API Well Number: 43047535070000

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 922-34J1CS

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
720 929-6515

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

9. OPERATOR E-MAIL
julie.jacobson@anadarko.com

10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)
UTU-0149077

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	2050 FSL 991 FWL	NWSW	34	9.0 S	22.0 E	S
Top of Uppermost Producing Zone	2082 FSL 1821 FEL	NWSE	34	9.0 S	22.0 E	S
At Total Depth	2082 FSL 1821 FEL	NWSE	34	9.0 S	22.0 E	S

21. COUNTY
UINTAH

22. DISTANCE TO NEAREST LEASE LINE (Feet)
1821

23. NUMBER OF ACRES IN DRILLING UNIT
600

25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)
1420

26. PROPOSED DEPTH
MD: 9432 TVD: 8915

27. ELEVATION - GROUND LEVEL
4989

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 - 2380	28.0	J-55 LT&C	0.2	Type V	180	1.15	15.8
							Class G	270	1.15	15.8
Prod	7.875	4.5	0 - 9432	11.6	I-80 LT&C	12.0	Premium Lite High Strength	300	3.38	12.0
							50/50 Poz	1320	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 Gina Becker | **TITLE** Regulatory Analyst II | **PHONE** 720 929-6086

SIGNATURE | **DATE** 01/03/2013 | **EMAIL** gina.becker@anadarko.com

API NUMBER ASSIGNED
43047535070000

APPROVAL

Permit Manager

RECEIVED: January 30, 2013

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

NBU 922-34J1CS

Surface:	2050 FSL / 991 FWL	NWSW
BHL:	2082 FSL / 1821 FEL	NWSE

Section 34 T9S R22E

Uintah County, Utah
Mineral Lease: UTU-0149077

ONSHORE ORDER NO. 1

DRILLING PROGRAM

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

Formation	Depth	Resource
Uinta	0 - Surface	
Green River	1,156'	
Birds Nest	1,485'	Water
Mahogany	1,934'	Water
Wasatch	4,341'	Gas
Mesaverde	6,670'	Gas
Sego	8,915'	Gas
TVD	8,915'	
TD	9,432'	

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

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

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

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

RECEIVED: December 27, 2012

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 8915' TVD, approximately equals 5,438 psi 0.61 psi/ft = actual bottomhole gradient

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

Maximum anticipated surface pressure equals approximately 3,500 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 Drilling Program.

RECEIVED: December 27, 2012

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	November 27, 2012
WELL NAME	**NBU 922-34J1CS**	TD	8,915' TVD 9,432' MD
FIELD	Natural Buttes COUNTY Uintah STATE Utah	FINISHED ELEVATION	4,989'
SURFACE LOCATION	NWSW 2050 FSL 991 FWL Sec 34 T 9S R 22E		
	Latitude: 39.990891 Longitude: -109.432040 NAD 83		
BTM HOLE LOCATION	NWSE 2082 FSL 1821 FEL Sec 34 T 9S R 22E		
	Latitude: 39.990979 Longitude: -109.423196 NAD 83		
OBJECTIVE ZONE(S)	Wasatch/Mesaverde		
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'	8-5/8", 28#, IJ-55, LTC	Air mist
			7-7/8"	4-1/2" 11.6# I-80 Ultra DQX/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 @ 1,156'
Top of Birds Nest @ 1,485'
Mahogany @ 1,934'

Preset f/ GL @ 2,380' 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 @ 4,341'

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

Mverde @ 6,670' TVD

Sego @ 8,915' TVD

Max anticipated Mud required 12.0 ppg

TD @ 8,915' TVD 9,432' MD

RECEIVED: December 27, 2012

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	COLLAPSE LTC	TENSION DQX
CONDUCTOR	14"	0-40'									
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,380	28.00	IJ-55	LTC	2.27	1.69	5.96	N/A
								7,780	6,350	223,000	267,035
PRODUCTION	4-1/2"	0	to	5,000	11.60	I-80	DQX	1.11	1.14		2.99
								7,780	6,350	223,000	267,035
	4-1/2"	5,000	to	9,432'	11.60	I-80	LTC	1.11	1.14	5.31	

Surface Casing:

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

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

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

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.61 psi/ft = bottomhole gradient

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

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	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	1,880'	65/35 Poz + 6% Gel + 10 pps gilsonite	170	35%	11.00		3.82
			+ 0.25 pps Flocele + 3% salt BWOW					
	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	3,832'	Premium Lite II +0.25 pps celloflake + .4% FL-52	300	35%	12.00		3.38
			+ .3% R-3 + .5 lbs/sk Kol-Seal + 6%Bentonite II +					
			1.2% Sodium Metasilicate + .05 lbs/sk Static Free					
	TAIL	5,600'	50/50 Poz/G + 10% salt + .05 lbs/sk Static Free	1,320	35%	14.30		1.31
			+ 1.2% Sodium Metasilicate + .5 % EC-1					
			+.002 gps FP-6L + 2% Bentonite II					

*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:** _____

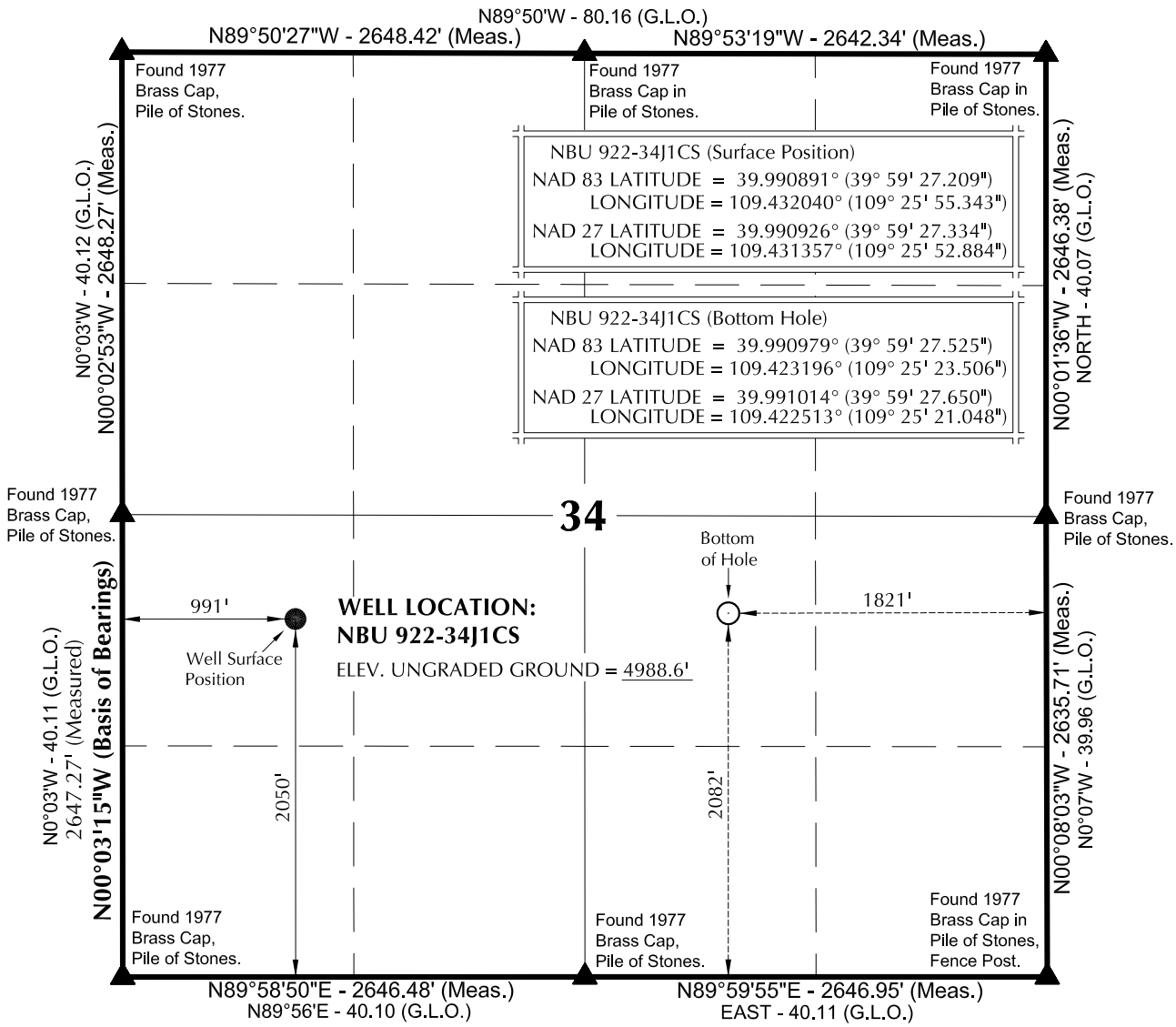
Nick Spence / John Tuckwiller / Brian Cocchiere / Tyler Elliot

DRILLING SUPERINTENDENT: _____ **DATE:** _____

Kenny Gathings / Lovel Young

RECEIVED: December 27, 2012

T9S, 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 N89°14'15"E 2478.87' 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.

9-20-12

PROFESSIONAL LAND SURVEYOR No. 6028691 JOHN R. LAUGHLIN 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 922-34L

NBU 922-34J1CS
WELL PLAT
2082' FSL, 1821' FEL (Bottom Hole)
NW ¼ SE ¼ OF SECTION 34, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

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

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

DATE SURVEYED: 6-4-12	SURVEYED BY: A.F.	SHEET NO:
DATE DRAWN: 6-15-12	DRAWN BY: T.J.R.	6
SCALE: 1" = 1000'	Date Last Revised: 9-15-12 T.J.R.	6 OF 20

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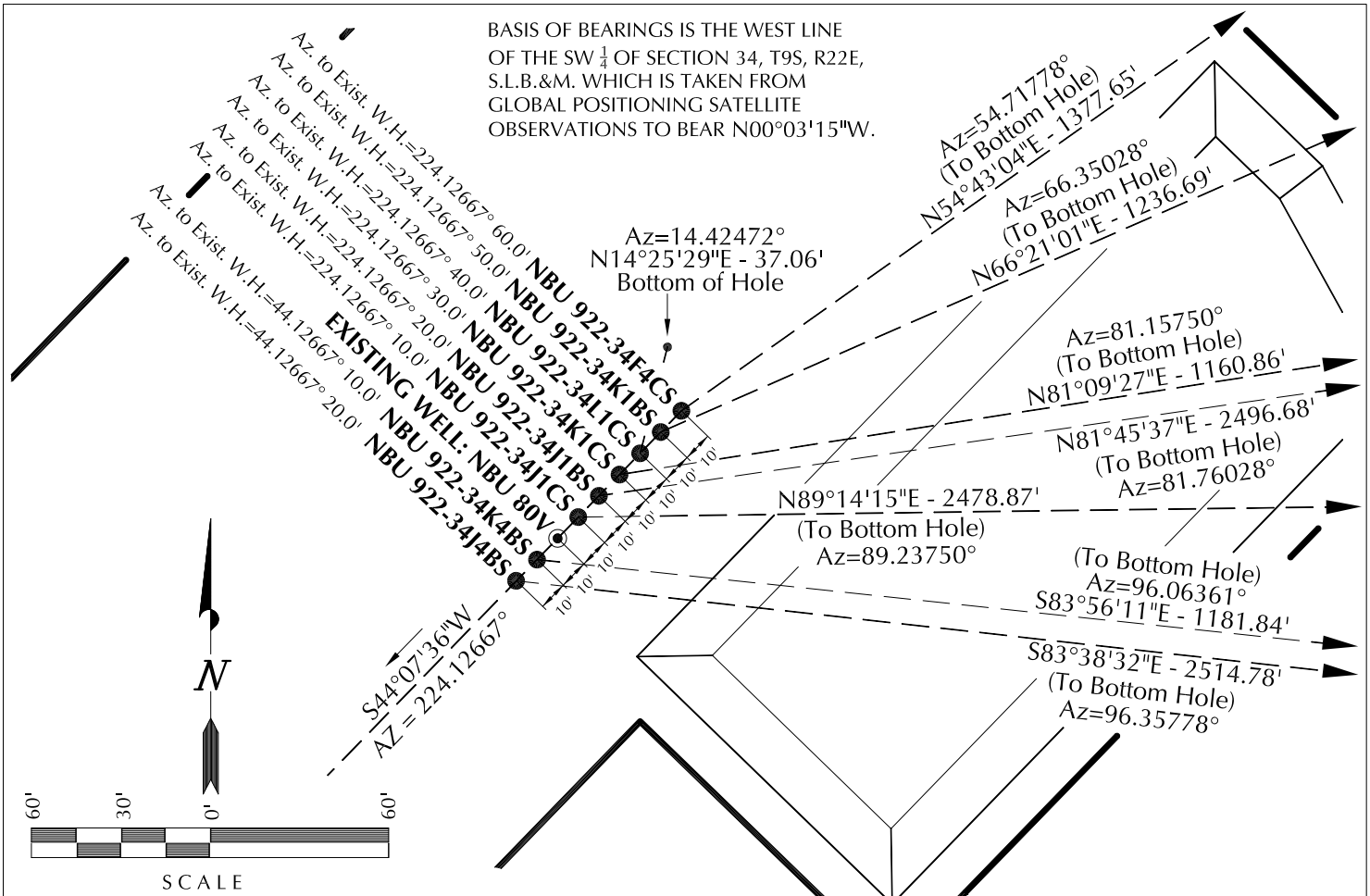
RECEIVED: December 27, 2012

API Well Number: 43047535070000

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27			NAD83		NAD27		
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES
NBU 922-34F4CS	39°59'27.564" 39.990990°	109°25'54.896" 109.431916°	39°59'27.689" 39.991025°	109°25'52.437" 109.431233°	2085' FSL 1026' FWL	39°59'35.421" 39.993173°	109°25'40.447" 109.427902°	39°59'35.546" 39.993207°	109°25'37.988" 109.427219°	2408' FNL 2151' FWL
NBU 922-34K1BS	39°59'27.493" 39.990970°	109°25'54.986" 109.431940°	39°59'27.618" 39.991005°	109°25'52.527" 109.431257°	2078' FSL 1019' FWL	39°59'32.390" 39.992331°	109°25'40.432" 109.427898°	39°59'32.515" 39.992365°	109°25'37.974" 109.427215°	2574' FSL 2152' FWL
NBU 922-34L1CS	39°59'27.422" 39.990951°	109°25'55.075" 109.431965°	39°59'27.547" 39.990985°	109°25'52.616" 109.431282°	2071' FSL 1012' FWL	39°59'27.777" 39.991049°	109°25'54.956" 109.431932°	39°59'27.901" 39.991084°	109°25'52.497" 109.431249°	2107' FSL 1021' FWL
NBU 922-34K1CS	39°59'27.351" 39.990931°	109°25'55.164" 109.431990°	39°59'27.476" 39.990966°	109°25'52.706" 109.431307°	2064' FSL 1005' FWL	39°59'29.110" 39.991419°	109°25'40.430" 109.427897°	39°59'29.235" 39.991454°	109°25'37.972" 109.427214°	2242' FSL 2152' FWL
NBU 922-34J1BS	39°59'27.280" 39.990911°	109°25'55.254" 109.432015°	39°59'27.405" 39.990946°	109°25'52.795" 109.431332°	2057' FSL 998' FWL	39°59'30.806" 39.991890°	109°25'23.514" 109.423198°	39°59'30.930" 39.991925°	109°25'21.056" 109.422516°	2414' FSL 1821' FEL
NBU 922-34J1CS	39°59'27.209" 39.990891°	109°25'55.343" 109.432040°	39°59'27.334" 39.990926°	109°25'52.884" 109.431357°	2050' FSL 991' FWL	39°59'27.525" 39.990979°	109°25'23.506" 109.423196°	39°59'27.650" 39.991014°	109°25'21.048" 109.422513°	2082' FSL 1821' FEL
NBU 922-34K4BS	39°59'27.068" 39.990852°	109°25'55.522" 109.432090°	39°59'27.192" 39.990887°	109°25'53.063" 109.431407°	2035' FSL 977' FWL	39°59'25.830" 39.990508°	109°25'40.428" 109.427897°	39°59'25.954" 39.990543°	109°25'37.969" 109.427214°	1910' FSL 2152' FWL
NBU 922-34J4BS	39°59'26.997" 39.990832°	109°25'55.612" 109.432114°	39°59'27.121" 39.990867°	109°25'53.153" 109.431431°	2028' FSL 970' FWL	39°59'24.235" 39.990065°	109°25'23.510" 109.423197°	39°59'24.360" 39.990100°	109°25'21.053" 109.422515°	1749' FSL 1822' FEL
NBU 80V	39°59'27.138" 39.990872°	109°25'55.433" 109.432065°	39°59'27.263" 39.990906°	109°25'52.974" 109.431382°	2042' FSL 984' 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 922-34F4CS	795.7'	1124.6'	NBU 922-34K1BS	496.1'	1132.8'	NBU 922-34L1CS	35.9'	9.2'	NBU 922-34K1CS	178.4'	1147.1'
WELL NAME	**NORTH**	**EAST**	**WELL NAME**	**NORTH**	**EAST**	**WELL NAME**	**NORTH**	**EAST**	**WELL NAME**	**NORTH**	**EAST**
NBU 922-34J1BS	357.8'	2470.9'	NBU 922-34J1CS	33.0'	2478.7'	NBU 922-34K4BS	-124.8'	1175.2'	NBU 922-34J4BS	-278.5'	2499.3'



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

WELL PAD - NBU 922-34L

WELL PAD INTERFERENCE PLAT
WELLS - NBU 922-34F4CS, NBU 922-34K1BS, NBU 922-34L1CS, NBU 922-34K1CS, NBU 922-34J1BS, NBU 922-34J1CS, NBU 922-34K4BS & NBU 922-34J4BS
LOCATED IN SECTION 34, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

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

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

DATE SURVEYED: 6-4-12	SURVEYED BY: A.F.	SHEET NO:
DATE DRAWN: 6-15-12	DRAWN BY: T.J.R.	9
SCALE: 1" = 60'	Date Last Revised: 9-15-12 T.J.R.	9 OF 20

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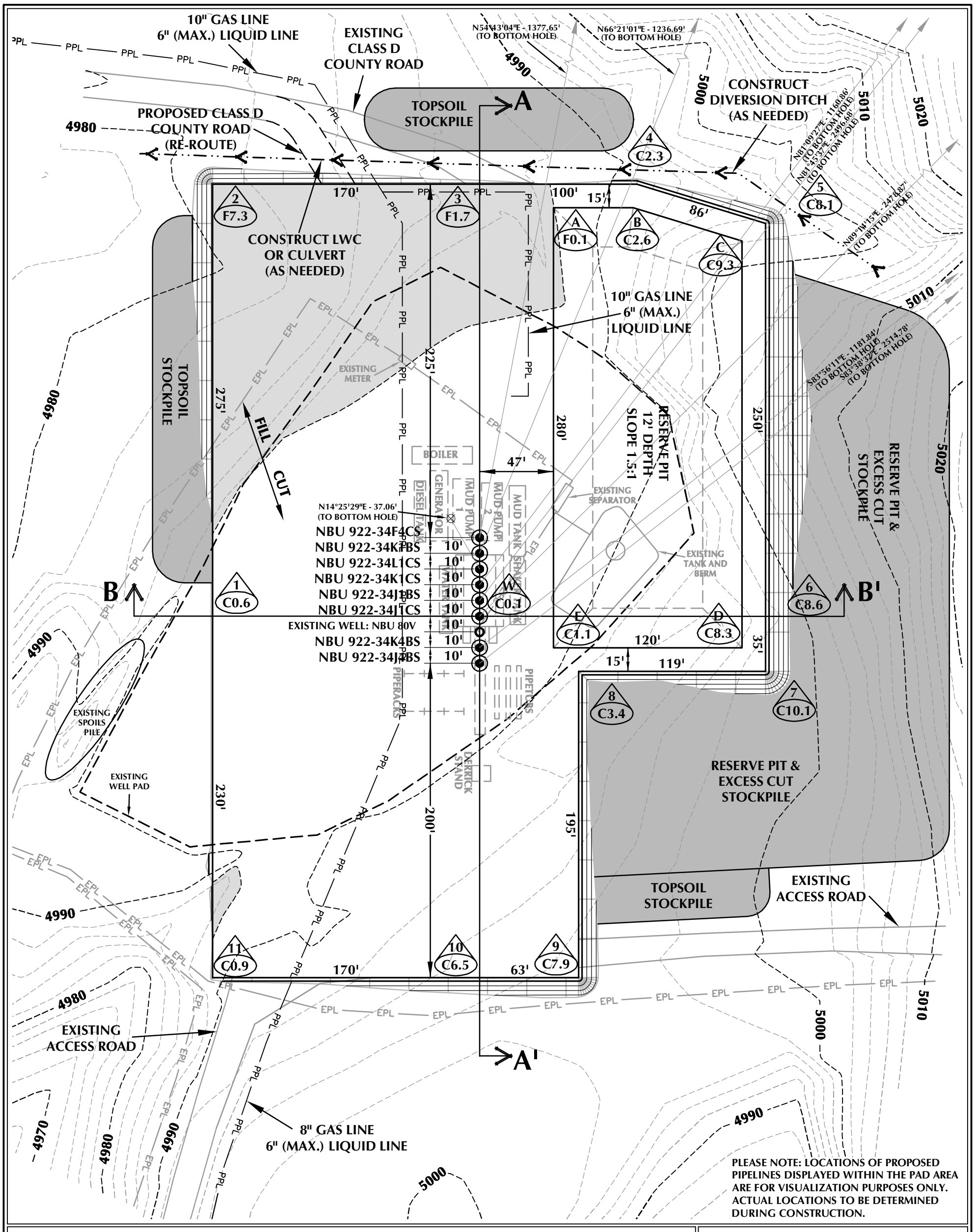
API Well Number: 43047535070000



WELL PAD - NBU 922-34L DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4988.6'
FINISHED GRADE ELEVATION = 4988.5'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.88 ACRES
TOTAL DISTURBANCE AREA = 5.48 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 = 13,407 C.Y.
TOTAL FILL FOR WELL PAD = 4,452 C.Y.
TOPSOIL @ 6" DEPTH = 1,770 C.Y.
EXCESS MATERIAL = 8,955 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT
+/- 11,670 C.Y.
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 44,820 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 30' 60' 1" = 60'
2' CONTOURS

WELL PAD - NBU 922-34L

WELL PAD - LOCATION LAYOUT
NBU 922-34F4CS, NBU 922-34K1BS,
NBU 922-34L1CS, NBU 922-34K1CS,
NBU 922-34J1BS, NBU 922-34J1CS,
NBU 922-34K4BS & NBU 922-34J4BS
LOCATED IN SECTION 34, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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

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

SCALE: 1"=60'	DATE: 7/10/12	SHEET NO:
REVISED:	9/19/12	10 10 OF 20

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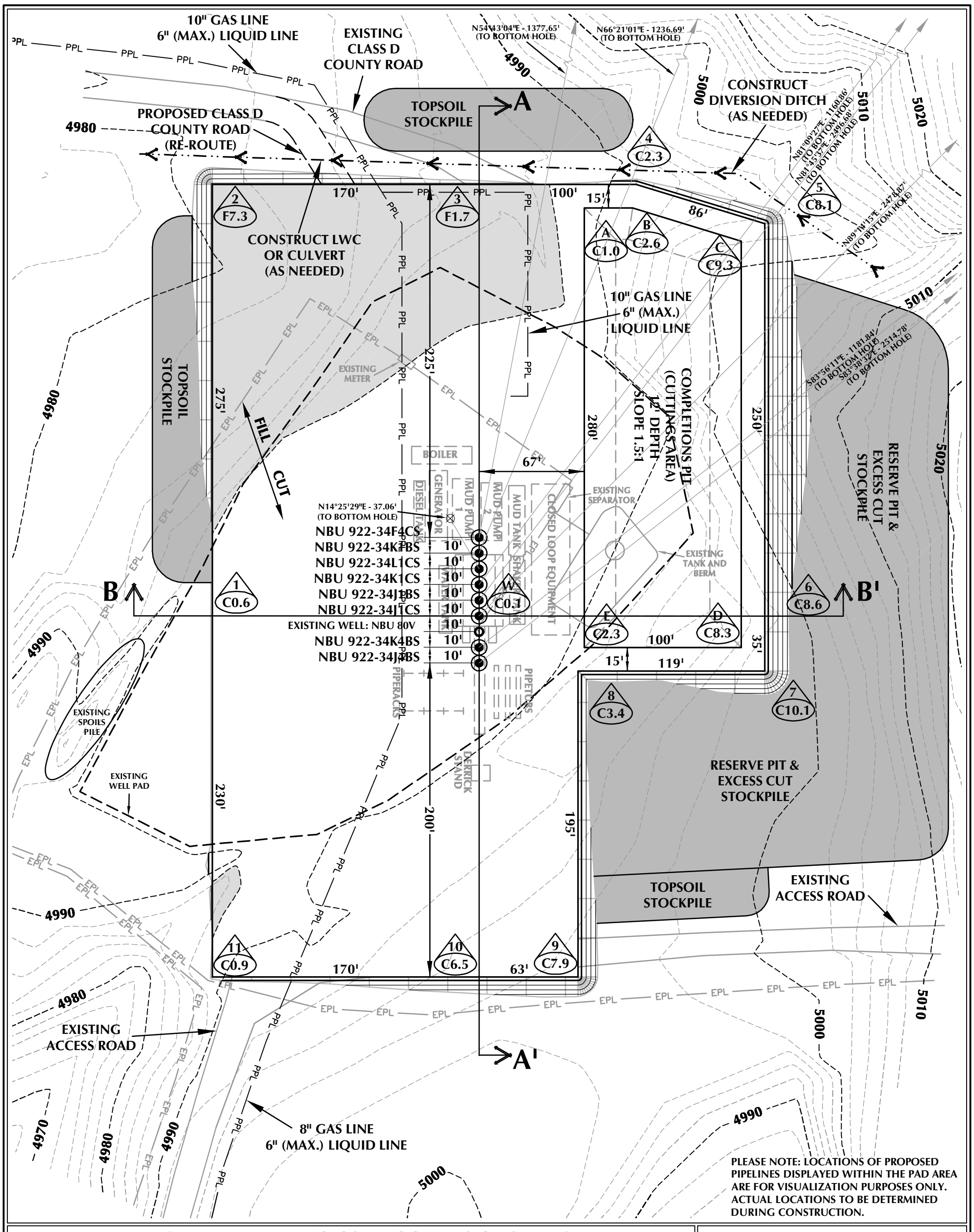


WELL PAD - NBU 922-34L (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4988.6'
FINISHED GRADE ELEVATION = 4988.5'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.88 ACRES
TOTAL DISTURBANCE AREA = 5.48 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

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

WELL PAD - NBU 922-34L

WELL PAD - LOCATION LAYOUT
NBU 922-34F4CS, NBU 922-34K1BS,
NBU 922-34L1CS, NBU 922-34K1CS,
NBU 922-34J1BS, NBU 922-34J1CS,
NBU 922-34K4BS & NBU 922-34J4BS
LOCATED IN SECTION 34, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 13,407 C.Y.
TOTAL FILL FOR WELL PAD = 4,452 C.Y.
TOPSOIL @ 6" DEPTH = 1,770 C.Y.
EXCESS MATERIAL = 8,955 C.Y.

