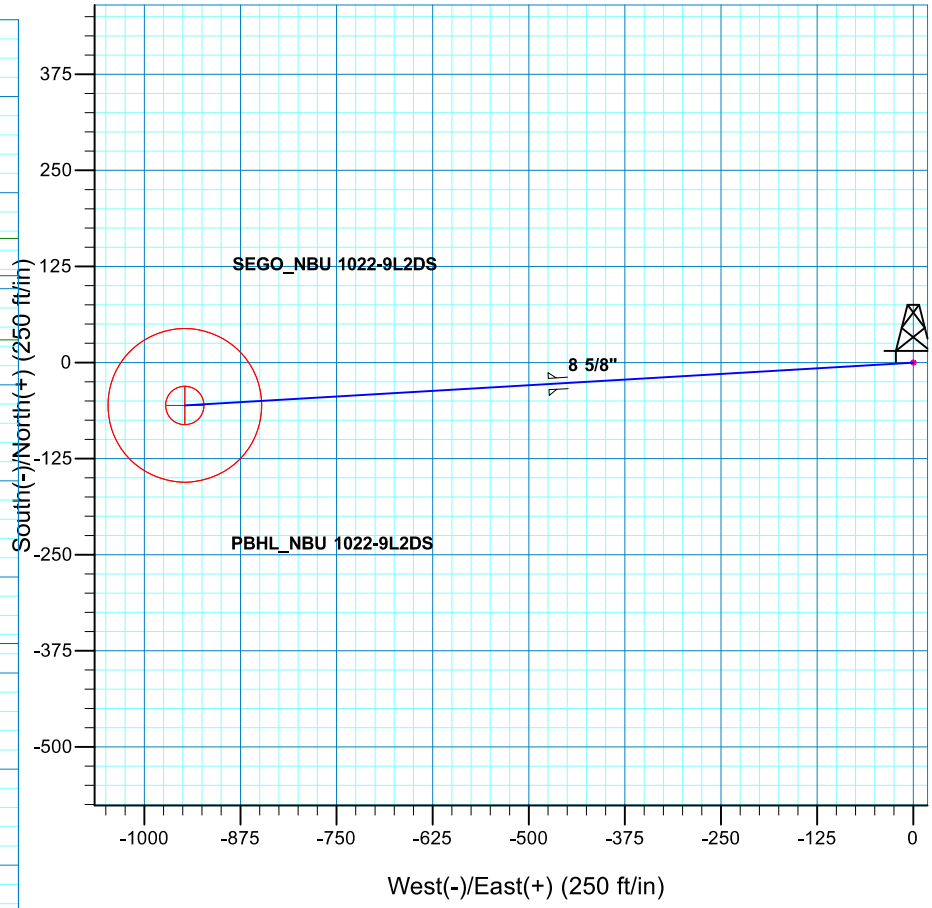
GL 5152 & KB 4 @ 5156.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14515973.44	2075125.70	39.9619610	-109.4486850

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	8838.00	-55.71	-947.33	14515901.27	2074179.48	39.9618080	-109.4520650	Circle (Radius: 25.00)
- plan hits target center								
PBHL	9985.00	-55.71	-947.33	14515901.27	2074179.48	39.9618080	-109.4520650	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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
950.00	15.00	266.63	941.46	-5.73	-97.45	2.00	266.63	97.62	
3862.21	15.00	266.63	3754.44	-49.98	-849.88	0.00	0.00	851.35	
4612.21	0.00	0.00	4495.91	-55.71	-947.33	2.00	180.00	948.97	
10101.31	0.00	0.00	9985.00	-55.71	-947.33	0.00	0.00	948.97	PBHL_NBU 1022-9L2DS

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

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1108.00	1122.41	GREEN RIVER
1398.00	1422.64	BIRDSNEST
1899.00	1941.32	MAHOGANY
4269.00	4385.07	WASATCH
6771.00	6887.31	MESAVERDE
8838.00	8954.31	SEGO
8939.00	9055.31	CASTLEGATE
9385.00	9501.31	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2349.00	2407.19	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 1022-9L2DS/OH)

Created By: Bailey Brook Date: 15:50, August 12 2015

RECEIVED: December 21, 2015

API Well Number: 43047552100000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9K PAD
Well: NBU 1022-9L2AS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

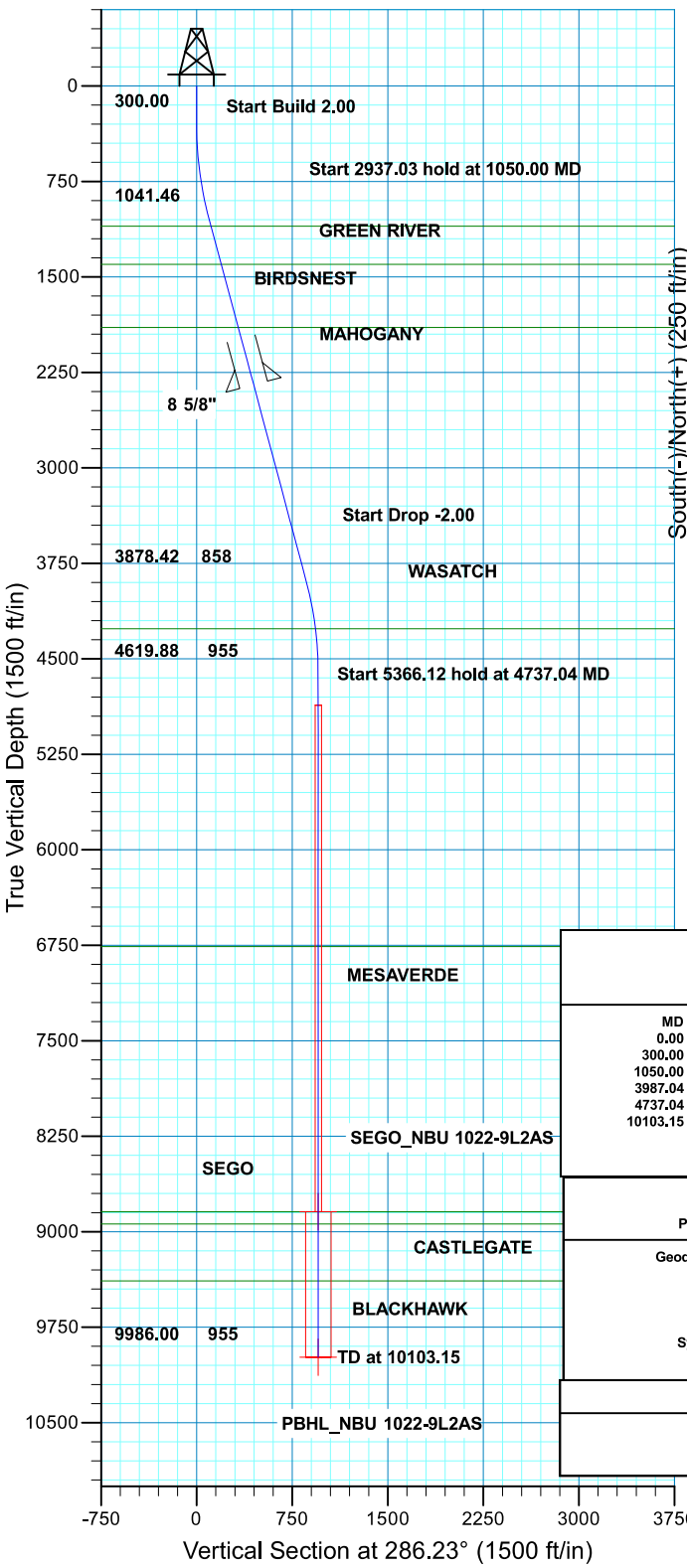
WELL DETAILS: NBU 1022-9L2AS

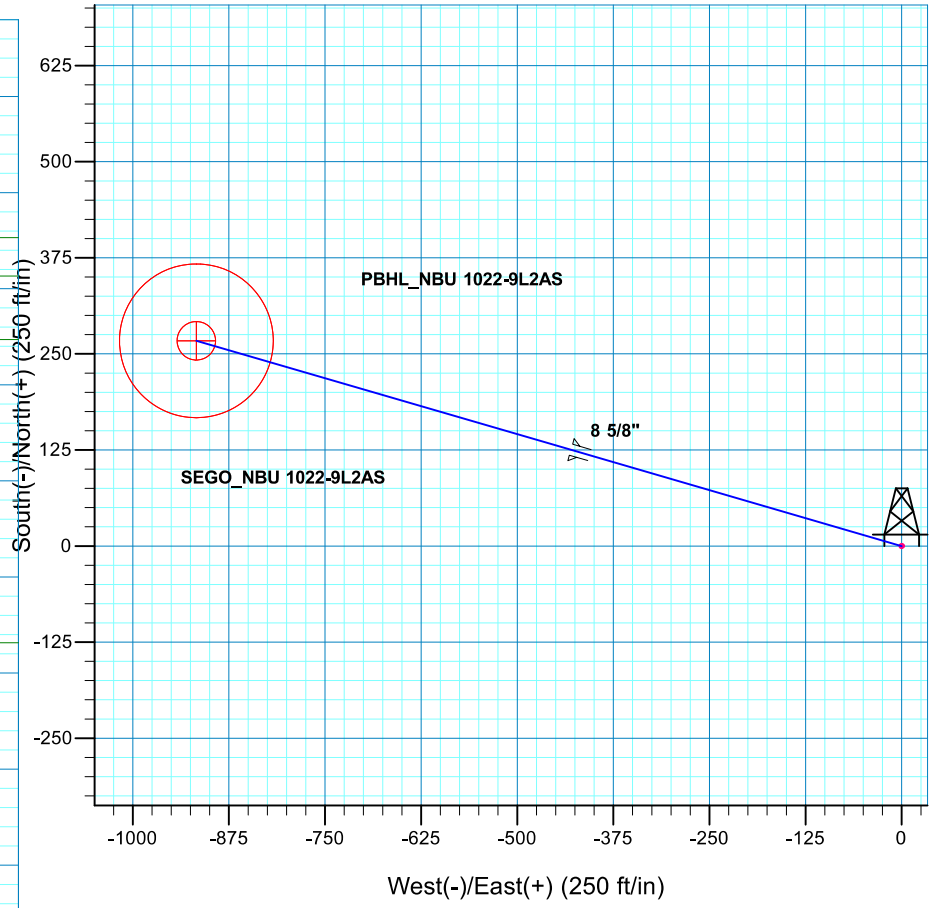
GL 5152 & KB 4 @ 5156.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14515977.61	2075134.87	39.9619720	-109.4486520

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	8843.00	266.98	-917.33	14516228.60	2074213.04	39.9627050	-109.4519250	Circle (Radius: 25.00)
- plan hits target center								
PBHL	9986.00	266.98	-917.33	14516228.60	2074213.04	39.9627050	-109.4519250	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	
1050.00	15.00	286.23	1041.46	27.28	-93.73	2.00	286.23	97.62	
3987.04	15.00	286.23	3878.42	239.71	-823.60	0.00	0.00	857.78	
4737.04	0.00	0.00	4619.88	266.98	-917.33	2.00	180.00	955.39	
10103.15	0.00	0.00	9986.00	266.98	-917.33	0.00	0.00	955.39	PBHL_NBU 1022-9L2AS

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

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1102.00	1112.67	GREEN RIVER
1402.00	1423.26	BIRDSNEST
1898.00	1936.75	MAHOGANY
4263.00	4379.22	WASATCH
6759.00	6876.15	MESAVERDE
8843.00	8960.15	SEGO
8939.00	9056.15	CASTLEGATE
9386.00	9503.15	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2348.00	2402.63	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 1022-9L2AS/OH)

Created By: Bailey Brook Date: 15:57, August 12 2015

RECEIVED: December 21, 2015

API Well Number: 43047552100000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9K PAD
Well: NBU 1022-9K3BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

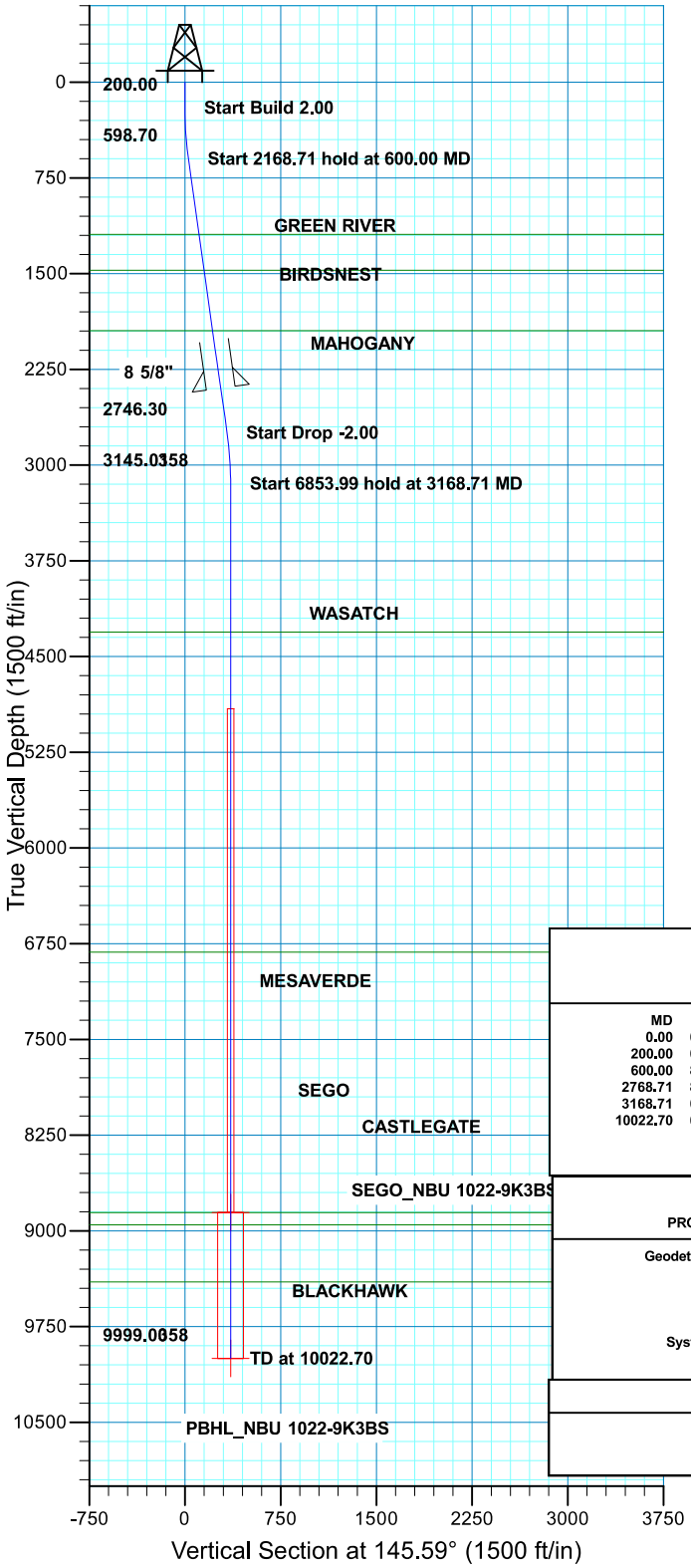
WELL DETAILS: NBU 1022-9K3BS

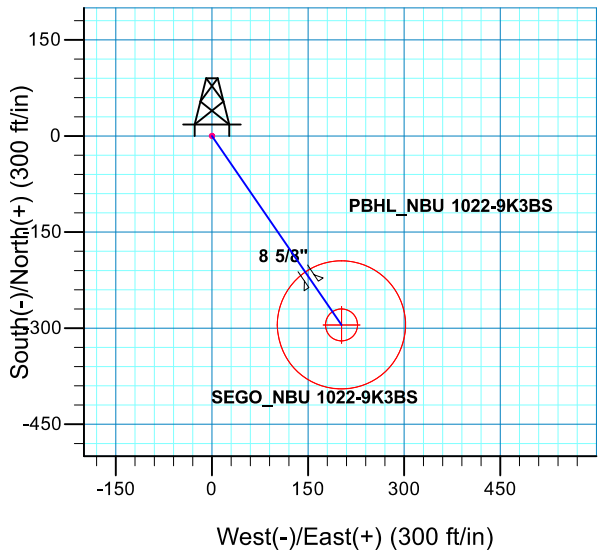
GL 5152 & KB 4 @ 5156.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14515990.10	2075162.13	39.9620050	-109.4485540