COMPLETIONS PIT QUANTITIES

TOTAL CUT FOR COMPLETIONS PIT
+/- 9,340 C.Y.
COMPLETIONS PIT CAPACITY
(2' OF FREEBOARD)
+/- 35,600 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 30' 60' 1" = 60'
2' CONTOURS

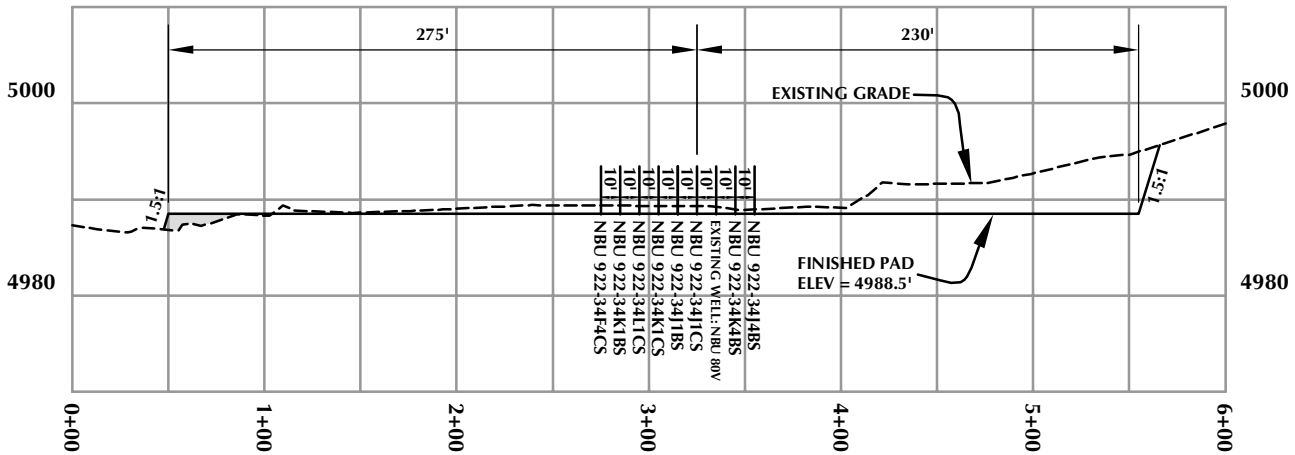
609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

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

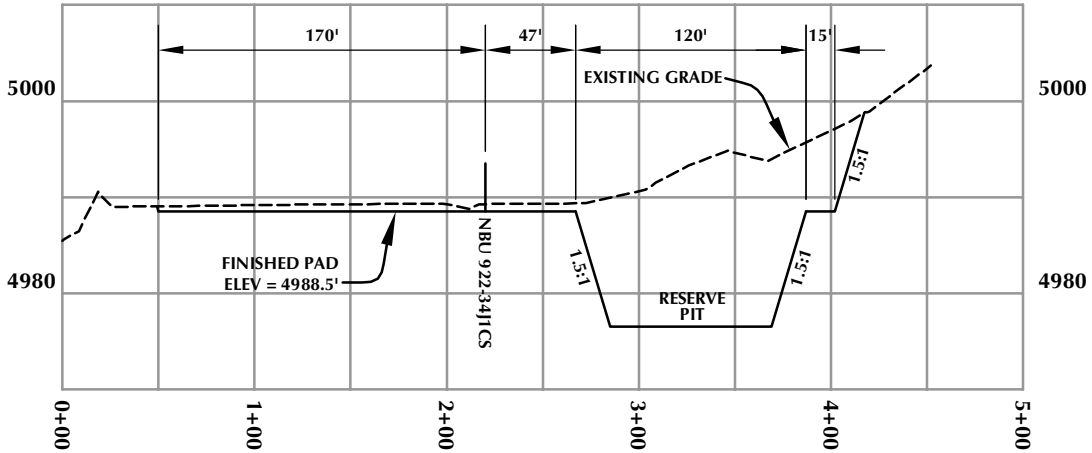
SCALE: 1"=60'	DATE: 9/19/12	SHEET NO:
REVISED:		10B 10B OF 20

K:\ANADARKO\2012\2012_36_NBU_FOCUS_922-34\DWGS\NBU 922-34L\NBU 922-34L.dwg, 9/20/2012 4:30:44 PM, jacob

RECEIVED: December 27, 2012



CROSS SECTION A-A'



CROSS SECTION B-B'

NOTE: CROSS SECTION B-B' DEPICTS MAXIMUM RESERVE PIT DEPTH.

HORIZONTAL 0 50' 100' 1" = 100'

VERTICAL 0 10' 20' 1" = 20'

Kerr-McGee Oil & Gas Onshore, LP
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WELL PAD - NBU 922-34L

WELL PAD - CROSS SECTIONS
NBU 922-34F4CS, NBU 922-34K1BS,
NBU 922-34L1CS, NBU 922-34K1CS,
NBU 922-34J1BS, NBU 922-34J1CS,
NBU 922-34K4BS & NBU 922-34J4BS
LOCATED IN SECTION 34, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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CONSULTING, LLC
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209 NORTH 300 WEST - VERNAL, UTAH 84078

Scale: 1"=100' | Date: 7/10/12 | SHEET NO:
REVISED: 9/19/12 | 11 | 11 OF 20

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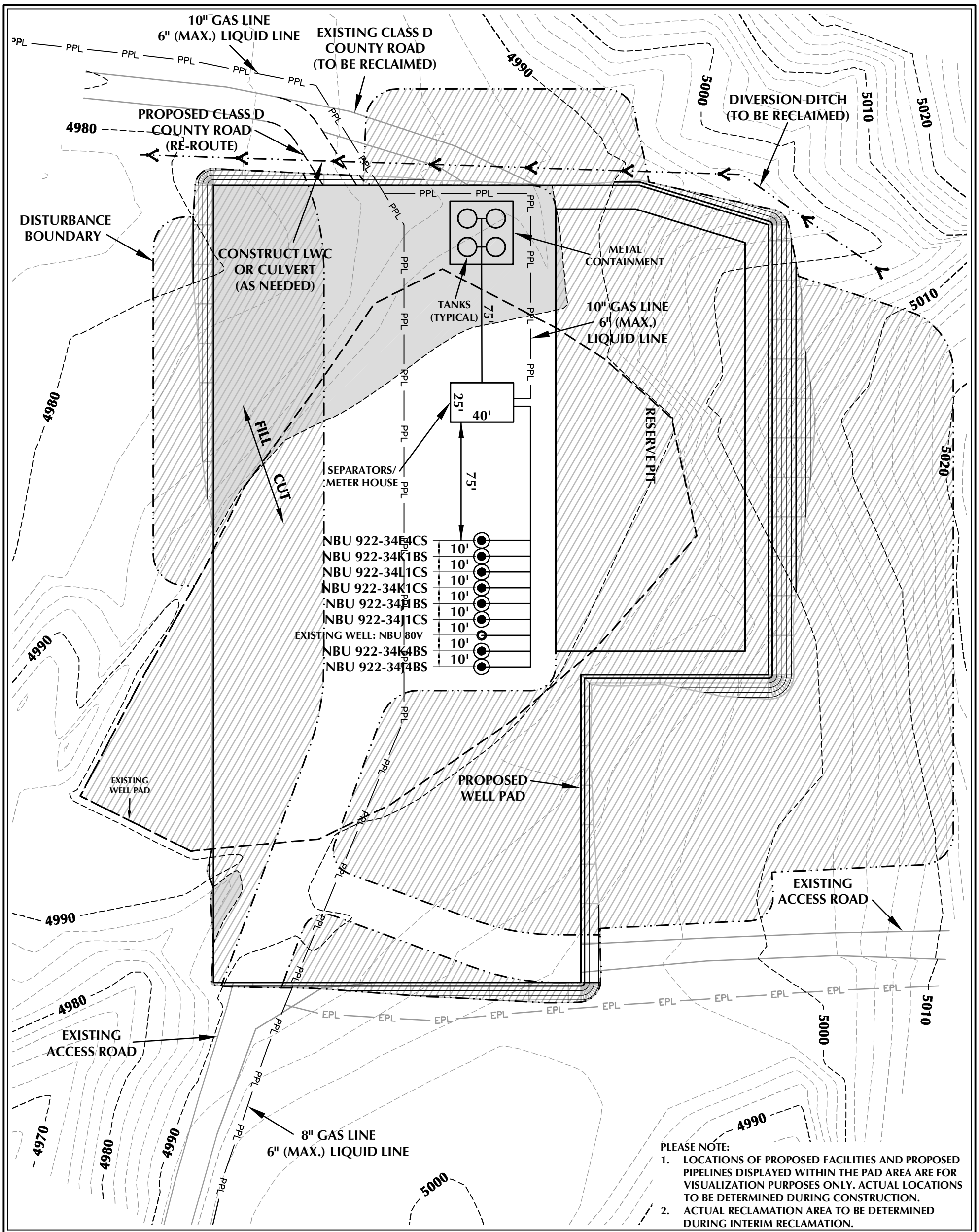

WELL PAD - NBU 922-34L DESIGN SUMMARY

TOTAL DISTURBANCE AREA = 5.66 ACRES (INCLUDING EXISTING)
RECLAMATION AREA = 4.28 ACRES
TOTAL WELL PAD AREA AFTER RECLAMATION = 1.38 ACRES

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
- RECLAMATION AREA

HORIZONTAL 0 30' 60' 1" = 60'

2' CONTOURS

Kerr-McGee Oil & Gas Onshore, LP
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WELL PAD - NBU 922-34L

WELL PAD - RECLAMATION LAYOUT
NBU 922-34F4CS, NBU 922-34K1BS,
NBU 922-34L1CS, NBU 922-34K1CS,
NBU 922-34J1BS, NBU 922-34J1CS,
NBU 922-34K4BS & NBU 922-34J4BS
LOCATED IN SECTION 34, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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

SCALE: 1"=60'	DATE: 7/10/12	SHEET NO:
REVISED:	9/19/12	12 12 OF 20

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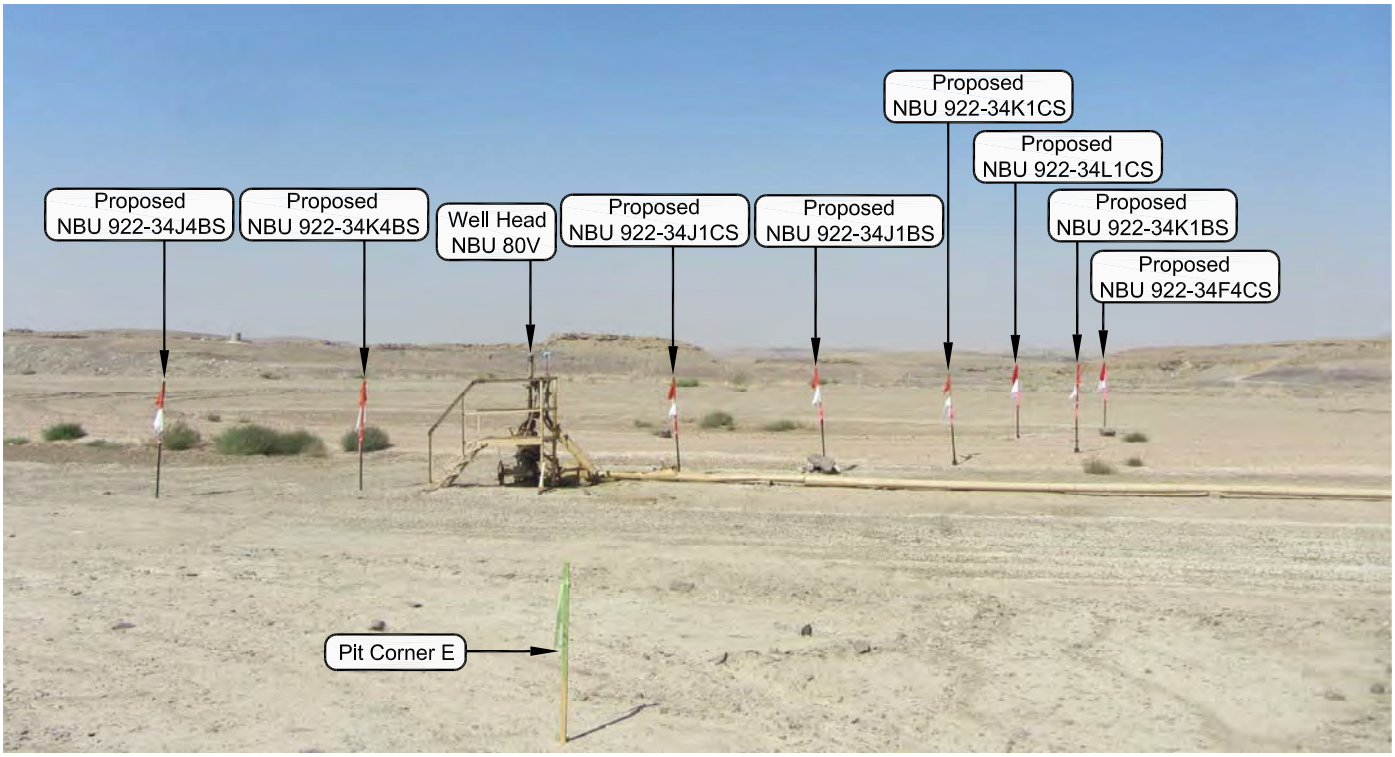

PHOTO VIEW: FROM PIT CORNER E TO LOCATION STAKE **CAMERA ANGLE: NORTHWESTERLY**

PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD **CAMERA ANGLE: SOUTHWESTERLY**

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

WELL PAD - NBU 922-34L

LOCATION PHOTOS
NBU 922-34F4CS, NBU 922-34K1BS,
NBU 922-34L1CS, NBU 922-34K1CS,
NBU 922-34J1BS, NBU 922-34J1CS,
NBU 922-34K4BS & NBU 922-34J4BS
LOCATED IN SECTION 34, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH.

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

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

DATE PHOTOS TAKEN: 6-4-12	PHOTOS TAKEN BY: A.F.	SHEET NO:
DATE DRAWN: 6-15-12	DRAWN BY: T.J.R.	13
Date Last Revised:		13 OF 20

S:\ANADARKO\922\922-34\NBU 922-34L\NBU 922-34L UPDATED_20120915\NBU 922-34L_LOC_20120915.dwg, 9/20/2012 4:06:46 PM, 1:1

RECEIVED: December 27, 2012

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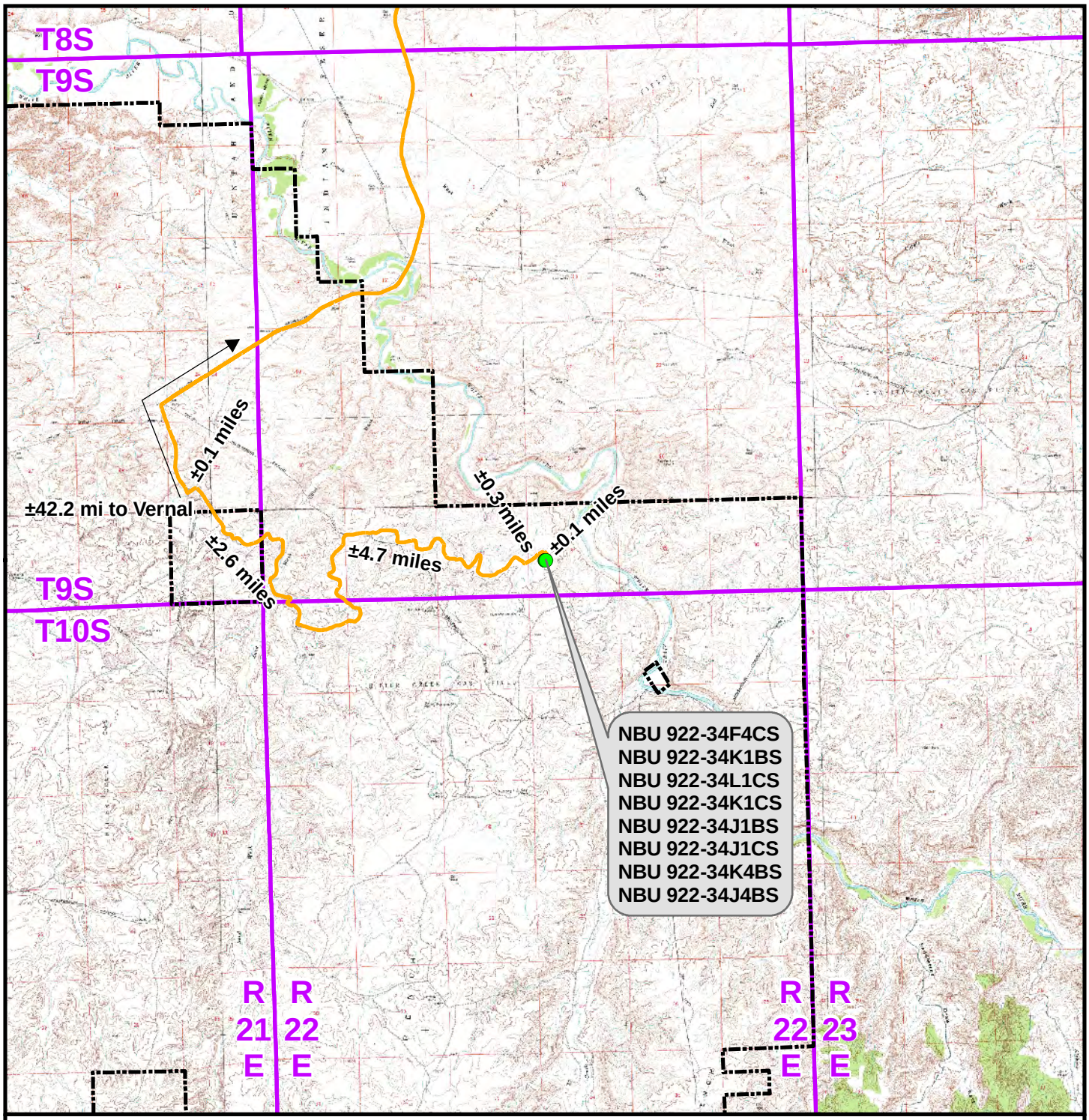

Legend

Distance From Well Pad - NBU 922-34L To Unit Boundary: ±3,206ft

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

WELL PAD - NBU 922-34L

TOPO A
NBU 922-34F4CS, NBU 922-34K1BS, NBU 922-34L1CS, NBU 922-34K1CS, NBU 922-34J1BS, NBU 922-34J1CS, NBU 922-34K4BS & NBU 922-34J4BS
LOCATED IN SECTION 34, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

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Denver, Colorado 80202

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

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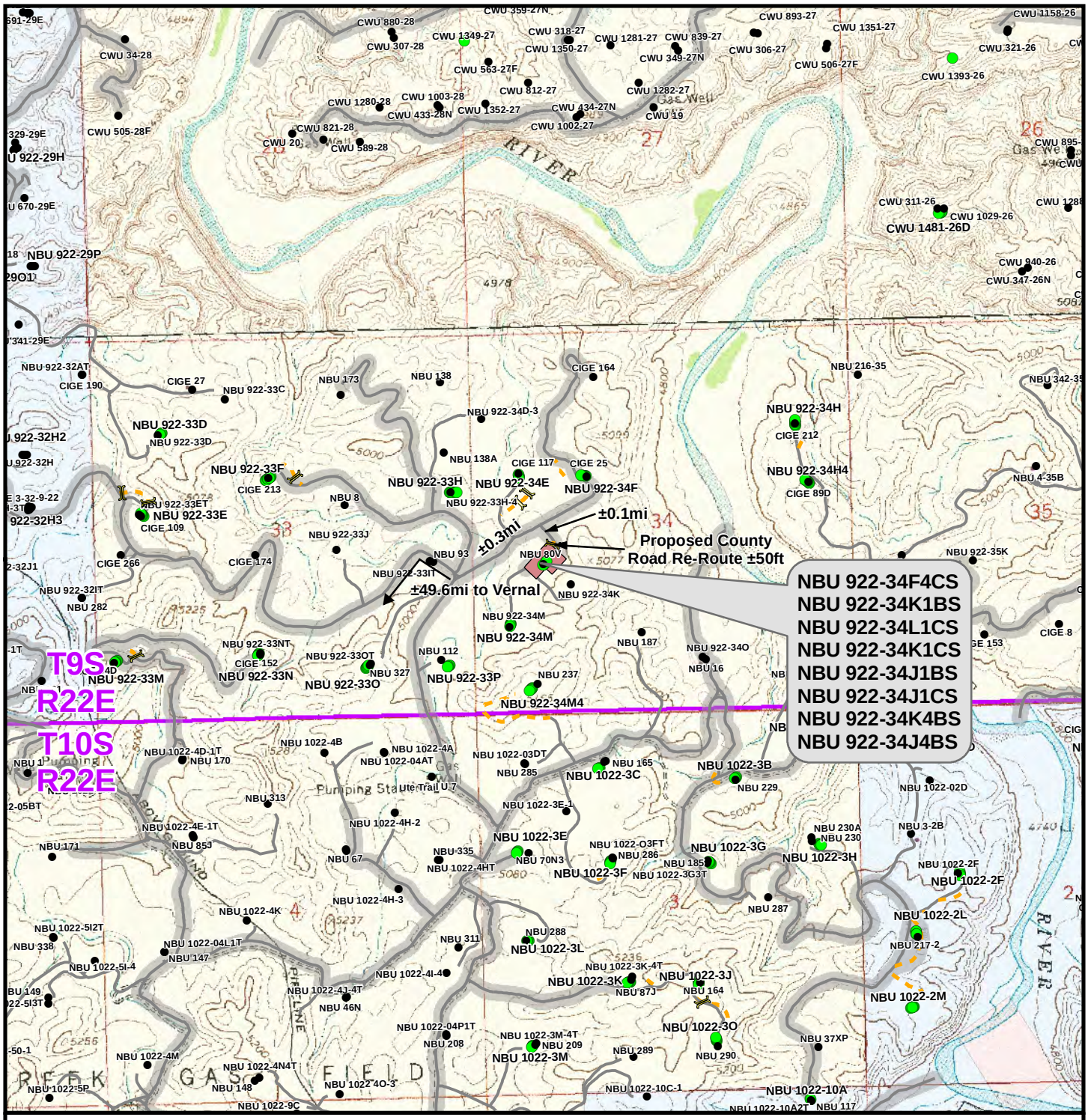
SCALE: 1:100,000	NAD83 USP Central	SHEET NO: 14
DRAWN: TL	DATE: 5 July 2012	14 OF 20
REVISED:	DATE:	

File: K:\ANADARKO\2012\2012_36_NBU_FOCUS_922-34\GIS\Maps_ABCDE\NBU 922-34L\NBU 922-34L_A.mxd, 9/20/2012 3:56:44 PM

RECEIVED: December 27, 2012

API Well Number: 43047535070000



Legend

Total Proposed County Road Re-Route Length: ±50ft

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

File: K:\ANADARKO\2012\2012_36_NBU_FOCUS_922-34G\S\Maps_ABCDE\NBU 922-34L\NBU 922-34L_B.mxd, 9/22/2012 1:56:36 PM

WELL PAD - NBU 922-34L

TOPO B

NBU 922-34F4CS, NBU 922-34K1BS, NBU 922-34L1CS, NBU 922-34K1CS, NBU 922-34J1BS, NBU 922-34J1CS, NBU 922-34K4BS & NBU 922-34J4BS LOCATED IN SECTION 34, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

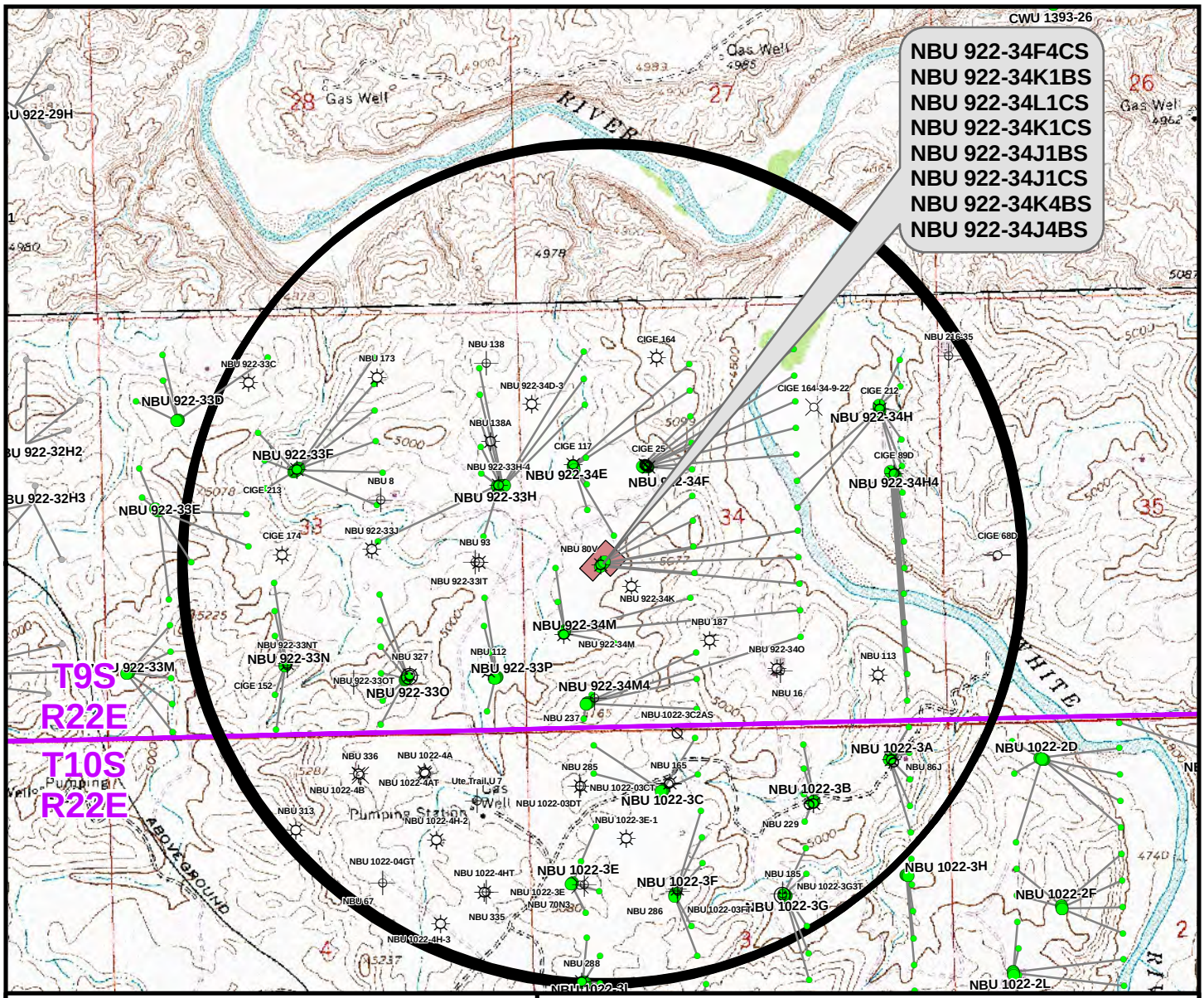
609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO:	
DRAWN: TL	DATE: 5 July 2012	15	
REVISED: TL	DATE: 18 Sept 2012	15 OF 20	

RECEIVED: December 27, 2012

API Well Number: 43047535070000



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 922-34F4CS	CIGE 25	661ft
NBU 922-34K1BS	CIGE 25	873ft
NBU 922-34L1CS	NBU 80V	74ft
NBU 922-34K1CS	NBU 922-34K	929ft
NBU 922-34J1BS	CIGE 89D	1,402ft
NBU 922-34J1CS	NBU 922-34O	1,420ft
NBU 922-34K4BS	NBU 922-34K	810ft
NBU 922-34J4BS	NBU 922-34O	1,097ft

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 922-34L

TOPO C

NBU 922-34F4CS, NBU 922-34K1BS, NBU 922-34L1CS, NBU 922-34K1CS, NBU 922-34J1BS, NBU 922-34J1CS, NBU 922-34K4BS & NBU 922-34J4BS LOCATED IN SECTION 34, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

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Denver, Colorado 80202

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Sheridan, Wyoming 82801
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Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 16
DRAWN: TL	DATE: 18 Sept 2012	16 OF 20
REVISED:	DATE:	

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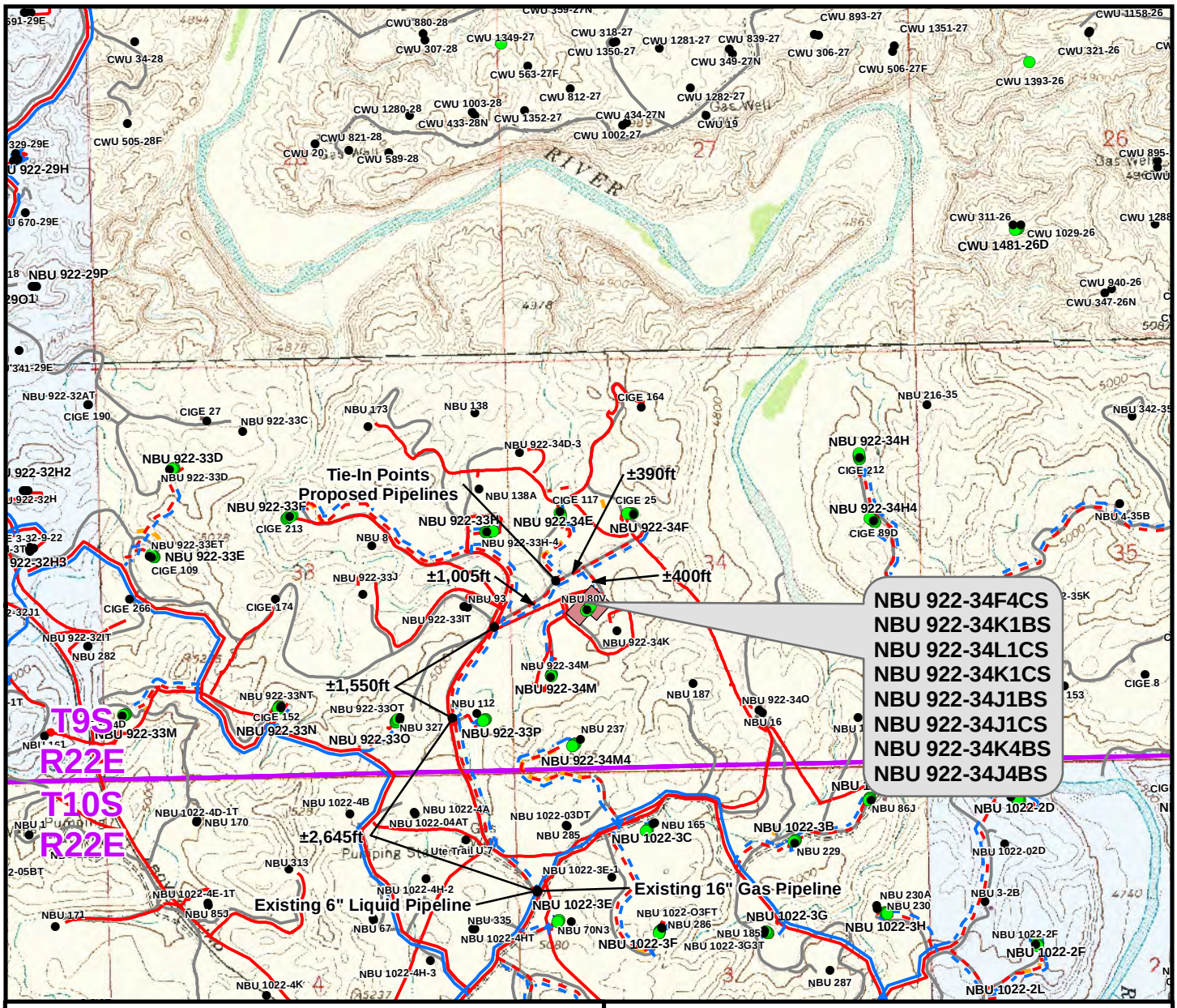
RECEIVED: December 27, 2012

API Well Number: 43047535070000



Proposed Liquid Pipeline	Length
Buried 6"(Max.) (Separator to 34M Intersection)	±235ft
Buried 6"(Max.) (34M Intersection 34F Intersection)	±400ft
Buried 6"(Max.) (34F Intersection to 34E Intersection)	±390ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±1,025ft

Proposed Gas Pipeline	Length
Buried 10" (Meter House to 34M Intersection)	±235ft
Buried 10" (34M Intersection to 34F Intersection)	±400ft
Buried 12" (34F Intersection to 34E Intersection)	±390ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±1,025ft

Legend

- Well - Proposed
- Well - Existing
- Well Pad
- 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 922-34L

TOPO D
NBU 922-34F4CS, NBU 922-34K1BS, NBU 922-34L1CS, NBU 922-34K1CS, NBU 922-34J1BS, NBU 922-34J1CS, NBU 922-34K4BS & NBU 922-34J4BS
LOCATED IN SECTION 34, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

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

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SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 17
DRAWN: TL	DATE: 18 Sept 2012	17 OF 20
REVISED:	DATE:	

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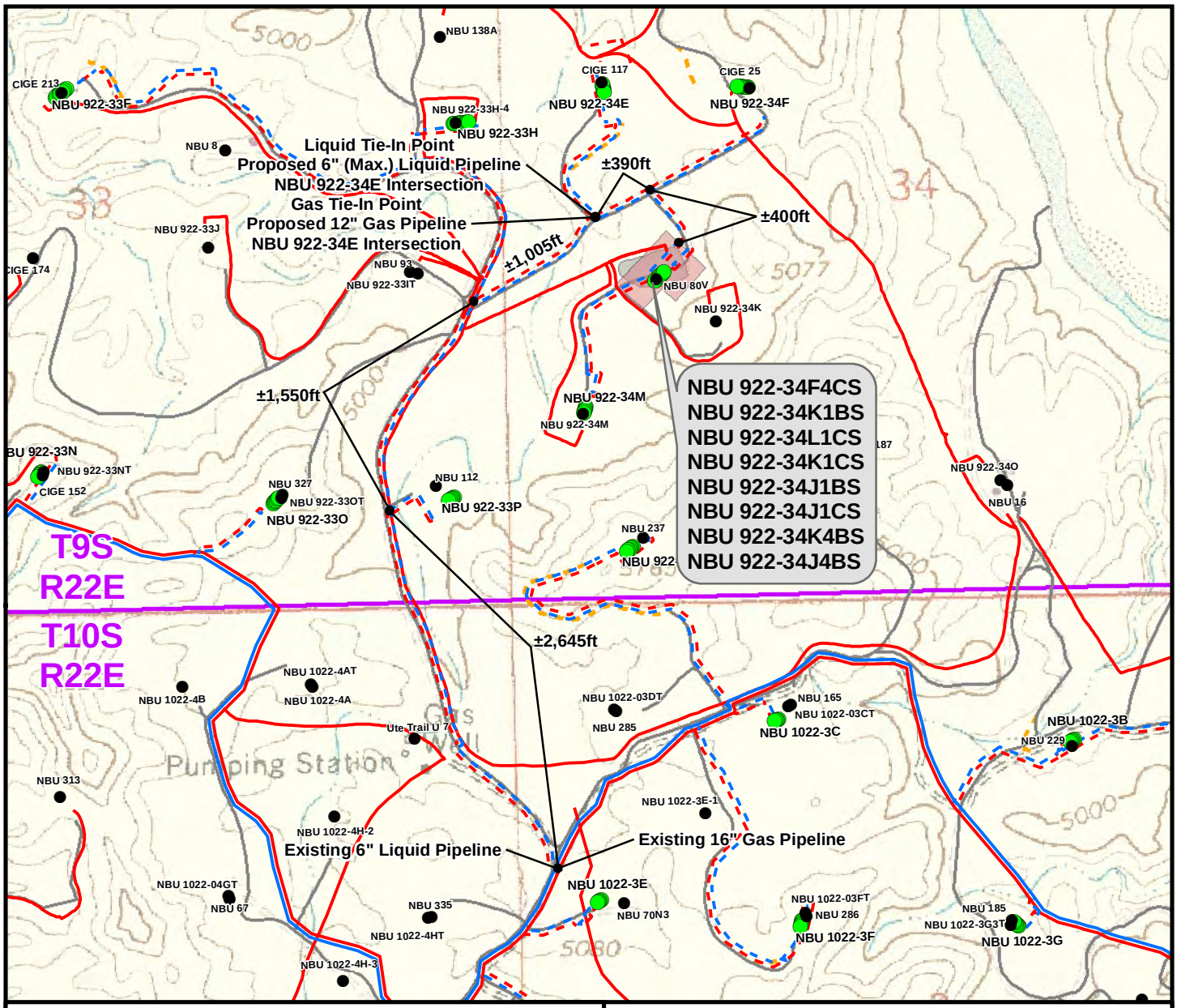
RECEIVED: December 27, 2012



Proposed Liquid Pipeline	Length
Buried 6"(Max.) (Separator to 34M Intersection)	±235ft
Buried 6"(Max.) (34M Intersection 34F Intersection)	±400ft
Buried 6"(Max.) (34F Intersection to 34E Intersection)	±390ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±1,025ft

Proposed Gas Pipeline	Length
Buried 10" (Meter House to 34M Intersection)	±235ft
Buried 10" (34M Intersection to 34F Intersection)	±400ft
Buried 12" (34F Intersection to 34E Intersection)	±390ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±1,025ft

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 922-34L

TOPO D2 (PAD & PIPELINE DETAIL)
NBU 922-34F4CS, NBU 922-34K1BS,
NBU 922-34L1CS, NBU 922-34K1CS,
NBU 922-34J1BS, NBU 922-34J1CS,
NBU 922-34K4BS & NBU 922-34J4BS
LOCATED IN SECTION 34, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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SCALE: 1" = 1,000ft	NAD83 USP Central	SHEET NO:	18
DRAWN: TL	DATE: 5 July 2012		
REVISED: TL	DATE: 18 Sept 2012		18 OF 20

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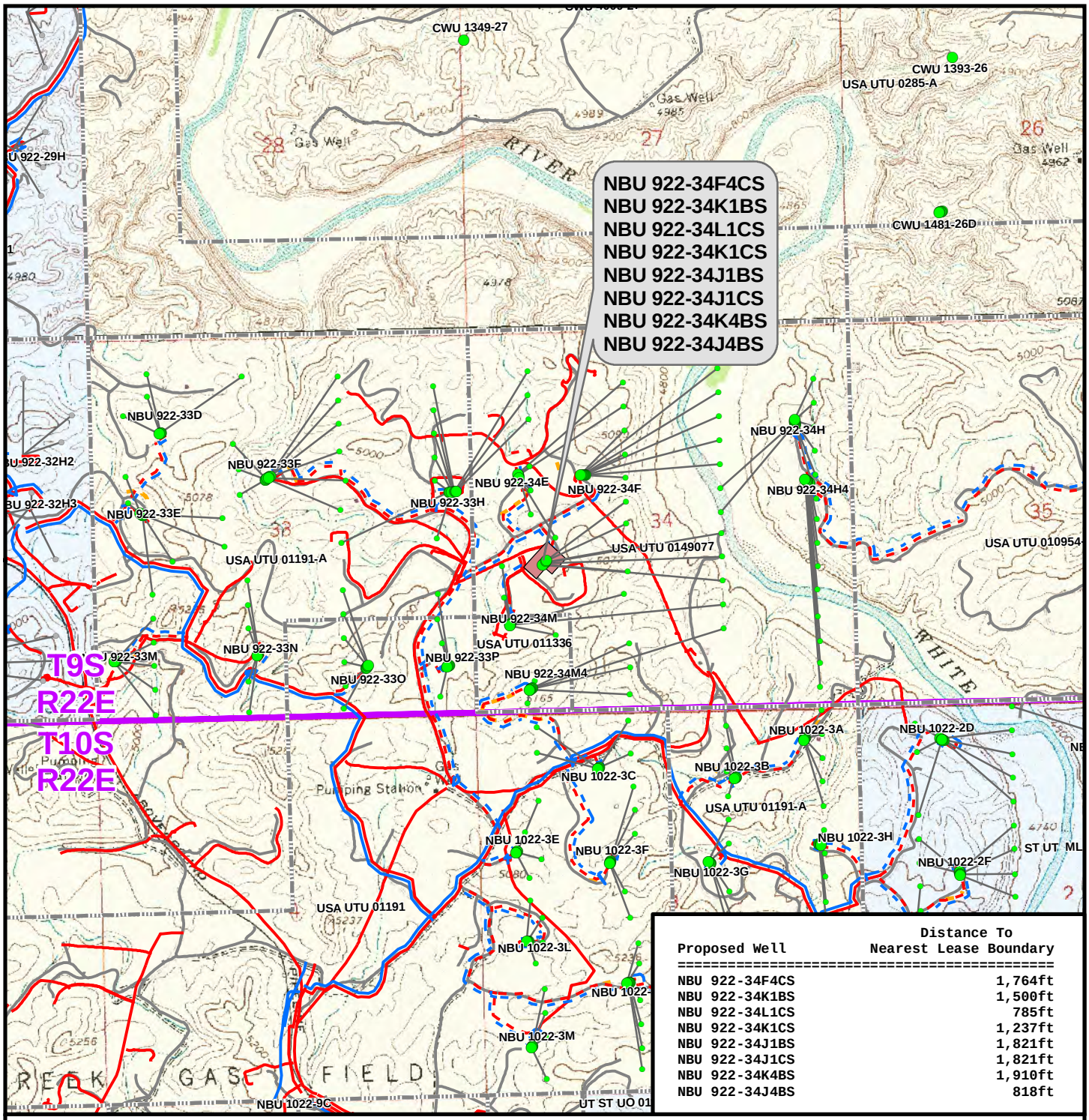
RECEIVED: December 27, 2012

API Well Number: 43047535070000



Proposed Well	Distance To Nearest Lease Boundary
NBU 922-34F4CS	1,764ft
NBU 922-34K1BS	1,500ft
NBU 922-34L1CS	785ft
NBU 922-34K1CS	1,237ft
NBU 922-34J1BS	1,821ft
NBU 922-34J1CS	1,821ft
NBU 922-34K4BS	1,910ft
NBU 922-34J4BS	818ft

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 922-34L

TOPO E
NBU 922-34F4CS, NBU 922-34K1BS, NBU 922-34L1CS, NBU 922-34K1CS, NBU 922-34J1BS, NBU 922-34J1CS, NBU 922-34K4BS & NBU 922-34J4BS
LOCATED IN SECTION 34, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

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1099 18th Street
Denver, Colorado 80202

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

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SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 19
DRAWN: TL	DATE: 18 Sept 2012	19 OF 20
REVISED:	DATE:	

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Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – NBU 922-34L
WELLS – NBU 922-34F4CS, NBU 922-34K1BS,
NBU 922-34L1CS, NBU 922-34K1CS,
NBU 922-34J1BS, NBU 922-34J1CS,
NBU 922-34K4BS & NBU 922-34J4BS
Section 34, T9S, R22E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45; exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 18.7 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the Class D County Road approximately 0.1 miles to a second Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the second Class D County Road approximately 2.6 miles to a third Class D County Road to the east. Exit left and proceed in an easterly, then northeasterly, then southeasterly direction along the third Class D County Road approximately 4.7 miles to a four-way intersection. Proceed through the four-way intersection in a southeasterly direction to a fourth Class D County Road to the northeast. Proceed in a northeasterly direction along the fourth Class D County Road approximately 0.3 miles to a fifth Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the fifth Class D County Road approximately 0.1 miles to the proposed access road to the south. Follow road flags in a southerly direction approximately 50 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 50.0 miles in a southerly direction.