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	8857.00	-295.01	202.08	14515698.65	2075369.31	39.9611950	-109.4478330	Circle (Radius: 25.00)
- plan hits target center								
PBHL	9999.00	-295.01	202.08	14515698.65	2075369.31	39.9611950	-109.4478330	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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
600.00	8.00	145.59	598.70	-23.00	15.76	2.00	145.59	27.88	
2768.71	8.00	145.59	2746.30	-272.01	186.32	0.00	0.00	329.71	
3168.71	0.00	0.00	3145.01	-295.01	202.08	2.00	180.00	357.59	
10022.70	0.00	0.00	9999.00	-295.01	202.08	0.00	0.00	357.59	PBHL_NBU 1022-9K3BS

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

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1193.00	1200.14	GREEN RIVER
1473.00	1482.89	BIRDSNEST
1948.00	1962.56	MAHOGANY
4308.00	4331.70	WASATCH
6817.00	6840.70	MESAVERDE
8857.00	8880.70	SEGO
8952.00	8975.70	CASTLEGATE
9399.00	9422.70	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2398.00	2416.98	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 1022-9K3BS/OH)

Created By: Bailey Brook Date: 17:19, August 06 2015

RECEIVED: December 21, 2015

API Well Number: 43047552100000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9K PAD
Well: NBU 1022-9K1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

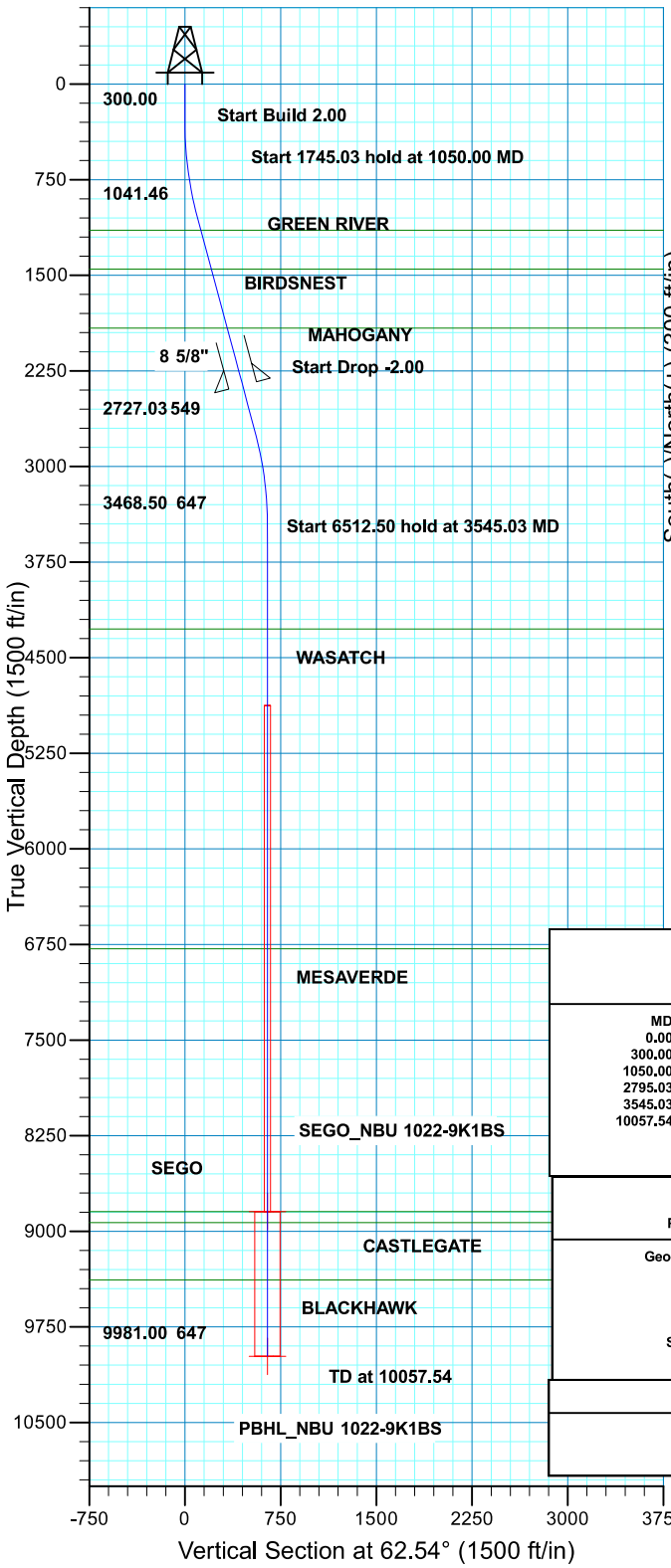
WELL DETAILS: NBU 1022-9K1BS

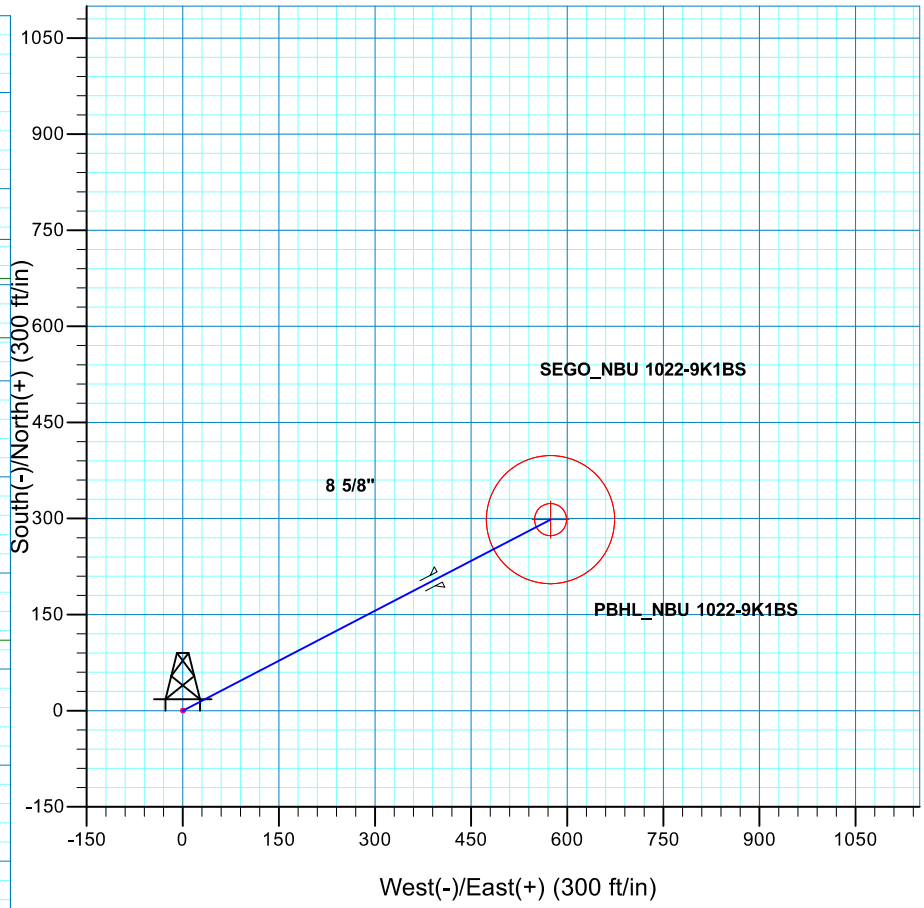
GL 5152 & KB 4 @ 5156.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14516002.60	2075189.38	39.9620380	-109.4484560