RECEIVED: December 27, 2012

API Well Number: 43047535070000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 922-34L PAD
Well: NBU 922-34J1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 922-34J1CS

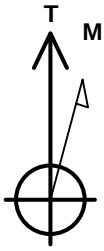
GL 4989 & KB 4 @ 4993.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14526606.17	2079795.98	39.990926	-109.431357

DESIGN TARGET DETAILS

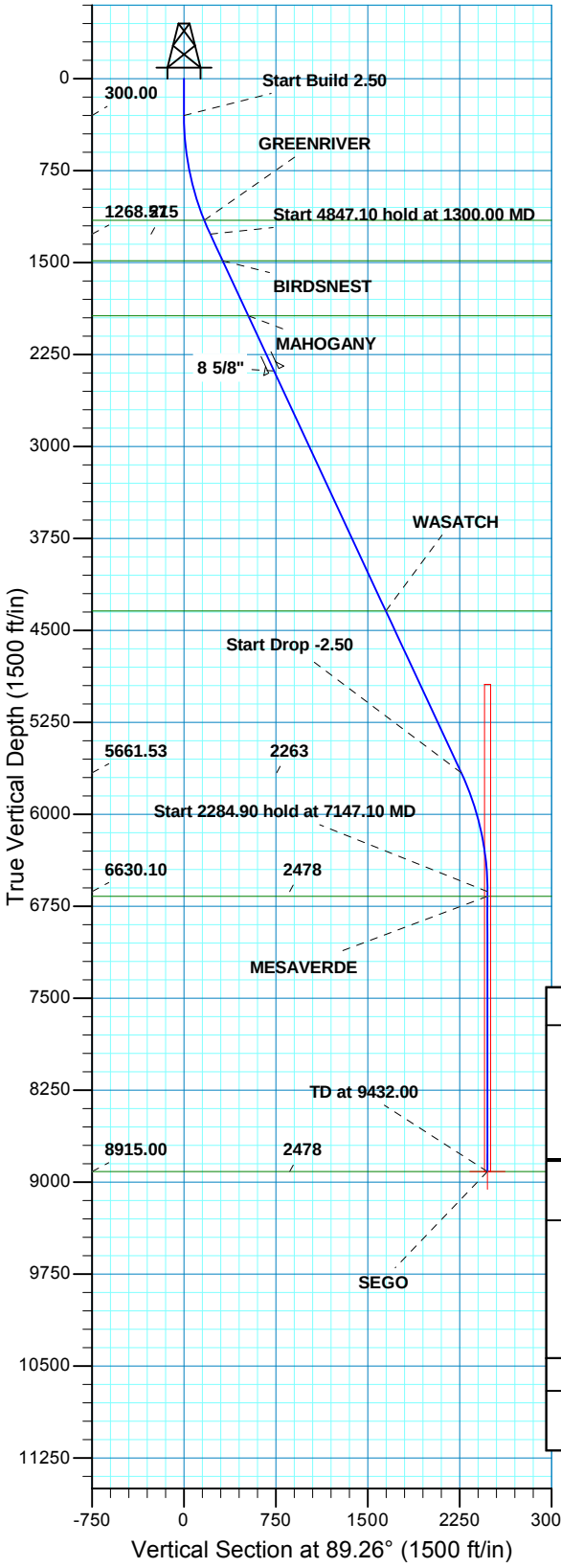
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8915.00	32.17	2477.72	14526681.94	2082272.74	39.991014	-109.422513	Circle (Radius: 25.00)

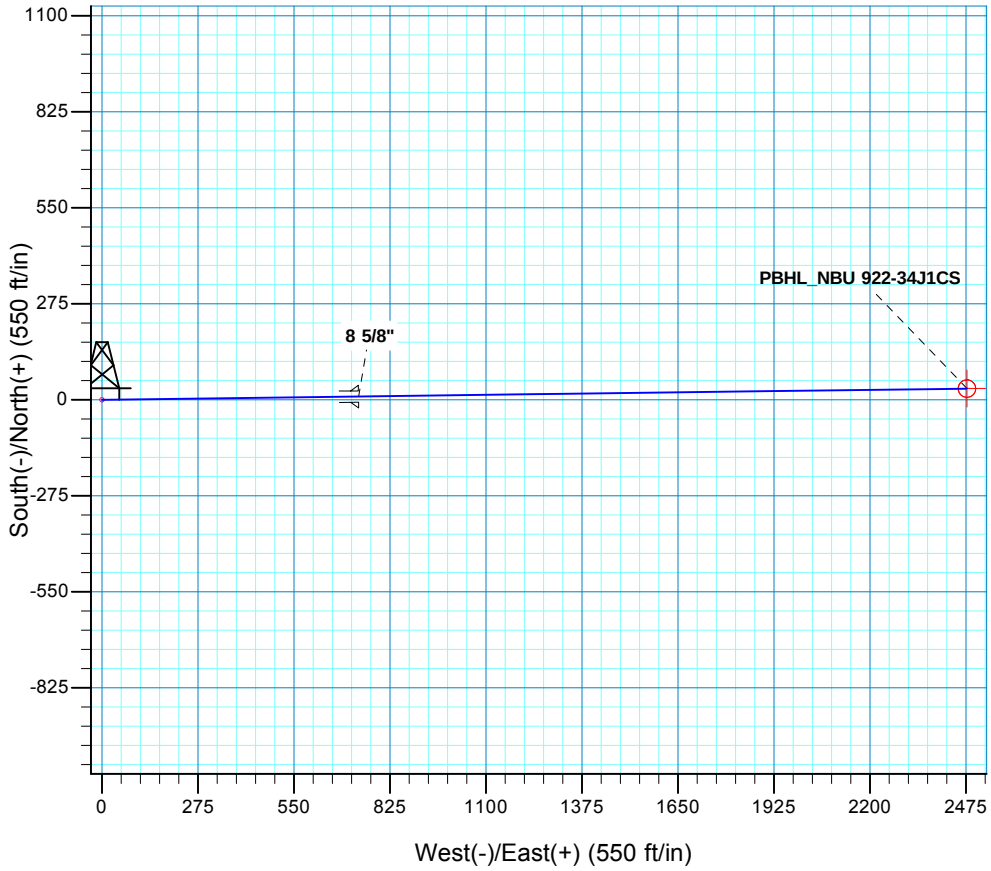
- plan hits target center



Azimuths to True North
Magnetic North: 10.85°

Magnetic Field
Strength: 52184.1snT
Dip Angle: 65.83°
Date: 11/15/2012
Model: IGRF2010





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	25.00	89.26	1268.57	2.79	214.71	2.50	89.26	214.73	
6147.10	25.00	89.26	5661.53	29.38	2263.01	0.00	0.00	2263.20	
7147.10	0.00	0.00	6630.10	32.17	2477.72	2.50	180.00	2477.92	
9432.00	0.00	0.00	8915.00	32.17	2477.72	0.00	0.00	2477.92	PBHL_NBU 922-34J1CS

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 34 T9S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1156.00	1177.27	GREENRIVER
1485.00	1538.80	BIRDSNEST
1934.00	2034.22	MAHOGANY
4341.00	4690.05	WASATCH
6670.00	7187.00	MESAVERDE
8915.00	9432.00	SEGO

CASING DETAILS

TVD	MD	Name	Size
2384.00	2530.74	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 922-34J1CS/OH)

Created By: RobertScott Date: 13:47, November 26 2012

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API Well Number: 43047535070000

Scientific Drilling

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N
NBU 922-34L PAD
NBU 922-34J1CS

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

26 November, 2012

Anadarko Petroleum Corporation

RECEIVED: December 27, 2012

Scientific Drilling

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-34J1CS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 4989 & KB 4 @ 4993.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 4989 & KB 4 @ 4993.00ft (ASSUMED)
Site:	NBU 922-34L PAD	**North Reference:**	True
Well:	NBU 922-34J1CS	**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 922-34L PAD, SECTION 34 T9S R22E

Site Position:		**Northing:**	14,526,606.18 usft	**Latitude:**	39.990926
From:	Lat/Long	**Easting:**	2,079,795.97 usft	**Longitude:**	-109.431357
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	1.01 °

Well NBU 922-34J1CS, 2050 FSL 991 FWL

Well Position	**+N/-S**	0.00 ft	**Northing:**	14,526,606.18 usft	**Latitude:**	39.990926
	+E/-W	0.00 ft	**Easting:**	2,079,795.97 usft	**Longitude:**	-109.431357
Position Uncertainty		0.00 ft	**Wellhead Elevation:**		**Ground Level:**	4,989.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/15/12	10.85	65.83	52,184

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	89.26

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	25.00	89.26	1,268.57	2.79	214.71	2.50	2.50	0.00	89.26	
6,147.10	25.00	89.26	5,661.53	29.38	2,263.01	0.00	0.00	0.00	0.00	
7,147.10	0.00	0.00	6,630.10	32.17	2,477.72	2.50	-2.50	0.00	180.00	
9,432.00	0.00	0.00	8,915.00	32.17	2,477.72	0.00	0.00	0.00	0.00	PBHL_NBU 922-34J1

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Scientific Drilling

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-34J1CS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 4989 & KB 4 @ 4993.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 4989 & KB 4 @ 4993.00ft (ASSUMED)
Site:	NBU 922-34L PAD	**North Reference:**	True
Well:	NBU 922-34J1CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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 2.50									
400.00	2.50	89.26	399.97	0.03	2.18	2.18	2.50	2.50	0.00
500.00	5.00	89.26	499.75	0.11	8.72	8.72	2.50	2.50	0.00
600.00	7.50	89.26	599.14	0.25	19.61	19.61	2.50	2.50	0.00
700.00	10.00	89.26	697.97	0.45	34.82	34.82	2.50	2.50	0.00
800.00	12.50	89.26	796.04	0.71	54.32	54.33	2.50	2.50	0.00
900.00	15.00	89.26	893.17	1.01	78.09	78.09	2.50	2.50	0.00
1,000.00	17.50	89.26	989.17	1.38	106.06	106.07	2.50	2.50	0.00
1,100.00	20.00	89.26	1,083.85	1.79	138.20	138.21	2.50	2.50	0.00
1,177.27	21.93	89.26	1,156.00	2.15	165.85	165.86	2.50	2.50	0.00
GREENRIVER									
1,200.00	22.50	89.26	1,177.05	2.26	174.44	174.46	2.50	2.50	0.00
1,300.00	25.00	89.26	1,268.57	2.79	214.71	214.73	2.50	2.50	0.00
Start 4847.10 hold at 1300.00 MD									
1,400.00	25.00	89.26	1,359.20	3.34	256.97	256.99	0.00	0.00	0.00
1,500.00	25.00	89.26	1,449.83	3.89	299.23	299.25	0.00	0.00	0.00
1,538.80	25.00	89.26	1,485.00	4.10	315.62	315.65	0.00	0.00	0.00
BIRDSNEST									
1,600.00	25.00	89.26	1,540.46	4.43	341.48	341.51	0.00	0.00	0.00
1,700.00	25.00	89.26	1,631.09	4.98	383.74	383.77	0.00	0.00	0.00
1,800.00	25.00	89.26	1,721.72	5.53	426.00	426.04	0.00	0.00	0.00
1,900.00	25.00	89.26	1,812.35	6.08	468.26	468.30	0.00	0.00	0.00
2,000.00	25.00	89.26	1,902.99	6.63	510.52	510.56	0.00	0.00	0.00
2,034.22	25.00	89.26	1,934.00	6.82	524.98	525.02	0.00	0.00	0.00
MAHOGANY									
2,100.00	25.00	89.26	1,993.62	7.18	552.77	552.82	0.00	0.00	0.00
2,200.00	25.00	89.26	2,084.25	7.73	595.03	595.08	0.00	0.00	0.00
2,300.00	25.00	89.26	2,174.88	8.27	637.29	637.35	0.00	0.00	0.00
2,400.00	25.00	89.26	2,265.51	8.82	679.55	679.61	0.00	0.00	0.00
2,500.00	25.00	89.26	2,356.14	9.37	721.81	721.87	0.00	0.00	0.00
2,530.74	25.00	89.26	2,384.00	9.54	734.80	734.86	0.00	0.00	0.00
8 5/8"									
2,600.00	25.00	89.26	2,446.77	9.92	764.07	764.13	0.00	0.00	0.00
2,700.00	25.00	89.26	2,537.40	10.47	806.32	806.39	0.00	0.00	0.00
2,800.00	25.00	89.26	2,628.03	11.02	848.58	848.65	0.00	0.00	0.00
2,900.00	25.00	89.26	2,718.66	11.57	890.84	890.92	0.00	0.00	0.00
3,000.00	25.00	89.26	2,809.29	12.12	933.10	933.18	0.00	0.00	0.00
3,100.00	25.00	89.26	2,899.92	12.66	975.36	975.44	0.00	0.00	0.00
3,200.00	25.00	89.26	2,990.55	13.21	1,017.62	1,017.70	0.00	0.00	0.00
3,300.00	25.00	89.26	3,081.19	13.76	1,059.87	1,059.96	0.00	0.00	0.00
3,400.00	25.00	89.26	3,171.82	14.31	1,102.13	1,102.23	0.00	0.00	0.00
3,500.00	25.00	89.26	3,262.45	14.86	1,144.39	1,144.49	0.00	0.00	0.00
3,600.00	25.00	89.26	3,353.08	15.41	1,186.65	1,186.75	0.00	0.00	0.00
3,700.00	25.00	89.26	3,443.71	15.96	1,228.91	1,229.01	0.00	0.00	0.00
3,800.00	25.00	89.26	3,534.34	16.51	1,271.17	1,271.27	0.00	0.00	0.00
3,900.00	25.00	89.26	3,624.97	17.05	1,313.42	1,313.53	0.00	0.00	0.00
4,000.00	25.00	89.26	3,715.60	17.60	1,355.68	1,355.80	0.00	0.00	0.00
4,100.00	25.00	89.26	3,806.23	18.15	1,397.94	1,398.06	0.00	0.00	0.00
4,200.00	25.00	89.26	3,896.86	18.70	1,440.20	1,440.32	0.00	0.00	0.00

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Scientific Drilling

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-34J1CS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 4989 & KB 4 @ 4993.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 4989 & KB 4 @ 4993.00ft (ASSUMED)
Site:	NBU 922-34L PAD	**North Reference:**	True
Well:	NBU 922-34J1CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,300.00	25.00	89.26	3,987.49	19.25	1,482.46	1,482.58	0.00	0.00	0.00
4,400.00	25.00	89.26	4,078.12	19.80	1,524.71	1,524.84	0.00	0.00	0.00
4,500.00	25.00	89.26	4,168.75	20.35	1,566.97	1,567.11	0.00	0.00	0.00
4,600.00	25.00	89.26	4,259.39	20.89	1,609.23	1,609.37	0.00	0.00	0.00
4,690.05	25.00	89.26	4,341.00	21.39	1,647.29	1,647.42	0.00	0.00	0.00
WASATCH									
4,700.00	25.00	89.26	4,350.02	21.44	1,651.49	1,651.63	0.00	0.00	0.00
4,800.00	25.00	89.26	4,440.65	21.99	1,693.75	1,693.89	0.00	0.00	0.00
4,900.00	25.00	89.26	4,531.28	22.54	1,736.01	1,736.15	0.00	0.00	0.00
5,000.00	25.00	89.26	4,621.91	23.09	1,778.26	1,778.41	0.00	0.00	0.00
5,100.00	25.00	89.26	4,712.54	23.64	1,820.52	1,820.68	0.00	0.00	0.00
5,200.00	25.00	89.26	4,803.17	24.19	1,862.78	1,862.94	0.00	0.00	0.00
5,300.00	25.00	89.26	4,893.80	24.74	1,905.04	1,905.20	0.00	0.00	0.00
5,400.00	25.00	89.26	4,984.43	25.28	1,947.30	1,947.46	0.00	0.00	0.00
5,500.00	25.00	89.26	5,075.06	25.83	1,989.56	1,989.72	0.00	0.00	0.00
5,600.00	25.00	89.26	5,165.69	26.38	2,031.81	2,031.99	0.00	0.00	0.00
5,700.00	25.00	89.26	5,256.32	26.93	2,074.07	2,074.25	0.00	0.00	0.00
5,800.00	25.00	89.26	5,346.95	27.48	2,116.33	2,116.51	0.00	0.00	0.00
5,900.00	25.00	89.26	5,437.59	28.03	2,158.59	2,158.77	0.00	0.00	0.00
6,000.00	25.00	89.26	5,528.22	28.58	2,200.85	2,201.03	0.00	0.00	0.00
6,100.00	25.00	89.26	5,618.85	29.13	2,243.11	2,243.29	0.00	0.00	0.00
6,147.10	25.00	89.26	5,661.53	29.38	2,263.01	2,263.20	0.00	0.00	0.00
Start Drop -2.50									
6,200.00	23.68	89.26	5,709.73	29.67	2,284.81	2,285.00	2.50	-2.50	0.00
6,300.00	21.18	89.26	5,802.16	30.16	2,322.95	2,323.15	2.50	-2.50	0.00
6,400.00	18.68	89.26	5,896.17	30.60	2,357.03	2,357.23	2.50	-2.50	0.00
6,500.00	16.18	89.26	5,991.57	30.99	2,386.98	2,387.18	2.50	-2.50	0.00
6,600.00	13.68	89.26	6,088.19	31.33	2,412.73	2,412.93	2.50	-2.50	0.00
6,700.00	11.18	89.26	6,185.83	31.61	2,434.25	2,434.45	2.50	-2.50	0.00
6,800.00	8.68	89.26	6,284.33	31.83	2,451.48	2,451.69	2.50	-2.50	0.00
6,900.00	6.18	89.26	6,383.48	32.00	2,464.41	2,464.62	2.50	-2.50	0.00
7,000.00	3.68	89.26	6,483.11	32.11	2,473.00	2,473.21	2.50	-2.50	0.00
7,100.00	1.18	89.26	6,583.01	32.17	2,477.23	2,477.44	2.50	-2.50	0.00
7,147.10	0.00	0.00	6,630.10	32.17	2,477.72	2,477.92	2.50	-2.50	0.00
Start 2284.90 hold at 7147.10 MD									
7,187.00	0.00	0.00	6,670.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
MESAVERDE									
7,200.00	0.00	0.00	6,683.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
7,300.00	0.00	0.00	6,783.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
7,400.00	0.00	0.00	6,883.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
7,500.00	0.00	0.00	6,983.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
7,600.00	0.00	0.00	7,083.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
7,700.00	0.00	0.00	7,183.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
7,800.00	0.00	0.00	7,283.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
7,900.00	0.00	0.00	7,383.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
8,000.00	0.00	0.00	7,483.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
8,100.00	0.00	0.00	7,583.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
8,200.00	0.00	0.00	7,683.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
8,300.00	0.00	0.00	7,783.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
8,400.00	0.00	0.00	7,883.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
8,500.00	0.00	0.00	7,983.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
8,600.00	0.00	0.00	8,083.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
8,700.00	0.00	0.00	8,183.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00

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Scientific Drilling

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-34J1CS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 4989 & KB 4 @ 4993.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 4989 & KB 4 @ 4993.00ft (ASSUMED)
Site:	NBU 922-34L PAD	**North Reference:**	True
Well:	NBU 922-34J1CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,800.00	0.00	0.00	8,283.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
8,900.00	0.00	0.00	8,383.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
9,000.00	0.00	0.00	8,483.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
9,100.00	0.00	0.00	8,583.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
9,200.00	0.00	0.00	8,683.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
9,300.00	0.00	0.00	8,783.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
9,400.00	0.00	0.00	8,883.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
9,432.00	0.00	0.00	8,915.00	32.17	2,477.72	2,477.92	0.00	0.00	0.00
SEGO - PBHL_NBU 922-34J1CS									

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
PBHL_NBU 922-34J1CS - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,915.00	32.17	2,477.72	14,526,681.95	2,082,272.74	39.991014	-109.422513

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,530.74	2,384.00	8 5/8"	8.625	11.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,177.27	1,156.00	GREENRIVER			
1,538.80	1,485.00	BIRDSNEST			
2,034.22	1,934.00	MAHOGANY			
4,690.05	4,341.00	WASATCH			
7,187.00	6,670.00	MESAVERDE			
9,432.00	8,915.00	SEGO			

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 2.50
1,300.00	1,268.57	2.79	214.71	Start 4847.10 hold at 1300.00 MD
6,147.10	5,661.53	29.38	2,263.01	Start Drop -2.50
7,147.10	6,630.10	32.17	2,477.72	Start 2284.90 hold at 7147.10 MD
9,432.00	8,915.00	32.17	2,477.72	TD at 9432.00

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

NBU 922-34L PAD

API #		NBU 922-34F4CS	
	Surface:	2085 FSL / 1026 FWL	NWSW
	BHL:	2408 FNL / 2151 FWL	SENW

API #		NBU 922-34J1BS	
	Surface:	2057 FSL / 998 FWL	NWSW
	BHL:	2414 FSL / 1821 FEL	NWSE

API #		NBU 922-34J1CS	
	Surface:	2050 FSL / 991 FWL	NWSW
	BHL:	2082 FSL / 1821 FEL	NWSE

API #		NBU 922-34J4BS	
	Surface:	2028 FSL / 970 FWL	NWSW
	BHL:	1749 FSL / 1822 FEL	NWSE

API #		NBU 922-34K1BS	
	Surface:	2078 FSL / 1019 FWL	NWSW
	BHL:	2574 FSL / 2152 FWL	NESW

API #		NBU 922-34K1CS	
	Surface:	2064 FSL / 1005 FWL	NWSW
	BHL:	2242 FSL / 2152 FWL	NESW

API #		NBU 922-34K4BS	
	Surface:	2035 FSL / 977 FWL	NWSW
	BHL:	1910 FSL / 2152 FWL	NESW

API #		NBU 922-34L1CS	
	Surface:	2071 FSL / 1012 FWL	NWSW
	BHL:	2107 FSL / 1021 FWL	NWSW

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

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

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An on-site meeting was held on August 16-17, 2012. Present were:

- Dave Gordon, Tyler Cox, Aaron Roe and Brian Barnett - BLM;
- Jessi Brunson - USFWS;
- Bill Knapp - ICF Consulting;
- Jacob Dunham - 609 Consulting;
- Mitch Batty - Timberline Engineering & Land Surveying, Inc.; and
- Gina Becker, Charles Chase, Lindsey Frazier, Doyle Holmes, Randy Townley and Casey McKee- Kerr-McGee

A. Existing Roads:

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

Please refer to Topo B for existing roads.

B. New or Reconstructed Access Roads:

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

The following segments are "on-lease"

±50' (0.01 miles) – Section 34 T9S R22E (NW/4 SW/4) – On-lease UTU-0149077, from the edge of pad to the T-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 October 31, 2012.

This pad will expand the existing pad for the NBU 80V, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on of pad November 20, 2012. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

GAS GATHERING

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

The total gas gathering pipeline distance from the meter to the tie in point is ±6,225' and the individual segments are broken up as follows:

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

±235' (0.04 miles) – Section 34 T9S R22E (NW/4 SW/4) – On-lease UTU-0149077, BLM surface, New 10" buried gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

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±400’ (0.1 miles) – Section 34 T9S R22E (NW/4 SW/4) – On-lease UTU-0149077, BLM surface, New 10" buried gas gathering pipeline from the edge of the pad to tie-in to the proposed buried 12" gas gathering pipeline at the NBU 922-34F Pad intersection . This pipeline will be used concurrently with the NBU 922-34M Pad. Please refer to Exhibit A, Line 13.

±1,395’ (0.3 miles) – Section 34 T9S R22E (NW/4 SW/4) – On-lease UTU-0149077 and UTU-01191-A, BLM surface, New 12" buried gas gathering pipeline from the NBU 922-34F Pad pipeline intersection to tie-in to the proposed buried 16" gas gathering pipeline at the NBU 922-33H Pad intersection. This pipeline will be used concurrently with the NBU 922-34E, NBU 922-34F and NBU 922-34M Pads. Please refer to Exhibit A, Lines 12 and 11.

The following segments require a ROW. Anadarko Uintah Midstream (AUM) will apply for an SF-299/POD under separate cover. Listed below is the gas gathering pipeline distances:

±4,195’ (0.8 miles) – Section 33 T9S R22E and Section 3 and 4 T10S R22E – On-lease UTU 01191-A and UTU 01191, BLM surface, New 16" buried gas gathering pipeline from the NBU 922-33H Pad pipeline intersection to the existing 16" buried gas pipeline in 1022-3 at the NBU 1022-3E Pad intersection. Please refer to Exhibit A- Line 10.

LIQUID GATHERING

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

The total liquid gathering pipeline distance from the separator to the tie in point is ±6,225’ and the individual segments are broken up as follows:

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

±235’ (0.04 miles) – Section 34 T9S R22E (NW/4 SW/4) – On-lease UTU-0149077, BLM surface, New 6” buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

±400’ (0.1 miles) – Section 34 T9S R22E (NW/4 SW/4) – On-lease UTU-0149077, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad to tie-in to the proposed buried 6" liquid gathering pipeline at the NBU 922-34F Pad intersection . This pipeline will be used concurrently with the NBU 922-34M Pad. Please refer to Exhibit B, Line 13.

±1,395’ (0.3 miles) – Section 34 T9S R22E (NW/4 SW/4) – On-lease UTU-0149077 and UTU-01191-A, BLM surface, New 6" buried liquid gathering pipeline from the NBU 922-34F Pad pipeline intersection to tie-in to the proposed buried 6" liquid gathering pipeline at the NBU 922-33H Pad intersection. This pipeline will be used concurrently with the NBU 922-34E, NBU 922-34F and NBU 922-34M Pads. Please refer to Exhibit B, Lines 12 and 11.

±4,195’ (0.8 miles) – Section 33 T9S R22E and Section 3 and 4 T10S R22E – On-lease UTU 01191-A and UTU 01191, BLM surface, New 6" buried liquid gathering pipeline from the NBU 922-33H Pad pipeline intersection to the existing 6" buried liquid pipeline in 1022-3 at the NBU 1022-3E Pad intersection. This pipeline will be used concurrently with the NBU 922-33F, NBU 922-33H, NBU 922-34E, NBU 922-34F, NBU 922-34M and NBU 922-33P Pads. Please refer to Exhibit B, Line 10.

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Pipeline Gathering Construction

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

The Anadarko Completions Transportation System (ACTS) information:

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

Please refer to Exhibit C for ACTS Lines

E. Location and Types of Water Supply:

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

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

F. Construction Materials:

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

G. Methods for Handling Waste:

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

Materials Management

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

H. Ancillary Facilities:

No additional ancillary facilities are planned for this location.

I. Well Site Layout:

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

J. Plans for Surface Reclamation:

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

Interim Reclamation

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

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Final Reclamation

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

Measures Common to Interim and Final Reclamation

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

Weed Control

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

Monitoring

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

K. Surface/Mineral Ownership:

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

L. Other Information:

Cultural and Paleontological Resources

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

Resource Reports:

A Class I literature survey was completed on September 21, 2012 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC-12-264.

A paleontological reconnaissance survey was completed on September 20, 2012 by SWCA Environmental Consultants. For additional details please refer to report SWCA-UT12-14314-178.

Biological field survey was completed on August 25, 2012 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-845.

Proposed Action Annual Emissions Tables:

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

RECEIVED: December 27, 2012

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

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

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

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

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

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

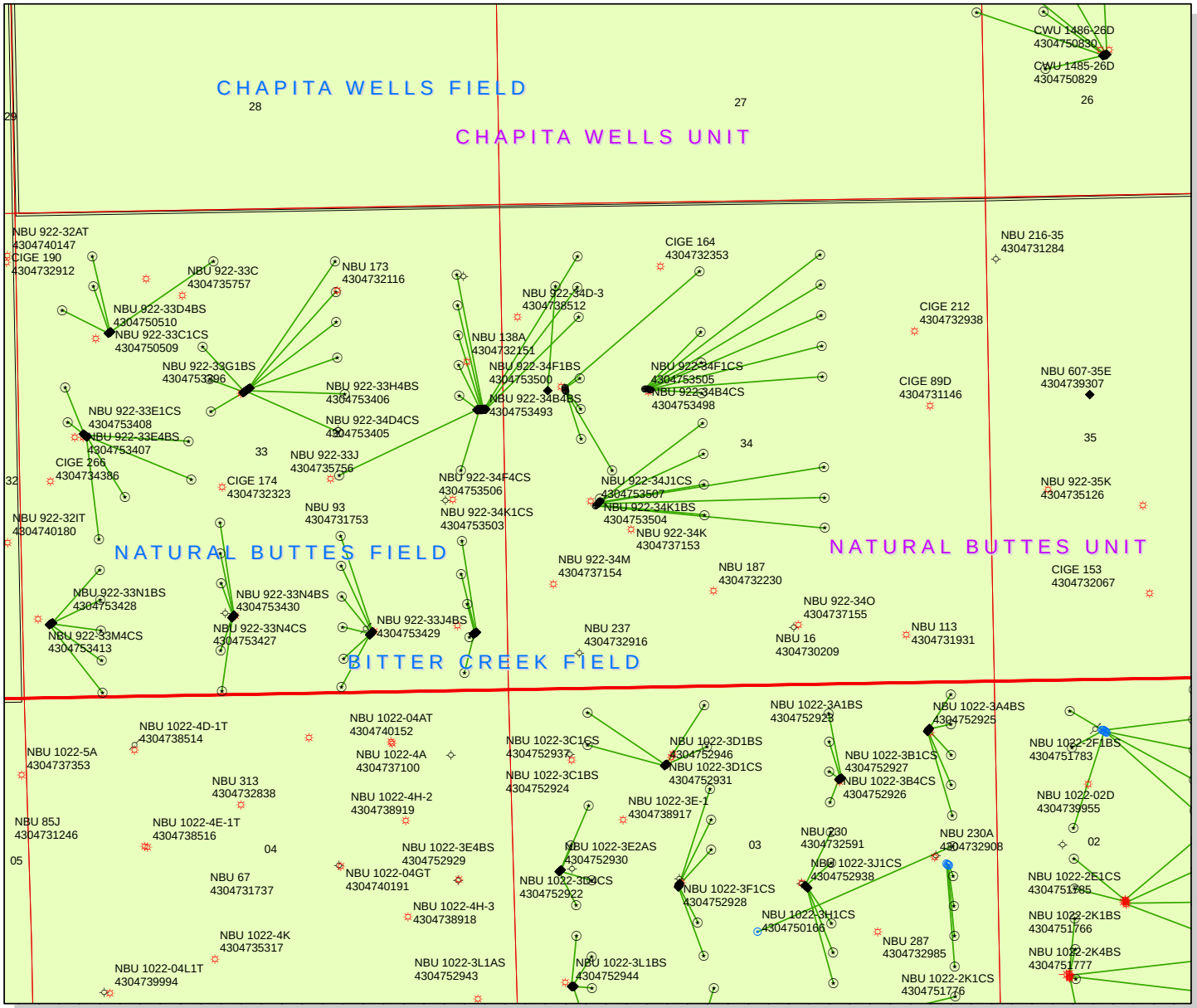
Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

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

Gina T.Becker

November 20, 2012
Date

API Well Number: 43047535070000



API Number: 4304753507

Well Name: NBU 922-34J1CS

Township T09.0S Range R22.0E Section 34

Meridian: SLBM

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

Map Prepared:
Map Produced by Diana Mason

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

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
- Bottom Hole Location - OilGasDb

1,400 700 0 1,400 Feet

1:13,484

RECEIVED: January 04, 2013

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:
3160
(UT-922)

January 15, 2013

Memorandum

To: Assistant Field Office Manager Minerals, Vernal Field Office

From: Michael Coulthard, Petroleum Engineer

Subject: 2013 Plan of Development Natural Buttes Unit Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2013 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
NBU 921-17C PAD		
43-047-53476	NBU 921-17C4CS	Sec 17 T09S R21E 0629 FNL 2001 FWL
		BHL Sec 17 T09S R21E 1074 FNL 2155 FWL
43-047-53483	NBU 921-17F1BS	Sec 17 T09S R21E 0634 FNL 1993 FWL
		BHL Sec 17 T09S R21E 1405 FNL 2154 FWL
NBU 921-17D PAD		
43-047-53477	NBU 921-17E4BS	Sec 17 T09S R21E 0953 FNL 0416 FWL
		BHL Sec 17 T09S R21E 2231 FNL 0825 FWL
43-047-53478	NBU 921-17E1CS	Sec 17 T09S R21E 0959 FNL 0424 FWL
		BHL Sec 17 T09S R21E 1901 FNL 0825 FWL
43-047-53479	NBU 921-17E1BS	Sec 17 T09S R21E 0965 FNL 0432 FWL
		BHL Sec 17 T09S R21E 1570 FNL 0826 FWL
43-047-53480	NBU 921-17D4BS	Sec 17 T09S R21E 0982 FNL 0457 FWL
		BHL Sec 17 T09S R21E 0909 FNL 0827 FWL
43-047-53481	NBU 921-17D1CS	Sec 17 T09S R21E 0976 FNL 0449 FWL
		BHL Sec 17 T09S R21E 0578 FNL 0827 FWL
43-047-53482	NBU 921-17D1BS	Sec 17 T09S R21E 0970 FNL 0440 FWL
		BHL Sec 17 T09S R21E 0148 FNL 0834 FWL
NBU 922-34F PAD		
43-047-53484	NBU 922-34G1CS	Sec 34 T09S R22E 2030 FNL 1588 FWL
		BHL Sec 34 T09S R22E 1913 FNL 1820 FEL
43-047-53485	NBU 922-34G1BS	Sec 34 T09S R22E 2029 FNL 1578 FWL
		BHL Sec 34 T09S R22E 1580 FNL 1820 FEL
43-047-53486	NBU 922-34F4BS	Sec 34 T09S R22E 2032 FNL 1598 FWL
		BHL Sec 34 T09S R22E 2076 FNL 2151 FWL

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API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-53492	NBU 922-34B1CS	Sec 34 T09S R22E 2023 FNL 1539 FWL
		BHL Sec 34 T09S R22E 0581 FNL 1820 FEL
43-047-53493	NBU 922-34B4BS	Sec 34 T09S R22E 2024 FNL 1549 FWL
		BHL Sec 34 T09S R22E 0914 FNL 1820 FEL
43-047-53498	NBU 922-34B4CS	Sec 34 T09S R22E 2027 FNL 1568 FWL
		BHL Sec 34 T09S R22E 1247 FNL 1820 FEL
43-047-53500	NBU 922-34F1BS	Sec 34 T09S R22E 2021 FNL 1529 FWL
		BHL Sec 34 T09S R22E 1412 FNL 2151 FWL
43-047-53505	NBU 922-34F1CS	Sec 34 T09S R22E 2026 FNL 1559 FWL
		BHL Sec 34 T09S R22E 1744 FNL 2151 FWL
NBU 922-34E PAD		
43-047-53487	NBU 922-34C4BS	Sec 34 T09S R22E 1991 FNL 0662 FWL
		BHL Sec 34 T09S R22E 0747 FNL 2150 FWL
43-047-53488	NBU 922-34E1CS	Sec 34 T09S R22E 2001 FNL 0663 FWL
		BHL Sec 34 T09S R22E 1896 FNL 0825 FWL
43-047-53489	NBU 922-34E4BS	Sec 34 T09S R22E 2021 FNL 0666 FWL
		BHL Sec 34 T09S R22E 2228 FNL 0825 FWL
43-047-53490	NBU 922-34E4CS	Sec 34 T09S R22E 2040 FNL 0670 FWL
		BHL Sec 34 T09S R22E 2559 FNL 0825 FWL
43-047-53491	NBU 922-34L1AS	Sec 34 T09S R22E 2030 FNL 0668 FWL
		BHL Sec 34 T09S R22E 2406 FSL 1156 FWL
NBU 922-34L PAD		
43-047-53497	NBU 922-34L1CS	Sec 34 T09S R22E 2071 FSL 1012 FWL
		BHL Sec 34 T09S R22E 2107 FSL 1021 FWL
43-047-53499	NBU 922-34K4BS	Sec 34 T09S R22E 2035 FSL 0977 FWL
		BHL Sec 34 T09S R22E 1910 FSL 2152 FWL
43-047-53501	NBU 922-34J1BS	Sec 34 T09S R22E 2057 FSL 0998 FWL
		BHL Sec 34 T09S R22E 2414 FSL 1821 FEL
43-047-53502	NBU 922-34J4BS	Sec 34 T09S R22E 2028 FSL 0970 FWL
		BHL Sec 34 T09S R22E 1749 FSL 1822 FEL
43-047-53503	NBU 922-34K1CS	Sec 34 T09S R22E 2064 FSL 1005 FWL
		BHL Sec 34 T09S R22E 2242 FSL 2152 FWL
43-047-53504	NBU 922-34K1BS	Sec 34 T09S R22E 2078 FSL 1019 FWL
		BHL Sec 34 T09S R22E 2574 FSL 2152 FWL
43-047-53506	NBU 922-34F4CS	Sec 34 T09S R22E 2085 FSL 1026 FWL
		BHL Sec 34 T09S R22E 2408 FNL 2151 FWL
43-047-53507	NBU 922-34J1CS	Sec 34 T09S R22E 2050 FSL 0991 FWL
		BHL Sec 34 T09S R22E 2082 FSL 1821 FEL
NBU 922-34M PAD		
43-047-53508	NBU 922-34J4CS	Sec 34 T09S R22E 1203 FSL 0497 FWL
		BHL Sec 34 T09S R22E 1416 FSL 1822 FEL
43-047-53509	NBU 922-34K4CS	Sec 34 T09S R22E 1213 FSL 0499 FWL
		BHL Sec 34 T09S R22E 1597 FSL 2094 FWL
43-047-53510	NBU 922-34L2DS	Sec 34 T09S R22E 1232 FSL 0505 FWL
		BHL Sec 34 T09S R22E 2021 FSL 0407 FWL
43-047-53511	NBU 922-34L3DS	Sec 34 T09S R22E 1222 FSL 0502 FWL
		BHL Sec 34 T09S R22E 1587 FSL 0428 FWL

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API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-53512	NBU 922-34M1BS	Sec 34 T09S R22E 1194 FSL 0493 FWL
		BHL Sec 34 T09S R22E 1054 FSL 1135 FWL
NBU 922-34M4 PAD		
43-047-53513	NBU 922-34M4BS	Sec 34 T09S R22E 0325 FSL 0787 FWL
		BHL Sec 34 T09S R22E 0415 FSL 0826 FWL
43-047-53514	NBU 922-34M4CS	Sec 34 T09S R22E 0295 FSL 0747 FWL
		BHL Sec 34 T09S R22E 0115 FSL 0716 FWL
43-047-53515	NBU 922-34N1CS	Sec 34 T09S R22E 0319 FSL 0779 FWL
		BHL Sec 34 T09S R22E 0913 FSL 2153 FWL
43-047-53516	NBU 922-34N4BS	Sec 34 T09S R22E 0307 FSL 0763 FWL
		BHL Sec 34 T09S R22E 0581 FSL 2153 FWL
43-047-53517	NBU 922-34N4CS	Sec 34 T09S R22E 0301 FSL 0755 FWL
		BHL Sec 34 T09S R22E 0201 FSL 2140 FWL
43-047-53518	NBU 922-34O1BS	Sec 34 T09S R22E 0313 FSL 0771 FWL
		BHL Sec 34 T09S R22E 1083 FSL 1822 FEL
NBU 921-17G PAD		
43-047-53519	NBU 921-17B4CS	Sec 17 T09S R21E 1527 FNL 2258 FEL
		BHL Sec 17 T09S R21E 1239 FNL 1823 FEL
43-047-53520	NBU 921-17F1CS	Sec 17 T09S R21E 1529 FNL 2288 FEL
		BHL Sec 17 T09S R21E 1736 FNL 2152 FWL
43-047-53521	NBU 921-17F4BS	Sec 17 T09S R21E 1528 FNL 2278 FEL
		BHL Sec 17 T09S R21E 2066 FNL 2151 FWL
43-047-53523	NBU 921-17G4BS	Sec 17 T09S R21E 1528 FNL 2268 FEL
		BHL Sec 17 T09S R21E 2106 FNL 1832 FEL
NBU 921-17H PAD		
43-047-53522	NBU 921-17A4BS	Sec 17 T09S R21E 2074 FNL 0557 FEL
		BHL Sec 17 T09S R21E 0744 FNL 0496 FEL
43-047-53524	NBU 921-17A4CS	Sec 17 T09S R21E 2076 FNL 0547 FEL
		BHL Sec 17 T09S R21E 1074 FNL 0496 FEL
43-047-53525	NBU 921-17H1BS	Sec 17 T09S R21E 2078 FNL 0538 FEL
		BHL Sec 17 T09S R21E 1405 FNL 0496 FEL
43-047-53526	NBU 921-17H1CS	Sec 17 T09S R21E 2080 FNL 0528 FEL
		BHL Sec 17 T09S R21E 1736 FNL 0495 FEL
43-047-53527	NBU 921-17H4CS	Sec 17 T09S R21E 2082 FNL 0518 FEL
		BHL Sec 17 T09S R21E 2495 FNL 0489 FEL

Michael L. Coulthard

Digitally signed by Michael L. Coulthard
DN: cn=Michael L. Coulthard, o=Bureau of Land Management, ou=Branch of Minerals, email=Michael_Coulthard@blm.gov, c=US
Date: 2013.01.15 14:15:41 -07'00'

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

MCoulthard:mc:1-15-13

RECEIVED: January 15, 2013

API	Well Name	Surface Location			
43-047-53476	NBU 921-17C4CS	Sec 17	T09S	R21E	0629 FNL 2001 FWL
43-047-53477	NBU 921-17E4BS	Sec 17	T09S	R21E	0953 FNL 0416 FWL
43-047-53478	NBU 921-17E1CS	Sec 17	T09S	R21E	0959 FNL 0424 FWL
43-047-53479	NBU 921-17E1BS	Sec 17	T09S	R21E	0965 FNL 0432 FWL
43-047-53480	NBU 921-17D4BS	Sec 17	T09S	R21E	0982 FNL 0457 FWL
43-047-53481	NBU 921-17D1CS	Sec 17	T09S	R21E	0976 FNL 0449 FWL
43-047-53482	NBU 921-17D1BS	Sec 17	T09S	R21E	0970 FNL 0440 FWL
43-047-53483	NBU 921-17F1BS	Sec 17	T09S	R21E	0634 FNL 1993 FWL
43-047-53484	NBU 922-34G1CS	Sec 34	T09S	R22E	2030 FNL 1588 FWL
43-047-53485	NBU 922-34G1BS	Sec 34	T09S	R22E	2029 FNL 1578 FWL
43-047-53486	NBU 922-34F4BS	Sec 34	T09S	R22E	2032 FNL 1598 FWL
43-047-53487	NBU 922-34C4BS	Sec 34	T09S	R22E	1991 FNL 0662 FWL
43-047-53488	NBU 922-34E1CS	Sec 34	T09S	R22E	2001 FNL 0663 FWL
43-047-53489	NBU 922-34E4BS	Sec 34	T09S	R22E	2021 FNL 0666 FWL
43-047-53490	NBU 922-34E4CS	Sec 34	T09S	R22E	2040 FNL 0670 FWL
43-047-53491	NBU 922-34L1AS	Sec 34	T09S	R22E	2030 FNL 0668 FWL
43-047-53492	NBU 922-34B1CS	Sec 34	T09S	R22E	2023 FNL 1539 FWL
43-047-53493	NBU 922-34B4BS	Sec 34	T09S	R22E	2024 FNL 1549 FWL
43-047-53497	NBU 922-34L1CS	Sec 34	T09S	R22E	2071 FSL 1012 FWL
43-047-53498	NBU 922-34B4CS	Sec 34	T09S	R22E	2027 FNL 1568 FWL
43-047-53499	NBU 922-34K4BS	Sec 34	T09S	R22E	2035 FSL 0977 FWL
43-047-53500	NBU 922-34F1BS	Sec 34	T09S	R22E	2021 FNL 1529 FWL
43-047-53501	NBU 922-34J1BS	Sec 34	T09S	R22E	2057 FSL 0998 FWL
43-047-53502	NBU 922-34J4BS	Sec 34	T09S	R22E	2028 FSL 0970 FWL
43-047-53503	NBU 922-34K1CS	Sec 34	T09S	R22E	2064 FSL 1005 FWL
43-047-53504	NBU 922-34K1BS	Sec 34	T09S	R22E	2078 FSL 1019 FWL
43-047-53505	NBU 922-34F1CS	Sec 34	T09S	R22E	2026 FNL 1559 FWL
43-047-53506	NBU 922-34F4CS	Sec 34	T09S	R22E	2085 FSL 1026 FWL
43-047-53507	NBU 922-34J1CS	Sec 34	T09S	R22E	2050 FSL 0991 FWL
43-047-53508	NBU 922-34J4CS	Sec 34	T09S	R22E	1203 FSL 0497 FWL
43-047-53509	NBU 922-34K4CS	Sec 34	T09S	R22E	1213 FSL 0499 FWL
43-047-53510	NBU 922-34L2DS	Sec 34	T09S	R22E	1232 FSL 0505 FWL
43-047-53511	NBU 922-34L3DS	Sec 34	T09S	R22E	1222 FSL 0502 FWL
43-047-53512	NBU 922-34M1BS	Sec 34	T09S	R22E	1194 FSL 0493 FWL
43-047-53513	NBU 922-34M4BS	Sec 34	T09S	R22E	0325 FSL 0787 FWL
43-047-53514	NBU 922-34M4CS	Sec 34	T09S	R22E	0295 FSL 0747 FWL
43-047-53515	NBU 922-34N1CS	Sec 34	T09S	R22E	0319 FSL 0779 FWL
43-047-53516	NBU 922-34N4BS	Sec 34	T09S	R22E	0307 FSL 0763 FWL
43-047-53517	NBU 922-34N4CS	Sec 34	T09S	R22E	0301 FSL 0755 FWL
43-047-53518	NBU 922-34O1BS	Sec 34	T09S	R22E	0313 FSL 0771 FWL
43-047-53519	NBU 921-17B4CS	Sec 17	T09S	R21E	1527 FNL 2258 FEL
43-047-53520	NBU 921-17F1CS	Sec 17	T09S	R21E	1529 FNL 2288 FEL
43-047-53521	NBU 921-17F4BS	Sec 17	T09S	R21E	1528 FNL 2278 FEL
43-047-53522	NBU 921-17A4BS	Sec 17	T09S	R21E	2074 FNL 0557 FEL
43-047-53523	NBU 921-17G4BS	Sec 17	T09S	R21E	1528 FNL 2268 FEL
43-047-53524	NBU 921-17A4CS	Sec 17	T09S	R21E	2076 FNL 0547 FEL

RECEIVED: January 15, 2013

API	Well Name	Surface Location			
43-047-53525	NBU 921-17H1BS	Sec 17	T09S	R21E	2078 FNL 0538 FEL
43-047-53526	NBU 921-17H1CS	Sec 17	T09S	R21E	2080 FNL 0528 FEL
43-047-53527	NBU 921-17H4CS	Sec 17	T09S	R21E	2082 FNL 0518 FEL

RECEIVED: January 15, 2013

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 1/3/2013
API NO. ASSIGNED: 43047535070000
WELL NAME: NBU 922-34J1CS
OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)
PHONE NUMBER: 720 929-6086
CONTACT: Gina Becker

PROPOSED LOCATION: NWSW 34 090S 220E
Permit Tech Review: ✔

SURFACE: 2050 FSL 0991 FWL
Engineering Review: ✔

BOTTOM: 2082 FSL 1821 FEL
Geology Review: ✔

COUNTY: UINTAH
LATITUDE: 39.99079
LONGITUDE: -109.43198
UTM SURF EASTINGS: 633867.00
NORTHINGS: 4427912.00
FIELD NAME: NATURAL BUTTES
LEASE TYPE: 1 - Federal
LEASE NUMBER: UTU-0149077
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 30, 2013

GARY R. HERBERT
Governor

GREGORY S. BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

****

Well Name: NBU 922-34J1CS
API Well Number: 43047535070000
Lease Number: UTU-0149077
Surface Owner: FEDERAL
Approval Date: 1/30/2013

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

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

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

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

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

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

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

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil

shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

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

- Within 24 hours following the spudding of the well - contact Carol Daniels at 801-538-5284
  (please leave a voicemail message if not available)
  OR
  submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website
  at http://oilgas.ogm.utah.gov

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

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

Approved By:

For John Rogers
Associate Director, Oil & Gas

Form 3160-3
(August 2007)

RECEIVED
DEC 04 2012
BLM

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
UTU0149077

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.
891008900A

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

8. Lease Name and Well No.
NBU 922-34J1CS

2. Name of Operator
KERR MCGEE OIL & GAS ONSHORE L
Contact: GINA T BECKER
Email: GINA.BECKER@ANADARKO.COM

9. API Well No.
43-047-53507

3a. Address
1368 SOUTH 1200 EAST
VERNAL, UT 84078

3b. Phone No. (include area code)
Ph: 720-929-6086
Fx: 720-929-7086

10. Field and Pool, or Exploratory
NATURAL BUTTES

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

At surface NWSW 2050FSL 991FWL 39.990891 N Lat, 109.432040 W Lon

At proposed prod. zone NWSE 2082FSL 1821FEL 39.990979 N Lat, 109.423196 W Lon

11. Sec., T., R., M., or Blk. and Survey or Area
Sec 34 T9S R22E Mer SLB
SME: BLM

14. Distance in miles and direction from nearest town or post office*
APPROXIMATELY 50 MILES SOUTHEAST OF VERNAL, UTAH

12. County or Parish
UINTAH

13. State
UT

15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
1821

16. No. of Acres in Lease
600.00

17. Spacing Unit dedicated to this well

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.
1420

19. Proposed Depth
9432 MD
8915 TVD

20. BLM/BIA Bond No. on file
WYB000291

21. Elevations (Show whether DF, KB, RT, GL, etc.
4989 GL

22. Approximate date work will start
07/01/2012

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)
GINA T BECKER Ph: 720-929-6086

Date
12/04/2012

Title
REGULATORY ANALYST II

Approved by (Signature)

Name (Printed/Typed)
Jerry Kenczka

Date
JUN 04 2013

Title
VERNAL FIELD OFFICE

Office
Assistant Field Manager
Lands & Mineral Resources

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

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

Additional Operator Remarks (see next page)

Electronic Submission #161652 verified by the BLM Well Information System
For KERR MCGEE OIL & GAS ONSHORE L, sent to the Vernal
Committed to AFMSS for processing by JOHNETTA MAGEE on 12/14/2012 (13JM0149AE)

RECEIVED
JUN 07 2013
DIV. OF OIL, GAS & MINING

NOTICE OF APPROVAL

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

NDOGM

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

CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:	**Kerr McGee Oil & Gas Onshore, LP**	**Location:**	**NWSW, Sec. 34, T9S, R22E**
Well No:	**NBU 922-34J1CS**	**Lease No:**	**UTU-0149077**
API No:	**43-047-53507**	**Agreement:**	**Natural Butte**

OFFICE NUMBER: (435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

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

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

NOTIFICATION REQUIREMENTS

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

SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO_x per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.

- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO_x per horsepower-hour.

- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.

- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.

- Mitigation measures can be found in Appendix B, Table B-2, of the GNB ROD (BLM 2012b) under the following sections of the table:
    - Air Quality
    - Soils
    - Vegetation: *Sclerocactus wetlandicus*
    - Wildlife: Colorado River Fish

- All vehicles and equipment shall be cleaned either through power-washing, or other approved method, if the vehicles or equipment were previously operated outside the Uinta Basin, to prevent weed seed introduction.

- All disturbance areas shall be monitored for noxious weeds annually, for a minimum of three growing seasons following completion of project or until desirable vegetation is established

- Noxious and invasive weeds will be controlled throughout the area of project disturbance.

- Noxious weeds will be inventoried and reported to BLM in the annual reclamation report. Where an integrated pest management program is applicable, coordination has been undertaken with the state and local management program (if existing). A copy of the pest management plan will be submitted for each project.