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	8845.00	298.30	574.00	14516310.83	2075758.10	39.9628570	-109.4464080	Circle (Radius: 25.00)
- plan hits target center								
PBHL	9981.00	298.30	574.00	14516310.83	2075758.10	39.9628570	-109.4464080	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	
1050.00	15.00	62.54	1041.46	45.01	86.62	2.00	62.54	97.62	
2795.03	15.00	62.54	2727.03	253.28	487.38	0.00	0.00	549.26	
3545.03	0.00	0.00	3468.50	298.30	574.00	2.00	180.00	646.88	
10057.54	0.00	0.00	9981.00	298.30	574.00	0.00	0.00	646.88	PBHL_NBU 1022-9K1BS

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

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1146.00	1158.23	GREEN RIVER
1451.00	1473.98	BIRDSNEST
1915.00	1954.35	MAHOGANY
4276.00	4352.54	WASATCH
6783.00	6859.54	MESAVERDE
8845.00	8921.54	SEGO
8931.00	9007.54	CASTLEGATE
9381.00	9457.54	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2365.00	2420.23	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 1022-9K1BS/OH)

Created By: Bailey Brook Date: 17:59:24, August 06 2015

RECEIVED: December 21, 2015

API Well Number: 43047552100000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9K PAD
Well: NBU 1022-9J3BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

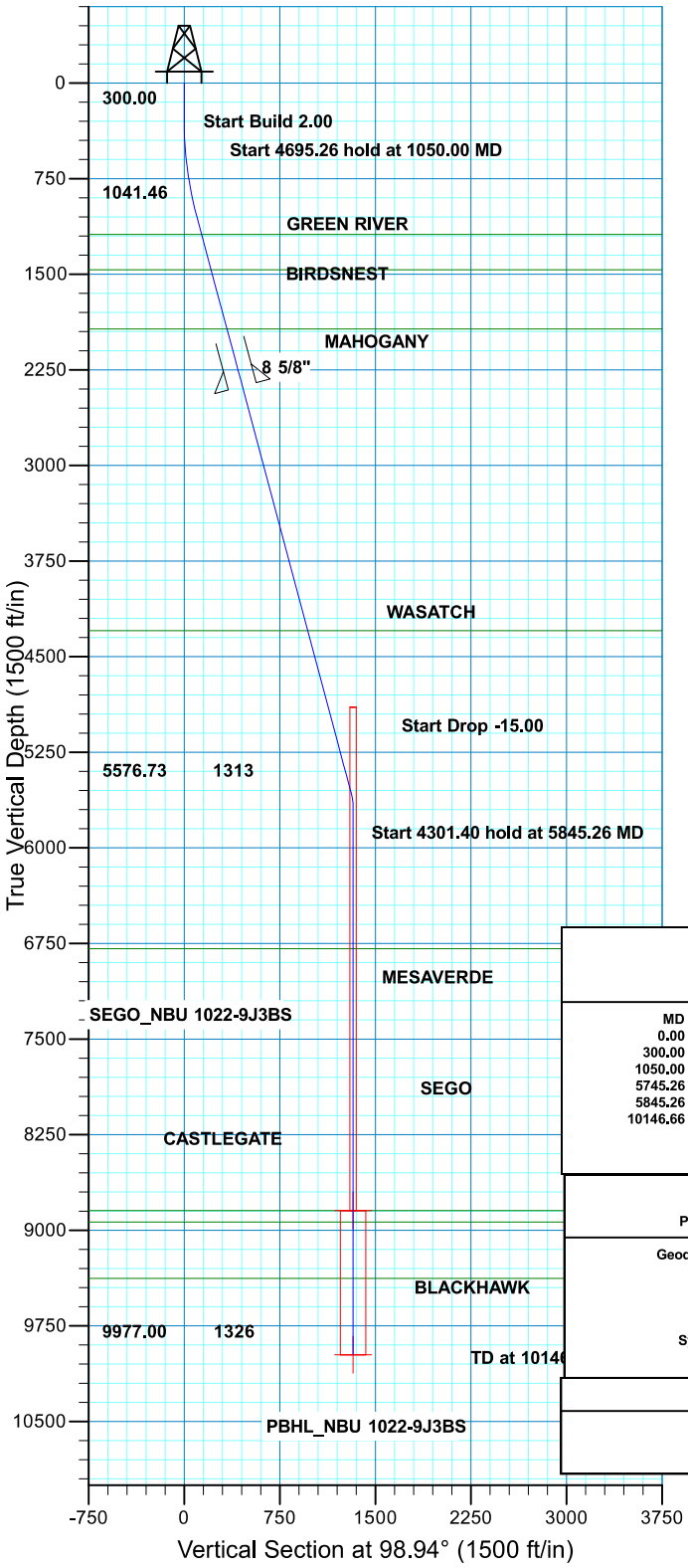
WELL DETAILS: NBU 1022-9J3BS

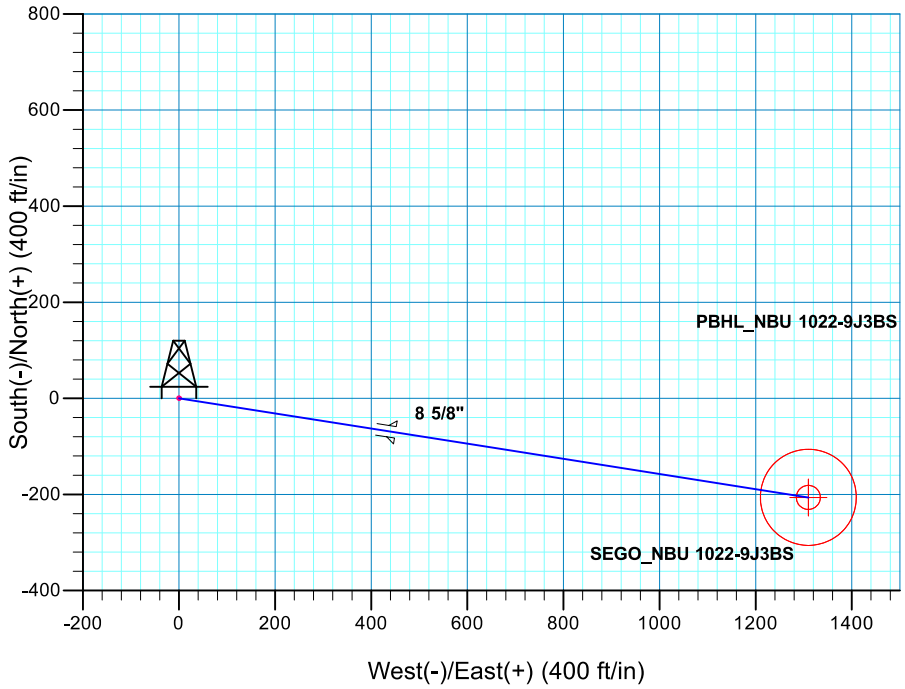
GL 5152 & KB 4 @ 5156.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14515994.27	2075171.31	39.9620160	-109.4485210

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	8845.00	-206.11	1309.73	14515810.97	2076484.42	39.9614500	-109.4438480	Circle (Radius: 25.00)
- plan hits target center								
PBHL	9977.00	-206.11	1309.73	14515810.97	2076484.42	39.9614500	-109.4438480	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	
1050.00	15.00	98.94	1041.46	-15.17	96.43	2.00	98.94	97.62	
5745.26	15.00	98.94	5576.73	-204.09	1296.88	0.00	0.00	1312.84	
5845.26	0.00	0.00	5675.60	-206.11	1309.73	15.00	180.00	1325.85	
10146.66	0.00	0.00	9977.00	-206.11	1309.73	0.00	0.00	1325.85	PBHL_NBU 1022-9J3BS

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

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1187.00	1200.67	GREEN RIVER
1464.00	1487.44	BIRDSNEST
1929.00	1968.85	MAHOGANY
4296.00	4419.35	WASATCH
6791.00	6960.66	MESAVERDE
8845.00	9014.66	SEGO
8934.00	9103.66	CASTLEGATE
9377.00	9546.66	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2379.00	2434.72	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 1022-9J3BS/OH)

Created By: Bailey Brook Date: 17:19, August 06 2015

RECEIVED: December 21, 2015

API Well Number: 43047552100000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9K PAD
Well: NBU 1022-9F4CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

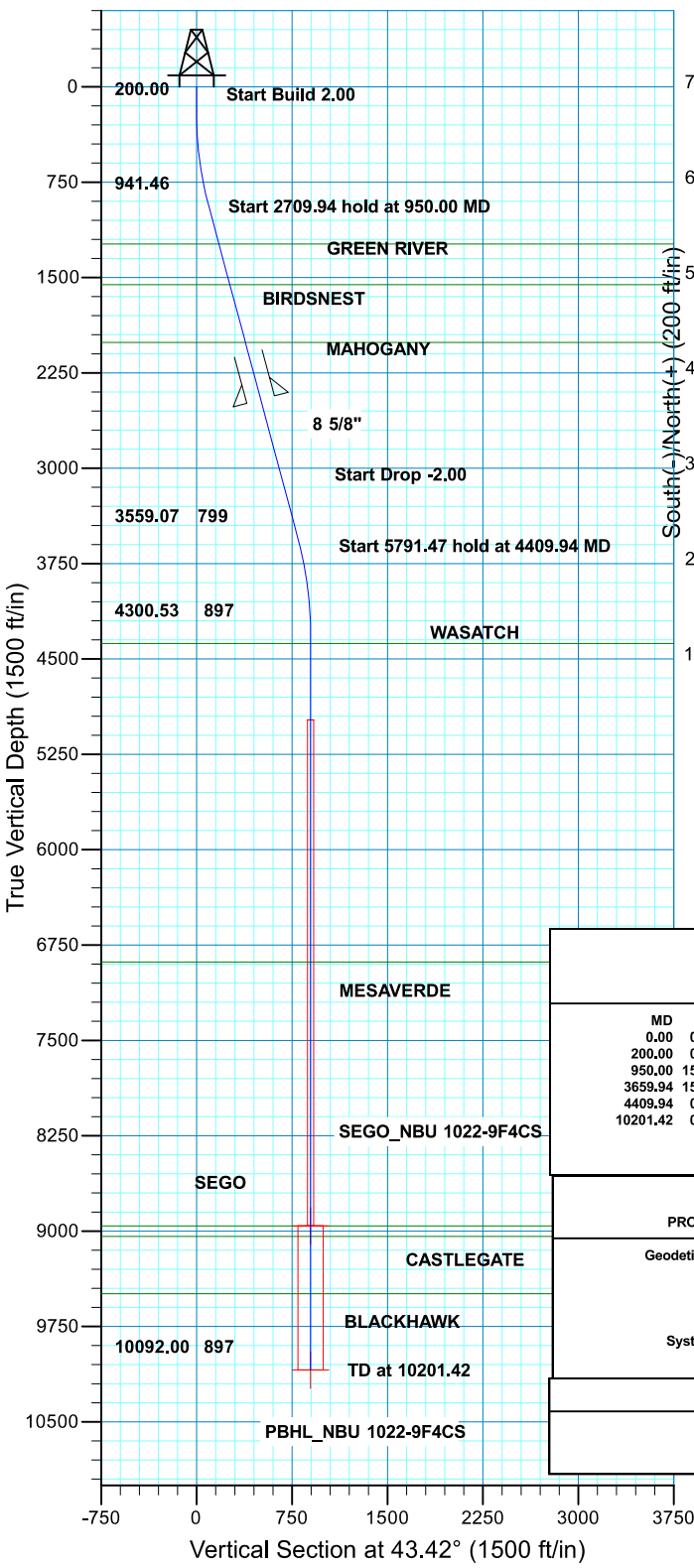
WELL DETAILS: NBU 1022-9F4CS

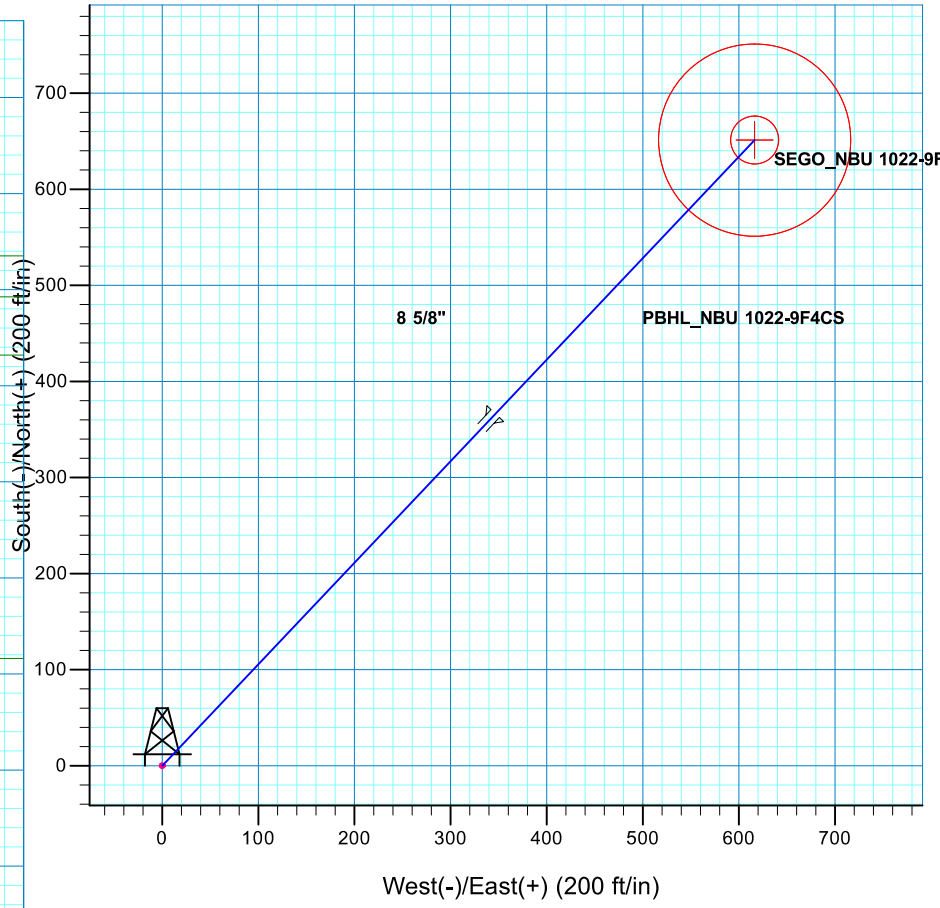
GL 5152 & KB 4 @ 5156.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14515998.43	2075180.20	39.9620270	-109.4484890

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	8959.00	651.22	616.31	14516660.27	2075785.09	39.9638150	-109.4462900	Circle (Radius: 25.00)
- plan hits target center								
PBHL	10092.00	651.22	616.31	14516660.27	2075785.09	39.9638150	-109.4462900	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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
950.00	15.00	43.42	941.46	70.90	67.10	2.00	43.42	97.62	
3659.94	15.00	43.42	3559.07	580.32	549.21	0.00	0.00	799.00	
4409.94	0.00	0.00	4300.53	651.22	616.31	2.00	180.00	896.62	
10201.42	0.00	0.00	10092.00	651.22	616.31	0.00	0.00	896.62	PBHL_NBU 1022-9F4CS