- A pesticide use permit (PUP) will be obtained for the project, if applicable.

- Paleontological monitoring by a BLM permitted paleontologist is required for Well Pads 922-33A, 922-33D, 922-33E, 922-33H, and 922-33N; Access Road for 922-33E during all ground disturbing activities (BLM 2012b; BLM 2013c).

- Construction and development activities will be prohibited at the Well pads 922-34E, 922-34F, and 922-34L locations from 5/15 to 6/30 (BLM 2008a).

- Damage to livestock and livestock facilities would be reported as quickly as possible to the BLM and affected livestock operators. Operators would develop and employ prevention measures to

avoid damaging fences, gates, and cattle guards, including upgrading cattle guard gate widths and load-bearing requirements and fencing all open pits and cellars.

If partial or complete removal of a fence cannot be avoided, the fence would be braced and tied off per the BLM guidance. Where the fence is crossed by a road, the fence would be braced and a cattle guard and gate installed per BLM guidance.

DOWNHOLE PROGRAM
CONDITIONS OF APPROVAL (COAs)

SITE SPECIFIC DOWNHOLE COAs:

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

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

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

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

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

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

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

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

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

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

OPERATING REQUIREMENT REMINDERS:

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

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

- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:

    - Operator name, address, and telephone number.

    - Well name and number.

    - Well location (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-0149077

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 922-34J1CS

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

9. API NUMBER: 43047535070000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6582

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 2050 FSL 0991 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 34 Township: 09.0S 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

- ✓ NOTICE OF INTENT — Approximate date work will start: 1/30/2014
- ☐ SUBSEQUENT REPORT — Date of Work Completion:
- ☐ SPUD REPORT — Date of Spud:
- ☐ DRILLING REPORT — Report Date:

TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ 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

Date: November 18, 2013

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Kay E. Kelly	720 929 6582	Regulatory Analyst

SIGNATURE	DATE
N/A	11/14/2013

RECEIVED: Nov. 14, 2013

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 43047535070000

API: 43047535070000
Well Name: NBU 922-34J1CS
Location: 2050 FSL 0991 FWL QTR NWSW SEC 34 TWNP 090S RNG 220E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 1/30/2013

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

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

Signature: Kay E. Kelly **Date:** 11/14/2013
Title: Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED: Nov. 14, 2013

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-0149077

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 922-34J1CS

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

9. API NUMBER: 43047535070000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6515 EXT

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 2050 FSL 0991 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 34 Township: 09.0S 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

- ☐ NOTICE OF INTENT — Approximate date work will start:
- ☐ SUBSEQUENT REPORT — Date of Work Completion:
- ✓ SPUD REPORT — Date of Spud: 1/7/2014
- ☐ DRILLING REPORT — Report Date:

TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ 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.

Spud well 01/07/2014 @ 12:00. Drill 24" conductor hole to 40', run 14" X .250 wall conductor pipe, cement with 81 sacks ready mix. Anticipated surface spud date and surface casing cement 03/02/2014.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
January 10, 2014

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Doreen Green	435 781-9758	Regulatory Analyst II

SIGNATURE	DATE
N/A	1/10/2014

RECEIVED: Jan. 10, 2014

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-0149077

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 922-34J1CS

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

9. API NUMBER: 43047535070000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6100 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 2050 FSL 0991 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 34 Township: 09.0S 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:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 6/24/2014	☐ 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.

Drilled to 9,464 ft. in Quarter 2 of 2014.

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

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Ila Beale	720 929-6408	Staff Reg. Specialist
SIGNATURE N/A		**DATE** 6/24/2014

RECEIVED: Jun. 24, 2014

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-0149077

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 922-34J1CS

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

9. API NUMBER: 43047535070000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6100 EXT

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 2050 FSL 0991 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 34 Township: 09.0S 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:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
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	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 9/11/2014	☐ 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.

Started completing the well. Well TD at 9,464 ft. Thank you.

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

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Kay E. Kelly	720 929 6582	Regulatory Analyst

SIGNATURE	DATE
N/A	9/11/2014

RECEIVED: Sep. 11, 2014

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-0149077

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 922-34J1CS

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

9. API NUMBER: 43047535070000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6100

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 2050 FSL 0991 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 34 Township: 09.0S 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:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
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	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 12/17/2014	☐ 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.

THE WELL IS TD AT 9,464'. WAITING ON COMPLETION OPERATIONS TO BEGIN. THANK YOU.

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

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

RECEIVED: Dec. 17, 2014

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-0149077

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 922-34J1CS

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

9. API NUMBER: 43047535070000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6100 EXT

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 2050 FSL 0991 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 34 Township: 09.0S 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

- ☐ NOTICE OF INTENT — Approximate date work will start:
- ✓ SUBSEQUENT REPORT — Date of Work Completion: 1/28/2015
- ☐ SPUD REPORT — Date of Spud:
- ☐ DRILLING REPORT — Report Date:

TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
✓ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ 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.

The NBU 922-34J1CS was placed on production 01/28/2015 after a new well completion. Producing from the MESAVERDE.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
January 29, 2015

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Doreen Green	435 781-9758	Regulatory Analyst II

SIGNATURE	DATE
N/A	1/28/2015

RECEIVED: Jan. 28, 2015

Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No. UTU0149077

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

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No. UTU63047A

2. Name of Operator KERR-MCGEE OIL AND GAS ONSHORE LP
Contact: DOREEN GREEN
E-Mail: Doreen.Green@anadarko.com

8. Lease Name and Well No. NBU 922-34J1CS

3. Address P.O. BOX 173779
DENVER, CO 82017

3a. Phone No. (include area code) Ph: 435-781-9758

9. API Well No. 43-047-53507

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

At surface NWSW 2050FSL 991FWL 39.990891 N Lat, 109.432040 W Lon

At top prod interval reported below NWSE 2083FSL 1834FEL

At total depth NWSE 2070FSL 1820FEL

10. Field and Pool, or Exploratory NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey or Area Sec 34 T9S R22E Mer SLB

12. County or Parish UINTAH

13. State UT

14. Date Spudded 01/07/2014

15. Date T.D. Reached 06/06/2014

16. Date Completed ☐ D & A ☒ Ready to Prod. 01/28/2015

17. Elevations (DF, KB, RT, GL)* 5007 KB

18. Total Depth: MD 9464 TVD 8912

19. Plug Back T.D.: MD 9412 TVD 8860

20. Depth Bridge Plug Set: MD TVD

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

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

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

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
24.000	14.000 STL	36.7	0	40		81			
11.000	8.625 J-55	28.0	18	2549		770		0	
7.875	4.500 I-80	11.6	18	9460		1691		1210	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	8855							

25. Producing Intervals

Formation	Top	Bottom
A) MESA VERDE	7225	9464
B)		
C)		
D)		

26. Perforation Record

Perforated Interval	Size	No. Holes	Perf. Status
7248 TO 9393	0.410	192	OPEN

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

Depth Interval	Amount and Type of Material
7248 TO 9393	PUMP 9,853 BBLS SLICKWATER, 48 BBLS HCL ACID (12.5%-18%), 203,309 LBS 30/50 MESH SAND

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
01/28/2015	02/22/2015	24	→	32.0	2293.0	241.0			FLOWS FROM WELL

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
20/64	1242	1613.0	→	32	2293	241		PGW

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
			→					

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

ELECTRONIC SUBMISSION #292886 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

RECEIVED: Feb. 25, 2015

28b. Production - Interval C

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

28c. Production - Interval D

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

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

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
				GREEN RIVER	1181
				BIRD'S NEST	1580
				MAHOGANY	2110
				WASATCH	4770
				MESA VERDE	7225

32. Additional remarks (include plugging procedure):

33. Circle enclosed attachments:

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

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

Electronic Submission #292886 Verified by the BLM Well Information System.
For KERR-MCGEE OIL AND GAS ONSHORE, sent to the Vernal

Name *(please print)* DOREEN GREEN Title REGULATORY ANALYST II

Signature (Electronic Submission) Date 02/24/2015

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

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

RECEIVED: Feb. 25, 2015

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-34J1CS BLACK	Spud date: 3/6/2014	
Project: UTAH-UINTAH	Site: NBU 922-34L PAD	Rig name no.: SST 57/57, CAPSTAR 310/310
Event: DRILLING	Start date: 3/6/2014	End date: 6/7/2014
Active datum: RKB @5,007.00usft (above Mean Sea Level)	UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2050/W/0/991/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
3/6/2014	2:00 - 4:00	2.00	MIRU	01	E	P	58	CUT OFF ROTATING HEAD / RIG DOWN
	4:00 - 6:00	2.00	MIRU	01	C	P	58	CONDUCT JSA WITH TRUCKS TO SKID RIG / SKID RIG FROM NBU 922-34K1CS TO THE NBU 922-34J1CS, WELL 7 OF 8. HOWCROFT FIELD SERVICES HAD 2 TRUCKS 1 SWAMPER 1 PUSHER/SAFETY MAN
	6:00 - 8:00	2.00	MIRU	01	B	P	58	RIG UP WELD ON ROTATING HEAD / RIG UP FLOW LINE
	8:00 - 8:30	0.50	MIRU	06	A	P	58	PICK UP BHA / MAKE UP BIT / INSTALL ROTATING HEAD RUBBER / AIR OUT PUMPS
	8:30 - 9:00	0.50	MIRU	23		P	58	PRESPUD SAFETY MEETING
	9:00 - 10:00	1.00	DRLSUR	02	B	P	58	DRILL 12 1/4 SURFACE HOLE F/ 49' TO 200' , 151' @ 100' FPH WOB = 8 TO 12K ROTORY RPM = 65 MUD MOTOR RPM = 111 TOTAL = 166 PUMPING 650 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 800/600 TORQUE ON/OFF = 2000/740 PU = 32 / SO = 28 / ROT = 30 PEAK ON LINE ARCHER OFF LINE
	10:00 - 11:30	1.50	DRLSUR	06	A	P	209	TRIP OUT OF HOLE LAY DOWN 12 1/4" BIT PICK UP 11" BIT AND DIRECTIONAL TOOLS /SCRIB AND TRIP IN HOLE.
	11:30 - 12:30	1.00	DRLSUR	02	B	P	209	DRILL 11" SURFACE HOLE F/ 200' TO 388', 188' @ 188' FPH WOB = 15 TO 19K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 533 GPM @ 174 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,560/1450 PU = 52 / SO = 42 / ROT = 45 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 10' = 9.52% .21' ABOVE & .00' LEFT OF THE LINE NO HOLE ISSUES
	12:30 - 13:00	0.50	DRLSUR	07	C	P	397	CHANGE ROTATING HEAD RUBBER

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Project: UTAH-UINTAH	Site: NBU 922-34L PAD	Rig name no.: SST 57/57, CAPSTAR 310/310
Event: DRILLING	Start date: 3/6/2014	End date: 6/7/2014
Active datum: RKB @5,007.00usft (above Mean Sea Level)	UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2050/W/0/991/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	13:00 - 14:00	1.00	DRLSUR	02	B	P	397	DRILL 11" SURFACE HOLE F/ 388' TO 481', 93' @ 93' FPH WOB = 15 TO 19K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 533 GPM @ 174 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,560/1450 PU = 55 / SO = 42 / ROT = 48 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 10' = 9.52% .21' ABOVE & .00' LEFT OF THE LINE NO HOLE ISSUES
	14:00 - 14:30	0.50	DRLSUR	07	A	P	490	RIG SERVICE
	14:30 - 18:00	3.50	DRLSUR	02	B	P	490	DRILL 11" SURFACE HOLE F/ 481' TO 1078', 597' @ 170' FPH WOB = 15 TO 19K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 533 GPM @ 174 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,560/1450 PU = 62 / SO = 48 / ROT = 55 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 196' = 22.37% 11.15' ABOVE & 8.12' RIGHT OF THE LINE NO HOLE ISSUES
	18:00 - 0:00	6.00	DRLSUR	02	B	P	1087	DRILL 11" SURFACE HOLE F/ 1078' TO 1607', 529' @ 88' FPH WOB = 15 TO 19K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 533 GPM @ 174 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,560/1450 PU = 70 / SO = 52 / ROT = 65 PEAK ON LINE ARCHER ON LINE 1140@300 CFM MUD WT 8.4 SLID 149' = 28.17% 7.12' ABOVE & 2.49' RIGHT OF THE LINE NO HOLE ISSUES

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Project: UTAH-UINTAH	Site: NBU 922-34L PAD	Rig name no.: SST 57/57, CAPSTAR 310/310
Event: DRILLING	Start date: 3/6/2014	End date: 6/7/2014
Active datum: RKB @5,007.00usft (above Mean Sea Level)	UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2050/W/0/991/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
3/7/2014	0:00 - 6:00	6.00	DRLSUR	02	B	P	1616	DRILL 11" SURFACE HOLE F/ 1607' TO 2013, 529' @ 88' FPH WOB = 15 TO 19K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 533 GPM @ 174 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,560/1450 PU = 70 / SO = 52 / ROT = 65 PEAK ON LINE ARCHER ON LINE 1140@300 CFM MUD WT 8.4 SLID 149' = 28.17% 11.54' ABOVE & 13.50' RIGHT OF THE LINE NO HOLE ISSUES
	6:00 - 12:00	6.00	DRLSUR	02	B	P	2022	DRILL 11" SURFACE HOLE F/ 2013' TO 2386', 376' @ 63' FPH WOB = 15 TO 19K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 533 GPM @ 174 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,560/1450 PU = 80 / SO = 62 / ROT = 75 PEAK ON LINE ARCHER ON LINE 1140@300 CFM MUD WT 8.4 SLID 57' = 15.28.% 13.16' ABOVE & 7.81' RIGHT OF THE LINE NO HOLE ISSUES
	12:00 - 12:30	0.50	DRLSUR	07	A	P	2395	RIG SERVICE
	12:30 - 15:00	2.50	DRLSUR	02	B	P	2395	DRILL 11" SURFACE HOLE F/ 2386' TO 2565', 179' @ 72' FPH WOB = 15 TO 19K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 533 GPM @ 174 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,560/1450 PU = 80 / SO = 62 / ROT = 75 PEAK ON LINE ARCHER ON LINE 1140@300 CFM MUD WT 8.4 SLID 57' = 15.28.% 13.16' ABOVE & 7.81' RIGHT OF THE LINE NO HOLE ISSUES
	15:00 - 17:00	2.00	DRLSUR	05	A	P	2574	CIRCULATE AND CONDITION HOLE /UNLOAD HOLE/PUMP 80 BBLS HEAVY KILL MUD / FLOW CHECK. (SAVED 4 HRS).
	17:00 - 18:00	1.00	DRLSUR	06	D	P	2574	LAY DOWN DRILL PIPE / BHA AND DIRECTIONAL TOOLS
	18:00 - 19:30	1.50	DRLSUR	06	D	P	2574	LAY DOWN DRILL PIPE / BHA AND DIRECTIONAL TOOLS

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Project: UTAH-UINTAH	Site: NBU 922-34L PAD	Rig name no.: SST 57/57, CAPSTAR 310/310
Event: DRILLING	Start date: 3/6/2014	End date: 6/7/2014
Active datum: RKB @5,007.00usft (above Mean Sea Level)	UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2050/W/0/991/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	19:30 - 20:30	1.00	DRLSUR	12	A	P	2574	CHANGE OVER TO RUN CASING / LEVEL RIG, SWIVEL AND BOOM LOAD PIPE RACKS WITH CASING
	20:30 - 22:30	2.00	CSGSUR	12	C	P	2574	PREJOB SAFETY WITH RIG CREW. RAN 57 JTS OF 8 5/8", 28#, J-55, LT&C CASING WITH CTE FLOAT GUIDE SHOE AND BAFFLE PLATE LOCATED 1 JOINT ABOVE THE SHOE. 5 CENTRALIZERS SPACED 10' ABOVE THE SHOE, 2ND & 3RD COLLARS, AND EVERY THIRD COLLAR TO 2,189'. LANDED CASING SHOE AT 2,530'. BAFFLE PLATE @ 2,495'.
	22:30 - 23:00	0.50	CSGSUR	05	D	P	2574	CIRCULATE TO CLEAR CASING
	23:00 - 0:00	1.00	CSGSUR	12	E	P	2574	PREJOB SAFETY MEETING WITH PRO PETRO CEMENTERS & RIG CREW. TESTED LINES TO 2000 PSI PUMPED 140 BBLS FRESH WATER CLEARING SHOE RETURNS TO SURFACE MIXED AND PUMPED 20 BBL GELLED WATER FLUSH AHEAD OF CEMENT MIXED AND PUMPED 300 SX OF PREMIUM LEAD CEMENT WITH 2% CACL2 & 1/4 LB/SX FLOCELE. 61.4 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. DROP PLUG ON FLY.

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Project: UTAH-UINTAH	Site: NBU 922-34L PAD	Rig name no.: SST 57/57, CAPSTAR 310/310
Event: DRILLING	Start date: 3/6/2014	End date: 6/7/2014
Active datum: RKB @5,007.00usft (above Mean Sea Level)	UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2050/W/0/991/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
3/8/2014	0:00 - 2:00	2.00	CSGSUR	12	E	P	2574	PREJOB SAFETY MEETING WITH PRO PETRO CEMENTERS & RIG CREW. TESTED LINES TO 2500 PSI PUMPED 148 BBLS FRESH WATER CLEARING SHOE RETURNS TO SURFACE MIXED AND PUMPED 20 BBL GELLED WATER FLUSH AHEAD OF CEMENT MIXED AND PUMPED 300 SX OF PREMIUM LEAD CEMENT WITH 2% CACL2 & 1/4 LB/SX FLOCELE. 61.4 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. DROP PLUG ON FLY. DISPLACE CEMENT WIITH 156.2 BBL FRESH WATER. RETURNS THROUGH OUT DISPLACEMENT. FINAL LIFT OF 190 PSI @ 3 BBL/MINUTE. BUMP PLUG WITH 650 PSI. HELD 350 PSI FOR 5 MINUTES. CHECK FLOAT. FLOAT HELD. TOP JOB # 1: PUMP CEMENT DOWN 1" PIPE WITH 150 SX PREMIUM CEMENT WITH 4% CACL2, 2% GR-3, & 1/4 LB/SX FLOCELE. 30.7 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. RELEASE RIG 03/08/2014 @ 02:00 TOP JOB # 2: PUMP CEMENT DOWN 1" PIPE WITH 150 SX PREMIUM CEMENT WITH 4% CACL2, 2% GR-3, & 1/4 LB/SX FLOCELE. 30.7 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX TOP JOB # 3: PUMP CEMENT DOWN 1" PIPE WITH 170 SX PREMIUM CEMENT WITH 4% CACL2, 2% GR-3, & 1/4 LB/SX FLOCELE. 34.8 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX CEMENT TO SURFACE. RELEASE CEMENTERS
6/1/2014	11:30 - 12:30	1.00	MIRU3	01	C	P	2574	RIG DOWN, SKID RIG 10', RIG UP
	12:30 - 14:00	1.50	PRPSPD	14	A	P	2574	NIPPLE UP BOP, INSTALL BALES & ELEVATORS, HOOK UP GAS BUSTER, HOOK UP FLOW LINE & CHOKE LINE, HOOK UP ACCUMULATOR HOSES

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Project: UTAH-UINTAH	Site: NBU 922-34L PAD	Rig name no.: SST 57/57, CAPSTAR 310/310
Event: DRILLING	Start date: 3/6/2014	End date: 6/7/2014
Active datum: RKB @5,007.00usft (above Mean Sea Level)	UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2050/W/0/991/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	14:00 - 18:00	4.00	PRPSPD	15	A	P	2574	HOLD SAFETY MEETING, RUN TEST ASSY, TEST BOP WITH A-1 TESTERS - TEST ANNULAR TO 250 PSI LOW/ 5 MINUTES 2,500 PSI HIGH 10 MINUTES, ANNULAR DID NOT TEST TESTED ALL OTHER ITEMS AS FOLLOWS PIPE & BLIND RAMS, FLOOR VALVES, IBOP, HCR VALVE, KILL LINE VALVES,TEST BOP'S, CHOKE MANIFOLD TO 250 PSI LOW/ 5 MINUTES - 5,000 PSI HIGH 10 MINUTES, HOLD ACCUMULATOR FUNCTION TEST, TEST CASING @ 1,500 PSI FOR 30 MINUTES, RIG DOWN (DURING B.O.P. TEST) VERIFY ALL TOOLS AND BACK UP TOOLS ARE ON LOCATION, CHECK AND DOCUMENT ALL OUTER DIAMETER'S AND INNER DIAMETER'S ON DOWN HOLE EQUIPMENT
	18:00 - 0:00	6.00	PRPSPD	08	C	Z	2574	***FAILURE: RIG EQUIPMENT - (ANNULAR B.O.P.) ANNULAR FAILED TEST WAIT ON NEW ANNULAR FROM CASPER WYOMING, REPLACE ANNULAR ELEMENT.
6/2/2014	0:00 - 10:30	10.50	PRPSPD	08	C	Z	2574	***FAILURE: RIG EQUIPMENT - (ANNULAR B.O.P.) ANNULAR FAILED TEST WAIT ON NEW ANNULAR FROM CASPER WYOMING, REPLACE ANNULAR ELEMENT.
	10:30 - 11:30	1.00	PRPSPD	09	A	P	2574	SLIP & CUT (16 WRAPS) 99' OF DRILLING LINE
	11:30 - 12:30	1.00	PRPSPD	15	A	P	2574	HOLD SAFETY MEETING, RUN TEST ASSY, TEST BOP WITH A-1 TESTERS - TEST ANNULAR TO 250 PSI LOW/ 5 MINUTES 2,500 PSI HIGH 10 MINUTES, RIG DOWN (DURING B.O.P. TEST) VERIFY ALL TOOLS AND BACK UP TOOLS ARE ON LOCATION, CHECK AND DOCUMENT ALL OUTER DIAMETER'S AND INNER DIAMETER'S ON DOWN HOLE EQUIPMENT
	12:30 - 13:00	0.50	PRPSPD	14	B	P	2574	INSTALL WEAR BUSHING REVIEW DIRECTIONAL PLANS AND PLATS AND VERIFY LAT/LONGS AND WELL ORDER PRIOR TO SPUD, VERIFY DIRECTIONAL DRILLERS PLAN IS THE MOST RECENT AND APPROVED VERSION, REFERENCE WELLBORE DIAGRAMS FOR EXACT CASING DESIGN AND GENERAL OVERVEW OF WELLBORE.
	13:00 - 14:30	1.50	PRPSPD	06	J	P	2574	PICK UP SCIENTIFIC MOTOR- 6 ½", 1.5 BEND, 7/8 LOBE, 3.3 STAGE, .14 RPG MUD MOTOR, (SER #6449-114) MAKE UP SECURITY MM65M PDC BIT, DRESSED WITH 6 X 15 JETS, (TFA = 1.035), (SER #12272538) PICK UP MONEL DRILL COLLARS & INSTALL MWD TOOL, ORIENT & SCRIBE TOOLS

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Project: UTAH-UINTAH	Site: NBU 922-34L PAD	Rig name no.: SST 57/57, CAPSTAR 310/310
Event: DRILLING	Start date: 3/6/2014	End date: 6/7/2014
Active datum: RKB @5,007.00usft (above Mean Sea Level)	UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2050/W/0/991/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	14:30 - 15:00	0.50	PRPSPD	06	A	P	2574	PICK UP HEAVY WEIGHT DRILL PIPE, AND DRILL PIPE, TRIP IN HOLE TO TOP OF CEMENT @ 2,464' INSTALL ROTATING RUBBER
	15:00 - 16:00	1.00	DRLPRC	02	F	P	2574	SPUD @ 06/02/2014 15:00 DRILL CEMENT, BAFFLE, & FLOAT EQUIPMENT, CLEAN OUT TO 2,574' DRILLED 130' OF CEMENT
	16:00 - 18:00	2.00	DRLPRC	02	D	P	2574	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 2,574' TO / 2,836' = 262' @ 131' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 2 PUMP @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83, TOP DRIVE RPM = 40-60, TOTAL RPM = 123-143 FT/LBS TORQUE = 10-12K STAND PIPE PRESSURE ON BOTTOM = 1,600 STAND PIPE PRESSURE OFF BOTTOM = 1,200 STRING WEIGHT UP/DOWN/ROTATING = 150K / 130K / 140K DRAG = 10K HOLE IN GOOD CONDITION SLIDE 10' & 3% OF FOOTAGE CURRENTLY 2.33‘ High / 2.8‘ Left OF PLAN LINE BOS DE-WATERING - AS NEEDED CENTRIFUGE - RUNNING CONVENTIONAL DE-SANDER - RUNNING MUD WEIGHT = 8.5 PPG VISCOSITY = 27 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	18:00 - 0:00	6.00	DRLPRC	02	D	P	2836	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 2,836' TO / 3,546' = 710' @ 118' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 2 PUMP @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83, TOP DRIVE RPM = 40-60, TOTAL RPM = 123-143 FT/LBS TORQUE = 10-12K STAND PIPE PRESSURE ON BOTTOM = 1,600 STAND PIPE PRESSURE OFF BOTTOM = 1,200 STRING WEIGHT UP/DOWN/ROTATING = 160K / 140K / 150K DRAG = 10K HOLE IN GOOD CONDITION SLIDE 219' & 27% OF FOOTAGE CURRENTLY 19.00‘ High / 8.72‘ Left OF PLAN LINE BOS DE-WATERING - AS NEEDED CENTRIFUGE - RUNNING CONVENTIONAL DE-SANDER - RUNNING MUD WEIGHT = 8.5 PPG VISCOSITY = 27 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB

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Project: UTAH-UINTAH	Site: NBU 922-34L PAD	Rig name no.: SST 57/57, CAPSTAR 310/310
Event: DRILLING	Start date: 3/6/2014	End date: 6/7/2014
Active datum: RKB @5,007.00usft (above Mean Sea Level)	UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2050/W/0/991/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
6/3/2014	0:00 - 6:00	6.00	DRLPRC	02	D	P	3546	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 3,546' TO / 4,070' = 524' @ 87' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 2 PUMP @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83, TOP DRIVE RPM = 40-60, TOTAL RPM = 123-143 FT/LBS TORQUE = 10-12K STAND PIPE PRESSURE ON BOTTOM = 1,600 STAND PIPE PRESSURE OFF BOTTOM = 1,200 STRING WEIGHT UP/DOWN/ROTATING = 160K / 140K / 150K DRAG = 10K HOLE IN GOOD CONDITION SLIDE 217' & 41% OF FOOTAGE CURRENTLY 19.18' High/ 9.61' Left OF PLAN LINE BOS DE-WATERING - AS NEEDED CENTRIFUGE - RUNNING CONVENTIONAL DE-SANDER - RUNNING MUD WEIGHT = 8.5 PPG VISCOSITY = 27 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	6:00 - 14:30	8.50	DRLPRC	02	D	P	4070	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 4,070' TO / 4,925' = 855' @ 100' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 2 PUMP @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83, TOP DRIVE RPM = 40-60, TOTAL RPM = 123-143 FT/LBS TORQUE = 12-14K STAND PIPE PRESSURE ON BOTTOM = 1,800 STAND PIPE PRESSURE OFF BOTTOM = 1,400 STRING WEIGHT UP/DOWN/ROTATING = 180K / 150K / 170K DRAG = 10K HOLE IN GOOD CONDITION SLIDE 363' & 59% OF FOOTAGE CURRENTLY 1.2' High/ 7.4' Left OF PLAN LINE BOS DE-WATERING - AS NEEDED CENTRIFUGE - RUNNING CONVENTIONAL DE-SANDER - RUNNING MUD WEIGHT = 8.9 PPG VISCOSITY = 29 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	14:30 - 15:00	0.50	DRLPRC	07	A	P	4925	RIG SERVICE, SERVICE TOP DRIVE, SERVICE DRAW WORKS, CHECK BRAKES AND ADJUST, SERVICE CROWN.