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

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1237.00	1255.96	GREEN RIVER
1556.00	1586.22	BIRDSNEST
2010.00	2056.23	MAHOGANY
4379.00	4488.42	WASATCH
6884.00	6993.42	MESAVERDE
8959.00	9068.42	SEGO
9041.00	9150.42	CASTLEGATE
9492.00	9601.42	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2460.00	2522.11	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 1022-9F4CS/OH)

Created By: Bailey Brook Date: 16:02, August 12 2015

RECEIVED: December 21, 2015

API Well Number: 43047552100000

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9K PAD
Well: NBU 1022-9E4CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Scientific Drilling

Anadarko Petroleum Corporation

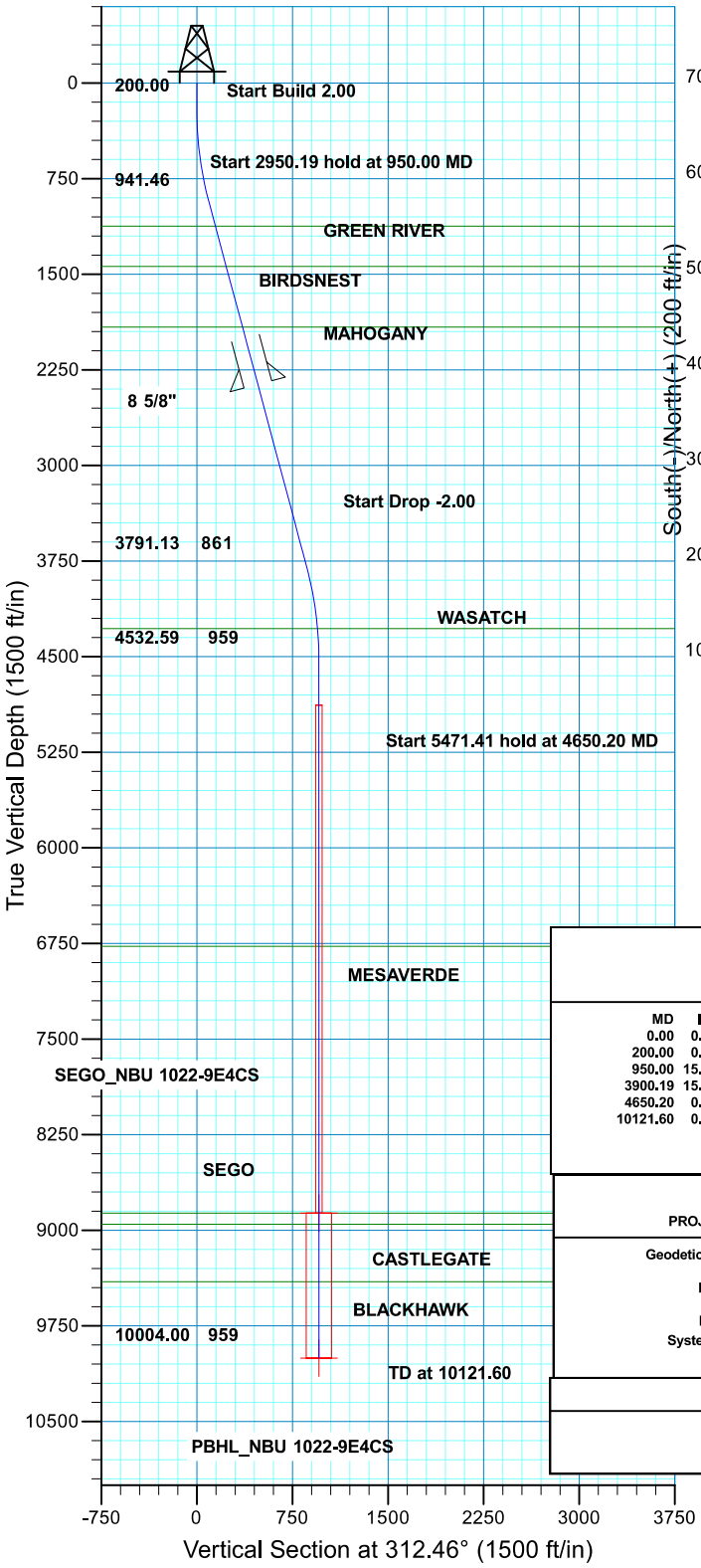
WELL DETAILS: NBU 1022-9E4CS

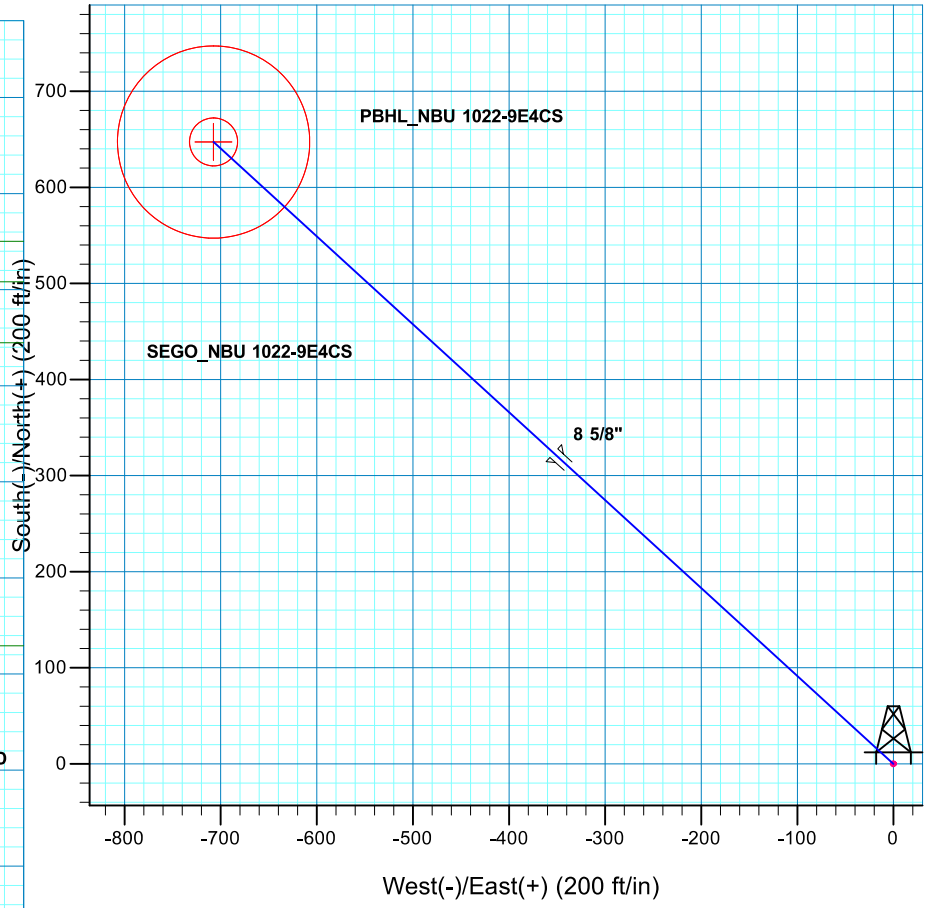
GL 5152 & KB 4 @ 5156.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14515981.77	2075143.77	39.9619830	-109.4486200

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	8866.00	647.21	-707.39	14516616.58	2074425.23	39.9637600	-109.4511440	Circle (Radius: 25.00)
- plan hits target center								
PBHL	10004.00	647.21	-707.39	14516616.58	2074425.23	39.9637600	-109.4511440	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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
950.00	15.00	312.46	941.46	65.89	-72.02	2.00	312.46	97.62	
3900.19	15.00	312.46	3791.13	581.32	-635.37	0.00	0.00	861.18	
4650.20	0.00	0.00	4532.59	647.21	-707.39	2.00	180.00	958.80	
10121.60	0.00	0.00	10004.00	647.21	-707.39	0.00	0.00	958.80	PBHL_NBU 1022-9E4CS

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

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1123.00	1137.94	GREEN RIVER
1439.00	1465.09	BIRDSNEST
1914.00	1956.85	MAHOGANY
4280.00	4397.27	WASATCH
6773.00	6890.60	MESAVERDE
8866.00	8983.60	SEGO
8953.00	9070.60	CASTLEGATE
9404.00	9521.60	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2364.00	2422.72	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 1022-9E4CS/OH)

Created By: Bailey Brook Date: 16:04, August 12 2015

RECEIVED: December 21, 2015

API Well Number: 43047555210000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9K PAD
Well: NBU 1022-9E4BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

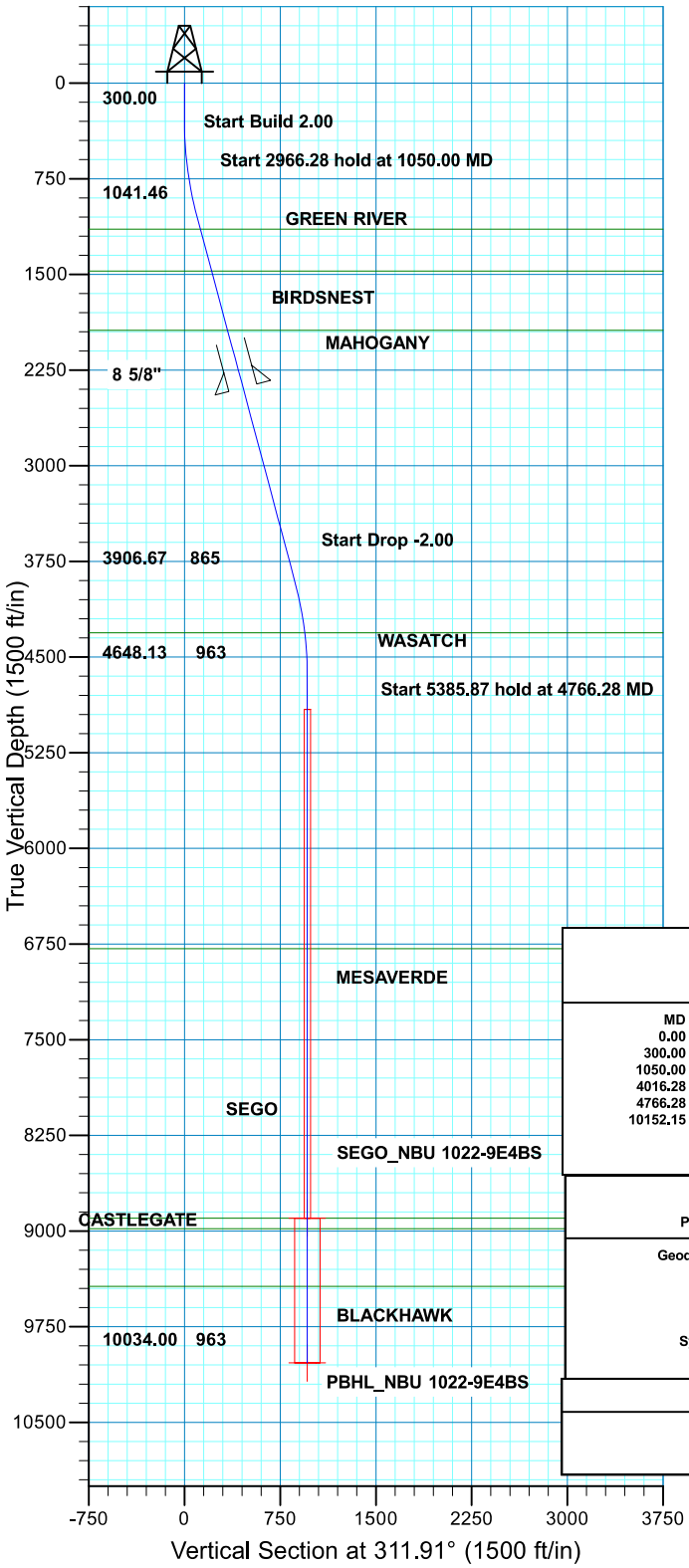
WELL DETAILS: NBU 1022-9E4BS

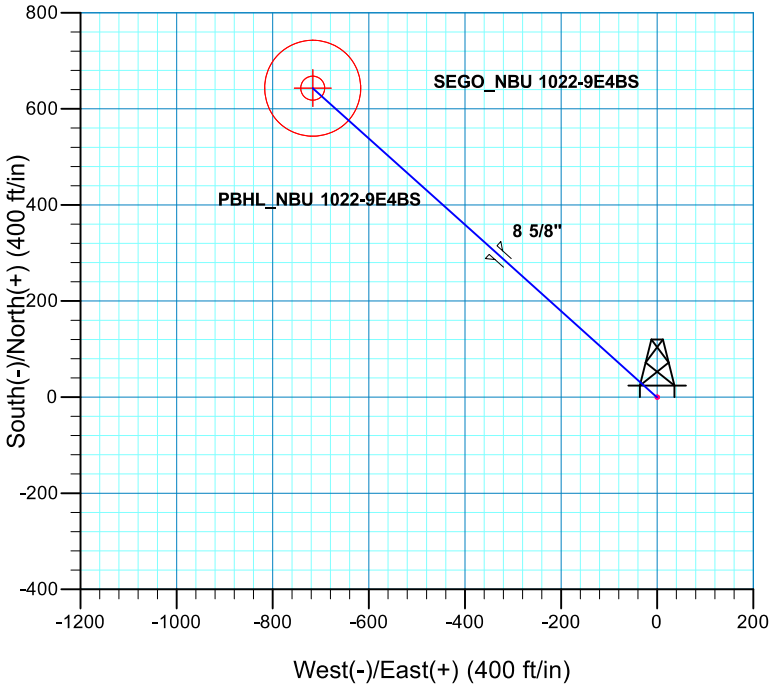
GL 5152 & KB 4 @ 5156.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14515985.94	2075152.95	39.9619940	-109.4485870

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	8899.00	643.21	-716.64	14516616.58	2074425.23	39.9637600	-109.4511440	Circle (Radius: 25.00)
- plan hits target center								
PBHL	10034.00	643.21	-716.64	14516616.58	2074425.23	39.9637600	-109.4511440	Circle (Radius: 100.00)
- plan hits target center								





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DIeg	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	
1050.00	15.00	311.91	1041.46	65.20	-72.65	2.00	311.91	97.62	
4016.28	15.00	311.91	3906.67	578.01	-644.00	0.00	0.00	865.35	
4766.28	0.00	0.00	4648.13	643.21	-716.64	2.00	180.00	962.96	
10152.15	0.00	0.00	10034.00	643.21	-716.64	0.00	0.00	962.96	PBHL_NBU 1022-9E4BS

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

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1145.00	1157.19	GREEN RIVER
1473.00	1496.76	BIRDSNEST
1938.00	1978.16	MAHOGANY
4310.00	4427.36	WASATCH
6787.00	6905.15	MESAVERDE
8899.00	9017.15	SEGO
8981.00	9099.15	CASTLEGATE
9434.00	9552.15	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2388.00	2444.04	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 1022-9E4BS/OH)

Created By: Bailey Brook Date: 17:11, August 06 2015

RECEIVED: December 21, 2015

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 12/21/2015
API NO. ASSIGNED: 43047555210000
WELL NAME: NBU 1022-9E4BS
OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)
PHONE NUMBER: 720 929-6828
CONTACT: Joel Malefyt