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Event: DRILLING	Start date: 3/6/2014	End date: 6/7/2014
Active datum: RKB @5,007.00usft (above Mean Sea Level)	UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2050/W/0/991/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	15:00 - 0:00	9.00	DRLPRC	02	D	P	4925	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 4,925' TO / 5,879' = 954' @ 106' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 2 PUMP @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83, TOP DRIVE RPM = 40-60, TOTAL RPM = 123-143 FT/LBS TORQUE = 14-16K STAND PIPE PRESSURE ON BOTTOM = 2,000 STAND PIPE PRESSURE OFF BOTTOM = 1,700 STRING WEIGHT UP/DOWN/ROTATING = 200K / 150K / 180K DRAG = 20K HOLE IN GOOD CONDITION SLIDE 90' & 16% OF FOOTAGE CURRENTLY 19.00‘ High / 8.72‘ Left OF PLAN LINE BOS DE-WATERING - AS NEEDED CENTRIFUGE - RUNNING CONVENTIONAL DE-SANDER - RUNNING MUD WEIGHT = 8.9 PPG VISCOSITY = 29 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
6/4/2014	0:00 - 6:00	6.00	DRLPRC	02	D	P	5879	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 5,879' TO / 6,443' = 564' @ 94' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 2 PUMP @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83, TOP DRIVE RPM = 40-60, TOTAL RPM = 123-143 FT/LBS TORQUE = 14-16K STAND PIPE PRESSURE ON BOTTOM = 2,000 STAND PIPE PRESSURE OFF BOTTOM = 1,700 STRING WEIGHT UP/DOWN/ROTATING = 235K / 90K / 134K DRAG = 100K HOLE IN GOOD CONDITION SLIDE 69' & 12.34% OF FOOTAGE BOS DE-WATERING - AS NEEDED CENTRIFUGE - RUNNING CONVENTIONAL DE-SANDER - RUNNING MUD WEIGHT = 8.9 PPG VISCOSITY = 29 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB

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Event: DRILLING	Start date: 3/6/2014	End date: 6/7/2014
Active datum: RKB @5,007.00usft (above Mean Sea Level)	UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2050/W/0/991/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:00 - 13:30	7.50	DRLPRC	02	D	P	6443	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 6443' TO / 7108' = 665' @ 88.7' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 2 PUMP @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83, TOP DRIVE RPM = 40-60, TOTAL RPM = 123-143 FT/LBS TORQUE = 14-16K STAND PIPE PRESSURE ON BOTTOM = 2100 STAND PIPE PRESSURE OFF BOTTOM = 1800 STRING WEIGHT UP/DOWN/ROTATING = 220K / 110K / 140K DRAG = 80K HOLE IN GOOD CONDITION SLIDE 64' & 11% OF FOOTAGE BOS DE-WATERING - AS NEEDED CENTRIFUGE - RUNNING CONVENTIONAL DE-SANDER - RUNNING MUD WEIGHT = 9.2 PPG VISCOSITY = 32 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	13:30 - 14:00	0.50	DRLPRC	07	A	P	7108	LUBRICATE RIG
	14:00 - 0:00	10.00	DRLPRC	02	D	P	7108	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 7108' TO / 7963' = 855' @ 85.5' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 2 PUMP @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83, TOP DRIVE RPM = 40-60, TOTAL RPM = 123-143 FT/LBS TORQUE = 15-21K STAND PIPE PRESSURE ON BOTTOM = 2100 STAND PIPE PRESSURE OFF BOTTOM = 1800 STRING WEIGHT UP/DOWN/ROTATING = 300K / 110K / 155K DRAG = 145K HOLE IN GOOD CONDITION SLIDE 77' & 17.75% OF FOOTAGE CURRENTLY 10.63‘ NORTH / 8.53‘ WEST OF PLAN LINE BOS DE-WATERING - AS NEEDED CENTRIFUGE - RUNNING CONVENTIONAL DE-SANDER - RUNNING MUD WEIGHT = 9.2 PPG VISCOSITY = 32 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB

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US ROCKIES REGION

Operation Summary Report

Well: NBU 922-34J1CS BLACK	Spud date: 3/6/2014	
Project: UTAH-UINTAH	Site: NBU 922-34L PAD	Rig name no.: SST 57/57, CAPSTAR 310/310
Event: DRILLING	Start date: 3/6/2014	End date: 6/7/2014
Active datum: RKB @5,007.00usft (above Mean Sea Level)	UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2050/W/0/991/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
6/5/2014	0:00 - 8:00	8.00	DRLPRO	02	B	P	7963	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 7963' TO / 8477' = 514' @ 64.3' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 2 PUMP @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 83, TOP DRIVE RPM = 50-70, TOTAL RPM = 123-143 FT/LBS TORQUE = 15-21K STAND PIPE PRESSURE ON BOTTOM = 2100 STAND PIPE PRESSURE OFF BOTTOM = 1800 STRING WEIGHT UP/DOWN/ROTATING = 320K / 110K / 160K DRAG = 160K HOLE HAS HEAVY DRAG SLIDE 20' & 7% OF FOOTAGE BOS DE-WATERING - AS NEEDED CENTRIFUGE - RUNNING CONVENTIONAL DE-SANDER - RUNNING MUD WEIGHT = 9.2 PPG VISCOSITY = 32 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	8:00 - 14:30	6.50	DRLPRC	02	B	P	8477	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 8477' TO / 8820' = 343' @ 52.8' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 1 PUMP @ 105 GALLONS PER MINUTE = 515 MUD MOTOR RPM = 83, TOP DRIVE RPM = 50-70, TOTAL RPM = 123-143 FT/LBS TORQUE = 15-21K STAND PIPE PRESSURE ON BOTTOM = 2300 STAND PIPE PRESSURE OFF BOTTOM = 2000 STRING WEIGHT UP/DOWN/ROTATING = 320K / 110K / 160K DRAG = 160K HOLE HAS HEAVY DRAG SLIDE 20' & 4.3% OF FOOTAGE BOS DE-WATERING - AS NEEDED CENTRIFUGE - RUNNING CONVENTIONAL DE-SANDER - RUNNING MUD WEIGHT = 11 PPG VISCOSITY = 38 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	14:30 - 15:00	0.50	DRLPRC	07	A	P	8820	LUBRICATE RIG

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US ROCKIES REGION

Operation Summary Report

Well: NBU 922-34J1CS BLACK	Spud date: 3/6/2014	
Project: UTAH-UINTAH	Site: NBU 922-34L PAD	Rig name no.: SST 57/57, CAPSTAR 310/310
Event: DRILLING	Start date: 3/6/2014	End date: 6/7/2014
Active datum: RKB @5,007.00usft (above Mean Sea Level)	UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2050/W/0/991/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	15:00 - 0:00	9.00	DRLPRC	02	B	P	8820	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 8820' TO / 9283' = 463' @ 51.4' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 1 PUMP @ 105 GALLONS PER MINUTE = 515 MUD MOTOR RPM = 83, TOP DRIVE RPM = 50-70, TOTAL RPM = 123-143 FT/LBS TORQUE = 15-21K STAND PIPE PRESSURE ON BOTTOM = 2500 STAND PIPE PRESSURE OFF BOTTOM = 2200 STRING WEIGHT UP/DOWN/ROTATING = 350K / 120K / 170K DRAG = 180K HOLE HAS HEAVY DRAG SLIDE 22' & 8% OF FOOTAGE CURRENTLY 1.18‘ NORTH / 1.59‘ WEST OF PLAN LINE BOS DE-WATERING - AS NEEDED CENTRIFUGE - RUNNING CONVENTIONAL DE-SANDER - RUNNING MUD WEIGHT = 12 PPG VISCOSITY = 38 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
6/6/2014	0:00 - 4:30	4.50	DRLPRC	02	D	P	9283	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 9283' TO / 9464' = 181' @ 40.2' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 1 PUMP @ 105 GALLONS PER MINUTE = 515 MUD MOTOR RPM = 83, TOP DRIVE RPM = 50-70, TOTAL RPM = 123-143 FT/LBS TORQUE = 15-21K STAND PIPE PRESSURE ON BOTTOM = 2500 STAND PIPE PRESSURE OFF BOTTOM = 2200 STRING WEIGHT UP/DOWN/ROTATING = 350K / 120K / 170K DRAG = 180K HOLE HAS HEAVY DRAG CURRENTLY 10.37‘ SOUTH / 2.48‘ EAST OF PLAN LINE BOS DE-WATERING - AS NEEDED CENTRIFUGE - RUNNING CONVENTIONAL DE-SANDER - RUNNING MUD WEIGHT = 12 PPG VISCOSITY = 38 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	4:30 - 6:00	1.50	DRLPRC	05	A	P	9464	CONDITION MUD & CIRCULATE - PUMP HIGH VIS LCM SWEEP AROUND - PREPARE FOR TRIP
	6:00 - 13:00	7.00	DRLPRC	06	A	P	9464	TRIP OUT OF HOLE - BACKREAM FROM 9464' TO 7600' PULLING 350K - ABLE TO PULL OUT OF HOLE FROM 7600' - PUMP PILL & TRIP OUT - TIGHT FROM 4605' TO 4601' - BACKREAM THROUGH - CONTINUE PULLING OUT OF HOLE LOW DRUM CLUTCH WAS SLIPPING WHEN PULLING ABOVE 330K
	13:00 - 14:00	1.00	DRLPRC	06	J	P	9464	LAY DOWN DIRECTIONAL TOOLS & MUD MOTOR

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US ROCKIES REGION

Operation Summary Report

Well: NBU 922-34J1CS BLACK	Spud date: 3/6/2014	
Project: UTAH-UINTAH	Site: NBU 922-34L PAD	Rig name no.: SST 57/57, CAPSTAR 310/310
Event: DRILLING	Start date: 3/6/2014	End date: 6/7/2014
Active datum: RKB @5,007.00usft (above Mean Sea Level)	UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2050/W/0/991/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	14:00 - 14:30	0.50	DRLPRC	14	B	P	9464	PULL WEAR BUSHING
	14:30 - 15:30	1.00	CSGPRO	12	A	P	9464	HOLD SAFETY MEETING / RIG UP WYOMING CASING SERVICE CASING EQUIPMENT
	15:30 - 21:00	5.50	CSGPRO	12	C	P	9464	RAN 101 JTS + MARKER JT 4 1/2", 11.6#. I80, LT&C CASING + 112 JTS + CROSSOVER + PUP JT, 4 1/2", 11.6#, I80/ DQX CASING, SHOE AT 9459.64', TOP FLOAT COLLAR AT 9412.38', RAN 15 CENT'S - TOP OF MESEVERDE MK JT 7230.99'
	21:00 - 22:30	1.50	CSGPRO	05	D	P	9464	CIRCULATE / RIG DOWN WYOMING CASING SERVICE CASING TOOLS / RIG UP BAKER CEMENTING EQUIPMENT - CIRCULATE @ 100 SPM = 490 GPM @ 1100 PSI HAD 10-15' FLARE ON BTMS UP
	22:30 - 0:00	1.50	CSGPRO	12	E	P	9464	CEMENT W/ BAKER - HOLD SAFETY MEETING - TEST LINES TO 5463 PSI - PUMP 25 BBLS WATER SPACER - 178 BBLS LEAD CEMENT 506 SKS @ 12.5 PPG W/ 1.98 YIELD, MIX & PUMP 283 BBLS TAIL CEMENT 1185 SKS @ 14.3 PPG W/ 1.34 YIELD - WASH UP LINES - DISPLACE W/ 146.3 BBLS WATER - BUMP PLUG TO 3382 PSI - HAD 2806 PSI LIFT PRESSURE PRIOR TO BUMP PLUG / GOOD RETURNS THROUGHOUT JOB - 5 BBLS WATER TO SURFACE - RIG DOWN CEMENTERS PUMPED 25% EXCESS OF HOLE VOLUME ON LEAD & TAIL CEMENT EST TOP OF LEAD TO 467' EST TOP OF TAIL IS 4228'
6/7/2014	0:00 - 1:30	1.50	CSGPRO	12	E	P	9464	CEMENT W/ BAKER - HOLD SAFETY MEETING - TEST LINES TO 5463 PSI - PUMP 25 BBLS WATER SPACER - 178 BBLS LEAD CEMENT 506 SKS @ 12.5 PPG W/ 1.98 YIELD, MIX & PUMP 283 BBLS TAIL CEMENT 1185 SKS @ 14.3 PPG W/ 1.34 YIELD - WASH UP LINES - DISPLACE W/ 146.3 BBLS WATER - BUMP PLUG TO 3382 PSI - HAD 2806 PSI LIFT PRESSURE PRIOR TO BUMP PLUG / GOOD RETURNS THROUGHOUT JOB - 5 BBLS WATER TO SURFACE - RIG DOWN CEMENTERS PUMPED 25% EXCESS OF HOLE VOLUME ON LEAD & TAIL CEMENT EST TOP OF LEAD TO 467' EST TOP OF TAIL IS 4228'
	1:30 - 2:30	1.00	CSGPRO	12	B	P	9464	BACK OUT LANDING JT - INSTALL PACK OFF WITH CAMERON HAND - LAY DOWN LANDING JT
	2:30 - 4:00	1.50	RDMO	14	A	P	9464	NIPPLE DOWN BOP - CLEAN MUD TANKS - RELEASE RIG @ 0400 HRS ON 6/7/2014

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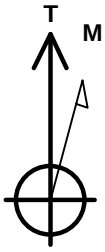
Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 922-34L PAD
Well: NBU 922-34J1CS
Wellbore: OH
Design: OH

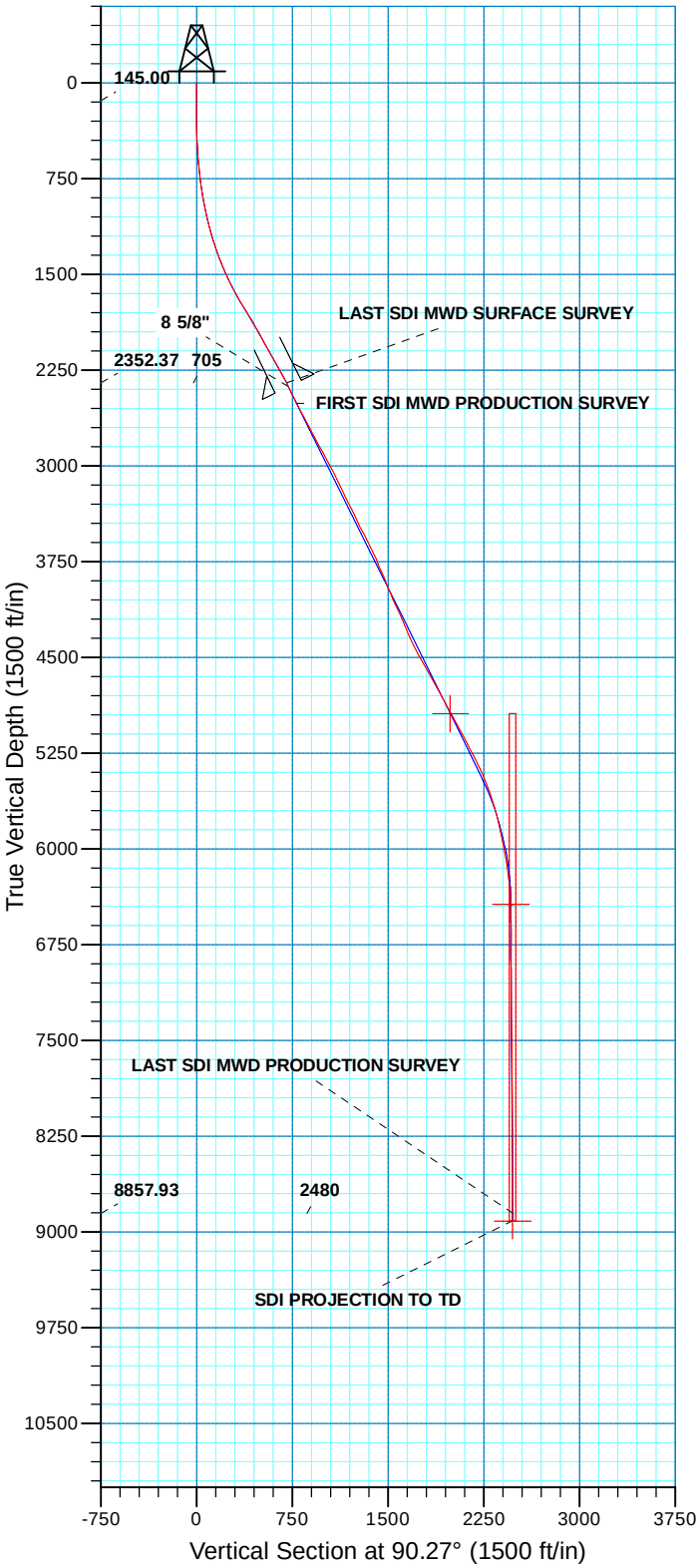
Anadarko Petroleum Corporation

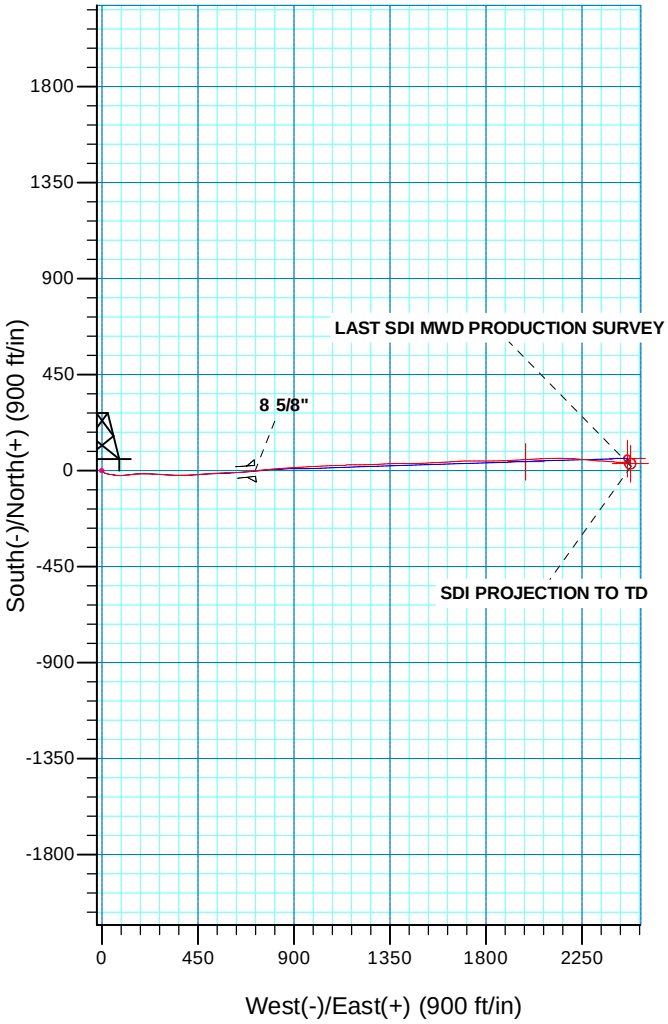
WELL DETAILS: NBU 922-34J1CS					
GL 4989 & KB 18 @ 5007.00ft (SST 57)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14526606.17	2079795.98	39.9909260	-109.4313570



Azimuths to True North
Magnetic North: 10.79°

Magnetic Field
Strength: 51981.7snT
Dip Angle: 65.79°
Date: 2/12/2014
Model: BGGM2013





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 34 T9S R22E
System Datum: Mean Sea Level

Design: OH (NBU 922-34J1CS/OH)

Created By: RobertScott Date: 14:48, February 23 2015

REC

Scientific Drilling

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N
NBU 922-34L PAD
NBU 922-34J1CS

OH

Design: OH

Standard Survey Report

23 February, 2015

Anadarko Petroleum Corporation

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Scientific Drilling

Survey Report

Anadarko Petroleum Corporation

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well NBU 922-34J1CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	GL 4989 & KB 18 @ 5007.00ft (SST 57)
Site:	NBU 922-34L PAD	**MD Reference:**	GL 4989 & KB 18 @ 5007.00ft (SST 57)
Well:	NBU 922-34J1CS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Denver Sales

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

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

Site NBU 922-34L PAD, SECTION 34 T9S R22E

Site Position:		**Northing:**	14,526,606.18 usft	**Latitude:**	39.9909260
From:	Lat/Long	**Easting:**	2,079,795.97 usft	**Longitude:**	-109.4313570
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	1.01 °

Well NBU 922-34J1CS, 2050 FSL 991 FWL

Well Position	**+N/-S**	0.00 ft	**Northing:**	14,526,606.18 usft	**Latitude:**	39.9909260
	+E/-W	0.00 ft	**Easting:**	2,079,795.97 usft	**Longitude:**	-109.4313570
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,989.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	2/12/2014	10.79	65.79	51,982

Design OH

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	90.27

Survey Program **Date** 2/23/2015

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
9.00	2,508.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1
2,686.00	9,464.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.00	0.00	0.00	9.00	0.00	0.00	0.00	0.00	0.00	0.00
145.00	0.18	112.92	145.00	-0.08	0.20	0.20	0.13	0.13	0.00
FIRST SDI MWD SURFACE SURVEY									
332.00	1.14	150.27	331.99	-1.81	1.39	1.40	0.54	0.51	19.97
424.00	2.61	135.67	423.93	-4.11	3.31	3.33	1.67	1.60	-15.87
518.00	4.15	127.29	517.77	-7.70	7.51	7.55	1.72	1.64	-8.91
611.00	5.19	115.64	610.46	-11.56	13.98	14.03	1.51	1.12	-12.53
706.00	6.16	99.73	705.00	-14.28	22.88	22.94	1.94	1.02	-16.75
801.00	7.57	103.91	799.32	-16.64	33.98	34.05	1.57	1.48	4.40