PROPOSED LOCATION: NESW 09 100S 220E
Permit Tech Review: ✔

SURFACE: 2084 FSL 1387 FWL
Engineering Review: ✔

BOTTOM: 2258 FNL 0693 FWL
Geology Review: ✔

COUNTY: UINTAH
LATITUDE: 39.96184
LONGITUDE: -109.44918
UTM SURF EASTINGS: 632454.00
NORTHINGS: 4424673.00
FIELD NAME: NATURAL BUTTES
LEASE TYPE: 1 - Federal
LEASE NUMBER: UTU 01196-B
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

RECEIVED: January 13, 2016

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. BAZA
Division Director

Permit To Drill

****

Well Name: NBU 1022-9E4BS
API Well Number: 43047555210000
Lease Number: UTU 01196-B
Surface Owner: FEDERAL
Approval Date: 1/13/2016

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 Alexis Huefner at 801-538-5302
  (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

RECEIVED

Form 3160-3
(August 2007)

SEP 08 2015

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BLM VERNAL UTAH

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
UTU01196B

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

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

8. Lease Name and Well No.
NBU 1022-9E4BS

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

9. API Well No.
43 047 55521

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

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

10. Field and Pool, or Exploratory
NATURAL BUTTES

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface NESW 2084FSL 1387FWL 39.961959 N Lat, 109.449270 W Lon

At proposed prod. zone SWNW 2258FNL 693FWL 39.964541 N Lat, 109.451755 W Lon

11. Sec., T., R., M., or Blk. and Survey or Area
Sec 9 T10S R22E Mer SLB

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

12. County or Parish
UINTAH

13. State
UT

15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any)
693

16. No. of Acres in Lease
320.00

17. Spacing Unit dedicated to this well

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.
758

19. Proposed Depth
10152 MD
10034 TVD

20. BLM/BIA Bond No. on file
WYB000291

21. Elevations (Show whether DF, KB, RT, GL, etc.
5152 GL

22. Approximate date work will start
03/01/2016

23. Estimated duration
60-90 DAYS

24. Attachments

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

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

25. Signature
(Electronic Submission)

Name (Printed/Typed)
JOEL MALEFYT Ph: 720-929-6828

Date
08/26/2015

Title
REGULATORY ANALYST

Approved by (Signature)

Name (Printed/Typed)
Jerry Kenczka

Date
DEC 29 2015

Title
Assistant Field Manager
Lands & Mineral Resources

Office
VERNAL FIELD OFFICE

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

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)

RECEIVED
JAN 11 2016
DIV. OF OIL, GAS & MINING

UDOGM

Electronic Submission #314247 verified by the BLM Well Information System
For KERR-MCGEE OIL & GAS ONSHORE, sent to the Vernal
Committed to AFMSS for processing by STEVE HIRSCHI on 09/17/2015 ()

NOTICE OF APPROVAL
CONDITIONS OF APPROVAL ATTACHED

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

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE
170 South 500 East VERNAL, UT 84078 (435) 781-4400

CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:	**Kerr McGee Oil & Gas Onshore**	**Location:**	**NESW, Sec. 9, T10S, R22E**
Well No:	**NBU 1022-9E4BS**	**Lease No:**	**UTU-01196B**
API No:	**43-047-55521**	**Agreement:**	**UTU-63047A**

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.

Site Specific COAs:

- Geology, Minerals, and Paleontology
    - 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 paleontological material before construction can continue.
    - A BLM-permitted paleontologist will oversee monitoring of construction activities as indicated in SWCA Environmental Consultants' report number UT15–14314–21. Note that this is in addition to those already required in the Greater Natural Buttes FEIS/ROD (UT-080-07-807).

- Threatened, Endangered, Candidate and Proposed Plant Species: Uinta Basin hookless cactus (Sclerocactus wetlandicus)
    - Site inventory surveys will be valid for 4 years from the survey date. If more than 4 years pass between the original survey date and construction, a new clearance survey/site inventory will be required. If construction is to occur within the 4 year window, and at least 1 year after the initial survey date, an additional spot check survey will be required following the methodology established in the 2010 Memorandum of Understanding (MOU) between USFWS and BLM regarding Sclerocactus survey data use timing restrictions. Review of spot checks may result in requirements for additional pre-construction plant surveys or other requirements as directed by USFWS and the BLM Authorized Officer (AO).
    - The applicant will perform ground disturbing activities outside of the flowering period for Sclerocactus wetlandicus (April 1 through May 30).

- Only water and methods approved by the BLM (no chemicals, reclaimed production water or oil field brine) will be used for dust abatement measures within Sclerocactus habitat.

- Dust abatement will be employed in suitable Sclerocactus habitat over the life of the project (during ground disturbing activities, and/or periods of increased travel frequency and amount of traffic to the Project Area; does not apply to general maintenance activities) during the time of the year when Sclerocactus species are most vulnerable to dust-related impacts (March through August).

- Noxious weeds within Sclerocactus habitat may be controlled with herbicides, in accordance with the BLM Herbicide PEIS (http://www.blm.gov/wo/st/en/prog/more/veg_eis.html). Guidelines and the BLM's Standard Operating Procedures for Threatened and Endangered Plant Species (Table 1).

- Application for a Pesticide Use Permit will include provisions for mechanical removal, as opposed to chemical removal, for Utah Class A, B, and C noxious weeds within 50 feet of individual/populations of Sclerocactus.

- Erosion control measures (e.g., silt fencing) will be implemented to minimize sedimentation to Sclerocactus plants and populations located down slope of proposed surface disturbance activities, and should only be implemented within the area proposed for disturbance.

- All disturbed areas will be reclaimed with plant species native to Utah, or seed mixtures approved by the BLM and our office, which may include the use of sterile, non-native, non-invasive, annuals to help secure topsoil and encourage native perennials to establish.

- Discovery Stipulation: Reinitiation of section 7 consultation with the USFWS will be sought immediately if any loss of plants or occupied habitat for Uinta Basin hookless cactus is anticipated as a result of project activities.

- Green River District Reclamation Guidelines

  - The Operator will comply with the requirements of Appendix B: Green River District Reclamation Guidelines (p. 59), formalized by Green River District Instructional Memo UTG000-2014-004 on May 21, 2014.

DOWNHOLE PROGRAM
CONDITIONS OF APPROVAL (COAs)

SITE SPECIFIC DOWNHOLE COAs:

- Surface casing cement shall be brought to surface.
- Production casing cement shall be brought 400' up and into the surface casing.
- For the drilling of the surface hole section, operator is required to install an bowl diverter system or rotating head which is connected and discharges to an panic or choke blooie line. The surface hole section of the subject well is deeper than 2,000 ft.
- A variance is granted for Onshore Order #2 Drilling Operations III. E. "Blooie line discharge 100 feet from well bore and securely anchored" Blooie line can be 75 feet.
- All requirements will be adhered to covering air/gas drilling operations as described in Onshore Order #2 III. E. 1. Drilling Operations, Special Drilling Operations, air/gas drilling.

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

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

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

- **Cement baskets shall not be run on surface casing.**

- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.

- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.

- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.

- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.

- **Please submit an electronic copy of all other logs run on this well by CD (compact disc). This submission will supersede the requirement for submittal of paper logs to the BLM.**

- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.

- 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 01196-B

SUNDRY NOTICES AND REPORTS ON WELLS

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

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-9E4BS

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

9. API NUMBER: 43047555210000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779
PHONE NUMBER: 720 929-6404 EXT

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 2084 FSL 1387 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 09 Township: 10.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 1/3/2017	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

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

Approved by the Utah Division of Oil, Gas and Mining
January 04, 2017
Date:
By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Candice Barber	435 781-9749	HSE Representative

SIGNATURE	DATE
N/A	1/3/2017

RECEIVED: Jan. 03, 2017

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 43047555210000

API: 43047555210000
Well Name: NBU 1022-9E4BS
Location: 2084 FSL 1387 FWL QTR NESW SEC 09 TWNP 100S RNG 220E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 1/13/2016

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: Candice Barber **Date:** 1/3/2017
Title: HSE Representative **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED: Jan. 03, 2017