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Survey Report

Anadarko Petroleum Corporation

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well NBU 922-34J1CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	GL 4989 & KB 18 @ 5007.00ft (SST 57)
Site:	NBU 922-34L PAD	**MD Reference:**	GL 4989 & KB 18 @ 5007.00ft (SST 57)
Well:	NBU 922-34J1CS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Denver Sales

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
895.00	9.51	102.64	892.27	-19.83	47.56	47.66	2.07	2.06	-1.35
988.00	12.09	97.09	983.62	-22.72	64.73	64.84	2.99	2.77	-5.97
1,080.00	14.29	91.20	1,073.19	-24.14	85.64	85.76	2.80	2.39	-6.40
1,174.00	15.65	82.68	1,164.01	-22.77	109.82	109.93	2.75	1.45	-9.06
1,271.00	17.59	81.71	1,256.95	-18.99	137.31	137.39	2.02	2.00	-1.00
1,360.00	18.73	87.25	1,341.52	-16.36	164.89	164.97	2.32	1.28	6.22
1,455.00	22.51	90.50	1,430.42	-15.79	198.32	198.40	4.16	3.98	3.42
1,550.00	26.29	92.42	1,516.92	-16.84	237.54	237.62	4.07	3.98	2.02
1,644.00	27.26	93.32	1,600.85	-18.96	279.83	279.92	1.12	1.03	0.96
1,740.00	29.00	93.27	1,685.50	-21.57	325.02	325.12	1.81	1.81	-0.05
1,832.00	31.92	90.49	1,764.80	-23.05	371.62	371.72	3.52	3.17	-3.02
1,926.00	31.48	86.55	1,844.79	-21.78	420.97	421.07	2.25	-0.47	-4.19
2,018.00	30.07	84.00	1,923.83	-17.93	467.87	467.95	2.09	-1.53	-2.77
2,111.00	28.84	86.20	2,004.81	-14.00	513.43	513.49	1.76	-1.32	2.37
2,206.00	28.75	88.29	2,088.07	-11.80	559.13	559.18	1.06	-0.09	2.20
2,301.00	30.07	87.60	2,170.82	-10.13	605.75	605.79	1.43	1.39	-0.73
2,394.00	29.43	86.49	2,251.57	-7.75	651.83	651.86	0.91	-0.69	-1.19
2,489.00	26.73	84.18	2,335.38	-4.15	696.39	696.40	3.06	-2.84	-2.43
2,508.00	26.38	84.97	2,352.37	-3.35	704.85	704.86	2.62	-1.84	4.16
LAST SDI MWD SURFACE SURVEY									
2,686.00	26.91	84.68	2,511.47	3.85	784.35	784.32	0.31	0.30	-0.16
FIRST SDI MWD PRODUCTION SURVEY									
2,781.00	28.14	83.71	2,595.72	8.30	828.02	827.97	1.38	1.29	-1.02
2,875.00	27.51	85.02	2,678.85	12.61	871.68	871.61	0.93	-0.67	1.39
2,970.00	28.22	87.37	2,762.83	15.55	915.98	915.90	1.38	0.75	2.47
3,065.00	29.72	88.28	2,845.94	17.28	961.96	961.87	1.65	1.58	0.96
3,160.00	28.58	87.66	2,928.91	18.92	1,008.20	1,008.10	1.24	-1.20	-0.65
3,255.00	28.40	87.14	3,012.41	20.97	1,053.47	1,053.36	0.32	-0.19	-0.55
3,350.00	25.59	88.02	3,097.05	22.81	1,096.55	1,096.43	2.99	-2.96	0.93
3,445.00	24.62	86.43	3,183.07	24.75	1,136.80	1,136.67	1.24	-1.02	-1.67
3,540.00	26.48	91.05	3,268.79	25.60	1,177.74	1,177.60	2.87	1.96	4.86
3,635.00	25.89	88.15	3,354.04	25.88	1,219.65	1,219.51	1.48	-0.62	-3.05
3,730.00	26.56	86.17	3,439.26	27.97	1,261.57	1,261.42	1.16	0.71	-2.08
3,825.00	28.14	87.66	3,523.64	30.30	1,305.15	1,304.99	1.81	1.66	1.57
3,920.00	26.12	89.77	3,608.19	31.30	1,348.45	1,348.28	2.35	-2.13	2.22
4,015.00	24.62	88.19	3,694.03	32.01	1,389.14	1,388.97	1.73	-1.58	-1.66
4,110.00	23.44	90.38	3,780.79	32.51	1,427.82	1,427.65	1.56	-1.24	2.31
4,205.00	22.69	89.07	3,868.20	32.68	1,465.03	1,464.86	0.96	-0.79	-1.38
4,300.00	21.90	87.49	3,956.10	33.75	1,501.05	1,500.88	1.04	-0.83	-1.66
4,395.00	24.62	88.37	4,043.37	35.09	1,538.54	1,538.36	2.89	2.86	0.93
4,490.00	25.51	87.02	4,129.42	36.72	1,578.75	1,578.56	1.11	0.94	-1.42
4,585.00	22.77	87.31	4,216.10	38.64	1,617.55	1,617.35	2.89	-2.88	0.31
4,680.00	23.13	85.12	4,303.59	41.09	1,654.51	1,654.29	0.98	0.38	-2.31

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Scientific Drilling

Survey Report

Anadarko Petroleum Corporation

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well NBU 922-34J1CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	GL 4989 & KB 18 @ 5007.00ft (SST 57)
Site:	NBU 922-34L PAD	**MD Reference:**	GL 4989 & KB 18 @ 5007.00ft (SST 57)
Well:	NBU 922-34J1CS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Denver Sales

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,775.00	25.15	88.27	4,390.28	43.29	1,693.28	1,693.06	2.52	2.13	3.32
4,870.00	27.87	90.92	4,475.28	43.54	1,735.67	1,735.45	3.12	2.86	2.79
4,965.00	29.81	90.13	4,558.50	43.13	1,781.49	1,781.27	2.08	2.04	-0.83
5,059.00	29.46	87.66	4,640.20	44.03	1,827.95	1,827.72	1.35	-0.37	-2.63
5,154.00	29.70	87.68	4,722.82	45.93	1,874.81	1,874.57	0.25	0.25	0.02
5,250.00	29.11	87.75	4,806.46	47.81	1,921.91	1,921.66	0.62	-0.61	0.07
5,344.00	29.19	87.22	4,888.55	49.82	1,967.65	1,967.39	0.29	0.09	-0.56
5,439.00	28.72	87.06	4,971.67	52.12	2,013.58	2,013.31	0.50	-0.49	-0.17
5,534.00	27.79	86.17	5,055.35	54.77	2,058.48	2,058.19	1.07	-0.98	-0.94
5,629.00	28.09	86.78	5,139.28	57.50	2,102.90	2,102.61	0.44	0.32	0.64
5,726.00	28.15	91.21	5,224.84	58.30	2,148.59	2,148.29	2.15	0.06	4.57
5,819.00	26.20	92.50	5,307.57	56.94	2,191.03	2,190.74	2.19	-2.10	1.39
5,914.00	24.27	94.34	5,393.50	54.55	2,231.46	2,231.17	2.19	-2.03	1.94
6,009.00	21.72	96.63	5,480.95	51.04	2,268.39	2,268.13	2.84	-2.68	2.41
6,103.00	18.93	95.31	5,569.09	47.62	2,300.86	2,300.61	3.01	-2.97	-1.40
6,198.00	16.27	94.61	5,659.63	45.13	2,329.47	2,329.23	2.81	-2.80	-0.74
6,293.00	14.16	92.67	5,751.30	43.51	2,354.35	2,354.12	2.28	-2.22	-2.04
6,388.00	12.54	93.44	5,843.73	42.35	2,376.25	2,376.02	1.72	-1.71	0.81
6,483.00	11.41	93.24	5,936.66	41.20	2,395.93	2,395.71	1.19	-1.19	-0.21
6,578.00	11.06	94.07	6,029.84	40.03	2,414.40	2,414.18	0.41	-0.37	0.87
6,673.00	8.97	93.11	6,123.39	38.98	2,430.89	2,430.67	2.21	-2.20	-1.01
6,768.00	6.90	90.53	6,217.47	38.52	2,443.99	2,443.78	2.21	-2.18	-2.72
6,863.00	5.61	91.87	6,311.90	38.32	2,454.34	2,454.13	1.37	-1.36	1.41
6,958.00	3.50	101.22	6,406.60	37.60	2,461.82	2,461.62	2.35	-2.22	9.84
7,053.00	1.92	124.26	6,501.49	36.14	2,465.98	2,465.78	1.99	-1.66	24.25
7,148.00	0.79	157.63	6,596.47	34.64	2,467.55	2,467.36	1.40	-1.19	35.13
7,243.00	0.97	175.54	6,691.46	33.23	2,467.86	2,467.67	0.34	0.19	18.85
7,338.00	0.95	180.05	6,786.44	31.64	2,467.92	2,467.74	0.08	-0.02	4.75
7,433.00	0.56	49.74	6,881.44	31.16	2,468.28	2,468.10	1.45	-0.41	-137.17
7,528.00	2.29	2.06	6,976.41	33.35	2,468.70	2,468.51	2.06	1.82	-50.19
7,623.00	2.11	350.02	7,071.34	36.97	2,468.46	2,468.26	0.52	-0.19	-12.67
7,718.00	1.67	358.10	7,166.29	40.08	2,468.11	2,467.90	0.54	-0.46	8.51
7,813.00	0.79	20.34	7,261.26	42.08	2,468.30	2,468.07	1.04	-0.93	23.41
7,908.00	0.62	53.74	7,356.26	42.99	2,468.94	2,468.71	0.46	-0.18	35.16
8,003.00	0.53	90.30	7,451.25	43.30	2,469.79	2,469.56	0.39	-0.09	38.48
8,098.00	1.23	107.35	7,546.24	42.99	2,471.20	2,470.97	0.78	0.74	17.95
8,193.00	0.75	72.18	7,641.23	42.88	2,472.77	2,472.54	0.79	-0.51	-37.02
8,288.00	0.62	83.45	7,736.22	43.12	2,473.87	2,473.64	0.20	-0.14	11.86
8,383.00	0.93	102.87	7,831.21	43.01	2,475.13	2,474.90	0.42	0.33	20.44
8,478.00	0.97	146.02	7,926.20	42.17	2,476.34	2,476.11	0.74	0.04	45.42
8,574.00	1.14	174.41	8,022.18	40.55	2,476.88	2,476.66	0.57	0.18	29.57
8,669.00	1.37	189.71	8,117.16	38.49	2,476.78	2,476.57	0.43	0.24	16.11
8,765.00	1.77	180.92	8,213.13	35.88	2,476.57	2,476.37	0.49	0.42	-9.16
8,860.00	1.14	215.90	8,308.10	33.64	2,475.99	2,475.80	1.12	-0.66	36.82

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Scientific Drilling

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Site:	NBU 922-34L PAD	**MD Reference:**	GL 4989 & KB 18 @ 5007.00ft (SST 57)
Well:	NBU 922-34J1CS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Denver Sales

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,955.00	1.05	181.93	8,403.08	32.01	2,475.40	2,475.22	0.68	-0.09	-35.76
9,050.00	1.21	170.89	8,498.06	30.15	2,475.53	2,475.36	0.28	0.17	-11.62
9,145.00	1.31	151.96	8,593.04	28.20	2,476.20	2,476.04	0.45	0.11	-19.93
9,240.00	1.58	157.78	8,688.01	26.03	2,477.21	2,477.06	0.32	0.28	6.13
9,335.00	1.75	144.31	8,782.97	23.64	2,478.55	2,478.41	0.45	0.18	-14.18
9,410.00	2.11	132.49	8,857.93	21.77	2,480.24	2,480.11	0.71	0.48	-15.76
LAST SDI MWD PRODUCTION SURVEY									
9,464.00	2.11	132.49	8,911.89	20.43	2,481.70	2,481.58	0.00	0.00	0.00
SDI PROJECTION TO TD									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
145.00	145.00	-0.08	0.20	FIRST SDI MWD SURFACE SURVEY
2,508.00	2,352.37	-3.35	704.85	LAST SDI MWD SURFACE SURVEY
2,686.00	2,511.47	3.85	784.35	FIRST SDI MWD PRODUCTION SURVEY
9,410.00	8,857.93	21.77	2,480.24	LAST SDI MWD PRODUCTION SURVEY
9,464.00	8,911.89	20.43	2,481.70	SDI PROJECTION TO TD

Checked By: _____ Approved By: _____ Date: _____

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US ROCKIES REGION

Operation Summary Report

Well: NBU 922-34J1CS BLACK		Spud date: 3/6/2014
Project: UTAH-UINTAH	Site: NBU 922-34L PAD	Rig name no.: ROCKY MOUNTAIN WELL SERVICE 1/1
Event: COMPLETION	Start date: 7/14/2014	End date: 1/28/2015
Active datum: RKB @5,007.00usft (above Mean Sea Level)	UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2050/W/0/991/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
7/10/2014	-							
7/14/2014	9:00 - 10:00	1.00	SUBSPR	52	B	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -62 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. PRESSURE TEST 8 5/8 X 4 1/2 TO 548 PSI HELD FOR 5 MIN LOST -121 PSI, BLED PSI OFF, REINSTALLED POP OFF SWIFN 180 # PRESSURE ON SURFACE CASING FILLED SURFACE WITH 2 BBLS H2O
12/17/2014	9:00 - 10:00	1.00	SUBSPR	52	B	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -98 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. PRESSURE TEST 8 5/8 X 4 1/2 TO 548 PSI HELD FOR 5 MIN LOST -121 PSI, BLED PSI OFF, REINSTALLED POP OFF SWIFN 180 # PRESSURE ON SURFACE CASING FILLED SURFACE WITH 2 BBLS H2O
1/5/2015	7:00 - 7:15	0.25	FRAC	48		P		HSM-JSA
	7:15 - 15:00	7.75	FRAC	36	H	P		PERF STG #1 AS DESIGNED, SWI, SDFN.
1/6/2015	6:30 - 6:45	0.25	FRAC	48		P		HSM-JSA
	6:45 - 17:30	10.75	FRAC	36	H	P		FRAC STG #1) WHP 592 PSI, BRK 4620 PSI @ 5.8 BPM. ISIP 2592 PSI, FG. 0.72 ISIP 2790 PSI, FG. 0.74, NPI 198 PSI, X/O TO WL. SET CBP & PERF STG #2 AS DESIGNED, X/O TO FRAC. FRAC STG #2) WHP 870 PSI, BRK 3778 PSI @ 3.4 BPM. ISIP 2747 PSI, FG. 0.74 ISIP 3043 PSI, FG. 0.78, NPI 296 PSI, X/O TO WL. SET CBP & PERF STG #3 AS DESIGNED, SWI, SDFN.
1/7/2015	6:30 - 6:45	0.25	FRAC	48		P		HSM-JSA

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US ROCKIES REGION

Operation Summary Report

Well: NBU 922-34J1CS BLACK		Spud date: 3/6/2014
Project: UTAH-UINTAH	Site: NBU 922-34L PAD	Rig name no.: ROCKY MOUNTAIN WELL SERVICE 1/1
Event: COMPLETION	Start date: 7/14/2014	End date: 1/28/2015
Active datum: RKB @5,007.00usft (above Mean Sea Level)	UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2050/W/0/991/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:45 - 17:30	10.75	FRAC	36	H	P		FRAC STG #3) WHP 1822 PSI, BRK 3858 PSI @ 3.5 BPM. ISIP 2180 PSI, FG. 0.69 ISIP 2665 PSI, FG. 0.74, NPI 485 PSI, X/O TO WL. SET CBP & PERF STG #4 AS DESIGNED, X/O TO FRAC. FRAC STG #4) WHP 1947 PSI, BRK 3815 PSI @ 3.6 BPM. ISIP 2390 PSI, FG. 0.72 ISIP 2423 PSI, FG. 0.72, NPI 33 PSI, X/O TO WL. SET CBP & PERF STG #5 AS DESIGNED, X/O TO FRAC. FRAC STG #5) WHP 2042 PSI, BRK 2254 PSI @ 3.5 BPM. ISIP 2052 PSI, FG. 0.69 ISIP 2400 PSI, FG. 0.73, NPI 348 PSI, X/O TO WL. SET CBP & PERF STG #6 AS DESIGNED, SWI, SDFN.
1/8/2015	6:30 - 16:30	10.00	FRAC	36		P		FRAC STG #6) WHP 1078 PSI, BRK 2690 PSI @ 3.6 BPM. ISIP 1838 PSI, FG. 0.67 ISIP 2383 PSI, FG. 0.74, NPI 545 PSI, X/O TO WL. SET CBP & PERF STG #7 AS DESIGNED, X/O TO FRAC. FRAC STG #7) WHP 690 PSI, BRK 1979 PSI @ 4.5 BPM. ISIP 1225 PSI, FG. 0.69 ISIP 1983 PSI, FG. 0.7, NPI 758 PSI, X/O TO WL. SET CBP & PERF STG #8 AS DESIGNED, X/O TO FRAC. FRAC STG #8) WHP 331 PSI, BRK 2690 PSI @ 6 BPM. ISIP 1188 PSI, FG. 0.6 ISIP 1925 PSI, FG. 0.7, NPI 737 PSI, X/O TO WL. SET KILL PLUG. RDMO WL & FRAC EQUIP. TOTAL FLUID- 9901 BBLS TOTAL SAND- 203309 LBS
1/27/2015	7:00 - 7:15	0.25	DRLOUT	48		P		HSM, PINCH POINT, SLIPS, TRIPS, FALLS
	7:15 - 9:00	1.75	DRLOUT	30	A	P		HAVE GRADER FIX LOC, MIRU, N/D WELL HEAD, N/U BOPS, MIRU SLAUGH PIPE WRANGLER, R/U TBG EQUIP.
	9:00 - 16:30	7.50	DRLOUT	31	I	P		P/U 3-7/8 BIT W/ POBS PKG, TALLEY AND P/U 2-3/8 L-80 TBG, TAG @=7,180' W/ 226 JNTS, P/U POWER SWIVEL PRP TO DRILL OUT IN AM. SWIFN.
1/28/2015	7:00 - 7:15	0.25	DRLOUT	48		P		HSM, CIRCULATING WELL

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US ROCKIES REGION

Operation Summary Report

Well: NBU 922-34J1CS BLACK		Spud date: 3/6/2014
Project: UTAH-UINTAH	Site: NBU 922-34L PAD	Rig name no.: ROCKY MOUNTAIN WELL SERVICE 1/1
Event: COMPLETION	Start date: 7/14/2014	End date: 1/28/2015
Active datum: RKB @5,007.00usft (above Mean Sea Level)	UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2050/W/0/991/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	7:15 - 16:00	8.75	DRLOUT	44	C	P		SICP=0#, SITP=0#, OPEN WELL PRESSURE TEST BOPS TO 3,000# [NO LEAKS], BREAK CIRC W/ RIG PUMP, DRILL THROUGH HALIBURTON PLUG @=7,190' IN 7 MIN W/ 350# PRESSURE INCREASE PLUG #2] CONT. TO RIH, TAG @=7,417' [25' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=7,442' IN 4 MIN W/ 200# PRESSURE INCREASE. PLUG #3] CONT. TO RIH, TAG @=7,707' [35' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=7,742' IN 4 MIN W/ 550# PRESSURE INCREASE. PLUG #4] CONT. TO RIH, TAG @=8,0522' [25' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=8,077' IN 5 MIN W/ 750# PRESSURE INCREASE. PLUG #5] CONT. TO RIH, TAG @=8,799' [25' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=8,424' IN 6 MIN W/ 800# PRESSURE INCREASE. PLUG #6] CONT. TO RIH, TAG @=8,658' [20' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=8,678' IN 4 MIN W/ 1,000# PRESSURE INCREASE. PLUG #7] CONT. TO RIH, TAG @=8,830' [25' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=8,855' IN 4 MIN W/ 1,000# PRESSURE INCREASE. PLUG #8] CONT. TO RIH, TAG @=9,043' [30' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=9,073' IN 4 MIN W/ 750# PRESSURE INCREASE. C/O TO PBTD @=9,412', CIRC WELL, R/D POWER SWIVEL, L/D 18 JNTS, P/U STRIP HANGER IN WELL, LAND TBG W/ 278 JNTS 2-3/8 L-80 TBG @=8,855.30'. R/D PIPE WRANGLER, R/D TBG EQUIP, N/D BOPS, DROP BALL, N/U WELL HEAD, PUMP OFF BIT W/ 2350# PRESSURE TURN OVER TO F/B CREW. KB 24.00 4-1/2 HANGER .83 278 JNTS 2-3/8 L-80 8,828.27 XN-POBS 2.20 EOT @= 8,855.30
	16:00 - 16:00	0.00	DRLOUT	50		P		WELL ON SALES @ 8:35 HR ON 1/28/2015 - 1525 MCFD, FCP 2619#, FTP 2324#, 1440 BWPD, 20/64 CK.

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Sundry Number: 61073 API Well Number: 43047535070000

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 922-34J1CS BLACK	**Wellbore No.**	00
Well Name	NBU 922-34J1CS	**Wellbore Name**	NBU 922-34J1CS
Report no.	1	**Report date**	12/29/2014
Project	UTAH-UINTAH	**Site**	NBU 922-34L PAD
Rig Name/No.		**Event**	COMPLETION
Start date	7/14/2014	**End date**	1/28/2015
Spud date	3/6/2014	**Active datum**	RKB @5,007.00usft (above Mean Sea Level)
UWI	NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2050/W/0/991/0/0		

1.3 General

Contractor		**Job method**		**Supervisor**	
Perforated Assembly		**Conveyed method**			

1.4 Initial Conditions

Fluid type		**Fluid density**	
Surface press.		**Estimate res press**	
TVD fluid top		**Fluid head**	
Hydrostatic press.		**Press. difference**	
Balance Cond	NEUTRAL		

1.5 Summary

Gross Interval	7,248.0 (usft)-9,393.0 (usft	**Start Date/Time**	12/29/2014 12:00AM
No. of intervals	59	**End Date/Time**	12/29/2014 12:00AM
Total shots	192	**Net perforation interval**	64.00 (usft)
Avg. shot density	3.00 (shot/ft)	**Final surface pressure**	
		Final press. date	

2 Intervals

2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
12/29/2014 12:00AM	M E S A VERDE/			7,248.0	7,249.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		

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2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
12/29/2014 12:00AM	M E S A VERDE/			7,266.0	7,267.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			7,359.0	7,360.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			7,371.0	7,373.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			7,387.0	7,388.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			7,410.0	7,412.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			7,479.0	7,480.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			7,591.0	7,592.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			7,607.0	7,608.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			7,621.0	7,622.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			7,643.0	7,644.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			7,675.0	7,676.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			7,710.0	7,712.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			7,828.0	7,829.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			7,859.0	7,860.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			7,877.0	7,878.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		

Sundry Number: 61073 API Well Number: 4304753507000 0

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2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
12/29/2014 12:00AM	M E S A VERDE/			7,902.0	7,903.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			7,951.0	7,952.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,006.0	8,007.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,014.0	8,015.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,046.0	8,047.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,259.0	8,260.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,271.0	8,272.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,293.0	8,294.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,310.0	8,311.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,323.0	8,324.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,373.0	8,374.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,385.0	8,386.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,398.0	8,399.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,441.0	8,442.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,538.0	8,539.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		

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2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
12/29/2014 12:00AM	M E S A VERDE/			8,559.0	8,560.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,575.0	8,576.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,599.0	8,600.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,641.0	8,642.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,658.0	8,659.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,664.0	8,665.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,692.0	8,693.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,701.0	8,702.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,712.0	8,713.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,751.0	8,752.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,761.0	8,762.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,801.0	8,802.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,823.0	8,824.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,832.0	8,833.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,896.0	8,897.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		

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2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
12/29/2014 12:00AM	M E S A VERDE/			8,904.0	8,905.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,934.0	8,935.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,948.0	8,949.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,956.0	8,957.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			8,986.0	8,987.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			9,041.0	9,043.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			9,261.0	9,262.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			9,286.0	9,287.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			9,297.0	9,298.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			9,352.0	9,353.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			9,361.0	9,362.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			9,368.0	9,369.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
12/29/2014 12:00AM	M E S A VERDE/			9,391.0	9,393.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		

3 Plots

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